

MILITARY SPECIFICATION SHEET  
CABLES, RADIO FREQUENCY, FLEXIBLE, COAXIAL,  
93 OHMS, M17/97-RG210

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.

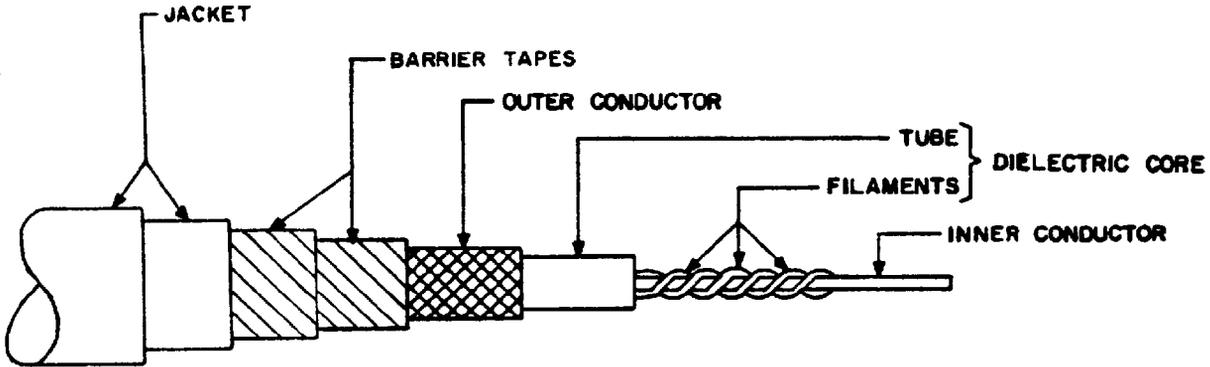


FIGURE 1. Configuration.

© denotes changes.

FSC 6145

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

TABLE I. Description.

Component	Construction details
Inner conductor	Solid, silver-coated, copper-covered steel wire. Diameter: .0253 inch $\pm$ .0010.
Dielectric core	Type F-4: Air-spaced PTFE. A braid of four filament threads .028 inch approximate diameter each, with 2 picks/inch approximate, under two wraps, .005 inch thick each, with a 50% minimum overlap. Diameter: .146 inch $\pm$ .005.
Outer conductor	Single braid of AWG No. 34, silver-coated copper wire. Diameter: .191 inch maximum.  Alternate  Coverage: 94.3% nominal      96.5% nominal Carriers: 16                      24 Ends: 7                              5 Picks/inch: 8.2 $\pm$ 10%      12.3 $\pm$ 10%
Barrier tapes	Type FF-2: Two wraps of PTFE tape, .005-inch thick each, by 1/2 -inch wide, with a 50% overlap, minimum.
Jacket	Type V: Double braid of fiberglass. Diameter: .242 inch $\pm$ .008.

C

## ENGINEERING INFORMATION:

Continuous working voltage: 750 V rms, maximum.

Operating frequency: 3 GHz, maximum.

Velocity of propagation: 88 percent, nominal.

Power rating: See figure 2.

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

Inner conductor properties:

DC resistance (maximum at 20°C): 4.4 ohms per 100 feet.

Elongation: 1 percent, minimum.

Tensile strength: 110 klbf/inch<sup>2</sup>, minimum.

Engineering note: This cable useful in low capacitance, high temperature applications (see connector series "TNC" and "BNC" per MIL-C-39012.)

## REQUIREMENTS:

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

Environmental and mechanical:

C

Visual and mechanical inspection:

Out-of-roundness: Not applicable.

Eccentricity: Not applicable.

Adhesion of conductors: Not applicable.

