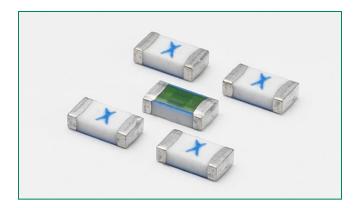


440 Series, 1206 High I2t Fuse





Agency Approvals

AGENCY	AGENCY FILE NUMBER	AMPERE RANGE		
c 711 ° us	E10480	0.25A - 8A		
⊕ ;	29862	0.25A - 8A		

Electrical Characteristics for Series

% of Ampere Rating	Ampere Rating	Opening Time at 25°C
100%	0.25A - 8A	4 hours, Minimum
350%	0.25A - 8A	5 secs., Maximum

Description

The 440 Series is a 100% Lead-free, RoHS compliant and Halogen-free fuse series designed specifically to provide over-current protection to circuits that operate under high working ambient temperatures up to 150°C and high inrush currents. The general design ensures excellent temperature stability and performance reliability. This high I2t fuse series is designed to have ultra high inrush current withstand capability to avoid nuisance fuse open.

Features

- Operating Temperature from -55°C to +150°C
- 100% Lead-free, RoHS
- Suitable for both leaded and lead-free reflow / wave soldering
- compliant and Halogen-free Ultra high I2t values

Applications

- LCD Displays
- Servers
- Notebook Computers
- Scanners
- Data Modems
- Hard Disk Drives

Printers

Additional Information







Resources



Samples

Electrical Specifications by Item

Ampere	A 222.22	Max.	Intermedia a Datina	Nominal	Nominal	Nominal Voltage	Nominal Power	Agency A	pprovals
Rating (A)	Amp Code	Voltage Rating (V)	Interrupting Rating (AC/DC) ¹	Resistance (Ohms) ²	Melting I ² t (A ² Sec.) ³	Drop At Rated Current (V) ⁴	Dissipation At Rated Current (W)	c FL °us	()
0.250	.250	125	EO A @ 13E V AC/DC	2.140	0.00649	0.5260	0.132	Х	Χ
0.375	.375	125	50 A @ 125 V AC/DC	1.216	0.01455	0.4993	0.187	Х	X
0.500	.500	63	50 A @ 63 V AC/DC	0.8140	0.02642	0.4831	0.242	X	Х
0.750	.750	63	50 A @ 63 V AC/DC	0.4624	0.09312	0.3983	0.299	X	X
1.00	001.	50	50 A @ 50 V D O	0.3096	0.21054	0.3457	0.346	X	X
1.25	1.25	50	50 A @ 50 V DC 50 A @ 50 V AC	0.2265	0.379	0.3240	0.405	X	Х
1.50	01.5	50	30 A @ 30 V AC	0.1759	0.50652	0.3215	0.482	X	X
1.75	1.75	32		0.0450	0.3312	0.0777	0.136	X	X
2.00	002.	32		0.0385	0.4326	0.0792	0.158	X	X
2.50	02.5	32		0.02850	0.8191	0.0747	0.187	X	Х
3.00	003.	32		0.02252	1.232	0.0742	0.223	X	X
3.50	03.5	32	50 A @ 32 V AC/DC	0.01845	1.789	0.0757	0.265	X	X
4.00	004.	32		0.01553	2.601	0.0709	0.284	Х	X
5.00	005.	32		0.0120	4.761	0.0654	0.327	Х	Χ
7.00	007.	32		0.00753	8.464	0.0696	0.487	X	Χ
8.00	008.	32		0.00634	12.95	0.0655	0.524	Х	X

Notes:

- 1. AC Interrupting Rating tested at rated voltage with unity power factor. DC Interrupting Rating tested at rated voltage with time constant < 0.8 msec.
- 2. Nominal Resistance measured with < 10% rated current.
- 3. Contact Littelfuse if application transient surges are less than 1 ms.
- 4. Nominal Voltage Drop measured at rated current after temperature has stabilized.

