

INCH-POUND

MIL-DTL-17/196C
w/Amendment 1
01 October 2015
SUPERSEDING
MIL-DTL-17/196C
12 June 2014

DETAIL SPECIFICATION SHEET

CABLE, RADIO FREQUENCY, FLEXIBLE, COAXIAL,
50 OHMS, M17/196-00001

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.

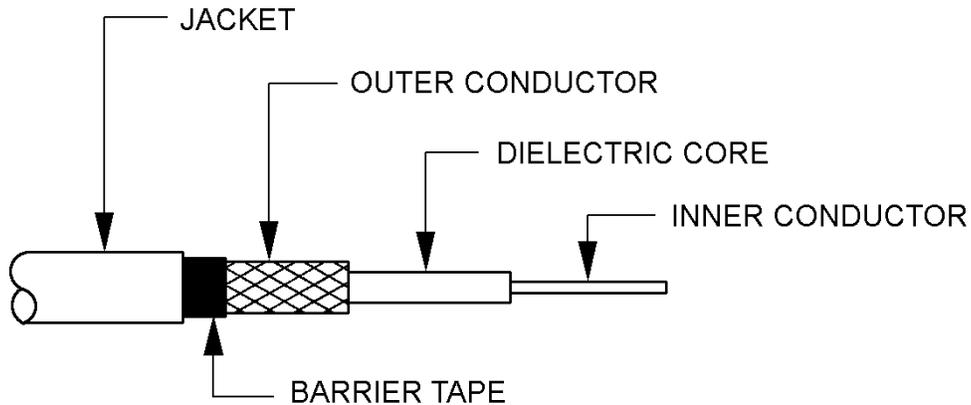


FIGURE 1. Configuration.

TABLE I. Description.

Components	Construction details
Inner conductor	Seven strands of copper-covered steel wire, each strand .0063 inch diameter. Overall diameter: .0189 inch \pm .0010.
Dielectric core	Type A-1: Solid polyethylene. Diameter: .060 inch \pm .003.
Outer conductor	Single braid of AWG No. 38, tinned copper wire. Diameter: .083 inch maximum. Coverage: 85.6% nominal Carriers: 16 Ends: 4 Picks/inch: 16.3 \pm 10%
Barrier tape	A .001 inch thick polyester tape faced with a .002 inch thick layer of aluminum. The tape will be applied with a 50% lap, aluminum face toward the outer conductor. Diameter: .093 inch maximum.
Jacket	Cross-linked polyolefin. Diameter: .110 inch \pm .005. Jacket thickness: .008 inch minimum.



REQUIREMENTS:

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

Operating frequency: 1 GHz, maximum.

Velocity of propagation: 65.9 percent, nominal.

Power ratings: See figure 2.

Operating temperature range: -30°C to +85°C.

Inner conductor properties:

DC resistance (maximum at +20°C): 9.67 ohms per 100 feet.

Elongation: 1 percent, minimum.

Tensile strength: 110 klb_f/inch², minimum.

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

Environmental and mechanical:

Visual and mechanical examination: Applicable.

Eccentricity: 10 percent maximum.

Adhesion of conductors:

Inner conductor to core: 4 pounds, minimum; 12 pounds, maximum.

Aging stability: +98°C ± 2°C.

Cold bend: -30°C ± 2°C.

Dimensional stability: +85°C ± 2°C.

Inner conductor from core: .062 inch, maximum.

Inner conductor from jacket: .125 inch, maximum.

Contamination: Not applicable.

Flame propagation: Applicable.

Acid gas generation: 2.0 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: 0.88 pounds per 100 feet maximum.

