

MIL-C-17/658
15 March 1977
SUPERSEDING
MIL-C-17/65A
28 February 1964
MIL-C-17/66
7 September 1955

MILITARY SPECIFICATION SHEET

CABLES, RADIO FREQUENCY, FLEXIBLE COAXIAL, 50 OHMS
UNARMORED MIL/065-RG165, AND ARMORED, MIL/065-RG166.

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the cables described herein shall consist of this document and the latest issue of Specification MIL-C-17.

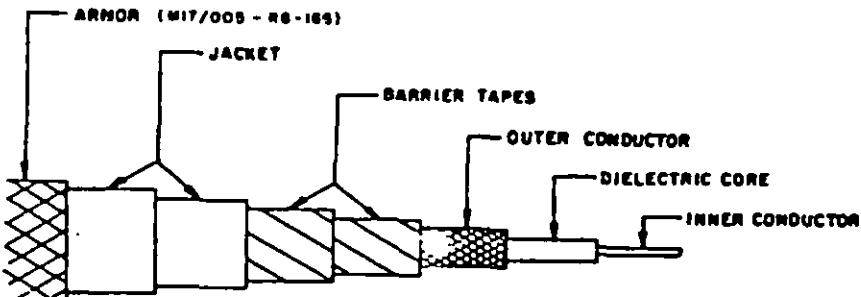


FIGURE 1. Configuration.

TABLE I. DESCRIPTION.

Components	Construction details
Inner conductor	Seven strands of silver-coated copper wire each strand, 0.0315 inch diameter Overall diameter: 0.094 inch ± 0.001
Dielectric core	Type F-1: Solid, extruded PTFE. Diameter: 0.285 inch ± 0.005 .
Outer conductor	Single braid of AWG #34 silver-coated copper wire. Diameter: 0.340 inch maximum. Coverage: : 93.2% nominal. Carriers : 24 Ends : 6 Picks/inch : 16.6 $\pm 10\%$
Barrier tapes	Type FF-2: Two wraps of PTFE type, 0.005 inch thick each, by 1-inch width with an approximate lay of 24 turns per foot and with 1/2 inch lap.
Jacket	Type V: Double braid of fiberglass. Diameter: 0.410 inch ± 0.010 .
Armor (MIL/065-RG166)	Single braid of aluminum-alloy wire. Diameter: 0.470 inch maximum.

ENGINEERING INFORMATION:

Capacitance: 29.3 pF per foot, nominal.
 Continuous working voltage: 3,700 Vrms, maximum.
 Operating frequency: 3 GHz, maximum.
 Velocity of propagation: 69.5 percent, nominal.
 Power rating: See figure 2.
 Operating temperature range: -55° to +250°C.
 Weight: MIL-065-RG165 - 0.142 pound per foot, nominal.
 MIL-065-RG166 - 0.189 pound per foot, nominal.
 Inner conductor properties:
 DC resistance (maximum at 20°C): 0.170 ohms per 100 feet.
 Elongation: 25 percent, minimum.
 Engineering notes: This cable useful in general purpose high temperature applications.
 (MIL-065-RG165, see connector series "N", "C", and "SC" per
 MIL-C-39012. NATO preferred type KWR-10.) (MIL-065-RG166,
 see connector series "N", "C", per MIL-C-39012, "MN" per
 MIL-C-3650.)

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; 30 pounds, maximum.
 Aging stability: +250° +5°C.
 Dimensional stability: +250° +5°C.
 Inner conductor from core: 0.312 inch, maximum.
 Inner conductor from jacket: 0.125 inch, maximum.
 Flammability: Applicable.

Electrical:

Test frequency: 50 MHz to 3 GHz.
 Spark test: Not applicable.
 Voltage withstanding: 6,500 Vrms, minimum.
 Corona extinction voltage: 2,500 Vrms, minimum.
 Characteristic impedance: 50 ohms ±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
MIL-065-RG165	RG-165/U
MIL-065-RG166	RG-166/U

