

INCH-POUND

MIL-DTL-17/97D
 19 June 2015
 SUPERSEDING
 MIL-C-17/97C
 18 July 1985

MILITARY SPECIFICATION SHEET

CABLES, RADIO FREQUENCY, FLEXIBLE, COAXIAL, 93 OHMS, M17/97-RG210

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.

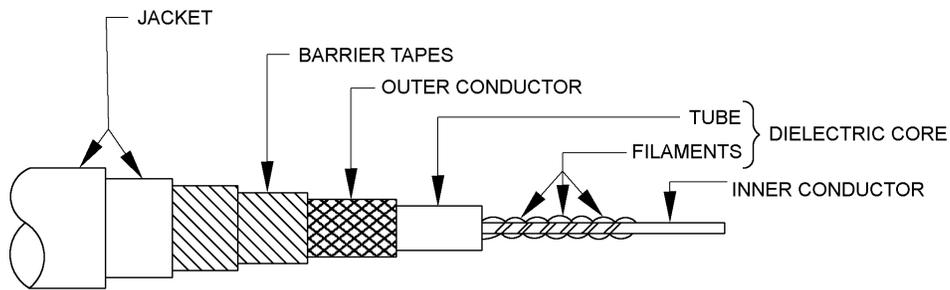


FIGURE 1. Configuration.

TABLE I. Description.

Components	Construction details										
Inner conductor	Solid, silver-coated, copper-covered steel wire. Diameter: .0253 inch \pm .0010.										
Dielectric core	Type F-4: Air-spaced PTFE. A braid of four filament threads .028 inch approximate diameter each, with 2 picks/inch approximate, under two wraps, .005 inch thick each, with a 50% minimum overlap. Diameter: .146 inch \pm .005.										
Outer conductor	Single braid of AWG No. 34, silver-coated copper wire. Diameter: .191 inch, maximum. <table style="width: 100%; border: none;"> <tr> <td></td> <td style="text-align: center;">Alternate</td> </tr> <tr> <td>Coverage: 94.3%, nominal</td> <td style="text-align: center;">96.5% nominal</td> </tr> <tr> <td>Carriers: 16</td> <td style="text-align: center;">24</td> </tr> <tr> <td>Ends: 7</td> <td style="text-align: center;">5</td> </tr> <tr> <td>Picks/inch: 8.2 \pm 10%</td> <td style="text-align: center;">12.3 \pm 10%</td> </tr> </table>		Alternate	Coverage: 94.3%, nominal	96.5% nominal	Carriers: 16	24	Ends: 7	5	Picks/inch: 8.2 \pm 10%	12.3 \pm 10%
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Picks/inch: 8.2 \pm 10%	12.3 \pm 10%										
Barrier tapes	Type FF-2: Two wraps of PTFE tape, .005-inch thick each, by 1/2-inch wide, with a 50% overlap, minimum.										
Jacket	Type V: Double braid of fiberglass. Diameter: .242 inch \pm .008.										



ENGINEERING INFORMATION:

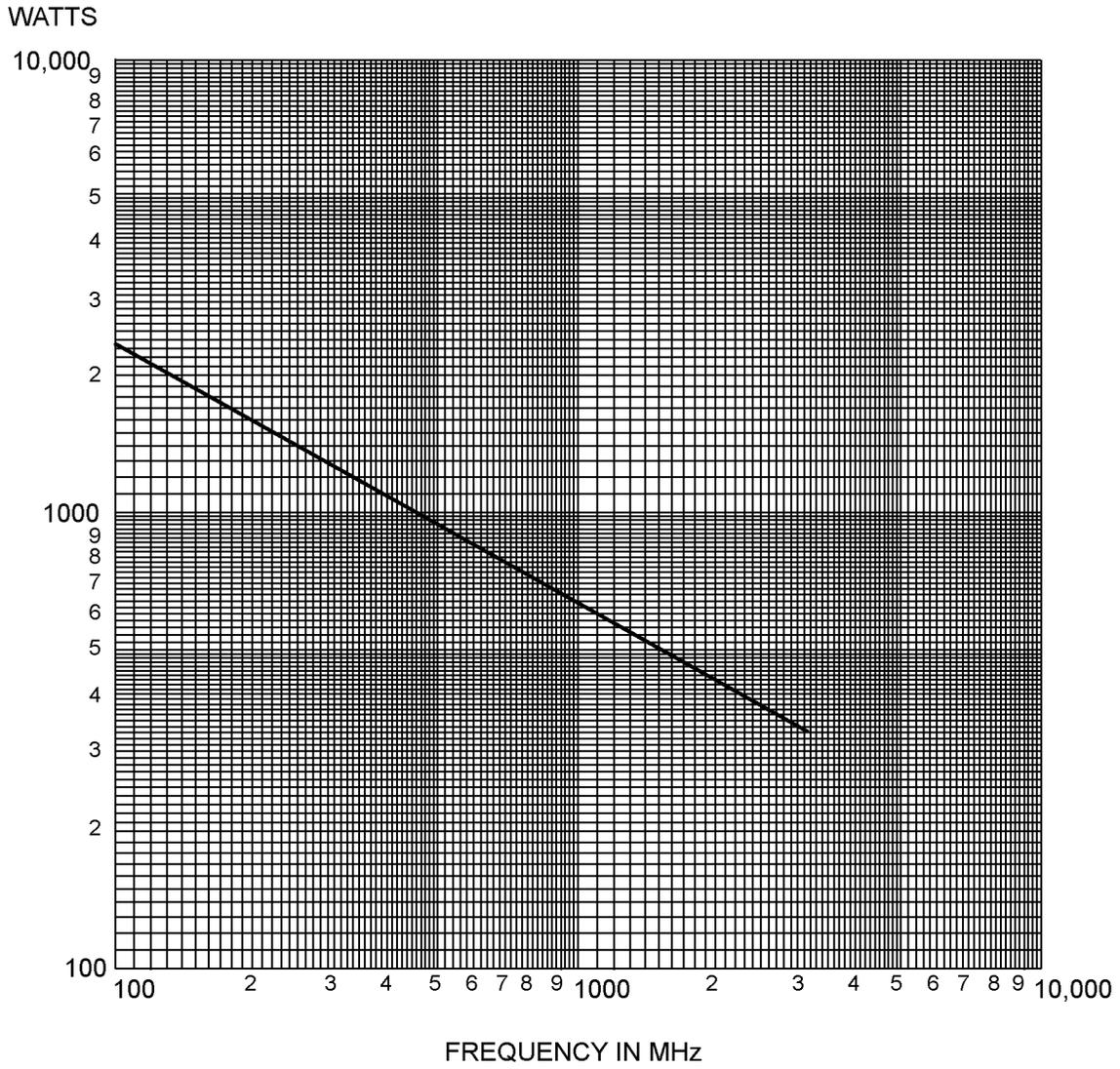
Continuous working voltage: 750 V rms, maximum.
Operating frequency: 3 GHz, maximum.
Velocity of propagation: 88 percent, nominal.
Power rating: See figure 2.
Operating temperature range: -55° to +200°C.
Inner conductor properties:
 DC resistance (maximum at 20°C): 4.4 ohms per 100 feet.
 Elongation: 1 percent, minimum.
 Tensile strength: 110 klb_f/inch², minimum.
Engineering note: This cable useful in low capacitance, high temperature 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 examination:
 Out-of-roundness: Not applicable.
 Eccentricity: Not applicable.
 Adhesion of conductors: Not applicable.
 Aging stability: +250°C ± 5°C.
Stress-crack resistance: Not applicable.
Outer conductor integrity: Not applicable.
Cold bend: -55°C ± 2°C.
Dimensional stability: Not applicable.
Contamination: Not applicable.
Bendability: Not applicable.
Flammability: Not applicable.
Weight: 5 pounds per 100 feet, maximum.

Electrical:

Continuity: Applicable.
Spark test: Not applicable.
Voltage withstanding: 3,000 V rms, +10%, -0%.
Insulation resistance: Not applicable.
Corona extinction voltage: Not applicable.
Characteristic impedance: 93 ohms ± 5.
Attenuation: 8 dB per 100 feet, maximum, at 400 MHz.
Structural return loss: Not applicable.
Capacitance: 14.5 pF per foot, maximum.
Capacitance stability: ± 3 percent.
Capacitance unbalance: Not applicable.
Transmission unbalance: Not applicable.
Mechanically induced noise voltage: Not applicable.
Time delay: Not applicable.



Power	
MHz	Watts
100	2400
400	1000
1000	630
2000	420
3000	340

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

Part or Identifying Number (PIN): M17/97-RG210.

Supersession data: See table II.

TABLE II. Cross reference of part number.

PIN	Superseded PIN or type designation
M17/97-RG210	RG210/U

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 6145-2015-015)

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>.