

# Customer Specification

## PART NO. FIT-221L-1/2

### Construction

1) Tubing Type	Heat Shrinkable Tubing
2) Tubing Material	LSZH Polyolefin
3) Minimum Supplied ID(In)	0.500
4) Maximum Recovered ID (In)	0.250
5) Nominal Recovered Wall Thickness(In)	0.022
6) Color(s)	BLACK

### Applicable Specifications

1) UL	Standard 224	125°C / 600 V <sub>RMS</sub>
	VW-1	

### Environmental

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### Properties

Physical & Mechanical Properties		
1) Temperature Range	-55 to 125°C	
2) Shrink Ratio	Approximately 2:1	
3) Full Recovery Temperature	110°C	
4) Minimum Shrink Temperature	100°C	
5) Tensile Strength	1500psi, Min	ASTM D638
6) Elongation	200%, Min	ASTM D638
7) Low Temperature Flex(-30°C)	no cracking	AMS-DTL-23053

8) Heat Resistance(158°C,168hrs)	100% Elongation, Min	ASTM D638
9) Heat Shock(250°C,4hrs)	no cracking	AMS-DTL-23053
10) Secant Modulus	2.5x10 <sup>4</sup> psi, Min	ASTM D882
11) Longitudinal Change	+/-5%	AMS-DTL-23053
12) Shelf Life	25 Years @ 18 to 35°C	
Electrical Properties		
Chemical Properties		
1) Water Absorption	0.70%, Max	ASTM D570
2) Copper stability(158°C,168hrs)	100% Elongation, Min	UL 224
3) Corrosion(158°C,16hrs)	no corrosion	AMS-DTL-23053
4) Halogen Free	Yes	
5) Lead Free	Yes	

## Other

<b>Packaging</b>	
1) 200 FT	CR19-1: 19.75 x 1 x 8 Max. 3 pieces/Min length 25 FT.

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# EU/China ROHS CERTIFICATE OF COMPLIANCE

To Whom It May Concern:

Alpha Wire Part Number: FIT-221L-1/2

FIT-221L-1/2, RoHS-Compliant Commencing With 1/27/2014 Production

Note: all colors and put-ups

This document certifies that the Alpha part number cited above is fully compliant with Directive 2011/65/EU of the European Parliament, better known as the RoHS Directive, with regards to restrictions of the use of certain hazardous substances used in the manufacture of electrical and electronic equipment.

This certification extends to amending Directive 2015/863/EU which expanded the list of restricted substances to 10 items (commonly known as RoHS 3). The reader is referred to this Directive for the specific definitions and extents of this Directive. **No Exemptions are required for RoHS Compliance on this item.** It should be noted that this product does not fall within the scope of Directive 2011/65/EU, but this Certificate is offered for cases where this product will be used within EEE that does fit within the Directive's scope. Additionally, Alpha certifies that the listed part number is in compliance with China RoHS "Marking for Control of Pollution by Electronic Information Products" standard SJ/T 11364-2006.

Substance	Maximum Control Value
Lead	0.1% by weight (1000 ppm)
Mercury	0.1% by weight (1000 ppm)
Cadmium	0.01% by weight (100 ppm)
Hexavalent Chromium	0.1% by weight (1000 ppm )
Polybrominated Biphenyls (PBB)	0.1% by weight (1000 ppm)
Polybrominated Diphenyl Ethers (PBDE) , Including Deca-BDE	0.1% by weight (1000 ppm)
Bis(2-ethylhexyl) phthalate (DEHP)	0.1% by weight (1000 ppm)
Butyl benzyl phthalate (BBP)	0.1% by weight (1000 ppm)
Dibutyl phthalate (DBP)	0.1% by weight (1000 ppm)
Diisobutyl phthalate (DIBP)	0.1% by weight (1000 ppm)

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Authorized Signatory for the Alpha Wire:

Dave Watson, Director of Engineering & QA

8/25/2020

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