

MILITARY SPECIFICATION SHEET

CABLE, RADIO FREQUENCY, FLEXIBLE, COAXIAL,
 50 OHMS, M17/127-RG393

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the cable described herein shall consist of this document and the latest issue of Specification MIL-C-17.

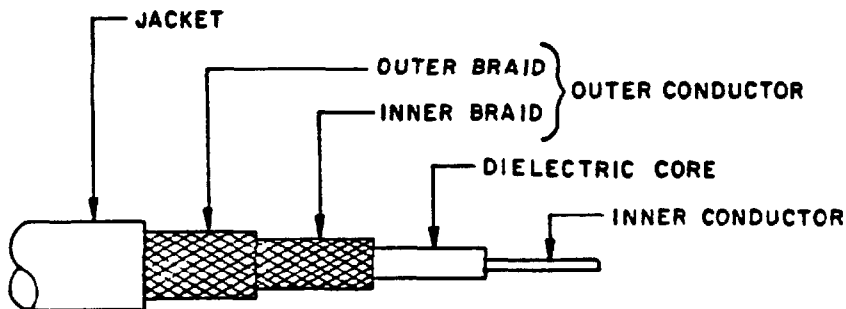


FIGURE 1. Configuration.

TABLE 1. Description.

Components	Construction details
Inner conductor	Seven strands of silver-coated copper wire; each strand .0312 inch diameter. Overall diameter: .094 inch $\pm$.001.
Dielectric core	Type F-1: Solid extruded PTFE. Diameter: .285 inch $\pm$.005.
Outer conductor	Double braid of AWG size 34 silver-coated copper wire. Diameter: .360 inch maximum.
Inner braid	Coverage: 95.7% nominal Carriers: 24 Ends: 6 Picks/inch: 16.6 $\pm$ 10%
Outer braid	Coverage: 98.0% nominal Carriers: 24 Ends: 7 Picks/inch: 15.4 $\pm$ 10%
Jacket	Type IX: FEP. Diameter: .390 inch $\pm$.010.

ENGINEERING INFORMATION:

Continuous working voltage: 1,875 Vrms, maximum.

Operating frequency: 11 GHz, maximum.

Velocity of propagation: 69.5 percent, nominal.

Power rating: See figure 2.

Operating temperature range: -55° to +200°C.

Inner conductor properties:

DC resistance (maximum at 20°C): 0.152 ohm per 100 feet.

Elongation: 20 percent, minimum.

Engineering notes: This cable useful in general purpose, high temperature applications (see connector series "N" per MIL-C-39012).

REQUIREMENTS:

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

Environmental and mechanical:

Eccentricity: 10 percent, maximum.

Adhesion of conductors:

Inner conductor to core: 10 pounds, minimum; 50 pounds, maximum.

Aging stability: Not applicable.

Stress crack resistance: +230° $\pm$ 5°C; mandrel size 7 1/2 times the jacket diameter.

Outer conductor integrity: Not applicable.

Dimensional stability: +200° $\pm$ 5°C.

Inner conductor from core: .250 inch, maximum.

Inner conductor from jacket: .312 inch, maximum.

Bendability: Not applicable.

Flammability: Applicable.

Weight: 17.5 pounds per 100 feet, maximum.

Electrical:

Spark test: 2,000 Vrms, +25 percent, -0 percent.

Voltage withstanding: 7,500 Vrms, minimum.

