Littelfuse

400 Series, TE5® Fuse, Time-Lag



Agency Approvals					
Agency	Agency File Number	Ampere Range			
c FN ° us	E67006	0.50A – 6.3A			
PSE	JET1896-31007-2001 JET1896-31007-1006	1A – 5A 6.3A			
VDE	40026355	0.50A – 6.3A			
	CQC09012031624	0.50A – 6.3A			
K	SU05024-9004 SU05024-9003 SU05024-9001 SU05024-10003 SU05024-9002	0.50A - 0.80A 1A - 2.5A 3.15A 4A - 5A 6.3A			

Description

The 400 Series TE5[®] Fuse is a Time-Lag type subminiature fuse and designed for overcurrent protection. It is 250V rated and designed in accordance to IEC 60127-3.

Features

- Halogen free, Lead-free and RoHS compliant
- Reduced PCB space requirements
- Direct solderable or plugin versions
- Shock safe casing

- Vibration resistant
- High Breaking Capacity up to 130A at 250VAC
- Internationally approved
- Low internal resistance

Applications

- Battery chargers
- Consumer electronics
- Power supplies
- Industrial controllers

Additional Information





Electrical Characteristics

% of Ampere Rating	OpeningTime
150%	1 Hour, Minimum
210%	120 Secs., Maximum
275%	400 ms, Minimum; 10 Secs., Maximum
400%	150 ms, Minimum; 3 Secs., Maximum
1000%	20 ms, Minimum; 150 ms, Maximum

Electrical Characteristics

		Rated		Nominal	Voltage	Power	Melting		Agency Approvals			
Amp Code	Rated Current	Voltage (V)	Breaking Capacity	Cold Resistance (Ohms)	Drop 1.0×I _N max. (mV)	Dissipation 1.0×I _N max. (mW)	Integral 10×I _N max. (A²s)	c FN ° us	PS L	VDE	Cec	ß
0.5	0.5A	250		0.1950	165	297	2.170	X		X	х	x
0800	0.8A	250		0.1003	116	387	6.720	X		х	х	x
1100	1.00A	250		0.0808	89	432	10.70	X	х	X	х	X
1125	1.25A	250		0.0562	76	411	14.44	X	х	х	х	x
1160	1.60A	250	130A	0.0384	76	601	21.75	X	х	X	х	X
1200	2.00A	250	@250VAC	0.0292	75	758	46.00	X	х	X	х	х
1250	2.50A	250	@250VAC	0.0216	61	683	61.94	X	х	Х	х	х
1315	3.15A	250		0.0167	55	921	101.61	X	х	х	х	х
1400	4.00A	250		0.0124	65	936	133.40	X	х	Х	х	х
1500	5.00A	250		0.0098	56	948	216.50	X	х	х	х	х
1630	6.30A	250		0.0072	48	926	323.08	X	х	X	х	X

* Per VDE, approved breaking capacity is at 100A, 250VAC

Radial Lead Fuses TE5[®] Fuse > Time-Lag Fuse > 400 Series



Temperature Re-rating Curve



Note

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 Dwell Time:	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[®] Fuse > Time-Lag Fuse > 400 Series

Product Characteristics

Materials	Base/Cap: Brown Thermoplastic Polyamide, UL 94 V-0 Round Pins: Copper, Tin-plated		
Lead Pull Strength	10 N (IEC 60068-2-21)		
Solderability	260°C, \leq 3s. (Wave) 350°C, \leq 1s. (Soldering Iron)		
Soldering Heat Resistance	260°C, 10s. (IEC 60068-2-20) 350°C, 3s. (Soldering Iron)		

Operating Temperature	–40°C to +85°C (Consider re-rating)		
Climatic Category	–40°C to +85°C/21 days (IEC 60068-1, -2-1, -2-2, -2-78)		
Stock Conditions	+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 60028-2-6) 10–60Hz at 0.75mm amplitude 20–2000Hz at 10g acceleration		

Part Numbering System



0000	Tape/Ammopack	(1,400 pcs)
0440	Shortleads - Bulk	(1,400 pcs)
0075	7.5mm pitch - Bulk	(1,400 pcs)

Dimensions



Long Leads (L=18.8±0.3mm) Short Leads (L=4.3±0.3mm)

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Taping Width		
400 Series						
Tape & Ammopack	N/A	1,400	0000	N/A		
Short Leads	N/A	1,400	0440	N/A		
7.5 mm Pitch	N/A	1,400	0075	N/A		

Disclaimer Notice - Littelfuse products are not designed for, and shall not be used for, any purpose (including, without limitation, automotive, military, aerospace, medical, life-saving, life-sustaining or nuclear facility applications, devices intended for surgical implant into the body, or any other application in which the failure or lack of desired operation of the product may result in personal injury, death, or property damage) other than those expressly set forth in applicable Littelfuse product documentation. Warranties granted by Littelfuse shall be deemed void for products used for any purpose not expressly set forth in applicable Littelfuse documentation. Littelfuse shall not be liable for any claims or damages arising out of products used in applications not expressly intended by Littelfuse as set forth in applicable Littelfuse product is subject to Littelfuse Terms and Conditions of Sale, unless otherwise agreed by Littelfuse. Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product sector for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at <u>www.littelfuse.com/disclaimer-electronics</u>.