

MILITARY SPECIFICATION SHEET

CABLE, RADIO FREQUENCY, FLEXIBLE, COAXIAL, 75 OHMS, M17/110-RG302

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-17.

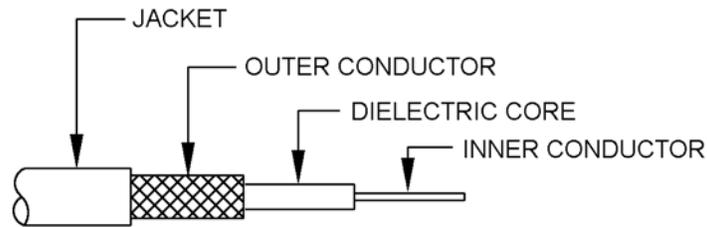


FIGURE 1. Configuration.

TABLE I. Description.

Components	Construction details
Inner conductor	Solid, silver-coated, copper-covered steel wire. Diameter: .0253 inch \pm .0010.
Dielectric core	Type F-1: Solid extruded PTFE. Diameter: .146 inch \pm .004.
Outer conductor	Single braid of AWG size 36 silver-coated copper wire. Diameter: .176 inch maximum. Coverage: 88.4%, nominal Carriers: 16 Ends: 7 Picks/inch: 11.5 \pm 10%
Jacket	Type IX: Diameter: .202 inch \pm .005.



ENGINEERING INFORMATION:

Continuous working voltage: 1,700 V rms, maximum.
Operating frequency: 3 GHz, maximum.
Velocity of propagation: 69.5 percent, nominal.
Power rating: See figure 2.
Operating temperature range: -55° to +200°C.
Inner conductor properties:
 DC resistance (maximum at 20°C): 4.4 ohms per 100 feet.
 Elongation: 1 percent, minimum.
 Tensile strength: 110 klbf/inch², minimum.

Engineering note: This cable useful in general purpose, high temperature applications (see connector series "BNC" and "TNC" per MIL-PRF-39012.)

REQUIREMENTS:

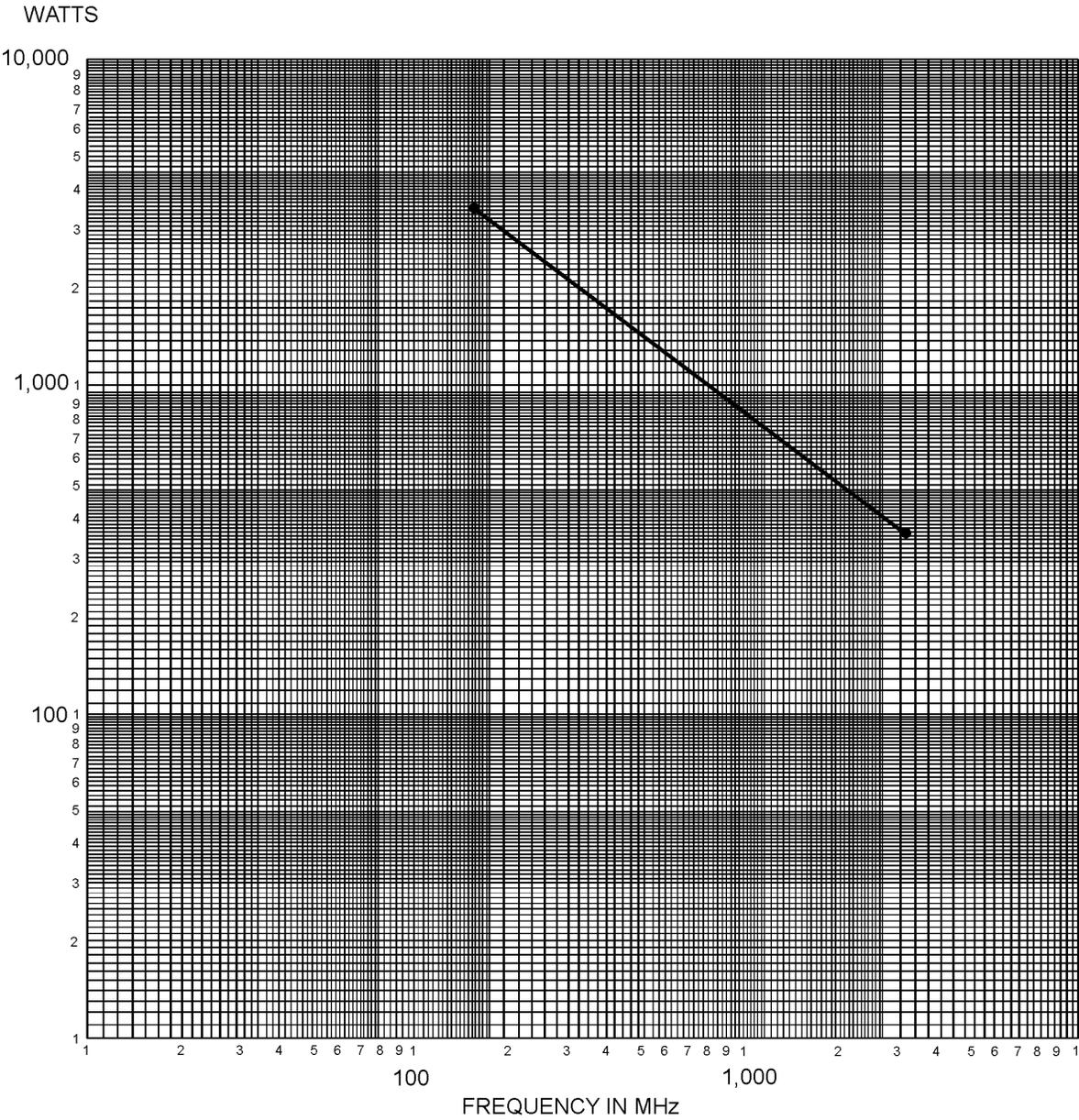
Dimensions, configuration, and descriptions: See figure 1 and table I.

