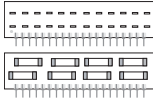


## Four-port TeleLink Fuse



This hybrid Single In-line Package (SIP) protects four twisted pairs from overcurrent conditions. Comprising eight *TeleLink* surface mount fuses, it is ideal for densely populated line cards that cannot afford PCB inefficiencies or the use of series power resistors. **0461 .500**, **0461 1.25**, **0461 002**. versions are available.

### Surge Ratings

TeleLink SM Fuse	I <sub>pp</sub> 2x10 μs Amps	I <sub>pp</sub> 10x160 μs Amps	I <sub>pp</sub> 10x560 μs Amps	I <sub>pp</sub> 10x1000 μs Amps
F0500Z8 ( <b>0461 .500</b> )	not rated	75	45	35
F1250Z8 ( <b>0461 1.25</b> )	500	160	115	100
F1251Z8 ( <b>0461 002.</b> )	500	160	115	100

### Interrupting Values

TeleLink SM Fuse	Voltage Rating	Current Rating	I <sup>2</sup> t Measured at DC Rated Voltage	Interrupting Rating			
				Voltage, Current	MIN	TYP	MAX
F0500Z8 ( <b>0461 .500</b> )	250 V	500 mA	1.3 A <sup>2</sup> s	600 V, 40 A	1 ms	2 ms	60 ms
F1250Z8 ( <b>0461 1.25</b> )	250 V	1.25 A	22.2 A <sup>2</sup> s	600 V, 60 A *	1 ms	2 ms	60 ms
F1251Z8 ( <b>0461 002.</b> )	250 V	2 A	30 A <sup>2</sup> s	600 V, 60 A *	1 ms	2 ms	60 ms

\* Interrupt test characterized at 50° to 70° phase angle. Phase angles approximating 90° may result in damage to the body of the fuse.

Notes:

- The *TeleLink* SM fuse is designed to carry 100% of its rated current for four hours and 250% of its rated current for one second minimum and 120 seconds maximum. Typical time is four to 10 seconds. For optimal performance, an operating current of 80% or less is recommended.
- I<sup>2</sup>t is a non-repetitive RMS surge current rating for a period of 16.7 ms.

### Resistance Ratings

TeleLink SM Fuse	Typical Voltage Drop @ Rated Current	DC Cold Resistance	
		MIN	MAX
F0500Z8	0.471 V	0.420 Ω	0.640 Ω
F1250Z8	0.205 V	0.107 Ω	0.150 Ω
F1251Z8	0.110 V	0.050 Ω	0.100 Ω

Notes:

- Typical inductance < 150 nH up to 500 MHz.
- Resistance changes 0.5% for every °C.
- Resistance is measured at 10% rated current.

## Qualification Data

The F1250Z8 and F1251Z8 meet the following test conditions per GR 1089 **without** additional series resistance. However, in-circuit test verification is required. Note that considerable heating may occur during Test 4 of the Second Level AC Power Fault Test.

### First Level Lightning Surge Test

Test	Surge Voltage Volts	Wave-form $\mu$ s	Surge Current Amps	Repetitions Each Polarity
1	$\pm 600$	10x1000	100	25
2	$\pm 1000$	10x360	100	25
3	$\pm 1000$	10x1000	100	25
4	$\pm 2500$	2x10	500	10
5	$\pm 1000$	10x360	25	5

### Second Level Lightning Surge Test

Test	Surge Voltage Volts	Wave-form $\mu$ s	Surge Current Amps	Repetitions Each Polarity
1	$\pm 5000$	2x10	500	1

### First Level AC Power Fault Test

Test	Applied Voltage, 60 Hz $V_{RMS}$	Short Circuit Current Amps	Duration
1	50	0.33	15 min
2	100	0.17	15 min
3	200, 400, 600	1 at 600 V	60 applications, 1 s each
4	1000	1	60 applications, 1 s each
5	*	*	60 applications, 5 s each
6	600	0.5	30 s each
7	600	2.2	2 s each
8	600	3	1 s each
9	1000	5	0.5 s each

