

MIL-C-17/94F
18 July 1985
~~SUPERSEDING~~
MIL-C-17/94E
15 March 1977

MILITARY SPECIFICATION SHEET
CABLES, RADIO FREQUENCY, FLEXIBLE, COAXIAL,
75 OHMS, M17/94-RG179

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

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

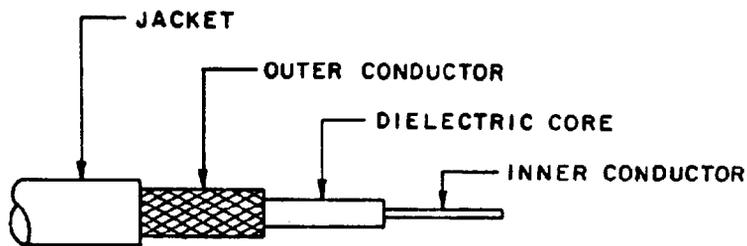


FIGURE 1. Configuration.

Ⓡ denotes changes.

FSC 6145

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

TABLE I. Description.

Component	Construction details
Inner conductor	Seven strands of silver-coated, annealed-copper covered steel wire, each strand .004 inch diameter. Overall diameter: 0.012 inch \pm 0.001.
Dielectric core	Type F-1: Solid, extruded PTFE. Diameter: 0.063 inch \pm 0.003.
Outer conductor	Single braid of AWG No. 38, silver-coated copper wire. Diameter: 0.084 inch maximum. Coverage: 92.3% nominal Carriers: 16 Ends: 5 Picks/inch: 12.0 \pm 10%
Jacket	Type IX: FEP Diameter: 0.100 inch \pm 0.005.

ENGINEERING INFORMATION:

Continuous working voltage: 900 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 $+200^{\circ}\text{C}$.

Inner conductor properties:

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

(F) Elongation: 8 percent, minimum.

Tensile strength: 50 klb_f/inch², minimum.

Engineering note: This cable useful in general purpose, high temperature applications (see connector series "SMB" and "SMC" per MIL-C-39012. NATO preferred type MWR-33.)

REQUIREMENTS:

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

Environmental and mechanical:

Visual and mechanical inspection:

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: $+230^{\circ}\text{C}$ \pm 5 $^{\circ}\text{C}$.