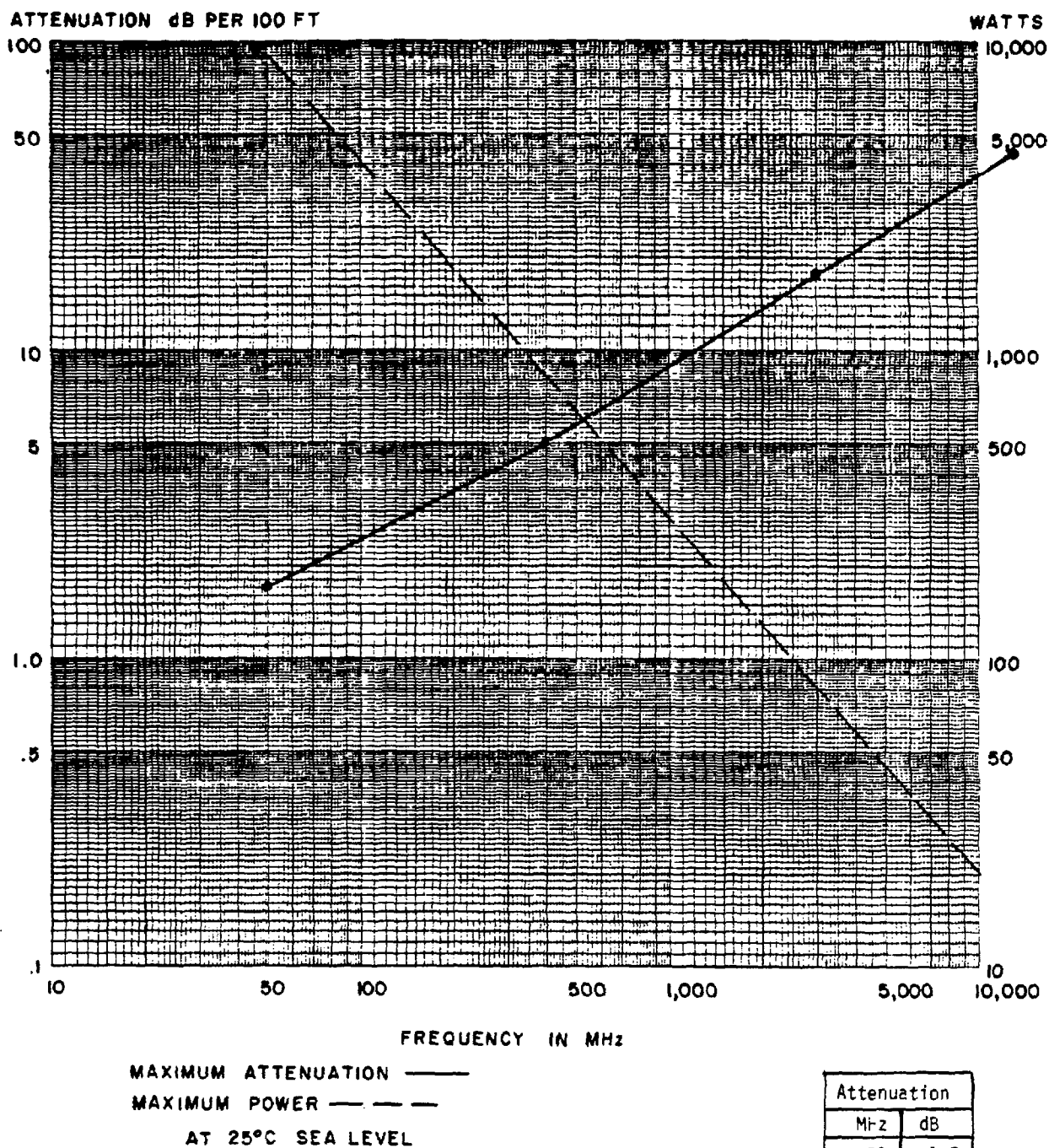
Insulation resistance: Not applicable.

Corona extinction voltage: 2,500 Vrms, minimum.

Characteristic impedance: 50 $\pm$ 2 ohms.

Attenuation: See figure 2.

Structural return loss: See figure 3.

FIGURE 2. Power rating and attenuation.