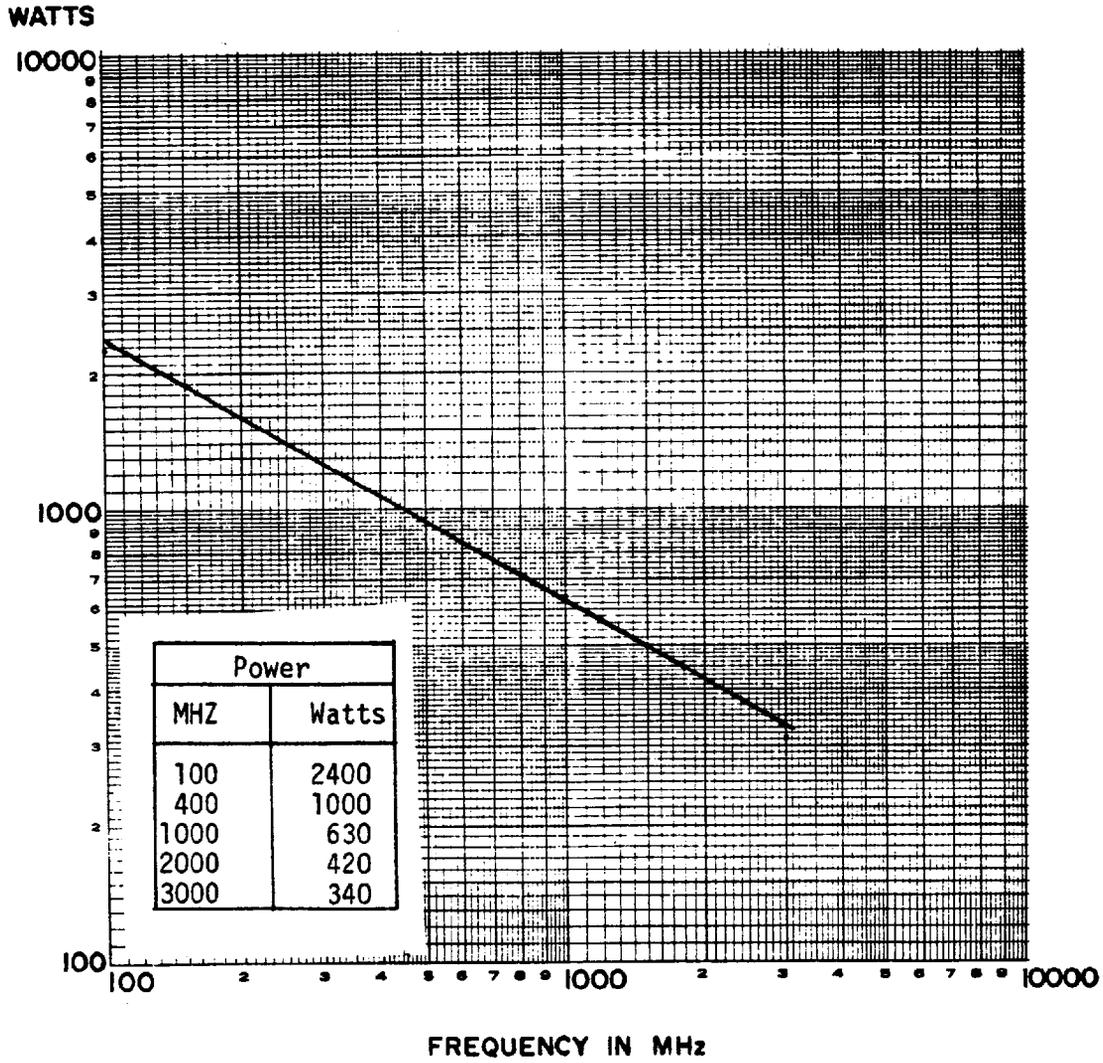


FIGURE 2. Power rating at 25°C at sea level.

Aging stability: +250°C ±5°C.  
 Stress crack resistance: Not applicable.  
 Outer conductor integrity: Not applicable.  
 Cold bend: -55°C ±2°C.  
 Dimensional stability: Not applicable.  
 Contamination: Not applicable.  
 Bendability: Not applicable.  
 Flammability: Not applicable.  
 Weight: 5 pounds per 100 feet, maximum.

Electrical:

- Ⓒ Continuity: Applicable.
- Ⓒ Spark test: Not applicable
- Ⓒ Voltage withstanding: 3,000 V rms, +10%, -0%.  
 Insulation resistance: Not applicable.  
 Corona extinction voltage: Not applicable.  
 Characteristic impedance: 93 ohms ±5.  
 Attenuation: 8 dB per 100 feet, maximum, at 400 MHz.  
 Structural return loss: Not applicable.  
 Capacitance: 14.5 pF per foot, maximum.  
 Capacitance stability: ±3 percent.  
 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
M17/97-RG210	RG210/U

Custodians:

Army - CR  
Navy - EC  
Air Force - 85

Preparing activity:  
Army - CR

(Project 6145-0911-21)

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