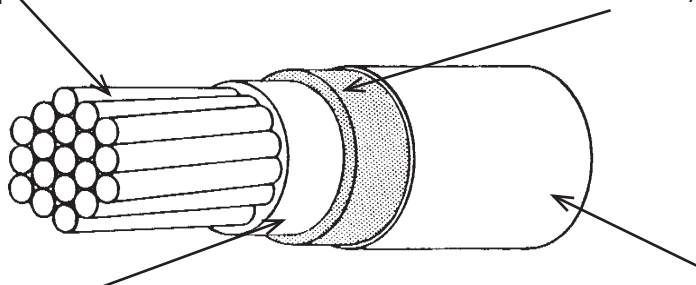


|                                                                                         |                                                            |          |         |
|-----------------------------------------------------------------------------------------|------------------------------------------------------------|----------|---------|
| SPECIFICATION CONTROL DRAWING                                                           |                                                            | 55FA0514 |         |
| TITLE                                                                                   | CABLE, ELECTRIC, FILTER LINE - ELECTROLOSS, COMPONENT WIRE | Date     | 7-23-10 |
|                                                                                         |                                                            | Revision | H       |
| This specification sheet forms a part of the latest issue of Raychem Specification 55F. |                                                            |          |         |

CONDUCTOR - SILVER-COATED HIGH-STRENGTH  
COPPER ALLOY

FILTER LAYER - RADIATION-MODIFIED,  
ABSORPTIVE COMPOUND



PRIMARY INSULATION - RADIATION-CROSSLINKED,  
MODIFIED PVDF  
COLOR - NATURAL

PRIMARY JACKET - RADIATION-CROSSLINKED,  
MODIFIED ETFE

TABLE I. CONSTRUCTION DETAILS

| PART NUMBER<br>1/ | WIRE<br>SIZE<br>(AWG) | CONDUCTOR<br>STRANDING<br>(number x AWG) | DIAMETER OF<br>STRANDED<br>CONDUCTOR<br>(in.) |         | FINISHED WIRE                                      |                   |                                     |
|-------------------|-----------------------|------------------------------------------|-----------------------------------------------|---------|----------------------------------------------------|-------------------|-------------------------------------|
|                   |                       |                                          | MINIMUM                                       | MAXIMUM | MAXIMUM<br>RESISTANCE<br>AT 20°C<br>(ohms/1000 ft) | DIAMETER<br>(in.) | MAXIMUM<br>WEIGHT<br>(lbs/1000 ft.) |
|                   |                       |                                          |                                               |         |                                                    |                   |                                     |
| 55FA0514-26-*     | 26                    | 19 x 38                                  | .018                                          | .020    | 44.8                                               | .043 ± .002       | 2.3                                 |
| 55FA0514-24-*     | 24                    | 19 x 36                                  | .023                                          | .025    | 28.4                                               | .045 ± .002       | 3.0                                 |
| 55FA0514-22-*     | 22                    | 19 x 34                                  | .029                                          | .032    | 17.5                                               | .051 ± .003       | 4.0                                 |
| 55FA0514-20-*     | 20                    | 19 x 32                                  | .037                                          | .040    | 10.7                                               | .059 ± .003       | 5.8                                 |

TABLE II. PERFORMANCE DETAILS

| PART NUMBER<br>1/ | BEND TESTING                                            |              |                                                         |              |
|-------------------|---------------------------------------------------------|--------------|---------------------------------------------------------|--------------|
|                   | MANDREL DIAMETER<br>(inch) (± 3%)                       |              | WEIGHT<br>(lb) (± 3%)                                   |              |
|                   | IMMERSION,<br>LIFE CYCLE AND<br>CROSSLINKING PROOF TEST | COLD<br>BEND | IMMERSION,<br>LIFE CYCLE AND<br>CROSSLINKING PROOF TEST | COLD<br>BEND |
|                   |                                                         |              |                                                         |              |
| 55FA0514-26-*     | .500                                                    | 1.00         | .500                                                    | 3.00         |
| 55FA0514-24-*     | .500                                                    | 2.00         | .625                                                    | 3.00         |
| 55FA0514-22-*     | .500                                                    | 2.00         | .750                                                    | 3.00         |
| 55FA0514-20-*     | .750                                                    | 2.50         | 1.25                                                    | 4.00         |

