

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 product described herein shall consist
of this specification sheet and MIL-DTL-17.

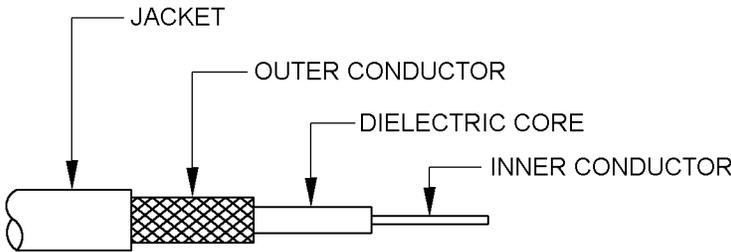


FIGURE 1. Configuration.

TABLE I. Description.

Components	Construction details
Inner conductor	Seven strands of silver-coated, beryllium copper, C17200 <u>1/</u> , 0.004 inch each. Overall diameter: 0.012 inch \pm 0.001. <u>Alternate</u> Seven strands of silver-coated, beryllium copper, CS95, 0.004 inch each. Overall diameter: 0.012 inch \pm 0.001.
Dielectric core	Type F-1: Solid extruded PTFE. Diameter: 0.102 inch \pm 0.003.
Outer conductor	Single braid of AWG No. 38, silver-coated cadmium bronze C16200 <u>1/</u> . (Or equivalent see MIL-DTL-17 3.4) Diameter: 0.124 inch, maximum. Coverage: 91.0% nominal. Carriers: 16 Ends: 7 Picks/inch: 12.0% \pm 10.
Jacket	Type XIII: PFA. Diameter: 0.141 inch \pm 0.004.

1/ Reference C16200 in accordance with ASTM B105 and
C17200 in accordance with ASTM B197/B197M.



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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° to +200°C.
Inner conductor properties:
DC resistance (maximum at 20°C): 40 ohms per 100 feet.
Elongation: 8 percent, minimum.
Tensile strength: 80 klb_f/inch², minimum.

Engineering note: This cable useful in high temperature, high tensile strength applications (see connector series "TNC" and "BNC" per MIL-PRF-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 Vrms, 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 ± 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.

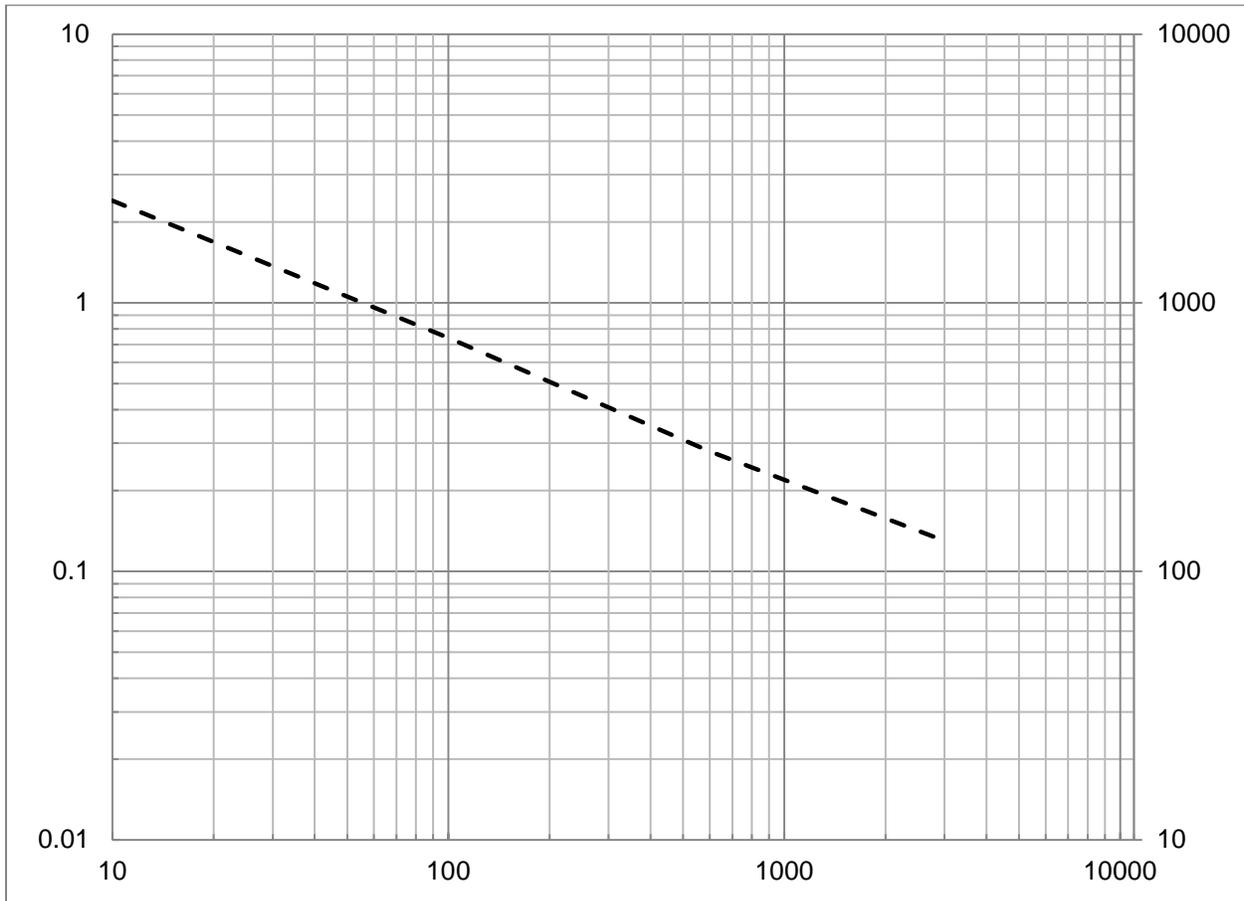
Phase stability: Not applicable.

Mechanically induced noise voltage: Not applicable.

Time delay: Not applicable.

Part or Identifying Number (PIN): M17/139-00001.

WATTS



FREQUENCY IN MHz

MAXIMUM POWER - - - - -
AT 25°C SEA LEVEL

Power rating for information only.

FIGURE 2. Power rating.

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Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

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

MIL-PRF-39012 ASTM B105 ASTM B197/B197M

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:
DLA - CC

(Project 6145-2016-002)

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>.