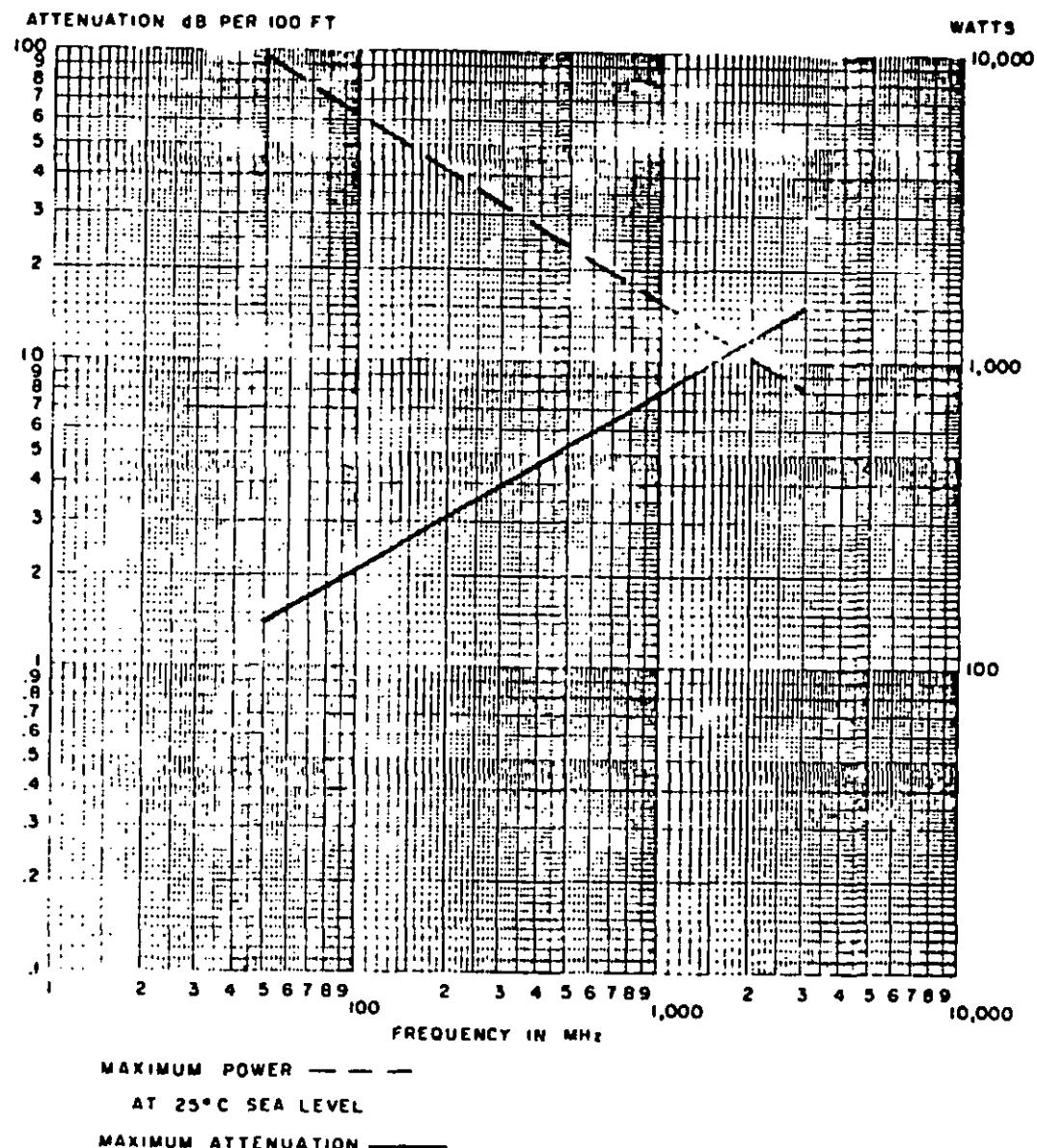


FIGURE 2. Power rating and attenuation.

