

# SPECIFICATION CONTROL DRAWING

44A9647

TITLE WIRE, ELECTRIC, RADIATION-CROSSLINKED, TIN-COATED COPPER, LIGHTWEIGHT, GENERAL PURPOSE

Date 06-21-04

Revision H

This specification sheet forms a part of the latest issue of Raychem Specification 44 and MIL-W-81044 as applicable.

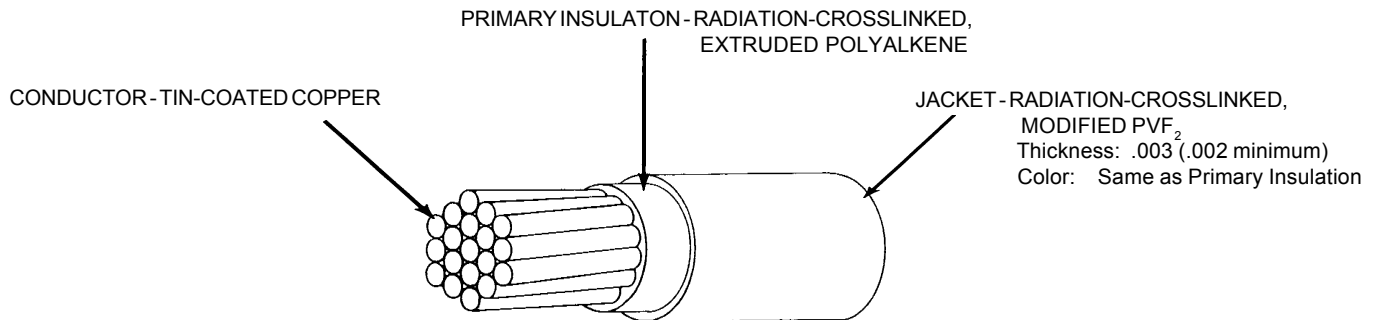


TABLE I. CONSTRUCTION DETAILS

PART NUMBER 1/	WIRE SIZE (AWG)	CONDUCTOR STRANDING (number x AWG)	DIAMETER OF STRANDED CONDUCTOR (in.)		FINISHED WIRE		
			MINIMUM	MAXIMUM	MAXIMUM RESISTANCE AT 20°C (ohms/1000 ft)	DIAMETER (in.)	MAXIMUM WEIGHT (lbs/1000 ft.)
44A9647-26-*	26	19 x 38	.018	.021	41.3	.034 ± .002	1.4
44A9647-24-*	24	19 x 36	.023	.026	26.2	.040 ± .002	2.0
44A9647-22-*	22	19 x 34	.029	.033	16.2	.047 ± .002	3.0
44A9647-20-*	20	19 x 32	.037	.041	9.88	.055 ± .002	4.5
44A9647-18-*	18	19 x 30	.046	.051	6.23	.065 ± .002	6.8
44A9647-16-*	16	19 x 29	.052	.058	4.81	.072 ± .003	8.6
44A9647-14-*	14	19 x 27	.065	.073	3.06	.089 ± .004	13.2
44A9647-12-*	12	37 x 28	.084	.090	2.02	.108 ± .004	20.2

TABLE II. PERFORMANCE DETAILS

PART NUMBER 1/	BEND TESTING				
	MANDREL DIAMETER (inch) (± 3%)			WEIGHT (lb) (± 3%)	
	LIFE CYCLE AND ACCELERATED AGING	COLD BEND	WRAP	LIFE CYCLE AND ACCELERATED AGING	COLD BEND
44A9647-26-*	.500	.500	.250	.250	.500
44A9647-24-*	.500	.500	.250	.375	.500
44A9647-22-*	.750	.750	.250	.375	1.00
44A9647-20-*	.750	.750	.250	.375	1.00
44A9647-18-*	1.00	1.00	.375	.500	1.00
44A9647-16-*	1.00	1.00	.375	.500	1.00
44A9647-14-*	1.50	1.50	.500	1.00	3.00
44A9647-12-*	2.00	2.00	.500	1.00	3.00

Users should evaluate the suitability of this product for their application. Specifications are subject to change without notice. Tyco Electronics also reserves the right to make changes in materials or processing, which do not affect compliance with any specification, without notification to Buyer.

