

DETAIL SPECIFICATION SHEET

CABLE, RADIO FREQUENCY, FLEXIBLE, COAXIAL,
50 OHMS, LOW SMOKE, LOW LOSS DIAMETER .870

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.

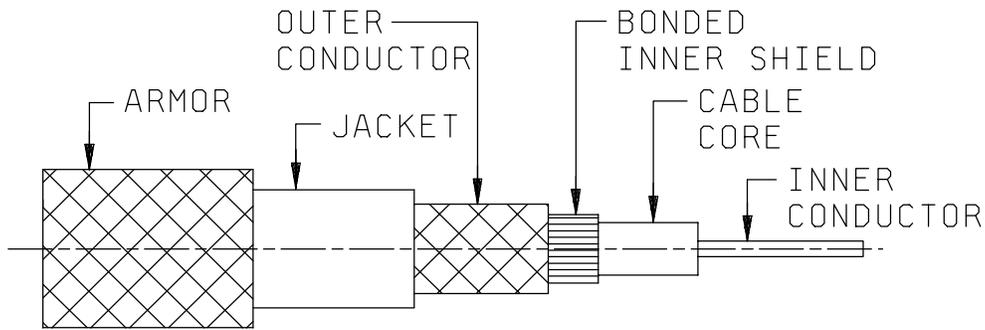


FIGURE 1. General configuration.

TABLE I. Description.

Components	Construction details	Diameters
Inner conductor	Bare copper tube	.262 ±.003 inch (6.65 ±0.09 mm)
Dielectric core	Cellular polyethylene	.680 ±.010 inch (17.27 ±0.25 mm)
Inner shield	.003 inch bonded aluminum tape	.686 ±.010 inch (17.42 ±0.25 mm)
Outer conductor	Single braid of 30 AWG, tinned copper wire Coverage: 90.8 percent, nominal Carriers: 48 Ends: 6 Picks/inch: 4.2	.732 ±.010 inch (18.59 ±0.25 mm)
Jacket	Type XIV, crosslinked polyolefin	.870 ±.010 inch (22.10 ±0.25 mm)
Armor	Single braid of aluminum alloy wire	.945 inch (24.00 mm) maximum.

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ENGINEERING INFORMATION:

Continuous working voltage: 3,930 V rms maximum.

Operating frequency: 2.5 GHz maximum.

Velocity of propagation: 83 percent nominal.

Power rating: See figure 2.

Operating temperature range: -30° to +105°C.

Inner conductor properties: DC resistance maximum at 20°C: .065 ohms per 100 feet.

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: 20 pounds minimum, 100 pounds maximum.

Aging stability: +98° ±2°C.

Cold bend: -30°C ±2°C.

Dimensional stability: +85°C ±2C.

Inner conductor from core: 0.62 inch (15.75 mm) maximum.

Inner conductor from jacket: .125 inch (3.17 mm) maximum.

Contamination: Not applicable.

Flame propagation: Applicable.

Acid gas generation: 2.0 percent maximum.

Halogen content: 0.2 percent maximum.

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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.

Heat distortion: 30 percent maximum.

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: 375 lbs/1000 ft maximum.
426.6 lbs/1000 ft (armored) maximum.

Electrical:

Spark test: 8,000 V rms minimum.

Voltage withstanding: 7,000 V rms, minimum.

Corona extinction voltage: 5,250 V rms minimum.

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Characteristic impedance: 50 ± 2 ohms.

Attenuation: See figure 2.

Structural return loss: See figure 3.

Capacitance: 27.0 pF per feet, maximum.

Capacitance unbalance: Not applicable.

Transmission unbalance: Not applicable.

