

MILITARY SPECIFICATION SHEET

CABLE, RADIO FREQUENCY, FLEXIBLE COAXIAL,
95 OHMS, M17/139-00001

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

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

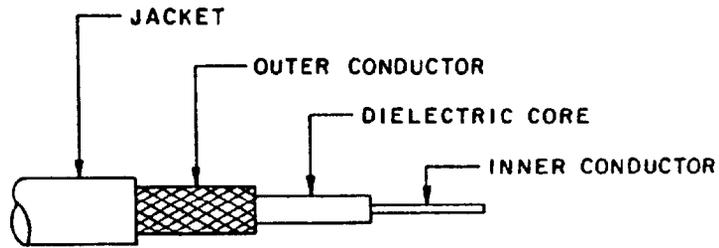


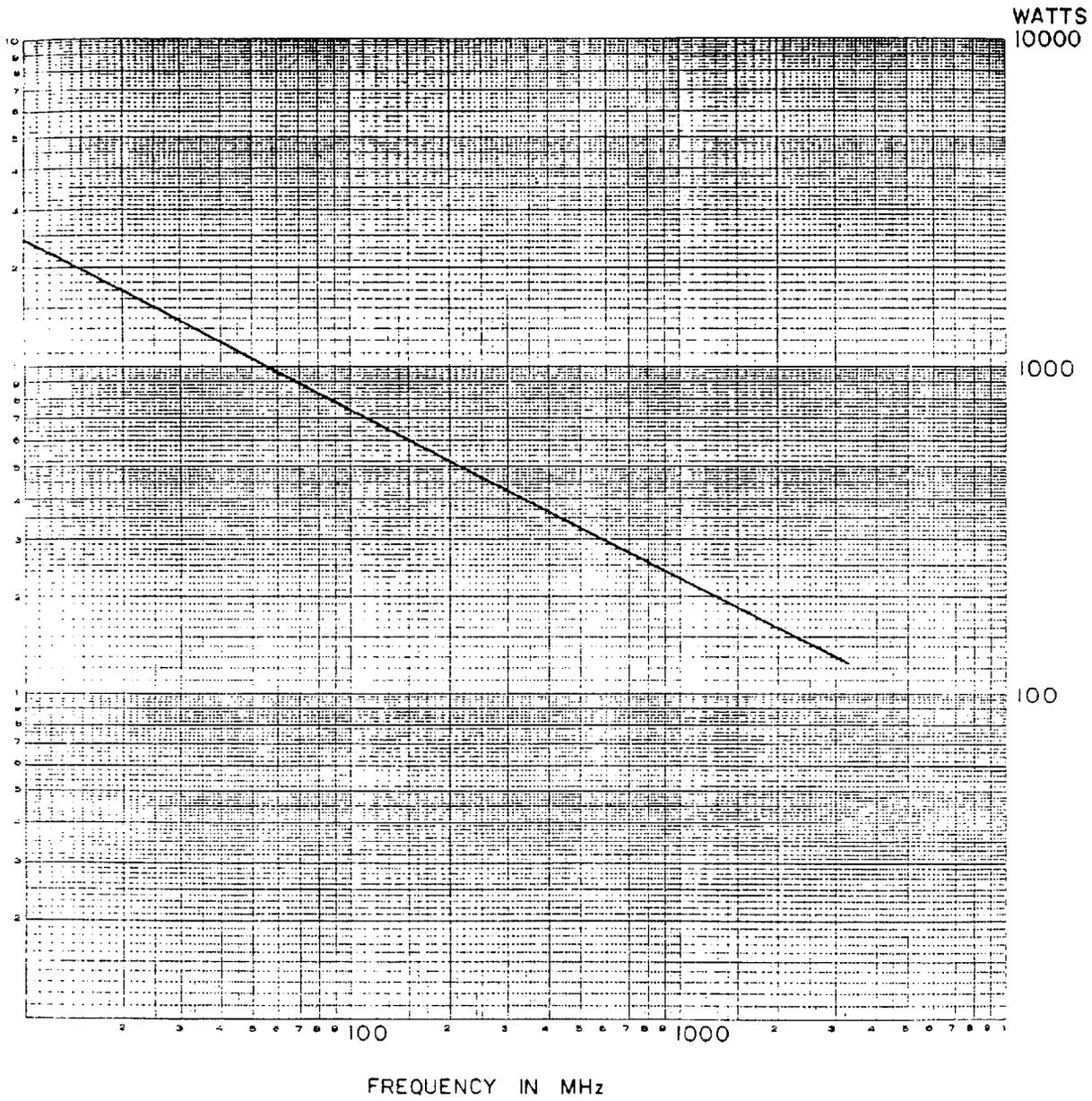
FIGURE 1. Configuration.

