

ALPHA WIRE COMPANY

CUSTOMER PRODUCT SPECIFICATION

Part Number: FIT221B
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Issue: 2
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, CLEAR |

Part Number	Minimum Supplied ID (In)	Maximum Recovered ID (In)	Nominal Recovered Wall Thickness (In)
FIT221B-3/64	0.046	0.023	0.016
FIT221B-1/16	0.063	0.031	0.017
FIT221B-3/32	0.093	0.046	0.020
FIT221B-1/8	0.125	0.062	0.020
FIT221B-3/16	0.187	0.093	0.020
FIT221B-1/4	0.250	0.125	0.025
FIT221B-3/8	0.375	0.187	0.025
FIT221B-1/2	0.500	0.250	0.025
FIT221B-3/4	0.750	0.375	0.030
FIT221B-1IN	1.000	0.500	0.035

B. Industry Approvals

- | | |
|-----------------------------------|--|
| 1) UL | Standard 224 |
| 2) Other | REACH Regulation (EC 1907/2006)
AMS-DTL-23053/5 Class 1 (Except Clear)
AMS-DTL-23053/5 Class 2 (Clear Only) |
| 3) 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. |
| 4) California Proposition 65: | The outer surface materials used in the manufacture of this part meet the requirements of California Proposition 65. |

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 Shock(250°C,4hrs) | no cracking | AMS-DTL-23053 |
| 9) Secant Modulus | 2.5x10 ⁴ psi, Min | ASTM D882 |
| 10) Longitudinal Change | +/-5% | AMS-DTL-23053 |
| 11) Specific Gravity(Colors) | 1.35, Max | ASTM D792 |
| Specific Gravity(Clear) | 1.00, Max | |
| 12) 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 |
| 3) Vacuum Outgassing - CVCM | 0.1%, Max | ASTM E595 |
| 4) Halogen Free | Yes – Clear Only | |

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5) Lead Free Yes – Clear Only

F. Other

- 1) Packaging
 - a) FIT221B-3/64
3X1000 FT, 250X4 FT
 - b) FIT221B-1/16
3X1000 FT, 250X4 FT
 - c) FIT221B-3/32
3X500 FT, 250X4 FT
 - d) FIT221B-1/8
3X500 FT, 250X4 FT
 - e) FIT221B-3/16
250X4 FT, 2X500 FT
 - f) FIT221B-1/4
250X4 FT, 2X250 FT
 - g) FIT221B-3/8
250X4 FT, 2X200 FT
 - h) FIT221B-1/2
200X4 FT, 2X150 FT
 - i) FIT221B-3/4
125X4 FT, 2X250 FT
 - j) FIT221B-1IN
2X250 FT, 75X4 FT

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