Environmental and mechanical:

Visual and mechanical examination:
 Out-of-roundness: Not applicable.
 Eccentricity: 10 percent, maximum.
Adhesion of conductors:
 Inner conductor to core: 2 pounds, minimum; 16 pounds, maximum.
Aging stability: Not applicable.
Stress-crack resistance: +230°C ± 5°C; mandrel size five times the jacket diameter.
Outer conductor integrity: Not applicable.
Cold bend: -55°C ± 2°C.
Dimensional stability: +200°C ± 5°C.
 Inner conductor from core: .250 inch, maximum.
 Inner conductor from jacket: .312 inch, maximum.
Contamination: Not applicable.
Bendability: Not applicable.
Flammability: Applicable.
Weight: 4 pounds per 100 feet, maximum.

Electrical:

Continuity: Applicable.
Spark test: 2,000 Vrms, +10%, -0%.
Voltage withstanding: 3,500 V rms, +10%, -0%.
Insulation resistance: Not applicable.
 Corona extinction voltage: 2,300 V rms, minimum.
Characteristic impedance: 75 ohms ± 3.
Attenuation: 8 dB per 100 feet, maximum, at .4 GHz; 26 dB per 100 feet, maximum, at 3 GHz.
Structural return loss: Not applicable.
Capacitance: 22 pF per foot, maximum.
Capacitance stability: Not applicable.
Capacitance unbalance: Not applicable.
Transmission unbalance: Not applicable.
Mechanically induced noise voltage: Not applicable.
Time delay: Not applicable.



Maximum power at 25°C, sea level.

MHz	Watts
150	3500
400	1700
1000	800
2000	470
3000	350

FIGURE 2. Power rating.

Part or Identifying Number (PIN): M17/110-RG302.

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

Referenced documents. In addition to MIL-DTL-17, this document references the following:

MIL-PRF-39012

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:
DLA - CC

(Project 6145-2015-016)

Review activities:

Army – AT, CR4, MI
Navy – AS, MC, OS, SH
Air Force – 19, 99

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>.