

MILITARY SPECIFICATION SHEET

CABLES, RADIO FREQUENCY, FLEXIBLE, COAXIAL,
 50 OHMS, M17/169-00001

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.

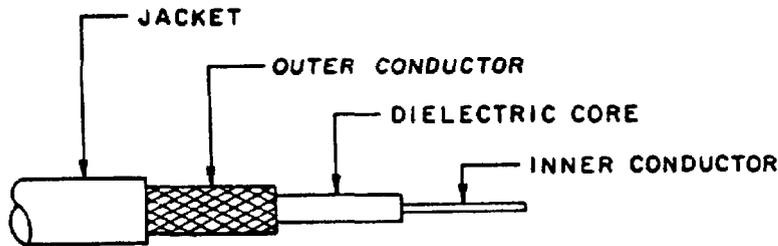


FIGURE 1. Configuration.

TABLE I. Description.

Component	Construction details
Inner conductor	Seven strands of silver-coated, annealed-copper-covered steel wire, each strand .004 inch diameter. Overall diameter: .012 inch \pm .001.
Dielectric core	Type F-1: Solid, extruded PTFE. Diameter: .033 inch \pm .002.
Outer conductor	Single braid of AWG No. 38 silver-coated copper wire. Diameter: .054 inch, maximum. Coverage : 95.9% nominal Carriers : 16 Ends : 3 Picks/inch: 25.0 \pm 10%
Jacket	Type IX: FEP. Diameter: .071 inch \pm .004. Color: White

CAUTION IS DIRECTED TO THE APPLICATION OF THIS CABLE ABOVE 400 MHZ. ATTENUATION IS TESTED ONLY AT 400 MHZ. SRL AND POWER HANDLING CAPABILITIES ARE NOT STIPULATED HEREIN.

(A) denotes changes

FSC 6145

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

ENGINEERING INFORMATION:

Continuous working voltage: 750 V rms, maximum.

Velocity of propagation: 69.5 percent, nominal.

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

Inner conductor properties:

DC resistance (maximum at 20°C): 24.45 ohms per 100 feet.

Elongation: 10 percent, minimum.

Tensile strength: Not applicable.

Engineering note: This cable is useful in general purpose, high temperature applications. (See connector series "SMA", "SMB", and "SMC" per MIL-C-39012.)

REQUIREMENTS:

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

Environmental and mechanical:

Visual and mechanical examination:

Out-of-roundness: Not applicable.

Eccentricity: 10 percent, maximum.

Adhesion of conductors:

Inner conductor to core: 1.5 pounds, minimum; 4 pounds, maximum.

Aging stability: Not applicable.

Stress crack resistance: +230°C ±5°C for 96 hours; mandrel size 7-1/2 times the jacket diameter.

Outer conductor integrity: Not applicable.

Ⓐ Cold bend: -55°C ±2°C.

Ⓐ Dimensional stability: +200°C ±5°C.

Inner conductor from core: 0.125 inch, maximum.

Inner conductor from jacket: 0.187 inch, maximum.

Contamination: Not applicable.

Bendability: Not applicable.

Flammability: Applicable.

Weight: 0.0063 pound per foot, maximum.

Electrical:

Continuity: Applicable.

Ⓐ Spark test: 2,000 V rms, +10%, -0%.

Ⓐ Voltage withstanding: 2,000 V rms, +10%, -0%.

Insulation resistance: Not applicable.
 Corona extinction voltage: 1,000 V rms, minimum.
 Characteristic impedance: 50 ohms \pm 2.
 (A) Attenuation: 33 dB/100 ft maximum at 400 MHz.
 Structural return loss: Not applicable.
 Capacitance: 32 pF per foot, maximum.
 Capacitance stability: Not applicable.
 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
M17/169-00001	RG-178B/U per MIL-C-17D; RG-196A/U per MIL-C-17/71 (canceled)

Custodians:
 Army - CR
 Navy - EC
 Air Force - 85

Preparing activity:
 Army - CR
 (Project 6145-0911-42)

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