This product meets or exceeds all requirements of SAE AS85485/10, less identification for AWG 24.  
All other AWG sizes meet or exceed requirements of SAE AS85485, less identification.

|                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                    |  |                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Users should evaluate the suitability of this product for their application. Specifications are subject to change without notice.<br>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.                                                                                     |                                                                                                                                                                    |  |                                                                                                                                                                                                                    |
| Page 1 of 3                                                                                                                                                                                                                                                                                                     | The TE logo, Tyco Electronics, Electroloss and Raychem are trademarks.                                                                                             |  | <br>Raychem Wire & Cable<br>501 Oakside Avenue<br>Redwood City, CA 94063-3800<br>Phone: 1-800-227-8816<br>Fax: 1-650-361-6297 |
|                                                                                                                                                                                                                                                                                                                 | DIMENSIONS ARE IN INCHES, AND UNLESS OTHERWISE DESIGNATED ARE NOMINAL                                                                                              |  |                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                 | THIS SPECIFICATION SHEET TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.<br>REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BID. |  |                                                                                                                                                                                                                    |

|                                                                                   |                                      |             |               |                               |
|-----------------------------------------------------------------------------------|--------------------------------------|-------------|---------------|-------------------------------|
|  | <b>SPECIFICATION CONTROL DRAWING</b> | Page 2 of 3 | Revision<br>H | SCD Number<br><b>55FA0514</b> |
|-----------------------------------------------------------------------------------|--------------------------------------|-------------|---------------|-------------------------------|

## WIRE RATINGS AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 150°C

Maximum continuous conductor temperature

VOLTAGE RATING: 600 volts (rms) at sea level

ATTENUATION (INSERTION LOSS): See Table III

BLOCKING: 200 ± 3°C for 6 hours

COLOR: Light violet preferred

CONCENTRICITY: Primary Insulation - 50% (minimum); Finished Wire - 70% (minimum)

CROSSLINKING PROOF TEST: 300 ± 3°C for 7 hours

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

FLUORIDE EXTRACTION: 70 ± 2°C for 168 hours, 150 ppm (maximum)

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

IDENTIFICATION AND COLOR STRIPING DURABILITY:

125 cycles (250 strokes) (minimum), 500 g weight

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

INSULATION ELONGATION AND TENSILE STRENGTH:

Primary Insulation, Filter Layer and Primary Jacket pulled together

Elongation, 50% (minimum)

Tensile Strength, 3000 lbf/in<sup>2</sup> (minimum)

INSULATION FLAWS:

Primary Insulation only,

Spark Test, 1.5 kV (rms) at 60 Hz

4.2 kV (rms) at 3 kHz

Impulse Dielectric Test, 6.0 kV (peak)

Finished Wire,

Spark Test, 3.0 kV (rms) at 60 Hz

5.7 kV (rms) at 3 kHz

Impulse Dielectric Test, 8.0 kV (peak)

INSULATION RESISTANCE: 5000 megohms for 1000 ft. (minimum)

INSULATION THICKNESS:

Primary Insulation, .002 in. (minimum);

Filter Layer, average .0025 in. (minimum);

Primary Jacket, .0035 in. (minimum)

LIFE CYCLE: 200 ± 3°C for 168 hours

LOW TEMPERATURE-COLD BEND: -65 ± 2°C for 4 hours

SHRINKAGE: 200 ± 3°C for 6 hours, 0.125 in. (maximum)

SMOKE: 200 ± 2°C, no visible smoke

SURFACE RESISTANCE: 500 megohms-in. (minimum), initial and final readings

THERMAL SHOCK RESISTANCE: 150 ± 3°C, .060 in. (maximum)

