

INCH-POUND

MIL-DTL-23806/1D
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 SUPERSEDING
 MIL-C-23806/1C
 20 February 1990

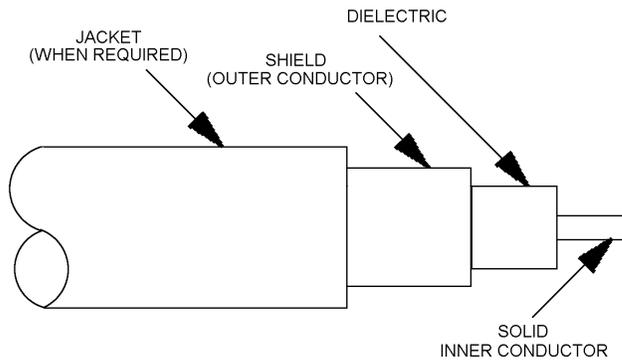
DETAIL SPECIFICATION SHEET

CABLE, RADIO FREQUENCY, COAXIAL, SEMIRIGID, FOAM DIELECTRIC,
 .500 INCH, 50 AND 75 OHM, (RG-231A/U, RG-331/U, RG-334/U AND RG-335/U)

Inactive for new design after 10 July 2000

This specification is approved for use by all Departments
 and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall
 consist of this specification sheet and MIL-DTL-23806.



Inches	mm
.001	0.03
.002	0.05
.004	0.10
.005	0.13
.098	2.49
.162	4.11
.450	11.43
.500	12.70
.625	15.88
5.	127.

Characteristics	50 ohms		75 ohms	
	Type I RG-231A/U	Type II RG-331/U	Type I RG-334/U	Type II RG-335/U
Construction details				
Inner conductor				
Outside diameter	0.162 ± .002	0.162 ± .002	0.098 ± .001	0.098 ± .001
Outer conductor				
Inside diameter	0.450 ± .004	0.450 ± .004	0.450 ± .004	0.450 ± .004
Outside diameter	0.500 ± .005	0.500 ± .005	0.500 ± .005	0.500 ± .005
Jacket				
Minimum wall thickness		0.045		0.045
Maximum outside diameter		0.625		0.625
Minimum bending radius	5	5		
Weight (pounds per 1000 feet, maximum)	152	187	104	134

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are for information only.

FIGURE 1. Construction.

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ENGINEERING INFORMATION:

Continuous working voltage:	RG-231A/U RG-331/U	RG-334/U RG-335/U
	1,960 V rms, max.	2,400 V rms, max.

Frequency range: 10 GHz, maximum.
 Power rating: See figure 2.
 Operating temperature range: -55°C to +85°C.

REQUIREMENTS (RG-231A/U and RG-331/U):

Design and construction: See figure 1.
 Impedance: 50 ± 1 .
 Capacitance: 25 pF/ft, nominal.
 Velocity of propagation: 81 ± 2 percent.
 Dielectric strength (at 60 Hz): 3,500 V rms, minimum.
 Dielectric constant: 1.5, nominal.
 Attenuation: See figure 2.

REQUIREMENTS (RG-334/U and RG-335/U):

Design and construction: See figure 1.
 Impedance: 75 ± 2 .
 Capacitance: 17 pF/ft, nominal.
 Velocity of propagation: 81 ± 2 percent.
 Dielectric strength (at 60 Hz): 4,300 V rms, minimum.
 Dielectric constant: 1.5, nominal.
 Attenuation: See figure 2.

REQUIREMENTS (All cables):

The attenuation measurement for all cables is tested at 30 MHz, 400 MHz and 3 GHz; maximum attenuation is not to exceed 0.53 dB, 2.19 dB and 7.0 dB per 100 feet.

Voltage standing wave ratio (VSWR): See table I.

TABLE I. Voltage standing wave ratio.

Frequency range (MHz)	Initial (maximum)	After temperature cycling (maximum)	After cooling (maximum)
500 to 2000	1.15	1.18	1.18
2000 to 5000	1.20	1.25	1.25
5000 to 10,000	1.30	1.35	1.35

Temperature cycling and bending test: Coiling mandrel, 15 inches in diameter, maximum.

