

INCH-POUND

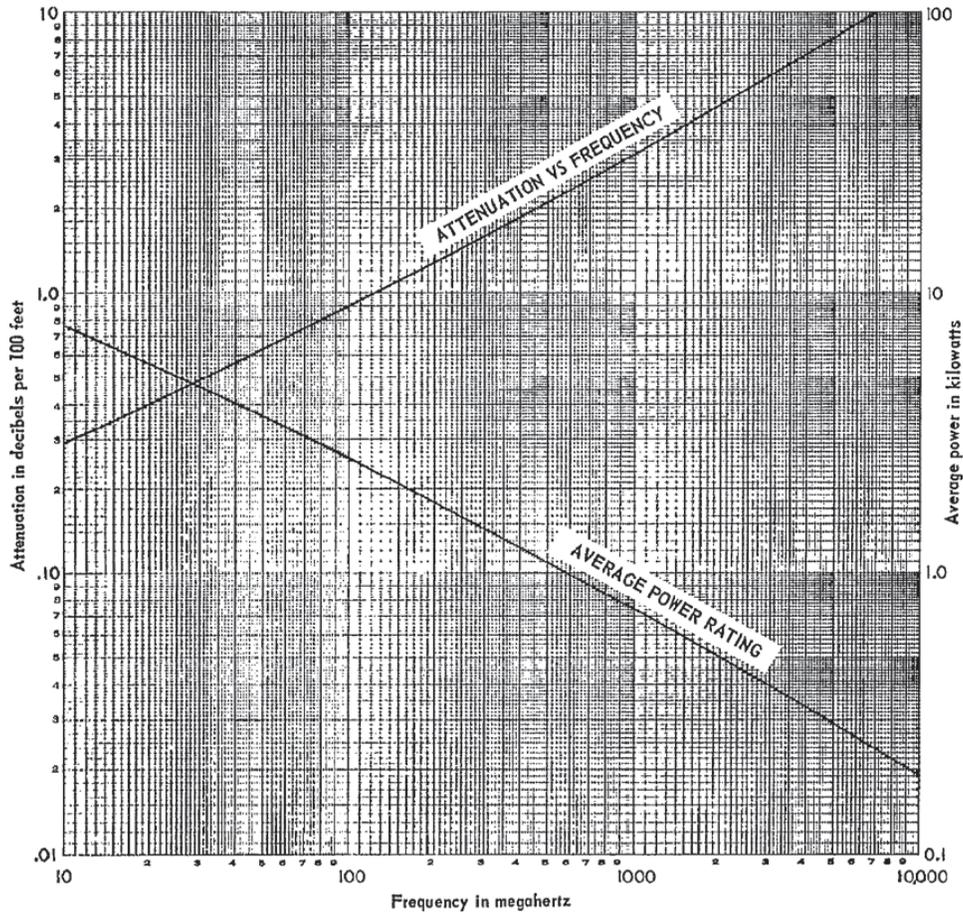
MIL-DTL-22931/17A  
19 June 2013  
SUPERSEDING  
MIL-C-22931/17(USAF)  
21 January 1969

