

MIL-C-17/64B
 24 April 1978
 SUPERSEDING
 MIL-C-17/64A
 28 February 1964
 MIL-C-17/25B
 28 February 1964

MILITARY SPECIFICATION SHEET

CABLES, RADIO FREQUENCY, FLEXIBLE COAXIAL, 75 OHMS,
 M17/64-RG164, UNARMORED, M17/64-RG35, ARMORED

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

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

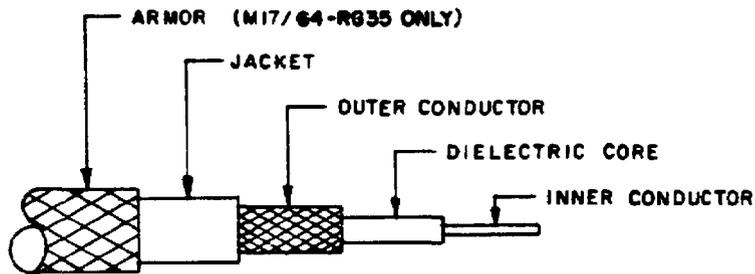


FIGURE 1. Configuration.

TABLE I. Description.

Components	Construction details
Inner conductor	Solid, bare, copper wire. Diameter: .1045 inch \pm .0020.
Dielectric core	Type A-1: Solid polyethylene. Diameter: .680 inch \pm .010.
Outer conductor	Single braid of AWG #30, bare copper wire. Diameter: .760 inch maximum. <u>Alternates</u> Coverage: 97.7% nominal 95.8% nominal 97.2% nominal Carriers: 48 24 36 Ends: 7 14 9 Picks/inch: 5.6% \pm 10 3.1% \pm 10 4.0% \pm 10
Jacket	Type IIa. Diameter: .870 inch \pm .010.
Armor (M17/64-RG35 only)	Single braid of aluminum-alloy wire. Diameter: .945 inch maximum.

ENGINEERING INFORMATION:

Continuous working voltage: 7,500 Vrms, maximum.
 Operating frequency: 1 GHz, maximum.
 Velocity of propagation: 65.9 percent, nominal.
 Power ratings: See figure 2.
 Operating temperature range: -40° to +85°C maximum.
 Weight: 50.5 pounds per 100 feet maximum (M17/64-RG164); 54.5 pounds per 100 feet, maximum (M17/64-RG35).

Inner conductor properties:

DC resistance (maximum at 20°C): .027 ohms per 100 feet.

Elongation: 30 percent, minimum.

Engineering notes: This cable useful in low temperature applications.
 (See connector series "N" per MIL-C-39012; "HN" per MIL-C-3643 and "LC" per MIL-C-3650, NATO preferred type NWR-6 (M17/64-RG164), NATO preferred type NWR20 (M17/64-RG35).

REQUIREMENTS:

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

Environmental and mechanical:

Visual and mechanical examination: Applicable.

Eccentricity: 10 percent, maximum.

Adhesion of conductors:

Inner conductor to core: 4 pounds, minimum; 30 pounds, maximum.

Aging stability: +98° ±2°C.

Cold bend: -40° ±2°C.

Dimensional stability: +85° ±2°C.

Inner conductor from core: 0.062 inch, maximum.

Inner conductor from jacket: 0.125 inch, maximum.

Contamination: Applicable.

Electrical:

Spark test: 8,000 Vrms, minimum.

Voltage withstanding: 22,000 Vrms, minimum.

Corona extinction voltage: 10,000 Vrms, minimum.

Characteristic impedance: 75 ohms ±3.

Attenuation: 2.8 dB per 100 feet, maximum at .4 GHz; 6 dB per 100 feet, maximum at 1 GHz.

Capacitance 20 pF per foot, maximum.

