Complete Coaxial Cable Catalog & Handbook

16th Edition

TIMES MICROWAVE SYSTEMS • COAXIAL CABLE CATALOG & HANDBOOK • 16TH EDITION

TIMES MICROWAVE SYSTEMS

An Amphenol Company

INTRODUCTION

Times Microwave Systems designs and manufactures high performance coaxial cables, connectors and cable assemblies for a broad range of RF transmission applications. For more than 50 years, Times has been the leader in the development of new cable technologies to meet the demands of evolving RF and microwave applications. This technological manufacturing and application leadership continues today.

Since its inception, Times has been dedicated to the improvement of coaxial cable technology and the development of new and innovative cable products to address the increasingly rigorous demands placed on RF transmission products.

The expertise that provided cable solutions for the demanding requirements of airborne electronic systems and led the way in the development of low smoke
cables for shipboard applications is now yielding high performance cables to meet the needs of the wireless communications market with Times LMR low loss flexible coax cables.

Times has been instrumental in the development of commercial and military specifications, including MIL-C-17 for coaxial cables. Times is the leading source of MIL-C-17 qualified products, holding more QPL's (Qualified Product Listings) than any other manufacturer in the world

Times applies its expertise to customer requirements through a staff of Field Application Engineers. Unlike other cable manufacturers with limited product lines who try to fit customer applications to their existing products, the philosophy of Times is to select or design the right product for each application.

This catalog serves as a guide to many of the products offered by Times and is a comprehensive technical reference with useful technical information on MIL-C-17 and RG cables.

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HIGH PERFORMANCE CABLES

M17 AND RG CABLES

REFERENCE DATA AND APPLICATION NOTES


Expertise
Our Expertise — Coaxial Assembly Technology.
We have been supplying RF and microwave interconnection solutions for the most sophisticated airborne military electronic systems in the harshest environments for more than 50 years. With our unmatched engineering and production capabilities we can also provide the most cost effective coaxial assemblies for commercial applications. Get the benefit of our expertise, call us with your application at 1-800-TMS-COAX or visit our web site at www.timesmicrowave.com.
TIMES MICROWAVE SYSTEMS
An Amphenol Company
ISO 9001
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China Sales: No. 318 Yuan Shan Road, Shanghai 201108 China • Tel: 86-21-51761234 • Fax: 86-21-64424098
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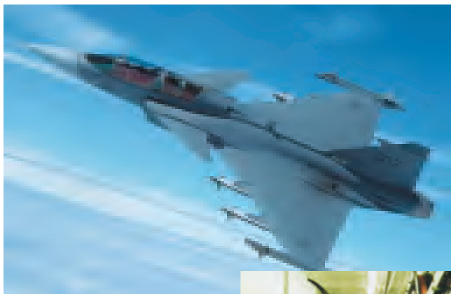
MARKETS SERVED



Military Aerospace

Times Microwave Systems coax cables are qualified for service on virtually every military aircraft platform for critical avionics and electronic warfare systems.

Military and Government Research

National research laboratories throughout the country rely on the engineering expertise of *Times Microwave Systems* for microwave, RF, high voltage and high power coax cables.

Military Ground-Based Communication Systems

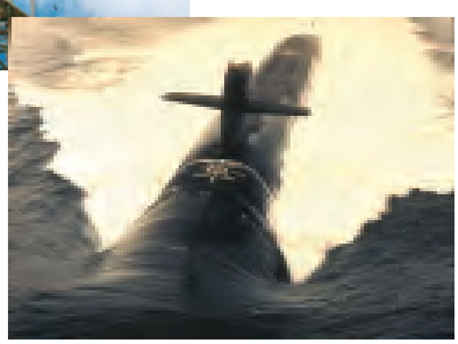
Crucial radar and RF systems rely on high performance coax cables from *Times Microwave Systems*.

Commercial Aircraft

From navigational systems to TCAS (Traffic and Collision Avoidance Systems) and essentially every airborne avionics system, commercial passenger aircraft depend on coax cable from *Times Microwave Systems*.

Wireless Telecommunications

Times Microwave Systems is a leader in providing flexible cabling solutions for the technological challenges of the rapidly evolving wireless industry.



Shipboard

Safety aboard military vessels is assured with *Times Microwave Systems* LLSB and LSSB fire retardant low-smoke generating coax cable.

COMPLETE REFERENCE DATA INTERCONNECT SYSTEM CAPABILITY

COMPLETE REFERENCE DATA

The correct selection of cable requires proper analysis of the electrical and physical parameters of the system. To assist you in this analysis, this catalog and handbook includes complete reference data enabling you to determine the characteristics of the cables presently available and also to evaluate how their characteristics may vary under various operating conditions. First, review the Application Notes section to determine the key characteristics which need to be considered. Then from the tabulations of M17, RG and Times high performance cables, the optimum cables may be selected.

COMPLETE INTERCONNECT SYSTEM CAPABILITY

Since Times manufactures coax cable and connectors used in the entire RF transmission system, we are capable of taking full responsibility for the design and manufacture of all interconnections. Times maintains one of the largest and most modern state-of-the-art RF cable assembly facilities in the world, producing broadband coax cable assemblies to swept performance specifications. Times products are qualified and supplied on hundreds of critical system applications for commercial and military aerospace, electronic warfare (EW), shipboard and missile programs.

Products supplied by Times include:

- Flexible cables for shock-mounted applications.
- Lightweight and low-loss cables for air-frame equipment up to 40 GHz.
- Non-hosing cable to 1500 PSI for hull penetrations.
- Flexible coax cables for temperatures up to 250^{o}C.
- High power applications.
- More than 10,000 coax cable designs!

Times welcomes the opportunity to provide a solution to your most difficult RF transmission system problem, as well as your standard requirements.

High Performance Coaxial Cables

M17 Select Cables, LSSB, LLSB®, StripFlex®, StripFlex® II, TCOM®, TFlex®, Coppersol, Coppersol Low Loss

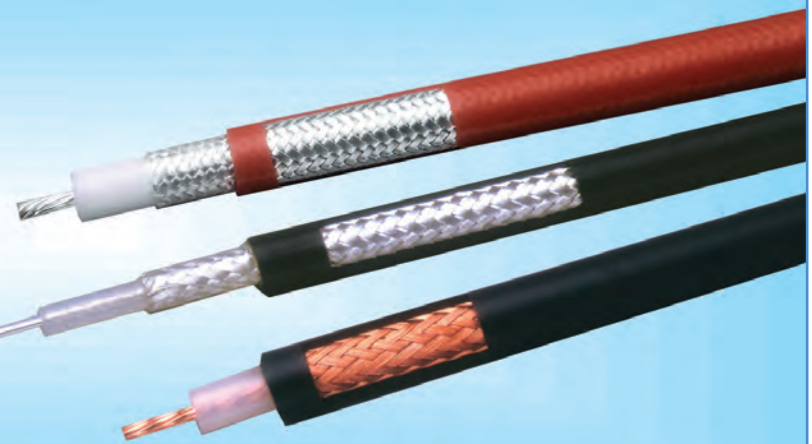
M17/RG

‘Select’ Types and Sizes

- *Low Loss HF-UHF Interconnect*
- *Wireless Base Station Interconnect*

Features & Benefits

- **Meets all MIL-C-17 Requirements**
- **Good Shielding Effectiveness**
- **Low Passive Intermod (PIM)**
- **Readily available in Distribution**
- **Uses Standard Connectors**



Attenuation (Loss) – again not the best by today’s standards but is usually acceptable at HF frequencies.

Attenuation Stability – silver plated outer conductor prevents oxidation of the conductors thereby minimizing attenuation change vs time. Conversely, bare copper outer conductors may oxidize quite rapidly precipitating loss increase which is only significant at frequencies > 500 MHz.

Power Handling – solid dielectric materials (high thermal conductivity) provides excellent power handling capability.

Temperature Range - broad operating temperature range.

Mechanical Properties – solid dielectric provides superior crush resistance and therefore is well suited for tactical applications.

M17/RG’s are traditional MIL Spec coax cables that were born 50-60 years ago. Originally created to support WWII military applications, these cables quickly became the products of choice for commercial wireless applications once they hit the surplus market, and continue to be used today.

M17/RG’s have been widely adopted for commercial and military applications. Their QPL stature insures a high quality product made to the same spec regardless of the manufacturer.

Some of the key characteristics of M17/RG’s are:

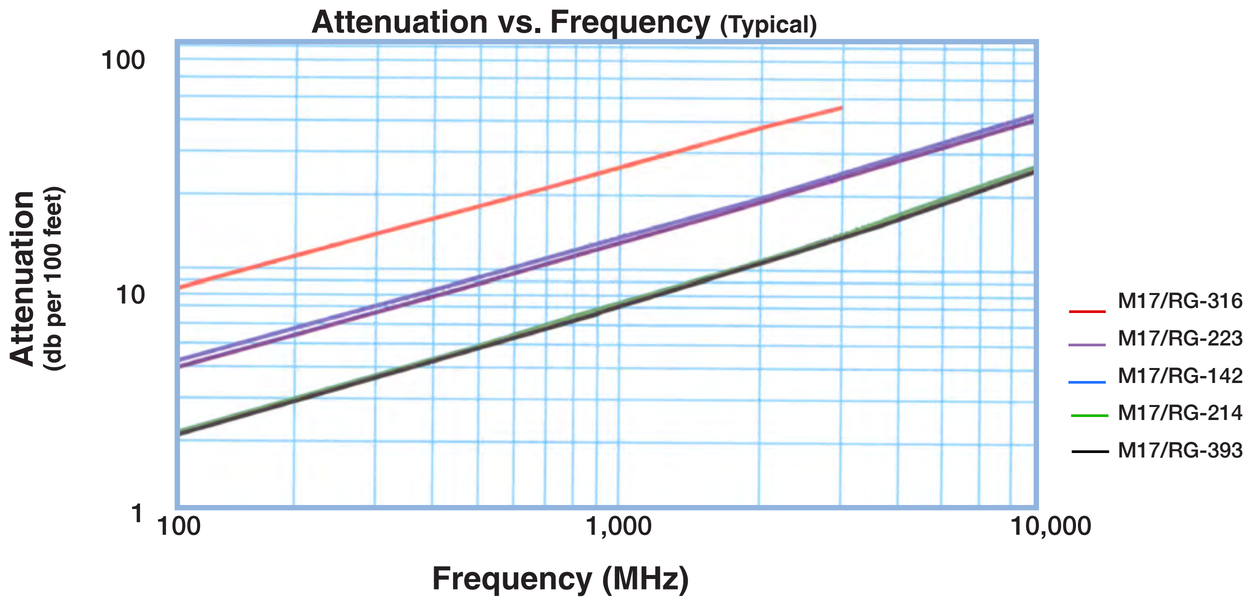
Shielding Effectiveness – in the 40 to 60 dB range and is acceptable for many lower frequency applications.

Phase Stable – not the best for phase stability by today’s standards but can be optimized by appropriate preconditioning over the temp range of interest.

“Select” M17 Coaxial Cables

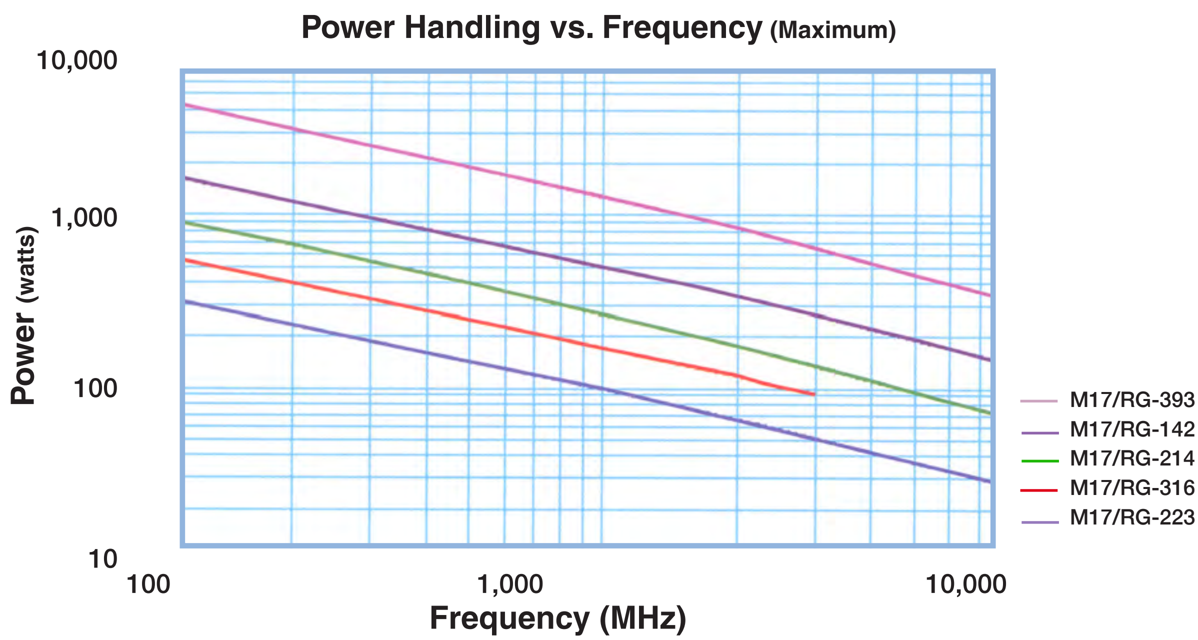
M17 Number	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Weight lbs/foot (kg/m)	Impedance ohms Vp(%)	Capacitance pF/foot (pF/m)	DC Resistance ohms/1kft (/km) Cent. Cond	Shield	Oper. Voltage kvrms	Temp. Range F (C)	M17 Freq. Range
M17/113-RG316	SCCS 7/.0067” 0.0201 (0.51)	PTFE 0.060 (1.52)	1:SC 0.078 (1.98)	FEP-IX 0.098 (2.49)	0.012 (0.018)	50 +/- 2 69.5	29.4 (96.5)	83.3 (273.3)	8.5 (27.9)	1.2	-67 +392 (-55 +200)	.05- 3 GHz
M17/84-RG223	SC 0.0355 (0.90)	PE 0.116 (2.95)	2:SC 0.162 (4.11)	PVC-IIA 0.212 (5.38)	0.041 (0.061)	50 +/- 2 65.9	30.8 (101.1)	8.2 (26.9)(	2.2 7.2)	1.9	-40 +185 (-40 +85)	.04- 12.4 GHz
M17/60-RG142	SCCS 0.037 (0.94)	PTFE 0.116 (2.95)	2:SC 0.162 (4.11)	FEP-IX 0.195 (4.95)	0.043 (0.064)	50 +/- 2 69.5	29.4 (96.5)	19.1 (62.7)	2.2 (7.2)	1.9	-67 +392 (-55 +200)	.05- 8 GHz
M17/75-RG214	SC 7/.0296” 0.0888 (2.26)	PE 0.285 (7.24)	2:SC 0.343 (8.71)	PVC-IIA 0.425 (10.8)	0.130 (0.194)	50 +/- 2 65.9	30.8 (101.1)	1.7 (5.6)	1.3 (4.3)	5.0	-40 +185 (-40 +85)	.05- 11 GHz
M17/127-RG393	SC 7/.0312” 0.094 (2.39)	PTFE 0.285 (7.24)	2:SC 0.343 (8.71)	FEP-IX 0.390 (9.91)	0.175 (0.261)	50 +/- 2 69.5	29.4 (96.5)	1.5 (4.9)	1.3 (4.3)	5.0	-67 +392 (-55 +200)	.05- 11 GHz

- *Low Passive Intermod (silver plated types)*
- *Where MIL Spec Pedigree is Required*
- *Tactical Field Antenna Feeders*



Frequency (MHz)	10	30	50	100	400	1,000	1,500	2,000	2,500	3,000	10,000	k1	k2
M17/RG-316	2.5	4.3	5.6	8	16	26	32	38	42	47	-	0.787	0.00120
M17/RG-223	1.2	2.1	2.8	4	8	13	17	20	22	25	51	0.384	0.00126
M17/RG-142	1.2	2.1	2.7	4	8	13	16	19	21	24	49	0.368	0.00120
M17/RG-214	0.7	1.2	1.6	2.2	4.7	7.9	10	11.9	13.7	15.3	37	0.210	0.00126
M17/RG-393	0.6	1.1	1.4	2.0	4	7	9	11	13	14	31	0.202	0.00120

Attenuation at Any Frequency = [k1 x SQRT (Fmhz)] + [k2 x Fmhz]; dB per 100 feet



Frequency (MHz)	10	30	50	100	400	1,000	1,500	2,000	2,500	3,000	10,000
M17/RG-393	15141	8612	6604	4584	2156	1275	1000	838	729	649	286
M17/RG-142	5601	3206	2468	1726	831	504	401	340	298	267	125
M17/RG-214	3181	1808	1386	961	451	266	209	175	152	135	59
M17/RG-316	1869	1072	827	580	282	173	138	118	104	93	-
M17/RG-223	1081	619	476	333	161	97	78	66	58	52	24

Watts; Sea Level; Ambient +40C; VSWR 1:1

LSSB™

Low Smoke - Non-Halogen
Military/Aerospace Coax

- MIL-Spec Air Frame, Shipboard, Ground (Tactical)

Features & Benefits

- **Rugged Abrasion Resistant Jacket**
- **Excellent Shielding Effectiveness**
- **Fire Retardant (non-halogen)**
- **Light Weight**
- **Flexible for Ease of Deployment**
- **Excellent Connector Selection**

- **Flexible:** With very tight minimum bend radius, LSSB cable can be easily routed into and through tight spaces. Ideal for tactical deployment and retrieval.
- **Excellent Loss: LSSB** has lower loss than other cables of the same size and and is significantly less than the M17 spec requirement.
- **Fire Retardant:** A black UV resistant non-halogen Low Smoke - Fire Retardant cross-linked polyethylene jacket makes the cable rugged and resistant to the full range of military/defense environments. LSSB cables easily achieve FAR 25, NES-711, NES-713 compliance.
- **RF Shielding:** High coverage (>95%) braids, result in >40-60 dB RF shielding (>80 dB - 120 dB crosstalk) and excellent interference immunity (ingress and egress).
- **Connectors and Assemblies:** A full range of connector interfaces is available in crimp or clamp styles. Custom pre-terminated and tested assemblies with phase matching, insertion loss matching, and other special electrical or marking requirements can also be provided.

LSSB Shipboard Coaxial Cables

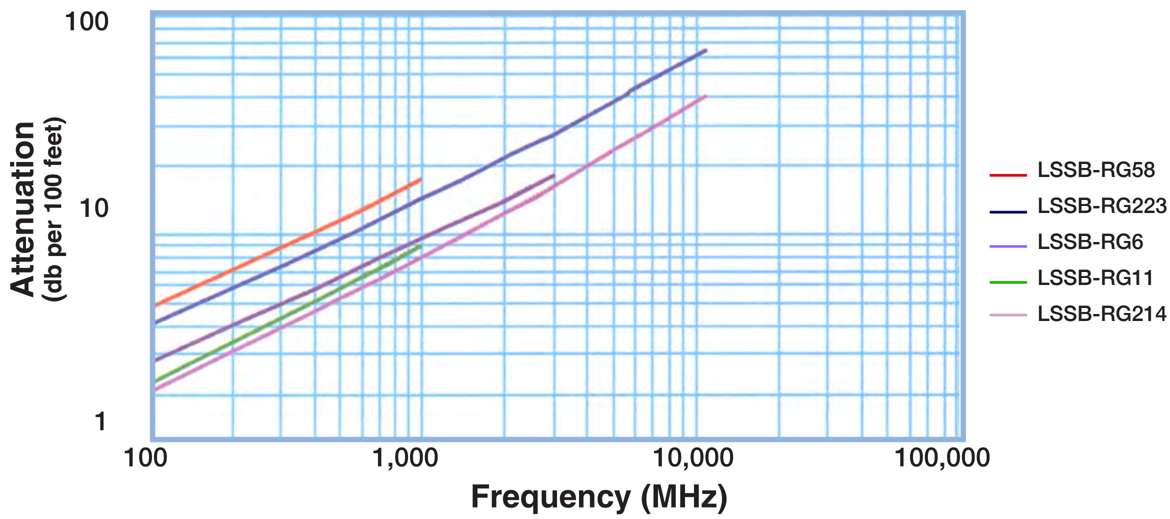
TMS & M17 Number	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Weight lbs/foot (kg/m)	Impedance ohms Vp(%)	Capacitance pF/foot (pF/m)	DC Resistance ohms/1kft (/km) Cent. Cond	Shield (s)	Oper. Voltage kvrms	Temp. Range F (C)	Test Freq.
LSSB-RG6 M17/180-00001	CCS 0.0285 (0.72)	PE 0.185 (4.70)	34 SC: 34 BC 0.243 (6.17)	XLPE 0.332 (8.43)	0.092 (0.137)	75 +/- 3 65.9	20.6 (67.6)	32.2 (105.6)	1.1 (3.6)	2.7	-22 +176 (-30+80)	3 GHz
LSSB-RG11 M17/181-00001	TC 7/.0159 0.0477 (1.21)	PE 0.285 (7.24)	33 BC 0.318 (8.08)	XLPE 0.405 (10.29)	0.142 (0.212)	75 +/-3 65.9	20.6 (67.6)	6.1 (20.0)	1.2 (3.9)	5.0	-22 +176 (30+80)	3 GHz
LSSB-RG58 M17/183-00001	TC 19/.0072 0.0355 (0.900)	PE 0.116 (2.95)	36 BC 0.139 (3.53)	XLPE 0.195 (4.95)	0.03 (0.045)	50 +/-2 65.9	30.8 (101.1)	10.9 (35.8)	4.1 (13.5)	1.9	-22 +176 (-30 +80)	0.05- 1 GHz
LSSB-RG214 M17/190-00001	SC 7/.0296 0.089 (2.26)	PE 0.285 (7.24)	34 SC:34 SC 0.343 (8.71)	XLPE 0.425 (10.80)	0.154 (0.229)	50 +/-2 65.9	30.8 (101.1)	1.7 (5.6)	1.3 (4.3)	5.0	-22 +176 (-30 +80)	0.05- 11 GHz
LSSB-RG223 M17/194-00001	SC 0.035 (0.889)	PE 0.116 (2.95)	36 SC:36 SC 0.162 (4.11)	XLPE 0.212 (5.38)	0.044 (0.066)	50 +/-2 65.9	30.8 (101.1)	8.2 (26.9)	2.2 (7.2)	1.9	-22 +176 (-30 +80)	0.05- 2.5 GHz

See M17 tables for additional sizes and armored versions

Interconnect (M17/180 –/200, /210–/218)

- Fire Retardant / Low Smoke (non-halogen)
- Flexible For Easy Deployment / Routing

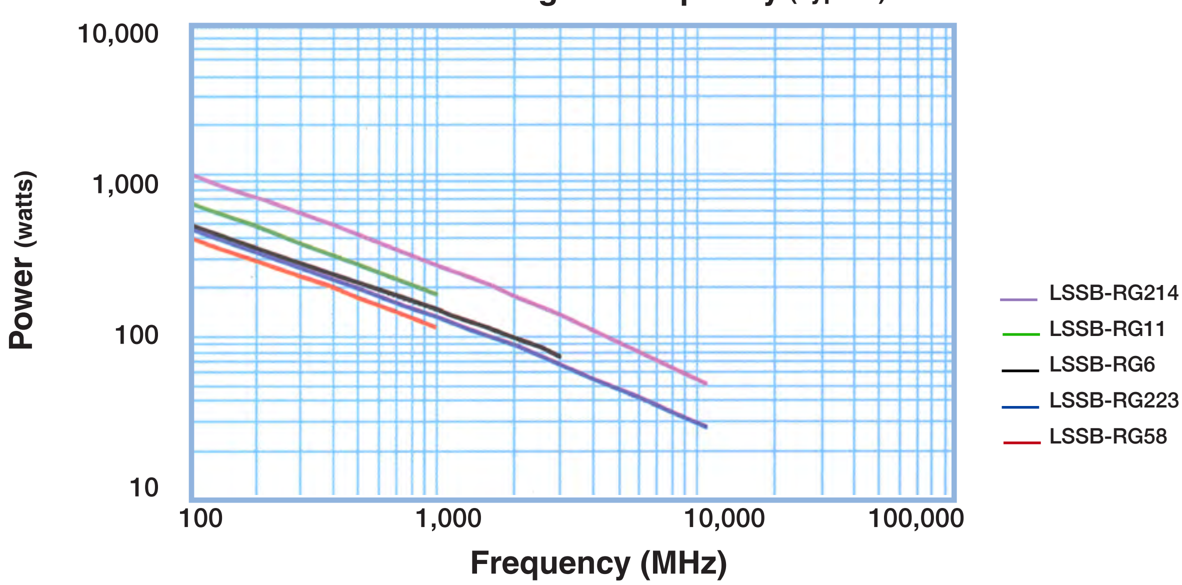
Attenuation vs. Frequency (Typical)



Frequency (MHz)	10	30	50	100	400	1,000	1,500	2,000	2,500	3,000	11,000	k1	k2
LSSB-RG58	1.4	2.5	3.3	4.6	10.2	17	-	-	-	-	-	0.444971	0.003370
LSSB-RG223	1.2	2.2	2.8	4.1	8.6	14	18	22	25	28	65	0.383488	0.002232
LSSB-RG6	0.8	1.5	1.9	2.7	5.7	9.6	12	14	16	18	-	0.262144	0.001264
LSSB-RG11	0.7	1.2	1.6	2.3	5.1	6.9	-	-	-	-	-	0.202970	0.002527
LSSB-RG214	0.6	1.1	1.4	2.1	4.6	7.9	10	12	14	16	41	0.191365	0.001895

Attenuation at Any Frequency = [k1 x SQRT (Fmhz)] + [k2 x Fmhz]; dB per 100 feet

Power Handling vs. Frequency (Typical)



Frequency (MHz)	10	30	50	100	400	1,000	1,500	2,000	2,500	3,000	11,000
LSSB-RG214	3549	2003	1528	1051	481	276	213	177	152	134	51
LSSB-RG11	2430	1364	1037	709	318	179	-	-	-	-	-
LSSB-RG6	1678	957	736	513	244	146	116	97	85	76	-
LSSB-RG223	1558	887	680	472	223	132	103	87	75	67	27
LSSB-RG58	1412	800	612	423	196	114	-	-	-	-	-

Watts; Sea Level; Ambient +40C; VSWR 1:1

LLSB®

Low Loss – Military/Aerospace Coax

- **Low Loss Air Frame, Shipboard, Ground (Tactical) Interconnect**

Features & Benefits

- **Low Loss**
- **Superior Shielding Effectiveness**
- **Fire Retardant (non-halogen)**
- **Light Weight**
- **Flexible for Ease of Deployment**
- **Excellent Connector Selection**

- **Flexible:** With very tight minimum bend radius, LLSB cable can be easily routed into and through tight spaces without kinking. The bonded-tape outer conductor provides superior flexibility and ease of bending compared to previous generation M17/RG type, corrugated copper, or smooth wall copper hard-line cables.

- **Low Loss:** LLSB has lower loss than other cables of the same size. This is achieved through the use of a high velocity dielectric and bonded aluminum tape outer conductor. The proprietary gas-injected closed cell foam dielectric prevents water migration through the cable and provides excellent crush resistance.

- **Fire Retardant:** A black UV resistant non-halogen Low Smoke - Fire Retardant cross-linked polyethylene jacket makes the cable rugged and resistant to the full range of military/defense environments. LLSB cables easily achieve FAR 25, NES-711, NES-713 compliance.

- **RF Shielding:** The bonded aluminum tape outer conductor is overlapped to provide 100% coverage, resulting in >90 dB RF shielding (>180 dB crosstalk) and excellent interference immunity (ingress and egress).

- **Phase Stability:** The intimately bonded structure and foam dielectric of LLSB cables provide excellent phase stability over temperature and with bending. The high velocity dielectric results in superior phase stability as compared with solid and air-spaced dielectric cables.

- **Connectors and Assemblies:** A full range of connector interfaces is available in crimp or clamp styles in addition to supporting installation tools. Custom preterminated and tested assemblies with phase matching, insertion loss matching, and other special electrical or marking requirements can also be provided.

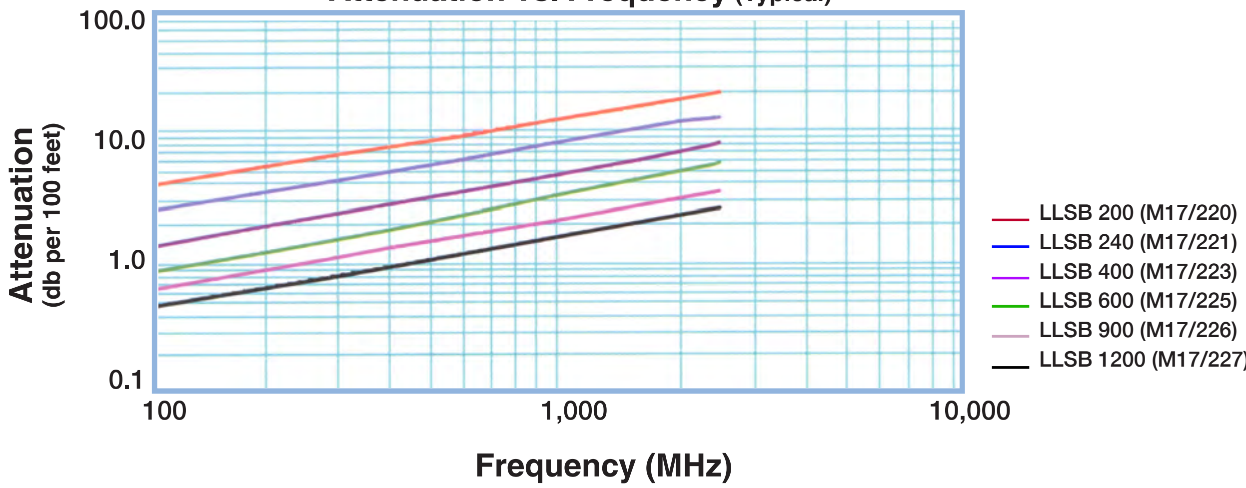
LLSB Shipboard Coaxial Cables

TMS & M17 Number	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Weight lbs/foot (kg/m)	Impedance ohms Vp(%)	Capacitance pF/foot (pF/m)	DC Resistance ohms/1kft(/km)		Oper. Voltage kvrms	Temp. Range F (C)	Test Freq.
								Cent. Cond	Shield (s)			
LLSB-200	BC	Foam PE	Alum Tape;	XLPE	0.037	50 +/- 2	24.5	5.4	4.9	1.0	-22 +185	0.05-
M17/220-00001	0.044	0.118	36 TC	0.195								2.5
	(1.12)	(2.95)	0.144 (3.66)	(4.95)	(0.055)	83	(80.4)	(17.7)	(16.1)		(-30 +85)	GHz
LLSB-240	BC	Foam PE	Alum. Tape;	XLPE	0.051	50 +/-2	24.2	3.2	3.9	1.5	-22 +185	0.05-
M17/221-00001	0.056	0.150	36 TC	0.242								2.5
	(1.42)	(3.81)	0.178 (4.52)	(6.15)	(0.076)	84	(79.4)	(10.5)	(12.8)		(-30+85)	GHz
LLSB-400	BCCAI	Foam PE	Alum Tape;	XLPE	0.114	50 +/-2	23.9	1.39	1.65	3.0	-22 +185	0.05-
M17/223-00001	0.108	0.285	34 TC	0.405								2.5
	(2.74)	(7.245)	0.320 (8.13)	(10.29)	(0.170)	85	(78.4)	(4.6)	(5.4)		(-30 +85)	GHz
LLSB-600	BCCAI	Foam PE	Alum Tape;	XLPE	0.168	50 +/-2	23.4	0.53	1.20	5.0	-22 +185	0.05-
M17/225-00001	0.176	0.455	33 TC	0.590								2.5
	(4.47)	(11.56)	0.490 (12.45)	(14.99)	(0.250)	87	(76.8)	(1.74)	(3.94)		(-30 +85)	GHz
LLSB-900	BC Tube	Foam PE	Alum Tape;	XLPE	0.375	50 +/-2	23.4	0.54	0.55	7.0	-22 +185	0.05-
M17/226-00001	0.262	0.680	30 TC	0.870								2.5
	(6.65)	(17.27)	0.732 (18.59)	(22.108)	(0.559)	87	(76.8)	(1.78)	(1.80)		(-30 +85)	GHz
LLSB-1200	BC Tube	Foam PE	Alum Tape;	XLPE	0.686	50 +/-2	23.1	0.32	0.37	8.0	-22+185	0.05-
M17/227-00001	0349	0.920	30 TC	1.200								2.5
	(8.86)	(23.37)	0.972 (24.69)	30.48	(1.022)	88	(75.8)	(1.06)	(1.21)		(-30 +85)	GHz

See page 39 for additional sizes and armored versions

- **Fire Retardant / Low Smoke (non-halogen)**
- **Flexible For Easy Deployment / Routing**

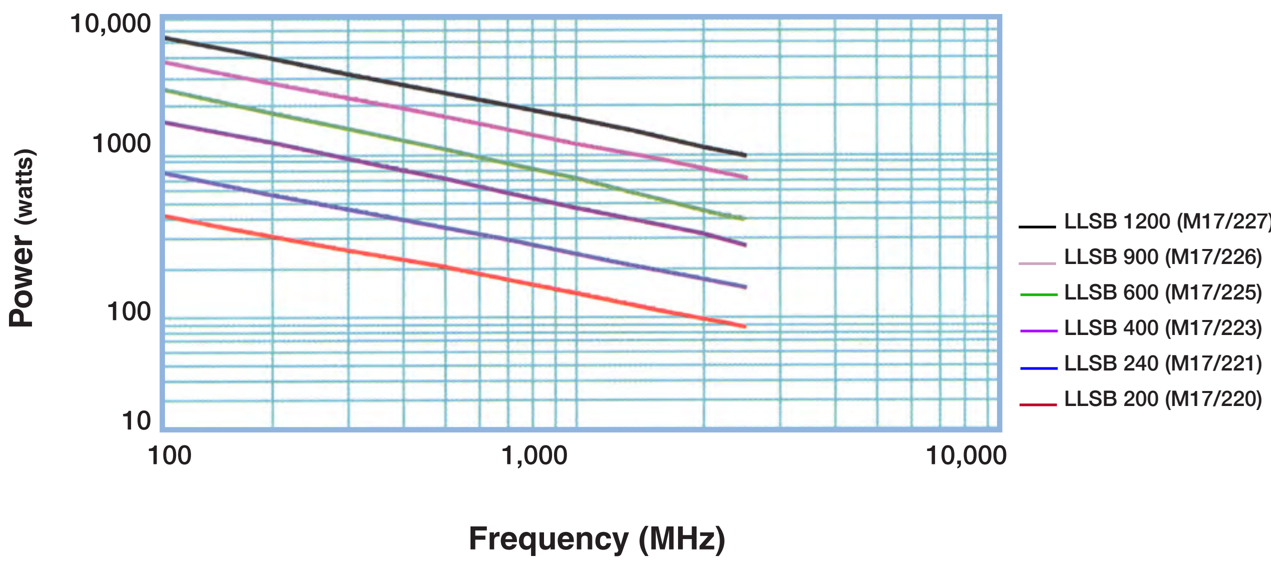
Attenuation vs. Frequency (Typical)



Frequency (MHz)	10	30	50	100	400	1,000	1,500	2,000	2,500	k1	k2
LLSB-200 (M17/220)	1.2	2.1	2.7	3.8	7.7	12	15	18	20	0.377530	0.000380
LLSB-240 (M17/221)	0.8	1.3	1.7	2.5	5.0	8	10	12	13	0.242084	0.000397
LLSB-400 (M17/223)	0.4	0.7	0.9	1.3	2.8	4.7	5.9	7.0	8.1	0.14387	0.00031
LLSB-600 (M17/225)	0.2	0.4	0.6	0.8	1.8	3.2	4.2	5.0	5.9	0.08888	0.00031
LLSB-900 (M17/226)	0.2	0.3	0.4	0.6	1.3	2.1	2.6	3.1	3.5	0.060910	0.000188
LLSB-1200 (M17/227)	0.1	0.2	0.3	0.5	1.0	1.6	2.0	2.3	2.7	0.043960	0.000188

Attenuation at Any Frequency = [k1 x SQRT (Fmhz)] + [k2 x Fmhz]; dB per 100 feet

Power Handling vs. Frequency (Typical)



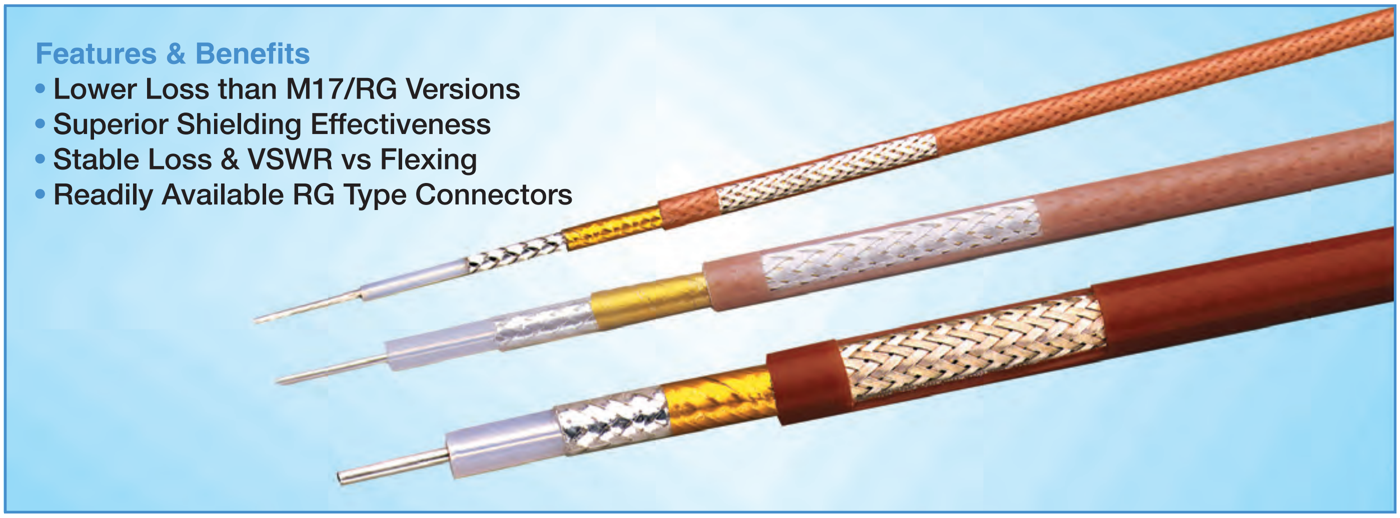
Frequency (MHz)	10	30	50	100	400	1,000	1,500	2,000	2,500
LLSB-1200 (M17/227)	18953	10835	8337	5823	2795	1689	1342	1137	998
LLSB-900 (M17/226)	13044	7477	5763	4038	1959	1197	958	815	718
LLSB-600 (M17/225)	9392	5291	4031	2767	1257	718	554	458	394
LLSB-400 (M17/223)	5720	3254	2495	1732	815	482	379	318	277
LLSB-240 (M17/221)	2592	1490	1150	809	397	245	198	169	150
LLSB-200 (M17/220)	1459	840	649	457	225	140	113	97	86

Watts; Sea Level; Ambient +40C; VSWR 1:1

StripFlex®

Low Loss – High Performance Coax

- Low Loss Microwave Interconnect
- Wireless Base Station Interconnect



StripFlex cables are identical in materials and construction to their M17/RG predecessors, with the exception of the outer conductor.

The StripFlex shielding system, pioneered by Times Microwave Systems in the mid-sixties, consists of an inner silver plated flat ribbon braid (FSC), a spirally applied and overlapped composite aluminum tape interlayer (Intl), and an overall silver plated round wire braid (SC). The StripFlex shield affords approximately 15% lower loss and >95 dB shielding compared with the typical M17/RG round wire braided shield (40 to 60 dB).

Standard M17/RG cables are shielded with high coverage single or double round wire braids. While these shields provide 40 dB and 60 dB shielding effectiveness respectively, they are not particularly stable (loss & vswr) nor is the shielding adequate for today's sensitive wireless communications and microwave military/defense applications.

VSWR is lower since the flat ribbons can be applied over the dielectric much more uniformly than multi-end round wire braids. The VSWR and attenuation variation due to aging and flexure is substantially lower at all frequencies, and especially above 12 GHz. StripFlex cables are also available from Times that have been sweep tested for broadband VSWR and attenuation performance. Please contact the factory with your specific requirements.

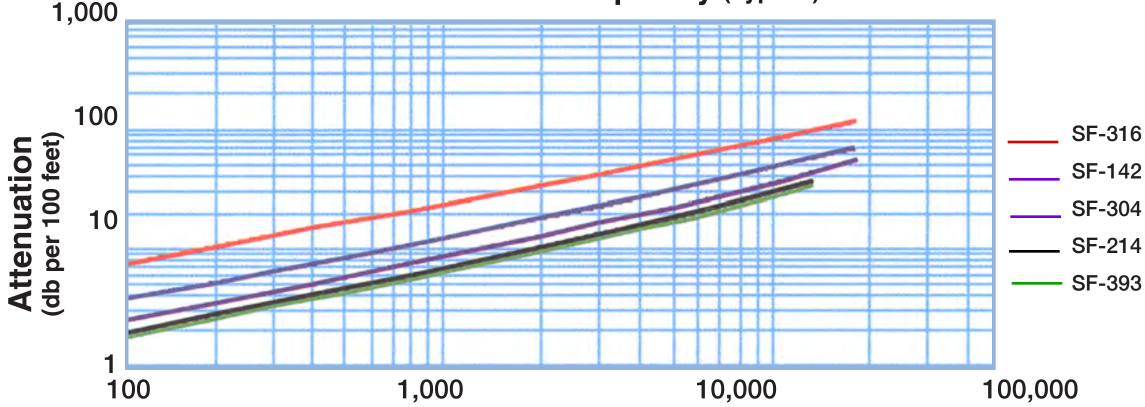
Standard inexpensive connectors (crimp or clamp style) commonly used on the M17/RG counterparts can be used on StripFlex.

StripFlex Low Loss High Performance Coaxial Cables

TMS Number	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Weight lbs/foot (kg/m)	Impedance ohms Vp(%)	Capacitance pF/foot (pF/m)	DC Resistance ohms/1kft (/km) Cent. Cond	Shield	Oper. Voltage kvrms	Temp. Range F (C)	Min. Bend Radius in (mm)	Test Freq.
SF-316	SCCS 7/.0067" 0.0201 (0.51)	PTFE 0.060 (1.52)	FSC Intl: SC 0.093 (2.36)	FEP-IX 0.110 (2.79)	0.013 (0.019)	50 +/- 1 69.5	29.4 (96.5)	83.3 (273.3)	4.4 (14.4)	1.2	-67 +392 (-55 +200)	0.5 (12.7)	.05- 3 GHz
SF-142B	SCCS 0.037 (0.94)	PTFE 0.116 (2.95)	FSC Intl: SC 0.154 (3.91)	FEP-IX 0.195 (4.95)	0.043 (0.064)	50 +/- 1 69.5	29.4 (96.5)	19.1 (62.7)	2.9 (9.4)	1.9	-67 +392 (-55 +200)	1 (25.4)	.05- 18 GHz
SF-304	SCCS 0.059 (1.50)	PTFE 0.185 (4.70)	FSC Intl: SC 0.231 (5.87)	FEP-IX 0.290 (7.37)	0.105 (0.1564)	50 +/- 1 69.5	29.4 (96.5)	7.5 (24.6)	1.7 (5.4)	3.0	-67 +392 (-55 +200)	1.5 (38.1)	.05- 18 GHz
SF-214	SC 7/.0296" 0.0888 (2.26)	PE 0.285 (7.24)	FSC Intl: SC 0.330 (8.38)	PVC-IIA 0.425 (10.8)	0.116 0.116 (0.173)	50 +/- 1 65.9	30.8 (101)	1.71 (5.6)	1.36 (4.5)	5.0	-40 +176 (-40 +80)	2 (50.8)	.05- 12 GHz
SF-393SC 7/.0312"	PTFE 0.094 (2.39)	FSC: 0.285 (7.24)	FEP-IX Intl: SC 0.330 (8.38)	0.188 0.390 (9.91)	50 +/- 1 (0.280)	29.4 69.5	1.54 (96.5)	1.08 (5.1)	5.0 (3.5)	-67 +392	2 (-55 +200)	.05- (50.8)	12 GHz

- Low Passive Intermod
- High Temperature /Low Temperature
- High Power

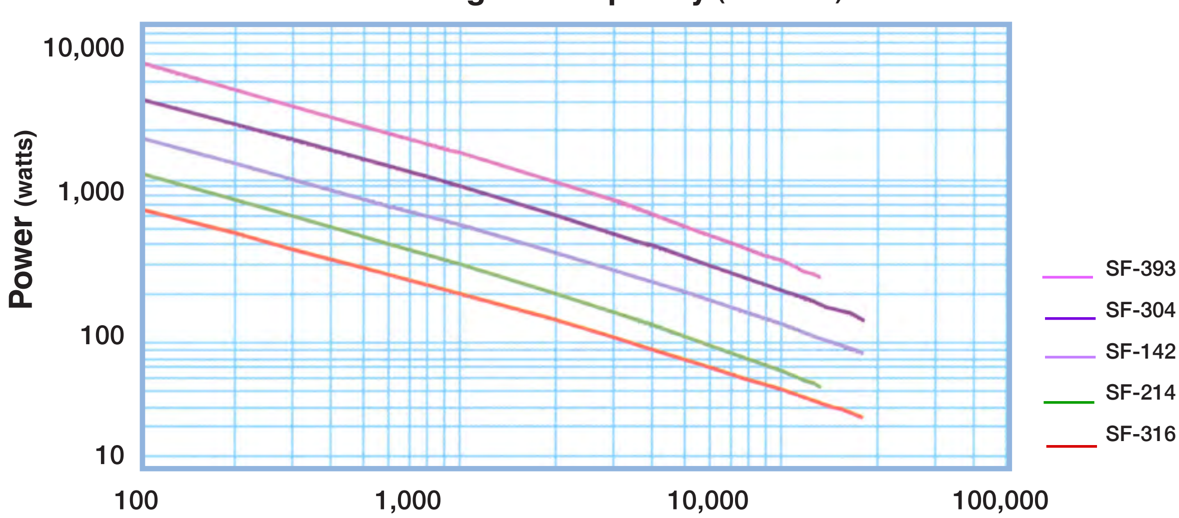
Attenuation vs. Frequency (Typical)



Frequency (MHz)	100	400	1,000	2,000	3,000	5,000	10,000	12,000	13,500	16,000	18,000	k1	k2
SF-316	7.2	15	24	34	42	56	83	92	98	109	117	0.708	0.00120
SF-142	3.6	7.4	12	18	23	31	47	53	57	63	68	0.348	0.00120
SF-304	2.4	5.1	8.5	13	16	22	35	40	43	48	53	0.231	0.00120
SF-214	1.8	3.9	6.7	10	13	18	30	34	37	-	-	0.172	0.00126
SF-393	1.8	3.8	6.4	10	13	18	28	32	35	-	-	0.164	0.00120

Attenuation at Any Frequency = [k1 x SQRT (Fmhz] + [k2 x Fmhz]; dB per 100 feet

Power Handling vs. Frequency (Maximum)



Frequency (MHz)	100	400	1,000	2,000	3,000	5,000	10,000	12,000	13,500	16,000	18,000
SF-393	5303	2474	1450	946	729	517	315	274	251	-	--
SF-304	3192	1514	903	599	467	336	210	184	169	149	136
SF-142	1796	864	522	352	277	202	129	114	105	93	85
SF-214	1102	515	302	197	152	108	66	58	53	-	-
SF-316	672	328	200	136	108	80	52	46	42	38	35

Watts; Sea Level; Ambient +40C; VSWR 1:1

StripFlex®-II (SFT)

Low Loss – High Performance Coax

- Lower Loss Microwave Interconnect
- Wireless Base Station Interconnect

Features & Benefits

- Lower Loss than SF Versions
- Superior Shielding Effectiveness
- Low Passive Intermod (-155 dBc)
- Stable Loss & VSWR vs. Flexing
- Excellent Connector Selection

StripFlex II cables provide the ultimate performance in a flexible cable. The low density PTFE tape dielectric provides the lowest dielectric loss of any practical dielectric and silver plated conductors make these the ideal choice for microwave and military interconnect systems

The high temperature dielectric and jacket enable their use in high ambient temperatures up to +200°C. They have losses slightly smaller than their low temperture TCOM counterparts as well as higher power handling capability.

