

MIL-C-17 Coaxial Cable

Harbour supplies a complete line of high temperature, high performance QPL approved MIL-C-17 coax cables for military, commercial and industrial applications. The specific constructions referenced are manufactured in accordance with the most recent revision of the MIL-C-17 specification. MIL-C-17 specification defines complete physical and electrical characteristics for each part number, including dimensional parameters, dielectric materials, shield construction, maximum attenuation, and VSWR levels.

VSWR Sweep Testing

When selecting a 50 ohm coaxial cable, constructions with VSWR requirements are recommended. Manufacturing and sweep testing cables with concern for VSWR ensures a quality cable free of spikes over the referenced frequency range. (Note the test frequencies specified in the electrical characteristics on the next page.

Precision PTFE Dielectric Coax

All of the PTFE dielectric coax cables listed are high temperature, high performance constructions exhibiting high dielectric strength and low capacitance in proportion to their dielectric constant. All PTFE dielectrics are manufactured with tolerances tighter than the MIL-C-17 specification to ensure uniformity of electrical characteristics, especially impedance, attenuation and VSWR.

Tape Wrapped PTFE Constructions

Harbour manufactures PTFE tape wrapped cables to a previous revision of the MIL-C-17 specification. These constructions can withstand operating temperatures up to 250° C versus 200° C for FEP jacketed cables. PTFE tape wrapped cables are generally more flexible than their FEP jacketed counterparts.

UL Approvals

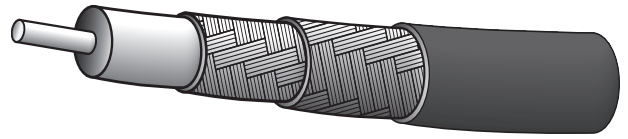
All of Harbour’s M17 part numbers with PTFE dielectrics and FEP jackets may be ordered with UL 1971 (150°C, 125 Volt) listing.

M17 Number	Center Conductor	Dielectric Diameter	Shield	Jacket	Overall Diameter	Minimum Bend Radius	Operating Temp (°C)	Weight (lbs/mft)	Comments
M17/60-RG142	.037” SCCS	.116”	SPC (2)	FEP	.195”	1.0”	-55 +200	43.0	
M17/93-RG178	.0120” (7/.004”)SCCS	.033”	SPC	FEP	.071”	0.4”	-55 +200	6.3	
M17/94-RG179	.0120” (7/.004”)SCCS	.063”	SPC	FEP	.100”	0.4”	-55 +200	10.8	
M17/95-RG180	.0120” (7/.004”)SCCS	.102”	SPC	FEP	.141”	0.7”	-55 +200	19.8	
M17/111-RG303	.037” SCCS	.116”	SPC	FEP	.170”	0.9”	-55 +200	31.0	
M17/112-RG304	.059” SCCS	.185”	SPC (2)	FEP	.280”	1.4”	-55 +200	94.0	
M17/113-RG316	.0201” (7/.0067”)SCCS	.060”	SPC	FEP	.098”	0.5”	-55 +200	12.2	
M17/127-RG393	.094” (7/.0312”) SC	.285”	SPC (2)	FEP	.390”	2.0”	-55 +200	165.0	
M17/128-RG400	.0384” (19/.008”) SC	.116”	SPC (2)	FEP	.195”	1.0”	-55 +200	50.0	
M17/131-RG403	.0120” (7/.004”)SCCS	.033”	SPC (2)	FEP (2)	.116”	0.6”	-55 +200	15.0	Triaxial RG-178
M17/152-00001	.0201” (7/.0067”)SCCS	.060”	SPC (2)	FEP	.114”	0.6”	-55 +200	18.5	Double Shield RG-316
M17/158-00001	.037” SCCS	.116”	SPC (2)	FEP	.195”	1.0”	-55 +200	56.0	Unswept RG142
M17/169-00001	.0120” (7/.004”)SCCS	.033”	SPC	FEP	.071”	0.4”	-55 +200	6.3	Unswept RG178
M17/170-00001	.037” SCCS	.116”	SPC	FEP	.170”	0.9”	-55 +200	39.0	Unswept RG303
M17/172-00001	.0120” (7/.004”)SCCS	.060”	SPC	FEP	.098”	0.5”	-55 +200	11.5	Unswept RG316
M17/174-00001	.094” (7/.0312”) SC	.285”	SPC (2)	FEP	.390”	2.0”	-55 +200	175	Unswept RG393
M17/175-00001	.0384”(19/.008”)SC	.116”	SPC (2)	FEP	.195”	1.0”	-55 +200	50.0	Unswept RG400
M17/176-00002	.0235” (19/.005”)SPA(2)	.042”	SPA	PFA	.129”	0.6”	-55 +230	18.0	Twinax
RG187 A/U	.0120” (7/.004”)SCCS	.063”	SPC	PTFE	.100”	0.5”	-55 +250	10.0	Tape Wrapped Jacket
RG188 A/U	.0201” (7/.0067”)SCCS	.060”	SPC	PTFE	.100”	0.5”	-55 +250	11.0	Tape Wrapped Jacket
RG195 A/U	.0129” (7/.004”)SCCS	.102”	SPC	PTFE	.141”	0.7”	-55 +250	18.0	Tape Wrapped Jacket
RG196 A/U	.0120” (7/.004”)SCCS	.034”	SPC	PTFE	.067”	0.4”	-55 +250	6.0	Tape Wrapped Jacket