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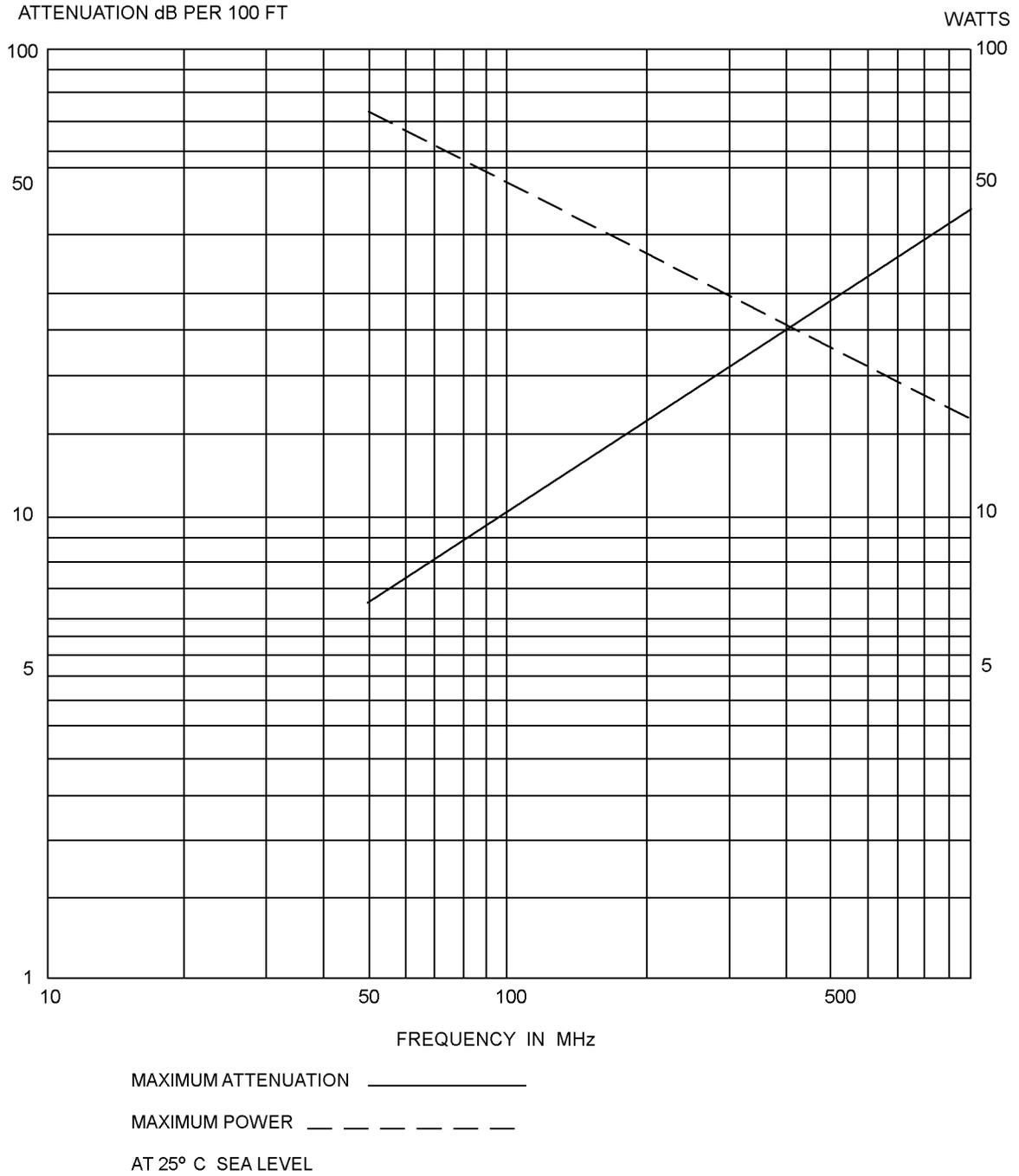


FIGURE 2. Power rating and attenuation.

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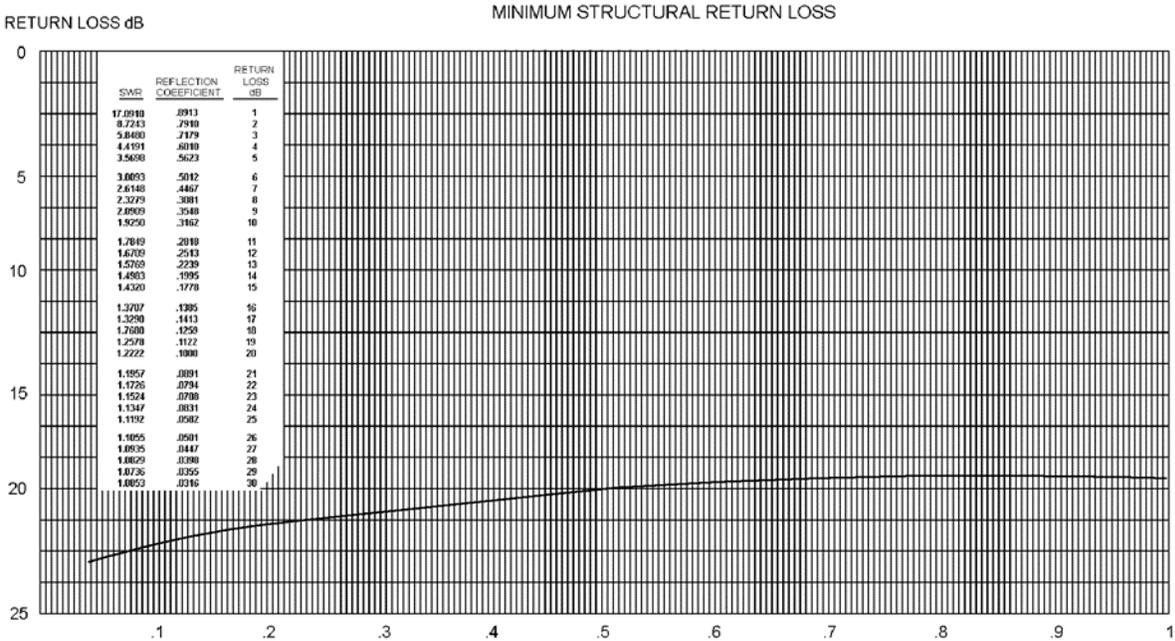


FIGURE 3. Structural return loss.

Electrical:

Spark test: 2,000 V rms, minimum.

Voltage withstanding: 4,500 V rms, minimum.

Corona extinction voltage: 1,500 V rms, minimum.

Characteristic impedance: 50 ± 2 ohms.

Attenuation: See figure 2.

Structural return loss: See figure 3.

Capacitance: 32.2 pF per foot, maximum.

Part or Identifying Number (PIN): M17/196-00001.

Amendment notations. The margins of this specification are marked with vertical lines to indicate where modifications from this amendment were made. 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.

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Referenced documents. This document references MIL-DTL-17.

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:

DLA-CC

Review activities:

Army – AR, AT, CR4, MI
Navy – AS, MC, OS, SH
Air Force – 19, 99

(Project 6145-2015-030)

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>.