The Shielding system, provided by times Microwave Systems in the mid-sixties, consists of an inner silver plated flat ribbon braid (FSC), a spirally applied and overlapped composite aluminum tape interlayer (Intl), and an overall silver plated round wire braid (SC). The flat ribbon shield affords approximately 30% lower loss and >95 dB shielding compared with the typical M17/RG round wire braided shield (40 to 60 dB).

Standard M17/RG cables are shielded with high coverage single or double round wire braids. While these shields provide 40 dB and 60 dB shielding effectiveness respectively, they are not particularly stable (loss & vswr) nor is the shielding adequate for today's sensitive wireless communications and microwave military/defense applications.

VSWR is lower since the flat ribbons can be applied over the dielectric much more uniformly than multi end round wire braids. The VSWR and attenuation variation due to aaging and flexure is substantially lower at all frequencies, and especially above 12 GHz. StripFlex II cables are also available from Times that have been sweep tested for broadband VSWR and attenuation performance. Please contact the factory with your specific requirements.

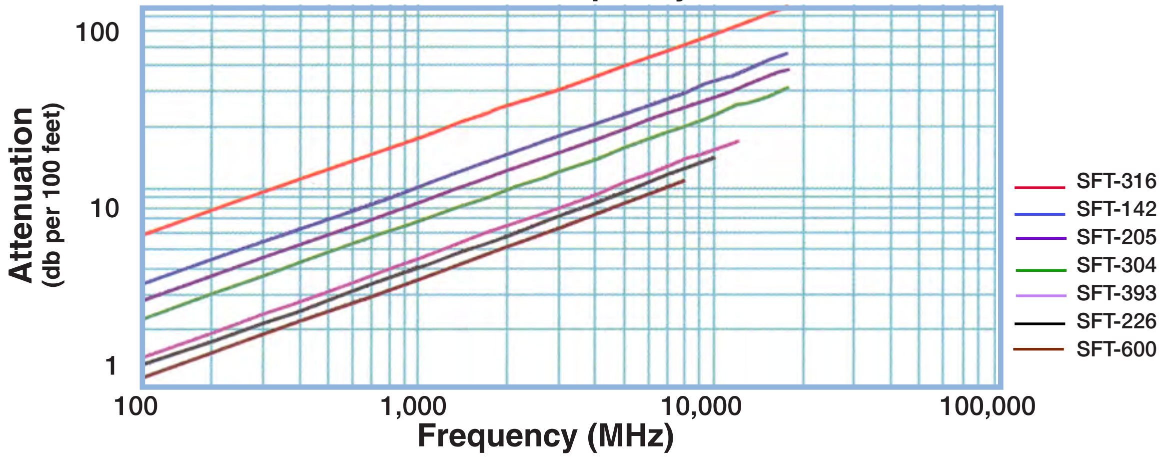
A good selection of interface connectors (crimp or clamp style) are available. SFT cables can be purchased in bulk reels or as predetermined and tested cable assemblies.

StripFlex II Low Loss High Performance Coaxial Cables

TMS Number	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Weight lbs/foot (kg/m)	Impedance ohms Vp(%)	Capacitance pF/foot (pF/m)	DC Resistance ohms/1kft (/km) Cent. Cond	Shield (s)	Oper. Voltage kvrms	Temp. Range F (C)	Min. Bend Radius in (mm)	Test Freq.
SFT-316	SC	LDPTFE	FSC:	Blue FEP	0.018	50 +/- 1	26.7	20.5	5.4	0.5	-67 +392	0.5	.05-
	0.0226	0.068	Intl: SC	0.120									18
	(0.57)	(1.73)	0.096 (2.44)	(3.05)	(0.027)	76	(87.6)	(67.3)	(17.7)		(-55 +200)	(12.7)	GHz
SFT-142	SC	LDPTFE	FSC:	Blue FEP	0.036	50 +/- 1	26.7	6.5	3.3	1.0	-67 +392	1	.05-
	0.0403	0.121	Intl: SC	0.180									18
	(1.02)	(3.07)	0.160 (4.57)	(4.57)	(0.054)	76	(87.6)	(21.3)	(10.8)		(-55 +200)	(25.4)	GHz
SFT-205	SC	LDPTFE	FSC:	Blue FEP	0.042	50 +/-1	26.7	4.1	4.8	1.0	-67 +392	1.5	.05-
	0.0508	0.154	Intl: SC	0.205									18
	(1.29)	(3.91)	0.187 (4.75)	(5.21)	(0.063)	76	(87.6)	(13.5)(	15.6)		(-55 +200)	(38.1)	GHz
SFT-304	SC	LDPTFE	FSC:	Blue FEP	0.067	50+/-1	26.7	2.7	2.1	2.0	-67+392	2	.05-
	0.062	0.185	Intl: SC	0.250									18
	(1.57)	(4.70)	0.227 (5.77)	(6.35)	(0.100)	76	(88)	(8.9)	(7.0)		(-55+200)	(50.8)	GHz
SFT-393	SC	LDPTFE	FSC:	Blue FEP	0.126	50 +/- 1	26.7	1.2	1.1	2.5	-67 +392	2	.05-
	0.096	0.285	Intl: SC	0.390									12
	(2.44)	(7.24)	0.319 (8.10)	(9.91)	(0.188)	76	(87.8)	(3.8)	(3.5)		(-55 +200)	(50.8)	GHz
SFT-226	SC 7/.048	LDPTFE	FSC:	Blue FEP	0.235	50 +/- 1	26.7	0.68	1.04	3.0	-67 +392	2	.05-
	0.131	0.370	Intl: SC	0.485									10
	(3.33)	(9.40)	0.399 (10.13)	(12.32)	(0.350)	76	(87.6)	(2.2)	(3.4)		(-55 +200)	(50.8)	GHz
SFT-600	SC 7/.0535	LDPTFE	FSC:	Blue FEP	0.240	50+/-1	26.7	0.53	1.32	3.5	-67 +392	3	.05-
	0.160	0.455	Intl: SC	0.555									8
	(4.08)	(11.56)	0.500 (12.70)	(14.10)	(0.357)	76	(87.6)	(1.73)	(4.3)		(-55 +200)	(76.2)	GHz

- Low Passive Intermod
- High Temperature
- High Power

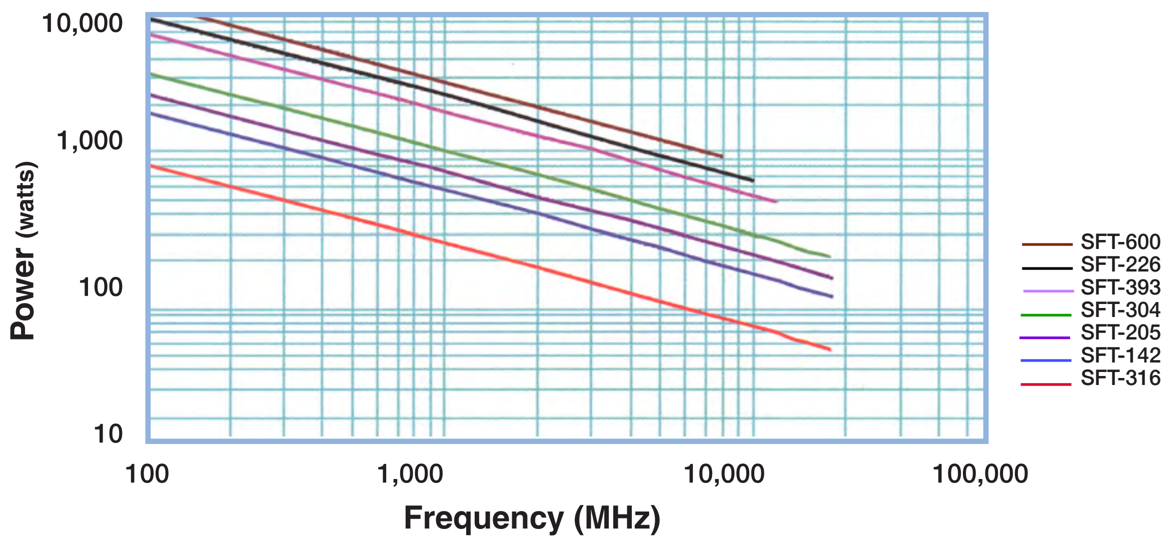
Attenuation vs. Frequency (Typical)



Frequency (MHz)	100	400	1,000	2,000	3,000	8,000	10,000	12,000	13,500	16,000	18,000	k1	k2
SFT-316	5.5	11.1	17.6	25	31	51	57	63	67	73	77	0.55168	0.00018
SFT-142	3.2	6.4	10.2	14	18	30	33	37	39	43	46	0.31533	0.00018
SFT-205	2.6	5.3	8.4	12	15	25	28	31	33	36	38	0.26098	0.00018
SFT-304	2.1	4.2	6.8	9.7	12	20	23	25	27	29	31	0.20810	0.00018
SFT-393	1.4	2.8	4.5	8.0	8	14	15	17	-	-	-	0.13593	0.00018
SFT-226	1.2	2.5	4.0	7.2	7	12	14	-	-	-	-	0.12183	0.00018
SFT-600	1.1	2.21	3.5	5.1	6	11	-	-	-	-	-	0.10137	0.00018

Attenuation at Any Frequency = [k1 x SQRT (Fmhz)] + [k2 x Fmhz]; dB per 100 feet

Power Handling vs. Frequency (Maximum)



Frequency (MHz)	100	400	1,000	2,000	3,000	8,000	10,500	12,000	13,500	16,000	18,000
SFT-600	9325	4576	2833	1956	1569	904	-	-	-	-	-
SFT-226	7494	3685	2286	1582	1271	737	-		-	-	-
SFT-393	5986	2947	1831	1269	1021	594	523	471	-	-	-
SFT-304	3309	1635	1020	710	572	336	297	268	251	227	212
SFT-205	2430	1201	750	523	422	248	220	198	186	168	157
SFT-142	1843	912	569	397	320	189	167	151	141	128	120
SFT-316	854	422	263	183	148	86	76	69	64	58	54

Watts; Sea Level; Ambient +40C; VSWR 1:1

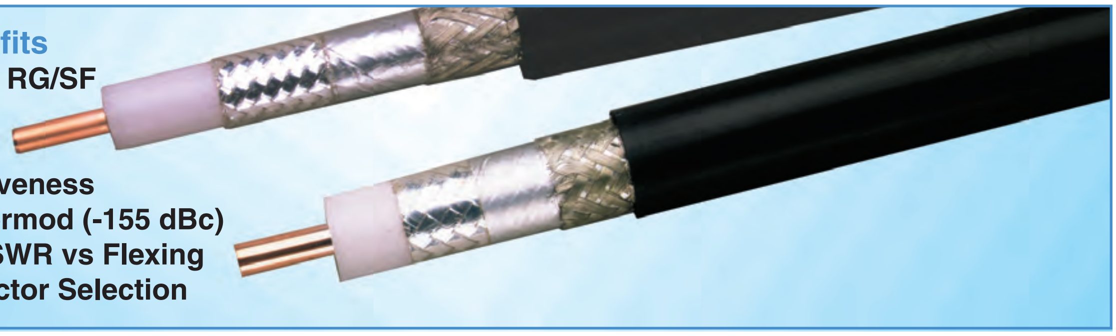
TCOM®

Low Loss – High Performance Coax

- Low Loss UHF/Microwave Interconnect
- Wireless Base Station Interconnect
- Low Passive Intermod
- Flexible For Easy Routing

Features & Benefits

- Lower Loss than RG/SF Versions
- Superior Shielding Effectiveness
- Low Passive Intermod (-155 dBc)
- Stable Loss & VSWR vs Flexing
- Excellent Connector Selection



TCOM cables provide the ultimate performance in a flexible cable. The high velocity gas injected foam polyethylene dielectric provides the lowest dielectric loss of any practical dielectric and silver plated flat ribbon braid make TCOM the ideal choice for uhf/microwave applications and all other commercial and military interconnect systems.

The TCOM design make them the ideal choice for jumper cables in commercial wireless (PCS, Cellular, Paging, LMR) and military systems.

The Shielding system, pioneered by Times Microwave Systems in the mid-sixties, consists of an inner silver plated flat ribbon braid (FSC), a spirally applied and overlapped composite aluminum tape interlayer (Intl), and an overall tin plated round wire braid (TC). The flat ribbon shield affords approximately 15% lower loss and >95 dB shielding when compared with the typical M17/RG round wire braided shield (40 to 60 dB).

Standard M17/RG cables are shielded with high coverage single or double round wire braids. While these shields provide 40 dB and 60 dB shielding effectiveness respectively, they are not particularly stable (loss & vswr) nor is the shielding adequate for today's sensitive wireless communications and microwave military/defense applications.

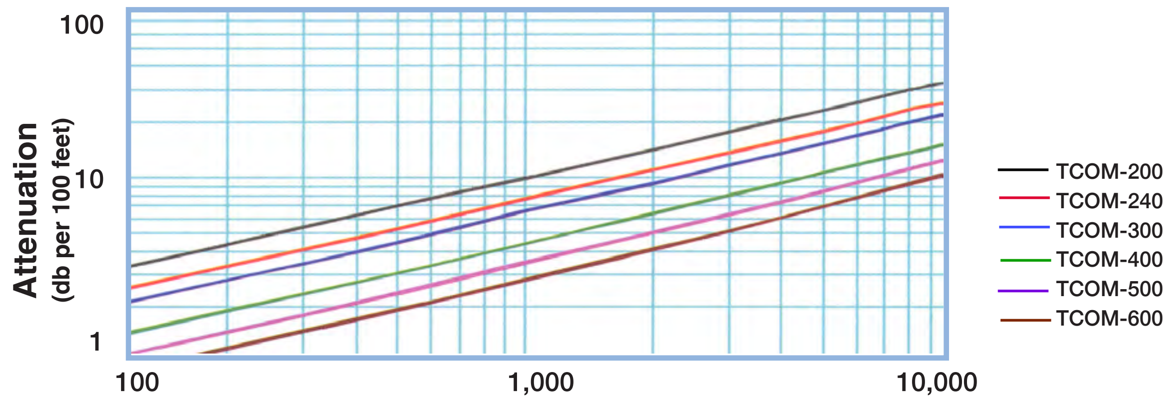
VSWR is lower since the flat ribbons can be applied over the dielectric much more uniformly than multi-end round wire braids. The VSWR and attenuation variation due to aging and flexure is substantially lower at all frequencies, and especially above 12 GHz. TCOM cables are also available from Times that have been sweep tested for broadband VSWR and attenuation performance. Please contact the factory with your specific requirements.

A full range of standard interface connectors (crimp or clamp style) are available. TCOM cables can be purchased in bulk reels or as preterminated and tested cable assemblies.

TCOM Low Loss High Performance Coaxial Cables

TMS Number	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Weight lbs/foot (kg/m)	Impedance ohms Vp(%)	Capacitance pF/foot (pF/m)	DC Resistance ohms/1kft (/km) Cent. Cond	Shield (s)	Oper. Voltage kvrms	Temp. Range F (C)	Min. Bend Radius in. (mm)	Test Freq.
TCOM-200	BC 0.044 (1.12)	Foam PE 0.116 (2.95)	FSC Intl: TC 0.154 (3.91)	PE+lvs 0.195 (4.95)	0.040 (0.060)	50 +/- 1 83	24.5 (80.4)	5.4 (17.6)	3.54 (10.7)	1.0	-40 +185 (-40 +85)	0.5 (12.7)	.03- 10 GHz
TCOM-240	BC 0.058 (1.42)	Foam PE 0.150 (3.81)	FSC Intl: TC 0.188(4.78)	PE+lvs 0.240 (6.10)	0.045 (0.067)	50 +/- 1 84	24.2 (79.4)	3.2 (10.5)	1.91 (6.26)	1.5	-40 +185 (-40 +85)	1 (25.4)	.03- 10 GHz
TCOM-300	BC 0.070 (1.78)	Foam PE 0.190 (4.83)	FSC Intl: TC 0.225 (5.72)	PE+ lvs 0.300 (7.62)	0.055 (0.082)	50+/-1 85	23.9 (78.4)	2.1 (7.0)	1.96 (5.4)	2.0	-40+185 (_40+85)	1.5 (38.1)	.03- 10 GHz
TCOM-400	BCCAI 0.108 (2.74)	Foam PE 0.285 (9.40)	FSC Intl: TC 0.330 (8.38)	PE+lvs 0.405 (10.29)	0.080 (0.119)	50+/-1 85	23.9 (78)	1.4 (4.6)	1.37 (3.8)	2.5	-40+185 (-40+85)	2 (50.8)	.03- 10 GHz
TCOM-500	BCCAI 0.142 (3.61)	Foam PE 0.370 (9.40)	FSC Intl: TC 0.415 (10.54)	PE+lvs 0.500 (12.70)	0.120 (0.179)	50+/-1 86	23.6 (77.4)	0.81 (2.7)	1.21 (4.3)	3.0	-40+185 (-40+85)	2.5 (63.5)	03- 10 GHz
TCOM-600	BCCAI 0.176 (4.47)	Foam PE 0.455 (11.56)	FSC Intl: TC 0.500 (12.70)	PE+lvs 0.590 (14.99)	0.160 (0.238)	50+/-1 87	23.4 (76.8)	0.524 (1.7)	1.02 (3.7)	4.0	-40+185 (-40+85)	3 (76.2)	.03- 10 GHz

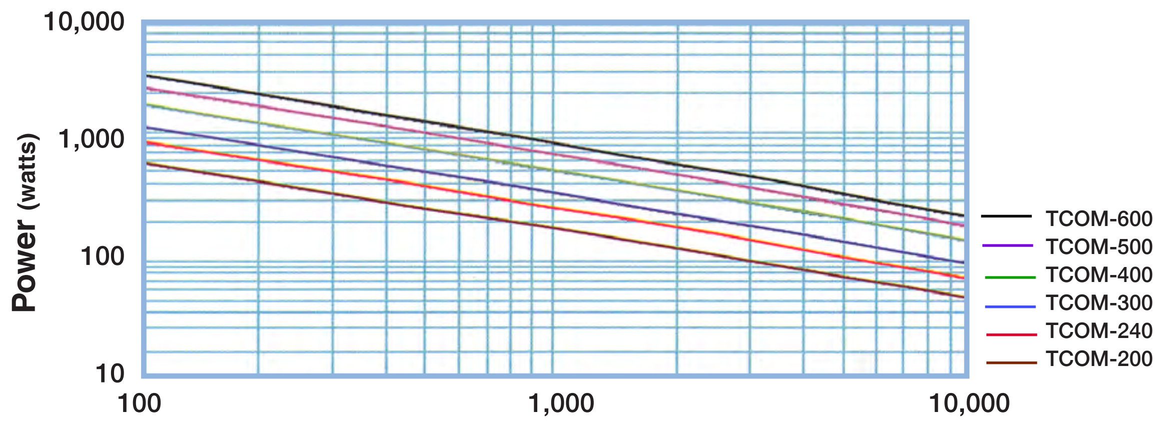
Attenuation vs. Frequency (Typical)



Frequency (MHz)	30	50	150	450	900	2,000	3,000	4,000	5,000	8,000	10,000	k1	k2
TCOM-200	1.7	2.2	3.8	6.6	9	14	18	21	23	30	34	0.30367	0.00033
TCOM-240	1.3	1.6	2.9	5.0	7.2	11	14	16	18	23	26	0.22915	0.00033
TCOM-300	1.1	1.4	2.4	4.3	6.1	9.3	12	14	15	20	23	0.19434	0.00033
TCOM-400	0.7	0.9	1.5	2.9	4.2	6.4	7.9	9	11	14	16	0.13056	0.00026
TCOM-500	0.6	0.7	1.3	2.3	3.3	5.0	6	7	8	11	13	0.10097	0.00026
TCOM-600	0.4	0.6	1.0	1.8	2.6	4.1	5	6	7	9	11	0.08008	0.00026

Attenuation at Any Frequency = [k1 x SQRT [fMHZ] + [k2 x Fmhz]; dB per 100 feet

Power Handling vs. Frequency (Maximum)



Frequency (MHz)	30	50	150	450	900	2,000	3,000	4,000	5,000	8,000	10,000
TCOM-600	5201	4008	2276	1277	879	564	448	378	332	249	217
TCOM-500	4225	3259	1856	1046	723	467	372	316	278	210	183
TCOM-400	3121	2409	1375	779	541	352	282	240	211	161	141
TCOM-300	2068	1597	913	518	360	235	188	161	142	108	95
TCOM-240	1575	1217	696	396	276	180	145	124	109	84	74
TCOM-200	1080	835	478	272	190	125	100	86	75	58	51

Watts; Sea Level; Ambient +40C; VSWR 1:1

TFlex®

Flexible alternative to Semirigid Coax

- **Low Loss Microwave Interconnect**
- **Wireless Base Station Interconnect**

Features & Benefits

- **Meets all MIL-C-17 Requirements**
- **Excellent Shielding Effectiveness**
- **Low Passive Intermod (PIM)**
- **Stable Loss, Phase, & VSWR vs Flexing**
- **Uses Standard Solder-on Semirigid Connectors**

TFlex employs a thin helical wrap of silver plated copper tape and overall braid sized such that standard solder-on connectors can be used.

TFlex was developed 10 years ago and have been widely adopted by the commercial and military OEM's.

Some of the key characteristics of TFlex are:

Passive Intermod – typically > -150dBc (2x 20 watt carriers)

Shielding Effectiveness – comparable to standard semirigid and like semirigid is beyond measurable limits.

Small/Lightweight – same size but lighter weight than standard CL semirigid coax.

Phase Stable – the helical tape outer conductor minimizes electrical length change with temperature to yield substantial improvement over equivalent size flexible cables.

Low Loss – can achieve loss comparable to standard CL semirigid coax.

Attenuation Stability – silver plated outer conductor prevents oxidation of the conductors thereby minimizing attenuation change vs time.

Power Handling – comparable to standard CL semirigid.

Corrosion Resistance – jacketing of the cable with FEP provides excellent protection when cable is deployed in a corrosive environment.

Formability – the flexible nature of TFlex eliminates the need for hand or precision machine bending. TFlex is preterminated in it's approximate desired length and just 'plugged in' using the most convenient/desirable routing.

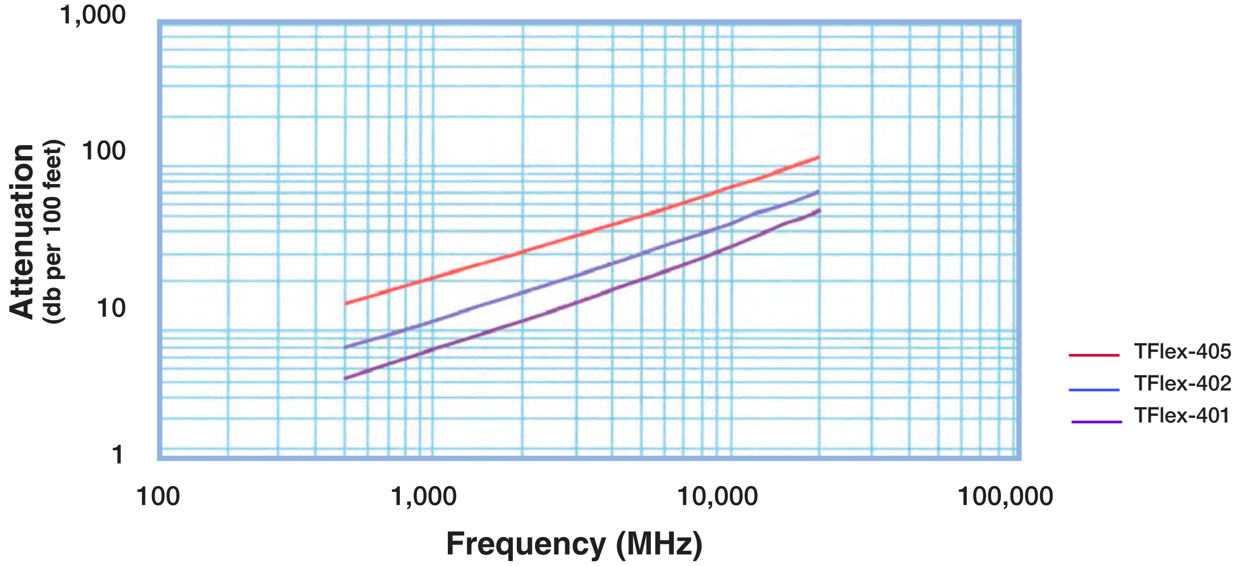
Connectors (solder-on) – are available from a variety of sources to fit standard semirigid coax and TFlex.

TFlex Flexible Alternative to Semirigid Coaxial Cables

TMS Number	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Weight lbs/foot (kg/m)	Impedance ohms Vp(%)	Capacitance pF/foot (pF/m)	DC Resistance ohms/1kft (/km) Cent. Cond	Shield (s)	Oper. Voltage kvrms	Temp. Range F (C)	Min, Bend Radius in. (mm)	Test Freq.
TFlex-405	SCCS 0.0201 (0.51)	PTFE 0.064 (1.63)	SC tape&braid 0.085 (2.16)	Blue FEP 0.103 (2.64)	0.015 (0.022)	50+/-1 69.5	29.3 (96.1)	64.5 (212.6)	10.7 (35.0)	1.5	-85+267 (-65+125)	0.250 (6.4)	0.5- 20 GHz
TFlex-402	SC 0.036 (0.91)	PTFE 0.118 (3.00)	SC tape&braid 0.141 (3.58)	Blue FEP 0.160 (4.06)	0.033 (0.049)	50+/-1 69.5	29.3 (96.1)	8.0 (26.2)	7.63 (25.0)	1.9	-85+257 (-65+125)	0.500 (12.7)	0.5- 20 GHz
TFlex-401	SC 0.0641 (1.63)	PTFE 0.208 (5.28)	SC tape&braid 0.249 (6.32)	Blue FEP 0.270 (6.9)	0.095 (0.142)	50+/-1 69.5	29.3 (96.1)	2.6 (8.4)	2.09 (6.9)	3.0	-85+257 (-65+125)	1.25 (31.8)	0.5- 20 GHz

- **Low Passive Intermod**
- **Phase Stable**
- **All Semirigid Coax Applications**

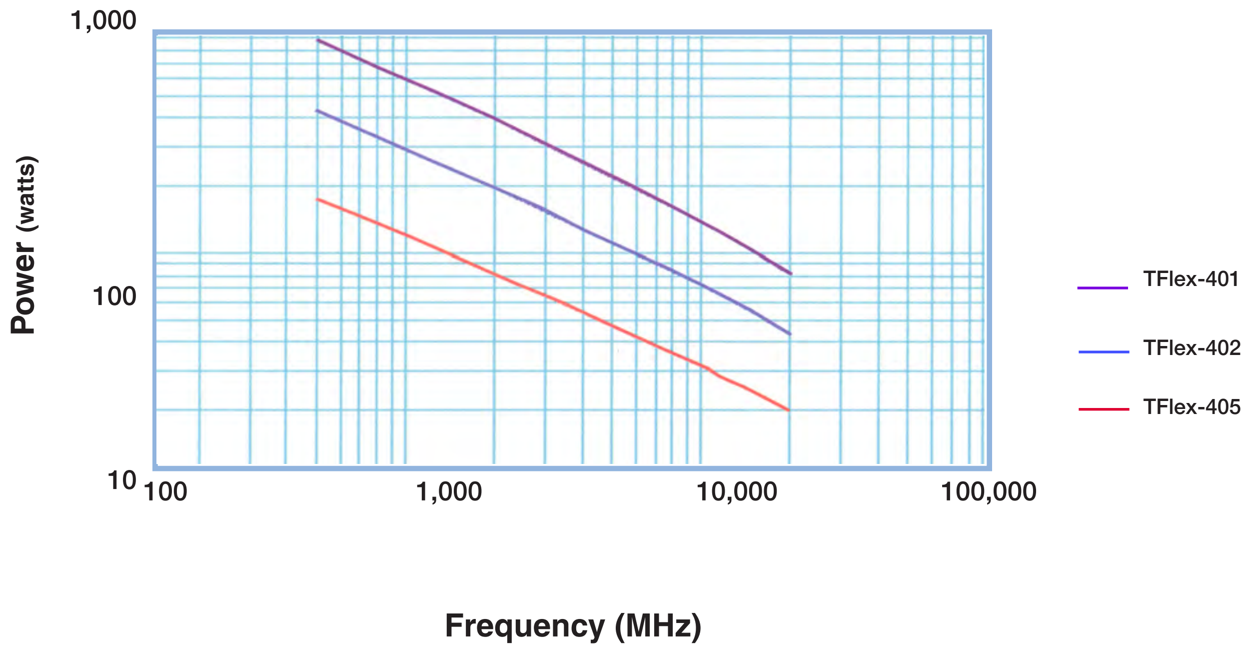
Attenuation vs. Frequency (Typical)



Frequency (MHz)	500	1,000	2,000	3,000	8,000	10,000	12,000	15,000	18,000	20,000	k1	k2
TFlex-405	14.7	21.1	30.6	38	66	76	83	99	106	113	0.630	0.00120
TFlex-402	8.0	11.6	17.2	22	39	45	51	61	66	71	0.330	0.00120
TFlex-401	5.3	7.8	11.8	15	28	33	37	46	50	54	0.210	0.00120

Attenuation at Any Frequency = [k1 x SQRT (Fmhz) + [k2 x Fmhz]; dB per 100 feet

Power Handling vs. Frequency (Maximum)



Frequency (MHz)	500	1,000	2,000	3,000	8,000	10,000	12,000	15,000	18,000	20,000
TFlex-401	885	595	394	306	160	136	120	97	88	81
TFlex-402	426	290	195	154	83	72	63	52	48	44
TFlex-405	173	119	81	65	36	31	28	23	21	20

Watts; Sea Level; Ambient +40C; VSWR 1:1

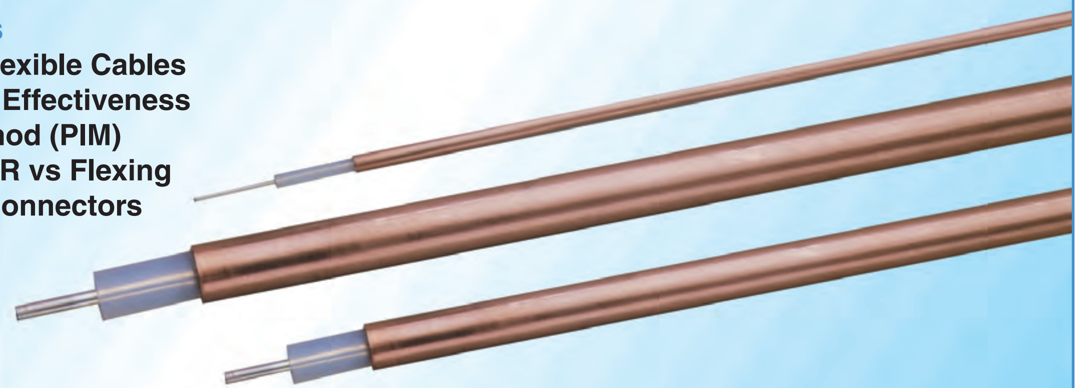
Coppersol®

Semirigid Coax

- **Low Loss Microwave Interconnect**
- **Wireless Base Station Interconnect**

Features & Benefits

- **Lower Loss than Flexible Cables**
- **Superior Shielding Effectiveness**
- **Low Passive Intermod (PIM)**
- **Stable Loss & VSWR vs Flexing**
- **Readily Available Connectors**



Coppersol employs a thin tubular copper outer conductor and solid PTFE dielectric which provides the lowest attenuation and highest shielding giving it significant performance advantages over flexible coax of similar size.

Coppersol was developed 30-40 years ago and was subsequently adopted by the military and MIL-C-17 specification sheets and QPL status were achieved.

Some of the key characteristics of Coppersol are:

Shielding Effectiveness – the highest achievable for any cable and is estimated at >165 db, well below measurable limits..

Small/Lightweight – much smaller and therefore lighter weight than flexible coax having similar electrical performance.

Phase Stable – the solid outer conductor minimizes electrical length change with temperature to substantially lower levels than flexible coax cables.

Low Loss – can achieve up to 50% less loss than flexible cable of the same size.

Attenuation Stability – impervious outer conductor prevents oxidation of the conductors thereby minimizing attenuation change vs. time.

Electrical Performance – has lowest VSWR and pulse reflection coefficient and exhibits very uniform characteristics to >20 GHz.

Corrosion Resistance – jacketing of the bare copper tube or plating with tin or silver is recommended when cable is deployed in a corrosive environment.

Formability – the solid copper tube enables the cable to be bent to any 3 dimensional configuration and have it retain its shape.

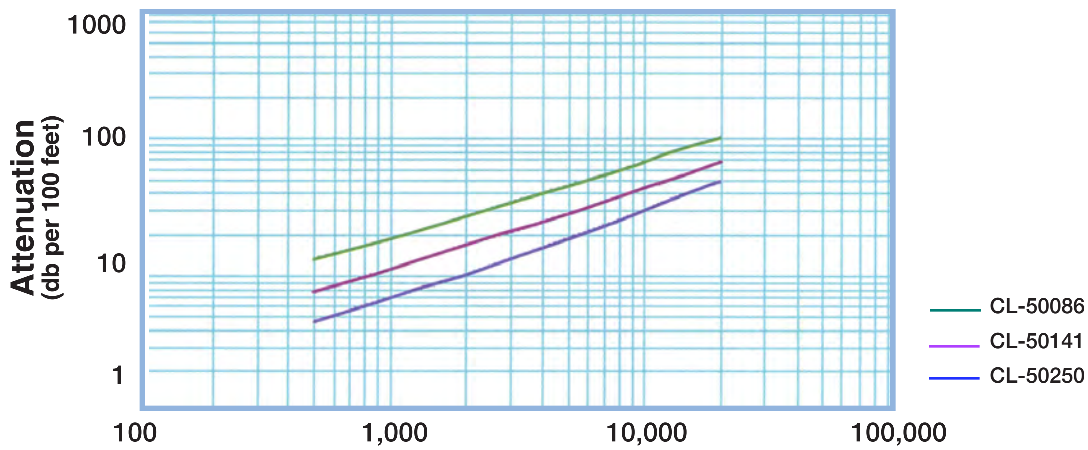
Connectors – standard inexpensive solder-on connectors are available from a variety of connector sources.

Coppersol Semirigid Coaxial Cables

TMS Number	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Weight lbs/foot (kg/m)	Impedance ohms Vp(%)	Capacitance pF/foot (pF/m)	DC Resistance ohms/1kft (/km) Cent. Cond	Shield (s)	Oper. Voltage kvrms	Temp. Range F (C)	Min, Bend Radius in. (mm)	Test Freq.
CL-50086 M17/133-RG405	SCCS 0.0201 (0.51)	PTFE 0.066 (1.68)	BC Tube 0.0865 (2.20)	0.0153 (0.023)	50+/-1.5 69.5	29.4 (96.5)	64.8 (212.6)	2.68 (8.86)	1.5	-40+194 (-40+125)	0.125 (3.2)	0.5- 20 GHz
CL-50141 M17/130-RG402	SCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	BC Tube 0.141 (3.58)	0.0344 (0.051)	50+/-1 69.5	29.4 (96.5)	20.0 (65.6)	1.32 (4.3)	1.9	-40+194 (-40+125)	0.250 (6.4)	0.5- 20 GHz
CL-50250 M17/129-RG401	SC 0.0641 (1.63)	PTFE 0.209 (5.31)	BC Tube 0.250 (6.35)	0.105 (0.156)	50+/-0.5 69.5	29.4 (96.5)	2.6 (8.4)	0.45 (1.5)	3.0	-40+194 (-40+125)	0.375 (9.5)	0.5- 20 GHz

- Low Passive Intermod
- High Temperature
- High Power

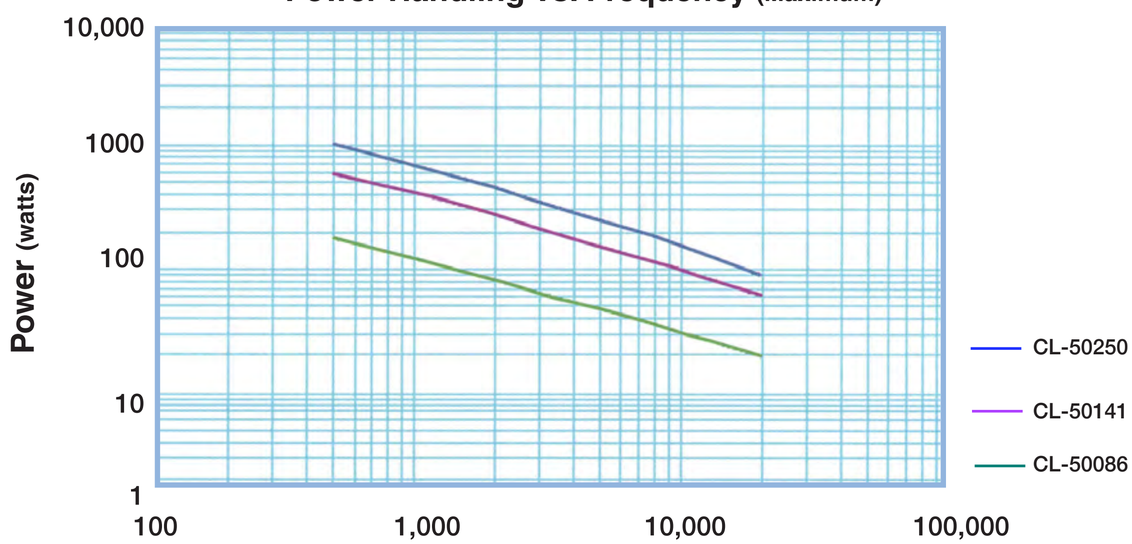
Attenuation vs. Frequency (Typical)



Frequency (MHz)	500	1,000	2,000	3,000	8,000	10,000	12,000	16,000	18,000	20,000	k1	k2
CL-50086	13.2	19.0	27.6	34	60	68	76	91	97	104	0.564	0.00120
CL-50142	7.7	11.3	16.6	21.0	38	44	49	59	64	69	0.318	0.00120
CL-50250	4.6	6.9	10.4	13.4	26	30	34	42	46	49	0.179	0.00120

Attenuation at Any Frequency = [k1 x SQRT (Fmhz)] + [k2 x Fmhz]; dB per 100 feet

Power Handling vs. Frequency (Maximum)



Frequency (MHz)	500	1,000	2,000	3,000	8,000	10,000	12,000	16,000	18,000	20,000
CL-50250	1024	685	449	347	179	152	133	107	97	90
CL-50141	592	403	271	213	115	99	87	71	65	60
CL-50086	174	120	82	65	36	31	28	23	21	20

Watts; Sea Level; Ambient +40C; VSWR 1:1; Outer Conductor +125C

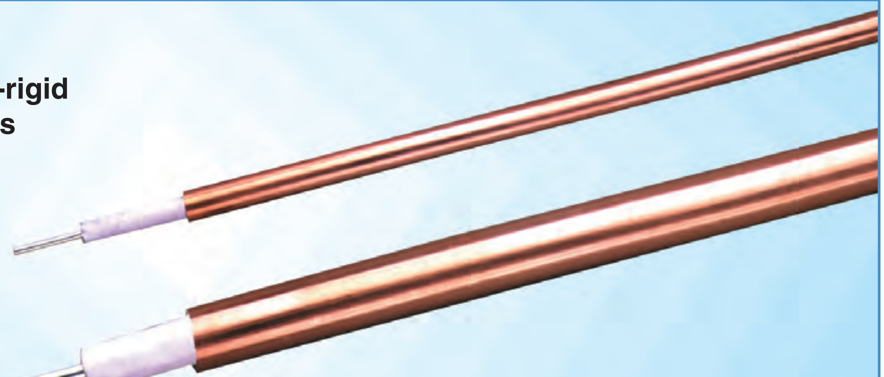
Coppersol® CLL

Low Loss Semirigid Coax

- **Low Loss Microwave Interconnect**
- **Wireless Base Station Interconnect**

Features & Benefits

- **Lower Loss than Standard Semi-rigid**
- **Excellent Shielding Effectiveness**
- **Low Passive Intermod (PIM)**
- **Stable Loss, Phase and VSWR**



Coppersol-CLL employs a thin tubular copper outer conductor and low-density PTFE dielectric which provide the lowest loss and highest shielding giving it significant performance advantages over semirigid coax of similar size.

Coppersol-CLL was developed 25 years ago and have been widely adopted by the military OEM's.

Some of the key characteristics of Coppersol-CLL are:

Shielding Effectiveness – the highest achievable for any cable and is estimated at > 165 dB, well below measurable limits.

Small/Lightweight – same size but lighter weight than standard CL semirigid coax.

Phase Stable – the solid outer conductor and low density PTFE minimizes electrical length change with temperature to yield 100 % improvement over standard CL semirigid coax.

Low Loss – can achieve up to 30 % less loss than standard CL semirigid coax.

Attenuation Stability – impervious outer conductor prevents oxidation of the conductors thereby minimizing attenuation change vs time.

Power Handling – higher operating temperature provides 200% increase in power handling vs standard CL semirigid.

Corrosion Resistance – jacketing of the bare copper tube or plating with tin or silver is recommended when cable is deployed in a corrosive environment.

Formability – the solid copper tube enables the cable to be bent to any 3 dimensional configuration and have it retain its shape.

Connectors – are available from a variety of sources to fit Coppersol-CLL.

