

MILITARY SPECIFICATION SHEET

CABLES, RADIO FREQUENCY, FLEXIBLE, COAXIAL,
50 OHMS, M17/168-00001 AND M17/168-00002

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.

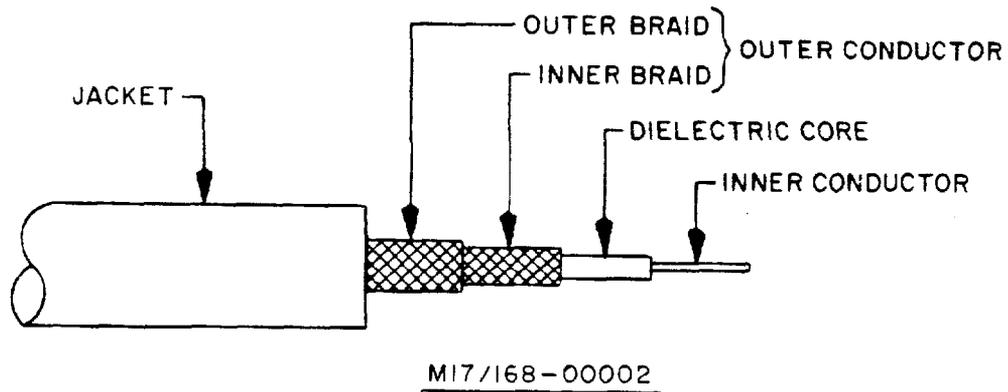
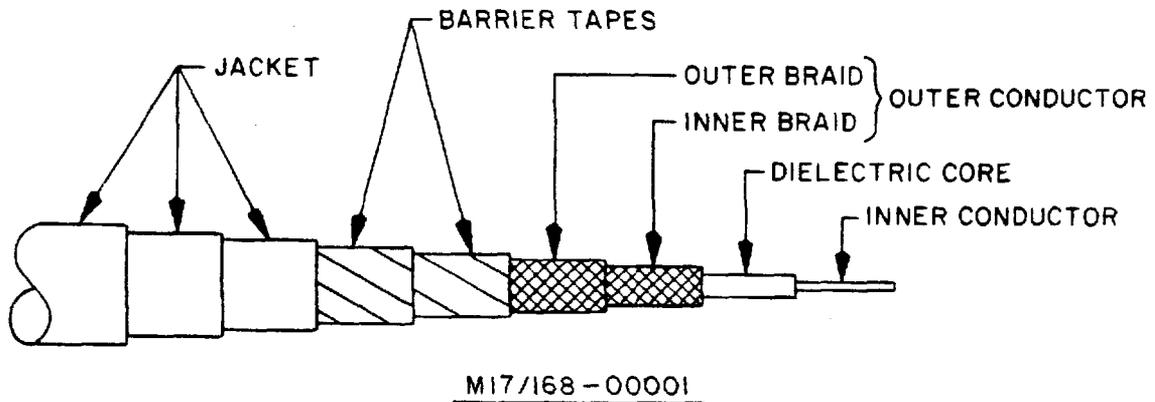


FIGURE 1. Configurations.

TABLE I. Description.

Components	Construction details
Inner conductor	Seven strands of silver-coated, copper wire .028 inch each. Overall diameter: .084 inch \pm .001.
Dielectric core	Type F-2: Diameter: .255 inch \pm .005.
Outer conductor	Double braid of AWG 34, silver-coated, copper wire. Diameter: .325 inch maximum.
Inner braid	Coverage : 91.8% nominal Carriers : 24 Ends : 6 Picks/inch: 14.0 \pm 10%
Outer braid	Coverage : 91.9% nominal Carriers : 24 Ends : 6 Picks/inch: 15.5 \pm 10%
Barrier tapes	Type FF-2: Two wraps of PTFE tape, .005 inch thick each, by 1-inch wide. Each wrap of PTFE tape is to be applied with a 50% minimum overlap.
Jacket	M17/168-00001 type V: Three braids. Diameter: .415 inch \pm .015. M17/168-00002 type FEP Diameter .344 \pm .010 applied directly over outer braid, barrier tapes not required.

ENGINEERING INFORMATION:

Continuous working voltage: 3,700 V rms, maximum.

Velocity of propagation: 70 percent, nominal.

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

Inner conductor properties:

DC resistance (maximum at 20°C): 0.199 ohm per 100 feet.

Elongation: 25 percent, minimum.

Tensile strength: Not applicable.

Engineering note: This cable is useful in general purpose high temperature applications.

REQUIREMENTS:

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

Environmental and mechanical:

Visual and mechanical examination: Applicable.

Out-of-roundness: Not applicable.

Eccentricity: 10 percent, maximum.

Adhesion of conductors:

Inner conductor to core: Not applicable.

Aging stability:

M17/168-00001: +230°C ±5°C.

M17/168-00002: Not applicable.

Stress crack resistance:

M17/168-00001: Not applicable.

M17/168-00002: +230°C ±5°C for 96 hours, mandrel size 7-1/2 times the jacket diameter.

Outer conductor integrity: Not applicable.

Cold bend: -35°C ±2°C.

Dimensional stability: +200°C ±5°C.

Inner conductor from core:

M17/168-00001: Not applicable.

M17/168-00002: Not applicable.

Inner conductor from jacket:

M17/168-00001: Not applicable.

M17/168-00002: 0.312 inch, maximum.

Contamination: Not applicable.

Bendability: Not applicable.

Flammability: Applicable.

Weight: 0.185 pound per foot, maximum.

Electrical:

Continuity: Applicable.

Spark test:

M17/168-00001: Not applicable.

M17/168-00002: 2,000 V rms +25 percent, -0 percent.

Voltage withstanding: 10,000 V rms, minimum.

Insulation resistance: Not applicable.
 Corona extinction voltage: 5,000 V rms, minimum.
 Characteristic impedance: 50 ±2 ohms.
 Attenuation: 5.2 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.
 Phase stability: Not applicable.
 Mechanically induced noise voltage: Not applicable.
 Time delay: Not applicable.

Part numbers: See table II.

Supersession data: See table II.

TABLE II. Cross reference of part number.

Part number	Superseded part number
M17/168-00001	RG-115A/U per MIL-C-17D
M17/168-00002	---

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

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

Preparing activity:
 Army - CR
 (Project 6145-0889)

Review activities:
 Army - MI
 Navy - SH
 Air Force - 11, 17, 99, 80
 DLA - ES, IS

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

Agent:
 DLA - ES