

RG058

MIL-C-17/288  
15 March 1977  
SUPERSEDING  
MIL-C-17/28A  
28 February 1964

# MILITARY SPECIFICATION SHEET

CABLES, RADIO FREQUENCY, FLEXIBLE, COAXIAL,  
50 OHMS, M17/028-RG058

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.

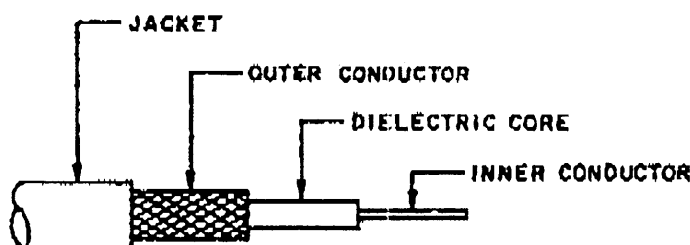


FIGURE 1. Configuration.

TABLE 1. Description.

Components	Construction details
Inner conductor	Nineteen strands of tinned copper wire, each strand 0.0072 inch diameter. Overall diameter: 0.0355 inch $\pm 0.0020$ .
Dielectric core	Type A-1: Solid polyethylene. Diameter: 0.116 inch $\pm 0.004$ .
Outer conductor	Single braid of AWG #36 tinned copper wire. Diameter: 0.150 inch maximum. 3.81 -- <div style="text-align: right;"><u>Alternate</u></div> <div style="display: flex; justify-content: space-between;"> <div>Coverage : 92.8% nominal</div> <div>94.2% nominal</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Carriers : 12</div> <div>16</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Ends : 9</div> <div>7</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Picks/inch : 7.7 <math>\pm 10\%</math></div> <div>10.3 <math>\pm 10\%</math></div> </div>
Jacket	Type Iia: PVC. Diameter: 0.195 inch $\pm 0.004$ . 4.95 --

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ENGINEERING INFORMATION:

Capacitance: 30.8 pF per foot, nominal.  
Continuous working voltage: 1,400 Vrms, maximum.  
Operating frequency: 1 GHz, maximum.  
Velocity of propagation: 65.9 percent, nominal.  
Power rating: See figure 2.  
Operating temperature range: -40° to +85°C.  
Weight: 0.029 pound per foot, nominal.  
Inner conductor properties:  
DC resistance (maximum at 20°C): 1.480 ohms per 100 feet.  
Elongation: 20  $\pm 2.5$  percent.  
Engineering notes: This cable useful in general purpose low temperature applications.  
(See connector series "TNC", "BNC", and "SMA" per MIL-C-39012.  
NATO preferred type NWR-2.)

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; 12 pounds, maximum.

Aging stability: +98°  $\pm 2^\circ$ C.

Dimensional stability: +85°  $\pm 2^\circ$ C.

Inner conductor from core: 0.062 inch, maximum.

Inner conductor from jacket: 0.125 inch, maximum.

Contamination: Applicable.

Electrical:

Test frequency: 10 MHz to 1 GHz.

Spark test: 5,000 Vrms, minimum.

Voltage withstanding: 5,000 Vrms, minimum.

Corona extinction voltage: 1,900 Vrms, minimum.

Characteristic impedance: 50 ohms  $\pm 2$ .

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
M17/028-RG058	RG-58C/U