THERMAL STABILITY: 180 ± 3°C for 1250 hours

VOLTAGE WITHSTAND (Post Environmental): 1500 volts (rms), 60 Hz

WRAP TEST: 200 ± 3°C for 6 hours, no cracking

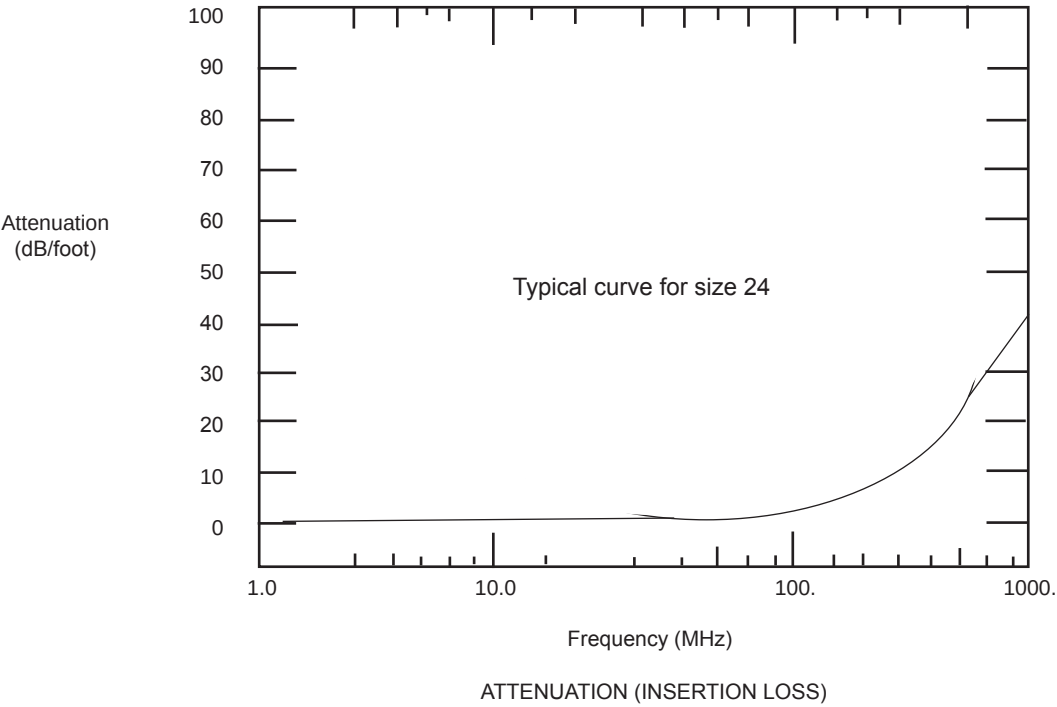
PART NUMBER:

The "\*" in the part numbers in Tables I-III shall be replaced by a color code designator, except that violet shall be light violet and designator shall be 7L.

1/ Example: AWG 24, light violet: 55FA0514-24-7L

AWG 24, light violet with blue stripe: 55FA0514-24-7L6

1/ See footer section on page 1



| TABLE III. ATTENUATION (INSERTION LOSS) + |                       |          |       |                             |         |          |                       |
|-------------------------------------------|-----------------------|----------|-------|-----------------------------|---------|----------|-----------------------|
| PART NUMBER<br><u>1</u> /                 | PASS BAND<br>(dB/ft.) |          |       | TRANSITION BAND<br>(dB/ft.) |         |          | STOP BAND<br>(dB/ft.) |
|                                           | 1.0 MHz               | 10.0 MHz |       | 100 MHz                     | 500 MHz | 1000 MHz | 1 to 12 GHz           |
|                                           | (max)                 | (min)    | (max) | (min)                       | (min)   | (min)    | (min)                 |
| 55FA0514-26-*                             | TBD                   | TBD      | TBD   | TBD                         | TBD     | TBD      | TBD                   |
| 55FA0514-24-*                             | .02                   | .06      | 0.20  | 1.3                         | 12      | 30       | 30                    |
| 55FA0514-22-*                             | .02                   | .06      | 0.20  | 1.3                         | 12      | 30       | 30                    |
| 55FA0514-20-*                             | .02                   | .06      | 0.20  | 1.3                         | 12      | 30       | 30                    |

1/ See footer section on page 1

+ THE PRIMARY WIRE OF THIS SPECIFICATION SHEET SHALL MEET THE ATTENUATION REQUIREMENTS SHOWN ABOVE ONLY WHEN USED AS A SINGLE COMPONENT IN A SHIELDED CABLE.