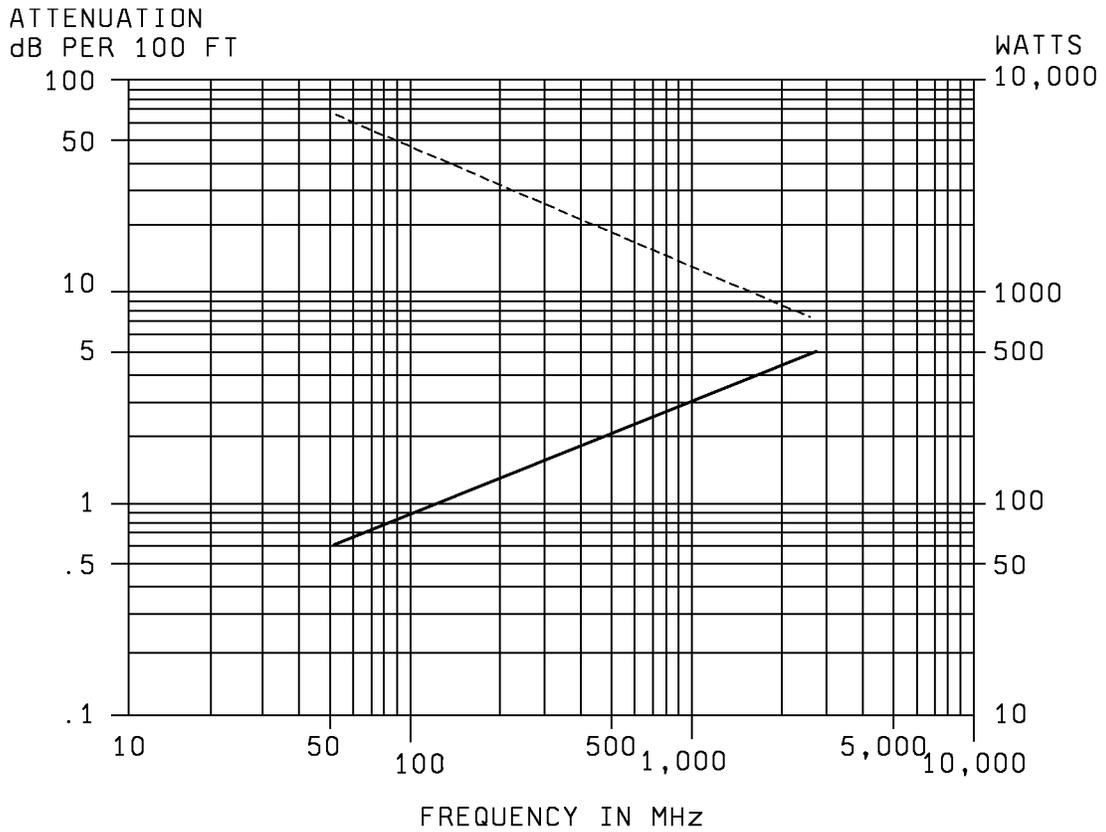
Mechanically induced noise: Not applicable.

Time delay: Not applicable.

Part or Identifying Number (PIN): M17/226-00001 (unarmored)
M17/226-00002 (armored)

Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

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MAXIMUM ATTENUATION ———
MAXIMUM POWER -----

Tabulated values are for reference only. The values on the graph represent the requirements for attenuation. The data regarding power rating are for information only.

Frequency MHz	Attenuation dB	Power Watts
50	.59	6560
150	1.06	3720
450	1.89	1970
900	2.88	1360
1500	3.80	970
2000	4.48	820
2500	5.07	720

FIGURE 2. Power rating and attenuation.

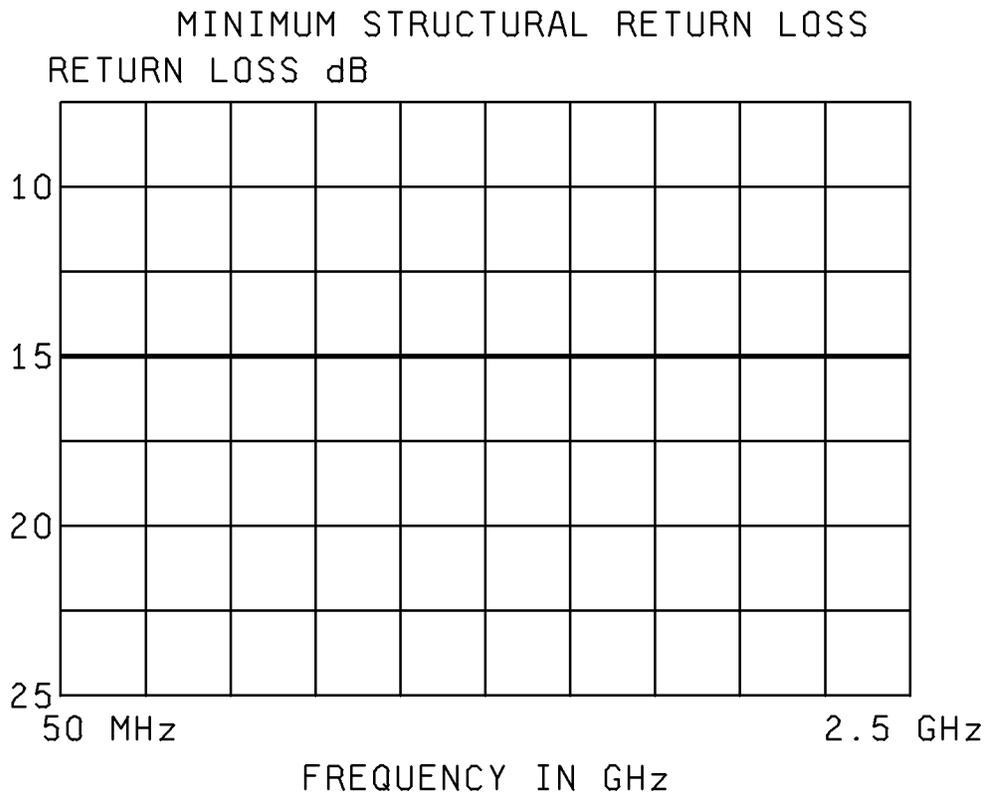


FIGURE 3. Structural return loss.

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CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - EC
Air Force - 11
NASA - NA
DLA - CC

Preparing activity:

DLA - CC

(Project: 6145-2377-000)

Review activities:

Army - AR, 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 <http://www.dodssp.daps.mil>.