

INCH-POUND

MIL-DTL-28830/5E

4 June 2009

SUPERSEDING

MIL-DTL-28830/5D

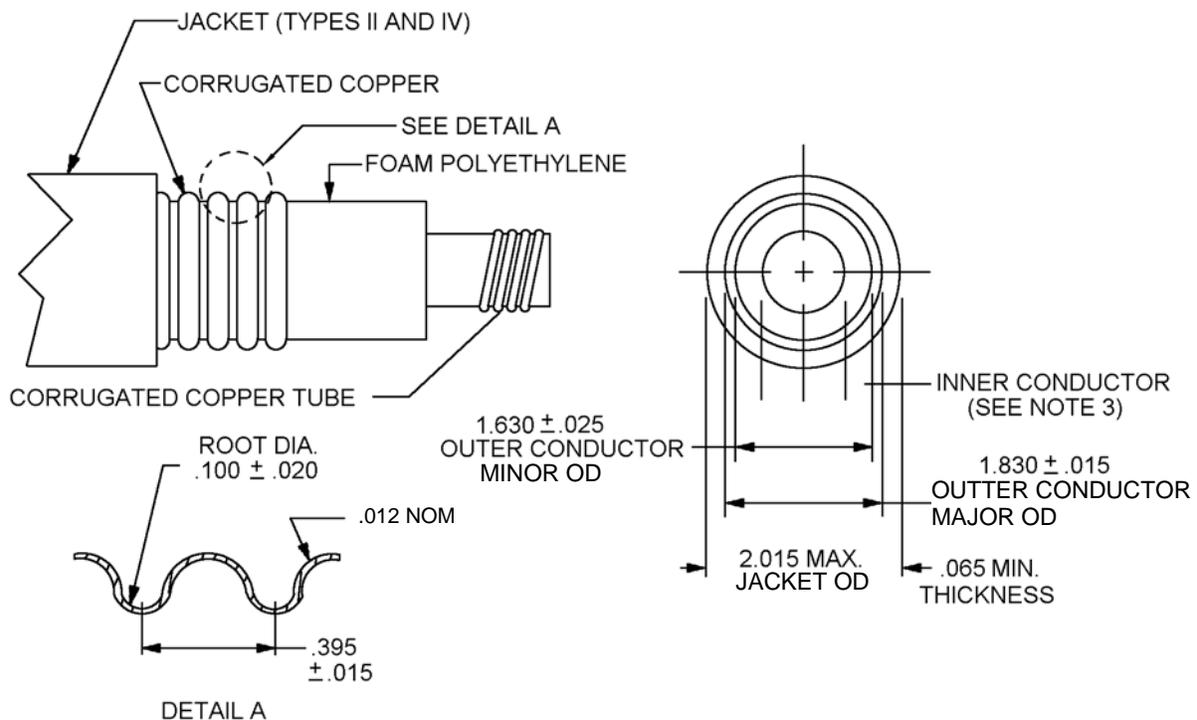
07 April 2006

DETAIL SPECIFICATION SHEET

CABLES, RADIO FREQUENCY, COAXIAL, SEMIRIGID, CORRUGATED OUTER CONDUCTOR, LOW LOSS FOAM DIELECTRIC, 1.625 INCH NOMINAL, 50 OHMS

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

The requirements for acquiring the product described herein shall consist of this specification sheet and [MIL-DTL-28830](#).



Inches	mm	Inches	mm	Inches	mm
.010	.254	.025	.635	1.63	41.40
.015	.381	.065	1.65	1.83	46.48
.018	.457	.100	2.54	2.01	51.05
.019	.483	.395	10.03		
.020	.508	.400	10.16		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Helically corrugated inner conductor with outside diameter of $.693 \pm .008$ inch. Strip thickness of $.010$ inch, nominal, minor diameter of $.626 \pm .012$ inch, and pitch of $.400 \pm .004$ inch.

FIGURE 1. Cable configuration.

AMSC N/A

FSC 6145

ENGINEERING INFORMATION:

Weight:

Type II jacketing: 0.8 lb/ft, nominal.

Type IV jacketing: 1.15 lb/ft, nominal.

Minimum in-service bending diameter: 40 inches (1.02 meter).

Operating voltage: 5,600 V rms.

Average power rating: See figure 2.

Operating temperature: -50 °C to +85 °C

REQUIREMENTS:

Design and construction: See figure 1.

Flexibility and cold bend mandrel diameter:

40 inches (1.02 meter), maximum.

Test cable length: 30 feet (9.1 meters).

Impedance: 50 \pm 1 ohms.

Attenuation: See figure 2.

Velocity of propagation: 90% nominal .

Capacitance: 22.5 pf/ft, maximum.

Voltage standing wave ratio (VSWR): 1.70, maximum.

VSWR frequency range: 100 MHz to 2.4 GHz.

Dielectric withstanding voltage: 15,000 V dc

Jacket spark:

Type II jacketing: 10,000 V rms.

Type IV jacketing: 8,000 V rms.

Acid gas generation (type IV only): 2.0 maximum.

Halogen content (type IV only): 0.2 maximum.

