

MILITARY SPECIFICATION SHEET

CABLES, RADIO FREQUENCY, FLEXIBLE, TRIAXIAL,
75 OHMS, M17/116-RG307

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.

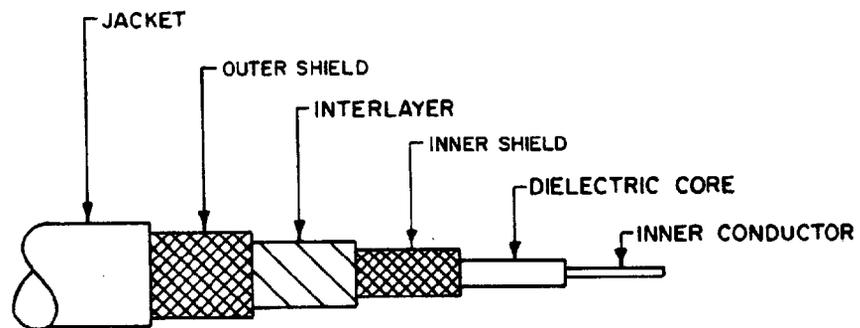


FIGURE 1. Configuration.

TABLE I. Description.

Components	Construction details
Inner conductor	Nineteen strands of silver-coated, copper wire each strand 0.0058 inch. Overall diameter: .029 inch \pm .001.
Dielectric core	Type A-4: Foamed polyethylene. Diameter: .146 inch \pm .003.
Inner shield	Single braid of AWG #34, silver-coated, copper wire. Diameter: .176 inch, maximum. Coverage: 94.6%, nominal. Carriers: 16 Ends: 7 Picks/inch: 8.2 \pm 10%
Interlayer	Urethane elastomer. Diameter: .205 inch \pm .005.
Outer shield	Single braid of AWG #34, silver-coated, copper wire. Diameter: .237 inch maximum. Coverage: 91.5%, nominal. Carriers: 16 Ends: 8 Picks/inch: 9.0 \pm 10%
Jacket	Type IIIa Diameter: .265 inch \pm .005.

Engineering information:

Continuous working voltage: 600 Vrms, maximum.
 Operating frequency: 1 GHz, maximum.
 Velocity of propagation: 79 percent, nominal.
 Power rating: See figure 2.
 Operating temperature range: -55° to +80°C.
 Inner conductor properties:
 DC resistance (maximum at 20°C) 1.75 ohms per 100 feet.
 Elongation: 10 percent minimum.
 Engineering notes: This cable useful in pulse applications (see connector per MIL-C-3607).

REQUIREMENTS:

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

Environmental and mechanical:

Adhesion of conductors:
 Inner conductor to core: 4 pounds minimum, 8 pounds maximum.
 Aging stability: +90° \pm 2°C.
 Stress crack resistance: Not applicable.
 Outer conductor integrity: Not applicable.
 Cold bend: -55° \pm 2°C.
 Dimensional stability: +85° \pm 2°C.
 Inner conductor from core: .062 inch, maximum.
 Inner conductor from jacket: .125 inch, maximum.
 Contamination: Not applicable.
 Bendability: Not applicable.
 Weight: 8 pounds per 100 feet, maximum.

Electrical:

Spark test: 5,000 Vrms +25%, -0%.
 Voltage withstanding: 1,000 Vrms.
 Insulation resistance: 500 megohms.

Corona extinction voltage: Not applicable.
 Characteristic impedance: 75 ohms \pm 4.
 Attenuation: 7.5 dB per 100 feet maximum at 400 MHz.
 Structural return loss: Not applicable.
 Capacitance: 19.7 pF per foot, maximum.
 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
M17/116-RG307	RG307/U

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

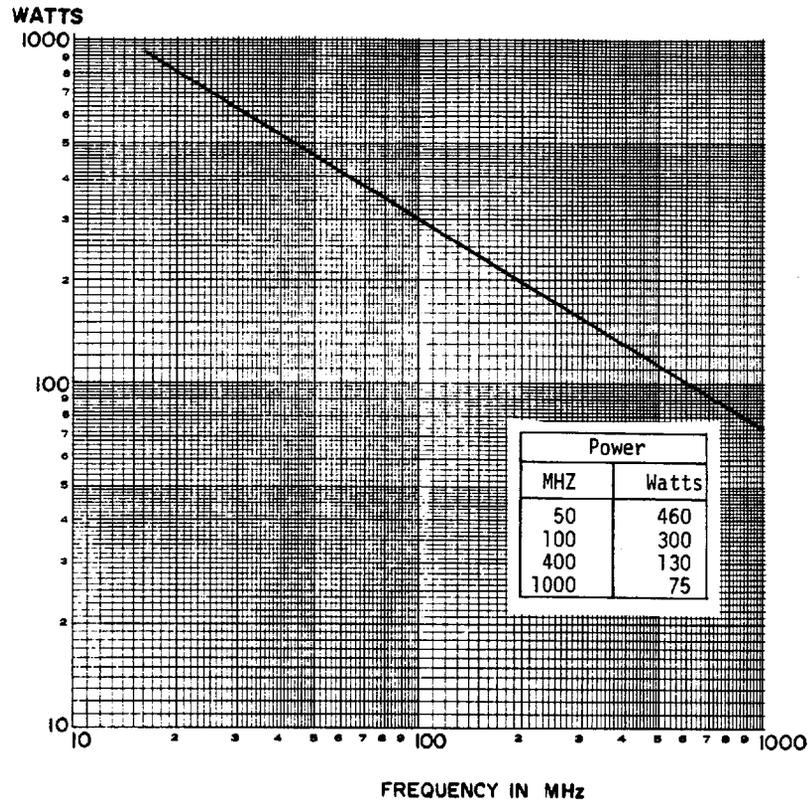


FIGURE 2. Maximum power at 25°C sea level.

Custodians:

Army - CR
Navy - EC
Air Force - 85

Review activities:

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

User activities:

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

Preparing activity:

Army - CR

Agent:

DLA - ES

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