TABLE I. Description.

Components	Construction details
Inner conductor	Seven strands of silver-coated, beryllium copper, C17200 ^{1/} , 0.004 inch each. Overall diameter: 0.012 inch ±0.001. Alternate Seven strands of silver-coated, beryllium copper, CS95, 0.004 inch each. Overall diameter: 0.012 inch ±0.001.
Dielectric core	Type F-1: Solid extruded PTFE. Diameter: 0.102 inch ±0.003.
Outer conductor	Single braid of AWG No.38, silver-coated cadmium bronze, C16200 ^{1/} . Diameter: 0.124 inch, maximum. Coverage: 91.0% nominal. Carriers: 16. Ends: 7. Picks/inch: 12.0% ±10.
Jacket	Type XIII: PFA. Diameter: 0.141 inch ±0.004.

^{1/} Reference C16200 in accordance with ASTM B-105 and C17200 in accordance with ASTM B-197.

© denotes changes



MAX POWER _____

Power rating for information only.

FIGURE 2. Power rating at 25°C sea level.

ENGINEERING INFORMATION:

Continuous working voltage: 1,100 V rms, maximum.

Operating frequency: 3 GHz, maximum.

Velocity of propagation: 69.5 percent, nominal.

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

Inner conductor properties:

Ⓒ DC resistance (maximum at +20°C): 40 ohms per 100 feet.

Elongation: 8 percent, minimum.

Tensile strength: 80 klbf/inch², minimum.

Engineering notes: This cable useful in high temperature, high tensile strength applications. (See connector series "TNC" and "BNC" per MIL-C-39012).

REQUIREMENTS:

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

Environmental and mechanical:

Visual and mechanical: Applicable.

Out-of-roundness: Applicable.

Eccentricity: 10 percent, maximum.

Adhesion of conductors:

Inner conductor to core: 1.5 pounds, minimum; 4 pounds, maximum.

Aging stability: Not applicable.

Stress-crack resistance: +230°C ±5°C mandrel size 7 times the cable diameter.

Outer conductor integrity: Not applicable.

Cold bend: -55°C ±2°C.

Dimensional stability: +200°C ±5°C.

Inner conductor from core: .187 inch, maximum.

Inner conductor from jacket: .250 inch, maximum.

Contamination: Not applicable.

Bendability: Not applicable.

Ⓒ Weight: 1.94 pounds per 100 feet, maximum.

Flammability: Applicable.

ELECTRICAL:

- Continuity: Applicable.
- Spark test: 2,000 V rms, minimum.
- Voltage withstanding: 2,000 V rms, minimum.
- Insulation resistance: 5,000 megohms, minimum.
- Corona extinction voltage: 1,500 V rms, minimum.
- Characteristic impedance: 95 ohms \pm 5.
- Attenuation: 18 dB per 100 feet maximum at .4 GHz.
- Structural return loss: Not applicable.
- Ⓒ Capacitance: 17.4 pF per foot, maximum.
- Capacitance stability: Not applicable.
- Capacitance unbalance: Not applicable.
- Transmission unbalance: Not applicable.
- Phase stability: Not applicable.
- Mechanically induced noise voltage: Not applicable.
- Time delay: Not applicable.

Part number: M17/139-00001.

CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - EC
Air Force - 85

Review activities:

Army - MI
Navy - SH
Air Force - 11, 17, 80, 99
DLA - ES, IS

User activities:

Army - AT, ME
Navy - AS, MC
Air Force - 19

Preparing activity:

Army - CR

Agent:

DLA - ES

(Project 6145-1108)