INCH-POUND

MIL-DTL-17/184C
w/AMENDMENT 1
15 APRIL 2016
SUPERSEDING
MIL-DTL-17/184C
25 July 2014

DETAIL SPECIFICATION SHEET

CABLE, RADIO FREQUENCY, FLEXIBLE, COAXIAL, 75 OHMS, M17/184-00001

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.

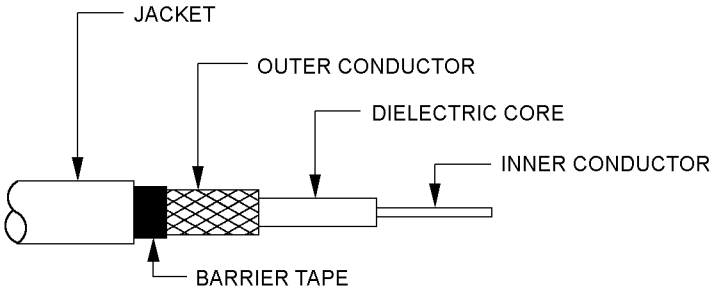

FIGURE 1. General configuration.

TABLE I. Description.

Component	Construction
Inner conductor	Solid copper- covered steel wire. Overall diameter: .0226 inch ±0.0010
Dielectric core	Type A-1: Solid, polyethylene. Diameter: .146 inch ±0.004
Outer conductor	Single braid of AWG No. 34, bare copper wire Diameter: .182 inch maximum Alternate Coverage: 94.4% nominal Coverage: 96.7% nominal Carriers: 16 Carriers: 24 Ends: 7 Ends: 5 Picks/inch: 8.2 ±10% Picks/inch: 12.3 ±10%
Barrier tape	A .001 inch thick polyester tape faced with a .002 inch thick layer of aluminum. The tape shall be applied with a 50% lap, aluminum face toward the outer conductor. Diameter: .192 inch maximum
Jacket	Cross-linked polyolefin Diameter: .242 inch ±0.004

ENGINEERING INFORMATION

Continuous working voltage: 1,700 V rms, maximum.
Operating frequency: 1GHz, maximum.
Velocity of propagation: 65.9 percent, nominal.
Power rating: See figure 2.
Operating temperature range: -30°C to +85°C.

Inner conductor properties:
DC resistance (maximum at +20°C): 4.8 ohms per 100 feet.
Elongation: 1 percent, minimum.
Tensile strength: 110klb$_f$/inch^2, minimum.

Engineering note: This cable is useful in low temperature applications.
(See connector series “BNC” and “TNC” in accordance with MIL-PRF-39012.)

REQUIREMENTS

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

Environmental and mechanical:
Visual and mechanical examination: Applicable.
Out-of-roundness: Not applicable.
Eccentricity: 10 percent, maximum.

Adhesion of conductors:
Inner conductor to core: 4 pounds, minimum; 15 pounds, maximum.

Aging stability: +98ºC ± 2ºC.
Cold bend: -30°C ± 2°C.

Dimensional stability: +85ºC ± 2ºC.
Inner conductor from core: .062 inch, maximum.
Inner conductor from jacket: .125 inch, maximum.

Contamination: Not applicable.
Flame propagation: Applicable.
Acid gas generation: 2 percent, maximum.
Halogen content: 0.2 percent, maximum.

Immersion test:
Tensile strength, percent of unaged minimum: 50.
Elongation, percent of unaged minimum: 50.

Smoke index: 25 maximum.
Toxicity index: 5 maximum.
Durometer hardness: (Type A) 80 minimum.
Weathering: Applicable.
Abrasion resistance: 75 cycles minimum (jacket only).
Tear strength: 35 pounds per inch minimum.
Heat distortion: 30 percent maximum distortion.

Physical tests on unaged jacket:
Tensile strength: 1,300 psi, minimum.
Elongation: 160 percent, minimum.

Physical tests on aged jacket:

Air oven:
Tensile strength, percent minimum: 60.
Elongation, percent minimum: 60.

Hot oil immersion:
Tensile strength, percent minimum: 50.
Elongation, percent minimum: 50.

Tensile strength and elongation: 1,300 psi, 160 percent minimum.
Weight: 4.3 pounds per 100 feet, maximum.

Electrical:

Spark test: 3,000 V rms, minimum.
Voltage withstanding: 7,000 V rms, minimum.
Corona extinction voltage: 2,300 V rms, minimum.
Characteristic impedance: 75 ohms ± 3.