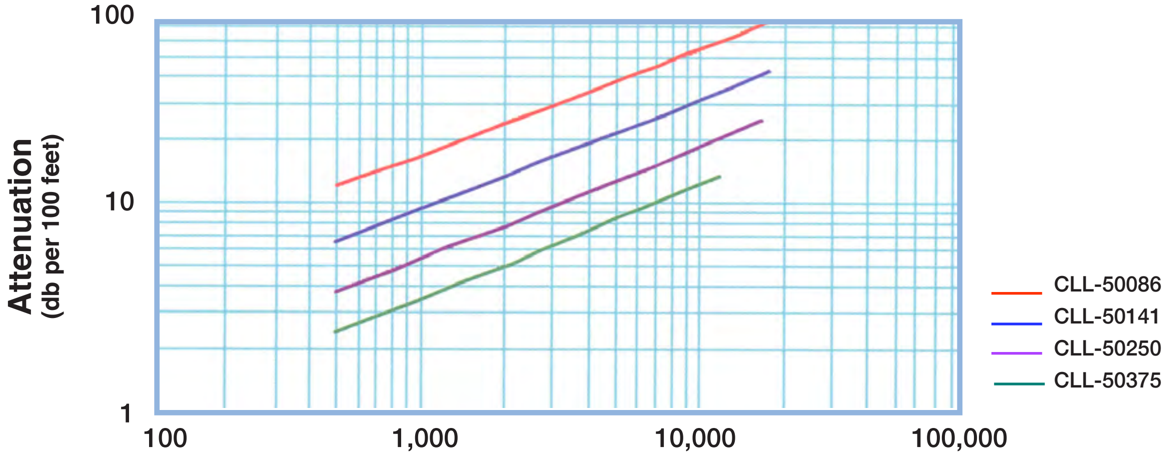
Coppersol CLL Low Loss Semirigid Coaxial Cables

TMS Number	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Weight lbs/foot (kg/m)	Impedance ohms Vp(%)	Capacitance pF/foot (pF/m)	DC Resistance ohms/1kft (/km) Cent. Cond	Shield (s)	Oper. Voltage kvrms	Temp. Range F (C)	Min, Bend Radius in. (mm)	Test Freq.
CLL-50086	SCCS 0.022 (0.56)	LD PTFE 0.066 (1.68)	BC Tube 0.0860 (2.18)	0.0130 (0.019)	50+/-1.5 76	26.8 (87.9)	53.6 (175.9)	2.68 (8.8)	0.6	-85+482 (-65+250)	0.25 (6.4)	0.5- 20 GHz
CLL-50141	SC 0.039 (0.99)	LD PTFE 0.1180 (3.00)	BC Tube 0.141 (3.58)	0.0290 (0.0431)	50+/-1 76	26.8 (87.9)	6.8 (22.4)	1.32 (4.3)	1.3	-85+482 (-65+250)	0.50 (12.7)	0.5- 20 GHz
CLL-50250	SC 0.0700 (1.78)	LD PTFE 0.210 (5.33)	BC Tube 0.250 (6.35)	0.091 (0.136)	50+/-1 76	26.8 (87.95)	2.1 (7.0)	0.45 (1.5)	2.2	-85+482 (-65+250)	2.0 (50.8)	0.5- 20 GHz
CLL-50375	SC 0.1120 (2.84)	LD PTFE 0.335 (8.51)	BC Tube 0.375 (9.535)	0.187 (0.279)	50+/-1 76	26.8 (87.9)	0.83 (2.7)	0.365 (1.2)	3.0	-85+482 (-65+250)	3.25 (82.6)	0.5- 12 GHz

Tinned and Silver Plated Outer Conductors Available on Request

- **Low Passive Intermod**
- **High Temperature**
- **High Power**

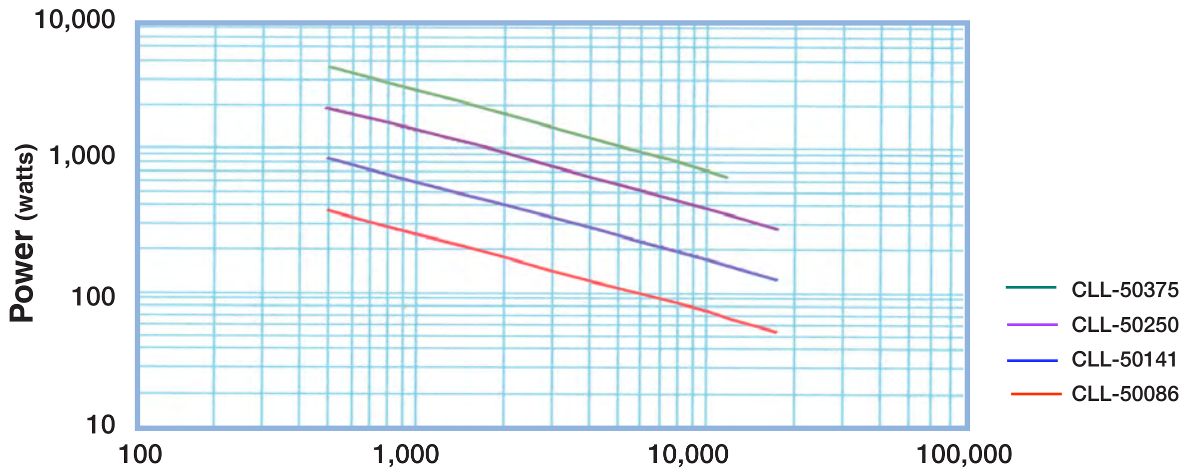
Attenuation vs. Frequency (Typical)



Frequency (MHz)	500	1,000	2,000	3,000	8,000	10,000	12,000	16,000	18,000	20,000	k1	k2
CLL-50086	11.8	16.8	23.9	29	48	54	60	69	74	78	0.525	0.00018
CLL-50141	6.7	9.5	13.5	16.6	28	31	34	40	43	45	0.293	0.00018
CLL-50250	3.8	5.4	7.8	9.6	16	18	20	24	25	27	0.165	0.00018
CLL-50375	2.4	3.5	5.0	6.2	11	12	14	-	-	-	0.104	0.00018

Attenuation at Any Frequency = [k1 x SQRT (Fmhz)] + [k2 x Fmhz]; dB per 100 feet

Power Handling vs. Frequency (Maximum)



Frequency (MHz)	500	1,000	2,000	3,000	8,000	10,000	12,000	16,000	18,000	20,000
CLL-50375	3633	2525	1743	1397	805	707	635	-	-	-
CLL-50250	1908	1332	925	745	436	384	347	294	274	257
CLL-50141	834	584	407	329	194	171	155	131	123	116
CCL-50086	363	254	177	143	84	74	67	56	53	50

Watts; Sea Level; Ambient +40C; VSWR 1:1; Outer Conductor +250C

Mission Critical PERFORMANCE

EW System Interconnects from ***TIMES MICROWAVE SYSTEMS***

Integrated Device Assemblies

- Flat, Equalized, Filtered, Attenuated, Amplified
- Platform-Independent System Design
- Dramatically Boosts System Performance
- Broadband Performance

Multi-Port Interconnects

- 38999 size 8, 12; M8; P8; MMP Contacts
- Blind-Mating, ARINC, Rack & Panel, Custom Shells
- Easy Insertion/Removal, Field Replaceable Contacts
- Rugged, Sealed, Extreme Environment Qualified

Vehicle Mounted/Deployed Antenna Feeder Cables

- Excellent Long-Term Electrical Performance
- Resists Harsh Treatment and Environments
- NBC Compliant Ruggedization Options
- Suited to COMM, COMMINT, IED, More

PhaseTrack™ for Critical Phase Applications

- Superior Electrical Phase Stability (vs LD PTFE)
- <1.5 ppm/°C
- TF4 Dielectric Technology (no PTFE "Knee")
- Ruggedization Options Available

Military Low Smoke Cables

- Ideal for Shipboard, Vehicle, Manned Area Use
- Low Loss, Light Weight, Superior RF Shielding
- Fire Retardant (non-halogen), Flexible
- MIL-DTL-17H Qualified

Blind Mate Antenna Solutions

- Convert Antennas to Blind Mate
- Improve Reliability, Maintainability and Serviceability
- Simplify Mission Equipment Role Changes
- Reduce Loss, Eliminate Cable Loop

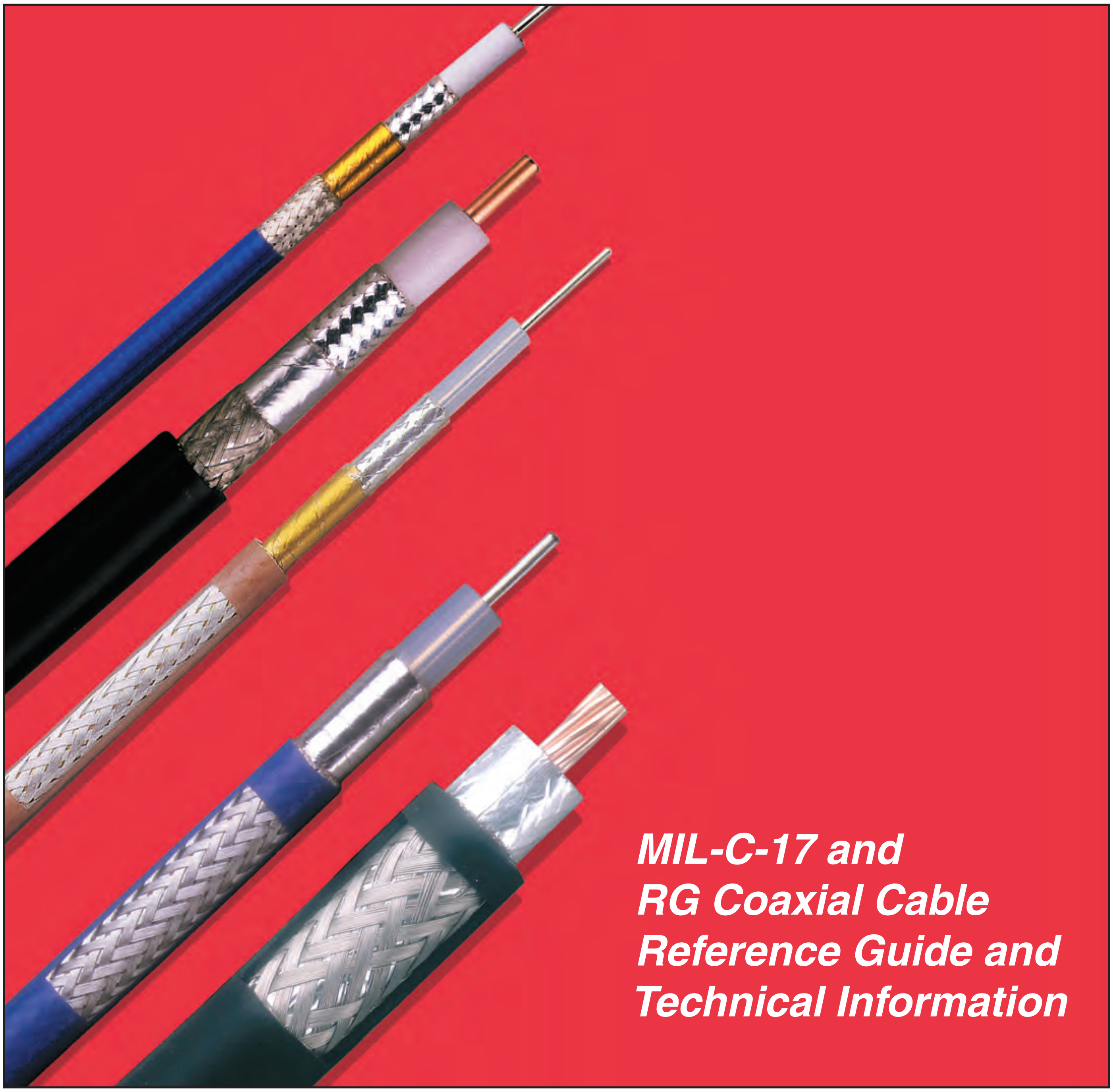
SiO2 (Silicon Dioxide) Cable Assemblies

- Exceptional Phase Stability
- Temperature: -273°C to +600°C
- Hermetically Sealed to 10E-9
- Resistance to Harsh/Extreme Environments

MilTech™ Microwave Transmission Lines

- Flexible, Hermetically Sealed Cables
- Low Loss to 20 dB/100 ft. at 18 GHz
- Replaceable Standard and Self-Locking Connectors
- Aircraft Qualified Worldwide

M17 and RG Cables



MIL-C-17 and RG Coaxial Cable Reference Guide and Technical Information

MIL-C-17 COAXIAL CABLES

INTRODUCTION

MIL-C-17 is the government specification document used to standardize coaxial cables; it has been in use since the 1940's. In the many revisions made to MIL-C-17 over the years, the familiar RG part numbers were superseded by M17 part numbers during the 1970s. The benefits of these more recent revisions are discussed under the following headlines. The most recent and therefore applicable revision to MIL-DTL-17 is Revision H.

Pages 29 through 39 contain a complete listing of all current M17 cables. For engineering reference, pages 45 through 61 contain the old RG tables. Attenuation and power handling characteristics tables are presented on pages 40 through 44.

BENEFITS IN USING MIL-C-17 COAXIAL CABLES

Revision E to MIL-C-17 was released in 1976 to better define the mechanical and electrical requirements for military coaxial cables. For 50-ohm cables, the most important changes were the addition of swept frequency measurements of both attenuation and structural return loss requirements (VSWR) to 22 different cables. Before this revision there were no VSWR requirements, and attenuation requirements were only given at two or three discrete frequencies. Other significant changes are described in the following paragraphs.

ADHESION REQUIREMENTS

MIL-C-17 specifications now contain the minimum and maximum adhesion requirements of the dielectric core to the center conductor. Prior to revision E, it was possible for a cable to have so little adhesion that the center conductor in shorter cables could be pulled out of the entire assembly during the stripping operation. Or there could be too much adhesion between the core and the conductor, causing the conductor to break before the dielectric core could be stripped off. With Revision E, a definite criterion has been specified.

DIMENSIONAL STABILITY

Revision E required that all cables be manufactured and tested to a specific maximum shrinkback allowance for the dielectric core and the jacket. Temperature extremes can cause shrinkback of the cable jacket which can create a poor termination.

ECCENTRICITY

Before Revision E was implemented, eccentricity requirements applied only to polyethylene dielectrics. Now eccentricity requirements have been identified for other kinds of dielectrics (e.g., PTFE). Cables that meet the eccentricity requirement facilitate the reliable assembly of connector parts and provide low VSWR ratios.

STRESS-CRACK RESISTANCE

MIL-C-17 now requires a stress-crack resistance test on all FEP (fluorinated ethylene propylene) and PFA (perfluoroalkoxy) jacketed cables. This test identifies cables with previously undetected residual stress that could result in jacket cracking.

CONTAMINATION

Although earlier MIL-C-17 specifications allowed the use of some Type I PVC (polyvinylchloride) for jackets, Revision F has completely replaced it with Type II PVC, a non-contaminating compound. The plasticizers in Type I PVC can penetrate the braided shield and migrate into the polyethylene dielectric core, causing a large increase in the dielectric loss portion of attenuation, especially at frequencies above 1 GHz. It should be noted that a cable with a type I PVC jacket can affect other cables in close contact, even if the other cables all have Type IIa jackets.

ATTENUATION AND STRUCTURAL RETURN LOSS

MIL-C-17 specifications require that attenuation and structural return loss (VSWR) be completely tested by sweeping 22 different 50-ohm cables over the frequency band for which their use is recommended. Variance in materials or in the manufacturing process can cause periodic discontinuities along a length of coaxial cable which can introduce resonance peaks (spikes). These spikes occur when the discontinuities or changes in electrical characteristics are periodic and at half-wave distances.

When impedance changes occur periodically, there are frequencies in which all of the reflections are in phase, resulting in a large reflected signal or VSWR that is out of proportion to the normal VSWR of the cables and its connectors. Periodic reflections can also cause substantial increase in attenuation at the resonance peaks. In the past, it was very unusual to detect these narrow band, high attenuation spikes when cables were tested for attenuation using the older MIL-C-17D discrete frequency test procedure (generally at 400 MHz and 3 GHz, and also at 10 GHz for RG-214).

Now, however, M17/75-RG214 has continuous swept maximum VSWR and attenuation requirements from 50 MHz to 11 GHz. The maximum VSWR is 1.15:1 (23 dB SRL) at 100 MHz increasing to a maximum of 1.33:1 (17 dB structural return loss) at 11 GHz. The maximum attenuation is 1.7 dB/100 feet at 50 MHz increasing to 60 dB/100 feet at 11 GHz.

Coaxial cables that do not require "full band" swept frequency performance can be procured under separate part numbers in an unswept version. The specifications sheets for these unswept cables recommend that they not be used above 400 MHz. The user must decide which cables will best suit the situation based on cost, application and potential for system growth and improvements.

CABLE DESIGNATIONS

Cables that are manufactured to MIL-C-17 specifications no longer carry the RG designation. For example, RG-214 has been replaced by M17/75-RG214. In the future, any new cable design will be designated by an M17 part number only. In addition to the M17 number, all cables are marked with the manufacturer's name and government identification number, for example, "M17/75-RG214, MIL-C-17, Times Microwave Systems, 68999 AA-3409" Cables that are not marked with this information are not qualified and there is no guarantee of their performance.

MIL-C-17 QPL LISTING

Only qualified cables should be used for military contracts. All manufacturers of MIL-C-17 cables must obtain qualification approval for their cables. The qualified products are then listed in QPL-17 which is updated periodically throughout the year. Please note that all RG numbered cables have been cancelled from MIL-C-17 and only cables with part numbers starting "MIL/17" should be used for new military contracts. Since there is no longer any control of "RG" specifications, many cables on the market with RG designations may be completely different in construction and performance. The RG tables listed in this catalog, when supplied by Times, are manufactured in accordance with the original specifications sheet released by the military.

SPECIAL DESIGNS

Although MIL-C-17 covers a broad range of cable types, Times can also provide technical assistance in designing specialized cables to meet specific system parameters that cannot be met with existing MIL-C-17 cables. Please contact our Marketing Department for assistance with your specialized need.

M17/MIL-C-17 Coaxial Cable Specifications

M17 Part No.	M17 QPL	TMS Part No.	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Armor inches (mm)	Weight lb/ft (kg/m)	Impedance ohms Vp (%)	Capacitance pF/ft (pF/m)	Max Oper. Voltage vrms	Temp. Range F (C)	M17 Test Frequency	Comments
M17/2-RG6	17-663-83	AA-3810	CCS 0.0285 (0.724)	PE 0.185 (4.70)	34SC-34BC 0.243 (6.17)	PVC-IIA 0.332 (8.43)	NA	0.082 (0.122)	75 +/-3 66	20.6 (67.6)	3,000	-40 +185 (-40 +85)	3 GHz Unswept	Use M17/180-00001 LS/LT Jacket
M17/6-RG11	17-100-79	AA-3811	TC 7/.0159” 0.0477 (1.21)	PE 0.285 (7.24)	33BC 0.318 (8.08)	PVC-IIA 0.405 (10.29)	NA	0.098 (0.146)	75 +/-3 66	20.8 (67.6)	5,000	-40 +185 (-40 +85)	1GHz Unswept	Use M17/181-00001 LS/LT Jacket
M 17/6-RG12	17-100-79	AA-3812	TC 7/.0159” 0.0477 (1.21)	PE 0.285 (7.24)	33BC 0.318 (8.08)	PVC-IIA 0.405 (10.29)	Alum.Braid 0.463 (11.76)	0.144 (0.200)	75 +/-3 66	20.6 (67.6)	5,000	-40+185 (-40+85)	1 GHz Unswept	Use M17/181-00002 LS/LT Jacket
M17/15-RG22	17-793-77	AA-3395	2-BC7/ .0152” 0.0456 (1.16)	PE 0.285 (7.24)	34TC:34TC 0.343 (8.71)	PVC-IIA 0.420 (10.67)	NA	0.134 (0.200)	95 +/- 5 66	16.0 (52.5)	1.000	-40+185 (-40 +85)	200 MHz Unswept	Use M17/182-00001 LS/LT Jacket
M17/15-RG111	17-793-77	AA-3396	2-BC 7/.0152” 0.0456 (1.16)	PE 0.285 (7.24)	34TC:34TC 0.343 (8.71)	PVC-IIA 0.420 (10.67)	Alum. Braid 0.478 (12.14)	0.161 (0.240)	95 +/- 5 66	16.0 (52.5)	1,000	-40 +185 (-40 +85)	200MHz Unswept	Use M17/182-00002 LS/LT Jacket
M17/16-RG23	No QPL'd Source	AA-5160	2-BC 7/.0285” 0.0855 (2.17)	PE: 2 cores 0.380 (9.65)	34BC:34BC .438 x .847 (11.1 x 21.5)	PVC-IIA .650 x .945 (16.5 x 24.0)	NA	0.530 (0.789)	125 +/- 5 66	12.0 (39.4)	7,000	-40 +185 (-40 +85)	400 MHz Unswept	Inactive for new design
M17/16-RG24	No QPL'd Source	AA-5161	2-BC 7/.0285” 0.0855 (2.17)	PE: 2 cores 0.380 (9.65)	34BC:34BC .438 x .847 (11.1 x 21.5)	PVC-IIA .650 x .945 (16.5 x 24.0)	Alum. Braid .708 x 1.003 (18.0 x 25.5)	0.730 (1.087)	125 +/-5 66	12.0 (39.4)	7,000	-40+185 (-40 +85)	400 MHz Unswept	Inactive for new design
M17/19-RG25	No QPL'd Source	AA-5124	TC 19/.0117” 0.0585 (1.49)	Rubber-E 0.288 (7.32)	34TC-34TC 0.382 (9.70)	Rubber-IV 0.505 (12.83)	NA	0.225 (0.335)	48 +/-4 42	50.0 (164.1)	10,000	-67 +194 (-55 +90)	1 MHz Unswept	Triaxial Pulse Cable
M17/21-RG26	No QPL'd Source	AA-5125	TC 19/.0117” 0.0585 (1.49)	Rubber-E 0.288 (7.32)	34TC 0.317 (8.05)	Rubber-IV 0.425 (10.80)	Alum. Braid 0.505 (12.83)	0.210 (0.313)	48 +/-4 42	50.0 (164.1)	10,000	-40 +185 (-40 +85)	1 MHz Unswept	Coaxial Pulse Cable Armored
M17/22-RG27	No QPL'd Source	AA-5163	TC 19/.0185” 0.0925 (2.35)	Rubber-D 0.455 (11.56)	34TC 0.484 (12.29)	Rubber-IV 0.595 (15.11)	Alum. Braid 0.670 (17.02)	0.330 (0.492)	48 +/-4 42	50.0 (164.1)	15,000	-40 +185 (-40 +85)	1 MHz Unswept	Coaxial Pulse Cable Armored
M17/22-00001	No QPL'd Source	AA-5162	TC 19/.0185” 0.0925 (2.35)	Rubber-D 0.455 (11.56)	34TC 0.484 (15.11)	Rubber-IV 0.595 (15.11)	NA	0.330 (0.492)	48 +/-4 42	50.0 (164.1)	15,000	-40 +185 (-40 +85)	1 MHz Unswept	Coaxial Pulse Cable
M17/23-RG28	No QPL'd Source	AA-5164	TC 19/.0185” 0.0925 (2.35)	Rubber-D 0.455 (11.58)	34TC:34GS 0.559 (14.20)	Rubber-IV 0.735 (18.67)	NA	0.400 (164.1)	48 +/-4 42	50.0 (164.1)	15,000	-40 +185 (-40 +85)	1 MHz Unswept	Triaxial Pulse Cable
M17/24-RG34	No QPL'd Source	AA-3813	TC 7/.0249” 0.0747 (1.90)	PE 0.460 (11.68)	33BC 0.493 (12.52)	PVC-IIA 0.630 (16.00)	NA	0.231 (0.344)	75 +/-3 66	22.0 (72.2)	6,500	-40+185 (-40+85)	1 GHz Unswept	
M17/28-RG58	17-304-83	AA-3397	TC 19/.0072” 0.0355 (0.090)	PE 0.116 (2.95)	36TC 0.139 (3.53)	PVC-IIA 0.195 (4.95)	NA	0.026 (0.039)	50 +/-2 66	30.8 (101.1)	1,900	-40+185 (-40+85)	.05 to 1 GHz Swept	Use: M17/183-00001 LS/LT Jacket
M17/29-RG59	17-102-79	AA-3797	CCS 0.0226 (0.57)	PE 0.146 (3.71)	34BC 0.175 (4.45)	PVC-IIA 0.242 (6.15)	NA	0.035 (0.052)	75 +/-3 66	20.6 (67.6)	2,300	-40+185 (-40 +85)	1 GHz Unswept	Use: M17/184-00001 LS/LT Jacket
M17/30-RG62	17-795-77	AA-3398	CCS 0.0253 (0.64)	Airspaced PE 0.146 (3.71)	34BC 0.175 (4.45)	PVC-IIA 0.242 (6.15)	NA	0.038 (0.057)	93 +/-5 81	13.5 (44.3)	1,000	-40 +176 (-40 +80)	1 GHz Unswept	Use: M17/185-00001 LS/LT Jacket
M17/31-RG63	17-103-79	AA-3815	CCS 0.0253 (0.64)	Airspaced PE 0.285 (7.24)	33BC 0.318 (8.08)	PVC-IIA 0.405 (10.29)	NA	0.138 (0.206)	125 +/-6 86	11.0 (36.1)	750	-40 +176 (-40 +80)	1 GHz Unswept	Use: M17/218-00001 LS/LT Jacket
M17/31-RG79	17-103-79	AA-3816	CCS 0.0253 (0.64)	Airspaced PE 0.285 (7.24)	33BC 0.318 (8.08)	PVC-IIA 0.405 (10.29)	Alum. Braid 0.475 (12.07)	0.088 (0.131)	125 +/-5 81	10.0 (32.8)	1,000	-40 +175 (-40 +80)	1GHz Unswept	Use: M17/218-00002 LS/LT Jacket
M17/33-RG64	No QLP'd Source	AA-5126	TC 19/.0117” 0.0585 (1.49)	Rubber-E 0.288 (7.32)	34TC:34TC 0.346 (8.79)	Rubber-IV 0.450 (11.68)	NA	0.220 (0.328)	48 +/-4 42	55.0 (180.5)	10,000	-40 +185 (-40 +85)	1 MHz Unswept	Coaxial Pulse Cable
M17/34-RG65	No QLP'd Source	AA-5165	.008” MW Helix 0.1280 (3.25)	PE 0.285 (7.24)	33BC 0.318 (8.08)	PVC-IIA 0.405 (10.29)	NA	0.110 (0.164)	950 +/-50 2	48.0 (157.5)	1,500	-40 +176 (-40 +85)	5 MHz Unswept	Coaxial Delay Line 0.15 uSec/foot
M17/45-RG108	17-796-77	AA-3399	2:TC 7/.0126” 0.0378 (0.96)	PE (2 cores) 0.079 (2.01)	36TC 0.181 (4.60)	PVC-IIA 0.235 (5.97)	NA	0.035 (0.052)	78 +/-7 68	19.6 (64.3)	1,000	-40 +185 (-40 +85)	10 MHz Unswept	Use: M17/186-00001 LS/LT Jacket
M17/47-RG114	Non- QPL'd	AA-3817	CCS 0.007 (0.18)	Airspaced PE 0.285 (7.24)	34BC 0.314 (7.98)	PVC-IIA 0.405 (10.29)	NA	0.089 (1.33)	185 +/-10 85	6.5 (21.3)	1,000	-40 -176 (-40 +80)	1 GHz Unswept	Use: M17/208-00001 LS/LT Jacket

M17/MIL-C-17 Coaxial Cable Specifications

M17 Part	M17 QPL No.	TMS Part	Conductor inches No.	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Armor inches (mm)	Weight lb/ft (mm)	Impedance ohms (kg/m)	Capacitance pF/ft Vp (%)	Max Oper. Voltage (pF/m)	Temp. Range vrms	M17 Test F (C)	Comments Frequency
M17/52-RG119	17-749-85	AA-3818	BC 0.1019 (2.59)	PTFE 0.332 (8.43)	33BC:34BC 0.394 (10.01)	FG Braid-V 0.465 (11.81)	NA	0.228 (0.340)	50 +/-2 69.5	29.4 (96.5)	6,000	-67 +392 (-55 +200)	.05 - 1 GHz Swept	High Power Coax
M17/52-RG120	17-749-85	AA-3819	BC 0.1019 (2.59)	PTFE 0.332 (8.43)	33BC:34BC 0.394 (10.01)	FG Braid-V 0.465 (11.81)	Alum Braid 0.525 (13.34)	0.286 (0.426)	50 +/-2 69.5	29.4 (96.5)	6,000	-67 +392 (-55 +200)	.05 - 1GHz Swept	Armored M17/52-RG119
M17/52-00001	No QPL'd Source	NA	BC 0.1019 (2.59)	PTFE 0.332 (8.43)	33SC:33SC 0.394 (10.01)	FG Braid-V 0.465 (11.81)	NA	0.228 (0.340)	50 +/-2 69.5	29.4 (96.5)	6,000	-67 +392 (-55 +200)	.05 - 3GHz Swept	High Frequency M17/52-RG119
M17/54-RG122	17-305-83	AA-3400	TC 27/.005" 0.0308 (0.78)	PE 0.096 (2.44)	36TC 0.119 (3.02)	PVC-IIA 0.160 (4.06)	NA	0.021 (0.031)	50 +/-2 66	30.8 (101.1)	1,900	-40 +185 (-40 +85)	.05 - 1 GHz Swept	Use M17/187-00001 LS/LT Jacket
M17/56-RG130	No QPL'd Source	AA-5166	2: BC 7/.0285" 0.0855 (2.17)	PE 0.472 (11.99)	30TC 0.518 (13.16)	PVC-IIA 0.625 (15.88)	NA	0.300 (0.447)	95 +/-5 66	16.3 (53.5)	3,000	-40 +185 (-40 +85)	200 MHz UnSwept	Balanced Shielded Line
M17/56-RG131	No QPL'd Source	AA-5187	2:BC 7/.0285" 0.0855 (2.17)	PE 0.472 (11.99)	30TC 0.518 (13.16)	PVC-IIA 0.625 (15.88)	Alum. Braid 0.710 (18.03)	0.400 (0.596)	95 +/5 66	16.3 (53.5)	3,000	-40 +185 (-40 +85)	200 MHz UnSwept	Armored M17/56-RG130
M17/60-RG142	17-664-83	AA-3401	SCCS 0.037 (0.94)	PTFE 0.116 (2.95)	36SC: 36SC 0.162 (4.11)	FEP-IX 0.195 (4.95)	NA	0.043 (0.064)	50 +/-2 69.5	29.4 (96.5)	1,900	-67 +392 (-55 +200)	.05 - 8 GHz Swept	50 ohm Low Loss High Temperature Coax
M17/62-RG144	17-750-85	AA-3820	SCCS 7/.0175" 0.0525 (1.33)	PTFE 0.285 (7.24)	34SC 0.314 (7.98)	FG Braided-V 0.410 (10.41)	NA	0.140 (0.209)	75 +/-3 69.5	19.5 (64.0)	5,000	-67 +392 (-55 +200)	3 GHz UnSwept	75 ohm Low Loss High Temperature Coax
M17/64-RG35	No QPL'd Source	AA-3822	BC 0.1045 (2.65)	PE 0.680 (17.27)	30BC 0.726 (18.44)	PVC-IIA 0.870 (22.10)	Alum.Braid 0.945 (24.00)	0.545 (0.812)	75 +/- 3 66	20.6 (67.6)	10,000	-40 +185 (-40 +85)	1 GHz UnSwept	Armored M17/209-00001
M17/64-RG164	No QPL'd Source	AA-3821	BC 0.1045 (2.65)	PE 0.680 (17.27)	30BC 0.726 (18.44)	PVC-IIA 0.870 (22.10)	NA	0.505 (0.752)	75 +/- 3 66	20.6 (67.6)	10,000	-40 +185 (-40 +185)	1 GHz UnSwept	Use: M17/209-0001 LS/LT Jacket
M17/65-RG165	17-598-81	AA-3402	SC 7/.0315" 0.094 (2.39)	PTFE 0.285 (7.24)	34SC 0.314 (7.98)	FG Braid-V 0.410 (10.41)	NA	0.142 (0.212)	50 +/- 2 69.5	29.4 (96.5)	2,500	-67 +482 (-55 +250)	0.05 - 3 GHz Swept	
M17/65-RG166	17-598-81	AA-3403	SC 7/.0315" 0.094 (2.39)	PTFE 0.285 (7.24)	34SC 0.314 (7.98)	FG Braid-V 0.410 (10.41)	Alum.Braid 0.470 (11.94)	0.189 (0.282)	50 +/- 2 69.5	29.4 (96.5)	2,500	-67 +482 (55 +250)	0.05 - 3 GHz Swept	Armored M17/65-RG165
M17/67-RG177	17-1102-85	AA-3404	BC 0.195 (4.95)	PE 0.680 (17.27)	34SC: 34SC 0.738 (18.75)	PVC-IIA 0.895 (22.73)	NA	0.520 (0.775)	50 +/- 2 66	30.8 (101.1)	11,000	-40 +185 (-40 +85)	0.05 - 3 GHz Swept	Use: M17/210-00001 LS/LT Jacket
M17/72-RG211	No QPL'd Source	AA-3405	BC 0.192 (4.88)	PTFE 0.620 (15.75)	32BC 0.657 (16.69)	FG Braid-V 0.730 (18.54)	NA	0.516 (0.769)	50 +/- 2 69.5	29.4 (96.5)	7,000	-67 +482 (-55 +250)	0.05 - 3 GHz Swept	
M17/73-RG212	17-1104-85	AA-3406	SC 0.0556 (1.41)	PE 0.185 (4.70)	34SC:34SC 0.243 (6.17)	PVC-IIA 0.332 (8.43)	NA	0.089 (0.133)	50 +/- 2 66	30.8 (101.1)	3,000	-40 +185 (-40 +85)	0.05 - 3 GHz Swept	Use:M17/188-00001 LS/LT Jacket
M17/74-RG213	17-804-77	AA-3408	BC 7/.0296" 0.0888 (2.26)	PE 0.285 (7.24)	33BC 0.318 (8.08)	PVC-IIA 0.405 (10.29)	NA	0.111 (0.165)	50 +/- 2 66	30.8 (101.1)	5,000	-40 +185 (-40 +85)	0.05 - 1 GHz Swept	Use M/17189-00001 LS/LT Jacket
M17/74-RG215	17-804-77	AA-3407	BC 7/.0296" 0.0888 (2.26)	PE 0.285 (7.24)	33BC 0.318 (8.08)	PVC-IIA 0.405 (10.29)	Alum.Braid 0.475 (12.07)	0.138 (0.206)	50 +/- 2 66	30.8 (101.1)	5,000	-40 +185 (-40 +85)	0.05 - 11GHz Swept	Use M17/189-00002 LS/LT Jacket
M17/75-RG214	17-804-77	AA-3409	SC 7/.0296" 0.0888 (2.26)	PE 0.285 (7.24)	34SC:34SC 0.343 (8.71)	PVC-IIA 0.425 (10.80)	NA	0.130 (0.194)	50 +/- 2 66	30.8 (101.1)	5,000	-40 +185 (-40 +85)	0.05 - 11GHz Swept	Use M17/190-00001 LS/LT Jacket
M17/75-RG365	17-984-85	AA-4761	SC 7/.0296" 0.0888 (2.26)	PE 0.285 (7.24)	34SC:34SC 0.343 (8.71)	TPE 0.425 (10.80)	NA	0.130 (0.194)	50 +/-2 66	30.8 (101.1)	5,000	-67 +185 (-55 +85)	0.05 - 11GHz Swept	
M17/77-RG216	17-108-79	AA-3823	TC 7/.0159" 0.0477 (1.21)	PE 0.285 (7.24)	34BC:34BC 0.343 (8.71)	PVC-IIA 0.425 (10.80)	NA	0.124 (0.185)	75 +/-3 66	20.6 (67.6)	5,000	-40 +185 (-40 +85)	3 GHz UnSwept	Use M17/191-00001 LS/LT Jacket
M17/78-RG217	17-1102-85	AA-3410	BC 0.106 (2.69)	PE 0.370 (9.40)	33BC:33BC 0.436 (11.07)	PVC-IIA 0.545 (13.84)	NA	0.225 (0.335)	50 +/-2 66	30.8 (101.1)	7,000	-40 +185 (-40 +85)	0.05 - 3GHz Swept	Use M17-192-00001 LS/LT Jacket

M17/MIL-C-17 Coaxial Cable Specifications

M17 Part No.	M17 QPL	TMS Part No.	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Armor inches (mm)	Weight lb/ft (kg/m)	Impedance ohms Vp (%)	Capacitance pF/ft (pF/m)	Max Oper. Voltage vrms	Temp. Range F (C)	M17 Test Frequency	Comments
M17/78-00001	17-1102-85	AA-8212	BC 0.106 (2.69)	PE 0.370 (9.40)	33BC:33BC 0.436 (12.07)	PVC-IIA 0.545 (13.84)	NA	0.225 (0.335)	50 +/-2 66	30.8 (101.1)	7,000	-40 +176 (-40 +85)	0.05 - 3GHz Swept	Temperature-cycled M17/78-RG217
M17/79-RG218	17-1102-85	AA-3411	BC 0.195 (4.95)	PE 0.680 (17.27)	30BC 0.726 (18.44)	PVC-IIA 0.870 (22.10)	NA	0.510 (0.760)	50 +/-2 66	30.8 (101.1)	11,000	-40 +185 (-40 +85)	0.05 - 1GHz Swept	Use M17/193-00001 LS/LT Jacket
M17/79-RG219	17-1102-85	AA-3412	BC 0.195 (4.95)	PE 0.680 (17.27)	30BC 0.726 (18.44)	PVC-IIA 0.870 (22.10)	Alum.Braid 0.945 (24.00)	0.550 (0.819)	50 +/-2 66	30.8 (101.1)	11,000	-40 +185 (-40 +85)	0.05 - 1GHz Swept	Use M17/193-00002 LS/LT Jacket
M17/81-00001	17-354-88	AA-6002	BC 0.260 (6.60)	PE 0.910 (23.11)	30BC 0.956 (24.28)	PVC-IIA 1.120 (28.45)	NA	0.820 (1.221)	50 +/-2 66	30.8 (101.1)	14,000	-40 +185 (-40 +85)	1 GHz UnSwept	
M17/81-00002	17-354-88	AA-6003	BC 0.260 (6.60)	PE 0.910 (23.11)	30BC 0.956 (24.28)	PVC-IIA 1.120 (28.45)	Alum.Braid 1.195 (30.35)	0.880 (1.311)	50 +/-2 66	30.8 (101.1)	14,000	-40 +185 (-40 +85)	1 GHz UnSwept	Armored M17/81-00001
M17/84-RG223	17-303-83	AA-3413	SC 0.035 (0.89)	PE 0.116 (2.95)	36SC:36SC 0.162 (4.11)	PVC-IIA 0.212 (5.38)	NA	0.041 (0.061)	50 +/-2 66	30.8 (101.1)	1,900	-40 +185 (-40 +85)	.04-12.4 GHz Swept	Use M17/194-00001 LS/LT Jacket
M17/86-00001	17-598-81	AA-5077	SC 7/.0312" 0.0936 (2.38)	PTFE 0.285 (7.24)	34SC:34SC 0.343 (8.71)	FG Braid-V 0.430 (10.92)	NA	0.195 (0.290)	50 +/-2 69.5	29.4 (96.5)	5,000	-67 +392 (-55 +200)	400 MHz UnSwept	
M17/86-00002	17-598-81	AA-5078	SC 7/.0312" 0.0936 (2.38)	PTFE 0.285 (7.24)	34SC:34SC 0.343 (8.71)	FG Braid-V 0.430 (10.92)	Alum.Braid 0.490 (12.45)	0.222 (0.331)	50 +/-2 69.5	29.4 (96.5)	5,000	-67 +392 (-55 +200)	400 MHz UnSwept	Armored M17/86-00001
M17/87-00001	17-355-88	AA-5168	SC 19/.0254" 0.127 (3.23)	Taped PTFE 0.370 (9.40)	34BC:34SC 0.428 (5.03)	FG Braid-V 0.500 (12.70)	NA	0.448 (0.667)	50 +/-2 71	29.0 (95.1)	7,000	-67 +392 (-55 +200)	400 MHz UnSwept	
M17/90-RG71	17-280-83	AA-4444	CCS 0.0253 (0.54)	Air-space PE 0.146 (3.71)	34BC:36TC 0.198 (5.03)	PE-IIIA 0.245 (6.22)	NA	0.050 (0.074)	93 +/-5 81	13.5 (44.3)	1,000	-67 +185 (-55 +85)	1GHz UnSwept	Use M17/195-00001 LS/LT Jacket
M17/92-RG115	17-598-81	AA-3824	SC 7/.0280" 0.084 (2.13)	Taped PTFE 0.255 (6.48)	34SC:34SC 0.313 (7.95)	FG Braid-V 0.415 (10.54)	NA	0.185 (0.276)	50 +/- 2 71	29.0 (95.1)	5,000	-67 +392 (-55 +200)	.05-12.4 GHz Swept	
M17/92-00001	17-598-81	AA-5308	SC 7/.0280" 0.084 (2.13)	Taped PTFE 0.255 (6.48)	34SC:34SC 0.313 (7.95)	FEP-IX 0.344 (8.74)	NA	0.185 (0.276)	50 +/- 2 71	29.0 (95.1)	5,000	-67 +392 (-55 +200)	.05-12.4 GHz Swept	
M17/93-RG178	17-666-83	AA-3414	SCCS 7/.0040" 0.012 (0.30)	PTFE 0.033 (0.84)	38SC 0.051 (1.30)	FEP-IX 0.071 (1.80)	NA	0.006 (0.009)	50 +/- 2 69.5	29.4 (96.5)	1,000	-67 +392 (-55 +200)	.05-3 GHz Swept	
M17/93-00001	17-867-84	AA-4762	SCCS 7/.0040" 0.012 (0.30)	PTFE 0.033 (0.84)	38SC 0.051 (1.30)	PFA-XIII 0.071 (1.80)	NA	0.006 (0.009)	50 +/- 2 69.5	29.4 (96.5)	1,000	-67 +446 (-55 +230)	.05-3 GHz Swept	
M17/94-RG179	17-809-77	AA-3415	SCCS 7/.0040" 0.012 (0.30)	PTFE 0.063 (1.60)	38SC 0.081 (2.06)	FEP-IX 0.100 (2.54)	NA	0.010 (0.015)	75 +/- 3 69.5	19.5 (64.0)	1,200	-67 +392 (-55 +200)	3 GHz UnSwept	
M17/95-RG180	17-810-77	AA-3416	SCCS 7/.0040" 0.012 (0.30)	PTFE 0.102 (2.59)	38SC 0.120 (3.05)	FEP-IX 0.141 (3.58)	NA	0.0198 (0.029)	95 +/-5 69.5	15.4 (50.5)	1,500	-67 +392 (-55 +200)	3 GHz UnSwept	
M17/97-RG210	17-668-83	AA-4763	SCCS 0.0253 (0.64)	Air-space PTFE 0.146 (3.71)	34SC 0.175 (4.45)	FG Braid-V 0.242 (6.15)	NA	0.050 (0.074)	93 +/- 5 85	13.5 (44.3)	1,000	-67 +392 (-55 +200)	3 GHz UnSwept	
M17/100-RG133	No QPL'd Source	NA	BC 0.0253 (0.64)	PE 0.285 (7.24)	33BC 0.318 (8.08)	PVC-IIA 0.405 (10.29)	NA	0.095 (0.142)	95 +/- 5 66	16.3 (53.5)	5,000	-40 +185 (-40 +85)	1 GHz UnSwept	
M17/109-RG301	No QPL'd Source	NA	HR 7/.0203" 0.0609 (1.55)	PTFE 0.185 (4.70)	36HR 0.208 (5.28)	FEP-IX 0.245 (6.22)	NA	0.056 (0.083)	50 +/- 2 69.5	29.4 (96.5)	3,000	-67 +392 (-55 +200)	3 GHz UnSwept	
M17/110-RG302	17-425-84	AA-3826	SCCS 0.0253 (0.64)	PTFE 0.146 (3.71)	36SC 0.169 (4.29)	FEP-IX 0.202 (5.13)	NA	0.040 (0.060)	75 +/- 3 69.5	19.5 (64.0)	2,300	-67 +392 (-55 +200)	3 GHz UnSwept	
M17/111-RG303	17-811-77	AA-3417	SCCS 0.0370 (0.94)	PTFE 0.116 (2.95)	36SC 0.139 (3.53)	FEP-IX 0.170 (4.32)	NA	0.031 (0.046)	50 +/- 2 69.5	29.4 (96.5)	1,900	-67 +392 (-55 +200)	0.05-3 GHz Swept	

M17/MIL-C-17 Coaxial Cable Specifications

M17 Part No.	M17 QPL	TMS Part No.	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Armor inches (mm)	Weight lb/ft (kg/m)	Impedance ohms Vp (%)	Capacitance pF/ft (pF/m)	Max Oper. Voltage vrms	Temp. Range F (C)	M17 Test Frequency	Comments
M17/112-RG304	17-474-86	AA-5130	SCCS 0.0590 (1.50)	PTFE 0.185 (4.70)	34SC:34SC 0.243 (6.17)	FEP-IX 0.280 (7.11)	NA	0.094 (0.140)	50 +/- 2 69.5	29.4 (96.5)	3,000	-67 +392 (-55 +200)	0.05-8 GHz Swept	
M17/113-RG316	17-812-77	AA-3418	SCCS 7/.0067" 0.0201 (0.51)	PTFE 0.060 (1.52)	38SC 0.078 (1.98)	FEP-IX 0.098 (2.49)	NA	0.012 (0.018)	50 +/- 2 69.5	29.4 (96.5)	1,200	-67 +392 (-55 +200)	0.05-3 GHz Swept	
M17/116-RG307	17-482-84	AA-4346	SC 19/.0058" 0.0290 (0.74)	Foam PE 0.146 (3.71)	34SC- PUR-34SC 0.234 (5.94)	PE-IIIA 0.265 (6.73)	NA	0.080 (0.119)	75 +/- 3 81	16.9 (55.4)	1,000	-67 +185 (-55 +80)	1 GHz UnSwept	
M17/119-RG174	17-813-77	AA-3419	CCS 7/.0063" 0.0189 (0.48)	PE 0.060 (1.52)	38TC 0.078 (1.98)	PVC-IIA 0.110 (2.79)	NA	0.009 (0.013)	50 +/- 2 66	30.8 (101.1)	1,500	-40 +185 (-40 +85)	0.05-1 GHz Swept	Use M17/196-00001 LS/LT Jacket
M17/124-RG328	No QPL'd Source	NA	TC Braid 0.4850 (12.32)	Rubber H,J,H 1.065 (27.05)	30TC: 33GS:30TC 1.251 (31.78)	Neoprene 1.460 (37.08)	NA	1.600 (2.383)	25 +/- 2 48	85.0 (278.9)	15,000	-67 +185 (-55 +85)	1 GHz UnSwept	
M17/125-RG329	No QPL'd Source	NA	TC19/.0117" 0.0585 (1.49)	Rubber H,J,H 0.380 (9.65)	30TC:33GS:30TC 0.571 (14.50)	Neoprene 0.700 (17.78)	NA	0.353 (0.526)	50 +/- 2 43	50.0 (164.1)	15,000	-67 +194 (-55 +90)	1 GHz UnSwept	
M17/126-RG391	17-670-83 (1.21)	AA-4464 (7.49)	TC 7/.0159" 0.0477 (8.23)	CPE & PE 0.295 (10.29)	34TC 0.324	PVC-IIA 0.405 (0.149)	NA 64	0.100 (75.5)	72 +/-3	23.0 (-40 +85)	5,000	-40 +185 UnSwept	1 GHz LS/LT Jacket	Use: M17/211-00001
M17/126-RG392	17-670-83	AA-4465	TC 7/.0159" 0.0477 (1.21)	CPE & PE 0.295 (7.49)	34TC 0.324 (8.23)	PVC-IIA 0.405 (10.29)	Alum.Braid 0.475 (12.07)	0.125 (0.186)	72 +/-3 64	23.0 (75.5)	5,000	-40 +185 (-40 +85)	1 GHz UnSwept	Armored M17/211-00001
M17/127-RG393	17-429-84	AA-3420	SC 7/.0312" 0.094 (2.39)	PTFE 0.285 (7.24)	34SC:34SC 0.343 (8.71)	FEP-IX 0.390 (9.91)	NA	0.175 (0.261)	50 +/-2 69.5	29.4 (96.5)	5000	-67 +392 (-55 +200)	.05-11 GHz Swept	
M17/128-RG400	17-671-83	AA-3827	SC 19/.0080" 0.0384 (0.98)	PTFE 0.116 (2.95)	36SC:36SC 0.162 (4.11)	FEP-IX 0.195 (4.95)	NA	0.050 (0.074)	50 +/-2 69.5	29.4 (96.5)	1,900	-67 +392 (-55 +200)	.05-12.4 GHz Swept	
M17/129-RG401	17-197-85	AA-5011	SC 0.0641 (1.63)	PTFE 0.209 (5.31)	BC Tube 0.250 (6.35)	None	NA	0.105 (0.156)	50 +/-0.5 69.5	29.4 (96.5)	3,000	-40 +194 (-40 +90)	0.4-18 GHz Swept	
M17/129-00001	17-197-85	AA-5012	SC 0.0641 (1.63)	PTFE 0.209 (5.31)	TC Tube 0.250 (6.35)	None		0.106 (0.158)	50 +/-0.5 69.5	29.4 (96.5)	3,000	-40 +194 (-40 +90)	0.4-18 GHz Swept	Tin Plated M17/129-RG401
M17/130-RG402	17-197-85	AA-5013	SCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	BC Tube 0.141 (3.58)	None	NA	0.0344 (0.051)	50 +/-2 69.5	29.4 (96.5)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	
M17/130-00001	17-197-85	AA-5014	SCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	TC Tube 0.141 (3.58)	None	NA	0.0351 (0.052)	50 +/-1 69.5	29.4 (96.5)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	Tin Plated M17/130-RG402
M17/130-00002	17-197-85	AA-5015	SNCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	BC Tube 0.141 (3.58)	None	NA	0.0344 (0.051)	50 +/-1 69.5	29.4 (96.5)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	
M17/130-00003	17-197-85	AA-5016	SNCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	TC Tube 0.141 (3.58)	None	NA	0.0351 (0.052)	50 +/-1 69.5	29.4 (96.5)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	Tin Plated M17/130-00002
M17130-00004	17-297-90	AA-5916	SCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	BC Tube 0.141 (3.58)	None	NA	0.0344 (0.051)	50 +/-1 69.5	29.4 (96.5)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	
M17/130-00005	17-297-90	AA-5917	SCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	TC Tube 0.141 (3.58)	None	NA	0.0351 (0.052)	50 +/-1 69.5	29.4 (96.5)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	Tin Plated M17/130-00004
M17/130-00006	17-297-90	AA-5918	SNCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	BC Tube 0.141 (3.58)	None	NA	0.0344 (0.051)	50 +/-1 69.5	29.4 (96.5)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	
M17/130-00007	17-297-90	AA-5919	SNCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	TC Tube 0.141 (3.58)	None	NA	0.0351 (0.052)	50 +/- 1 69.5	29.4 (96.5)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	Tin Plated M17/130-00006
M17/130-00008	Non- QPL'd	NA	SCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	AL Tube 0.141 (3.58)	None	NA	0.0188 (0.028)	50 +/- 1 69.5	29.9 (98.1)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	

