

ALPHA WIRE COMPANY
CUSTOMER PRODUCT SPECIFICATION

Part Number: FIT221V
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Issue: 4
Issue Date: 12/31/2008
Effective Date: 3/1/2009

A. Construction

- | | |
|--------------------|--|
| 1) Tubing Type | Heat Shrinkable Tubing |
| 2) Tubing Material | Cross Linked Polyolefin |
| 3) Color(s) | BLACK, WHITE, RED, YELLOW, GREEN, BLUE |

Part Number	Minimum Supplied ID (In)	Maximum Recovered ID (In)	Nominal Recovered Wall Thickness (In)
FIT221V-3/64	0.046	0.023	0.016
FIT221V-1/16	0.063	0.031	0.017
FIT221V-3/32	0.093	0.046	0.020
FIT221V-1/8	0.125	0.062	0.020
FIT221V-3/16	0.187	0.093	0.020
FIT221V-1/4	0.250	0.125	0.025
FIT221V-3/8	0.375	0.187	0.025
FIT221V-1/2	0.500	0.250	0.025
FIT221V-3/4	0.750	0.375	0.030
FIT221V-1IN	1.000	0.500	0.035
FIT221V-1 1/2	1.500	0.750	0.040
FIT221V-2IN	2.000	1.000	0.045

B. Industry Approvals

- | | |
|-----------------------------------|--|
| 1) UL | Standard 224
VW-1 |
| 2) CSA International | Standard 198 |
| 3) Other | AMS-DTL-23053/5 Class 1 & 3
REACH Regulation (EC 1907/2006) |
| 4) EU Directive 2002/95/EC(RoHS): | All materials used in the manufacture of this part are in compliance with EU Directive 2002/95/EU regarding the restriction of use of certain hazardous substances in electrical and electronic equipment. Consult Alpha Wire's web site for compliance Date of Manufacture. |

C. Physical & Mechanical Properties

- | | | |
|----------------------------------|------------------------------|---------------|
| 1) Temperature Range | -55 to 135°C | |
| 2) Shrink Ratio | Approximately 2:1 | |
| 3) Full Recovery Temperature | 121°C | |
| 4) Minimum Shrink Temperature | 90°C | |
| 5) Tensile Strength | 1500psi, Min | ASTM D638 |
| 6) Elongation | 200%, Min | ASTM D638 |
| 7) Low Temperature Flex(-55°C) | no cracking | AMS-DTL-23053 |
| 8) Heat Resistance(175°C,168hrs) | 100% Elongation, Min | ASTM D638 |
| 9) Heat Shock(250°C,4hrs) | no cracking | AMS-DTL-23053 |
| 10) Secant Modulus | 2.5x10 ⁴ psi, Min | ASTM D882 |
| 11) Longitudinal Change | +/-5% | AMS-DTL-23053 |
| 12) Specific Gravity(Colors) | 1.35, Max | ASTM D792 |
| Specific Gravity(Clear) | 1.00, Max | |
| 13) Shelf Life | 5 Years @ 0 to 35°C | |

D. Electrical Properties

- | | | |
|------------------------|--------------------------------|-----------|
| 1) Dielectric Strength | 500 V/mil, Min | ASTM D876 |
| 2) Volume Resistivity | 1x10 ¹⁴ ohm-cm, Min | ASTM D876 |

E. Chemical Properties

- | | | |
|----------------------------------|---------------|---------------|
| 1) Water Absorption | 0.50%, Max | ASTM D570 |
| 2) Fluid Resistance(23°C,24 Hrs) | 1000 PSI, Min | AMS-DTL-23053 |

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- | | | |
|-----------------------------|-----------|-----------|
| 3) Vacuum Outgassing - CVCM | 0.1%, Max | ASTM E595 |
| 4) Halogen Free | No | |
| 5) Lead Free | No | |

F. Other

- 1) Packaging
 - a) FIT221V-3/64
3X1000 FT, 1000 FT, 250X4 FT, 25X4 FT, 40X6 IN
 - b) FIT221V-1/16
3X1000 FT, 1000 FT, 250X4 FT, 25X4 FT, 36X6 IN
 - c) FIT221V-3/32
3X500 FT, 250X4 FT, 500 FT, 25X4 FT, 32X6 IN
 - d) FIT221V-1/8
3X500 FT, 250X4 FT, 500 FT, 25X4 FT, 28X6 IN
 - e) FIT221V-3/16
250X4 FT, 2X500 FT, 500 FT, 25X4 FT, 24X6 IN
 - f) FIT221V-1/4
250X4 FT, 2X250 FT, 250 FT, 25X4 FT, 20X6 IN
 - g) FIT221V-3/8
250X4 FT, 2X200 FT, 200 FT, 25X4 FT, 16X6 IN
 - h) FIT221V-1/2
200X4 FT, 2X150 FT, 150 FT, 5X4 FT, 14X6 IN
 - i) FIT221V-3/4
125X4 FT, 250 FT, 5X4 FT, 12X6 IN
 - j) FIT221V-1IN
75X4 FT, 250 FT, 5X4 FT, 8X6 IN
 - k) FIT221V-11/2
125 FT, 5X4 FT, 5X6 IN
 - l) FIT221V-2IN
125 FT, 5X4 FT, 3X6 IN

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