Attenuation:
9 db per 100 feet, maximum at .4 Ghz.
16 db per 100 feet, maximum at 1 Ghz.

Capacitance: 22 pF per foot, maximum.

Part or Identifying Number (PIN): M17/184-00001.

Qualification: Not applicable.

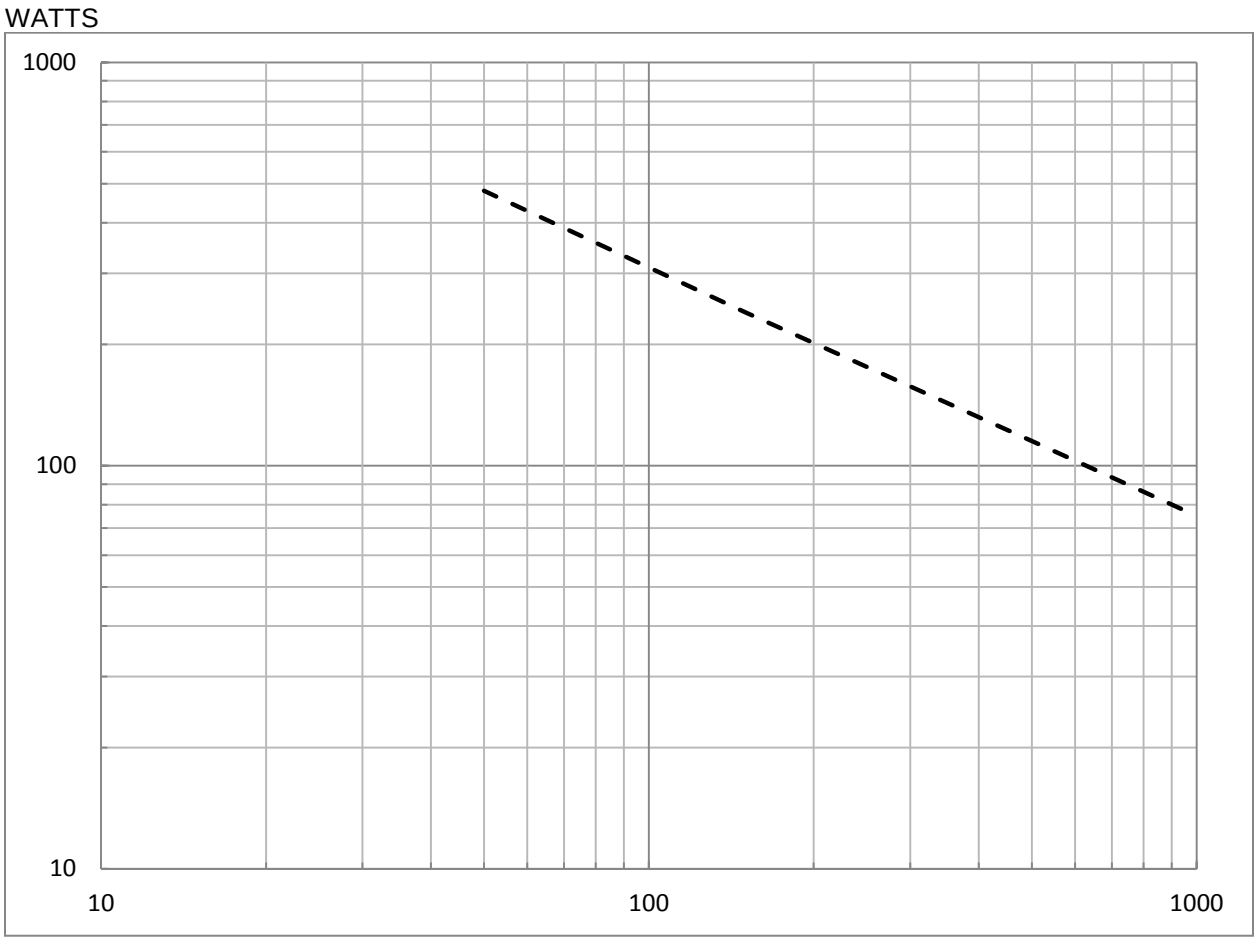

FIGURE 2. Power rating.

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

CONCLUDING MATERIAL

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

Preparing activity
DLA - CC

(Project 6145-2016-010)

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.