

# 392 Series, TE5 Time-Lag Fuse

















### **Agency Approvals**

Agency	Agency File Number	Ampere Range		
VDE	126983	0.28A - 6.3A*		
$\bigcirc$	1410866 1026673	0.8A - 4A 5A - 6.3A		
c <b>FL</b> °us	E67006	0.28A - 6.3A		
PS	JET1896-31007-2002	1A - 5A		
cec	CQC07012021162	0.8A - 6.3A		
	SU05024 - 7013A SU05024 - 7014A SU05024 - 7015A SU05024 - 7016A SU05024 - 7017A SU05024 - 7018A	0.8A - 6.3A		

<sup>\*</sup>Red Phosphorus Free from 0.28A to 5A.

## **Description**

TE5 Fuse, Time-Lag type, 250V rated, designed in accordance to IEC 60127-3.

#### **Features**

- Reduced PCB space requirements
- Direct solderable or plug-in versions
- Internationally approved
- Low internal resistance
- Shock safe casing
- Vibration resistant
- Halogen free, Lead-free and RoHS compliant
- Red Phosphorus Free

# **Applications**

- Battery Chargers
- Consumer Electronics
- Power supplies
- Industrial Controllers
- Chargers

### **Additional Information**









Samples

### **Electrical Characteristics for Series**

% of Ampere Rating	Opening Time		
150%	1 Hour, <b>Min.</b>		
210%	120 s, <b>Max</b> .		
275%	400 ms <b>Min.</b> ; 10 Sec. <b>Max.</b>		
400%	150 ms <b>Min.</b> ; 3 Sec. <b>Max</b> .		
1000%	20 ms <b>Min</b> . ; 150 ms <b>Max</b> .		

## **Electrical Characteristic Specifications by Item**

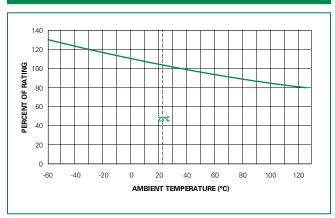
		.	Breaking Capacity	Cold Resistance	Voltage	Power Dissipation 1.5×I <sub>N</sub> max. (mW)	Melting Integral 10×I <sub>N</sub> max. (A²s)	Agency Approvals					
	Amp Code				Drop 1.0×I <sub>N</sub> max. (mV)			VDE	$\bigcirc$	c <b>71</b> 2°us	PS E	(Sec)	
280 mA	0280	250V	35A@250VAC	0.3300	115	168	0.048	х		×			
800 mA	0800	250V		0.0960	110	280	5.120	х	х	х		х	х
1.00 A	1100	250V		0.0715	115	400	8.00	х	х	х	х	х	х
1.25 A	1125	250V	25A@250VAC	0.0569	100	500	11.95	х	х	×	х	х	х
1.60 A	1160	250V		0.0400	95	600	18.43	х	х	×	х	х	х
2.00 A	1200	250V		0.0298	90	700	29.00	х	х	×	х	х	×
2.50 A	1250	250V		0.0240	85	750	47.81	х	х	×	х	х	х
3.15 A	1315	250V	32A@250VAC	0.0170	80	1100	78.39	х	х	×	х	х	×
4.00 A	1400	250V	40A@250VAC	0.0128	75	1200	126.40	х	х	×	х	х	х
5.00 A	1500	250V	50A@250VAC	0.0101	70	1000	106.25	х	х	×	х	х	х
6.30 A	1630	250V	63A@250VAC	0.0077	65	1200	160.74	X	х	x		X	X

#### Notes:

- 1) 1.00 means the number one with two decimal places. 1,000 means the number one thousand.
- 2) Resistance is measured at 10% of rated current, 25°C.

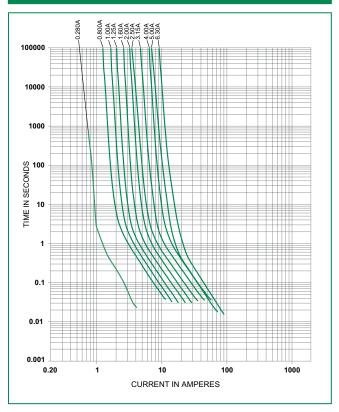


# **Temperature Re-rating Curve**

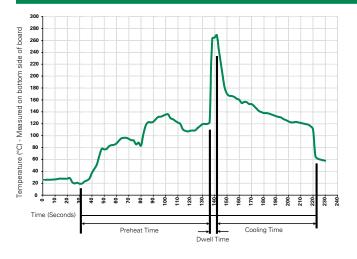


1. Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

# **Average Time Current Curves**



# Soldering Parameters - Wave Soldering



### **Recommended Process Parameters:**

Wave Parameter	Lead-Free Recommendation			
Preheat:				
(Depends on Flux Activation Temperature)	(Typical Industry Recommendation)			
Temperature Minimum:	100°C			
Temperature Maximum:	150°C			
Preheat Time:	60-180 seconds			
Solder Pot Temperature:	260°C Maximum			
Solder DwellTime:	2-5 seconds			

### **Recommended Hand-Solder Parameters:**

Solder Iron Temperature: 350°C +/- 5°C

Heating Time: 5 seconds max.

Note: These devices are not recommended for IR or Convection Reflow process.

# **Radial Lead Fuses**

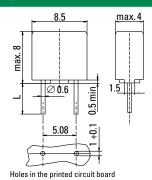
TE5 > Time-Lag Fuse > 392 Series

## **Product Characteristics**

Materials	Base/Cap: Thermoplastic Polyamide PA 6.6, UL 94 V-0 Round Pins: Copper, Tin-plated		
Lead Pull Strength	10 N (IEC 60068-2-21)		
Solderability	260°C, ≤ 3 sec. (Wave) 350°C, ≤ 3 sec. (Soldering iron)		
Soldering Heat Resistance	260°C, 10 sec. (IEC 60068-2-20) 350°C, ≤ 3 sec. (Soldering iron)		

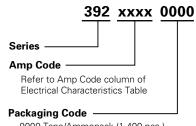
Operating Temperature	-40°C to +125°C (Consider re-rating)		
Climatic Category	-40°C to +85°C/21 days (IEC 60068-1, -2-1, -2-2, -2-78)		
Stock Condition	+10°C to +60°C Relative humidity ≤ 75% yearly average, without dew, maximum value for 30 days - 95%		
Vibration Resistance	24 cycles at 15 min. each (IEC 60068-2-6) 10 – 60Hz at 0.75mm amplitude 60 – 2000Hz at 10g acceleration		

### **Dimensions**



Long Leads (L=18.8mm) Short Leads (L=4.3mm)

# **Part Numbering System**



0000 Tape/Ammopack (1,400 pcs.) 0440 Short Leads - Bulk (1,400 pcs.)

## **Packaging**

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width
Tape and Ammopack	N/A	1,400	0000	N/A
Short Leads	N/A	1,400	0440	N/A

**Disclaimer Notice** - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at: <a href="https://www.littelfuse.com/disclaimer-electronics">www.littelfuse.com/disclaimer-electronics</a>.