M17/MIL-C-17 Coaxial Cable Specifications

M17 Part No.	M17 QPL	TMS Part No.	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Armor inches (mm)	Weight lb/ft (kg/m)	Impedance ohms Vp (%)	Capacitance pF/ft (pF/m)	Max Oper. Voltage vrms	Temp. Range F (C)	M17 Test Frequency	Comments
M17/130-00009	Non- QPL'd	NA	SCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	Tinned AL Tube 0.141 (3.58)	None	NA	0.0205 (0.031)	50 +/- 1 69.5	29.9 (98.1)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	Tin Plated M17/130-00008
M17/130-00010	No QPL'd Source	NA	SNCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	AL Tube 0.141 (3.58)	None	NA	0.0188 (0.028)	50 +/- 1 9.5	29.9 (98.1)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	
M17/130-00011	No QPL'd Source	NA	SNCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	Tinned AL Tube 0.141 (3.58)	None	NA	0.0205 (0.031)	50 +/- 1 69.5	29.9 (98.1)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	Tin Plated M17/130-00010
M17/130-00012	Non- QPL'd	NA	SCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	SC Tube 0.141 (3.58)	None	NA	0.0351 (0.052)	50 +/- 1 69.5	29.9 (98.1)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	Silver Plated M17/130-00004
M17/130-00013	No QPL'd Source	NA	SNCCS 0.0362 (0.92)	PTFE 0.1175 (2.98)	SC Tube 0.141 (3.58)	None	NA	0.0351 (0.052)	50 +/- 1 69.5	29.9 (98.1)	1,900	-40 +257 (-40 +125)	0.5-20 GHz Swept	Silver Plated M17/130-00006
M17/130-00014	No QPL'd Source	NA	SCCS .0362 (0.92)	PTFE 0.1175 (2.98)	TC Tube 0.141 (3.58)	None	NA	0.0351 (0.052)	50 +/- 1 69.5	29.9 (98.1)	1,900	-40 +257 (-40 +125)	0.5-20 GHz	90/10 Tin Plated 300u" minimum
M17/130-00015	No QPL'd Source	NA	SC .0362 (0.92)	PTFE 0.1175 (2.98)	TC Tube 0.141 (3.58)	None	NA	0.0351 (0.052)	50 +/- 1 69.5	29.9 (98.1)	1,900	-40 +257 (-40 +125)	0.5-20 GHz	90/10 Tin Plated 300u" minimum
M17/131-RG403	17-244-90	AA-6511	SCCS 7/.004 0.0120 (0.30)	PTFE 0.033 (0.84)	38SC-FEP-38SC 0.088 (2.24)	FEP-IX 0.116 (2.95)	NA	0.015 (0.022)	50 +/-2 69.5	29.4 (96.5)	1,000	-67 +392 (-55 +200)	0.05-10 GHz Swept	RG-178 Triax
M17/132-00001	17-245-90	AA-6512	SCCS 7/.004 0.0120 (0.30)	PTFE & CPT 0.035 (0.91)	38SC 0.054 (1.37)	FEP-IX 0.071 (1.80)	NA	0.018 (0.027)	50 +/-2 68	30.4 (99.7)	1,000	-40 +392 (-40 +200)	1 GHz UnSwept	RG-178 Low Noise
M17/133-RG405	17-197-85	AA-5017	SCCS 0.0201 (0.51)	PTFE 0.065 (1.68)	BC Tube 0.0865 (2.20)	None	NA	0.0153 (0.023)	50 +/-1.5 69.5	29.4 (96.5)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	
M17/133-00001	17-197-85	AA-5018	SCCS 0.0201 (0.51)	PTFE 0.066 (1.68)	TC Tube 0.0865 (2.20)	None	NA	0.0158 (0.024)	50 +/-1.5 69.5	29.4 (96.5)	1,500	-40 +257 (-40 +125)	0.5-20GHz Swept	Tinplated M17/133-RG405
M17/133-00002	17-298-90	AA-5019	SC 0.0201 (0.51)	PTFE 0.066 (1.68)	BC Tube 0.0865 (2.20)	None	NA	0.0152 (0.023)	50 +/-1.5 69.5	29.4 (96.5)	1,500	-40 +257 (-40 +125)	0.5-20GHz Swept	
M17/133-00003	17-298-90	AA-5020	SC 0.0201 (0.51)	PTFE 0.066 (1.68)	TC Tube 0.0865 (2.20)	None	NA	0.0157 (0.023)	50 +/-1.5 69.5	29.4 (96.5)	1,500	-40 +257 (-40 +125)	0.5-20GHz Swept	Tinplated M17/133-00002
M17/133-00004	17-298-90	AA-5021	SNCCS 0.0201 (0.51)	PTFE 0.066 (1.68)	BC Tube 0.0865 (2.20)	None	NA	0.0154 (0.023)	50 +/-1.5 69.5	29.4 (96.5)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	
M17/133-00005	17-298-90	AA-5022	SNCCS 0.0201 (0.51)	PTFE 0.066 (1.68)	TC Tube 0.0865 (2.20)	None	NA	0.0159 (0.024)	50 +/-1.5 69.5	29.4 (96.5)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	Tinplated M17/133-00004
M17-133-00006	17-298-90	AA-5920	SCCS 0.0201 (0.51)	PTFE 0.066 (1.68)	BC Tube 0.0865 (2.20)	None	NA	0.0153 (0.023)	50 +/-1.5 69.5	29.4 (96.5)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	
M17-133-00007	17-298-90	AA-5921	SCCS 0.0201 (0.51)	PTFE 0.066 (1.68)	TC Tube 0.0865 (2.20)	None	NA	0.0158 (0.024)	50 +/-1.5 69.5	29.4 (96.5)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	Tinplated M17/133-00006
M17/133-00008	17-298-90	AA-5922	SC 0.0201 (0.51)	PTFE 0.066 (1.68)	BC Tube 0.0865 (2.20)	None	NA	0.0152 (0.023)	50 +/-1.5 69.5	29.4 (96.5)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	
M17/133-00009	17-298-90	AA-5923	SC 0.0201 (0.51)	PTFE 0.066 (1.68)	TC Tube 0.0865 (2.20)	None	NA	0.0157 (0.023)	50 +/-1.5 69.5	29.4 (96.5)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	Tinplated M17/133-00008
M17/133-00010	17-298-90	AA-5924	SNCCS 0.0201 (0.51)	PTFE 0.066 (1.68)	BC Tube 0.0865 (2.20)	None	NA	0.0154 (0.023)	50 +/-1.5 69.5	29.4 (96.5)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	
M17/133-00011	17-298-90	AA-5925	SNCCS 0.0202 (0.51)	PTFE 0.066 (1.68)	TC Tube 0.0865 (2.20)	None	NA	0.0159 (0.024)	50 +/-1.5 69.5	29.4 (96.5)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	Tinplated M17/133-00010

M17/MIL-C-17 Coaxial Cable Specifications

M17 Part No.	M17 QPL	TMS Part No.	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Armor inches (mm)	Weight lb/ft (kg/m)	Impedance ohms Vp (%)	Capacitance pF/ft (pF/m)	Max Oper. Voltage vrms	Temp. Range F (C)	M17 Test Frequency	Comments
M17/133-00012	Non-QPL'd	NA	SCCS 0.0201 (0.51)	PTFE 0.066 (0.68)	AL Tube 0.066 (2.20)	None	NA	0.0075 (0.011)	50 +/-1.5 69.5	29.9 (98.1)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	
M17/133-00013	Non-QPL'd	NA	SCCS 0.0201 (0.051)	PTFE 0.066 (1.68)	Tinned AL Tube 0.0865 (2.20)	None	NA	0.008 (0.012)	50 +/-1.5 69.5	29.9 (98.1)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	Tinplated M17/133-00012
M17/133-00014	No QPL'd Source	NA	SNCCS 0.0201 (0.51)	PTFE 0.066 (1.68)	AL Tube 0.0865 (2.20)	None	NA	0.0075 (0.011)	50 +/-1.5 69.5	29.9 (98.1)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	
M17/133-00015	No QPL'd Source	NA	SNCCS 0.0201 (0.51)	PTFE 0.066 (1.68)	Tinned AL Tube 0.0865 (2.20)	None	NA	0.008 (0.012)	50 +/-1.5 69.5	29.9 (98.1)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	Tinplated M17/133-00014
M17/133-00016	Non-QLP'd	NA	SCCS 0.0201 (0.51)	PTFE 0.066 (1.68)	SC Tube 0.0865 (2.20)	None	NA	0.0158 (0.024)	50 +/-1.5 69.5	29.9 (98.1)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	Silver plated M17/133-00006
M17/133-00017	No QLP'd Source	NA	SNCCS 0.0201 (0.51)	PTFE 0.066 (1.68)	SC Tube 0.0865 (2.20)	None	NA	0.0158 (0.024)	50 +/-1.5 69.5	29.9 (98.1)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	Silver plated M17/133-00010
M17/133-00018	No QPL'd Source	NA	SC .0201 (0.51)	PTFE 0.066 (1.68)	TC Tube .0865 (2.20)	NA	NA	.0157 (.023)	50 +/-1.5 69.5	29.9 (98.1)	1,500	-40 +257 (-40 +125)	0.5-20 GHz Swept	90/10 Tinplated 300u" (minimum)
M17/134-00001	17-952-85	AA-5411	SC 0.033 (0.84)	PE 0.116 (2.95)	36SC-PE-36SC 0.198 (5.03)	PE-IIIA 0.245 (6.22)	NA	0.045 (0.067)	50 +/-2 66	30.8 (101.1)	1,900	-40 +158 (-40 +70)	.05-3 GHz Swept	Water blocked Triax
M17/134-00002	17-952-85	AA-4472	SC 0.033 (0.84)	PE 0.116 (2.95)	36SC-PE-36SC 0.198 (5.03)	PE-IIIA 0.245 (6.22)	NA	0.045 (0.067)	50 +/-2 66	30.8 (101.1)	1,900	-40 +158 (-40 +70)	.05-3 GHz Swept	Non-water blocked M17/134-00001
M17/134-00003	17-952-85	AA-7557	SC 0.033 (0.84)	PE 0.116 (2.95)	36SC-XLPE-36SC 0.198 (5.03)	XLPE 0.245 (6.22)	NA	0.050 (0.074)	50 +/-2 66	32.2 (105.6)	1,900	-22 +185 (-30 +85)	.05-3 GHz Swept	Non-halogen, Low Smoke M17/134-00001
M17/134-00004	17-952-85	AA-7558	SC 0.033 (0.84)	PE 0.116 (2.95)	36SC-XLPE-36SC 0.198 (5.03)	XLPE 0.245 (6.22)	NA	0.050 (0.074)	50 +/-2 66	32.2 (105.6)	1,900	-22 +185 (-30 +85)	.05-3 GHz Swept	Non-halogen, Low smoke M17/134-00002
M17/135-00001	17-202-88	AA-3833	SC 7/.0296 0.089 (2.24)	PE 0.285 (7.24)	33SC-PE-33SC 0.398 (10.11)	PUR 0.500 (12.70)	NA	0.160 (0.238)	50 +/-2 66	30.8 (101.1)	5,000	-40 +158 (-4 +70)	.05-3 GHz Swept	Water blocked Triax
M17/135-00002	17-202-88	AA-4473	SC 7/.0296 0.089 (2.24)	PE 0.285 (7.24)	33SC-PE-33SC 0.398 (10.11)	PUR 0.500 (12.70)	NA	0.160 (0.238)	50 +/-2 66	30.8 (101.1)	5,000	-40 +158 (-40 +70)	.05-3 GHz Swept	Non-water blocked M17/135-00001
M17/135-00003	17-202-88	AA-5926	SC 0.081 (2.06)	PE 0.285 (7.24)	33SC-PE-33SC 0.398 (10.11)	PE-IIIA 0.500 (12.70)	NA	0.185 (0.276)	50 +/-2 66	30.8 (101.1)	5,000	-40 +158 (-40 +70)	.05-3 GHz Swept	Water blocked Triaxial
M17/135-00004	17-202-88	AA-5927	SC 0.081 (2.06)	PE 0.285 (7.24)	33SC-PE-33SC 0.398 (10.11)	PE-IIIA 0.500 (12.70)	NA	0.185 (0.276)	50 +/-2 66	30.8 (101.1)	5,000	-40 +158 (-40 +70)	.05-3 GHz Swept	Non-Water blocked M17/135-00003
M17/135-00005	17-202-88	AA-7559	SC 0.081 (2.06)	PE 0.285 (7.24)	33SC-XLPE-33SC 0.398 (10.11)	XLPE 0.500 (12.70)	NA	0.185 (0.276)	50 +/-2 66	32.0 (105.0)	5,000	-22 +185 (-30 +85)	.05-3 GHz Swept	Water blocked Non-Halogen, Low smoke M17/135-00003
M17/135-00006	17-202-88	AA-7560	SC 0.081 (2.06)	PE 0.285 (7.24)	33SC-XLPE-33SC 0.398 (10.11)	XLPE 0.500 (12.70)	NA	0.185 (0.276)	50 +/-2 66	32.0 (105.0)	5,000	-22 +185 (-30 +85)	.05-3 GHz Swept	Non-Water blocked Non-Halogen, Low smoke M17/135-00004
M17/136-00001	17-809-77	AA-3828	SCCS 7/.004 0.0120 (0.30)	PTFE 0.063 (1.60)	38SC 0.081 (2.06)	PFA-XIII 0.100 (2.54)	NA	0.012 (0.018)	75 +/- 3 69.5	19.5 (64.0)	1,200	-67 +446 (-55 +230)	3 GHz UnSwept	High Temperature M17/94-RG179
M17/137-00001	17-810-77	AA-3829	SCCS 7/.004 0.0120 (0.30)	PTFE 0.102 (2.59)	38SC 0.120 (3.05)	PFA-XIII 0.141 (3.58)	NA	0.020 (0.030)	95 +/- 5 69.5	15.4 (50.5)	1,500	-67 +446 (-55 +230)	3 GHz UnSwept	High Temperature M17/95-RG180
M17/138-00001	17-812-77	AA-3830	SCCS 7/.0067 0.0201 (0.51)	PTFE 0.060 (1.52)	38SC 0.078 (1.98)	PFA-XIII 0.098 (2.49)	NA	0.0122 (0.018)	50 +/- 1.5 69.5	29.4 (96.5)	1,500	-67 +446 (-55 +230)	0.50-3 GHz Swept	High Temperature M17/113-RG316
M17/139-00001	17-359-84	AA-3831 (0.30)	SCBeCu 7/.004 0.0120 (2.59)	PTFE 0.102 (3.05)	38SC CadBr 0.120 (3.58)	PFA-XIII 0.141	NA (0.029)	0.0194 69.5	95 +/- 5 (50.5)	15.4	1,500 (-55 +230)	-67 +446	3 GHz UnSwept	High Strength M17/95-RG180

M17/MIL-C-17 Coaxial Cable Specifications

M17 Part No.	M17 QPL	TMS Part No.	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Armor inches (mm)	Weight lb/ft (kg/m)	Impedance ohms Vp (%)	Capacitance pF/ft (pF/m)	Max Oper. Voltage vrms	Temp. Range F (C)	M17 Test Frequency	Comments
M17/151-00001	17-543-90	AA-5023	SCCS 0.0113 (0.29)	PTFE 0.037 (0.94)	BC Tube 0.047 (1.19)	None	NA	0.0045 (0.0067)	50 +/- 2.5 69.5	29.4 (96.5)	1,000	-40 +212 (-40 +100)	0.50-20 GHz Swept	.047" Semirigid
M17/151-00002	17-543-90	AA-5024	SCCS 0.0113 (0.29)	PTFE 0.037 (0.94)	TC Tube 0.047 (1.19)	None	NA	0.0048 (0.007)	50 +/- 2.5 69.5	29.4 (96.5)	1,000	-40 +212 (-40 +100)	0.50-20 GHz Swept	Tinplated M17/151-00001
M17/152-00001	17-290-89	AA-4920	SCCS 7/.0067 0.0201 (0.51)	PTFE 0.060 (1.52)	38SC:38SC 0.096 (2.44)	FEP-IX 0.114 (2.90)	NA	0.0185 (0.028)	50 +/- 2 69.5	29.4 (96.5)	1,200	-67 +392 (-55 +200)	.05-12.4 GHz Swept	Double Shielded M17/113-RG316
M17/153-00001	No QPL'd Source	NA	SCCS 7/.0063 0.0189 (0.48)	PE 0.060 (1.52)	38SC:38SC 0.096 (2.44)	PVC-IIA 0.114 (2.90)	NA	0.0300 (0.045)	50 +/- 2 66	30.8 (101.1)	1,500	-40 +185 (-40 +85)	.05-12.4 GHz Swept	Canceled. Use M17/152-00001
M17/154-00001	17-544-90	AA-5025	SCCS 0.0080 (0.20)	PTFE 0.026 (0.66)	BC Tube 0.034 (0.86)	None	NA	0.0026 (0.0031)	50 +/- 3 69.5	29.4 (96.5)	750	-40 +212 (-40 +100)	0.50-20 GHz Swept	.034" Semirigid
M17/154-00002	17-544-90	AA-5026	SCCS 0.008 (0.20)	PTFE 0.026 (0.66)	TC Tube 0.034 (0.86)	None	NA	0.0028 (0.0042)	50 +/- 2	29.4 (96.5)	750	-40 +212 (-40 +100)	0.50-20 GHz Swept	Tinplated M17/154-00001
M17/155-00001	17-304-83	AA-4636	TC19/.0072 0.0355 (0.90)	PE 0.116 (2.95)	36TC 0.139 (3.53)	PVC-IIA 0.195 (4.95)	NA	0.0260 (0.039)	50 +/- 2 66	30.8 (101.1)	1,900	-40 +185 (-40 +85)	400 MHz UnSwept	Use M17/197-00001 LS/LT Jacket
M17/156-00001	17-749-85	AA-5606	BC 0.1019 (2.59)	PTFE 0.332 (8.43)	32BC:32BC 0.394 (10.01)	FG Braid-V 0.465 (11.81)	NA	0.2400 (0.357)	50 +/- 2 69.5	29.4 (96.5)	6,000	-67 +392 (-55 +200)	400 MHz UnSwept	Unswept M17/52-RG119
M17/157-00001 00001 Jacket	17-305-83	AA-4638	TC 27/.005	PE 0.0308 (0.78)	36TC 0.096 (2.44)	PVC-IIA 0.1190 (3.02)	NA 0.160 (4.06)	0.0210	50 +/-2 (0.031)	30.8 66	1,900 (101.1)	-40 +185	400 MHz (-40 +85)	Use M17/198- UnSwept LS/LT
M17/158-00001	17-664-83	AA-4639	SCCS 0.0370 (0.94)	PTFE 0.116 (2.95)	36SC:36SC 0.162 (4.11)	FEP-IX 0.195 (4.95)	NA	0.0560 (0.083)	50 +/-2 69.5	29.4 (96.5)	1,900	-67 +392 (-55 +200)	400 MHz UnSwept	Unswept M17/60-RG142
M17/159-00001	17-598-81	AA-4640	SC 7/.0315 0.0940 (2.39)	PTFE 0.285 (7.24)	34SC 0.3140 (7.98)	FG Braid-V 0.410 (10.41)	NA	0.2180 (0.325)	50 +/- 2 69.5	29.4 (96.5)	2,500	-67 +482 (-55 +250)	400 MHz UnSwept	Unswept M17/65-RG165
M17/160-00001	17-1102-85	AA-4641 0.1950	BC 0.680 (4.95)	PE 0.738 (17.27)	34SC:34SC 0.895 (18.75)	PVC-IIA (22.73)	NA	0.520 (0.775)	50 +/- 2 66	30.8 (101.1)	11,000	-40 +185 (-40 +85)	400 MHz UnSwept	Use: M17/212-00001 LS/LT Jacke
M17/161-00001	No QPL'd Source	NA	BC 0.192 (4.88)	PTFE 0.620 (15.75)	32BC 0.657 (16.69)	FG Braid-V 0.730 (18.54)	NA	0.6500 (0.968)	50 +/-2 69.5	29.4 (96.5)	7,000	-67 +482 (-55 +250)	400 MHz UnSwept	Unswept M17/72-RG211
M17/161-00002	No QPL'd Source	NA	BC 0.192 (4.88)	PTFE 0.620 (15.75)	32BC 0.657 (16.69)	FG Braid-V 0.730 (18.54)	Alum. Braid 0.795 (20.19)	0.650 (0.968)	50 +/- 2 69.5	29.4 (96.5)	7,000	-67 +482 (-55 +250)	400 MHz UnSwept	Armored M17/161-00001
M17/162-00001 00001 Jacket	17-1104-85	AA-4653	SC	PE .0556 (1.41)	34SC:34SC 0.185 (4.70)	PVC-IIA 0.243 (6.17)	NA 0.332 (8.43)	0.0890	50 +/- 2 (0.133)	30.8 66	3,000 (101.1)	-40 +185	400 MHz (-40 +85)	Use M17/199- UnSwept LS/LT
M17/163-00001	17-804-77	AA-4643	BC 7/.0296 0.0888 (2.26)	PE 0.285 (7.24)	33BC 0.318 (8.08)	PVC-IIA 0.405 (10.29)	NA	0.1110 (0.165)	50 +/- 2 66	30.8 (101.1)	5,000	-40 +185 (-40 +85)	400 MHz UnSwept	Unswept M17/74-RG213
M17/164-00001	17-804-77	AA-4645	SC 7/.0296 0.0888 (2.26)	PE 0.2850 (7.24)	34SC:34SC 0.398 (10.11)	PVC-IIA 0.425 (10.80)	NA	0.140 (0.209)	50 +/- 2 66	30.8 (101.1)	5,000	-40 +185 (-40 +85)	400 MHz UnSwept	Use M17/214-00001 LS/LT Jacket
M17/164-00002	17-984-85	AA-4646	SC 7/.0296 0.0888 (2.26)	PE 0.285 (7.24)	34SC:34SC 0.398 (10.11)	TPE 0.425 (10.80)	NA	0.140 (0.209)	50 +/- 2 66	30.8 (101.1)	5,000	-67 +185 (-55 +85)	400 MHz UnSwept	Unswept M17/75-RG365
M17/165-00001	17-1102-85	AA-4647	BC 0.106 (2.69)	PE 0.370 (9.40)	33BC:33BC 0.436 (11.07)	PVC-IIA 0.545 (13.84)	NA	0.225 (0.335)	50 +/- 2 66	30.8 (101.1)	7,000	-40 +185 (-40 +85)	400 MHz UnSwept	Use M17/215-00001 LS/LT Jacket
M17/165-00002	17-1102-85	AA-6544	BC 0.106 (2.69)	PE 0.370 (9.40)	33BC:33BC 0.436 (11.07)	PVC-IIA 0.545 (13.84)	Alum. Braid 0.615 (15.62)	0.310 (0.462)	50 +/- 2 66	30.8 (101.1)	7,000	-40 +185 (-40 +85)	400 MHz UnSwept	Armored M17/215-00001
M17/166-00001	17-1102-85	AA-4648	BC 0.195 (4.95)	PE 0.680 (17.27)	30BC 0.726 (18.44)	PVC-IIA 0.870 (22.10)	NA	0.510 (0.760)	50 +/- 2 66	30.8 (101.1)	11,000	-40 +185 (-40 +85)	400 MHz UnSwept	Use M17/216-00001 LS/LT Jacket

M17/MIL-C-17 Coaxial Cable Specifications

M17 Part No.	M17 QPL	TMS Part No.	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Armor inches (mm)	Weight lb/ft (kg/m)	Impedance ohms Vp (%)	Capacitance pF/ft (pF/m)	Max Oper. Voltage vrms	Temp. Range F (C)	M17 Test Frequency	Comments
M17/167-00001	17-303-83	AA-4649	SC 0.035 (0.89)	PE 0.116 (2.95)	36SC:36SC 0.162 (4.11)	PVC-IIA 0.212 (5.38)	NA	0.041 (0.061)	50 +/- 2 66	30.8 (101.1)	1,900	-40 +185 (-40 +85)	400 MHz UnSwept	Unswept M17/84-RG223 Use M17/200-00001 LS/LT Jacket
M17/168-00001	17-598-81	AA-4650	SC 7/.028 0.084 (2.13)	Taped PTFE 0.255 (6.48)	34SC:34SC 0.313 (7.95)	FG Braid-V 0.415 (10.54)	NA	0.185 (0.276)	50 +/- 2 71	29.0 (95.1)	5,000	-67 +392 (-55 +200)	400 MHz UnSwept	Unswept M17/92-RG115
M17/168-00002	17-598-81	AA-6306	SC 7/.028 0.084 (2.13)	Taped PTFE 0.255 (6.48)	34SC:34SC 0.313 (7.95)	FEP-IX 0.344 (8.74)	NA	0.185 (0.276)	50 +/- 2 71	29.0 (95.1)	5,000	-67 +392 (-55 +200)	400 MHz UnSwept	FEP Jacketed Unswept M17/92-RG115
M17/169-00001	17-666-84	AA-4651	SCCS 7/.004 0.012 (0.30)	PTFE 0.033 (0.84)	38SC 0.051 (1.30)	FEP-IX 0.071 (1.80)	NA	0.006 (0.009)	50 +/- 2 69.5	29.4 (96.5)	1,000	-67 +392 (-55 +200)	400 MHz UnSwept	Unswept M17/93-RG178
M17/170-00001	17-811-77	AA-4652	SCCS 0.037 (0.94)	PTFE 0.116 (2.95)	36SC 0.139 (3.53)	FEP-IX 0.170 (4.32)	NA	0.039 (0.058)	50 +/- 2 69.5	29.4 (96.5)	1,900	-67 +392 (-55 +200)	400 MHz UnSwept	Unswept M17/111-RG303
M17/171-00001	17-474-86	AA-4653	SCCS 0.0590 (1.50)	PTFE 0.185 (4.70)	34SC:34SC 0.243 (6.17)	FEP-IX 0.280 (7.11)	NA	0.092 (0.138)	50 +/-2 69.5	29.4 (96.5)	3,000	-67 +392 (-55 +200)	400 MHz UnSwept	Unswept M17/112-RG304
M17/172-00001	17-812-77	AA-4654	SCCS 7/.0067 0.0201 (0.51)	PTFE 0.060 (1.52)	38SC 0.078 (1.98)	FEP-IX 0.098 (2.49)	NA	0.012 (0.017)	50 +/-2 69.5	29.4 (96.5)	1,200	-67 +392 (-55 +200)	400 MHz UnSwept	Unswept M17/113-RG316
M17/173-00001	17-813-77	AA-4655	CCS 7/.0063 0.0189 (0.48)	PE 0.060 (1.52)	38TC 0.078 (1.98)	PVC-IIA 0.110 (2.79)	NA	0.0095 (0.014)	50 +/-2 66	30.8 (101.1)	1,500	-40 +185 (-40 +85)	400 MHz UnSwept	Use M17/217-00001 LS/LT Jacket
M17/174-00001	17-429-84	AA-4656	SC 7/.0312 0.094 (2.39)	PTFE 0.285 (7.24)	34SC:34SC 0.343 (8.71)	FEP-IX 0.390 (9.91)	NA	0.175 (0.261)	50 +/-2 69.5	29.4 (96.5)	2,500	-67 +392 (-55 +200)	400 MHz UnSwept	Unswept M17/127-RG393
M17/175-00001	17-671-83	AA-4657	SC 19/.008 0.0384 (0.98)	PTFE 0.116 (2.95)	36SC:36SC 0.162 (4.11)	FEP-IX 0.195 (4.95)	NA	0.050 (0.074)	50 +/-2 69.5	29.4 (96.5)	1,900	-67 +392 (-55 +200)	400 MHz UnSwept	Unswept M17/128-RG400
M17/176-00002	Non- QLP'd	AA-5127	2C:SPA 19/.005 0.0235 (0.60)	PTFE 0.042 (1.07)	38SCBeCu 0.102 (2.59)	PFA-XIII 0.129 (3.28)	NA	0.018 (0.027)	77 +/-3 71	24.0 (78.7)	1,000	-67 +392 (-55 +200)	10 MHz UnSwept	Use up to 10 MHz maximum
M17/176-00003	No QPL'd Source	NA	2C:SPA 19/005 0.0235 (0.60)	ETFE 0.042 (1.07)	38SCBeCu 0.102 (2.59)	PFA,FEP, ETFE,ETCFE 0.125 (3.18)	NA	0.016 (0.024)	77 +/-3 78	24.0 (78.7)	1,000	-67 +302 (-55 +150)	10 MHz UnSwept	Use up to 10 MHz maximum
M17/177-00001	17-246-90	AA-6513	SCCS 7/.004 0.012 (0.30)	PTFE 0.102 (2.59)	38SC-FEP- 38SC 0.159 (4.04)	FEP-IX 0.184 (4.67)	NA	0.034 (0.051)	95 +/-3 69.5	15.4 (50.5)	1,500	-67 +392 (-55 +200)	3 GHz UnSwept	Use up to 3000 MHz maximum
M17/178-00001	No QPL'd Source	NA	SCCS 7/.004 0.012 (0.30)	PTFE 0.102 (2.59)	38SC:34NC Composite .170" (4.32)	Polyester Braid 0.270 (6.86)	NA	0.060 (0.089)	95 +/-5 69.5	15.4 (50.5)	1,500	-67 +302 (-55 +150)	3 GHz UnSwept	Use up to 3000 MHz maximum
M17/179-00001	No QPL'd Source	NA	SCCS 7/.004 0.012 (0.30)	PTFE 0.063 (1.60)	38SC:34NC Composite .123" (3.12)	Polyester Braid 0.195 (4.95)	NA	0.036 (0.054)	75 +/-3 69.5	19.5 (64.0)	1,200	-67 +302 (-55 +150)	3 GHz UnSwept	Use up to 3000 MHz maximum
M17/180-00001	17-05-92	AA-7276	CCS 0.0285 (0.72)	PE 0.185 (4.70)	34SC-34BC 0.243 (6.17)	XLPE 0.332 (8.43)	NA	0.092 (0.137)	75 +/-3 66	20.6 (67.6)	2,700	-22 +176 (-30 +80)	3 GHz UnSwept	Non-halogen Low smoke M17/2-RG6
M17/181-00001	17-05-92	AA-7277	TC 7/.0159 0.0477 (1.21)	PE 0.285 (7.24)	33BC 0.318 (8.08)	XLPE 0.405 (10.29)	NA	0.108 (0.161)	75 +/-3 66	20.6 (67.6)	5,000	-22 +176 (-30 +80)	1 GHz UnSwept	Non-halogen Low smoke M17/6-RG11
M17/181-00002	17-05-92	AA-7278	TC 7/.0159 0.0477 (1.21)	PE 0.285 (7.24)	34BC 0.318 (8.08)	XLPE 0.405 (10.29)	Alum. Braid 0.475 (12.07)	0.132 (0.197)	75 +/-3 66	20.6 (67.6)	5,000	-22 +176 (-30 +80)	1 GHz UnSwept	Armored M17/181-00001
M17/182-00001	17-05-92	AA-7279	2C:BC 7/.0152 0.0456 (1.16)	PE 0.285 (7.24)	34TC:34TC 0.343 (8.71)	XLPE 0.405 (10.67)	NA	0.142 (0.212)	95 +/-5 66	16.3 (53.5)	1,000	-22 +176 (-30 +80)	200 MHz UnSwept	Non halogen Low smoke M17/15-RG22
M17/182-00002	17-05-92	AA-7280	2C:BC 7/.0152 0.0456 (1.16)	PE 0.285 (7.24)	34TC:34TC 0.343 (8.71)	XLPE 0.420 (10.67)	Alum. Braid 0.490 (12.45)	0.169 (0.252)	95 +/-5 66	16.3 (53.5)	1,000	-22 +176 (-30 +80)	200 MHz UnSwept	Armored M17/182-00001
M17/183-00001	17-05-92	AA-7281	TC 19/.0072 0.0355 (0.90)	PE 0.116 (2.95)	36TC 0.139 (3.53)	XLPE 0.195 (4.95)	NA	0.030 (0.045)	50 +/-2 66	30.8 (101.1)	1,900	-22 +176 (-30 +80)	0.05-1 GHz Swept	Non-halogen Low smoke M17/28-RG58

M17/MIL-C-17 Coaxial Cable Specifications

M17 Part No.	M17 QPL	TMS Part No.	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Armor inches (mm)	Weight lb/ft (kg/m)	Impedance ohms Vp (%)	Capacitance pF/ft (pF/m)	Max Oper. Voltage vrms	Temp. Range F (C)	M17 Test Frequency	Comments
M17/184-00001	17-05-92	AA-7282	CCS 0.0226 (0.57)	PE 0.146 (3.71)	34BC 0.175 (4.45)	XLPE 0.242 (6.15)	NA	0.043 (0.064)	75 +/-3 66	20.6 (67.6)	2,300	-22 +176 (-30 +80)	1 GHz UnSwept	Non-halogen Low smoke M17/29-RG59
M17/185-00001	17-05-92	AA-7283	CCS 0.0253 (0.64)	Air spaced PE 0.146 (3.71)	34BC 0.175 (4.45)	XLPE 0.242 (6.15)	NA	0.042 (0.063)	93 +/-5 81	13.5 (44.3)	750	-22 +176 (-30 +80)	1 GHz UnSwept	Non-halogen Low smoke M17/30-RG62
M17/186-00001	17-05-92	AA-7284	2C:TC 7/.0126 0.0378 (0.96)	PE (each) 0.079 (2.01)	36TC 0.181 (4.60)	XLPE 0.235 (5.97)	NA	0.041 (0.061)	75 +/-3 68	19.6 (64.3)	1,000	-22 +176 (-30 +80)	10 MHz UnSwept	Non-halogen Low smoke M17/45-RG108
M17/187-00001	17-05-92	AA-7285	TC 27/.005 0.0308 (0.78)	PE 0.096 (2.44)	36TC 0.119 (3.02)	XLPE 0.160 (4.06)	NA	0.023 (0.034)	50 +/-2 66	30.8 (101.1)	1,900	-22 +176 (-30 +80)	0.05-1 GHz Swept	Non-halogen Low smoke M17/54-RG122
M17/188-00001	17-05-92	AA-7286	SC 0.0556 (1.41)	PE 0.185 (2.44)	34SC:34SC 0.243 (6.17)	XLPE 0.332 (8.43)	NA	0.099 (0.147)	50 +/-2 66	30.8 (101.1)	3,000	-22 +176 (-30 +80)	0.05-11 GHz Swept	Non-halogen Low smoke M17/73-RG212
M17/189-00001	17-05-92	AA-7287	BC 7/.0296 0.0888 (2.26)	PE 0.285 (7.24)	33BC 0.318 (8.08)	XLPE 0.405 (10.29)	NA	0.121 (0.180)	50 +/-2 66	30.8 (101.1)	5,000	-22 +176 (-30 +80)	0.05-1GHz Swept	Non-halogen Low smoke M17/74-RG213
M17/189-00002	17-05-92	AA-7288	BC 7/.0296 0.0888 (2.26)	PE 0.285 (7.24)	33BC 0.318 (8.08)	XLPE 0.405 (10.29)	Alum. Braid 0.475 (12.07)	0.146 (0.217)	50 +/-2 66	30.8 (101.1)	5,000	-22 +176 (-30 +80)	0.05-1 GHz Swept	Armored M17/189-00001
M17/190-00001	17-05-92	AA-7289	SC 7/.0296 0.0888 (2.26)	PE 0.285 (7.24)	34SC:34SC 0.343 (8.71)	XLPE 0.425 (10.80)	NA	0.154 (0.229)	50 +/-2 66	30.8 (101.1)	5,000	-22 +176 (-30 +80)	0.05-11 GHz Swept	Non-halogen Low smoke M17/75-RG214
M17/191-00001	17-05-92	AA-7290	TC 7/.0159 0.0477 (1.21)	PE 0.285 (7.24)	34BC:34BC 0.343 (8.71)	XLPE 0.425 (10.80)	NA	0.139 (0.207)	75 +/-3 66	20.6 (67.6)	5,000	-22 +176 (-30 +80)	3 GHz UnSwept	Non-halogen Low smoke M17/77-RG216
M17/192-00001	17-05-92	AA-7291	BC 0.106 (2.69)	PE 0.370 (9.40)	33BC:33BC 0.436 (11.07)	XLPE 0.545 (13.84)	NA	0.248 (0.369)	50 +/-2 66	30.8 (101.1)	7,000	-22 +176 (-30 +80)	0.05-3 GHz Swept	Non-halogen Low smoke M17/78-RG217
M17/192-00002	17-95-94	AA-8111	BC 0.106 (2.69)	PE 0.370 (9.40)	33BC:33BC 0.436 (11.07)	XLPE 0.545 (13.84)	NA	0.248 (0.369)	50 +/-2 66	30.8 (101.1)	7,000	-22 +176 (-30 +80)	0.05-3 GHz Swept	M17/192-00001 with temperature cycling
M17/193-00001	17-05-92	AA-7292	BC 0.195 (4.95)	PE 0.680 (17.27)	30BC 0.726 (18.44)	XLPE 0.870 (22.10)	NA	0.521 (0.776)	50 +/-2 66	30.8 (101.1)	11,000	-22 +176 (-30 +80)	0.05-1 GHz Swept	Non-halogen Low smoke M17/79-RG218
M17/193-00002	17-05-92	AA-7293	BC 0.195 (4.95)	PE 0.680 (17.27)	30BC 0.726 (18.44)	XLPE 0.870 (22.10)	Alum. Braid 0.945 (24.00)	0.571 (0.851)	50 +/-2 66	30.8 (101.1)	11,000	-22 +176 (-30 +80)	0.05-1 GHz Swept	Armored M17/193-00001
M17/194-00001	17-05-92	AA-7294	SC 0.0350 (0.89)	PE 0.116 (2.95)	36SC:36SC 0.160 (4.11)	XLPE 0.212 (5.38)	NA	0.044 (0.066)	50 +/-2 66	30.8 (101.1)	1,900	-22 +176 (-30 +80)	0.04-12.4 GHz Swept	Non-halogen Low smoke M17/84-RG223
M17/195-00001	17-05-92	AA-7295	CCS 0.0253 (0.64)	Air Space PE 0.146 (3.71)	34BC:34TC 0.198 (5.03)	XLPE 0.245 (2.79)	NA	0.053 (0.079)	93 +/-5 85	13.5 (44.3)	750	-22 +176 (-30 +80)	1 GHz UnSwept	Non-halogen Low smoke M17/90-RG71
M17/196-00001	17-05-92	AA7296	CCS 7/.0063 0.0189 (0.48)	PE 0.060 (1.52)	38TC 0.078 (1.98)	XLPE 0.110 (2.79)	NA	0.009 (0.013)	50 +/-2 66	30.8 (101.1)	1,500	-22 +176 (-30 +80)	0.05-1 GHz Swept	Non-halogen Low smoke M17/119-RG174
M17/197-00001	17-05-92	AA-7297	TC 19/.0072 0.0355 (0.90)	PE 0.116 (2.95)	36TC 0.139 (3.53)	XLPE 0.195 (4.95)	NA	0.0310 (0.046)	50 +/-2 66	30.8 (101.1)	1,500	-22 +176 (-30 +80)	400 MHz UnSwept	Non-halogen Low Smoke M17/155-00001
M17/198-00001	17-05-92	AA-7298	TC 27/.005 0.0308 (0.78)	PE 0.096 (2.44)	36TC 0.119 (3.02)	XLPE 0.160 (4.06)	NA	0.024 (0.036)	50 +/-2 66	30.8 (101.1)	1,900	-22 +176 (-30 +80)	400 MHz UnSwept	Non-halogen Low smoke M17/157-00001
M17/199-00001	17-05-92	AA-7299	SC 0.0556 (1.41)	PE 0.185 (4.70)	34SC:34SC 0.243 (6.17)	XLPE 0.332 (8.43)	NA	0.100 (0.149)	50 +/-2 66	30.8 (101.1)	3,000	-22 +176 (-30 +80)	400 MHz UnSwept	Non-halogen Low smoke M17/162-00001
M17/200-00001	17-05-92	AA-7300	SC 0.0350 ((0.89)	PE 0.116 (2.95)	36SC:36SC 0.162 (4.11)	XLPE 0.212 (5.38)	NA	0.044 (0.066)	50 +/-2 66	30.8 (101.1)	1,900	-22 +176 (-30 +80)	400 MHz UnSwept	Non-halogen Low smoke M17/167-00001
M17/201-00001	No QPL'd Source	NA	2C:SPA 19/.005 (0.0248) (0.63)	XLETFE 0.052 (1.32)	38TC 0.070 (1.78)	XLETFE 0.137 (3.48)	NA	0.0142 (0.021)	77 +/-5 66	30.0 (98.4)	600	-85 +302 (-65 +150)	1 MHz UnSwept	Single Shield Data Bus Cable

