MILITARY SPECIFICATION SHEET

CABLES, RADIO FREQUENCY, FLEXIBLE, COAXIAL, 50 OHMS, M17/060-RG142

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.

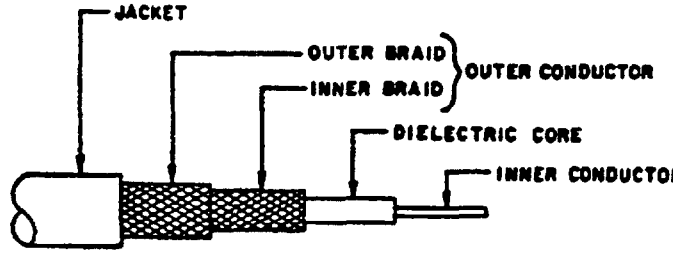

FIGURE 1. Configuration.

TABLE I. Description.

Components	Construction details
Inner conductor	Solid silver-coated, copper-covered, steel wire. Diameter: 0.037 inch ±0.001.
Dielectric core	Type F-1: Solid extruded PTFE. Diameter: 0.116 inch ±0.005.
Outer conductor	Double braid of AWG #36 silver-coated copper wire. Diameter: 0.171 inch maximum.
Inner braid	Coverage : 94.8% nominal Carriers : 16 Ends : 7 Picks/inch : 11.5 ±10%
Outer braid	Coverage : 93.1% nominal Carriers : 16 Ends : 7 Picks/inch : 14.5 ±10%
Jacket	Type IX: FEP. Diameter: 0.195 inch ±0.005.

ENGINEERING INFORMATION:

Capacitance: 29.3 pF per foot, nominal.
Continuous working voltage: 1,400 Vrms, maximum.
Operating frequency: 12.4 GHz, maximum.
Velocity of propagation: 69.5 percent, nominal.
Power rating: See figure 2.
Operating temperature range: -55° to +200°C.
Weight: 0.043 pound per foot, nominal.
Inner conductor properties:
DC resistance (maximum at 20°C): 19.5 ohms per 100 feet.
Elongation: 1 percent, minimum.
Tensile strength: 110 $klb_f/inch^2$, minimum.
Engineering notes: This cable useful in general purpose high temperature applications. (See connector series "TNC", "BNC", and "SMA" per MIL-C-39012. NATO preferred type NWR-25.)

REQUIREMENTS:

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

Environmental and mechanical:
Visual and mechanical examination:
Eccentricity: 10 percent, maximum.
Adhesion of conductors:
Inner conductor to core: 4 pounds, minimum; 15 pounds, maximum.
Stress-crack resistance: +230° +5°C.
Dimensional stability: +200° +5°C.
Inner conductor from core: 0.312 inch, maximum.
Inner conductor from jacket: 0.250 inch, maximum.
Flammability: Applicable.

Electrical:
Test frequency: 50 MHz to 12.4 GHz.
Spark test: 2,000 Vrms, minimum.
Voltage withstanding: 5,000 Vrms, minimum.
Corona extinction voltage: 1,900 Vrms, minimum.
Characteristic impedance: 50 ohms ±2.
Attenuation: See figure 2.
Structural return loss: See figure 3.

