

MILITARY SPECIFICATION SHEET

CABLES, RADIO FREQUENCY, FLEXIBLE TRIAXIAL,
95 OHMS, M17/177-00001

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

The requirements for acquiring the cable described herein shall consist of this specification and the latest issue of MIL-C-17.

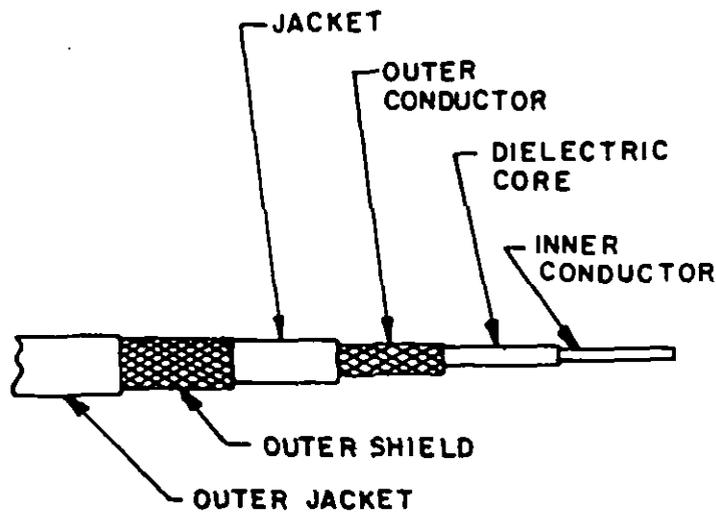


FIGURE 1. Configuration.