1/ COLORS AND COLOR CODE DESIGNATORS SHALL BE IN ACCORDANCE WITH MIL-STD-681. OTHER CODES AND SUFFIXES MAY BE ADDED TO THE PART NUMBER, AS NECESSARY, TO CAPTURE ANY ADDITIONAL REQUIREMENTS IMPOSED BY THE PURCHASE ORDER.



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WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 150°C,

Maximum continuous conductor temperature

VOLTAGE RATING: 600 volts (rms) at sea level

ACCELERATED AGING: 300 ± 2°C for 6 hours

FLAMMABILITY: 30 seconds (maximum); 3 in. (maximum); no flaming of facial tissue

HUMIDITY RESISTANCE: Insulation Resistance, 5000 Megohms for 1000 ft. (minimum)

IDENTIFICATION, STRIPING, OR BAND DURABILITY: 125 cycles (250 strokes) (minimum), 150 g weight

IMMERSION: Diameter increase 5% (maximum); no cracking, no dielectric breakdown

INSULATION ELONGATION AND TENSILE STRENGTH:

Primary Insulation,

Tensile strength, 2500 lbf/in<sup>2</sup> (minimum)

Elongation, 150% (minimum)

INSULATION FLAWS:

Primary Insulation,

Spark test, 1.5 kV (rms)

Impulse Dielectric test, 6.0 kV (peak)

Finished Wire,

Spark test, 3.0 kV (rms) at 3 kHz

Impulse Dielectric test, 8.0 kV (peak)

INSULATION RESISTANCE (Qualification Test Only): 5000 Megohms for 1000 ft. (minimum)

LIFE CYCLE: 200 ± 2°C for 168 hours

LOW TEMPERATURE-COLD BEND (Qualification Test Only): -55 ± 2°C for 4 hours

SHRINKAGE: 300 ± 2°C, 0.125 in. (maximum) in 12 in.

SMOKE TEST: 200 ± 2°C. No visible smoke

SOLDERABILITY (95% minimum coverage):

per MIL-STD-202, Method 208, except without steam-aging, Type RMA Flux

SURFACE RESISTANCE: 500 Megohms-in. (minimum), both readings

THERMAL SHOCK RESISTANCE: 150 ± 2°C, 0.060 in. (maximum)

VOLTAGE WITHSTAND TEST (POST ENVIRONMENTAL): 2500 volts (rms), 60 Hz, 5 minutes

WICKING: 2.25 in. (maximum)

PART NUMBER:

The "\*" in the part numbers on page 1 shall be replaced by a color code designator.

1/ Example: AWG 18, white: 44A9647-18-9

JACKET IDENTIFICATION: Mark outer surface of jacket in contrasting color at 12 inch (nominal) intervals as follows:

For AWG 18 - "600V 44A AWG18 0.96mm<sup>2</sup> Raychem Year of Manufacture"

For AWG 16 - "600V 44A AWG16 1.23mm<sup>2</sup> Raychem Year of Manufacture"

For AWG 14 - "600V 44A AWG14 1.94mm<sup>2</sup> Raychem Year of Manufacture"

For AWG 12 - "600V 44A AWG12 2.97mm<sup>2</sup> Raychem Year of Manufacture"

(Marks for other AWG sizes will be added to SCD as required)

Example: AWG 16 manufactured in year 1995 will be marked as follows:

600V 44A AWG16 1.23mm<sup>2</sup> Raychem 1995

1/ See footer section on page 1

# Mouser Electronics

Authorized Distributor

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[44A9647-14-0](#)



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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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