

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 complete requirements for acquiring the cable described herein shall consist of this specification and the latest issue of MIL-C-17.

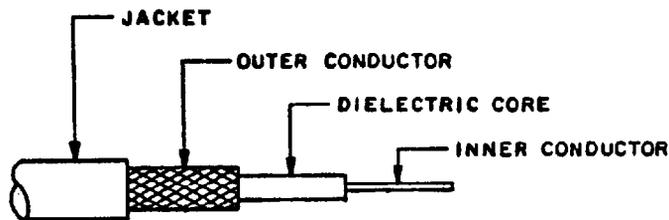


FIGURE 1. Configuration.

TABLE I. Description.

Component	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.

Ⓧ denotes changes

FSC 6145

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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°C 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-C-39012).

REQUIREMENTS:

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

Environmental and mechanical:

① Visual and mechanical inspection:

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.

② Cold bend: -55°C ±2°C.

Dimensional stability: +200°C ±5°C.

Inner conductor from core: .250 inch, maximum.

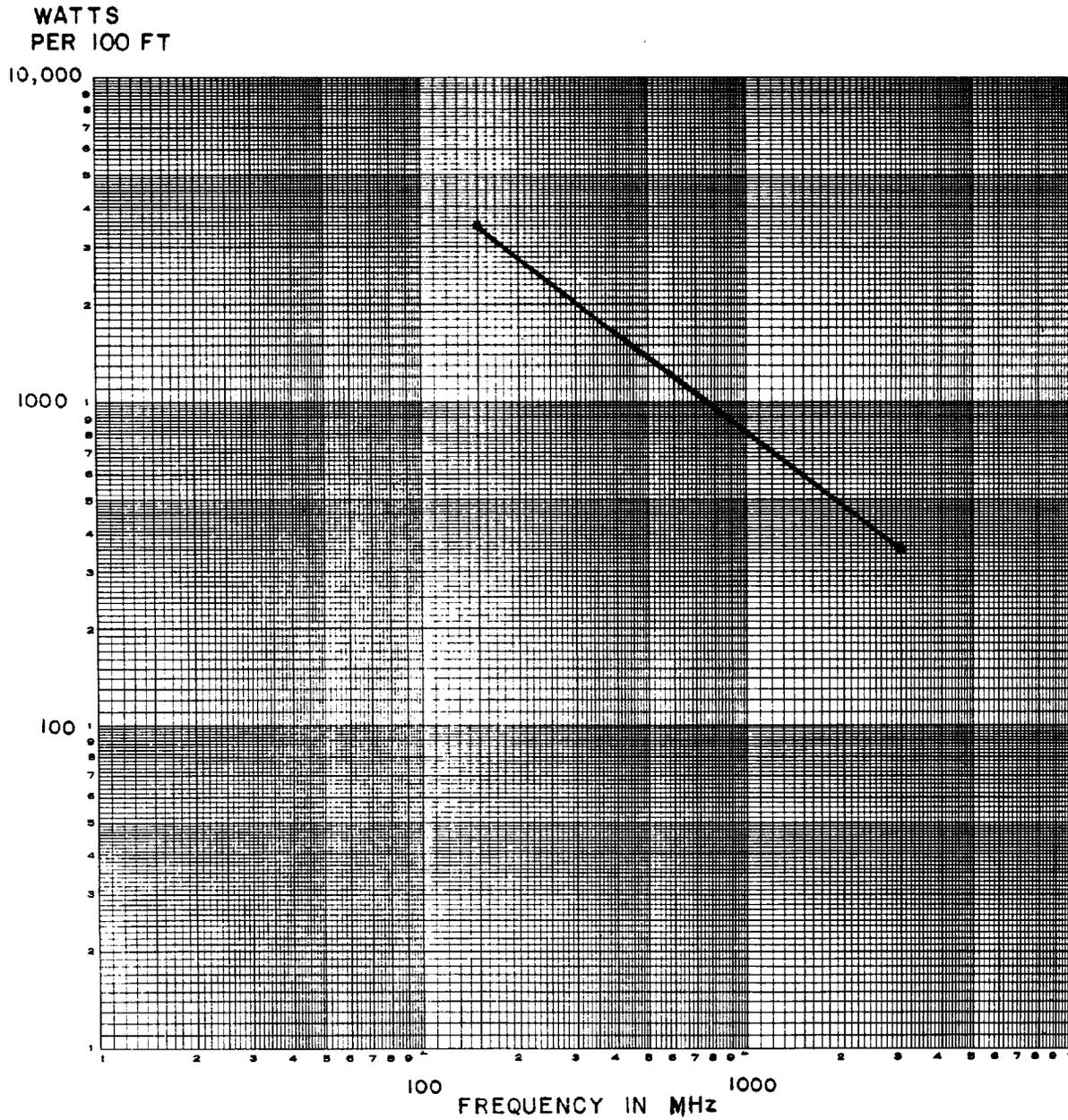
Inner conductor from jacket: .312 inch, maximum.

③ Contamination: Not applicable.

Bendability: Not applicable.

Flammability: Applicable.

Weight: 4 pounds per 100 feet, maximum.



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

Maximum power at 25°C, sea level

FIGURE 2. Power rating.

Electrical:

- ① Continuity: Applicable.
Spark test: 2,000 Vrms, +10%, -0%.
 - ① Voltage withstanding: 3,500 V rms, +10%, -0%.
Insulation resistance: Not applicable.
Corona extinction voltage: 2,300 V rms, minimum.
Characteristic impedance: 75 ohms \pm 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.
- Part number: M17/110-RG302.

Custodians:
Army - CR
Navy - EC
Air Force - 85

Preparing activity:
Army - CR
(Project 6145-0911-22)

Review activities:
Army - MI
Navy - SH, TD
Air Force - 11, 17, 99
DLA - ES, IS

User activities:
Army - AR, AT, ME
Navy - AS, MC, OS
Air Force - 19

Agent:
DLA - ES