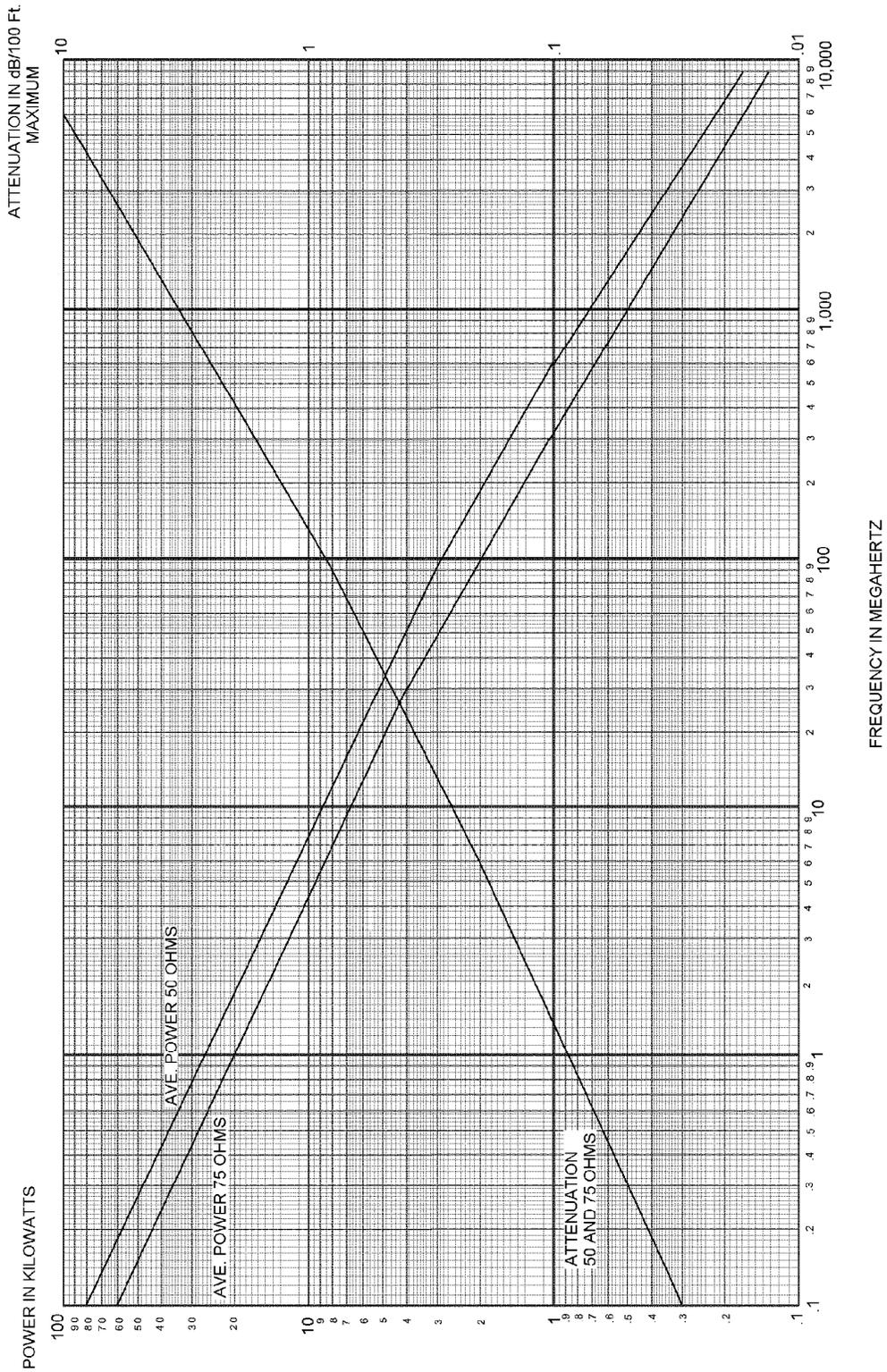


FIGURE 1. .500 inch foam dielectric coaxial cable (50 and 75 ohm).

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Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Referenced documents. This document references MIL-DTL-23806.

CONCLUDING MATERIAL

Custodians:

Army – CR
Navy - EC
Air Force - 11
DLA – CC

Preparing activity:

DLA – CC

(Project 6145-2006-019)

Review activities:

Army – AR, AV, MI
Navy – MC, MS, SA, YD
Air Force – 71

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.