M17/MIL-C-17 Coaxial Cable Specifications

M17 Part No.	M17 QPL	TMS Part No.	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Armor inches (mm)	Weight lb/ft (kg/m)	Impedance ohms Vp (%)	Capacitance pF/ft (pF/m)	Max Oper. Voltage vrms	Temp. Range F (C)	M17 Test Frequency	Comments
M17/201-00002	No QPL'd Source	NA	2C:SPA 19/.0063 0.0312 (0.79)	XLETFE 0.064 (1.63)	38TC 0.087 (2.21)	XLETFE 0.165 (4.19)	NA	0.0219 (0.033)	77 +/-5 66	30.0 (98.4)	600	-85 +302 (-65+150)	1 MHz UnSwept	Single Shield Data Bus Cable
M17/201-00003	No QPL'd Source	NA	2C:SPA 19/.005 0.0248 (0.63)	XLETFE 0.048 (1.22)	38TC 0.066 (1.68)	XLETFE 0.130 (3.30)	NA	0.0159 (0.024)	77 +/-5 66	30.0 (98.4)	600	-85 +302 (-65+150)	1 MHz UnSwept	Single Shield Data Bus Cable
M17/202-00001	No QPL'd Source	NA	2C:SPA 19/.005 0.0248 (0.63)	XLETFE 0.048 (1.22)	38TC: 38TC 0.084 (2.13)	XLETFE 0.147 (3.73)	NA	0.0262 (0.039)	77 +/-5 66	30.0 (98.4)	600	-85 +302 (-65+150)	1 MHz UnSwept	Single Shield Data Bus Cable
M17/203-00001	No QPL'd Source	NA	2C:SPA 19/.005 0.0248 (0.63)	XLETFE 0.048 (1.22)	38TC:38TC Mu Metal Interlayer .140" (3.56)	XLETFE 0.161 (4.09)	NA	0.0291 (0.043)	77 +/-5 66	30.0 (98.4)	600	-85 +302 (-65+150)	1 MHz UnSwept	Single Shield Data Bus Cable
M17/205-00018	No QPL'd Source	NA	SC 0.0298 (0.76)	LDTFE 0.083 (2.11)	Helical SPC Tape 38SC: .109" (2.77)	PFA-XIII 0.120 (3.05)	NA	0.015 (0.022)	50 +/-2 82	27.0 (88.6)	1,900	-67 +392 (-55 +200)	0.05-18 GHz Swept	Consider: TFlex 405 or TFlex 402
M17/205-00050	No QPL'd Source	NA	SC 0.0298 (0.76)	LDTFE Tape 0.083 (2.11)	Helical SPC Tape 38SC: .109" (2.77)	PFA-XIII 0.120 (3.05)	NA	0.015 (0.022)	50 +/-2 82	27.0 (88.6)	1,900	-67 +392 (-55 +200)	0.05-50 GHz Swept	Consider TFlex 405 or TFlex 402
M17/206-00018	No QPL'd Source	NA	SC 0.0365 (0.93)	PTFE 0.117 (2.97)	SC Strip-Al Kptn 38SC: .154" (3.91)	FEP-IX 0.169 (4.29)	NA	0.040 (0.060)	50 +/-2 69.5	32.0 (105.0)	1,900	-67 +392 (-55 +200)	0.05-18 GHz Swept	Consider: SF-142
M17/206-00030	No QPL'd Source	NA	SC 0.0365 (0.93)	PTFE 0.117 (2.97)	SC Strip-Al Kptn 38SC: .154" (3.91)	FEP-IX 0.169 (4.29)	NA	0.040 (0.060)	50 +/-2 69.5	32.0 (105.0)	1,900	-67 +392 (-55 +200)	0.05-30 GHz Swept	Consider: SF-142
M17/208-00001	No QPL'd Source	NA	BCCS 0.007 (0.18)	Air Space PE 0.285 (7.24)	34BC 0.314 (7.98)	XLPE 0.405 (10.29)	NA	0.089 (0.133)	185 +/-10 83	7.2 (23.6)	1,000	-40 +176 (-40 +80)	1GHz UnSwept	Non halogen Low smoke M17/47-RG114
M17/209-00001	No QPL'd Source	NA	BCCS 0.1054 (2.68)	PE 0.680 (17.27)	30BC 0.726 (18.44)	XLPE 0.670 (22.10)	NA	0.505 (0.752)	75 +/-3 66	22.0 (72.2)	10,000	-40 +176 (-40 +80)	1GHz UnSwept	Non halogen Low smoke M17/64-RG164
M17/210-00001	17-05-92	AA-3404	BC 0.195 (4.95)	PE 0.680 (17.27)	34SC:34SC 0.738 (18.75)	XLPE 0.895 (22.73)	NA	0.572 (0.852)	50 +/-2 66	32.2 (105.6)	11,000	-40 +176 (-40 +80)	1GHz UnSwept	Non halogen Low smoke M17/67-RG177
M17/211-00001	17-05-92	AA-8063	TC 7/.0159 0.0477 (1.21)	CPE & PE 0.295 (7.49)	34TC 0.324 (8.23)	XLPE 0.405 (10.29)	NA	0.110 (0.164)	72 +/-3 63	24.0 (78.7)	5,000	-40 +176 (-40 +80)	1 GHz UnSwept	Non halogen Low smoke M17/126-RG391
M17/211-00002	17-05-92	AA-8064	BC 7/.0159 0.0477 (1.21)	CPE & PE 0.295 (7.49)	34 TC 0.324 (8.23)	XLPE 0.405 (10.29)	Alum. Braid 0.475 (12.07)	0.135 (0.201)	72 +/-3 63	24.0 (78.7)	5,000	-40 +176 (-40 +80)	1 GHz UnSwept	Armored M17/211-00001
M17/211-00003	QPL Pending	AA-9422	BC 7/.0159 0.0477 (1.21)	CPE&PE 0.295 (17.27)	34TC 0.324 (8.23)	XLPE 0.405 (10.29)	NA	0.110 (0.201)	72 +/-3 63	24.0 (78.7)	5,000	-40 +176 (-40 +80)	1GHz Unswept	M17/211-00001 +IR Spec.
M17/212-00001	17-05-92	AA-8065	BC 0.195 (4.95)	PE 0.680 (17.27)	34SC:34SC 0.738 (18.75)	XLPE 0.895 (22.73)	NA	0.572 (0.852)	50 +/-2 66	32.2 (105.6)	11,000	-40 +176 (-40 +80)	400 MHz UnSwept	Non halogen Low smoke M17/160-00001
M17/213-00001	17-05-92	AA-8066	BC 7/.0296 0.0888 (2.26)	PE 0.285 (7.24)	33BC 0.318 (8.08)	XLPE 0.405 (10.29)	NA	0.121 (0.180)	50 +/-2 66	32.2 (105.6)	5,000	-40 +176 (-40 +80)	400 MHz UnSwept	Non halogen Low smoke M17/163-00001
M17/214-00001	17-05-92	AA-8067	SC 7/.0296 0.888 (2.26)	PE 0.285 (7.24)	34SC:34SC 0.343 (8.71)	XLPE 0.425 (10.80)	NA	0.154 (0.229)	50 +/-2 66	32.2 (105.6)	7,000	-40 +176 (-40 +80)	400 MHz UnSwept	Non halogen Low smoke M17/164-00001
M17/215-00001	17-05-92	AA-8068	BC 0.1060 (2.69)	PE 0.370 (9.40)	33BC:33BC 0.403 (10.24)	XLPE 0.545 (13.84)	NA	0.248 (0.369)	50 +/-2 66	32.2 (105.6)	7,000	-40 +176 (-40 +80)	400 MHz UnSwept	Non halogen Low smoke M17/165-00001
M17/216-00001	17-05-92	AA-8069	BC 0.195 (4.95)	PE 0.680 (17.27)	30BC 0.726 (18.44)	XLPE 0.870 (22.10)	NA	0.521 (0.776)	50 +/-2 66	32.2 (105.6)	11,000	-40 +176 (-40 +80)	400 MHz UnSwept	Non halogen Low smoke M17/166-00001
M17/217-00001	17-05-92	AA-8070	BCCS 7/.0063 0.0189 (0.48)	PE 0.060 (1.52)	38TC 0.078 (1.98)	XLPE 0.110 (2.79)	NA	0.010 (0.015)	50 +/-2 66	32.2 (105.6)	1,500	-40 +176 (-40 +80)	400 MHz UnSwept	Non halogen Low smoke M17/173-00001
M17/218-00001	17-05-92	AA-8071	BCCS 0.0253 (0.64)	Air Spaced PE 0.285 (7.24)	33BC 0.318 (8.08)	XLPE 0.405 (10.29)	NA	0.095 (0.142)	125 +/-6 86	11.0 (36.1)	750	-40 +176 (-40 +80)	1 GHz UnSwept	Non halogen Low smoke M17/31-RG63

M17/MIL-C-17 Coaxial Cable Specifications

M17 Part No.	M17 QPL	TMS Part No.	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Armor inches (mm)	Weight lb/ft (kg/m)	Impedance ohms Vp (%)	Capacitance pF/ft (pF/m)	Max Oper. Voltage vrms	Temp. Range F (C)	M17 Test Frequency	Comments
M17/218-00002	17-05-92	AA-8072	BCCS 0.0253 (0.64)	Air Spaced PE 0.285 (7.24)	33BC 0.318 (8.08)	XLPE 0.405 (10.29)	Alum. Braid 0.475 (12.07)	0.138 (.206)	125 +/-6 86	11.0 (36.1)	750	-40 +176 (-40 +80)	1 GHz UnSwept	Armored M17/218-00001
M17/219-00001	Proposed Spec	NA	SCCS 0.0232 (0.59)	PTFE 0.076 (1.93)	BC Tube 0.096 (2.44)	None	NA	0.015 (0.022)	50 +/-1 59.5	32.0 -105	1,700	-40 +257 (-40 +125)	0.50-50 GHz Swept	Proposed Spec
M17/220-00001	17-041-99	AA-8469	BC 0.044 (1.12)	Foam PE 0.116 (2.95)	36TC: Al Tape 0.144 (3.66)	XLPE 0.195 (4.95)	NA	0.037 (0.055)	50 +/-2 83	24.5 (80.4)	1,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Non-halogen Low smoke Low loss
M17/220-00002	17-041-99	AA-8897	BC 0.044 (1.12)	Foam PE 0.116 (2.95)	36TC: Al Tape 0.144 (3.66)	XLPE 0.195 (4.95)	Alum. Braid 0.265 (6.73)	0.051 (0.076)	50 +/-2 83	24.5 (80.4)	1,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Armored M17/220-00001
M17/221-00001	17-041-99	AA-8470	BC 0.056 (1.42)	Foam PE 0.150 (3.81)	36TC: Al Tape 0.178 (4.52)	XLPE 0.242 (6.15)	NA	0.051 (0.076)	50 +/-2 84	24.2 (79.4)	1,500	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Non-halogen Low smoke Low loss
M17/221-00002	17-041-99	AA-8898	BC 0.056 (1.42)	Foam PE 0.150 (3.81)	36TC: Al Tape 0.178 (4.52)	XLPE 0.242 (6.15)	Alum. Braid 0.312 (7.92)	0.066 (0.098)	50 +/-2 84	24.2 (79.4)	1,500	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Armored M17/221-00001
M17/222-00001	17-041-99	AA-8681	BC 0.070 (1.78)	Foam PE 0.190 (4.83)	34TC: Al Tape 0.225 (5.72)	XLPE 0.300 (7.62)	NA	0.087 (0.130)	50 +/-2 85	24.1 (79.1)	2,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Non-halogen Low smoke Low loss
M17/222-00002	17-041-99	AA-8899	BC 0.070 (1.78)	Foam PE 0.190 (4.83)	34TC: Al Tape 0.225 (5.72)	XLPE 0.300 (7.62)	Alum. Braid 0.370 (9.40)	0.105 (0.158)	50 +/-2 85	24.1 (79.1)	2,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Armored M17/222-00001
M17/223-00001	17-041-99	AA-8471	BCCAI 0.108 (2.74)	Foam PE 0.285 (7.24)	34TC: Al Tape 0.320 (8.13)	XLPE 0.405 (10.29)	NA	0.114 (0.170)	50 +/-2 85	23.9 (78.4)	3,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Non-halogen Low smoke Low loss
M17/223-00002	17-041-99	AA-8900	BCCAI 0.108 (2.74)	Foam PE 0.285 (7.24)	34TC: Al Tape 0.320 (8.13)	XLPE 0.405 (10.29)	Alum. Braid 0.475 (12.07)	0.140 (0.209)	50 +/-2 85	23.9 (78.4)	3,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Armored M17/223-00001
M17/224-00001	17-041-99	AA-8472	BCCAI 0.142 (3.61)	Foam PE 0.370 (9.40)	30TC: Al Tape 0.409 (10.39)	XLPE 0.500 (12.70)	NA	0.132 (0.197)	50 +/-2 86	23.6 (77.4)	4,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Non-halogen Low smoke Low loss
M17/224-00002	17-041-99	AA-8901	BCCAI 0.142 (3.61)	Foam PE 0.370 (9.40)	34TC: Al Tape 0.409 (10.39)	XLPE 0.500 (12.70)	Alum. Braid 0.570 (14.48)	0.163 (0.243)	50 +/-2 86	23.6 (77.4)	4,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Armored M17/224-00001
M17/225-00001	17-041-99	AA-8473	BCCAI 0.176 (4.47)	Foam PE 0.455 (11.56)	34TC: Al Tape 0.490 (12.45)	XLPE 0.590 (14.99)	NA	0.168 (0.250)	50 +/-2 87	23.4 (76.8)	5,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Non-halogen Low smoke Low loss
M17/225-00002	17-041-99	AA-8902	BCCAI 0.176 (4.47)	Foam PE 0.455 (11.56)	34TC: Al Tape 0.490 (12.45)	XLPE 0.590 (14.99)	Alum. Braid 0.665 (16.89)	0.204 (0.304)	50 +/-2 87	23.4 (76.8)	5,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Armored M17/225-00001
M17/226-00001	17-041-99	AA-8474	BC Tube 0.262 (6.65)	Foam PE 0.680 (17.27)	30TC: Al Tape 0.732 (18.59)	XLPE 0.870 (22.10)	NA	0.375 (0.559)	50 +/-2 87	23.4 (76.8)	7,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Non-halogen Low smoke Low loss
M17/226-00002	17-041-99	AA-8903	BC Tube 0.262 (6.65)	Foam PE 0.680 (17.27)	30TC: Al Tape 0.732 (18.59)	XLPE 0.870 (22.10)	Alum. Braid 0.945 (24.00)	0.427 (0.636)	50 +/-2 87	23.4 (76.8)	7,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Armored M17/226-00001
M17/227-00001	17-041-99	AA-8475	BC Tube 0.349 (8.86)	Foam PE 0.920 (23.37)	30TC: Al Tape 0.972 (24.69)	XLPE 1.200 (30.48)	NA	0.686 (1.022)	50 +/-2 88	23.1 (75.8)	8,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Non-halogen Low smoke Low loss
M17/227-00002	17-041-99	AA-8904	BC Tube 0.349 (8.86)	Foam PE 0.920 (23.37)	30TC: Al Tape 0.972 (24.69)	XLPE 1.200 (30.48)	Alum. Braid 1.300 (33.02)	0.758 (1.129)	50 +/-2 88	23.1 (75.8)	8,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Armored M17/227-00001
M17/228-00001	17-041-99	AA-8476	BC Tube 0.527 (13.39)	Foam PE 1.350 (34.29)	30TC: Al Tape 1.401 (35.59)	XLPE 1.670 (42.42)	NA	1.05 (1.564)	50 +/-2 89	22.8 (74.8)	10,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Non-halogen Low smoke Low loss
M17/228-00002	17-041-99	AA-8905	BC Tube 0.527 (13.39)	Foam PE 1.350 (34.29)	30TC: Al Tape 1.401 (35.59)	XLPE 1.670 (42.42)	Alum. Braid 1.300 (33.02)	1.13 (1.683)	50 +/-2 89	22.8 (74.8)	10,000	-22 +185 (-30 +85)	0.05-2.5 GHz Swept	Armored M17/228-00001
M17/233-0001	QPL Pending	AA-9600	BC 7/.0159 0.0477 (1.21)	CPE & PE 0.295 (7.49)	34 TC 0.324 (8.23)	XLPE 0.405 (10.29)	Magnetic Shield +XLPE .560 (14.22)	0.235 (0.350)	72 +/-3 63	24.0 (78.7)	5,000	-40 +176 (-40 +80)	1 GHz UnSwept	Magnetic Shielded M17/211-00003

MIL-C-17 Attenuation and Power Handling

M17 Part Number	Zo (ohms)	Overall Diam. (in.)	DC Resist. (ohms/1000 ft) Center	DC Resist. (ohms/1000 ft) Outer	M17 Max Freq. (MHz)	Loss Constants Resistive k1	Loss Constants Dielectric k2	100 MHz Loss (dB/100) Typical	100 MHz M17 (max)	400 MHz Loss (dB/100) Typical	400 MHz M17 (max)	1000 MHz Loss (dB/100) Typical	1000 MHz M17 (max)	3000 MHz Loss (dB/100) Typical	3000 MHz M17 (max)	5000 MHz Loss (dB/100) Typical	5000 MHz M17 (max)	11000 MHz Loss (dB/100) Typical	11000 MHz M17 (max)	M17Max Power (w) 400 MHz
M17/2-RG6	75	0.332	32.2	1.05	3000	0.256	0.00126	2.7	-	5.6	6.5	9.4	-	17.8	23.0	-	-	-	-	-
M17/6-RG11	75	0.405	6.10	1.18	1000	0.203	0.00126	2.2	-	4.6	5.2	7.7	9.4	-	-	-	-	-	-	290
M17/6-RG12	75	0.463	6.10	1.18	1000	0.203	0.00126	2.2	-	4.6	5.2	7.7	9.4	-	-	-	-	-	-	290
M17/15-RG22	95	0.420	6.50	0.83	200	0.214	0.00126	2.3	4.0	4.8	-	8.0	-	-	-	-	-	-	-	-
M17/15-RG111	95	0.478	6.50	0.83	200	0.214	0.00126	2.3	4.0	4.8	-	8.0	-	-	-	-	-	-	-	-
M17/16-RG23	125	0.945	1.84	1.06	400	0.150	0.00126	1.6	-	3.5	5.2	6.0	-	-	-	-	-	-	-	-
M17/16-RG24	125	1.003	1.84	1.06	400	0.150	0.00126	1.6	-	3.5	5.2	6.0	-	-	-	-	-	-	-	-
M17/24-RG34	75	0.630	2.47	1.24	400	0.131	0.00126	1.4	-	3.1	3.8	5.4	-	-	-	-	-	-	-	680
M17/28-RG58	50	0.195	10.90	4.11	1000	0.444	0.00126	4.6	6.5	9.4	17.0	15.3	28.0	-	-	-	-	-	-	90
M17/29-RG59	75	0.242	51.3	2.57	1000	0.320	0.00126	3.3	-	6.9	9.0	11.4	16.0	-	-	-	-	-	-	130
M17/30-RG62	93	0.242	40.9	2.57	1000	0.277	0.00074	2.8	-	5.8	8.0	9.5	13.0	-	-	-	-	-	-	-
M17/31-RG63	125	0.405	40.9	1.20	400	0.183	0.00075	1.9	-	4.0	5.5	6.5	-	-	-	-	-	-	-	-
M17/31-RG79	125	0.475	40.9	1.20	400	0.183	0.00075	1.9	-	4.0	5.5	6.5	-	-	-	-	-	-	-	-
M17/45-RG108	78	0.235	9.70	5.24	10	0.325	0.00126	3.4	-	7.0	-	11.5	-	-	-	-	-	-	-	-
M17/47-RG114	185	0.405	534	1.52	400	0.342	0.00066	3.5	-	7.1	8.5	11.5	-	-	-	-	-	-	-	-
M17/52-RG119	50	0.465	1.01	0.94	3000	0.136	0.00120	1.5	2.1	3.2	4.4	5.5	7.6	11.0	13.0	-	-	-	-	2600
M17/52-RG120	50	0.525	1.01	0.94	3000	0.136	0.00120	1.5	2.1	3.2	4.4	5.5	7.6	11.0	13.0	-	-	-	-	2600
M17/52-00001	50	0.465	1.01	0.94	1000	0.136	0.00120	1.5	2.1	3.2	4.4	5.5	7.6	11.0	13.0	-	-	-	-	2600
M17/54-RG122	50	0.160	15.9	4.83	1000	0.498	0.00126	5.1	8.2	10.5	18.0	17.0	30.0	-	-	-	-	-	-	62
M17/56-RG130	95	0.625	1.84	0.70	200	0.114	0.00126	1.3	-	2.8	8.8	4.9	-	-	-	-	-	-	-	-
M17/56-RG131	95	0.710	1.84	0.70	200	0.114	0.00126	1.3	-	2.8	8.8	4.9	-	-	-	-	-	-	-	-
M17/60-RG142	50	0.195	19.1	2.22	8000	0.368	0.00120	3.8	5.5	7.8	11.7	12.8	19.0	23.8	35.0	32.0	48.0	-	-	1100
M17/62-RG144	75	0.410	12.2	1.64	3000	0.188	0.00120	2.0	-	4.2	4.5	7.1	-	13.9	18.0	-	-	-	-	-
M17/64-RG35	75	0.945	0.96	0.35	1000	0.071	0.00126	0.8	-	1.9	2.8	3.5	6.0	-	-	-	-	-	-	-
M17/64-RG164	75	0.870	0.96	0.35	1000	0.071	0.00126	0.8	-	1.9	2.8	3.5	6.0	-	-	-	-	-	-	-
M17/65-RG165	50	0.410	1.51	2.82	3000	0.182	0.00120	1.9	2.1	4.1	4.6	7.0	8.0	13.6	15.0	-	-	-	-	2700
M17/65-RG166	50	0.470	1.51	2.82	3000	0.182	0.00120	1.9	2.1	4.1	4.6	7.0	8.0	13.6	15.0	-	-	-	-	2700
M17/67-RG177	50	0.895	0.28	0.30	5600	0.074	0.00126	0.9	1.0	2.0	2.6	3.6	5.0	7.8	15.0	11.5	25.0	-	-	1600
M17/72-RG211	50	0.730	0.28	0.47	1000	0.072	0.00120	0.8	0.85	1.9	2.3	3.5	4.5	-	-	-	-	-	-	11000
M17/73-RG212	50	0.332	3.40	1.04	11000	0.250	0.00126	2.6	3.0	5.5	6.5	9.2	12.0	17.5	24.0	24.0	34.0	40.1	73.0	400
M17/74-RG213	50	0.405	1.71	1.20	1000	0.183	0.00126	2.0	2.3	4.2	4.8	7.1	9.0	-	-	-	-	-	-	320
M17/74-RG215	50	0.475	1.71	1.20	1000	0.183	0.00126	2.0	2.3	4.2	4.8	7.1	9.0	-	-	-	-	-	-	320
M17/75-RG214	50	0.425	1.71	1.31	11000	0.210	0.00126	2.2	2.6	4.7	6.8	7.3	12.0	15.3	28.0	21.2	35.0	35.9	60.0	330
M17/75-RG365	50	0.425	1.71	1.31	11000	0.210	0.00126	2.2	2.6	4.7	6.8	7.3	12.0	15.3	28.0	21.2	35.0	35.9	60.0	330
M17/77-RG216	75	0.425	6.10	0.77	3000	0.203	0.00126	2.2	-	4.6	6.5	7.7	-	14.9	23.0	-	-	-	-	270
M17/78-RG217	50	0.545	0.93	0.60	3000	0.127	0.00126	1.4	1.6	3.0	3.7	5.3	7.0	10.7	14.0	-	-	-	-	470
M17/78-00001	50	0.545	0.93	0.60	3000	0.127	0.00126	1.4	1.6	3.0	3.7	5.3	7.0	10.7	14.0	-	-	-	-	470
M17/79-RG218	50	0.870	0.28	0.35	1000	0.069	0.00126	0.8	1.0	1.9	2.8	3.4	5.0	-	-	-	-	-	-	1200
M17/79-RG219	50	0.945	0.28	0.35	1000	0.069	0.00126	0.8	1.0	1.9	2.8	3.4	5.0	-	-	-	-	-	-	1200
M17/81-00001	50	1.120	0.15	0.27	400	0.052	0.00126	0.6	-	1.5	2.3	2.9	-	-	-	-	-	-	-	-
M17/81-00002	50	1.195	0.15	0.27	400	0.052	0.00126	0.6	-	1.5	2.3	2.9	-	-	-	-	-	-	-	-
M17/84-RG223	50	0.212	8.60	2.22	12400	0.384	0.00126	4.0	6.5	8.2	12.0	13.4	21.0	24.8	40.0	33.5	55.0	54.1	84.0	86
M17/86-00001	50	0.430	1.54	1.31	400	0.182	0.00120	1.9	-	4.1	5.0	7.0	-	-	-	-	-	-	-	-
M17/86-00002	50	0.490	1.54	1.31	400	0.182	0.00120	1.9	-	4.1	5.0	7.0	-	-	-	-	-	-	-	-
M17/87-00001	50	0.500	0.85	0.86	400	0.140	0.00120	1.5	-	3.3	3.8	5.6	-	-	-	-	-	-	-	-
M17/90-RG71	93	0.245	40.9	1.54	1000	0.277	0.00074	2.8	-	5.8	8.0	9.5	-	-	-	-	-	-	-	-
M17/92-RG115	50	0.344	1.91	1.34	12400	0.203	0.00120	2.2	2.5	4.5	5.7	7.6	9.8	14.7	23.0	20.4	34.0	34.5	58.0 @12.4 GHz	2600
M17/92-00001	50	0.415	1.91	1.34	12400	0.203	0.00120	2.2	2.5	4.5	5.7	7.6	9.8	14.7	23.0	20.4	34.0	34.5	58.0 @12.4 GHz	2600
M17/93-RG178	50	0.071	234	14.42	3000	1.365	0.00120	13.8	16.0	27.8	33.0	44.4	52.0	78.4	94.0	-	-	-	-	110
M17/93-00001	50	0.071	234	14.42	3000	1.365	0.00120	13.8	16.0	27.8	33.0	44.4	52.0	78.4	94.0	-	-	-	-	110
M17/94-RG179	75	0.100	234	8.49	400	0.800	0.00120	8.1	-	16.5	21.0	26.5	-	-	-	-	-	-	-	-
M17/95-RG180	95	0.141	234	6.43	400	0.615	0.00120	6.3	-	12.8	17.0	20.6	-	-	-	-	-	-	-	-
M17/97-RG210	93	0.242	40.9	2.57	400	0.277	0.00074	2.8	-	5.8	8.0	9.5	-	-	-	-	-	-	-	-
M17/100-RG133	95	0.405	16.4	1.18	400	0.208	0.00126	2.2	-	4.7	5.7	7.8	-	-	-	-	-	-	-	-
M17/109-RG301	50	0.245	8.00	3.00	3000	0.335	0.00120	3.5	-	7.2	-	11.8	70.0	-	116.0	-	-	-	-	-
M17/110-RG302	75	0.202	40.9	2.87	3000	0.305	0.00120	3.2	-	6.6	8.0	10.8	-	20.3	26.0	-	-	-	-	-
M17/111-RG303	50	0.170	19.1	4.17	3000	0.368	0.00120	3.8	3.9	7.8	8.6	12.8	15.0	23.8	28.0	-	-	-	-	1100
M17/112-RG304	50	0.280	7.5	1.19	12000	0.241	0.00120	2.5	2.7	5.3	6.4	8.8	11.1	16.8	22.0	23.0	30.0	-	-	1450
M17/113-RG316	50	0.098	83.3	8.46	3000	0.787	0.00120	8.0	10.5	16.2	21.0	26.1	38.0	46.7	58.0	-	-	-	-	210
M17/116-RG307	75	0.265	0.66	1.24	400	0.3293	0.00050	2.7	-	5.4	7.5	8.7	-	-	-	-	-	-	-	-
M17/119-RG174	50	0.110	94.3	10.93	1000	0.826	0.00126	8.4	10.0	17.0	25.0	27.4	45.0	-	-	-	-	-	-	26
M17/126-RG391	72	0.405	6.10	2.47	400	0.219	0.00136	2.3	-	4.9	15.0	8.3	-	-	-	-	-	-	-	-
M17/126-RG392	72	0.475	6.10	2.47	400	0.219	0.00136	2.3	-	4.9	15.0	8.3	-	-	-	-	-	-	-	-

MIL-C-17 Attenuation and Power Handling

M17 Part Number	Zo (ohms)	Overall Diam. (in.)	DC Resist. (ohms/1000 ft) Center	Outer	M17 Max Freq. (MHz)	Loss Constants Resistive k1	Dielectric k2	100 MHz Loss (dB/100) Typical	M17 (max)	400 MHz Loss (dB/100) Typical	M17 (max)	1000 MHz Loss (dB/100) Typical	M17 (max)	3000 MHz Loss (dB/100) Typical	M17 (max)	5000 MHz Loss (dB/100) Typical	M17 (max)	11000 MHz Loss (dB/100) Typical	M17 (max)	M17Max Power (w) 400 MHz
M17/127-RG393	50	0.390	1.54	1.31	11000	.202	0.00120	2.0	2.4	4.3	5.0	7.2	8.8	14.1	18.0	19.5	24.0	33.2	37.0	1900
M17/128-RG400	50	0.195	8.6	2.22	12400	0.426	0.00120	4.4	4.5	9.0	10.5	14.7	17.0	26.9	38.0	36.1	50.0	57.9	78.0	1050
M17/129-RG401	50	0.250	2.55	0.45	18000	0.178	0.00120	1.9	-	4.0	4.5	6.8	7.5	13.3	16.0	18.6	22.0	31.9	33.0	1900
M17/129-00001	50	0.250	2.55	0.45	18000	0.178	0.00120	1.9	-	4.0	4.5	6.8	7.5	13.3	16.0	18.6	22.0	31.9	33.0	1900
M17/130-RG402	50	0.141	20.00	1.32	20000	0.316	0.00120	3.3	-	6.8	8.0 @500 MHz	11.2	12.0	20.9	21.0	28.3	29.0	46.3	45.0 @10 MHz	660
M17/130-00001	50	0.141	20.00	1.32	20000	0.316	0.00120	3.3	-	6.8	8.0 @500 MHz	11.2	12.0	20.9	21.0	28.3	29.0	46.3	45.0 @10 MHz	660
M17/130-00002	50	0.141	20.00	1.32	20000	0.316	0.00120	3.3	-	11.9	14.0 @500 MHz	17.7	19.0	30.9	31.0	38.0	39.0	53.8	52.0 @10 MHz	660
M17/130-00003	50	0.141	20.00	1.32	20000	0.316	0.00120	3.3	-	11.9	14.0 @500 MHz	17.7	19.0	30.9	31.0	38.0	39.0	53.8	52.0 @10 MHz	660
M17/130-00004	50	0.141	20.00	1.32	20000	0.316	0.00120	3.3	-	6.8	8.0 @500 MHz	11.2	12.0	20.9	21.0	28.3	29.0	46.3	45.0 @10 MHz	660
M17/130-00005	50	0.141	20.00	1.32	20000	0.316	0.00120	3.3	-	6.8	8.0 @500 MHz	11.2	12.0	20.9	21.0	28.3	29.0	46.3	45.0 @10 MHz	660
M17/130-00006	50	0.141	20.00	1.32	20000	0.316	0.00120	3.3	-	11.9	14.0 @500 MHz	17.7	19.0	30.9	31.0	38.0	39.0	53.8	52.0 @10 MHz	660
M17/130-00007	50	0.141	20.00	1.32	20000	0.316	0.00120	3.3	-	11.9	14.0 @500 MHz	17.7	19.0	30.9	31.0	38.0	39.0	53.8	52.0 @10 MHz	660
M17/130-00008	50	0.141	20.00	1.32	20000	0.336	0.00120	3.5	-	7.2	8.0 @500 MHz	11.8	12.0	22.0	21.0	NA	29.0	48.4	45.0 @10 MHz	660
M17/130-00009	50	0.141	20.00	1.32	20000	0.336	0.00120	3.5	-	7.2	8.0 @500 MHz	11.8	12.0	22.0	21.0	NA	29.0	48.4	45.0 @10 MHz	660
M17/130-00010	50	0.141	20.00	1.32	20000	0.336	0.00120	3.5	-	12.6	14.0 @500 MHz	18.7	19.0	32.6	31.0	39.9	39.0	56.2	52.0 @10 MHz	660
M17/130-00011	50	0.141	20.00	1.32	20000	0.336	0.00120	3.5	-	12.6	14.0 @500 MHz	18.7	19.0	32.6	31.0	39.9	39.0	56.2	52.0 @10 MHz	660
M17/130-00012	50	0.141	20.00	1.32	20000	0.316	0.00120	3.3	-	6.8	8.0 @500 MHz	11.2	12.0	20.9	21.0	28.3	29.0	46.3	45.0 @10 MHz	660
M17/130-00013	50	0.141	20.00	1.32	20000	0.316	0.00120	3.3	-	11.9	14.0 @500 MHz	17.7	19.0	30.9	31.0	38.0	39.0	53.8	52.0 @10 MHz	660
M17/131-RG403	50	0.116	234	4.89	10000	1.365	0.00120	13.8	13.0	27.8	29.0	44.4	50.0	78.4	94.0	102.5	120.0	156.4	150.0	95
M17/132-00001	50	0.071	234	14.42	10000	1.365	0.00200	13.9	-	28.1	33.0	45.2	NA	NA	NA	NA	NA	NA	NA	90
M17/133-RG405	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	11.9	15.0 @500 MHz	19.2	22.0	34.8	37.0	46.2	50.0	72.9	80.0 @10 MHz	210
M17/133-00001	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	11.9	15.0 @500 MHz	19.2	22.0	34.8	37.0	46.2	50.0	72.9	80.0 @10 MHz	210
M17/133-00002	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	11.9	15.0 @500 MHz	19.2	22.0	34.8	37.0	46.2	50.0	72.9	80.0 @10 MHz	210
M17/133-00003	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	11.9	15.0 @500 MHz	19.2	22.0	34.8	37.0	46.2	50.0	72.9	80.0 @10 MHz	210
M17/133-00004	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	19.8	25.0 @500 MHz	29.6	34.0	46.9	50.0	60.1	65.0	72.9	90.0 @10 MHz	210
M17/133-00005	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	19.8	25.0 @500 MHz	29.6	34.0	46.9	50.0	60.1	65.0	72.9	90.0 @10 MHz	210
M17/133-00006	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	11.9	15.0 @500 MHz	19.2	22.0	34.8	37.0	46.2	50.0	72.9	80.0 @10 MHz	210
M17/133-00007	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	11.9	15.0 @500 MHz	19.2	22.0	34.8	37.0	46.2	50.0	72.9	80.0 @10 MHz	210
M17/133-00008	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	11.9	15.0 @500 MHz	19.2	22.0	34.8	37.0	46.2	50.0	72.9	80.0 @10 MHz	210
M17/133-00009	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	11.9	15.0 @500 MHz	19.2	22.0	34.8	37.0	46.2	50.0	72.9	80.0 @10 MHz	210
M17/133-00010	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	19.8	25.0 @500 MHz	29.6	34.0	46.9	50.0	60.1	65.0	72.9	90.0 @10 MHz	210
M17/133-00011	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	19.8	25.0 @500 MHz	29.6	34.0	46.9	50.0	60.1	65.0	72.9	90.0 @10 MHz	210
M17/133-00012	50	0.0865	64.8	2.68	20000	0.606	0.00120	6.2	-	12.6	15.0 @500 MHz	20.4	22.0	49.7	37.0	63.5	50.0	76.8	80.0 @10 MHz	210
M17/133-00013	50	0.0865	64.8	2.68	20000	0.606	0.00120	6.2	-	12.6	15.0 @500 MHz	20.4	22.0	49.7	37.0	63.5	50.0	76.8	80.0 @10 MHz	210
M17/133-00014	50	0.0865	64.8	2.68	20000	0.606	0.00120	6.2	-	21.0	25.0 @500 MHz	31.4	34.0	49.7	50.0	63.5	65.0	76.8	90.0 @10 MHz	210

MIL-C-17 Attenuation and Power Handling

M17 Part Number	Zo (ohms)	Overall Diam. (in.)	DC Resist. (ohms/1000 ft) Center	DC Resist. (ohms/1000 ft) Outer	M17 Max Freq. (MHz)	Loss Constants Resistive k1	Loss Constants Dielectric k2	100 MHz Loss (dB/100) Typical	100 MHz Loss (dB/100) M17 (max)	400 MHz Loss (dB/100) Typical	400 MHz Loss (dB/100) M17 (max)	1000 MHz Loss (dB/100) Typical	1000 MHz Loss (dB/100) M17 (max)	3000 MHz Loss (dB/100) Typical	3000 MHz Loss (dB/100) M17 (max)	5000 MHz Loss (dB/100) Typical	5000 MHz Loss (dB/100) M17 (max)	11000 MHz Loss (dB/100) Typical	11000 MHz Loss (dB/100) M17 (max)	M17Max Power (w) 400 MHz
M17/133-00015	50	0.0865	64.8	2.68	20000	0.606	0.00120	6.2	-	21.0	25.0 @500 MHz	31.4	34.0	49.7	50.0	63.5	65.0	76.8	90.0 @10 MHz	210
M17/133-00016	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	11.9	15.0 @500 MHz	19.2	22.0	34.8	37.0	46.2	50.0	72.9	80.0 @10 MHz	210
M17/133-00017	50	0.0865	64.8	2.68	20000	0.569	0.00120	5.8	-	19.8	25.0 @500 MHz	29.6	34.0	46.9	50.0	60.1	65.0	72.9	90.0 @10 MHz	210
M17/134-00001	50	0.245	9.6	2.78	3000	0.402	0.00126	4.1	6.0	8.6	15.0	14.0	26.0	25.8	60.0	-	-	53.7	-	60
M17/134-00002	50	0.245	9.6	2.78	3000	0.402	0.00126	4.1	6.0	8.6	15.0	14.0	26.0	25.8	60.0	-	-	-	-	60
M17/134-00003	50	0.245	9.6	2.78	3000	0.402	0.00126	4.1	6.0	8.6	15.0	14.0	26.0	25.8	60.0	-	-	-	-	60
M17/134-00004	50	0.245	9.6	2.78	3000	0.402	0.00126	4.1	6.0	8.6	15.0	14.0	26.0	25.8	60.0	-	-	-	-	60
M17/135-00001	50	0.500	1.71	0.66	3000	0.190	0.00126	2.0	2.5	4.3	6.0	7.3	11.0	14.2	22.0	-	-	-	-	350
M17/135-00002	50	0.500	1.71	0.66	3000	0.190	0.00126	2.0	2.5	4.3	6.0	7.3	11.0	14.2	22.0	-	-	-	-	350
M17/135-00003	50	0.500	1.60	0.66	3000	0.164	0.00126	1.8	2.5	3.8	6.0	6.5	11.0	12.8	22.0	-	-	-	-	350
M17/135-00004	50	0.500	1.60	0.66	3000	0.164	0.00126	1.8	2.5	3.8	6.0	6.5	11.0	12.8	22.0	-	-	-	-	350
M17/135-00005	50	0.500	1.60	0.66	3000	0.164	0.00126	1.8	2.5	3.8	6.0	6.5	11.0	12.8	22.0	-	-	-	-	350
M17/135-00006	50	0.500	1.60	0.66	3000	0.164	0.00126	1.8	2.5	3.8	6.0	6.5	11.0	12.8	22.0	-	-	-	-	350
M17/136-00001	75	0.100	234	8.49	400	0.800	0.00120	8.1	-	16.5	15.8	26.5	-	-	-	-	-	-	-	-
M17/137-00001	95	0.141	234	6.43	400	0.615	0.00120	6.3	-	12.8	17.0	20.6	-	-	-	-	-	-	-	-
M17/138-00001	50	0.098	83.3	8.46	3000	0.787	0.00120	8.0	11.0	16.2	21.0	26.1	38.0	46.7	58.0	-	-	-	-	220
M17/139-00001	95	0.141	374	8.05	3000	0.615	0.00120	6.3	8.8	12.8	17.0	20.6	29.0	-	-	-	-	-	-	-
M17/151-00001	50	0.047	205	12.35	20000	1.014	0.00120	10.3	-	20.8	25.0	33.3	40.0	59.1	70.0	77.7	90.0	119.5	130.0	52
M17/151-00002	50	0.047	205	12.35	20000	1.014	0.00120	10.3	-	20.8	25.0	33.3	40.0	59.1	70.0	77.7	90.0	119.5	130.0	52
M17/152-00001	50	0.114	83.3	3.93	12400	0.787	0.00120	8.0	11.5	16.2	24.0	26.1	40.0	46.7	75.0	61.6	110.0	95.7	170.0	210
M17/153-00001	50	0.114	94.3	3.93	12400	0.787	0.00126	8.0	11.0	16.2	23.0	26.1	40.0	46.9	75.0	61.9	110.0	96.4	170.0	26
M17/154-00001	50	0.034	409	21.60	20000	1.444	0.00120	14.6	-	29.4	37.0	46.9	60.0	82.7	100.0	108.1	140.0	164.6	190.0	16
M17/154-00002	50	0.034	409	21.60	20000	1.444	0.00120	14.6	-	29.4	37.0	46.9	60.0	82.7	100.0	108.1	140.0	164.6	190.0	16
M17/155-00001	50	0.195	10.9	4.11	400	0.444	0.00126	4.6	-	9.4	17.0	15.3	-	-	-	-	-	-	-	90
M17/156-00001	50	0.465	1.01	0.94	400	0.131	0.00120	1.4	-	3.1	4.5	5.3	-	-	-	-	-	-	-	2600
M17/157-00001	50	0.160	15.9	4.11	400	0.498	0.00126	5.1	-	10.5	18.0	17.0	-	-	-	-	-	-	-	62
M17/158-00001	50	0.195	19.1	2.22	400	0.368	0.00120	3.8	-	7.8	9.5	12.8	-	-	-	-	-	-	-	NA
M17/159-00001	50	0.410	1.51	2.82	400	0.182	0.00120	1.9	-	4.1	4.6	7.0	-	-	-	-	-	-	-	2700
M17/160-00001	50	0.895	0.28	0.30	400	0.074	0.00126	0.9	-	2.0	2.7	3.6	-	-	-	-	-	-	-	1600
M17/161-00001	50	0.730	0.28	0.46	400	0.072	0.00120	0.8	-	1.9	2.0	3.5	-	-	-	-	-	-	-	11000
M17/161-00002	50	0.795	0.28	0.46	400	0.072	0.00120	0.8	-	1.9	2.0	3.5	-	-	-	-	-	-	-	11000
M17/162-00001	50	0.332	3.40	1.07	400	0.250	0.00126	2.6	-	5.5	6.5	9.2	-	-	-	-	-	-	-	400
M17/163-00001	50	0.405	1.71	1.20	400	0.183	0.00126	2.0	-	4.2	4.7	7.1	-	-	-	-	-	-	-	NA
M17/164-00001	50	0.425	1.71	1.31	400	0.210	0.00126	2.2	-	4.7	5.5	7.9	-	-	-	-	-	-	-	400
M17/164-00002	50	0.425	1.71	1.31	400	0.210	0.00126	2.2	-	4.7	5.5	7.9	-	-	-	-	-	-	-	400
M17/165-00001	50	0.615	0.93	0.60	400	0.127	0.00126	1.4	-	3.0	3.8	5.3	-	-	-	-	-	-	-	400
M17/165-00002	50	0.545	0.93	0.60	400	0.127	0.00126	1.4	-	3.0	3.8	5.3	-	-	-	-	-	-	-	400
M17/166-00001	50	0.870	0.28	0.35	400	0.069	0.00126	0.8	-	1.9	2.75	3.4	-	-	-	-	-	-	-	1200
M17/167-00001	50	0.212	8.60	2.22	400	0.384	0.00126	4.0	-	8.2	11.5	13.4	-	-	-	-	-	-	-	86
M17/168-00001	50	0.415	1.91	1.34	400	0.203	0.00120	2.2	-	4.5	5.2	7.6	-	-	-	-	-	-	-	2600
M17/168-00002	50	0.344	1.91	1.34	400	0.203	0.00120	2.2	-	4.5	5.2	7.6	-	-	-	-	-	-	-	2600
M17/169-00001	50	0.071	234	14.42	400	1.365	0.00120	13.8	-	27.8	29.0	44.4	-	-	-	-	-	-	-	110
M17/170-00001	50	0.170	19.1	4.17	400	0.368	0.00120	3.8	-	7.8	8.6	12.8	-	-	-	-	-	-	-	1100
M17/171-00001	50	0.280	7.50	1.19	400	0.241	0.00120	2.5	-	5.3	6.4	8.8	-	-	-	-	-	-	-	1450
M17/172-00001	50	0.098	83.3	8.46	400	0.787	0.00120	8.0	-	16.2	21.0	26.1	-	-	-	-	-	-	-	220
M17/173-00001	50	0.110	94.3	10.93	400	0.826	0.00126	8.4	-	17.0	25.0	27.4	-	-	-	-	-	-	-	26
M17/174-00001	50	0.390	1.54	1.31	400	0.191	0.00120	2.0	-	4.3	5.0	7.2	-	-	-	-	-	-	-	1900
M17/175-00001	50	0.195	8.60	2.22	400	0.426	0.00120	4.4	-	9.0	10.5	14.7	-	-	-	-	-	-	-	1050
M17/176-00002	77	0.129	275	14.50	10	0.550	0.00120	0.6	1.4 @1 MHz	NA	-	NA	-	-	-	-	-	-	-	-
M17/176-00003	77	0.125	275	14.50	10	0.550	0.00230	0.6	1.4 @1 MHz	NA	-	NA	-	-	-	-	-	-	-	-
M17/177-00001	95	0.184	234	3.27	400	0.615	0.00120	6.3	-	12.8	17.0	20.6	-	-	-	-	-	-	-	-
M17/178-00001	95	0.270	234	1.85	400	0.615	0.00120	6.3	-	12.8	17.0	20.6	-	-	-	-	-	-	-	-
M17/179-00001	75	0.195	234	2.79	400	0.800	0.00120	8.1	-	16.5	21.0	26.5	-	-	-	-	-	-	-	-
M17/180-00001	75	0.332	32.2	1.05	3000	0.256	0.00126	2.7	-	5.6	6.5	9.4	-	17.8	23.0	-	-	-	-	-
M17/181-00001	75	0.405	6.10	1.18	1000	0.203	0.00126	2.2	-	4.6	5.2	7.7	-	-	-	-	-	-	-	-
M17/181-00002	75	0.475	6.10	1.18	1000	0.203	0.00126	2.2	-	4.6	5.2	7.7	9.4	-	-	-	-	-	-	-
M17/182-00001	95	0.420	6.50	0.83	200	0.214	0.00126	2.3	4.0	4.8	6.0 @200MHz	8.0	-	-	-	-	-	-	-	-
M17/182-00002	95	0.490	6.50	0.83	200	0.214	0.00126	2.3	4.0	4.8	-	8.0	-	-	-	-	-	-	-	-