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
M17/64-RG35	RG-35B/U
M17/64-RG164	RG-164/U

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

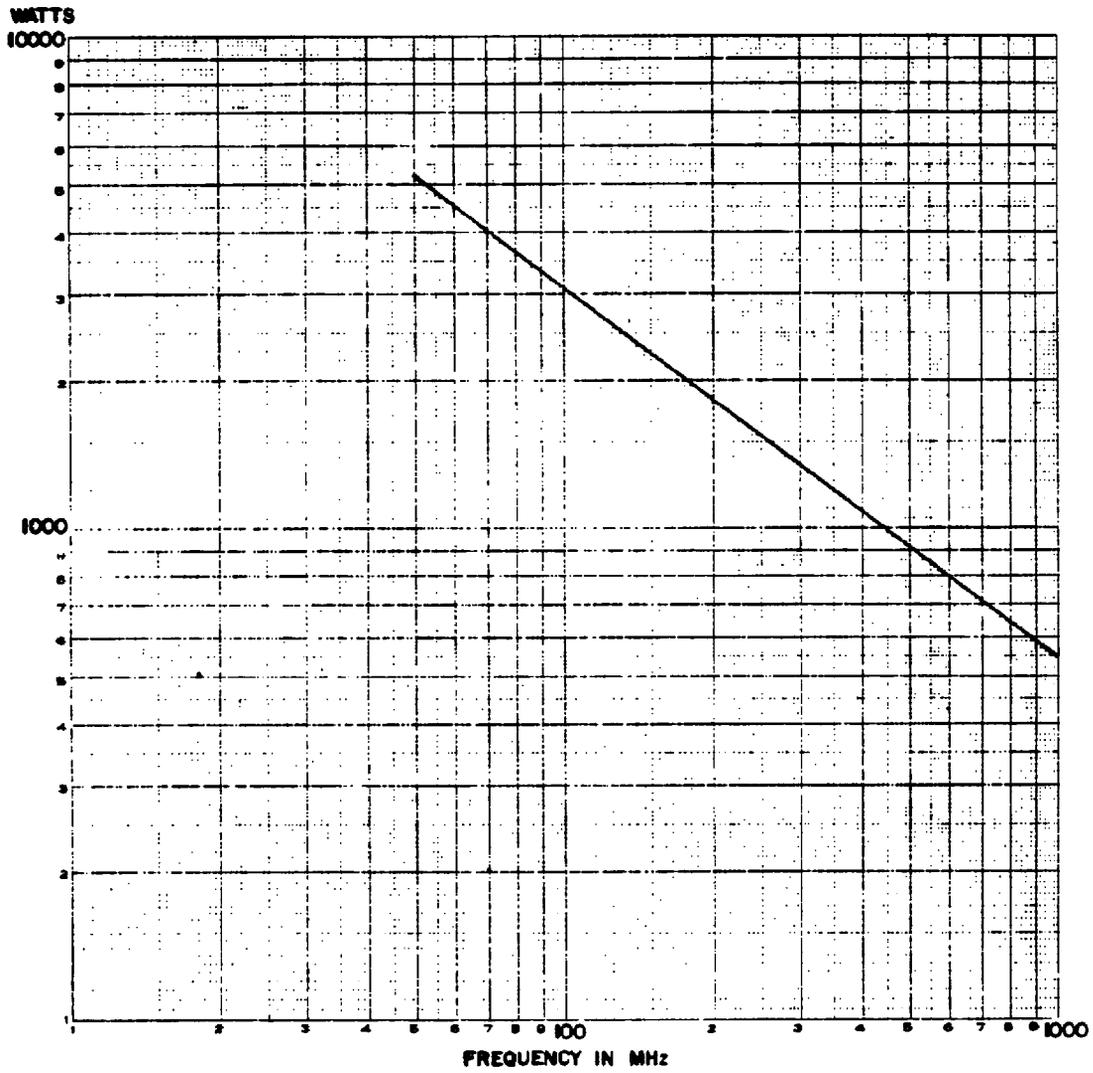


FIGURE 2. Power rating @ 25°C sea level.

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Custodians:

Army - EL
Navy - EC
Air Force - 99

Review activities:

Army - MI
Navy - SH
Air Force - 17, 85, 11
DLA - ES, IS

User activities:

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

Preparing activity:

Army - EL

Agent:

DLA - ES

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