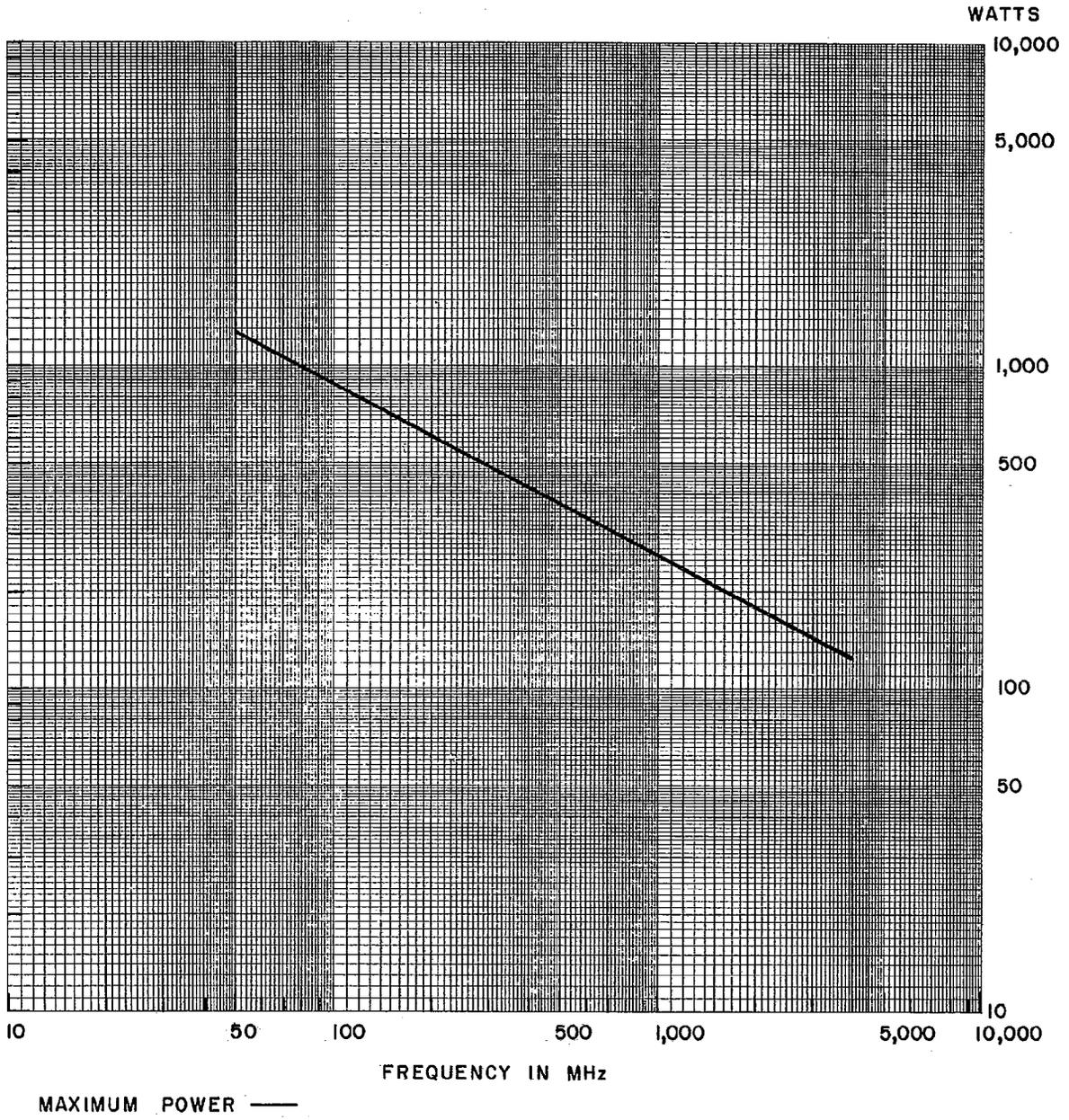


FIGURE 2. Power rating.

Outer conductor integrity: Not applicable.

Cold bend: $-55^{\circ}\text{C} \pm 2^{\circ}\text{C}$.

Ⓕ Dimensional stability: $+200^{\circ}\text{C} \pm 5^{\circ}\text{C}$.

Inner conductor from core: .187 inch, maximum.

Inner conductor from jacket: .250 inch, maximum.

Contamination: Not applicable.

Bendability: Not applicable.

Flammability: Applicable.

Weight: 0.0108 pound per foot, maximum.

Electrical:

Continuity: Applicable.

Ⓕ Spark test: 2,000 Vrms, +10%, -0%.

Ⓕ Voltage withstanding: 2,000 V rms, +10%, -0%.

Insulation resistance: Not applicable.

Corona extinction voltage: 1,200 V rms, minimum.

Characteristic impedance: 75 ohms ± 3 .

Attenuation: 21.0 dB per 100 feet, maximum, at 0.4 GHz.

Structural return loss: Not applicable.

Capacitance: 23.0 pF per foot, maximum.

Capacitance stability: Not applicable.

Capacitance unbalance: Not applicable.

Transmission unbalance: Not applicable.

Mechanically induced noise voltage: Not applicable.

Time delay: Not applicable.

Part number: See table II.

Supersession data: See table II.

TABLE II. Cross-reference of part number.

Part number	Superseded part number or type designation
M17/94-RG179	RG-1798/U; RG-187A/U per MIL-C-17/68 (canceled)

Custodians:

Army - CR
Navy - EC
Air Force - 85

Preparing activity:
Army - CR

(Project 6145-0911-19)

Review activities:

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

User activities:

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

Agent:

DLA - ES