MIL-C-17 Attenuation and Power Handling

M17 Part Number	Zo (ohms)	Overall Diam. (in.)	DC Resist. (ohms/1000 ft) Center	DC Resist. (ohms/1000 ft) Outer	M17 Max Freq. (MHz)	Loss Constants Resistive k1	Loss Constants Dielectric k2	100 MHz Loss (dB/100) Typical	100 MHz Loss (dB/100) M17 (max)	400 MHz Loss (dB/100) Typical	400 MHz Loss (dB/100) M17 (max)	1000 MHz Loss (dB/100) Typical	1000 MHz Loss (dB/100) M17 (max)	3000 MHz Loss (dB/100) Typical	3000 MHz Loss (dB/100) M17 (max)	5000 MHz Loss (dB/100) Typical	5000 MHz Loss (dB/100) M17 (max)	11000 MHz Loss (dB/100) Typical	11000 MHz Loss (dB/100) M17 (max)	M17Max Power (w) 400 MHz
M17/183-00001	50	0.195	10.9	4.11	1000	0.444	0.00126	4.6	6.5	9.4	17.0	15.3	28.0	-	-	-	-	-	-	90
M17/184-00001	75	0.242	51.3	2.57	1000	0.320	0.00126	3.3	-	6.9	9.0	11.4	16.0	-	-	-	-	-	-	130
M17/185-00001	93	0.242	40.9	2.57	1000	0.277	0.00074	2.8	-	5.8	8.0	9.5	13.0	-	-	-	-	-	-	-
M17/186-00001	78	0.235	9.70	5.24	10	0.325	0.00126	3.4	-	7.0	2.8	11.5	-	-	-	-	-	-	-	-
M17/187-00001	50	0.160	15.9	4.83	1000	0.498	0.00126	5.1	8.0	10.5	18.0	17.0	30.0	-	-	-	-	-	-	62
M17/188-00001	50	0.332	3.40	1.04	11000	0.250	0.00126	2.6	3.0	5.5	6.5	9.2	12.0	17.5	24.0	24.0	34.0	40.1	54.0	400
M17/189-00001	50	0.405	1.71	1.20	1000	0.183	0.00126	2.0	2.3	4.2	4.8	7.1	9.0	-	-	-	-	-	-	320
M17/189-00002	50	0.475	1.71	1.20	1000	0.183	0.00126	2.0	2.3	4.2	4.8	7.1	9.0	-	-	-	-	-	-	320
M17/190-00001	50	0.425	1.71	1.31	11000	0.210	0.00126	2.2	2.6	4.7	6.8	7.9	12.0	15.3	28.0	21.2	35.0	35.9	60	0 400
M17/191-00001	75	0.425	6.10	0.77	3000	0.203	0.00126	2.2	-	4.6	6.5	7.7	-	14.9	23.0	-	-	-	-	270
M17/192-00001	50	0.545	0.93	0.60	3000	0.127	0.00126	1.4	1.6	3.0	3.7	5.3	7.0	10.7	14.0	-	-	-	-	400
M17/192-00002	50	0.615	0.93	0.60	3000	0.127	0.00126	1.4	1.6	3.0	3.7	5.3	7.0	10.7	14.0	-	-	-	-	400
M17/193-00001	50	0.870	0.28	0.35	1000	0.069	0.00126	0.8	1.0	1.9	2.8	3.4	5.0	-	-	-	-	-	-	1200
M17/193-00002	50	0.945	0.28	0.35	1000	0.069	0.00126	0.8	1.0	1.9	2.8	3.4	5.0	-	-	-	-	-	-	1200
M17/194-00001	50	0.212	8.60	2.22	12400	0.384	0.00126	4.0	6.5	8.2	12.0	13.4	21.0	24.8	40.0	33.5	55.0	54.1	84.0	86
M17/195-00001	93	0.240	40.9	1.54	400	0.277	0.00074	2.8	-	5.8	8.0	9.5	-	-	-	-	-	-	-	135
M17/196-00001	50	0.110	94.3	10.93	1000	0.826	0.00126	8.4	10.0	17.0	25.0	27.4	45.0	-	-	-	-	-	-	26
M17/197-00001	50	0.195	10.9	4.11	400	0.444	0.00126	4.6	-	9.4	17.0	15.3	-	-	-	-	-	-	-	90
M17/198-00001	50	0.160	15.9	4.83	400	0.496	0.00126	5.1	-	10.4	18.0	16.9	-	-	-	-	-	-	-	62
M17/199-00001	50	0.332	3.40	1.19	400	0.250	0.00126	2.6	-	5.5	6.5	9.2	-	-	-	-	-	-	-	400
M17/200-00001	50	0.212	8.60	2.22	400	0.384	0.00126	4.0	-	8.2	11.5	13.4	-	-	-	-	-	-	-	86
M17/201-00001	77	0.137	27.00	6.61	1	0.120	0.00230	1.4	1.4 @ 1 MHz	3.3	-	6.1	-	-	-	-	-	-	-	-
M17/201-00002	77	0.165	15.10	6.91	1	0.080	0.00230	1.0	1.0 @ 1 MHz	2.5	-	4.8	-	-	-	-	-	-	-	-
M17/201-00003	77	0.130	27.00	6.54	1	0.120	0.00230	1.4	1.4 @ 1 MHz	3.3	-	6.1	-	-	-	-	-	-	-	-
M17/202-00001	77	0.147	27.00	4.91	1	0.120	0.00230	1.4	1.4 @ 1 MHz	3.3	-	6.1	-	-	-	-	-	-	-	-
M17/203-00001	77	0.161	27.00	4.91	1	0.120	0.00230	1.4	1.4 @ 1 MHz	3.3	-	6.1	-	-	-	-	-	-	-	-
M17/205-00018	50	0.120	11.8	9.30	18000	0.404	0.00017	4.1	4.1	8.1	8.2	12.9	13.0	22.6	22.9	29.4	31.0	44.2	45.1	-
M17/205-00050	50	0.120	11.8	9.30	50000	0.404	0.00017	4.1	4.1	8.1	8.2	12.9	13.0	22.6	22.9	29.4	31.0	44.2	45.1	-
M17/206-00018	50	0.169	7.9	2.85	18000	0.355	0.00120	3.7	4.3	7.6	9.0	12.4	17.0	23.0	27.0	31.1	38.0	50.4	59.0	-
M17/206-00030	50	0.169	7.9	2.85	30000	0.355	0.00120	3.7	4.3	7.6	9.0	12.4	17.0	23.0	27.0	31.1	38.0	50.4	59.0	-
M17/208-00001	185	0.405	534	1.52	1000	0.342	0.00066	3.5	-	7.1	8.5	11.5	-	-	-	-	-	-	-	-
M17/209-00001	75	0.870	2.36	0.35	1000	0.071	0.00126	0.8	-	1.9	2.8	3.5	6.0	-	-	-	-	-	-	-
M17/209-00002	75	0.945	2.36	0.35	1000	0.071	0.00126	0.8	-	1.9	2.8	3.5	6.0	-	-	-	-	-	-	-
M17/210-00001	50	0.895	0.28	0.35	5600	0.074	0.00126	0.9	1.0	2.0	2.8	3.6	5.0	7.8	16.0	12.6	28.0 @5.6 MHz	NA	NA	1600
M17/211-00001	72	0.405	6.1	2.47	1000	0.219	0.00136	2.3	-	4.9	15.0	8.3	-	-	-	-	-	-	-	-
M17/211-00002	72	0.475	6.1	2.47	1000	0.219	0.00136	2.3	-	4.9	15.0	8.3	-	-	-	-	-	-	-	-
M17/212-00001	50	0.895	0.28	0.30	400	0.074	0.00126	0.9	-	2.0	2.7	3.6	-	-	-	-	-	-	-	1600
M17/213-00001	50	0.405	1.71	1.20	400	0.183	0.00126	2.0	-	4.2	4.7	7.1	-	-	-	-	-	-	-	320
M17/214-00001	50	0.425	1.71	1.31	400	0.210	0.00126	2.2	-	4.7	5.5	7.9	-	-	-	-	-	-	-	400
M17/215-00001	50	0.545	0.93	0.60	400	0.127	0.00126	1.4	-	3.0	3.8	5.3	-	-	-	-	-	-	-	400
M17/216-00001	50	0.870	0.28	0.35	400	0.069	0.00126	0.8	-	1.9	2.8	3.4	-	-	-	-	-	-	-	1200
M17/217-00001	50	0.110	94.3	4.11	400	0.826	0.00126	8.4	-	17.0	25.0	27.4	-	-	-	-	-	-	-	26
M17/218-00001	125	0.405	40.9	1.20	1000	0.183	0.00075	1.9	-	4.0	5.5	6.5	-	-	-	-	-	-	-	-
M17/218-00002	125	0.475	40.9	1.20	1000	0.183	0.00075	1.9	-	4.0	5.5	6.5	-	-	-	-	-	-	-	-
M17/219-00001	50	0.096	48.7	3.02	50000	0.494	0.00120	5.1	5.2	10.4	10.5	16.8	17.0	30.7	31.0	40.9	40.0	65.0	62.0	
M17/220-00001	50	0.195	5.40	4.90	2500	0.37753	0.00039	3.8	4.3	7.7	8.7	12.3	14.0	21.8	22.4 @2.5 GHz	-	-	-	-	233
M17/220-00002	50	0.265	5.40	4.90	2500	0.37753	0.00039	3.8	4.3	7.7	8.7	12.3	14.0	21.8	22.4 @2.5 GHz	-	-	-	-	233
M17/221-00001	50	0.242	3.30	3.89	2500	0.28480	0.00039	2.9	3.3	5.9	6.6	9.4	10.7	16.8	17.1 @ 2.5 GHz	-	-	-	-	337
M17/221-00002	50	0.312	3.30	3.89	2500	0.28480	0.00039	2.9	3.3	5.9	6.6	9.4	10.7	16.8	17.1 @2.5 GHz	-	-	-	-	337
M17/222-00001	50	0.300	2.14	2.21	2500	0.22580	0.00044	2.3	2.6	4.7	5.2	7.6	8.4	13.7	13.8 @ 2.5 GHz	-	-	-	-	471
M17/222-00002	50	0.370	2.14	2.21	2500	0.22580	0.00044	2.3	2.6	4.7	5.2	7.6	8.4	13.7	13.8 @2.5 GHz	-	-	-	-	471
M17/223-00001	50	0.405	1.39	1.65	2500	0.14387	0.00031	1.5	1.7	3.0	3.5	4.9	5.7	8.8	9.4 @2.5 GHz	-	-	-	-	750

MIL-C-17 Attenuation and Power Handling

M17 Part Number	Zo (ohms)	Overall Diam. (in.)	DC Resist. (ohms/1000 ft) Center	DC Resist. (ohms/1000 ft) Outer	M17 Max Freq. (MHz)	Loss Constants Resistive k1	Loss Constants Dielectric k2	100 MHz Loss (dB/100) Typical	100 MHz Loss (dB/100) M17 (max)	400 MHz Loss (dB/100) Typical	400 MHz Loss (dB/100) M17 (max)	1000 MHz Loss (dB/100) Typical	1000 MHz Loss (dB/100) M17 (max)	3000 MHz Loss (dB/100) Typical	3000 MHz Loss (dB/100) M17 (max)	5000 MHz Loss (dB/100) Typical	5000 MHz Loss (dB/100) M17 (max)	11000 MHz Loss (dB/100) Typical	11000 MHz Loss (dB/100) M17 (max)	M17Max Power (w) 400 MHz
M17/223-00002	50	0.475	1.39	1.65	2500	0.14387	0.00031	1.5	1.7	3.0	3.5	4.9	5.7	8.8	9.4 @2.5 GHz	-	-	-	-	750
M17/224-00001	50	0.500	0.81	1.27	2500	0.11364	0.00031	1.2	1.4	2.4	2.8	3.9	4.6	7.1	7.6 @2.5 GHz	-	-	-	-	987
M17/224-00002	50	0.570	0.81	1.27	2500	0.11364	0.00031	1.2	1.4	2.4	2.8	3.9	4.6	7.1	7.6 @2.5 GHz	-	-	-	-	987
M17/225-00001	50	0.590	.524	1.20	2500	0.08888	0.00031	0.9	1.1	1.9	2.2	3.1	3.7	5.8	6.1 @2.5 GHz	-	-	-	-	1219
M17/225-00002	50	0.665	.524	1.20	2500	0.08888	0.00031	0.9	1.1	1.9	2.2	3.1	3.7	5.8	6.1 @2.5 GHz	-	-	-	-	1219
M17/226-00001	50	0.870	.541	0.55	2500	0.06091	0.00019	0.6	0.7	1.3	1.4	2.1	2.4	3.9	3.9 @2.5 GHz	-	-	-	-	1979
M17/226-00002	50	0.945	.541	0.55	2500	0.06091	0.00019	0.6	0.7	1.3	1.4	2.1	2.4	3.9	3.9 @2.5 GHz	-	-	-	-	1979
M17/227-00001	50	1.200	.323	0.37	2500	0.04396	0.00019	0.5	0.5	1.0	1.1	1.6	1.8	3.0	3.1 @2.5 GHz	-	-	-	-	2768
M17/227-00002	50	1.300	.323	0.37	2500	0.04396	0.00019	0.5	0.5	1.0	1.1	1.6	1.8	3.0	3.1 @2.5 GHz	-	-	-	-	2768
M17/228-00001	50	1.670	.209	0.27	2500	0.03113	0.00019	0.3	0.4	0.7	0.9	1.2	1.4	2.3	2.6 @2.5 GHz	-	-	-	-	3950
M17/228-00002	50	1.770	.209	0.27	2500	0.03113	0.00019	0.3	0.4	0.7	0.9	1.2	1.4	2.3	2.6 @2.5 GHz	-	-	-	-	3950

Notes:
Attenuation (typical) at any Frequency = k1 x SqRt (Fmhz) + k2 (Fmhz)
BC shielded cables used up to 1 GHz maximum due to braid oxidation over time.
TC shielded cables used up to 1 GHz maximum due to high loss of Tin Plating.
SPC shielded cables may be used up to their Cutoff Frequency.
Maximum Frequency listed in Table is as specified by MIL-C-17.
Cutoff frequency may be higher than M17 max frequency.
Power Data Given for 50 ohm Cables Only.
Power Data for SPC/PTFE based on +250C center conductor.
Power Data for PE dielectrics based on +80C center conductor.
Power Data for foam PE dielectrics based on +100C center conductor.
DC resistance of outer conductor includes all shield layers in parallel.
Consult Factory for not listed.

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range °C	Comments
1-3	WAVEGUIDE										Times Does Not Suply
4	BC 0.032	PE 0.116	2:BC	PVC-I 0.226	NA	0.025	50	30.8	1,900	-40 +80	Use: M17/28-RG58
5	BC 0.0508	PE 0.185	2:BC	PVC-I 0.332	NA	0.088	52.5	28.5	3,000	-40 +80	Use: M17/73-RG212
5A	SC 0.0508	PE 0.181	2:SC	PVC-II 0.328	NA	0.088	50	30.8	3,000	-40 +80	Use: M17/73-RG212
5B	SC 0.0508	PE 0.181	2:SC	PVC-IIA 0.328	NA	0.087	50	30.8	3,000	-40 +80	Use: M17/73-RG212
6	CCS 0.0285	PE 0.185	2:SC,BC	PVC-II 0.332	NA	0.081	76	20.0	2,700	-40 +80	Use: M17/2-RG6
6A	CCS 0.0285	PE 0.185	2:SC,BC	PVC-IIA 0.332	NA	0.082	75	20.6	2,700	-40 +80	Use: M17/2-RG6
7	BC 0.0359	Air-space PE 0.250	1:BC	PVC-I 0.370	NA	0.080	95	13.5	1,000	-40 +80	Use: M17/31-RG63
8	7/.0285 BC 0.0855	PE 0.285	1:BC	PVC-I 0.405	NA	0.106	52	29.6	4,000	-40 +80	Use: M17/74-RG213
8A	7/.0285 BC 0.0855	PE 0.285	1:BC	PVC-IIA 0.405	NA	0.106	52	29.6	5,000	-40 +80	Use: M17/74-RG213
9	7/.0285 SC 0.0855	PE 0.280	2:SC,BC	PVC-II 0.420	NA	0.140	51	30.2	4,000	-40 +80	Use: M17/75-RG214
9A	7/.0285 SC 0.0855	PE 0.280	2:SC	PVC-II 0.420	NA	0.140	51	30.2	4,000	-40 +80	Use: M17/75-RG214
9B	7/.0285 SC 0.0855	PE 0.280	2:SC	PVC-IIA 0.420	NA	0.150	50	30.8	5,000	-40 +80	Use: M17/75-RG214
10	7/.0285 BC 0.0855	PE 0.285	1:BC	PVC-II 0.405	Alum. Braid 0.463	0.146	52	29.6	4,000	-40 +80	Use: M17/74-RG215
10A	7/.0285 BC 0.0855	PE 0.285	1:BC	PVC-IIA 0.405	Alum. Braid 0.463	0.146	52	29.6	5,000	-40 +80	Use: M17/74-RG215
11	7/.0159 TC 0.0477	PE 0.285	1:BC	PVC-I 0.405	NA	0.096	75	20.6	4,000	-40 +80	Use: M17/6-RG11
11A	7/.0159 TC 0.0477	PE 0.285	1:BC	PVC-IIA 0.405	NA	0.096	75	20.6	5,000	-40 +80	Use: M17/6-RG11
12	7/.0159 TC 0.0477	PE 0.285	1:BC	PVC-II 0.405	Alum. Braid 0.463	0.141	75	20.6	4,000	-40 +80	Use: M17/6-RG12
12A	7/.0159 TC 0.0477	PE 0.285	1:BC	PVC-IIA 0.405	Alum. Braid 0.463	0.141	75	20.6	5,000	-40 +80	Use: M17/6-RG12
13	7/.0159 TC 0.0477	PE 0.280	2:BC	PVC-I 0.420	NA	0.126	74	20.8	4,000	-40 +80	Use: M17/77-RG216
13A	7/.0159 TC 0.0477	PE 0.370	2:BC	PVC-IIA 0.420	NA	0.126	74	20.8	5,000	-40 +80	Use: M17/77-RG216
14	BC 0.102	PE 0.370	2:BC	PVC-II 0.545	NA	0.216	52	29.6	5,500	-40 +80	Use: M17/78-RG217
14A	BC 0.102	PE 0.370	2:BC	PVC-IIA 0.545	NA	0.216	52	29.6	7,000	-40 +80	Use: M17/78-RG217

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range °C	Comments
15	CCS 0.0571	PE 0.370	2:BC	PVC-I 0.545	NA	0.197	76	20.0	5,000	-40 +80	
16	BC tube 0.125	PE 0.460	1:BC	PVC-I 0.630	NA	0.254	52	29.6	6,000	-40 +80	
17	BC 0.188	PE 0.680	1:BC	PVC-II 0.870	NA	0.460	52	29.6	11,000	-40 +80	Use: M17/79-RG218
17A	BC 0.188	PE 0.680	1:BC	PVC-IIA 0.870	NA	0.460	52	29.6	11,000	-40 +80	Use: M17/79-RG218
17B	CANCELLED, REASSIGNED NEW NOMENCLATURE RG177										
18	BC 0.188	PE 0.680	1:BC	PVC-II 0.870	Alum. Braid 0.925	0.585	52	29.6	11,000	-40 +80	Use: M17/79-RG219
18A	BC 0.188	PE 0.680	1:BC	PVC-IIA 0.870	Alum. Braid 0.928	0.585	52	29.6	11,000	-40 +80	Use: M17/79-RG219
19	BC 0.25	PE 0.91	1:BC	PVC-II 1.120	NA	0.740	52	29.6	14,000	-40 +80	Use: M17/81-00001
19A	BC 0.25	PE 0.91	1:BC	PVC-IIA 1.120	NA	0.740	52	29.6	14,000	-40 +80	Use: M17/81-00001
20	BC 0.25	PE 0.91	1:BC	PVC-II 1.120	Al. Braid 1.178	0.925	52	29.6	14,000	-40 +80	Use: M17/81-00002
20A	BC 0.25	PE 0.91	1:BC	PVC-IIA 1.12	Al. Braid 1.178	0.925	52	29.6	14,000	-40 +80	Use: M17/81-00002
21	HR 0.0508	PE 0.185	2:SC	PVC-II 0.332	NA	0.087	53	29.0	2,700	-40 +80	
21A	HR 0.0508	PE 0.185	2:SC	PVC-IIA 0.332	NA	0.087	53	29.0	2,700	-40 +80	
22	2 : BC 7/.0152 0.0456	PE 0.285	1:TC	PVC-I 0.405	NA	0.105	95	16.3	1,000	-40 +80	Use: M17/15-RG22
22A	2 : BC 7/.0152 0.0456	PE 0.285	2:TC	PVC-II 0.420	NA	0.151	95	16.3	1,000	-40 +80	Use: M17/15-RG22
22B	2 : BC 7/.0152 0.0456	PE 0.285	2:TC	PVC-IIA 0.420	NA	0.151	95	16.3	1,000	-40 +80	Use: M17/15-RG22
23	2 : BC 7/.0285 0.0855	PE, 2cores 0.380	2:BC	PVC-I 0.650x0.945	NA	0.490	125	12.0	3,000	-40 +80	Use: M17/16-RG23
23A	2 : BC 7/.0285 0.0855	PE, 2cores 0.380	2:BC	PVC-IIA 0.650x0.945	NA	0.490	125	12.0	3,000	-40 +80	Use: M17/16-RG23
24	2 : BC 7/.0285 0.0855	PE, 2 cores 0.380	2:BC	PVC-IIA 0.650x0.945	Al. Braid 0.708x1.003	0.670	125	12.0	3,000	-40 +80	Use: M17/16-RG24
24A	2 : BC 7/.0285 0.0855	PE, 2 cores 0.380	2:BC	PVC-II 0.650x0.945	Al. Braid 0.708x1.003	0.670	125	12.0	3,000	-40 +80	Use: M17/16-RG24
25A	TC 19/.0117 0.0585	Rubber-E 0.288	2:TC	Rubber-IV 0.505		0.205	48	50.0	10,000	-40 +80	Times does not supply
26A	TC 19/.0117 0.0585	Rubber-E 0.288	1:TC	Rubber-IV	Al. Braid 0.483	0.189	48	50.0	10,000	-40 +80	Times does not supply
27A	TC 19/.0185 0.0925	Rubber-D 0.455	1:TC	Rubber-IV	Al. Braid 0.653	0.304	48	50.0	15,000	-40 +80	Times does not supply

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range °C	Comments
28B	TC 19/.0185 0.0925	Rubber-D 0.455	2:TC, GS	Rubber-IV 0.750	NA	0.370	48	50.0	15,000	-40 +80	Times does not supply
29	BC 0.032	PE 0.116	1:TC	PE-III 0.184	NA	0.021	53.5	28.8	1,900	-55 +80	Use: M17/28-RG58
30	BC 7/.0159 0.0477	PIB 0.185	1:BC	PVC-I 0.250	NA	0.044	50	27.0	1,500	-40 +80	Use: M17/73-RG212
31	BC 7/.0285 0.0855	PIB 0.285	1:BC	PVC-I 0.405	NA	0.106	51	31.0	2,000	-40 +80	Use: M17/74-RG213
32	BC 7/.0285 0.0855	PIB 0.285	1:BC	PVC-I 0.405	Al. Braid 0.465	0.141	51	29.0	2,000	-40 +80	Use: M17/74-RG215
33	BC 0.1019	PE 0.370	None	Lead 0.470	NA	0.390	51	30.2	6,000	-55 +80	Times does not supply
34	BC 7/.0285 0.0855	PE 0.455	1:BC	PVC-I 0.625	NA	0.224	71	21.7	5,200	-40 +80	Use: M17/24-RG34
34A	BC 7/.0249 0.0747	PE 0.460	1:BC	PVC-IIA 0.630	NA	0.224	75	20.6	6,500	-40 +80	Use: M17/24-RG34
34B	BC 7/.0249 0.0747	PE 0.460	1:BC	PVC-IIA 0.630	NA	0.224	75	20.6	6,500	-40 +80	Use: M17/24-RG34
35	BC 0.1144	PE 0.680	1:BC	PVC-II 0.870	Al. Braid 0.928	0.525	71	21.7	10,000	-40 +80	Use: M17/64-RG35
35A	BC 0.1045	PE 0.680	1:BC	PVC-IIA 0.870	Al. Braid 0.928	0.525	75	20.6	10,000	-40 +80	Use: M17/64-RG35
35B	BC 0.1045	PE 0.680	1:BC	PVC-IIA 0.870	Al. Braid 0.928	0.525	75	20.6	10,000	-40 +80	Use: M17/64-RG35
36	BC 0.162	PE 0.910	1:BC	PVC-I 1.120	Al. Braid 1.180	0.805	69	22.3	13,000	-40 +80	
37	TC 0.032	Rubber-C 0.140	1:TC	PE-III 0.210	NA	0.040	52.5	38.0	750	-55 +80	Times does not supply
38	TC 0.0453	Rubber-C 0.196	2:TC	PE-III 0.312	NA	0.110	52.5	38.0	1,000	-55 +80	Times does not supply
39	CCS 0.0253	Rubber-C 0.196	2:TC	PE-III 0.312	NA	0.100	72.5	28.6	1,000	-55 +80	Times does not supply
40	CCS 0.0253	Rubber-C 0.196	2:TC	Rubber-IV 0.420	NA	0.150	72.5	28.0	1,000	-40 +80	Times does not supply
41	TC 16/.010 0.049	Rubber-C 0.250	1:TC	Rubber-IV 0.425	NA	0.150	67.5	27.6	3,000	-40 +80	Times does not supply
42	Resistance wire 0.0285	PE 0.196	2:SC	PVC-II 0.342	NA	0.050	78	19.7	2,700	-40 +80	Use: M17/2-RG6
43	2:BC 7/.0285 0.0855	Rubber-B 0.472	1:BC	PVC-I 0.617	NA		95	17.6	1,500	-40 +80	Use: M17/56-RG131
44-47	STUD SUPPORTED RIGID LINES See MIL-HDBK 216, Para. 5.5										Times does not supply
48-53	RECTANGULAR WAVE GUIDE COVERED BY MIL-W-85 See MIL-HDBK 216, Para. 623										Times does not supply
54	BC 7/.0159 0.0477	PE 0.185	1:BC	PVC-I 0.275	NA	0.045	58	26.5	2,500	-40 +80	Use: M17/73-RG212

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range ^{O}C	Comments
54A	BC 7/.0152 0.0456	PE 0.178	1:TC	PE-III 0.245	NA	0.041	58	26.5	3,000	-55 +80	Use: M17/73-RG212
55	BC 0.0320	PE 0.116	2:TC	PE-III 0.200	NA	0.032	53.5	28.8	1,900	-55 +80	Use: M17/84-RG223
55A	SC 0.0350	PE 0.116	2:SC	PVC-IIA 0.200	NA	0.034	50	30.8	1,900	-40 +80	Use: M17/84-RG223
55B	SC 0.0320	PE 0.116	2:TC	PVC-IIA 0.200	NA	0.033	53.5	28.8	1,900	-55 +80	Use: M17/84-RG223
56	TC 19/.0117 0.0585	Rubber-D 0.308	2:BC	PVC-I 0.535	NA	0.243	48	50.0	8,000	-40 +80	Times does not supply
57	2:BC 7/.0285 0.0855	PE 0.472	1:TC	PVC-I 0.625	NA	0.225	95	16.3	3,000	-40 +80	Use: M17/56-RG130
57A	2:BC 7/.0285 0.0855	PE 0.472	1:TC	PVC-IIA 0.625	NA	0.225	95	16.3	3,000	-40 +80	Use: M17/56-RG130
58	BC 0.0320	PE 0.116	1:TC	PVC-I 0.195	NA	0.029	53.5	28.8	1,900	-40 +80	Use: M17/28-RG58
58A	TC 19/.0071 0.0355	PE 0.116	1:TC	PVC-I 0.195	NA	0.029	52	29.6	1,900	-40 +80	Use: M17/28-RG58
58B	BC 0.0320	PE 0.116	1:TC	PVC-IIA 0.195	NA	0.029	53.5	28.8	1,900	-40 +80	Use: M17/28-RG58
58C	TC 19/.0071 0.0355	PE 0.116	1:TC	PVC-IIA 0.195	NA	0.029	50	30.8	1,900	-40 +80	Use: M17/28-RG58
59	CCS 0.0253	PE 0.146	1:BC	PVC-I 0.242	NA	0.032	73	21.1	2,300	-40 +80	Use: M17/29-RG59
59A	CCS 0.0253	PE 0.146	1:BC	PVC-IIA 0.242	NA	0.032	73	21.1	2,300	-40 +80	Use: M17/29-RG59
59B	CCS 0.0230	PE 0.146	1:BC	PVC-IIA 0.242	NA	0.032	75	20.6	2,300	-40 +80	Use: M17/29-RG59
60	Str. C 0.0508	Rubber-C 0.250	1:BC	Rubber-IV 0.425	NA	0.150	50	39.0	1,100	-40 +80	Times does not supply
61	SPECIAL	500 OHM	LINE								Times does not supply
62	CCS 0.0253	Air Space PE 0.146	1:BC	PVC-I 0.242	NA	0.038	93	13.5	750	-40 +80	Use: M17/30-RG62
62A	CCS 0.0253	Air Space PE 0.146	1:BC	PVC-IIA 0.242	NA	0.038	93	13.5	750	-40 +80	Use: M17/30-RG62
62B	CCS 7/.0080 0.0240	Air Space PE 0.146	1:BC	PVC-IIA 0.242	NA	0.038	93	13.5	750	-40 +80	Use: M17/30-RG62
63	CCS 0.0253	Air Space PE 0.285	1:BC	PVC-I 0.405	NA	0.083	125	10.0	1,000	-40 +80	Use: M17/31-RG63
63A	BC 0.0253	Air Space PE 0.285	1:BC	PVC-I 0.405	NA	0.083	125	10.0	1,000	-40 +80	Use: M17/31-RG63
63B	CCS 0.0253	Air-space PE 0.285	1:BC	PVC-IIA 0.405	NA	0.083	125	10.0	1,000	-40 +80	Use: M17/31-RG63
64	TC 19/.0117 0.0585	Rubber-D 0.308	2:TC	Rubber-IV 0.495	NA	0.225	48	60.0	10,000	-40 +80	Times does not supply

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range ^{o}C	Comments
64A	TC 19/.0117 0.0585	Rubber-E 0.288	2:TC	Rubber-IV 0.460	NA	0.205	48	50.0	10,000	-40 +80	Times does not supply
65	0.008 Formex-F 0.1280 dia Helix	PE 0.285	1:BC	PVC-I 0.405	NA	0.096	950	44.0	1,000	-40 +80	Use: M17/34-RG65
65A	0.008 Formex-F 0.1280 dia Helix	PE 0.285	1:BC	PVC-IIA 0.405	NA	0.096	950	44.0	1,000	-40 +80	Use: M17/34-RG65
66-69	RECTANGULAR WAVE GUIDE COVERED BY MIL-W-25 See Mil HDBK 216, Para. 6.17 -6.23										Times does not supply
71	CCS 0.0253	Air-Space PE 0.146	2:TC	PVC-I 0.245		0.046	93	13.5	750	-40 +80	Use: M17/90-RG71
71A	CCS 0.0253	Air-Space PE 0.146	2:TC	PE-III 0.245		0.046	93	13.5	750	-55 +80	Use: M17/90-RG71
71B	CCS 0.0253	Air-Space PE 0.146	2:TC	PE-IIIA 0.245	NA	0.046	93	13.5	750	-55 +80	Use: M17/90-RG71
72	CCS 0.0253	Air-Space PE 0.460	1:BC	PVC-I 0.630	NA	0.169	150	7.8	750	-40 +80	Low Capacitance
73	BC 0.0650	PE 0.116	2:BC	Copper Braid 0.175	NA	0.031	25	61.6	1,000	-55 +80	Low Impedence
74	BC 0.1020	PE 0.370	2:BC	PVC-II 0.545	Al.Braid 0.603	0.310	52	29.6	5,500	-40 +80	Use: M17/165-00002
74A	BC 0.1020	PE 0.370	2:BC	PVC-IIA 0.545	Al.braid 0.603	0.310	52	29.6	7,000	-40 +80	Use: M17/165-00002
75	RECTANGULAR WAVE GUIDE COVERED BY MIL-W-25 See Mil HDBK 216, Para. 6.17 -6.21										Times does not supply
76	STUD SUPPORTED RIGID LINE NA See Mil HDBK 216, Para. 5.5										Times does not supply
77A	TC 19/.0117 0.0585	Rubber-E 0.288	2:TC	PVC-IIA 0.450	NA	0.195	48	50.0	8,000 peak	-40 +80	Times does not supply
78A	TC 19/.0117 0.0585	Rubber-E 0.288	1:TC	PVC-IIA 0.420	NA	0.149	48	50.0	8,000 peak	-40 +80	Times does not supply
79	CCS 0.0253	Air-space PE 0.285	1:BC	PVC-I 0.405	Al. Braid 0.463	0.136	125	10.0	1,000	-40 +80	Use: M17/31-RG79
79A	CCS 0.0253	Air-space PE 0.285	1:BC	PVC-I 0.405	Al. Braid 0.463	0.130	125	10.0	1,000	-40 +80	Use: M17/31-RG79
79B	CCS 0.0253	Air-space PE 0.285	1:BC	PVC-IIA 0.405	Al. Braid 0.463	0.136	125	10.0	1,000	-40 +80	Use: M17/31-RG79
80	RIGID LINE	See Mil HDBK 216 para 5.2									Times does not supply
81	BC 0.0625	MGO-G 0.321	None	Copper Tube .325	NA	0.172	50	37.0	3,000	>250	Times does not supply
82	BC 0.1250	MGO-G 0.650	None	Copper Tube .750	NA	0.698	50	36.0	5,000	>250	Times does not supply
83	BC 0.102	PE 0.240	1:BC	PVC-I 0.405	NA	0.120	35	44.0	2,000	-40 +80	Low Impedance
84A	BC 0.1045	PE 0.680	1:BC	PVC-IIA	Lead 1.000	1.325	75	20.6	10,000	-40 +80	Times does not supply

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range °C	Comments
85A	BC 0.1045	PE 0.680	1:BC	PVC-IIA	Lead 1.565	2.910	75	20.6	10,000	-40 +80	Times does not supply
86	7/.0285 -2 Cond.BC 0.0855	PE .300 x .650	None	None	NA	0.100	200	7.8	10,000	-55 +80	Twin Lead
87A	SC 7/.032 0.0960	PTFE 0.280	2:SC	FG Braid-V 0.425	NA	0.180	50	29.4	5,000	-55 +250	Use: M17/127-RG393
88	TC 19/.0117 0.0585	Rubber-E 0.288	4:TC	PVC-I 0.515	NA	0.211	48	50.0	10,000	-40 +80	Times does not supply
88A	TC 19/.0117 0.0585	Rubber-E 0.288	4:TC	PVC-IIA 0.515	NA	0.211	48	50.0	10,000	-40 +80	Times does not supply
88B	TC 19/.0117 0.0585	Rubber-E 0.288	4:TC	Rubber-IV 0.565	NA	0.238	48	50.0	10,000	-40 +80	Times does not supply
89	CCS 0.0253	Air-Space PE 0.285	1:BC	PVC-I 0.632	NA	0.195	125	10.0	1,000	-40 +80	Use: M17/31-RG63
90	SC 7/.0201 0.0603	PE 0.195	3:SC, GC, SC	PVC-IIA 0.425	NA		50	30.8	3,000	-40 +80	Excellent Shielding
91	RECTANGULAR WAVE GUIDE COVERED BY MIL-W-85 See MIL HDBK 216, Para . 6.17 -6.23										Times does not supply
92	RIGID COAXIAL LINE, See MIL HDBK 216 para. 5.2										Times does not supply
93	BC 19/.0400 0.2000	Taped PTFE 0.573	1:BC	FG Braid-V 0.710	NA	0.475	50	29.0	10,000	-55 +250	Use: M17/72-RG211
94	SC 19/.0225 0.1125	Taped PTFE 0.292	2:BC	FG Braid-V 0.445		0.270	50	29.0	7,000	-55 +250	Use: M17/87-00001
94A	SC 19/.0254 0.1270	Taped PTFE 0.370	2:BC	FG Braid-V 0.500		0.445	50	29.0	7,000	-55 +250	Use: M17/87-00001
95-99	RECTANGULAR WAVE GUIDE COVERED BY MIL-W-85 See Mil HDBK 216, Para 6.17 -6.23										Times does not supply
100	BC 19/.0147 0.0735	PE 0.146	1:BC	PVC-I 0.242	NA	0.046	35	44.0	2,000	-40 +80	Use up to 1000 MHz
101	BC 0.0641	Rubber	1:TC .588	NA	NA		75				Times does not supply
102	2:BC 0.0808	Rubber	1:TC 1.088	NA	NA		140				Times does not supply
103-107	RECTANGULAR WAVE GUIDECOVERED BY MIL-W-85 See MIL HDBK 216, Para. 6.17 -6.23										Times does not supply
108	2:TC 7/.0126 0.0378	PE (each) 0.079	1:TC	PVC-II 0.235	NA	0.032	78	19.7	1,000	-40 +80	Use: M17/45-RG108
108A	2:TC 7/.0126 0.0378	PE (each) 0.079	1:TC	PVC-IIA 0.235	NA	0.032	78	19.7	1,000	-40 +80	Use: M17/45-RG108
109-110	RECTANGULARWAVE GUIDECOVERED BY MIL-W-85 See MIL HDBK 216, Para. 6.17 -6.23										Times does not supply
111	2:BC 7/.0152 0.0456	PE 0.285	2:TC	PVC-II	Al. Braid 0.478	0.146	95	16.3	1,000	-40 +80	Use: M17/15-RG111
111A	2:BC 7/.0152 0.0456	PE 0.285	2:TC	PVC-IIA	Al. Braid 0.478	0.146	95	16.3	1,000	-40 +80	Use: M17/15-RG111

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range °C	Comments
112-113		RECTANGULARWAVE GUIDECOVERED BY MIL-W-85 See MIL HDBK 216, Para 6.17 -6.23									Times does not supply
114	CCS 0.0070	Air-space PE 0.285	1:BC	PVC-IIA 0.405	NA	0.087	185	6.5	1,000	-40 +80	Use: M17/47-RG114
114A	CCS 0.0070	Air-space PE 0.285	1:BC	PVC-I 0.405	NA	0.087	185	6.5	1,000	-40 +80	Use: M17/47-RG114
115	SC 7/.0280 0.0840	Taped PTFE 0.250	2:SC	FG Braid-V 0.375	NA	0.148	50	29.0	5,000	-55 +250	Use: M17/168-00001
115A	SC 7/.0280 0.0840	Taped PTFE 0.255	2:SC	FG Braid-V 0.415	NA	0.180	50	29.0	5,000	-55 +250	Use: M17/168-00001
116	SC 7/.0320 0.0960	PTFE 0.280	2:SC	FG Braid-V	Al. Braid 0.475	0.198	50	29.4	5,000	-55 +250	Use: M17/86-00002
117	BC 0.1880	PTFE 0.620	1:BC	FG Braid-V .730	NA	0.641	50	29.4	7,000	-55 +250	Use: M17/72-RG211
117A	BC 0.1880	PTFE 0.620	1:BC	FG Braid-V	NA	0.641	50	29.4	7,000	-55 +250	Use: M17/72-RG211
118	BC 0.1880	PTFE 0.620	1:BC	FG Braid-V	Al. Braid 0.780	0.682	50	29.4	7,000	-55 +250	Use: M17/161-00002
118A	BC 0.1880	PTFE 0.620	1:BC	FG Braid-V	Al. Braid 0.780	0.682	50	29.4	7,000	-55 +250	Use: M17/161-00002
119	BC 0.1020	PTFE 0.332	2:BC	FG Braid-V 0.465	NA	0.225	50	29.4	6,000	-55 +250	Use: M17/52-RG119
120	BC 0.1020	PTFE 0.332	2:BC	FG Braid-V	Al. Braid 0.523	0.282	50	29.4	6,000	-55 +250	Use: M17/52-RG120
121	RECTANGULAR WAVE GUIDE COVERED BY MIL-W-85 See MIL HDBK 216, Para 17 -6.23										Times does not supply
122	TC 27/.0050 0.0300	PE 0.096	1:TC	PVC-IIA 0.160	NA	0.016	50	30.8	1,900	-40 +80	Use: M17/54-RG122
124	TCCS 0.0253	Taped PTFE 0.135	1:TC	FG Braid-V 0.240	NA	0.210	73	19.9	2,300	-55 +250	Use: M17/110-RG302
125	CCS 0.0159	Air-space PE 0.46	1:BC	PVC-IIA 0.600	NA	0.180	150	7.8	2,000	-40 +80	Low Capacitance
126	HR 7/.0203 0.0609	PTFE 0.185	1:HR	FG Braid-V 0.280	NA	0.070	50	29.4	3,000	-55 +250	Use: M17/109-RG301
127		RECTANGULAR WAVE GUIDE COVERED BY MIL-W-85 See MIL HDBK 216, Para. 6.17 -6.23									Times does not supply
128		RIGID LINE See MIL HDBK 216, Para. 5.2									Times does not supply
129		RECTANGULAR WAVE GUIDE COVERED BY MIL-W-85 See MIL HDBK 216, Para. 6.17 -6.23									Times does not supply
130	2:BC 7/.0285 0.0855	PE 0.472	1:TC	PVC-I 0.625	NA	0.220	95	17.0	3,000	-40 +80	Use: M17/56-RG130
131	2:BC 7/.0285 0.0855	PE 0.472	1:TC	PVC-I 0.625	Al. Braid 0.683	0.290	95	17.0	3,000	-40 +80	Use: M17/56-RG131
132		RECTANGULAR WAVE GUIDE COVERED BY MIL-W-85 See MIL HDBK 216, Para. 6.17 -6.23									Times does not supply

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range °C	Comments
133	BC 0.0285	PE 0.285	1:BC	PVC-I 0.405	NA	0.094	95	16.3	4,000	-40 +80	Use: M17/100-RG133
133A	BC 0.0253	PE 0.285	1:TC	PVC-IIA 0.405	NA	0.094	95	16.3	4,000	-40 +80	Use: M17/100-RG133
134		RIGID LINE	See MIL HDBK 216, Para. 5.2								Times does not supply
135-139		RECTANGULAR WAVE GUIDE COVERED BY MIL-W-85 See MIL HDBK 216, Para. 6.17 -6.23									Times does not supply
140 0.0250	SCCS 0.146	PTFE	1:SC 0.233	FG Braid-V	NA	0.056	75	19.5	2,300	-55 +250	Use: M17/110-RG302
141 0.0359	SCCS 0.116	PTFE	1:SC 0.190	FG Braid-V	NA	0.036	50	29.4	1,900	-55 +250	Use: M17/111-RG303
141A 0.0390	SCCS 0.116	PTFE	1:SC 0.190	FG Braid-V	NA	0.036	50	29.4	1,900	-55 +250	Use: M17/111-RG303
142	SCCS 0.0359	PTFE 0.116	2:SC	FG Braid-V 0.195	NA	0.047	50	29.4	1,900	-55 +250	Use: M17/60-RG142
142A	SCCS 0.0390	PTFE 0.116	2:SC	FG Braid-V 0.195	NA	0.047	50	29.4	1,900	-55 +250	Use: M17/60-RG142
142B	SCCS 0.0390	PTFE 0.116	2:SC	FEP 0.195	NA	0.050	50	29.4	1,900	-55 +250	Use: M17/60-RG142
143 0.0570	SCCS 0.185	PTFE	2:SC 0.325	FG Braid-V	NA	0.114	50	29.4	3,000	-55 +250	Use: M17/112-RG304
143A 0.0590	SCCS 0.185	PTFE	2:SC 0.325	FG Braid-V	NA	0.109	50	29.4	3,000	-55 +250	Use: M17/112-RG304
144	SCCS 7/.0179 0.0537	PTFE 0.285	1:SC	FG Braid-V 0.410	NA	0.137	75	19.5	5,000	-55 +250	Use: M17/62-RG144
145 0.0720	2:BC	Air-space PE	BC Tube	Lead/tar	NA		75	14.6			Times does not supply
146	CCS 0.0070	Air-space PTFE 0.285	1:BC	FG Braid-V 0.375	NA	0.108	190	6.0	1,000	-55 +200	Low capacitance
147	BC 0.2500	PE 0.910	1:BC	PVC-I 1.120	Al. Braid 1.937		52	29.6	14,000	-40 +80	Use: M17/81-00002
148	BC 7/.0285 0.0855	PE 0.285	1:BC	PVC-I 0.405	Al. Braid 0.800		52	29.6	4,000	-40 +80	Use: M17/74-RG213
149	TC 7/.0159 0.0480	PE 0.285	1:BC	PVC-IIA 0.405	NA	0.105	75	20.6	5,000	-40 +80	Use: M17/126-RG391
150	TC 7/.0159 0.0480	PE 0.285	1:BC	PVC-IIA 0.405	Al. Braid 0.463	0.112	75	20.6	5,000	-40 +80	Use: M17/126-RG392
151-155		RIGID LINES	COVERED BY MIL-L-3890. See MIL HDBK216, para. 5.4								Times does not supply
156	TC 7/.0285 0.0855	PE & CPE 0.285	3:TC,GS,TC	PVC-IIA 0.540	NA	0.211	50	32.8	10,000	-40 +80	Triaxial Pulse Cable
157	TC 19/.0201 0.1005	PE & CPE 0.455	3:TC,GS,TC	PVC-IIA 0.725	NA	0.317	50	32.8	15,000	-40 +80	Triaxial Pulse Cable
158	TC 37/.0284 0.1988	PE & C PE 0.455	3:TC,GS,TC	PVC-IIA 0.725	NA	0.380	25	65.5	15,000	-40 +80	Triaxial Pulse Cable

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range °C	Comments
159	SC	Taped PTFE 0.0320	1:SC 0.116	FG Braid-V	NA 0.195	0.035	50	29.0	1,900	-55 +250	Use: M17/111-RG303
160	2:TC,2:BC 19/.0142 0.071	PE 0.322	1:BC	PVC-I 1.055	NA		125	12.0	3,000	- 40 +80	4 conductor balanced line
161	S Cad.BR 7/.004 0.012	PTFE 0.057	1:SC	Nylon 0.082	NA	0.015	70	20.9	1,000	-60 +120	
162	RIGID LINE See MIL HDBK 216, Para. 5.2										Times does not supply
163	RECTANGULAR WAVE GUIDE COVERED BY MIL-W-85 See MIL HDBK 216, para. 6.17 - 6.23										Times does not supply
164	BC 0.1045	PE 0.680	1:BC	PVC-IIA 0.870	NA	0.490	75	20.6	10,000	-40 +80	Use: M17/64-RG164
165	SC 7/.0320 0.0960	PTFE 0.285	1:SC	FG Braid-V 0.410	NA	0.121	50	29.4	5,000	-55 +250	Use: M17/65-RG165
166	SC 7/.0320 0.0960	PTFE 0.285	1:SC	FG Braid-V 0.410	Al. Braid 0.460	0.144	50	29.4	5,000	-55 +250	Use: M17/65-RG166
167-173	RECTANGULAR WAVE GUIDE COVERED BY MIL-W-85 See MIL HDBK216, para. 6.17 - 6.23										Times does not supply
174	CCS 7/.0063 0.0189	PE 0.060	1:TC	PVC-I 0.100	NA	0.008	50	30.8	1,500	-40 +80	Use: M17/119-RG174
174A	CCS 7/.0063 0.0189	PE 0.060	1:TC	PVC-IIA 0.100	NA	0.008	50	30.8	1,500	-40 +80	Use: M17/119-RG174
175	RIGID LINE										Times does not supply
176	Helix over magnetic core 0.135	PE 0.285	1:Magnet wire	PVC-I 0.405	NA	0.120	2240	49.0	5,000	-40 +80	Times does not supply
177	BC 0.1950	PE 0.680	2:SC	PVC-IIA 0.895	NA	0.470	50	30.8	11,000	-40 +80	Use: M17/67-RG177
178	SCCS 7/.0040 0.0120	PTFE 0.036	1:SC	KEL-F 0.072	NA	0.0054	50	29.4	1,000	-40 +150	Use: M17/93-RG178
178A	SCCS 7/.0040 0.0120	PTFE 0.034	1:SC	KEL-F 0.072	NA	0.005	50	29.4	1,000	-40 +150	Use: M17/93-RG178
178B	SCCS 7/.0040 0.0120	PTFE 0.034	1:SC	FEP-IX 0.072	NA	0.0054	50	29.4	1,000	-55 +200	Use: M17/93-RG178
179	SCCS 7/.0040 0.0120	PTFE 0.057	1:SC	KEL-F 0.100	NA	0.010	70	20.9	1,200	-55 +150	Use: M17/94-RG179
179A	SCCS 7/.0040 0.0120	PTFE 0.063	1:SC	KEL-F 0.100	NA	0.010	75	19.5	1,200	-40 +150	Use: M17/94-RG179
179B	SCCS 7/.0040 0.0120	PTFE 0.063	1:SC	FEP-IX 0.100	NA	0.010	75	19.5	1,200	-55 +200	Use: M17/94-RG179
180	SCCS 7/.0040 0.0120	PTFE 0.103	1:SC	KEL-F 0.140	NA	0.019	93	15.4	1,500	-40 +150	Use: M17/95-RG180
180A	SCCS 7/.0040 0.0120	PTFE 0.102	1:SC	KEL-F 0.140	NA	0.019	95	15.4	1,500	-40 +150	Use: M17/95-RG180
180B	SCCS 7/.0040 0.0120	PTFE 0.102	1:SC	FEP-IX 0.140	NA	0.019	95	15.4	1,500	-55 +200	Use: M17/95-RG180