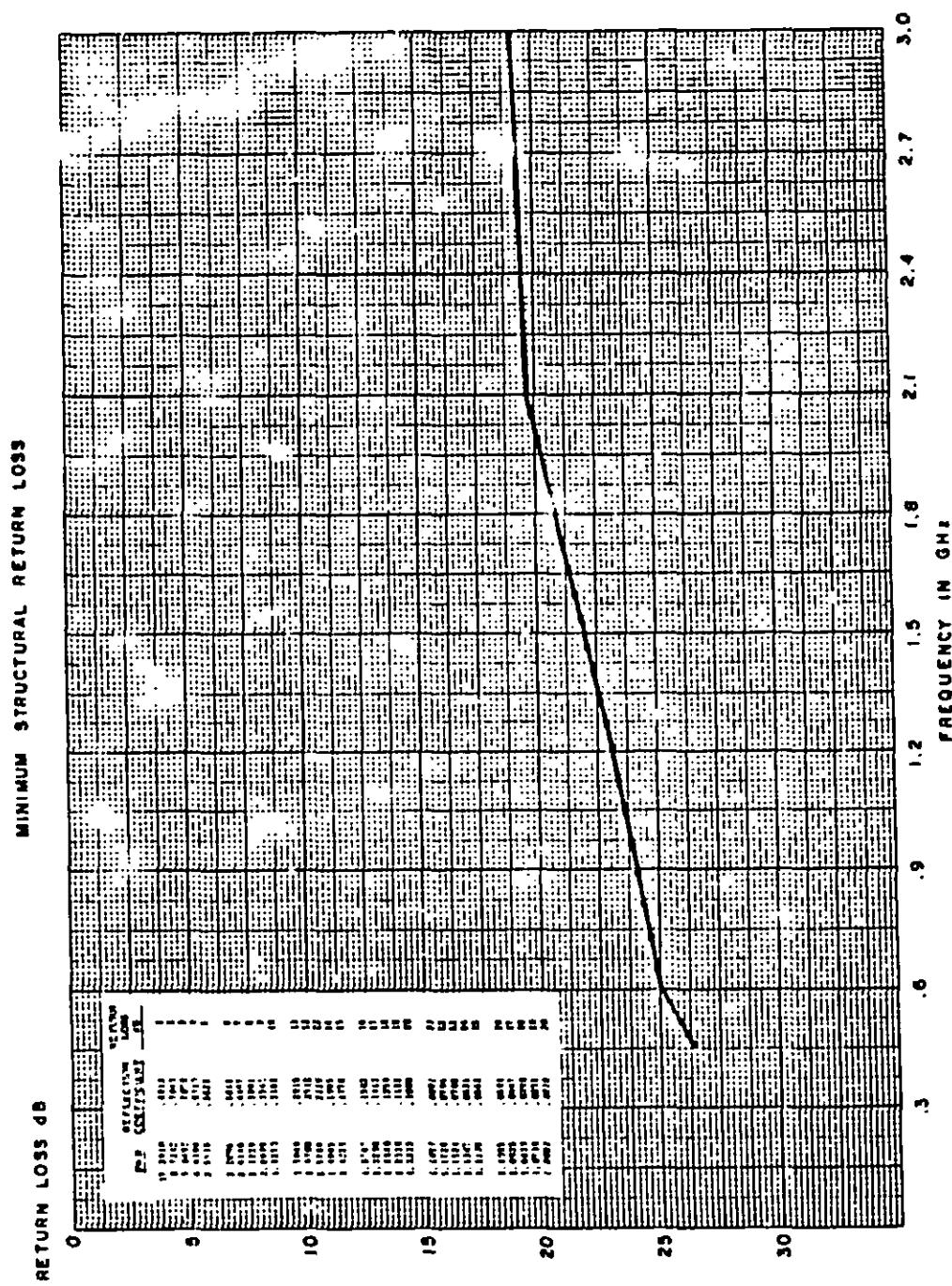


FIGURE 3. Structural return loss.

Custodians:

Army - EL
Navy - EC
Air Force - OS

Review activities:

Army - EL, MU, MI
Navy - SH, EC
Air Force - 11, 17, 99, OS
DLA - ES

User activities:

Army - ME, AT, SG
Navy - AS, OS, MC
Air Force - 19

Preparing activity:

Army - EL

Agent:

DLA - ES

(Project 6145-0689-7)

To detach this form, cut along this line

SPECIFICATION ANALYSIS SHEET		Form Approved Budget Bureau No. 23-R255
INSTRUCTIONS: This sheet is to be filled out by personnel, either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.		
SPECIFICATION MIL-C-17/65B CABLES, RADIO FREQUENCY, FLEXIBLE COAXIAL, 50 OHMS UNARMORED M17/065-RG165, AND ARMORED, M17/065-RG166.		
ORGANIZATION		
CITY AND STATE	CONTRACT NUMBER	
MATERIAL PROCURED UNDER A <input type="checkbox"/> DIRECT GOVERNMENT CONTRACT <input type="checkbox"/> SUBCONTRACT		
1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE? A. GIVE PARAGRAPH NUMBER AND ROLLING.		
B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES		
2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID		
3. IS THE SPECIFICATION RESTRICTIVE? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (If "yes", in what way?)		
4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place back in an envelope addressed to preparing activity)		
SUBMITTED BY (Printed or typed name and activity - Optional)	DATE	

DD FORM 1426
1 JAN 68

REPLACES EDITION OF 1 OCT 66 WHICH MAY BE USED.
ESC-PN 1068-68