

REVISIONS																	
LTR	DESCRIPTION							DATE	APPROVED								

Requirements of DSCC drawing 86045 are applicable.

Prepared in accordance with ASME Y14.100

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PMIC S	PREPARED BY Ron Gary		DEFENSE SUPPLY CENTER, COLUMBUS P.O. BOX 3990, COLUMBUS, OHIO 43218-3990	
	CHECKED BY Mary McWilliams APPROVED BY Richard Taylor		TITLE CABLE, ELECTRICAL, RADIO FREQUENCY, COAXIAL, 50 OHMS, DOUBLE SHIELDED RG-178	
Original date of drawing 12 May 2006				
SIZE A	CAGE CODE 037Z3		DWG. NO. 06017	
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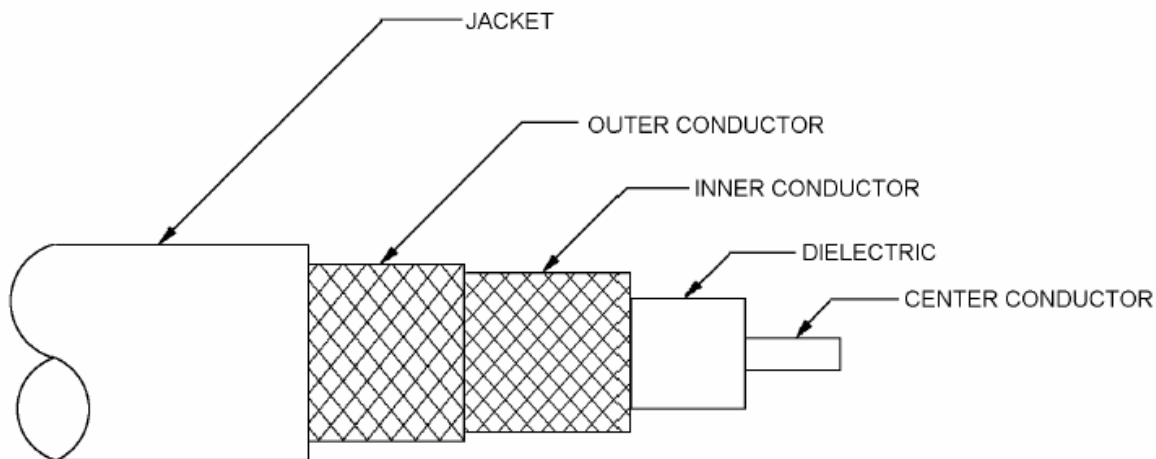


FIGURE 1. CONFIGURATION.

TABLE 1. Description.

Component	Construction details
Inner conductor	Seven strands of silver-coated, annealed-copper-covered steel wire, each strand .004 inch diameter. Overall diameter: 0.012 inch \pm 0.001.
Dielectric core	Type F-1: Solid, extruded PTFE. Diameter: 0.033 inch \pm 0.002.
Inner 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%
Outer conductor	Single braid of AWG No. 38 silver-coated copper wire. Diameter: .075 inch, maximum. Coverage : 94.7% nominal. Carriers : 16 Ends : 4 Picks/inch : 21.1 \pm 10%
Jacket	Type IX: FEP. Diameter: 0.092 inch \pm 0.004.

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ENGINEERING INFORMATION:

Continuous working voltage: 750 V rms, maximum.

Operating frequency: 3 GHz, maximum.

Velocity of propagation: 69.5 percent, nominal.

Power rating: In accordance with the latest revision of MIL-DTL-17/93.

Shielding effectiveness: -60 dB at 3 GHz, minimum.

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: 50 klb_f /inch² , minimum.

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

REQUIREMENTS:

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

Environmental and mechanical:

Visual and mechanical examination:

Eccentricity: 10 percent, maximum.

Adhesion of conductors: 1.0 pound, minimum; 4 pounds, maximum.

Cold bend: -55°C ± 2°C.

Stress crack resistance: + 230°C ± 5°C for 96 hours; mandrel size 7 ½ times the jacket diameter.

Dimensional stability: +200°C ± 5°C.

Inner conductor from core: .125 inch, maximum.

Inner conductor from jacket: .312 inch, maximum.

Flammability: Applicable.

Weight: 10.7 pounds per 1,000 feet, maximum.

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Electrical:

Test frequency: 50 MHZ to 3 GHz.

Spark test: 2,000 V rms, +25 percent, -0 percent.

Voltage withstanding: 2,000 V rms, minimum.

Corona extinction voltage: 1,000 V rms, minimum.

Characteristic impedance: 50 ± 2 ohms.

Attenuation: In accordance with the latest revision of MIL-C-17/93.

Structural return loss: In accordance with the latest revision of MIL-C-17/93.

Capacitance: 32 pF per foot, maximum (inner conductor to inner shield).

Capacitance unbalance: Not applicable.

Transmission unbalance: Not applicable.

Mechanically induced noise voltage: Not applicable.

Time delay: Not applicable.

Contamination: Not applicable.

Part or Identifying Number (PIN): 06017CF50FE.

Approved sources of supply are listed herein. Additional sources will be added as they become available. The vendors listed on the requirements drawing have agreed to this drawing and a certificate of compliance has been submitted to DSCC-VAI.

DSCC drawing PIN ^{1/}	Vendor CAGE number	Vendor reference PIN
06017CF50FE	68999	AA-9431
	12814	50-738CSSXE
	27478	H8675
	92607	30847/06025YX-1
	12515	17850

^{1/} Parts must be purchased to this DSCC PIN to assure that all performance requirements and tests are met.

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Vendor CAGE
Number

Vendor Name and
Address

68999

Times Microwave Systems
358 Hall Avenue
Wallingford, CT. 06492

12814

Thermax
225A N. Freeport Drive
Nogales, AZ. 85621

27478

Harbour Industries
4744 Shelburne Rd.
Shelburne, VT. 05482

92607

Tensolite Company
100 Tensolite Dr.
St. Augustine, FL. 32092

12515

Nexans
P.O. Box 909
Elm City, NC. 27822

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