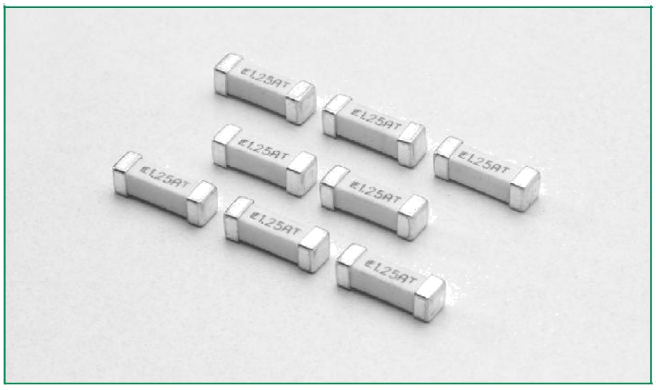
Surface Mount Fuses

Surge Resistant > 461 Series Tele



Agency Approvals

AGENCY	AGENCY FILE NUMBER	AMPERE RANGE
	E10480	.5A - 2A
	29862	.5A - 2A

Electrical Characteristics for Series

% of Ampere Rating	Opening Time
100%	4 hours, Minimum
250%	1 sec., Min.; 120 secs., Max.

Maximum Temperature Rise

Telecom Nano2® Fuse	Temperature Reading
04611.25	< 82°C (180°F)
0461002.	< 50°C (122°F)

Higher Currents and PCB layout designs can affect this parameter.
Readings are measured at rated current after temperature stabilizes.

Additional Information

Datasheet | **Resources** | **Samples**

Description

The 461 Series TeleLink® Surface Mount, Surge Resistant Fuse, offers over-current protection for a wide range of telecom applications without requiring a series resistor. When used in conjunction with a Littelfuse SIDACtor® Transient Voltage Suppressor (TVS) or a Greentube™ Gas Plasma Arrestor, this combination provides a compliant solution for standards and recommendations such as GR-1089–Core, TIA-968-A, UL/ EN/IEC 60950, and ITU K.20 and K.21. The coordination requirement contained in GR-1089–Core, and ITU K.20/21 may require a series of impedance devices.

Features

- Surface mount surge resistant Slo-Blo® fuse
- Meet UL 60950 3rd Edition power cross requirements standard alone
- Designed to allow compliance with Telcordia GR-1089-CORE and TIA-968-A (formerly FCC Part 68) Surge Specifications
- Provide coordinated protection with Littelfuse SIDACtor® Transient Voltage Suppressor (TVS)or a Greentube™ Gas Plasma Arrestor, without series resistors
- Designed to serve the requirements of a wide range of telecommunication and networking equipment
- 2A rating has improved temperature rise performance under 2.2A surge current testing when compared with 1.25A rating
- Product is Halogen Free and RoHS compliant and compatible with lead-free solder and higher temperature profiles when ordered with Standard Silver Plated Brass Caps
- Standard product is RoHS Compliant and compatible with lead-free solders and higher temperature profiles

Applications

- T1/E1/J1 and HDSL2/4
- SLIC interface portion of Fiber to the Curb (FTTC) and Fiber to the Premises (FTTP)
- Non-Fiber SLIC interface for Central Office (CO) locations and Remote Terminals (RT)
- xDSL applications such as ADSL, ADSL2+, VDSL, and VDSL2+
- Ethernet 10/100/1000BaseT
- POTS applications such as modems, answering machines, telephones, fax machines, and security systems
- ISDN “U” interface
- Baystation T1/E1/J1, T3 (DS3) trunk cards