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range ^{o}C	Comments
181	2:BC 7/.0159 0.0477	PE 0.210	2:BC	PVC-IIA 0.640	NA	0.198	125	12.0	3,500	-40 +80	Balanced line
182	2BC 19/.0142 2TC 19/.0066	PE 4 cores 2/.332-2/.146	2:BC	PVC-IIAea/ PVC-I1.055	NA		125	12.0	2,300	-40 +80	4 conductor coax
183	BC 0.251	PS Helix 0.632	Al. Tube .750	None	NA	0.380	50	23.0	1,800	-40 +80	Use Times M17/226-00001
184	RECTANGULAR WAVE GUIDE (MIL-W-18988 [ships]; canceled 20 March, 1961)										Times does not supply
185	Mag wire Helix on PE core 0.0031	Air-space PE 0.188	MW	PVC-IIA 0.282	NA		2000			-40 +80	Delay line cable
186	TFE Helix over core 0.008	Air-space PE 0.292	MW	PVC-IIA 0.405	NA		1000			-40 +80	Delay line cable
187	SCCS 7/.0040 0.0120	PTFE 0.060	1:SC	PTFE 0.105	NA	0.010	75	19.5	1,200	-55 +250	Use: M17/136-00001
187A	SCCS 7/.0040 0.0120	PTFE 0.060	1:SC	PTFE 0.105	NA	0.010	75	19.5	1,200	-55 +250	Use: M17/136-00001
188	SCCS 7/.0067 0.0201	PTFE 0.060	1:SC	PTFE 0.105	NA	0.011	50	29.4	1,200	-55 +250	Use: M17/138-00001
188A	SCCS 7/.0067 0.0201	PTFE 0.060	1:SC	PTFE 0.105	NA	0.011	50	29.4	1,200	-55 +250	Use: M17/138-00001
189	BC 0.2510	PS Helix 0.632	2:SC	PE-IIIA 0.875	NA	0.570	50	23.0	3,500	-55 +80	Use RG389
190	TC 19/.0117 0.0585	Rubber H,J 0.380	3:TC,GS,TC	Neoprene VIII 0.700	NA	0.353	50	50.0	15,000	-55 +80	Times does not supply
191	TC Braid 0.485	Rubber H,J,H 1.065	3:TC,GS,TC	Neoprene VIII 1.460	NA	1.469	25	85.0	15,000 peak	-55 +80	Times does not supply
192	GS Tube TC Braid 1.055	Butyl Rubber	3:TC,GS,TC	Rubber 2.200	NA		12.5	175.0	15,000 peak	-55 +80	Times does not supply
193	GS Tube TC Braid 1.055	Silicon Rubber	3:TC,GS,TC	Rubber 2.100	NA		12.5	159.0	30,000 peak	-55 +80	Times does not supply
194	GS Tube TC Braid 1.055	Silicon Rubber	3:TC,GS,TC	Rubber	Al. Armor 1.945		12.5	159.0	30,000 peak	-55 +80	Times does not supply
195	SCCS 7/.004 0.012	PTFE 0.102	1:SC	PTFE 0.145	NA	0.020	95	15.4	1,500	-55 +250	Use: M17/137-00001
195A	SCCS 7/.004 0.012	PTFE 0.102	1:SC	PTFE 0.145	NA	0.020	95	15.4	1,500	-55 +250	Use: M17/137-00001
196	SCCS 7/.004 0.012	PTFE 0.034	1:SC	PTFE 0.072	NA	0.006	50	29.4	1,000	-55 +250	Use: M17/93-00001
196A	SCCS 7/.004 0.012	PTFE 0.034	1:SC	PTFE 0.072	NA	0.006	50	29.4	1,000	-55 +250	Use: M17/93-00001
197	BC 00001	PS Helix	Al. Tube	None 0.300	NA 0.758	0.500 .875	50	22.0 peak	2,400	-55 +80	Use Times M17/227-
198	BC 0.114	PS Helix 0.421	Al. Tube .500'	PE 0.600	NA	0.155	70	16.0	1,300 peak	-55 +80	Times does not supply
199	BC 0.209	PS Helix 0.758	Al. Tube .875	PE 1.015	NA	0.435	70	16.0	2,400 peak	-55 +80	Times does not supply

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range ^oC	Comments
200	BC Tube .301 id/ .405 od	PS Helix 1.472	Al. Tube	PE 1.765	NA	0.900	70	16.0	4,600 peak	-55 +250	Times does not supply
201-208	RECTANGULAR WAVE GUIDE COVERED BY MIL - W- 85. See MIL HDBK 216, para. 6.17 - 6.23										Times does not supply
209	SC 19/.0378 0.189	Air-space PTFE 0.500	2:SC	SR & PolyesterVI 0.725	NA	0.432	50	25.0	3,200	-55 +150	Low loss RG211A
210	SCCS 0.0253	Air-space PTFE 0.146	1:SC	FG Braid-V 0.242	NA	0.040	93	13.5	750	-55 +250	Use: M17/97-RG210
211	BC 0.1900	PTFE 0.620	1:BC	FG Braid-V 0.730	NA	0.641	50	29.4	7,000	-55 +250	Use: M17/72-RG211
211A	BC 0.1900	PTFE 0.620	1:BC	FG Braid-V 0.730	NA	0.641	50	29.4	7,000	-55 +250	Use: M17/72-RG211
212	SC 0.0556	PE 0.185	2SC	PVC-IIA 0.332	NA	0.083	50	29.4	3,000	-40 +80	Use: M17/73-RG212
213	BC 7/.0296 0.0888	PE 0.285	1:BC	PVC-IIA 0.405	NA	0.099	50	30.8	5,000	-40 +80	Use: M17/74-RG213
214	SC 7/.0296 0.0888	PE 0.285	2:SC	PVC-IIA 0.425	NA	0.126	50	30.8	5,000	-40 +80	Use: M17/75-RG214
215	BC 7/.0296 0.0888	PE 0.285	1:BC	PVC-IIA 0.425	Al. Braid 0.463	0.121	50	30.8	5,000	-40 +80	Use: M17/74-RG215
216	TC 7/.0159 0.0477	PE 0.285	2:BC	PVC-IIA 0.425	NA	0.114	75	20.6	5,000	-40 +80	Use: M17/77-RG216
217	BC 0.106	PE 0.370	2:BC	PVC-IIA 0.545	NA	0.201	50	30.8	7,000	-40 +80	Use: M17/78-RG217
218	BC 0.195	PE 0.680	1:BC	PVC-IIA 0.870	NA	0.460	50	30.8	11,000	-40 +80)	Use: M17/79-RG218
219	BC 0.195	PE 0.680	1:BC	PVC-IIA 0.870	Al. Braid 0.928	0.585	50	30.8	11,000	-40 +80	Use: M17/79-RG219
220	BC 0.260	PE 0.910	1:BC	PVC-IIA 1.120	NA	0.740	50	30.8	14,000	-40 +80	Use: M17/81-00001
221	BC 0.260	PE 0.910	1:BC	PVC-IIA 1.120	Al. Braid 1.178	0.925	50	30.8	14,000	-40 +80	Use: M17/81-00002
222	HR 0.0556	PE 0.185	2:SC	PVC-IIA 0.332	NA	0.087	50	30.8	3,000	-40 +80	Use: M17/162-00001
223	SC 0.0350	PE 0.116	2:SC	PVC-IIA 0.211	NA	0.034	50	30.8	1,900	-40 +80	Use: M17/84-RG223
224	BC 0.106	PE 0.370	2:BC	PVC-IIA 0.545	Al. Braid 0.603	0.310	50	30.8	7,000	-40 +80	Use: M17/165-00002
225	SC 7/.0312 0.0936	PTFE 0.285	2:SC	FG Braid-V 0.430	NA	0.180	50	29.4	5,000	-55 +250	Use: M17/86-00001
226	SC 19/.0254 0.127	Taped PTFE 0.370	2:BC	FG Braid-V 0.500	NA	0.445	50	29.4	7,000	-55 +250	Use: M17/87-00001
227	SC 7/.0312 0.0936	PTFE 0.285	2:SC	FG Braid-V 0.430	Al. Braid 0.488	0.198	50	29.4	5,000	-55 +250	Use: M17/86-00002
228	BC 0.1900	PTFE 0.620	1:BC	FG Braid-V 0.730	Al. Braid 0.788	0.682	50	29.4	7,000	-55 +250	Use: M17/161-00002

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range °C	Comments
228A	BC 0.1900	PTFE 0.620	1:BC	FG Braid-V 0.730	Al. Braid 0.788	0.682	50	29.4	7,000	-55 +250	Use: M17/161-00002
229	SC 7/.032 0.096	PTFE 0.285	1:SC	FG Braid-V 0.430	Al. Braid 0.460	0.144	50	29.4	5,000	-55 +250	Use: M17/65-RG166
230	TC 37/.0284 0.1988	Rubber-D 0.455	3:TC,GS,GS	Rubber-IV 0.740	NA		25	100.0	15,000	-40 +80	Times does not supply
231	BC Tube 0.162	Foam PE 0.450	Al. Tube	None	NA	0.118	50	25.0	5,000 peak	-55 +80	Per MIL-C-23806/IA
231A	BC 0.162	Foam PE 0.45	Al. Tube	None	NA	0.156	50	25.0	5,000 peak	-55 +80	Per MIL-C-23806/IB +Amendment 1
232	BC 0.300	PE Helix 0.758	Al. Tube .875"	PE-IIIA 1.015	NA	0.570	50	22.0	2,400	-55 +80 peak	
233	BC Tube .481/.591	PS Helix 1.472	Al. Tube	PE-IIIA 1.765	NA	1.050	50	22.0	4,700 peak	-55 +80	Times does not supply
234	BC Tube 1.015 /1.570	PS Helix 2.775	Al. Tube	PE-IIIA 3.295	NA	3.110	50	22.0	8,700 peak	-55 +80	Times does not supply
235	SC 7/.0284 0.0852	Taped PTFE 0.255	2:SC	SIL/DAC/VI 0.450		0.160	50	29.5	5,000	-55 +80	Use M17/168-00001
236	BC 0.162	PS Helix 0.421	Al. Tube .500	None	NA	0.165	50	24.0	1,300	-55 +80 peak	
237	BC 0.162	PS Helix 0.421	Al. Tube .500	PE-IIIA 0.600	NA	0.195	50	24.0	1,300	-55 +80 peak	
238		CANCELLED REPLACE WITH RG197/U									
239		CANCELLED REPLACE WITH RG232/U									
240	BC Tube .481/.591	PS Helix 1.420	Al. Tube 1.625	None	NA	0.930	50	22.0	4,700 peak	-55 +80	Times does not supply
241		CANCELLED REPLACE WITH RG233									
242	BC Tube 1.036	PS Helix 2.850	Al. Tube 3.125	None	NA	2.700	50	22.0	8,700 peak	-55 +80	Times does not supply
243		CANCELLED REPLACE WITH RG234									
244	BC 0.102	PS Helix 0.421	Al. Tube .500	None	NA	0.118	75	15.5	1,200 peak	-55 +80	Times does not supply
245	BC 0.102	PS Helix 0.421	Al. Tube .500	PE-IIIA 0.600	NA	0.148	75	15.5	1,200 peak	-55 +80	Times does not supply
246	BC 0.1880	PS Helix 0.758	Al. Tube 0.875	None	NA	0.348	75	15.2	2,200 peak	-55 +80	Times does not supply
247	BC 0.1880	PS Helix 0.758	Al. Tube 0.875	PE-IIIA 1.015	NA	0.418	75	15.2	2,200 peak	-55 +80	Times does not supply
248 .	BC Tube 274/.374	PS Helix 1.472	Al. Tube 1.625	None	NA	0.948	75	15.0	4,300 peak	-55 +80	Times does not supply
249	BC Tube .274/.374	PS Helix 1.472	Al. Tube 1.625	PE-IIIA 1.765	NA	1.068	75	15.0	4,300 peak	-55 +80	Times does not supply
250	BC Tube .632/.732	PS Helix 2.850	Al. Tube 3.125	None	NA	2.395	75	15.0	8,500 peak	-55 +80	Times does not supply

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range °C	Comments
251	BC Tube .632/ .732	PS Helix 2.850	Al. Tube 3.125	PE-IIIA 3.295	NA	2.805	75	15.0	8,500 peak	-55 +80	Times does not supply
252	BC 0.1670	PE Tubes 0.456	Al. Tube 0.530	None	NA	0.175	50	24.0	1,000	-55 +80	Use Times M17/225-00001
253	BC 0.1670	PE Tubes 0.456	Al. Tube 0.530	PE 0.655	NA	0.225	50	24.0	1,000	-55 +80	Use Times M17/225-00001
254	SC 7/.0312 0.3110	PE Tubes 0.833	Al. Tube .953	PE 1.100	NA	0.655	50	24.0	1,860	-55 +80	Use Times M17/227-00001
255	BC 0.3110	PE Tubes 0.833	Al. Tube .953	None	NA	0.555	50	24.0	1,860	-55 +80	Use Times M17/227-00001
256	SC Tube .255/.311	PTFE Tubes 0.833	Al. Tube .953	None	NA	0.550	50	24.0	1,860	-55 +80	Times does not supply
257	BC Tube .486/.606	PS Tubes 1.622	Al. Tube 1.786	None	NA	1.200	50	24.0	3,640	-55 +80	Times does not supply
258	BC Tube .486 /.606	PE Tubes 1.622	Al. Tube 1.786	PE 1.926	NA	1.380	50	24.0	3,640	-55 +80	Times does not supply
259	BC Tube 0.1150	PTFE Tubes 0.318	Al. Tube .390	None	NA	0.100	50	24.0	697	-55 +80	Use Times M17/223-00001
260	BC Tube 0.1150	PE Tubes 0.318	Al. Tube .390	PE-IIIA 0.450	NA	0.140	50	24.0	697	-55 +80	Use Times M17/223-00001
263	BC 0.1720	Air-space PTFE 0.421	Al. Tube .500	None	NA	0.170	50	21.5	1,300	(-40 +250 peak	Use Times M17/225-00001
264	2:TC,2:BC 19/.0142 0.068	PE (ea core) 0.176	2:TC,2:BC,(BC)	PVC-IIA 0.750	NA	0.336	36.8	41.0	2,000	-40 +80	Use RG264C/U
264A	2:TC,2:BC 19/.0142 0.068	PE (ea core) 0.176	2:TC,2:BC,(BC)	PUR 0.750	NA	0.327	36.8	41.0	2,000	-40 +80	Use RG264C/U
264C	2:TC,2:BC 0.068	PE (ea core) 0.186	2:TC,2:BC,(BC)	PUR 0.765	NA	0.327	40	38.4	2,000	-40 +80	Water tight per MIL-C-23020
265	BC Tube 0.677	PE Helix 1.578	CCS. Tube	PE-IIIA 2.070	NA		50	22.3	145 KW peak	-40 +80	Times does not supply
266	Cond. ovr Mag.core 0.0113 over 0.144	PE 0.285	75 Spiral wound wires	PVC-I 0.400	NA	0.120	1530	53.0	5,000 DC	-40 +80	Delay Line Cable
267	BC Tube 0.355	PS Helix	Corr. CCS Tube	PE-IIIA 1.190	NA		50	22.2	44 KW peak	-40 +80	Times does not supply
268	BC 0.161	PE Helix 0.350	Corr. BC Tube .350	None	NA	0.234	50	23.0	10 KW peak	-55 +80	
269	BC Tube .287/.358	PE Helix 0.795	Corr. BC Tube .795	None	NA	0.430	50	22.2	44 KW peak	-55 +80	
269A	BC Tube .287/.358	PE Helix 0.795	Corr. BC Tube .795	None	NA	0.430	50	22.2	44 KW peak	-55 +80	
270	BC Tube .588/.688	PE Helix 1.578	Corr. BC Tube 1.830	None	NA	0.875	50	22.3	145 KW peak	-55 +80	Times does not supply
270A	BC Tube .588/.688	PE Helix 1.578	Corr. BC Tube 1.830	None	NA	0.875	50	22.3	145 KW peak	-55 +80	Times does not supply
271-278	RECTANGULAR WAVE GUIDES COVERED BY MIL-W-85 See MIL HDBK216, para 6.17 - 6.23										Times does not supply

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range °C	Comments
279	SCCS 19/.0050 0.025	Air-space PTFE 0.110	1:SC	FG Braid-V 0.145	NA	0.125	75	16.9	1,000	-55 +250	Extra flexible high temp.
280	BC 0.1144	Taped PTFE 0.327	2:SC	FEP-IX 0.468	NA	0.200	50	25.4	3,000	-55 +200	Low Loss High frequency
281	SC 19/ .0378 0.1890	Taped PTFE 0.500	2:SC	Sil/DAC-VI 0.720	NA	0.400	50	25.4	4,000	-55 +150	Low Loss High Power
282	SC 0.0253	Irradiated PE 0.099	2:SC	FEP 0.200	NA	0.031	54.5	28.2	4,500	-40 +150	Times does not supply
283	SC 19/ .0117 0.0585	Rubber-D 0.288	2:SC	Rubber-IV 0.475	NA	0.145	46	50.0	8,000	-55 +150	Times does not supply
284A	BC 0.2200	PE Helix 0.795	Corr. BC 1.005	None	NA	0.410	75	15.0	29 KW peak	-55 +80	Times does not supply
285A	BC 0.1140	PTFE Helix 0.795	Corr. BC 1.005	None	NA	0.430	100	13.0	22 KW peak	-55 +200	Times does not supply
286	BC Tube .360/.430	PE Helix 1.570	Corr. BC 1.830	None	NA	0.720	75	15.1	100 KW peak	-55 +80	Times does not supply
287	BC 0.1970	PE Helix 1.570	Corr. BC 1.830	None	NA	0.750	100	13.5	73 KW peak	-55 +80	Times does not supply
288	BC Tube 1.2221 /1.3330	PE Helix 2.960	CCS 3.75	None	NA	3.000	50	21.6	440 KW peak	-40 +80	Times does not supply
289	CCS Tube 0.740/0.820	PE Helix 2.960	CCS 3.75	None	NA	3.000	75	14.7	290 KW peak	-40 +80	Times does not supply
290-291	RECTANGULAR WAVE GUDES COVERED BY MIL-W-85 See MIL HDBK 216, para. 6.17 - 6.23.										Times does not supply
292	BC Tube 0.4300	PE Helix 1.570	Corr. BC 1.830	PE 2.000	NA	1.040	75	15.1	100 KW peak	-55 +80	Times does not supply
293	BC 0.1060	PE 0.375	1:SC	PE-IIIA 0.545	NA	0.160	50	30.8	7,000	-55 +80	Water tight cable per Mil-C-23020
293A	BC 0.1060	PE 0.370	1:SC	PE-IIIA 0.545	NA	0.160	50	30.8	7,000	-55 +80	Water tight cable per Mil-C-23020
294	1:BC, 1:TC (2cond) 0.0808	PE 0.472	1:TC	PE-IIIA 0.630	NA	0.205	95	16.3	3,000	-55 +80	Water tight cable per Mil-C-23020
294A	1:BC, 1:TC (2cond) 0.0808	PE 0.472	1:SC	PE-IIIA 0.630	NA	0.205	95	16.3	3,000	-55 +80	Water tight cable per Mil-C-23020
295	BC 0.195	PE 0.680	1:SC	PE-IIIA 0.895	NA	0.420	50	30.8	11,000	-55 +80	Water tight cable per Mil-C-23020
296	SC 37/.0336 0.2352	Silicone Rubber 0.906	1:SC	Neoprene 1.190	NA		50	36.4	13,800	-55 +80	Times does not supply
297	BC Tube 0.287/0.355	PTFE Helix 0.795	Corr. BC Tube	None	NA		50	21.4	44 KW peak	-55 +200	
298	CCS 7/.0201 0.0603	PE 0.115	None	Foam PE .650	NA	0.090				-55 +80	Buoyant Cable per Mil-C-22667
299-300	RECTANGULAR WAVE GUIDE										Times does not supply
301	HR 7/.0203 0.0609	PTFE 0.185	1:HR	FEP.IX .245	NA	0.056	50	29.4	3,000	-55 +200	Use M17/109-RG301
302	SCCS 0.025	PTFE 0.146	1:SC	FEP.IX .201	NA	0.031	75	19.5	2,300	-55 +200	Use M17/110-RG302

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range °C	Comments
303	SCCS 0.039	PTFE 0.116	1:SC	FEP-IX .170	NA	0.030	50	29.4	1,900	-55 +200	Use M17/111-RG303
304	SCCS 0.059	PTFE 0.185	2:SC	FEP-IX .280	NA	0.088	50	29.4	3,000	-55 +200	Use M17/112-RG304
305	BC Tube .360/.430	FEP 1.570	BC Tube 1.830	PE-IIIA 1.990	NA		75	19.5	2,720	-55 +80	Times does not supply
306A	BC 0.173	Foam PE 0.801	Al.Tube .875	PE-IIIA 1.015	NA	0.545	75	16.9	5,700	-55 +80	Per Mil-C-23806
307	SC 19/.0058 0.029	Foam PE 0.146	2:SC PUR Int	PE-111A 0.270	NA	0.070	75	16.9	1,000	-55 +80	Use M17/116-RG307
307A	BC 19/.0058 0.029	Foam PE 0.146	2:SC PUR Int	PE-111A 0.270	NA	0.070	75	16.9	1,000	-55 +80	Use M17/116-RG307
308-315	BEAD SUPPORTED RIGID LINES, See MIL-R-9671										Times does not supply
316	SCCS 7/.0067 0.0201	PTFE 0.060	1:SC	FEP-IX 0.102	NA	0.012	50	29.4	1,200	-55 +80	Use M17/113-RG316
317	2: BC 7/.0290 0.0870	FEP 0.446	1:TC	Neprene 0.710	NA		95	15.4	10,000	-55 +80	Water blocked
318	BC Tube .287/.358	PE Helix 0.795	Corr. BC 1.005	PE-IIIA 1.125	NA	0.530	50	22.0	44KW peak	-55 +80	
319	BC Tube .588/.688	PE Helix 1.570	Corr. BC 1.830	PE-IIIA 2.000	NA	1.040	50	22.0	145 KW peak	-55 +80	Times does not supply
320	WAVE GUIDE									-55 +80	Times does not supply
321	Corr. BC Tube 1.1400	PE Helix	Corr. BC	None	NA	1.210	50	21.7	320 KW peak	-55 +80	Times does not supply
322	Corr. BC 1.1400	PE Helix	Corr. BC	PE 3.040	NA	1.780	50	21.7	320 KW peak	-55 +80	Times does not supply
323	BC Tube .312	Foam PE 0.3120	Corr. BC	PE 1.060	NA	0.420	50	25.4	1,480	-55 +80	Use Times M17/227-00001
324	BC Tube .312	Foam PE 0.3120	Corr. BC	None	NA	0.320	50	25.4	1,480	-55 +80	Use Times M17/227-00001
325	SCC Al. 19/0.020 0.1000	PE Spline 0.260	2:SC Strip	PUR 0.350	NA	0.100	50	26.3	750	-55 +80	Low loss
326	SCC Al. 19/0.040 0.2000	PE Spline 0.550	2:SC Strip	PUR 0.697	NA	0.240	50	26.3	1,700	-55 +80	Low loss
327	SCC Al. 19/0.064 0.3200	PE Spline 0.840	2:SC Strip	PUR 1.010	NA	0.550	50	26.3	2,500	-55 +80	Low loss
328	TC Braid 0.4850	Rubber H,J,H 1.065	3: TC,GS,TC	Neoprene 1.460	NA	1.469	25	85.0	20,000	-55 +80	Times does not supply
329	TC 19/.0117 0.0585	Rubber H,J,H 0.380	3: TC,GS,TC	Neoprene 0.700	NA	0.353	50	50.0	15,000	-55 +80	Times does not supply
330	SC	Foam PE	1:SC		NA		50	25.0			Times does not supply
331	CCA 0.1620	Foam PE 0.450	Al. Tube .500	PE-IIIA 0.600	NA	0.187	50	25.4	2,500	-55 +80	Use Times M17/225-00001
332	BC 0.280	Foam PE 0.801	Al. Tube .875	None	NA	0.466	50	25.4	4,500	-55 +80	Use Times M17/227-00001

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range ^oC	Comments
333	CCA 0.2880	Foam PE 0.801	Al. Tube .875	PE-IIIA 1.015	NA	0.548	50	25.4	4,500	-55 +80	Use Times M17/227-00001
334	BC 0.098	Foam PE 0.450	Al. Tube .500	None	NA	0.109	75	16.9	2,500	-55 +80	Per MIL-C-23806
335	BC 0.098	Foam PE 0.450	Al. Tube .500	PE-IIIA 0.625	NA	0.143	75	16.9	2,500	-55 +80	Jacketed RG334/U
336	BC 0.173	Foam PE 0.801	Al. Tube .875	None	NA	0.315	75	16.9	4,000	-55 +80	Per MIL-C-23806
337-359	RECTANGULAR WAVE GUIDES COVERED BY MIL-W-85. See MIL HDBK 216, Para 6.17 - 6.23										Times does not supply
360	BC 0.243	Foam PE 0.676	Al. Tube .750	PE-IIIA 0.825	NA	0.397	50	25.4	4,000	-55 +80	Per MIL-C-23806
361-365	DATA NOT AVAILABLE										
366	BC 0.1600	**Foam PE** 0.540	Corr. BC	PE-IIIA 0.620	NA		50	25.4	4,000	-55 +80	Use Times M17/225-00001
367	Corr. BC	PE Helix	Corr. BC 5.200	PE-IIIA	NA	4.590	50	21.7 PEAK	830KW	-55 +80	Times does not supply
369	BC 0.117	PE Tubes 0.318	Al.Tube .390	PE-IIIA 0.470	NA	0.140	50	24.0	700	-55 +80	Use Times M17/223-00001
370	BC 0.117	PE Tubes 0.318	Al.Tube .390	None	NA	0.100	50	24.0	700	-40 +80	Use Times M17/223-00001
372-373	EXPERIMENTAL BUOYANT COAXIAL TRANSMISSION LINE										
374	BC 0.0285	PE 0.160	None	Foam PE 0.650	NA	0.097				-55 +80	Buoyant Antenna
375	RECTANGULAR WAVE GUIDE										Times does not supply
376	BC Tube 0.3120	Foam PE	Corr. Al. Tube	PE-IIIA 1.060	NA	0.390	50	25.4	6,000	-55 +80 00001	Use Times M17/227-
377	SC Tube 0.1650	PTFE Tubes	Al.Tube .530	None	NA	0.170	50	24.0	1,000	-55 +250	
378	BC Tube 0.7130	PE Helix	Corr. Al. Tube	PE-IIIA 2.000	NA	0.620	50	22.1	145 KW peak	-55 +80	Times does not supply
379-381	ELLIPTICAL WAVE GUIDES										Times does not supply
382		RIGID LINE									Times does not supply
383	2: (2000 pound break) 0.0403	PE	None	Foam PE 0.650	NA		100			-55 +80	Buoyant Twisted pair
384	BC 0.0508	PE	1: BC Strip	Foam PE 0.650	NA		50	30.8		-55 +80	Buoyant Antenna
385	SC 0.1530	Semi-solid PTFE 0.425	Corr. Al Tube	Optional 0.660	NA	0.178	50	25.4	1,500	-55 +250	Low loss cable per MIL-C-22931
386	CCS 0.0508	PE	Non-hosing	Foam PE 0.650	NA					-55 +80	Buoyant Antenna Cable
387	DATA NOT AVAILABLE										

RG Cable Descriptions

RG-/U Number	Conductor inches	Dielectric inches	Shields	Jacket inches	Armor inches	Weight lbs/foot	Impedance ohms	Capacitance pF/foot	Max Oper. Voltage vms	Temperature Range °C	Comments
388	SC	PE	SC	PE-IIIA 0.545	NA		50	30.8		-55 +80	Watertight Cable
389	BCCAl 0.2500	PE Spline 0.635	2:SC	PE-IIIA 0.875	NA	0.366	50	22.8	2,000	-55 +80	Low loss RG189/U
390	DATA NOT AVAILABLE										
391	TC 7/.0159 0.0480	CPE & PE 0.285	1:TC	PVC-IIA 0.405	NA	0.092	72	23.0	5,000	-55 +80	Use M17/126-RG391
392	TC 7/.0159 0.0480	CPE & PE 0.285	1:TC	PVC-IIA 0.405	Al. braid 0.475	0.114	72	23.0	5,000	-55 +80	Use M17/126-RG392
393	SC 7/.0312 0.0936	PTFE 0.285	2:SC	FEP-IX 0.390	NA	0.165	50	29.4	5,000	-55 +200	Use M17/127-RG393
397	SC 7/.032 0.0960	Air-space PTFE 0.270	2:SC	FEP-IX 0.350	NA	0.125	50	25.4	2,000	-55 +200	Low loss RG393/U
400	SC 19/.0077 0.0384	PTFE 0.116	2:SC	FEP-IX 0.195	NA	0.050	50	29.4	1,900	-55 +200	Use M17/128-RG400
401	SC 0.0645	PTFE 0.215	BC. Tube .250	None	NA	0.081	50	29.4	3,000	-55 +90	Use M17/129-RG401
402	SCCS 0.036	PTFE 0.119	BC. Tube .141	None	NA	0.0320	50	29.4	2,500	-55 +100	Use M17/130-RG402
403	SC 7/.004 0.012	PTFE 0.034	2:SC, FEP Int.Lay	FEP-IX 0.116	NA	0.0075	50	29.4	1,000	-55 +200	Use M17/131-RG403
404	SC 7/.004 0.012	PTFE & CPT 0.034	1:SC	FEP-IX 0.072	NA	0.0054	50	31.5	2,000	-55 +200	Use M17/132-00001
405	SCCS 0.0201	PTFE 0.066	BC Tube .0865	None	NA	0.0150	50	29.4	1,500	-55 +100	Use M17/133-RG405

Notes

Reference Data and Application Notes

Useful Design Equations, Materials Properties, Abbreviation Key and Critical Characteristics to Consider when Selecting or Designing Coaxial Cables

MATERIALS ABBREVIATIONS LEGEND

CONDUCTORS & BRAID MATERIALS

AL	Aluminum
BC	Bare Copper
BeCu	Beryllium-Copper Alloy 172
BCCAl	Bare Copper Clad Aluminum
CCS	Bare Copper Clad Steel
GS	Galvanized Steel
HR	High Resistance Wire
MW	Magnet Wire
NC	Nickel Covered Copper
SA	Silver Covered Alloy
SC	Silver Covered Copper
SCBeCu	Silver Covered Beryllium Copper
SCCadBr	Silver Covered Cadmium Bronze
SCCAl	Silver Covered Copper Clad Aluminum
SCCS	Silver Covered Copper Clad Steel
SNCCS Steel	Silver Covered Nickel Covered Copper Clad Steel
SCS	Silver Covered Copper Strip
TC	Tinned Copper

DIELECTRIC MATERIALS

PE	Solid Low Density Polyethylene
PTFE	Solid Polytetrafluoroethylene
LDTFE	Low Density PTFE
Foam PE	Gas Injected Foam PE
FEP	Solid Fluorinated Ethylene Propylene
CPT	Conductive PTFE
CPE	Conductive Polyethylene (Type A-5 per MIL-C-17)
Rubber	per MIL-C-17 (obsolete)

INTERLAYER MATERIALS

PE	Solid Polyethylene
PTFE	Solid Polytetrafluoroethylene
MY	Polyester
KP	Polyimide
ALMY	Aluminum-Polyester Laminate
ALKP	Aluminum-Polyimide Laminate
CPC	Copper-Polyester-Copper Laminate

JACKET MATERIALS

E-CTFE	Ethylene Chlorotrifluoroethylene Type XI per MIL-C-17
ETFE	Ethylene Tetrafluoroethylene Copolymer Type X per MIL-C-17
FEP	Fluorinated Ethylene Propylene Type IX per MIN-C-17
FG Braid	Fiberglass; Impregnated Type V per MIL-C-17
PE	Clear Polyethylene Type III per MIL-C-17
LS/LT	Low Smoke/Low Toxicity (XLPE)
PE	Polyethylene, black HMW Type IIIA per MIL-C-17
PFA	Perfluoroalkoxy Type XIII per MIL-C-17
PTFE	Polytetrafluoroethylene Type VIIA per MIL-C-17
PUR	Polyurethane, black Type XII per MIL-C-17
PVC-I	Polyvinyl Chloride, black (contaminating) Type 1 per MIL-C-17
PVC-II	Polyvinyl Chloride, grey (non-contaminating) Type II per MIL-C-17
PVC-IIA	Polyvinyl Chloride, black (non-contaminating) Type IIA per MIL-C-17
Rubber	Per MIL-C-17 (obsolete)
SIL/DAC	Dacron Braid over Silicone Rubber Type VI per MIL-C-17
TPE	Thermo Plastic Elastomer
XLPE	Crosslinked Polyolefin Type XIV per MIL-C-17

COAXIAL CABLE EQUATIONS LEGEND

Symbol	Definition	Units
α	= Attenuation in dB/100 feet	dB/100 feet
ε	= Dielectric constant	
Γ	= Reflection coefficient	
ϕ	= Electrical length	degrees
C	= capacitance	pF/foot
L	= Inductance	uH/foot
Zo	= Impedance	ohms
Vp	= Velocity of propagation	%
df	= Dissipation factor	
Td	= Time delay	nS/foot
F	= Frequency	MHz
PTC	= Phase temperature coefficient	ppm/C
Δ**T**	= Change in temperature (t2 t0 t1)	C
LTH	= Length	feet
$\Delta\phi$	= Change in electrical length (t1 to t2)	degrees
D	= dielectric diameter	inches
d	= center conductor diameter	inches
ds	= Braid wire size	inches
Fbd	= Braid factor	

Symbol	Definition	Units
Fco	= Cutoff frequency	GHz
C	= Braid carriers	
N	= Braid ends per carrier	
t	= Flat strip thickness	inches
w	= Flat strip width	inches
SRL	= Return loss	dB
VSWR	= Voltage standing wave ratio	
FWD	= Forward power	dB
RFL	= Reflected power	dB
MML	= Mismatch loss	dB
ME	= Match efficiency	%
k_s	= 1.0 for solid center conductor	
	= 0.939 for 7 strand center conductor	
	= 0.97 for 19 strand center conductor	
log	= logarithm to base 10	
ln	= logarithm to base e	
k_1	= resistive loss constant	
k_2	= dielectric loss constant	

Table 1
Coax Cable Design Equations

IMPEDANCE (ohms)

$$Z_o = 138\, V_p \log\left(\frac{D}{d \bullet ks}\right) = 60\, V_p \ln\left(\frac{D}{d \bullet ks}\right)$$

$$Z_o = \frac{138}{\sqrt{\varepsilon}} \log\left(\frac{D}{d \bullet ks}\right) = \frac{60}{\sqrt{\varepsilon}} \ln\left(\frac{D}{d \bullet ks}\right)$$

$$Z_o = \sqrt{L/C}$$

VELOCITY OF PROPAGATION (%) AND DIELECTRIC CONSTANT

$$V_p = \frac{1}{\sqrt{\varepsilon}} \qquad \varepsilon = \frac{1}{Vp^2}$$

TIME DELAY (nS/foot)

$$Td = \frac{1.016}{V_p} = 1.016\sqrt{\varepsilon}$$

CAPACITANCE (pF/foot)

$$C = \frac{7.36\varepsilon}{\log\left(\frac{D}{d \bullet ks}\right)} = \frac{16.95\varepsilon}{\ln\left(\frac{D}{d \bullet ks}\right)}$$

$$C = \frac{7.36}{Vp^2 \log\left(\frac{D}{d \bullet ks}\right)} = \frac{16.95}{Vp^2 \ln\left(\frac{D}{d \bullet ks}\right)}$$

$$C = \frac{1016}{Z_o \bullet V_p}$$

INDUCTANCE (uH/foot)

$$L = .140 \log\left(\frac{D}{d \bullet ks}\right) = .0606 \ln\left(\frac{D}{d \bullet ks}\right)$$

$$L = \frac{Z_o^2 \bullet C}{1 \times 10^6}$$

ATTENUATION (dB/100 feet)

$$\alpha = \frac{.4343}{Zo \bullet D}\left[\frac{D}{d \bullet ks} + Fbd\right]\sqrt{F} + \frac{2.78 \bullet df \bullet F}{Vp}$$

$$\alpha = k_1\sqrt{F} + k_2\, F$$

BRAID FACTOR

Round Wire Braid: $Fbd = \dfrac{8D + 16ds}{C \bullet N \bullet ds}$

Flat Strip Braid: $Fbd = \dfrac{2\pi\,(D + 2t)}{C \bullet W}$

Solid Tube: $Fbd = 1.0$

CUTOFF FREQUENCY

$$Fco = \frac{7.5 \bullet Vp}{(D + (d \bullet ks))}$$

$$Fco = \frac{7.5}{\sqrt{\varepsilon}\,(D + (d \bullet ks))}$$

ELECTRICAL LENGTH (degrees)

$$\phi = \frac{360 \bullet F \bullet L_{TH}}{984 \bullet V_p\, 100}$$

$$\phi = \frac{360 \bullet F \bullet L_{TH} \bullet \sqrt{\varepsilon}}{984}$$

PHASE TEMPERATURE COEFFICIENT (ppm/

$$PTC = \frac{\Delta\phi \bullet 1 \times 10^6}{\phi \bullet \Delta T}$$

PHASE STABILITY (degrees)

$$\Delta\phi = \frac{PTC \bullet \phi \bullet \Delta T}{1 \times 10^6}$$

RETURN LOSS (dB)

$$RL = -20 \log \Gamma$$

$$RL = -20 \log \frac{VSWR-1}{VSWR+1}$$

$$RL = -10 \log \frac{RFL}{FWD}$$

VSWR

$$VSWR = \frac{1 + \Gamma}{1 - \Gamma}$$

$$VSWR = \frac{1 + 10^{(RL/20)}}{1 - 10^{(RL/20)}}$$

$$VSWR = \frac{1 + \sqrt{RFL/FWD}}{1 - \sqrt{RFL/FWD}}$$

REFLECTION COEFFICIENT

$$\Gamma = 10^{-RL/20}$$

$$\Gamma = \frac{VSWR - 1}{VSWR + 1}$$

$$\Gamma = \sqrt{RFL/FWD}$$

MATCH EFFICIENCY (%)

$$ME = (1 - \Gamma^2) \bullet 100$$

$$ME = \left[1 - \left(\frac{VSWR - 1}{VSWR + 1}\right)^2\right] \bullet 100$$

$$ME = \left(\frac{FWD-REL}{FWD}\right) \bullet 100$$

MISMATCH LOSS (dB)

$$MML = -10 \log (1 - \Gamma^2)$$

$$MML = -10 \log \left[1 - \left(\frac{VSWR-1}{VSWR+1}\right)^2\right.$$

$$MML = -10 \log \left(1 - \frac{RFL}{FWD}\right)$$

GENERAL ELECTRICAL PROPERTIES

	Cable Type	Impedance (ohms)	Capacitane (p/F/foot)	Velocity (%)	Dielecrtic Constant	Time Delay (nS/foot)
50 OHM	Solid Polyethylene	50	30.8	65.9	2.30	1.54
	Foam PE	50	24.5	83.0	1.45	1.22
	Foam PE	50	24.2	84.0	1.42	1.21
	Foam PE	50	23.9	85.0	1.38	1.20
	Foam PE	50	23.6	86.0	1.35	1.18
	Foam PE	50	23.3	87.0	1.32	1.17
	Foam PE	50	23.1	88.0	1.29	1.16
	Solid PTFE	50	29.2	69.5	2.07	1.46
	Tape PTFE	50	28.6	71.0	1.98	1.43
	Low Density PTFE	50	26.7	76.0	1.73	1.34
	Low Density PTFE	50	25.4	80.0	1.56	1.27
75 OHM	Solid Polyethylene	75	20.6	65.9	2.30	1.54
	Foam PE	75	16.3	83.0	1.45	1.22
	Foam PE	75	16.1	84.0	1.42	1.21
	Foam PE	75	15.9	85.0	1.38	1.20
	Foam PE	75	15.8	86.0	1.35	1.18
	Foam PE	75	15.6	87.0	1.32	1.17
	Foam PE	75	15.4	88.0	1.29	1.16
	Solid PTFE	75	19.5	69.5	2.07	1.46
	Low Density PTFE	75	17.8	76.0	1.73	1.34
	Low Density PTFE	75	16.9	80.0	1.56	1.27
MISC	Solid Polyethylene	95	16.2	65.9	2.30	1.54
	Foam PE	95	12.6	85.0	1.38	1.20
	Air Spaced PE	95	12.6	85.0	1.38	1.20
	Solid PTFE	95	15.4	69.5	2.07	1.46
	Air Spaced PE	125	09.6	85.0	1.38	1.20
	Air Spaced PE	185	06.5	85.0	1.38	1.20

PROPERTIES OF WIRE AND CABLE INSULATING MATERIALS

Material	Dielectric Constant	Dissipation Factor	Volume-Resistivity (ohm-cm)	Operating Temperature (Range ^{o}C)
PTFE	2.07	0.0003	10^{19th}	-75 to +250
Polyethylene	2.3	0.0003	10^{16th}	-65 to +80
Foam Polyethylene	1.29 - 1.64	0.0001	10^{12th}	-65 to +100
Polyvinylchloride	3.0 - 8.0	0.07 - 0.16	2×10^{12th}	-50 to +105
Polyamide	3.5 - 4.6	0.03 - 0.4	4×10^{14th}	-60 to +120
Silicone Rubber	2.1 - 3.5	0.007 - 0.016	10^{13th}	-70 to +250
Ethylene Propylene	2.24	0.00046	10^{17th}	-40 to +105
FEP	2.1	0.0007	10^{18th}	-70 to +200
Low Density PTFE	1.38 - 1.73	0.00005	10^{19th}	-75 to +250
Foam FEP	1.45	0.0007	10^{18th}	-75 to +200
Polyimide	3.0 - 3.5	0.002 - 0.003	10^{13th}	-75 to +300
PFA	2.1	0.001	10^{16th}	-75 to +260
ETFE	2.6	0.005	10^{16th}	-75 to +150
ECTFE	2.5	0.0015	10^{16th}	-65 to +150
PVDF	7.8	0.02	10^{14th}	-75 to +125

APPLICATION NOTES

A guide to the selection of RF coaxial cable

Choosing the best coaxial cable for a new application requires an understanding of the application and of the range of cables to choose from. The best choice can only be arrived at by a careful evaluation of the performance and cost trade-offs. Our in-depth expertise in all aspects of coaxial cable technology can help you to arrive at the best choice for your application.

Times Microwave Systems offers the broadest range of coaxial cables of any manufacturer. We also have the expertise to design and produce custom cables if there is no design available for your application.

In choosing the best coaxial cable for an application, the cable characteristics listed below should be considered. The following sections provide detailed discussions of each characteristic.

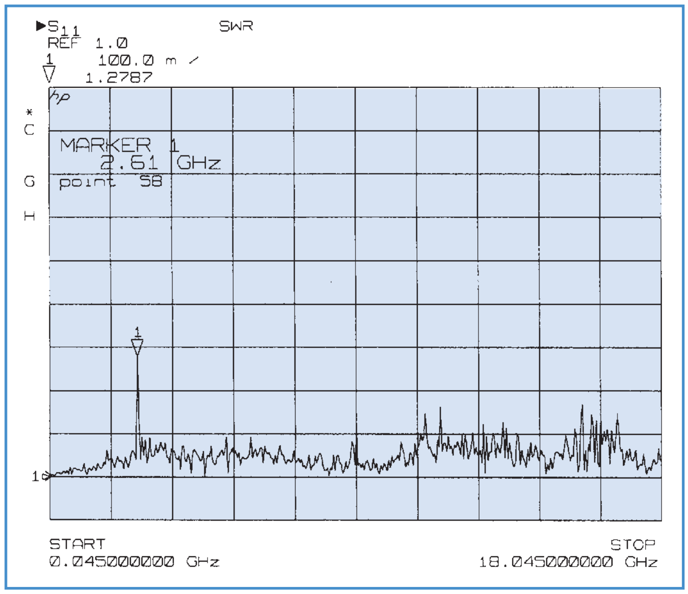
A: Characteristic Impedance
B: VSWR & Impedance Uniformity
C: Attenuation
  · Attenuation Uniformity
  · Attenuation Stability
D: Power Rating
E: Operating Voltage
F: Shielding
G: Capacitance
H: Velocity of Propagation
I: Electrical Length Stability
J: Cut-Off Frequency
K: Pulse Response
L: Self-Generated Cable Noise
M: Operating Temperature Range
N: Flexibility
O: Environmental Resistance
P: Cable Strength
Q: Qualification & U L Approval

Table 1 provides various formulae describing cable characteristics.