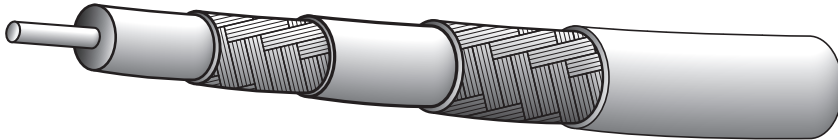
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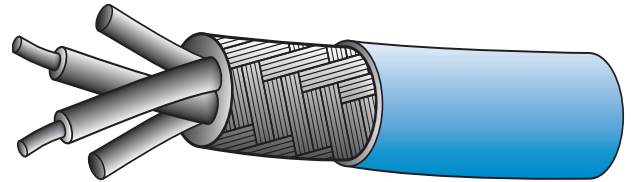
Single Braid



Double Braid



Triaxial



Twinax

“Maximum frequencies” are those as referenced on individual slant sheets of the MIL-C-17 specification. No values are given for unswept constructions as the specification recommends these cables should not be used above 400 MHz.

M17 Number	Impedance (ohms)	Capacitance (pF/ft)	Max V o l t - age	Attenuation (dB/100 ft)						
				100 MHz Typ/Max	400 MHz Typ/Max	1 GHz Typ/Max	2.4 GHz Typ/Max	5 GHz Typ/Max	10 GHz Typ/Max	Max Frequency (GHz)
M17/60-RG142	50 +/-2	29.4	1900	4.0 / 5.5	8.1 / 11.7	13.4 / 19.2	21.3 / 30.4	33.3 / 48.7		17.4
M17/93-RG178	50 +/-2	29.4	1000	13.0 / 16.0	27.2 / 33.0	44.2 / 52.0	61.9 / 83.3			
M17/94-RG179	75 +/-3	19.4	1200	8.0 / 9.2	15.5 / 21.0	26.7 / 30.7				
M17/95-RG180	95 +/-5	17.4	1500	5.7 / 6.6	11.7 / 17.4	19.2 / 23.0				
M17/111-RG303	50 +/-2	29.4	1900	3.5 / 3.9	7.2 / 8.0	13.5 / 15.0				
M17/112-RG304	50 +/-2	29.4	3000	2.4 / 2.7	5.8 / 6.4	10.0 / 11.1				8.0
M17/113-RG316	50 +/-2	29.4	1200	7.6 / 11.0	16.0 / 21.0	26.2 / 38.0	41.2 / 55.4			3.0
M17/127-RG393	50 +/-2	29.4	1500	2.3 / 2.5	4.4 / 5.0	7.7 / 9.2	12.4 / 14.2	21.3 / 26.8	30.1 / 37.9	11.0
M17/128-RG400	50 +/-2	29.4	1900	4.3 / 4.5	8.6 / 10.5	14.1 / 18.1	22.6 / 30.2	35.6 / 52.1	61.6 / 78.0	12.4
M17/131-RG403	50 +/-2	29.4	1000		33.3 / 37.0					10.0
M17/152-00001	50 +/-2	29.4	1200	8.1 / 11.5	17.8 / 24.0	29.6 / 40.0	43.1 / 58.3	100.0 / 110.0	153.0 / 170.0	12.4
M17/158-00001	50 +/-2	29.4	1900		8.1 / 9.5					
M17/169-00001	50 +/-2	29.4	1000		27.2 / 29.0					
M17/170-00001	50 +/-2	29.4	1900		7.7 / 8.6					
M17/172-00001	50 +/-2	29.4	1200		15.5 / 21.0					
M17/174-00001	50 +/-2	29.4	2500		4.4 / 5.0					
M17/175-00001	50 +/-2	29.4	1900		8.6 / 10.5					
M17/176-00002	77 +/-7	19.0	1000							
RG187 A/U	75 +/-3	19.4	1200		15.5 / 21.0					
RG188 A/U	50 +/-2	29.4	1200	7.6 / 11.0	16.0 / 21.0	26.2 / 38.0	41.2 / 55.4			3.0
RG195 A/U	95 +/-5	17.4	1500		11.7 / 17.4					
RG196 A/U	50 +/-2	29.4	1000	13.0 / 16.0	27.2 / 33.0	44.2 / 52.0	41.7 / 56.1			3.0