DETAIL SPECIFICATION SHEET

CABLES, RADIO FREQUENCY,  
SEMIRIGID, COAXIAL, SEMI-AIR-DIELECTRIC,  
.495 INCH OUTSIDE DIAMETER, 50 OHMS

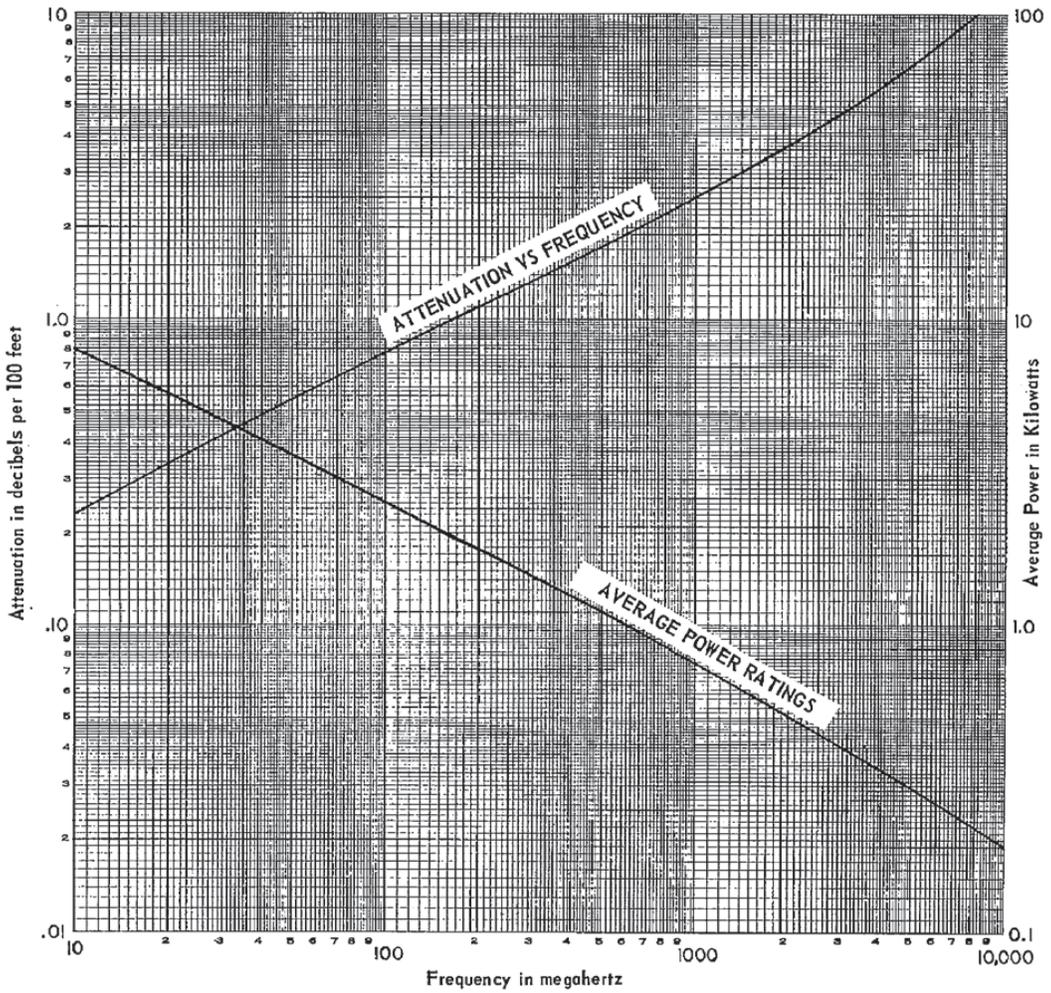
This specification is approved for use by all Departments  
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein  
shall consist of this specification sheet and MIL-DTL-22931.



Power rating based upon a 40°C ambient with a 45°C rise in center conductor temperature.

FIGURE 1. Attenuation and power rating curves for -001 and -002.



Power rating based upon a 40°C ambient with a 45°C rise in center conductor temperature.

FIGURE 2. Attenuation and power rating curves for -003 and -004.

REQUIREMENTS:

Operating temperature range: -55° to + 200°C.

Inner conductor: See table II.

Dielectric:

Cable core and insulating layer: See table II.

Outer conductor: Aluminum tubing, corrugated, seamless.

Diameter: See table II.

Jacket: See table II.

Voltage withstand:

2,000 volts rms (minimum at 60 Hz, or 3,500 volts dc)

Attenuation: See table II.

Velocity: See table II.

Capacitance: 25.0 pf/ft.

Impedance: 50 ± 2 ohms.

TABLE I. Voltage standing wave ratio.

Frequency range (MHz)	Initial (max)	After bending and temperature cycling (max)
500 – 2,000	1.15	1.18
2,000 – 5,000	1.20	1.25
5,000 – 10,000	1.20	1.25

Mandrel size for temperature cycling, bending, and cold bend tests: 7.5 inches (190.5 mm). See table I.

Minimum bending radius: 2.5 inches (63.5 mm). See table I.

TABLE II. Characteristics. 1/

Requirement 2/	PIN M22931/17-001
Inner conductor	Silver plated
Overall diameter $\pm 0.002$ (0.05)	Copper wire 0.153 (3.89)
Dielectrics	Polytetra-
Cable Core	fluorethylene
Outer conductor diameter	
Inside (nominal)	0.421 (10.69)
Outside	0.495 (12.57)
Attenuation (dB/100 ft max)	
30 MHz	0.48
400 MHz	2.10
3,000 MHz	6.90
Velocity (percent)	85.0

1/ Dimensions are in inches. Metric equivalents are given for information only.

2/ The following requirements of MIL-DTL-22931, identified by similarity of paragraph headings, are not applicable to this slash sheet: insulation resistance, pressure tightness, and marking.

Cross reference information: See table III.

TABLE III. Cross reference information.

PIN	RG cable number
M22931/17-001	RG-385/U

Attenuation and power rating: See figures 1 and 2.

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-22931.

CONCLUDING MATERIAL

Custodians:

Army – CR  
 Navy - EC  
 Air Force - 85  
 DLA -CC

Preparing activity:

DLA-CC

(Project 6145-2013-005)

Review activities:

Army – AT, CR4, MI  
 Navy – AS, MC, OS  
 Air Force – 19

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 <https://assist.dla.mil>.