A. CHARACTERISTIC IMPEDANCE

The characteristic impedance of a coaxial cable is determined by the ratio of the diameter of the outer conductor to the inner conductor and the dielectric constant of the insulating material between the conductors. Because the RF energy in the cable travels on the surface of the conductors, the important diameters are the outside diameter of the center conductor and the inside diameter of the outer conductor. Impedance is selected to match the system requirements.

Fig. 1
VSWR vs. Frequency



The most common coaxial cables impedances are 50, 75, and 95 ohm. Other impedances from 35 to 185 ohms are sometimes used. Fifty ohm cables are used in microwave and wireless communications applications. Seventy-five ohm cables are typically used in cable television applications and video applications. Ninety-five ohm cables are typically used for data transmission applications.

For best system performance, the cable must be selected to match the impedance of the other components in the system. Of the most commonly used coaxial cables, 75 ohms impedance provides the lowest attenuation and 35 ohms impedance provides the best power handling. For practical cables with non-ideal dielectrics and conductors, these differences are small. The availability of required components and cables with the appropriate characteristic impedance is usually the prime factor in selecting a given system impedance.

B. SIGNAL REFLECTION: VSWR, RETURN LOSS, REFLECTION FACTOR & IMPEDANCE UNIFORMITY

There are three things that happen to RF energy input into a coaxial cable assembly:

1. It is transmitted to the other end of the cable, as is usually desired.
2. It is lost along the length of the cable either by being transformed into heat or by leaking out of the cable.
3. It is reflected back towards the input end of the cable.

Reflections back towards the input end of the cable are caused by variations in impedance along the length of the cable assembly. This includes differences in impedance between the cable and the devices to which it is attached. Typically the connectors and the interface between the connectors and the cable will be major contributors to the reflection. The cable itself can also contribute to the reflections. One source of cable reflections is periodic variations in impedance which result from the manufacturing process and add up at a specific frequency. When viewed in a sweep over a range of frequencies this will show up as a spike. An example of a spike is shown in Figure 1.

The magnitude of a reflection can be expressed in several ways. Perhaps the most familiar is VSWR or Voltage Standing Wave Ratio. A value of 1.0:1 or just 1.0 indicates no reflected power or a perfect cable. Alternatively, the reflection can be expressed as return loss—the ratio of the reflected power to the input power usually expressed in decibels. Table 1 gives the formulas to convert between VSWR, return loss and reflection coefficient. A tabulation of the equivalent values of all three measures is also provided in Table 2.

The lack of reflected power (or low VSWR) is often used as a figure of merit for coaxial components, including cables, connectors and cable assemblies. It is indicative of how well the uniformity of the cable is maintained along its length, whether the connectors are properly designed and attached and how well the transitions between line sizes are compensated for in the connectors. It is generally a function of frequency, with reflections generally getting higher as the frequency increases.

In many applications, low reflected power is critical for proper system performance. In these cases, it is essential that this be considered in the selection of the cable and connectors. In addition, care must be taken to properly attach the connectors to the cable in order to achieve the proper results. Purchase of completed, factory assembled and tested cable assemblies should be considered for VSWR critical applications.

Note that actual input impedance at a particular frequency may be quite different from the characteristic impedance of the cable due to reflections in the line. The Voltage Standing Wave Ratio (or VSWR) of a particular length of cable is an indicator of the difference between the actual input impedance of the cable and its average characteristic impedance.

The impedance of long lengths of cable will exhibit very little change over their operating temperature

Table 2
VSWR Conversions

VSWR (:1)	Return Loss (dB)	Reflection Coefficient	Mismatch Loss (dB)	Match Efficiency (%)
1.011	45	0.006	0.000	100.00
1.020	40	0.010	0.000	99.99
1.036	35	0.018	0.001	99.97
1.065	30	0.032	0.004	99.90
1.074	29	0.035	0.005	99.87
1.08	28	0.400	0.007	99.84
1.09	27	0.045	0.009	99.80
1.11	26	0.050	0.011	99.75
1.12	25	0.056	0.014	99.68
1.13	24	0.063	0.017	99.60
1.15	23	0.071	0.022	99.50
1.17	22	0.079	0.027	99.37
1.20	21	0.089	0.035	99.21
1.22	20	0.100	0.044	99.00
1.25	19	0.112	0.055	98.74
1.29	18	0.126	0.069	98.42
1.33	17	0.141	0.088	98.00
1.38	16	0.158	0.110	97.49
1.43	15	0.178	0.140	96.84
1.50	14	0.200	0.176	96.02
1.58	13	0.224	0.223	94.99
1.67	12	0.251	0.283	93.69
1.78	11	0.282	0.359	92.06
1.92	10	0.316	0.458	90.00
2.10	9	0.355	0.584	87.41
2.32	8	0.398	0.749	84.15
2.61	7	0.447	0.967	80.05
3.01	6	0.501	1.256	74.88
3.57	5	0.562	1.651	68.38
4.42	4	0.631	2.205	60.19
5.85	3	0.708	3.021	49.88

Match efficiency - e.g. 100 Watts Forward Power at 1.33:1 VSWR yields 98 Watts Output (i.e. 2 Watts Reflected) ranges - less than 2%.

It is possible to fabricate cables having a charac teristic impedance that varies through the length of the cable for matching purposes. Thus a coaxial cable can be used as a broadband impedance transformer to match differing source and load impedances. The transforming action is related to cable length and the minimum operating frequency, and the cable must be designed for the specific application.

C. ATTENUATION

Attenuation is the loss of signal along the length of a cable. As the RF signal passes through the cable, a portion of the signal is converted to heat and a portion of the signal leaks out of the cable through the outer conductor. This loss of signal is usually expressed in decibels per unit of length at a specific frequency, since attenuation increases with frequency.

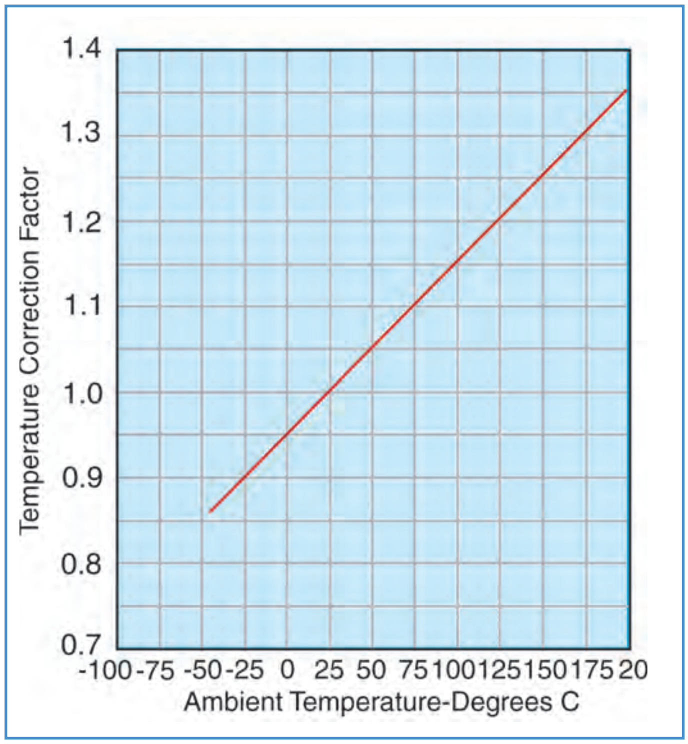
For most applications, the objective is to minimize the losses in the cable runs or to stay within a loss budget. Minimum loss corresponds to an attenuation of 0 dB or a ratio of 1 to 1 between input and output power. Because cable losses decrease with increasing cable diameter for the same type of construction, minimizing cable loss means maximizing cable size.

Attenuation is determined by the conductive and dielectric losses of the cable. Larger cables have lower conductor losses, reducing attenuation. Dielectric loss is independent of size. Dielectric losses increase linearly with frequency, while conductor losses increase with the square root of frequency. Therefore, dielectric losses become a larger proportion of the total cable loss as frequency increases.

Attenuation must be modified by a correction factor for the ambient temperature (see Figure 2). Elevated temperature increases cable attenuation by increasing the resistance of the conductors and by increasing the power factor of the dielectric (see Figure 6 for correction factors).

To select a cable construction for a particular application, determine the desired attenuation at the highest frequency from system requirements. Determine the corrected attenuation by dividing the desired attenuation by the temperature correction factor. Choose the smallest cable meeting the corrected attenuation value from the tables.

Fig. 2
Attenuation Temperature Correction Factor



For cables with low attenuation for their size,see the LMR, StripFlex, SFT, and CLL families of cables.

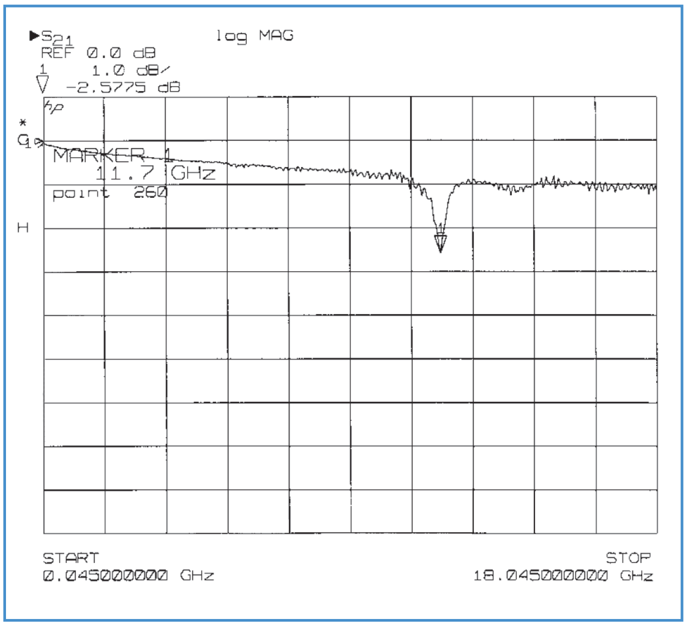
Attenuation Uniformity

The attenuation of any cable may not change uniformly as the frequency changes. Random and periodic impedance variations give rise to random and periodic attenuation responses. Narrow-band attenuation “spikes” such as that shown in Figure 3 can occur. If required, cables can be procured in various lengths where a maximum attenuation variation from nominal is specified over a customer defined frequency range.

Attenuation Stability

The attenuation of braided cables can increase with time and flexure. The change with time can be caused by corrosion of the braided shield, by contamination of the primary insulation due to jacket plasticizers, and by moisture penetration through the jacket. These effects can be essentially eliminated by encapsulating the braid with an appropriate flooding compound, as is done in the DB versions of the LMR cables.

Fig. 3
Attenuation vs. Frequency



(Vapor penetration occurs at differing rates through all plastic and elastomeric materials.) Attenuation degradation is more pronounced at frequencies above 1 GHz. Cables

having bare copper and tinned copper braids exhibit far greater attenuation degradation than cables with silver plated braids. These effects are illustrated in Figure 5.

The following guidelines apply:

a. Tin plated braids: Below 1 GHz, cables manufactured with tin plated braids have 15-20% more attenuation than bare copper braids in the "as manufactured" condition, but are more stable than bare copper braided cables.

b. Foam polyethylene: Flexible braided cables with foam polyethylene dielectrics have approximately 15 to 40% lower attenuation than solid polyethylene cables of the same core size and impedance. However, some polyethylene foams can absorb moisture causing attenuation increases. LMR cables utilize a closed cell, non-hydroscopic foam composition and are not subject to this problem.
See LMR cables.

c. If PVC jackets are used, a Type IIA, non-contaminating PVC should be specified for applications where attenuation uniformity over time is important. Type I PVC's contain plasticizers which can leach into the dielectric over time causing an increase in attenuation.

d. The ultimate in attenuation stability can be achieved by specifying hermetically-sealed cable assemblies. These will preclude the ingress of con

taminants of any sort into the cable and result in the best stability, such as MilTech assemblies. Contact Times Microwave for more information on this type of assembly.

For flexible cables in extreme environmental conditions, a protected braid (e.g. LMR-DB) is recommended.

D. AVERAGE POWER RATING

Electrical losses in a coaxial cable result in the generation of heat in the center and outer conductors, as well as in the dielectric core. The power handling capability of a cable is related to the ability of the cable to dissipate this heat. The ultimate limiting factor in power handling is the maximum allowable operating temperature of the materials used in the cable, especially the dielectric. This is because most of the heat is generated at the center conductor of the cable. In general, the power handling capability of a given cable is inversely proportional to its at-

Fig. 4
Attenuation vs. Flexure

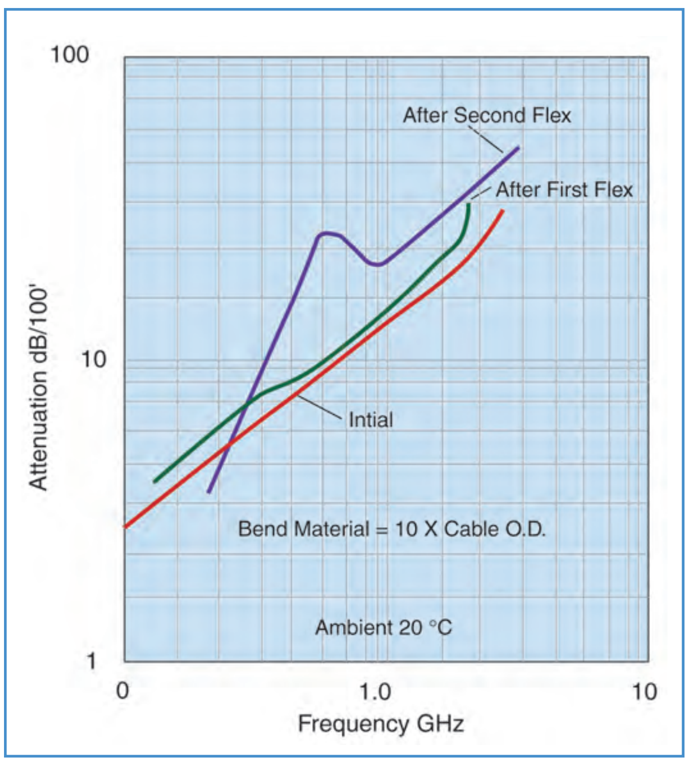
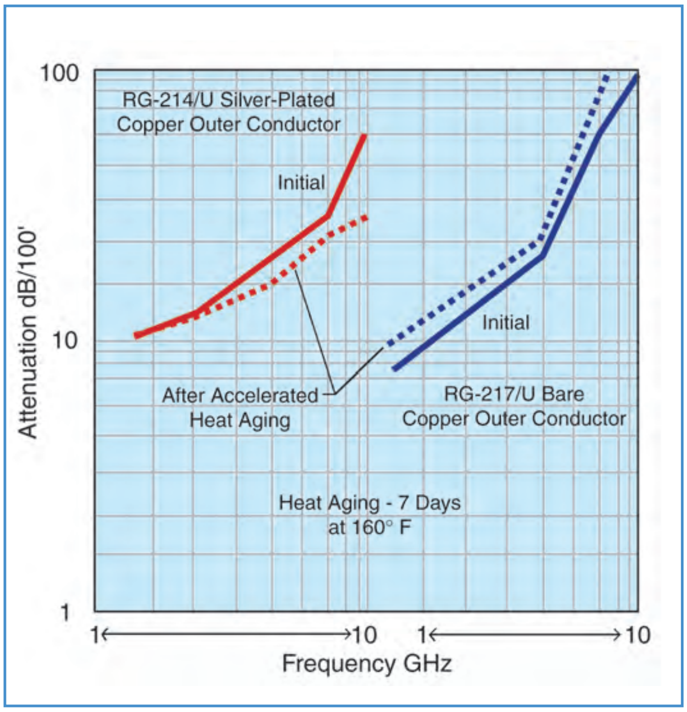


Fig. 5
Attenuation Stability



tenuation, and directly related to its size. The other factor is the heat transfer properties of the cable, especially the dielectric.

Cable power ratings must be derated by correction factors for the ambient temperature, altitude and VSWR encountered in a particular application. High ambient temperature and high altitude reduce the power rating of a cable by impeding heat transfer out of the cable. VSWR reduces power rating by causing localized hot spots in the cable.

To select the cable construction for a particular requirement, determine the average input power at the highest frequency from system requirements. Then determine the effective average input power as follows:

Effective Power = Average Power x (VSWR correction)

(Temp. correction) x (Alt. correction)

Temperature and altitude corrections are shown on Figures 6 and 7.

VSWR correction factor =

1 1

1/2 (VSWR + VSWR) + 1/2 k1 (VSWR - VSWR)

Where k, is shown in Figure 8. Select a cable from the Attenuation and Power charts rated at this effective power level.

Note that the peak power handling capability of a cable is related to the maximum operating voltage rating. See Section E, below.

E. MAXIMUM OPERATING VOLTAGE

Care must be taken to ensure that the continuous voltage (and the peak voltage related to pulsed power conditions) applied to a cable is held below its maximum voltage rating. Note that there are two separate voltage ratings for a cable: Corona Voltage and Dielectric Withstanding Voltage:

1. Corona is a voltage related ionization phenomenon which causes noise generation, long term dielectric damage, and eventual breakdown of the cable. Thus, a cable cannot operate continuously with corona, and the maximum operating voltage must be less than the corona extinction level (extinction voltage) of the cable. The determination of corona voltages requires sensitive instrumentation capable of detecting the voltage induced ionization noise generation.

Fig. 6
Power Temperature Correction Factor

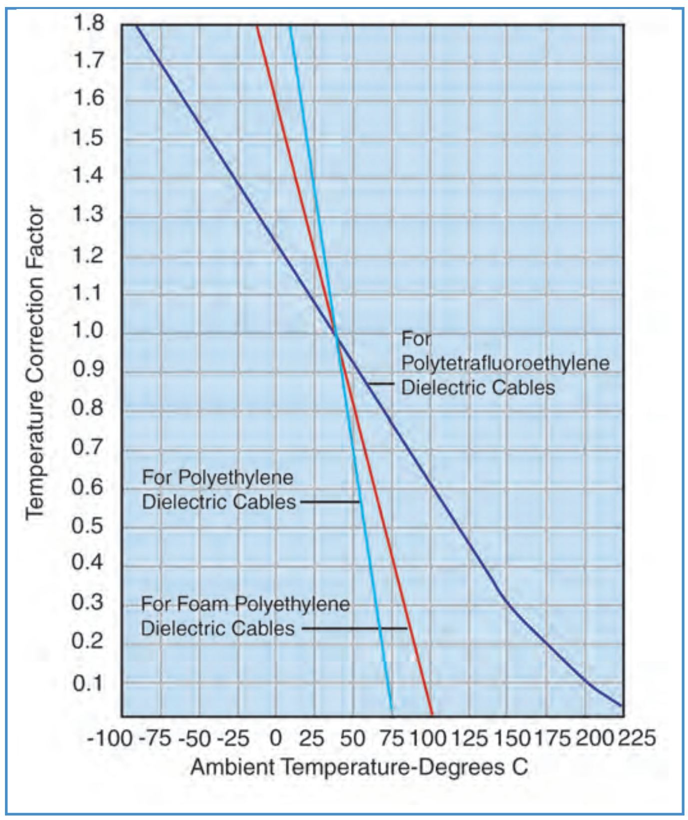
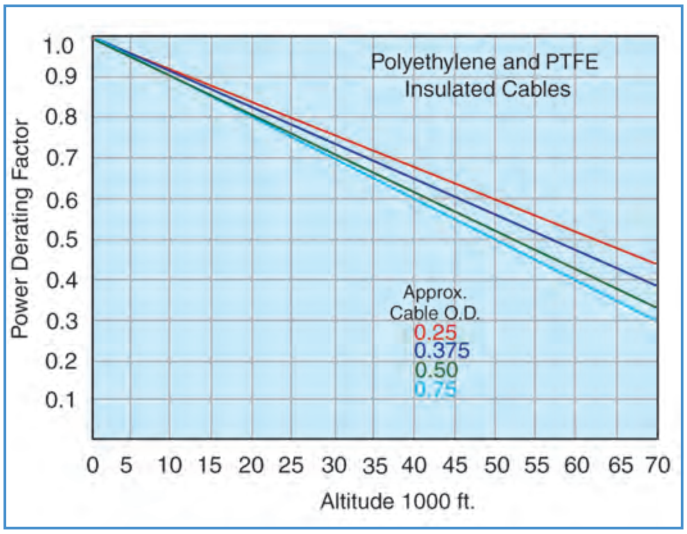


Fig. 7
Power Altitude Correction Factor



2. The Dielectric Withstanding Voltage, or dielectric strength of the cable, is a measure of the voltage level required to abruptly break down the dielectric employed in a cable. DWV testing requires less sensitive instrumentation, and is a test measurement where a voltage is applied to the cable for a limited time only, and monitored for current flow.

Maximum operating A.C. (RMS) voltage levels or peak voltage are given for each construction in the Cable Data Section of this catalog. The maximum permissible D.C. voltage level is conservatively 3 times the A.C. level.

To select a cable for a particular application, determine the actual RMS (peak /l.4) ,

$$\textbf{RMS voltage} = \frac{\textbf{(peak voltage value)}}{\textbf{1.4}}$$

or actual peak voltage = (RMS x value 1.4) from system requirements. Then determine the effective input voltage by multiplying the actual input voltage by the square root of the VSWR:

Effective voltage = Actual voltage x (VSWR)$^{1/2}$

Then select a cable with a maximum operating voltage greater than the effective RMS voltage. Maximum operating voltages are listed in the cable data section.

As the altitude where a cable is being used increases, the maximum operating voltage of a completed cable assembly is reduced due to the reduction in dielectric strength of the lower pressure air in the termination area.

F. SHIELDING AND CROSS-TALK (OR ISOLATION)

1. The shielding efficiency of a coaxial cable depends on the construction of its outer conductor. The most common constructions available are:

Single Braid: Consisting of bare, tinned, or silver plated round copper wires (70 to 95% coverage).

Double Braid: Consisting of two single braids as described above with no insulation between them.

Triaxial: Consisting of two single braids as described above with a layer of insulation between them.

Strip Braids: Consists of flat strips of copper rather than round wires (90% coverage).

Strip Outer Conductors/Spiral Flat Strips: Exhibiting @ 100% coverage.

Solid Sheath: Consisting of aluminum or copper tubing (100% coverage).

2. The relative shielding effectiveness of these constructions are illustrated in Figure 9 over the frequency range from 10 MHz to 8 GHz. This graph shows the level of signal which leaks through the outer shield of a one foot sample of each construction. The curves describing the performance of the flexible cables, i.e., the triax braid, double braid, and single braid construction are based on measured data.

Fig. 8
Second VSWR Correction Factor Multiplier K

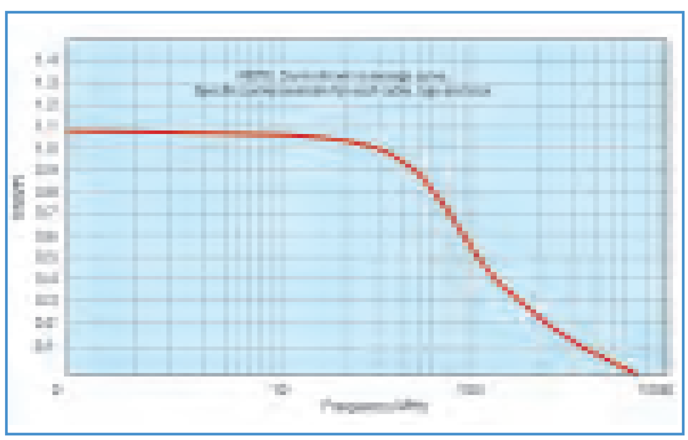
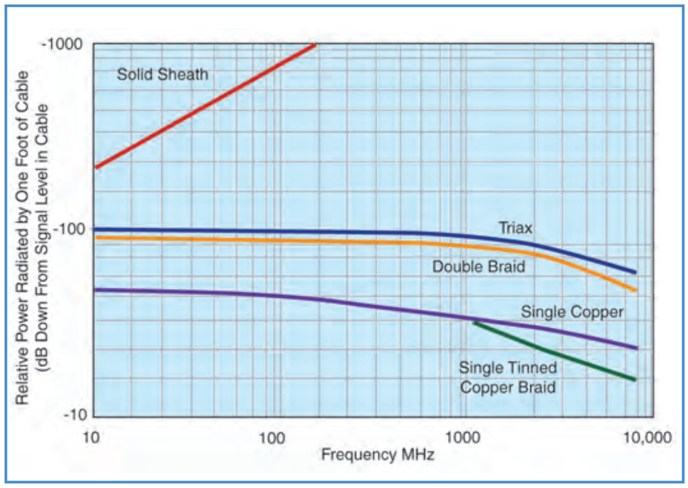


Fig. 9
Shielding Effectiveness



G. CAPACITANCE

Capacitance in a cable is related to the dielectric material and the characteristic impedance. Typical capacitance values are shown in the General Electrical Properties on page 66 for some common coaxial lines.

As seen in the table, the higher impedance cables provide lower "capacitance per foot" values, resulting in reduced loading for data communications applications.

H. VELOCITY OF PROPAGATION

The velocity of propagation in a coaxial cable is determined primarily by the dielectric constant of the insulating material between the inner and outer conductors. This property is usually expressed as a percentage of the velocity of light in free space, and is typically noted as Vg or Vp.

The General Electrical Properties on page 66 shows the velocity of propagation and time delay of cables insulated with commonly used dielectrics.

Delay lines made from coaxial cable can sometimes benefit from using lower velocity cables, thus providing maximum delay in the shortest length. But, the difference in loss between the lower and higher velocity cables must also be taken into account.

I. ELECTRICAL LENGTH STABILITY

Applications such as antenna feed systems may require many cable assemblies that are trimmed to a specific electrical length. In these applications, the change of the electrical length of the cable with temperature, flexure, tension and other environmental factors is critical. The variation of electrical length with temperature for standard flexible cables is shown in Figure 10.

For polyethylene insulated cables:-100 to -250 parts per million/^{O}C.

For TFE insulated cables:-50 to -100 parts/million/^{O}C.

The variation of electrical length with temperature for the standard foam dielectric semiflexible cables is -20 to -30 parts/million/^{O}C.

Times has special flexible and semiflexible cable designs with improved electrical length versus temperature characteristics. Semiflexible cables

To estimate the total leakage in cables under 1100 ft. long, add 20 log L to the figure read from the graph (where L is the cable length in feet). The curve showing the typical performance of the semi-flexible (or solid sheath) cables is based on theory. In practice the shielding efficiency of interconnections made using semi-flexible (solid sheath) cables is limited by the leakage at the connectors.

3. The isolation (or cross talk) between two coax cable runs is the sum of the isolation factors of the two cables and the isolation due to the "coupling factor" between the runs. This coupling factor will depend on the relative spacing, positioning and environment of the cable runs and on the grounding practices employed. The coupling factor will substantially affect the isolation between the cable runs.

4. Measurements show that the RF(1 -30 MHz) cross talk between two single braided coaxes over a 20 foot run length is approximately 80 db down from the signal level inside the cables. The coaxes were laid side-by-side over the 20 foot test length. (This test data illustrates the affect of the "coupling factor" noted above.)

5. Special Constructions that provide enhanced shielding characteristics are available. These cables include the LMR, RD, and RDT families of cables, and the StripFlex, SFT, and TFlex cables.

having an electrical length change with temperature as low as five parts/million per degree centigrade are available. See SFT and Coppersol Low Loss CLL cables.

J. CUT-OFF FREQUENCY

The cut-off frequency of a coaxial cable is that frequency at which modes of energy transmission other than the Tranverse Electro-Magnetic (TEM) mode can be generated. It does not mean that the TEM mode becomes highly attenuated. This frequency is a function of the mean diameter of

the conductors and the velocity of propagation of the cable. The higher modes are only generated at impedance discontinuities and in many situations

the cable can be operated above the cut-off frequency without substantial VSWR or insertion loss increase. However, it is recommended that cables not be operated above their cut-off frequency.

K. PULSE RESPONSE OF COAXIAL CABLES

1. The following characteristics must be considered when analyzing the Time Domain response of cable to pulses or step functions:

- **a:** Impedance and Reflection;
- **b:** Rise Time;
- **c:** Amplitude;
- **d:** Overshoot or Preshoot;
- **e:** Pulse Echoes.

a: Impedance and Reflection

1. Select impedance to match system requirements.
2. The impedance will vary along the length of cable. Variations of +5% are not uncommon. Cables can

Fig. 10
Phase Stability

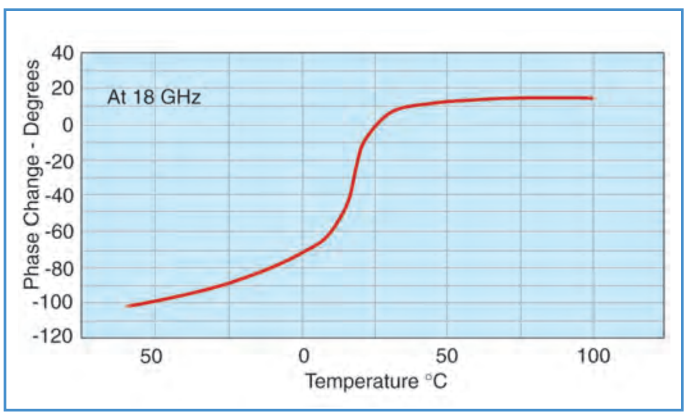
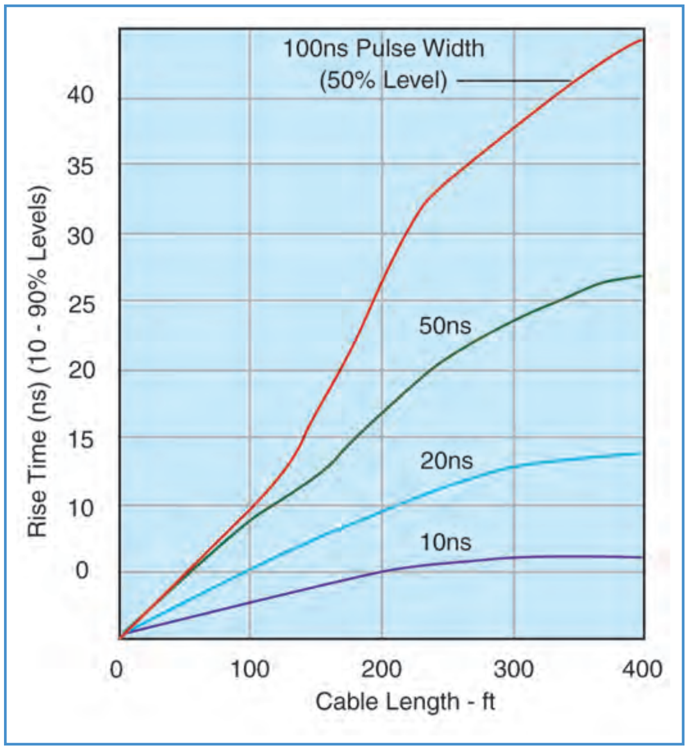


Fig. 11
Pulse Distortion



be produced to tolerances of 2%. Tighter tolerances are not recommended.

b: & c: Rise Time and Amplitude

1. The output rise time is a function of input rise time, pulse width and cable attenuation. A typical pulse response is shown in Figures 11 and 12, while a typical step response is shown in Figure 13. Increased cable temperature causes an increase in rise time and decrease in amplitude.

d: Overshoot or Preshoot

1. Figure 13 shows the overshoot which can be encountered with a 0.1 ns input pulse rise time in cables due to finite reflections. Such overshoot is not common in cables with longitudinally extruded

dielectrics.

2. Preshoot is encountered in some balanced delay lines and can be minimized by cable design.

e: Pulse Echoes

When a narrow pulse is placed on a cable, the distortions noted above will occur. In addition, a small pulse of energy may emerge after the initial pulse has arrived. This pulse echo is caused by finite periodic reflections within the cable. Normally the echo level can be neglected.

L. SELF-GENERATED CABLE NOISE

A noted cable phenomenon, is the generation of accoustical and electrical noise when flexed. The acoustical noise is a function of mechanical motion within the cable. Such noise (and the associated mechanical and frictional force) is minimized by proper cable design. Electrical noise generation is attributed to an electrostatic effect, which in testing has exhibited more than 500 millivolts in RG cable. This noise voltage can be minimized by preventing motion between dielectrics and conductors or dissipating electrostatic charges between conductors and dielectrics with semiconducting layers. Low noise constructions must take into account the life expectancy and environmental conditions to which they are subjected. Times manufactures low noise cables for special applications.

M. OPERATING TEMPERATURE RANGE

1. The operating temperature range of flexible coaxial cable is determined primarily by the operating temperature range of the dielectric and jacketing materials. Note that only silver plated conductors are suitable for long term use at temperatures over 80 degrees C.

2. Operating temperature limits of the most commonly used dielectrics and jacket types are given in the following table:

MATERIAL	Temperature Range
Polytetrafluoroethylene (PTFE)	-75°C to + 250°C
Polyethylene	-40°C to + 85°C
Foamed Polyethylene	- 40°C to + 100°C
Foamed or Solid Ethylene Propylene Jackets	- 40°C to + l05°C
Fluorinated Ethylene Propylene (FEP)	-70°C to +200°C
Polyvinylchloride (PVC)	- 50°C to + 85°C
Ethylene Chloro Trifluoroethylene (ECTFE)	- 65°C to + l50°C
Polyurethane	-100°C to + 125°C
Perfluoroalkoxy (PFA)	-65°C to + 260°C
Nylon	-60°C to + 120°C
Ethylene Propylene	- 40°C to + l05°C
High Molecular Weight Polyethylene	- 55°C to + 85°C
Crosslinked Polyolefin	- 40°C to + 85°C
Silicone Rubber	-70° to + 200°C
Silicone Impregnated Fiberglass	- 70°C to + 250°C
High Temperature Nylon Fiber	- 100°C to + 250°C

Fig. 12
Pulse Amplitude vs. Length

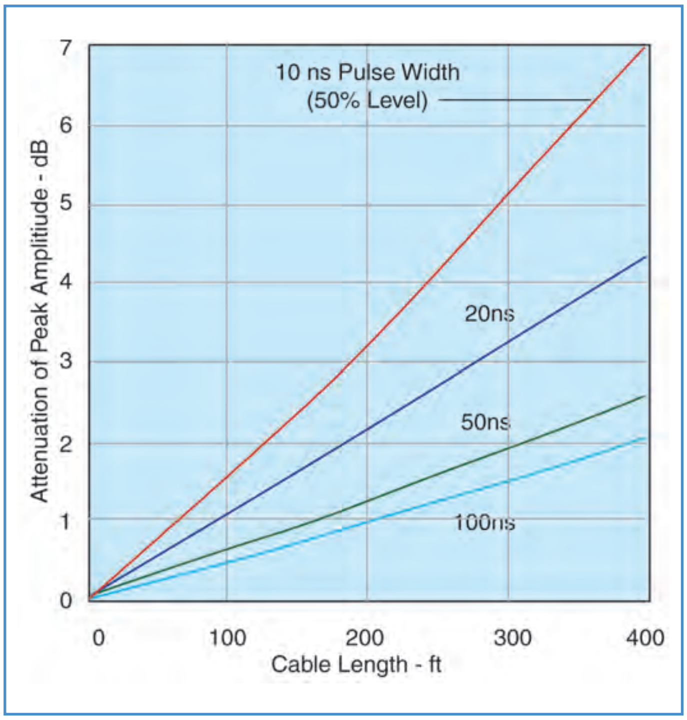
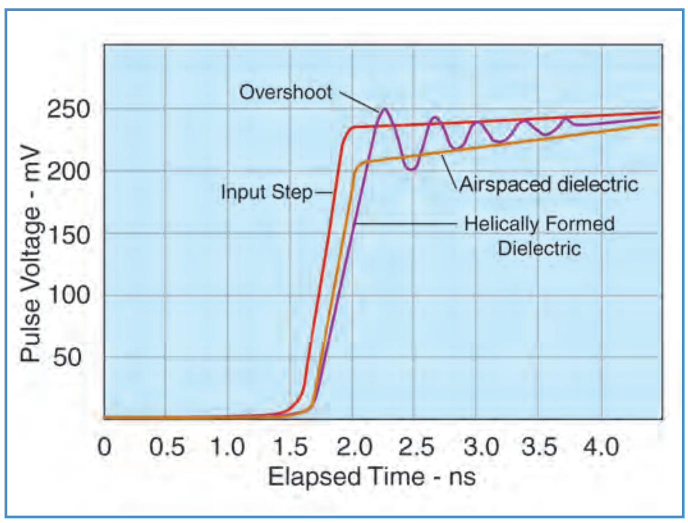


Fig. 13
Step Response (Output Amplitude vs. Time)



N. FLEXIBILITY

Coaxial cables with stranded center conductor and braided outer conductors are intended for use in those applications where the cable must flex repeatedly while in service. Cables with stranded center conductors will exhibit higher attenuation compared to cables with solid center conductors. In general, the higher the number of strands, the better the flexibility and the higher the attenuation.

Standard braided outer conductor constructions will withstand over 1000 flexes through 180° if bent over a radius 20 times the diameter of the cable. Flexible cables may be stored, and are normally shipped, on reels with a hub radius greater than 10 times the diameter of the cable. If a flexible cable is to be installed in a fixed, bent configuration, the minimum bend radius recommended is 5 times the cable diameter. Tighter bends can be made. Special braid designs are available for improved flex-life.

Coaxial cables with a tubular aluminum or copper outer conductors, commonly referred to as semi-flexible or semi-rigid cables, will not withstand more than ten 180° bends over a bend radius equal to 20 times the diameter of the cable. Semi-flex cables are normally shipped on reels having a hub radius of 20 times the O.D. of the cable. Semi-flex cables may be field bent for installation. The minimum recommended bend radius is equal to 10 times the O.D. of the cable. Cables bent on a bend radius of 5 times the O.D. of the cable may exhibit mechanical and electrical degradation.

O. ENVIRONMENTAL RESISTANCE

The life of a coaxial cable depends on many factors. The effects of ultra-violet exposure, high humidity, galvanic action, salt-water and corrosive vapors on the materials used are prime causes of cable failure. Resistance to flame must also be considered. The following guidelines apply:

a. Sunlight: For low temperature cables exposed to sunlight (ultra-violet), the use of high molecular weight polyethylene, with a specific carbon black particle size, % by weight and particle distribution, is recommended for maximum life expectancy. Polyvinylchloride jackets exhibit a life expectancy of less than 1/2 that of properly compounded polyethylene.

b. Humidity or water vapor can enter flexible cables through pin-holes in the jacket, at the con nector, or by vapor transmission through the jacket. All materials exhibit a finite vapor transmission rate. For example, a ten foot length of cable with a polymer outer jacket exhibits a helium leak rate of approximately 10^{-4} cc/sec/ft. Even the least porous thermoplastics, such as FEP, do not offer a significant improvement. In airborne applications, the combination of finite vapor transmission rates and large temperature extremes cause condensation in cables. The moisture can collect in low areas causing corrosion or shorting of a connector. One method of preventing moisture accumulation in cables is to fill all voids with a moisture-proofing compound which will not harden with age. See LMR-DB and Imperveon Cables for additional data. Times also supplies hermetically sealed cable assemblies with leak rates of less than 10^{-5} cc/sec/ft.

c. Salt-water Immersion-The electrical characteristics of cable will be rapidly affected if the conductors are exposed to salt-water. Unless an immersion test is performed on the jacket, there is a good possibility of one pinhole per 1000 feet. Even if sufficient tests could be performed, damage during installation or damage from rodents normally will cause leakage. Pressure-tight, non-hosing cables capable of withstanding the pressure at the required cable depth can be recommended.

d. Corrosive Vapors: The use of tin and silver coatings does afford some protection against corrosive vapors. However, such protection is short-lived. For installation near salt-water or chemical plants, a filled cable such as LMR-DB or Imperveon is recommended.

e. Underground Burial & Galvanic Action: Underground moisture which comes in contact with any cable metals, will cause rapid corrosion. Tubular aluminum outer conductors have been almost destroyed in 90 days. Therefore, any cables installed underground should have pinhole-free jackets. Since jacket damage due to installation techniques and rodents can occur, cables filled with a flooding compound should be used. For maximum reliability against rodents, a steel tape armor with overjacketing is recommended.

f. Flame Resistance: Cables have different degrees of flame resistance depending on the jacket and dielectric material. “Flame retardant” cables are cables having limited flame spread (propagation).

PVC jackets offer some flame retardance, depending on the compound selected.

Flame retardant jackets, which are actually within the flame, will burn. If the flame is removed, they will self-extinguish. PVC jackets will not drip burning material. However, if the dielectric is polyethylene, the dielectric may drip ignited materials. PTFE and FEP will not support combustion, drip or burn. TMS has a series of Low Smoke / Low Toxicity cables to provide the utmost in protection. These cables utilize a proprietary TMS compound which is non-halogenated and produces combustion products that are low smoke and low toxicity. See the LSSB/LLSB, LMR-FR and M17 qualified cable lines.

P. CABLE STRENGTH

The break strength of the cable depends primarily on the strength of the outer conductor. The cables will normally achieve at least 70% of the break strength of the outer conductor, if the center conductor will stretch up to 10% before breakage. Caution must be taken with cables with copper-covered steel or alloy center conductors where breakage would occur with only 1 to 10% elongation. Conductor sizes less than 26 AWG can easily be broken during assembly operations. Special alloy conductors are available which can achieve a tensile strength of 110,000 psi and 10% elongation.

Q. QUALIFICATION APPROVAL

Often, cables must be qualified to certain standards to allow usage in particular applications. Typical examples of necessary qualifications are:

Military: Most military applications require that cable conform to particular specifications. Many of these specifications require the manufacturer to qualify product by conducting a series of tests on a length of cable with a military representative present as a witness. MIL-C-17, the basic specification for most coaxial cables, requires a Qualified Products List (QPL). TMS maintains numerous MIL-C-17 qualifications.

Commercial (UL) Approval: The building codes of many cities require that cables installed in their buildings be approved by the Underwriters Laboratories (UL). With UL service, the cable is subjected to a clearly defined series of tests and examinations, and has met the quality and safety standards imposed by Underwriters Laboratories. Approval of new designs meeting UL standards normally can be made in a relatively short period of time. A large variety of TMS products are UL approved.

New York State Requirements: Article 15, Part 1120 of the New York State Uniform Fire Prevention and Building Code requires that materials used in some buildings and transit systems be tested and registered with The New York Department of State. For theTMS products tested, the fire/gas/toxicity data is found in: DOS file number 16120-931203-4001.

London Underground Limited: TMS has gained LUL approval on a series of low-smoke cable constructions. These cables were tested for smoke emission, toxic fume emission, and flammability assessment against the requirements of the London Underground Code of Practice for fire safety.

Contact your TMS representative for more information regarding TMS product qualifications.

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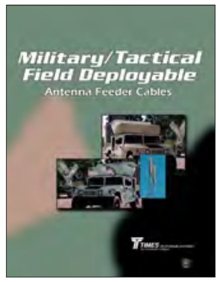
Order at www.timesmicrowave.com

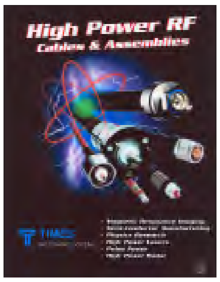
Coaxial Cable Assemblies, Products & Capabilities

High performance microwave cable assemblies for military electronic warfare systems, commercial aircraft, shipboard and ground based communications systems.



Tactical Field Deployable Antenna Cables

T-Com®, QEAM™, and LLSB™ cables suitable for the harshest mobile, portable or temporary military field deployed antenna applications.

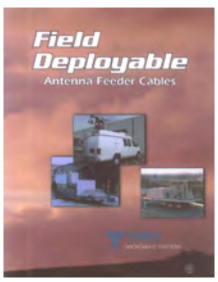


High Power RF Cables & Assemblies

Broad range of high power coax cables and assemblies for medical (MRI), semiconductor manufacturing equipment, lasers, particle physics experimentation and industrial applications.

Broadband Wireless Cable Assemblies

Purchasing and technical information for 50 ohm coaxial cables assemblies and jumpers-licensed and unlicensed bands.



Field Deployable Antenna Feeder Cables

LMR®, T-Com® and QEAM™ cables are suited for the rigors of any mobile, portable or temporary field antenna deployment.

SiO2 Silicon Dioxide Coaxial Cable Assemblies

Crack-free, low loss glass dielectric and laser welded technology combine to provide unequaled low VSWR and hermetic sealing performance.

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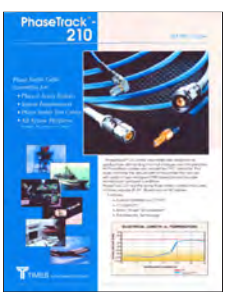
Low-loss, low smoke coaxial cables for military and commercial shipboard applications.



PhaseTrack® 210 Test Cables & Connectors

Thermally stable test cables with removable, interchangeable connectors that experience the lowest phase change with temperature fluctuations.

Blind Mate Antenna Applications

Unique interconnect systems for quick avionics and electronic warfare system antenna connect/ disconnect.

LMR® Flexible Communications Coax

Times LMR coax cables- the industry standard for the utmost in low loss flexible 50 ohm coax cable for every type of wireless communications system.

Silverline® Test Cables

Durable, cost effective, high performance cable assemblies designed for use in a broad range of test and interconnect applications.

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SilverLine VNA™

Precision test cables with excellent loss, VSWR and phase/flexure stability.

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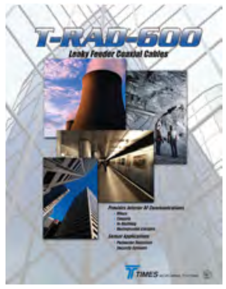
SPP-250-LLPL50 Ohm low loss plenum rated coaxial cable assemblies employ a flexible corrugated copper tube outer conductor over a tape wrapped low density PTFE dielectric core which results in an exceptional combination of low loss, light weight and flexibility.



T-RAD®-600

T-RAD 50 Ohm, leaky feeder coax radiating cable provide cost effective radio frequency coverage in enclosed or underground areas, where single point source antennas are not practical.

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SilverLine-LP is flexible test cable specifically designed for low passive intermodulation performance and to withstand the physical abuse of field work.

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