Surface Mount Fuses

Surge Resistant > 461 Series TeleLink® Fuse

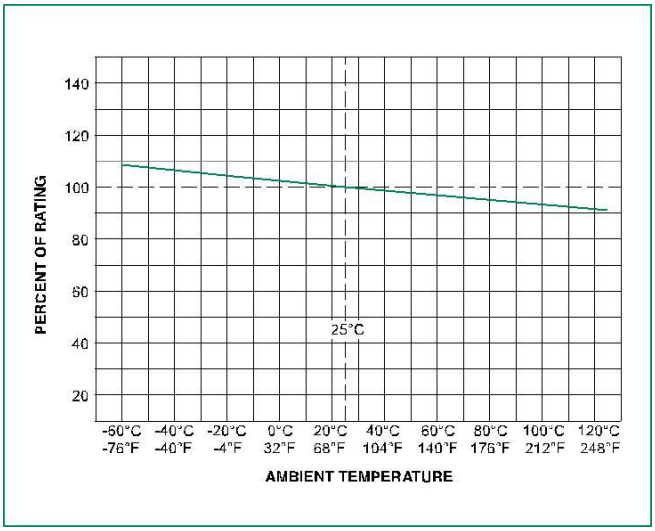
Electrical Specifications by Item

Ampere Rating (A)	Amp Code	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I^2t (A^2sec)	Agency Approvals	
0.500	.500	600	50A @ 250 VAC 60 A @600 VAC 100 A @80 VDC	0.560	0.840[1]	x	x
1.25	1.25	600		.1040	16.5[1]	x	x
2.00	002.	600		.0450	17.5[1]	x	x

[1] I^2t is calculated at 10 msecs. or less. I^2t at 10 times rated current has a typical value of: 24 A^2sec (2.0A), 22 A^2sec (1.25A), 1.3 A^2sec (0.5A).

- Typical inductance <40nH up to 500 MHz.
- Resistance changes 0.5% for every °C.
- Resistance is measured at 10% rated current.

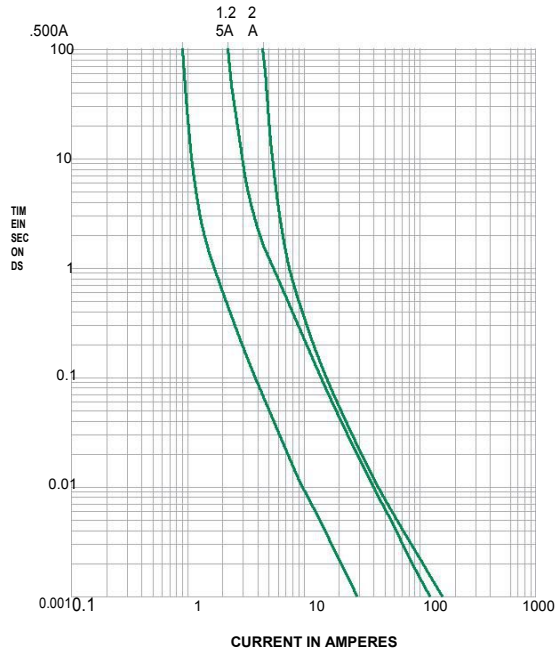
Temperature Re-rating Curve



Note:

1. Re-rating depicted in this curve is in addition to the standard re-rating of 25% for continuous operation.

Average Time Current Curves



GR 1089 Inter-building requirements

GR 1089 1st level lighting surge inter-building (Equipment under test can not be damaged and must continue to operate properly)

Surge	Minimum Peak Voltage (V)	Minimum Peak Current (A)	Max. Rise/Min. Decay (µs)	Repetitions Each Polarity	Fuse Choices
1	600	100	10/1000	25	1.25, 2.0
2	1000	100	10/360	25	1.25, 2.0
3	1000	100	10/1000	25	1.25, 2.0
4	2500	500	2/10	10	1.25, 2.0
5	1000	25	10/360	5	0.5, 1.25, 2.0

If sufficient series resistance is used, then the 0.5 fuse may be used in test conditions 1-4.

GR 1089 2nd level lightning surge telecom port (Equipment under test shall not become a fire or electrical safety hazard)

Surge	Minimum Peak Voltage (V)	Minimum Peak Current (A)	Max. Rise/Min. Decay (µs)	Repe-titions Each Polarity	Fuse Choices
1	5000	500	2/10	1	0.5, 1.25, 2.0
Alter-native	5000	500/8=625	8/10	1	0.5, 1.25, 2.0

The 0.5 fuse will open during these test conditions. The 1.25 & 2.0 will not open thus providing operational compliance.