Smoke index (type IV only): 35 maximum.

Toxicity index (type IV only): 5 maximum.

Tensile strength and elongation:

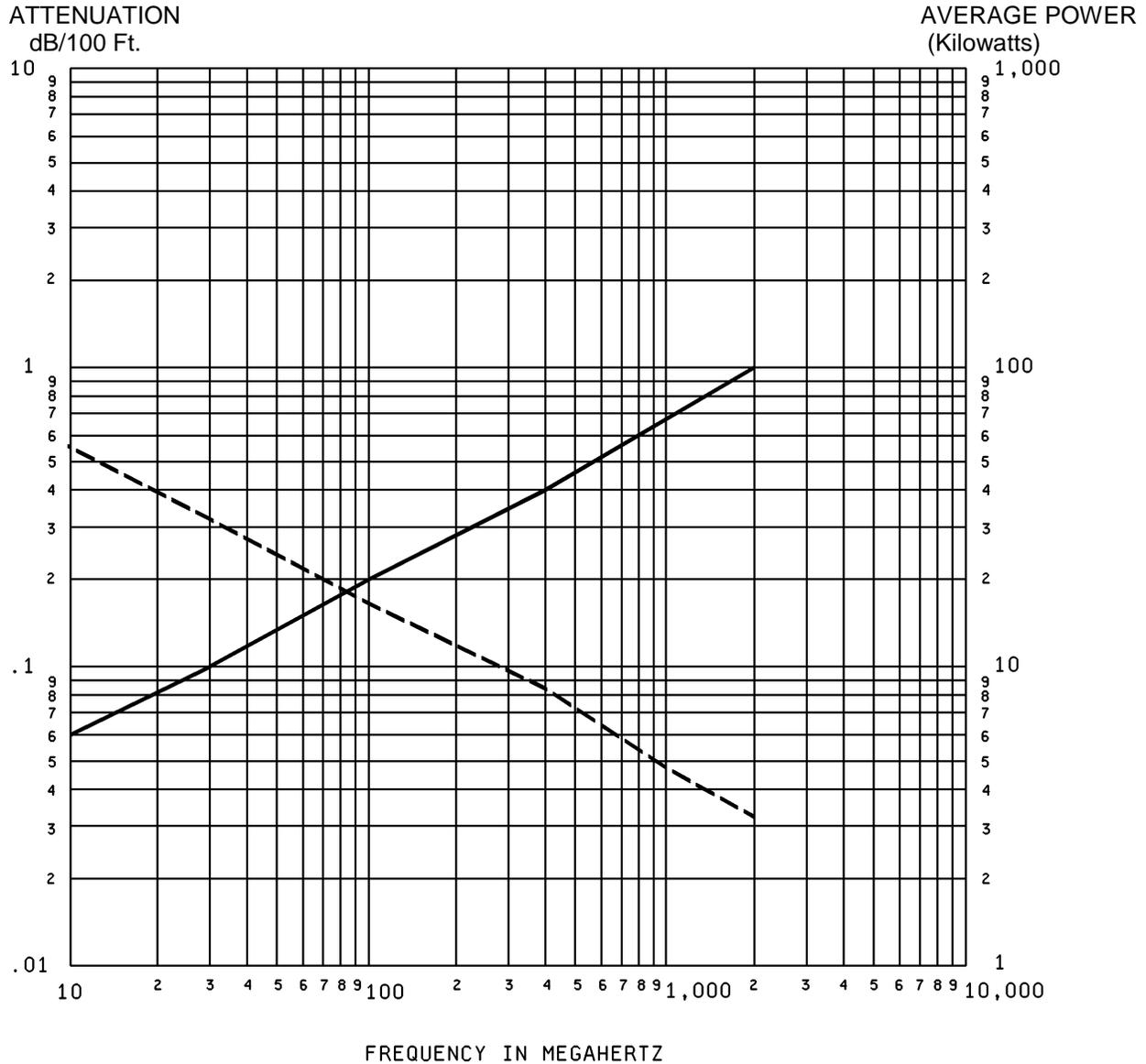
Type II jacketing: 2,100 psi and 700 percent elongation, minimum.

Type IV jacketing: 1,200 psi and 115 percent elongation, minimum.

Part or Identifying Number (PIN):

MIL-DTL-28830/5E

M28830/5-II (old design)
 M28830/5-II-A (new design)
 M28830/5-IV (old design)



Standard conditions for average power and attenuation:

For average power: -----
 VSWR: 1.0
 Ambient temperature: 40°C
 Inner conductor temperature: 100°C
 For attenuation: _____
 VSWR: 1.0
 Ambient temperature: 24°C

Frequency (MHz)	Attenuation (dB)
400	0.43
1,000	0.73
2,000	1.11

FIGURE 2. Attenuation and power.

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Changes from previous issue. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Referenced documents. This documents references [MIL-DTL-28830](#).

CONCLUDING MATERIAL

Custodians:

Army – CR
Navy – EC
Air Force – 85
DLA – CC

Preparing activity:

DLA – CC

(Project 6145-2009-043)

Review activities:

Navy – AS, MC, SH
Air Force – 19, 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.