

MIL-C-17/77C
18 July 1985
~~SUPERSEDING~~
MIL-C-17/77B
27 April 1981

MILITARY SPECIFICATION SHEET
CABLES, RADIO FREQUENCY, FLEXIBLE, COAXIAL,
75 OHMS, M17/77-RG216

THIS CABLE USES PVC MATERIAL AND IS NOT
TO BE USED IN AEROSPACE APPLICATIONS.

NOTE: THE AIR FORCE HAS RESTRICTED THE USE OF PVC IN
AEROSPACE AND GROUND SUPPORT APPLICATIONS. CABLES
WITH PVC JACKETING SHALL BE USED FOR RETROFIT PURPOSES
ONLY UNTIL AN ALTERNATE JACKET IS APPROVED.

This specification is approved for use by all Depart-
ments 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.

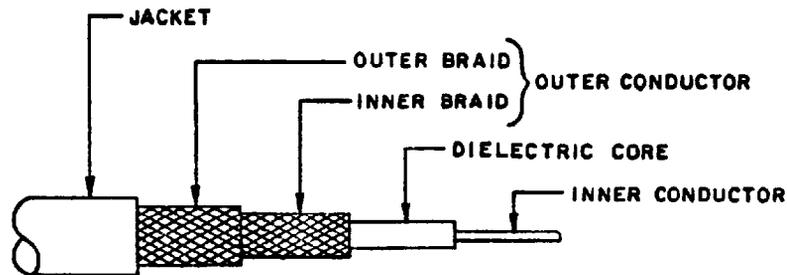


FIGURE 1. Configuration.

Ⓒ denotes changes

FSC 6145

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

TABLE I. Description.

Component	Construction details
Inner conductor	Seven strands of tinned, copper wire at .0159 inch each. Overall diameter: .0477 inch \pm .0020.
Dielectric core	Type A-1: Solid polyethylene Diameter: .285 inch \pm .007.
Outer conductor:	Double braid of AWG size 34 copper wire. Diameter: .360 inch maximum.
Inner braid	Coverage : 95.4% nominal Carriers : 24 Ends : 9 Picks/inch: 6.5 \pm 10%
Outer braid	Coverage : 93.6% nominal Carriers : 24 Ends : 8 Picks/inch: 10.3 \pm 10%
Jacket	Type IIa: PVC. Diameter: .425 inch \pm .007.

ENGINEERING INFORMATION:

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

Operating frequency: 3 GHz maximum.

Velocity of propagation: 65.9 percent, nominal.

Power rating: See figure 2.

Operating temperature range: -40°C to +85°C.