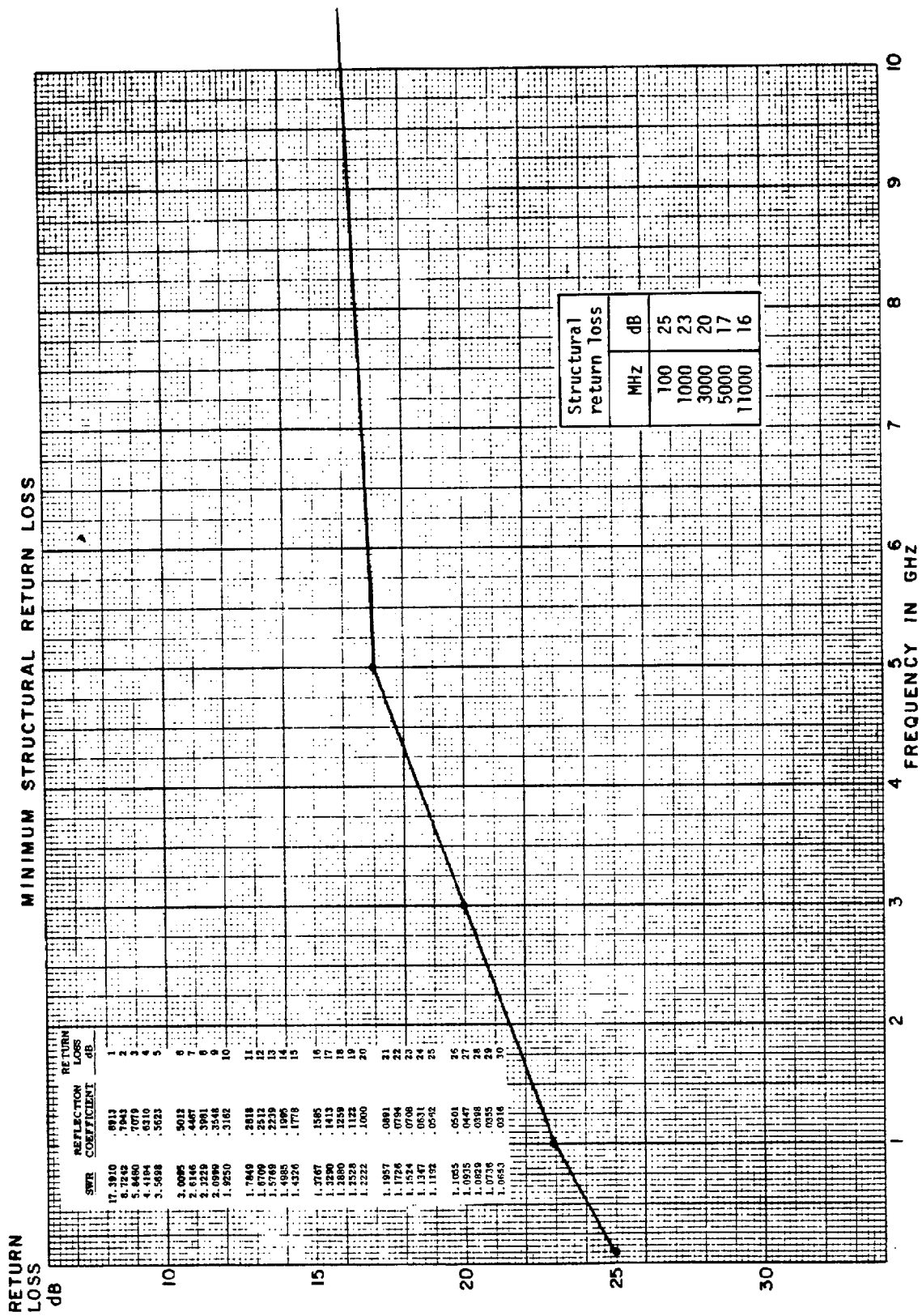


FIGURE 3. Structural return loss.

Capacitance: 32 pF per foot, maximum.

Capacitance unbalance: Not applicable.

Transmission unbalance: Not applicable.

Mechanically induced noise voltage: Not applicable.

Time delay: Not applicable.

Contamination: Not applicable.

Part number: M17/127-RG393.

NOTE: Revision letters are not used to denote changes due to the extensiveness of the changes.

Custodians:

Army - CR
Navy - EC
Air Force - 83

Review activities:

Army - AR, MI
Navy - SH, EC
Air Force - 11, 17, 99
DLA - ES, IS

User activities:

Army - ME, AT
Navy - AS, OS, MC
Air Force - 19

Preparing activity:

Army - CR

Agent:

DLA - ES

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