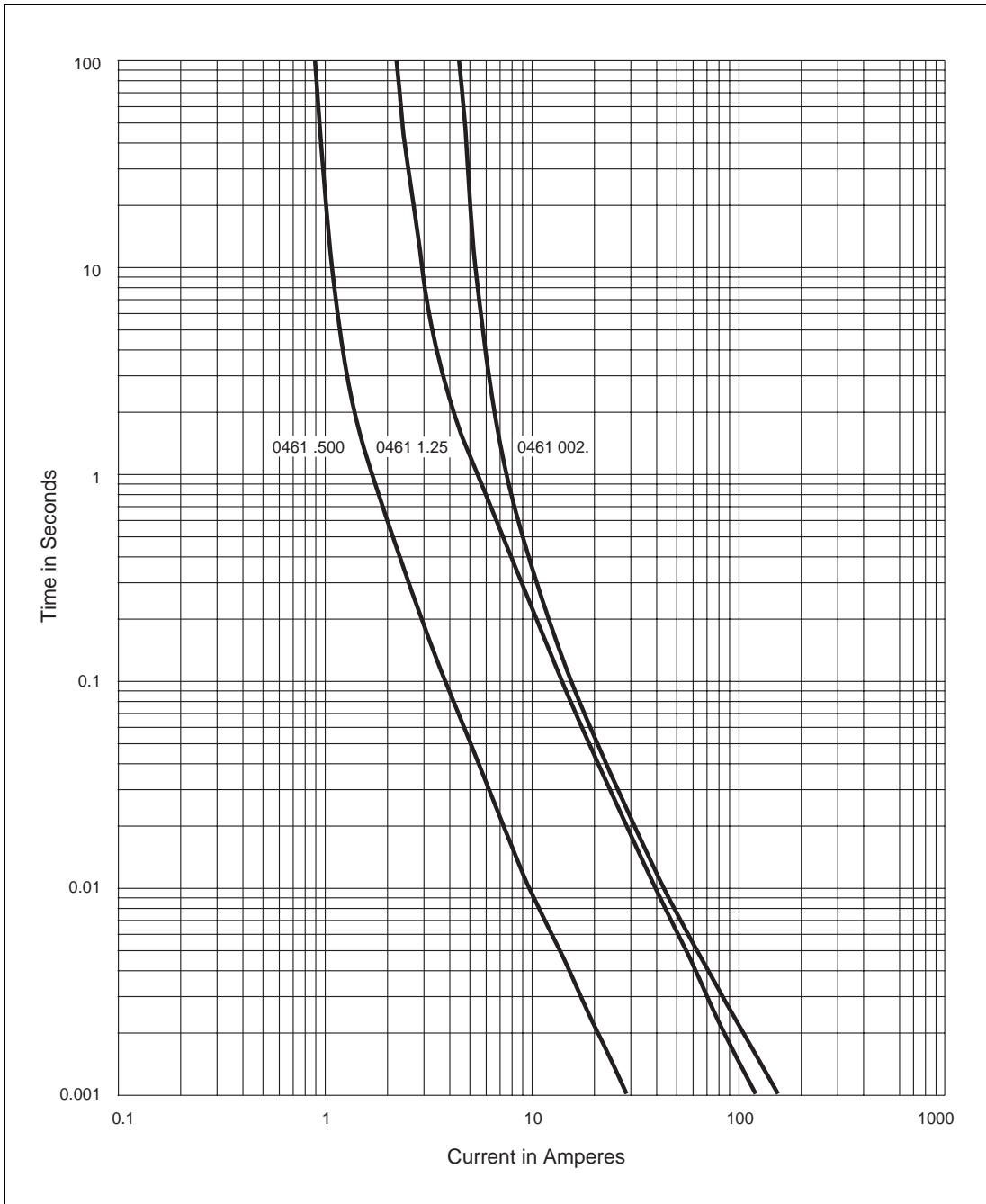
\* Test 5 simulates a high impedance induction fault. For specific information, please contact Teccor Electronics.

### Second Level AC Power Fault Test for Non-Customer Premises Equipment

Test	Applied Voltage, 60 Hz $V_{RMS}$	Short Circuit Current Amps	Duration
1	120, 277	30	30 min
2	600	60	5 s
3	600	7	5 s
4	100-600	2.2 at 600 V	30 min

#### Notes:

- Power fault tests equal or exceed the requirements of UL 60950 3rd edition.
- Test 4 is intended to produce a maximum heating effect. Temperature readings can exceed 150 °C.
- Test 2 may be dependent on the closing angle of the voltage source. Fuse is characterized at 50° to 70°. Closing angles approximating 90° may result in damage to the body of the fuse.



Time Current Curve

### Temperature Derating Curve

Operating temperature is -55 °C to +125 °C with proper correction factor applied.

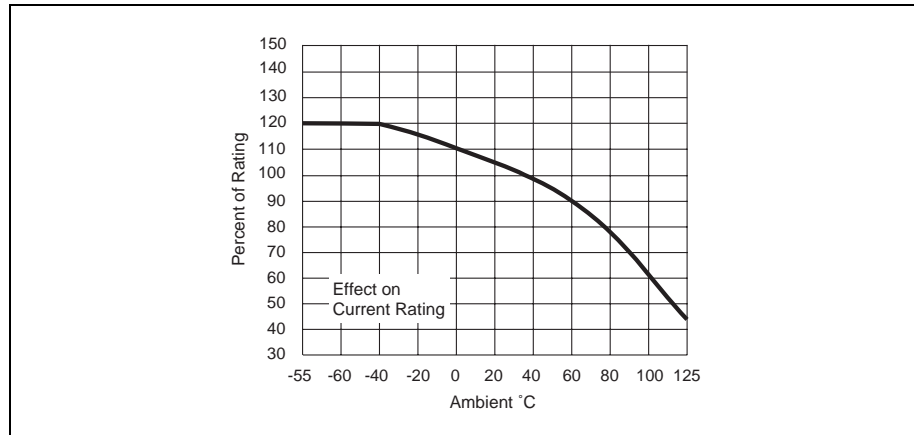


Chart of Correction Factor

Data Sheets

### Maximum Temperature Rise

TeleLink Fuse	Temperature Reading
F0500Z8	≤75 °C (167 °F) *
F1250Z8	≤75 °C (167 °F) *
F1251Z8	≤75 °C (167 °F) *

\* Higher currents and PCB layout designs can affect this parameter.

Notes:

- Readings are measured at rated current after temperature stabilizes
- The F1250Z8 meets the requirements of UL 248-14. However, board layout, board trace widths, and ambient temperature values can cause higher than expected rises in temperature. During UL testing, the typical recorded heat rise for the F1250Z8 at 2.2 A was 120 °C.