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
M17/060-RG142	RG-142B/U

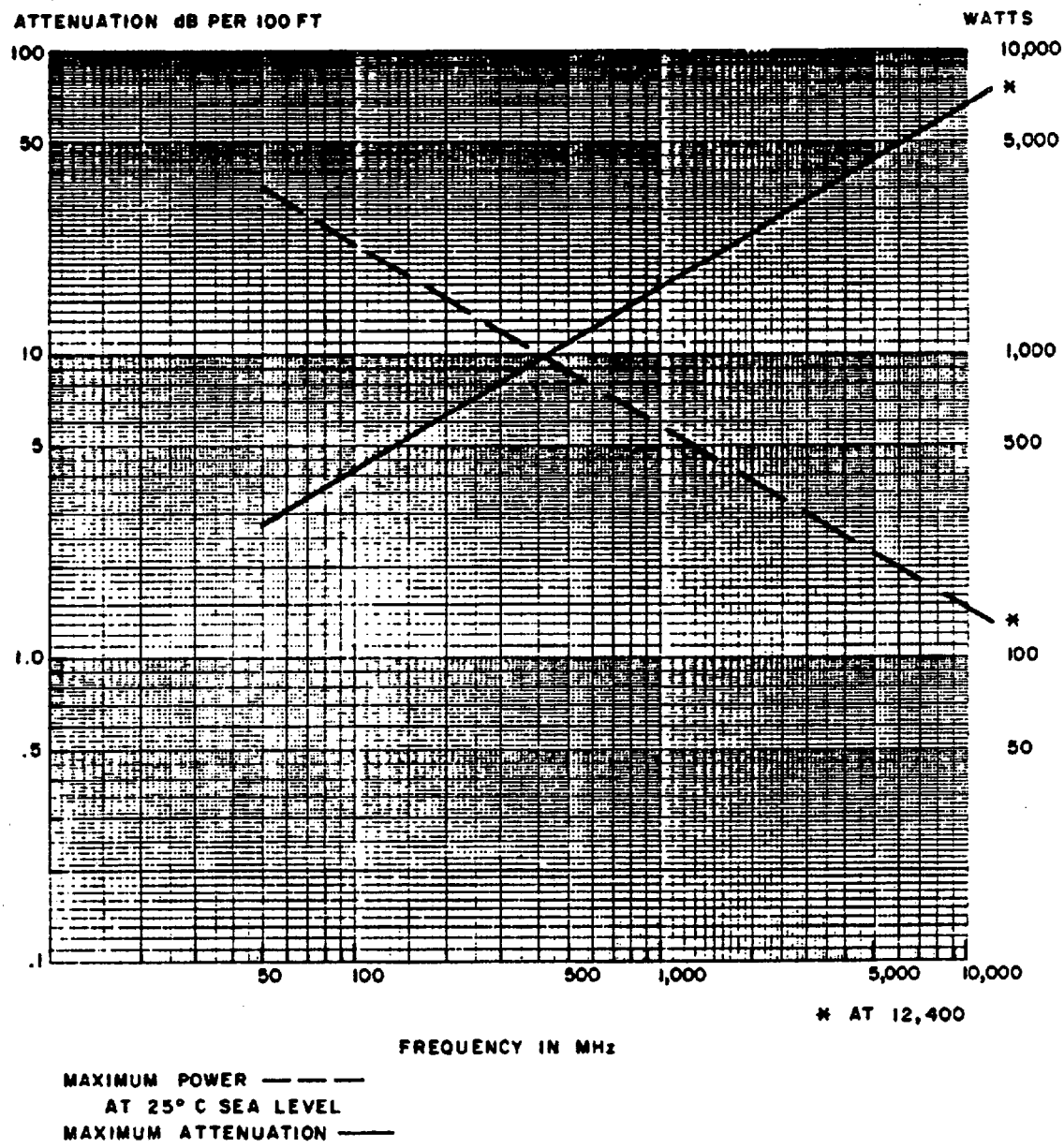

FIGURE 2. Power rating and attenuation.

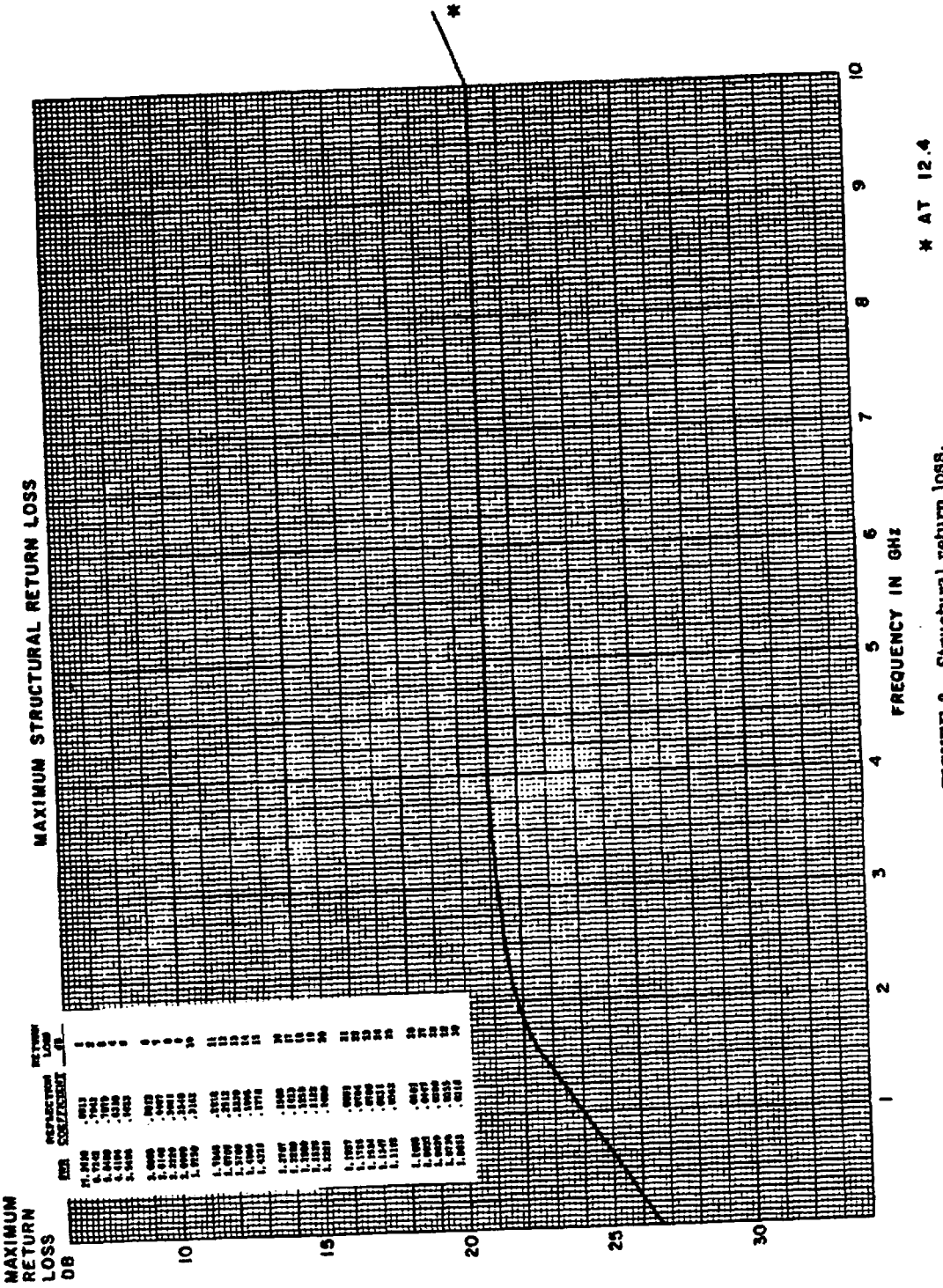

FIGURE 3. Structural return loss.

Custodians:
Army - EL
Navy - EC
Air Force - 95

Review activities:
Army - EL, MU, MI
Navy - SH, EC
Air Force - 11, 17, 99, 85
DLA - ES

User activities:
Army - ME, AT, SG
Navy - AS, OS, MC
Air Force - 19

Preparing activity:
Army - EL

Agent:
DLA - ES

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