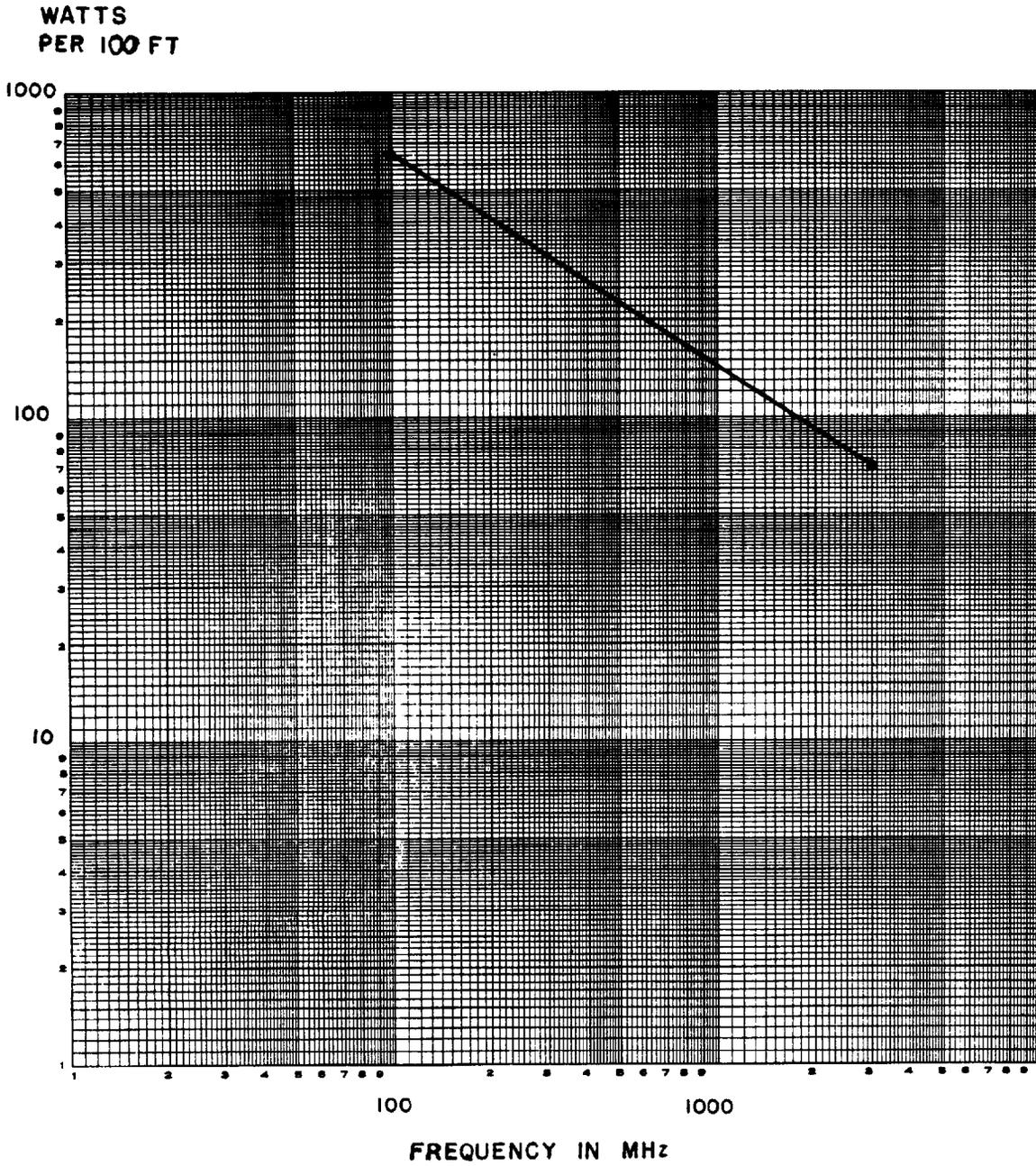
Inner conductor properties:

DC resistance (maximum at 20°C): 0.66 ohm per 100 feet.

Elongation: 15 percent, minimum.

Ⓒ Tensile strength: Not applicable.

Engineering note: This cable is useful in general purpose low temperature applications. (See connector series "N", per MIL-C-39012). This cable tends to degrade as it ages.



Maximum power at 25°C, sea level

MHz	Watts
100	650
400	270
1000	150
2000	90
3000	70

FIGURE 2. Power rating.

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: 7 pounds, minimum; 50 pounds, maximum.

Aging stability: +98°C ±2°C.

Stress crack resistance: Not applicable.

Outer conductor integrity: Not applicable.

Ⓒ Cold bend: -40°C ±2°C.

Dimensional stability: +85°C ±2°C.

Inner conductor from core: .062 inch, maximum.

Inner conductor from jacket: .125 inch, maximum.

Contamination: Applicable.

Bendability: Not applicable.

Flammability: Not applicable.

Weight: 12.4 pound per 100 feet, maximum.

Electrical:

Continuity: Applicable.

Ⓒ Spark test: 5,000 V rms, +10%, -0%.

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

Insulation resistance: Not applicable.

Corona extinction voltage: 5.000 V rms, minimum.

Characteristic impedance: 75 ohms ±3.

Attenuation: 6.5 dB per 100 feet, maximum, at 0.4 GHz; 23.0 dB per 100 feet, maximum, at 3.0 GHz.

Structural return loss: Not applicable.

Capacitance: 22 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: M17/77-RG216.

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

Preparing activity:
Army - CR
(Project 6145-0911-14)

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