Ⓐ denotes changes

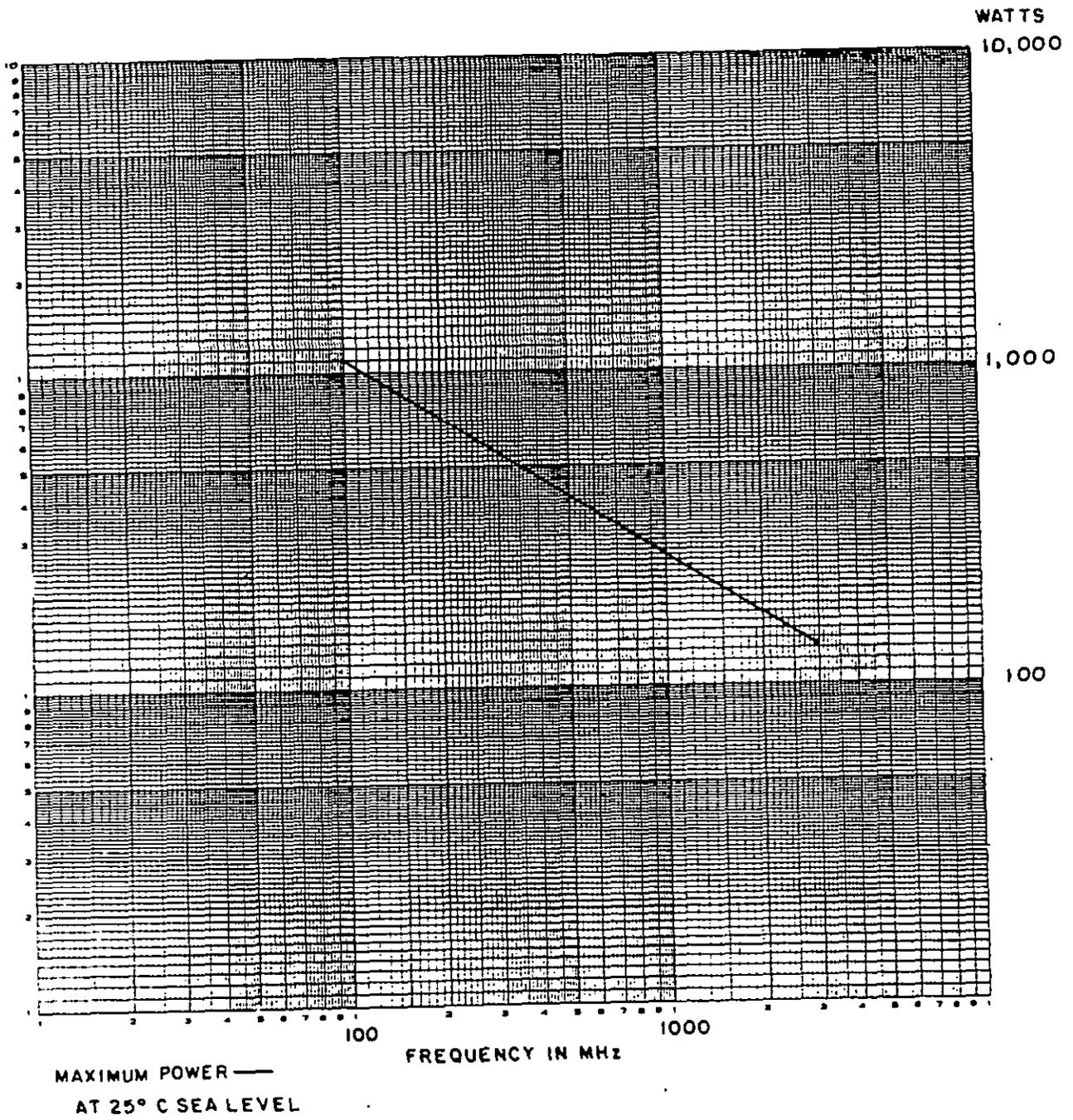


FIGURE 2. Power rating.

ENGINEERING INFORMATION:

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

Operating frequency: 3 GHz, maximum.

Velocity of propagation: 69.5 percent, nominal.

Power rating: See figure 2.

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

Inner conductor properties:

DC resistance (maximum at +20°C): 24.45 ohms per 100 feet.

Elongation: 10 percent, minimum.

Tensile strength: 50 klbf/inch² minimum.

Notes: This cable is useful in shield critical, high temperature applications (see connector series "TRB" and "TRT" in accordance with MIL-C-49142).

REQUIREMENTS:

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

TABLE I. Description.

Components	Construction details
Inner conductor	Seven strands of silver-coated, annealed-copper-covered, steel wire, each strand .004 inch diameter Overall diameter: .012 ±.001 inch.
Dielectric core	Type F-1: Solid, extruded PTFE. Diameter: .102 ±.003 inch.
Outer conductor	Single braid of #38 AWG silver-coated copper wire Diameter: .124 inch maximum. Coverage: 91.0% nominal Carriers: 16 Ends: 7 Picks/inch: 12.0 ±10%
(A) Inner jacket	Type IX: Clear transparent FEP. Diameter: .141 ±.004
(A) Outer shield	Single braid of #38 AWG silver-coated copper wire Diameter: .163 inch maximum Coverage: 91% nominal Braid angle: 38° nominal Carriers: 16 Ends: 8 Picks/inch: 14 ±10%
Outer jacket	Type IX: FEP Diameter: .184 ±.005

Environmental and mechanical:

Visual and mechanical examination:

Out-of-roundness: Not applicable.

Eccentricity: 10 percent maximum.

Adhesion of conductors:

Inner conductor to core: 1.5 pounds, minimum; 4 pounds, maximum.

Aging stability: Not applicable.

Stress crack resistance: +230°C ±5°C.

Outer conductor integrity: Not applicable.

Cold bend: -55°C ±2°C.

Dimensional stability: +200°C ±5°C.

Inner conductor from core: 0.187 inch, maximum.

Inner conductor from any jacket: 0.250 inch, maximum.

Contamination: Not applicable.

Bendability: Not applicable.

Flammability: Applicable.

Weight: 34 pounds per 1,000 feet, maximum.

Electrical:

Continuity: Applicable.

Spark test: 2,000 V rms +10, -0 percent.

Voltage withstanding: 2,000 V rms +10, -0 percent. 1/

Insulation resistance: Not applicable.

Corona extinction voltage: 1,500 V rms minimum.

Characteristic impedance: 95 ±5 ohms.

Attenuation: 17 dB per 100 feet maximum at 400 MHz.

Structural return loss: Not applicable.

Capacitance: 17.4 pF per foot, maximum.

Capacitance stability: Not applicable.

Capacitance unbalance: Not applicable.

Transmission unbalance: Not applicable.

Phase stability: Not applicable.

Mechanically induced noise voltage: Not applicable.

Time delay: Not applicable.

1/ 2,000 V rms +10, -0 percent applied between the inner and outer conductor with the outer conductor grounded; 200 V dc minimum applied between the outer conductor and the outer shield with the outer shield grounded.

Shielding effectiveness: To be determined.

Part number: M17/177-00001.

Custodians

Army - CR
Navy - EC
Air Force - 85

Review activities:

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

User activities:

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

Preparing activity:

Army - CR

Agent:

DLA - ES.

(Project 6145-1089)