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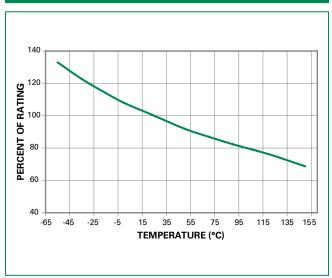
Specifications are subject to change without notice. Application testing is strongly recommended. Revised: 12/13/18

Devices designed to carry rated current for 4 hours minimum. It is recommended that devices be operated continuously at no more than 80% rated current. See "Temperature Derating Curve" for additional derating information.

Devices designed to be mounted with marking code facing up.



Temperature Rerating Curve



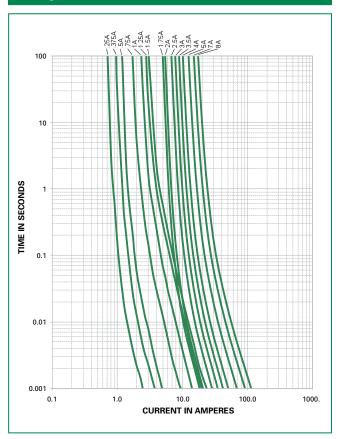
Note:

 Rerating depicted in this curve is in addition to the standard derating of 20% for continuous operation.

Example:

For continuous operation at 75 degrees celsius, the fuse should be derated as follows: $I = (0.80)(0.85)I_{RAT} = (0.68)I_{RAT}$

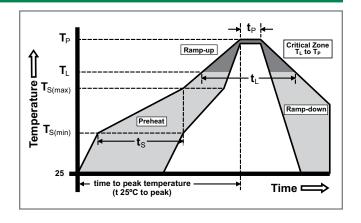
Average Time Current Curves



Soldering Parameters

Reflow Co	ndition	Pb-free assembly	
	-Temperature Min (T _{s(min)})	150°C	
Pre Heat	-Temperature Max (T _{s(max)})	200°C	
	-Time (Min to Max) (t _s)	60 – 180 seconds	
Average R (T _L) to pea	amp-Up Rate (Liquidus Temp k)	3°C/second max.	
T _{S(max)} to T	- Ramp-up Rate	5°C/second max.	
Reflow	-Temperature (T _L) (Liquidus)	217°C	
Reliow	-Temperature (t _L)	60 – 150 seconds	
PeakTemp	perature (T _P)	260+0/-5 °C	
Time with Temperate	in 5°C of actual peak ure (t _p)	10 – 30 seconds	
Ramp-dov	vn Rate	6°C/second max.	
Time 25°C	to peakTemperature (T _P)	8 minutes max.	
Do not exc	ceed	260°C	





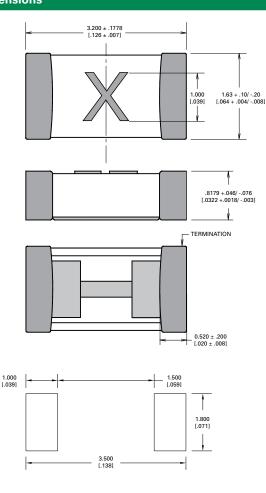


Product Characteristics

Materials	Body: Advanced Ceramic Terminations: Ag / Ni / Sn (100% Lead-free) Element Cover Coating: Lead-free Glass
Moisture Sensitivity Level	IPC/JEDEC J-STD-020, Level 1
Solderability	IPC/ECA/JEDEC J-STD-002, Condition C
Humidity Test	MIL-STD-202, Method 103, Conditions D
Resistance to Solder Heat	MIL-STD-202, Method 210, Condition B

Moisture Resistance	MIL-STD-202, Method 106	
Thermal Shock	MIL-STD-202, Method 107, Condition B	
Mechanical Shock	MIL-STD-202, Method 213, Condition A	
Vibration	MIL-STD-202, Method 201	
Vibration, High Frequency	MIL-STD-202, Method 204, Condition D	
Dissolution of Metallization	IPC/ECA/JEDEC J-STD-002, Condition D	
Terminal Strength	IEC 60127-4	

Dimensions

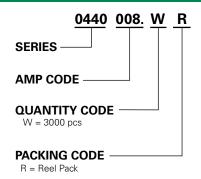


Part Marking System

Amp Code	Marking Code
.250	D
.375	E
.500	F
.750	G
001.	Н
1.25	J
01.5	K
1.75	L

Amp Code	Marking Code
002.	N
02.5	0
003.	Р
03.5	R
004.	S
005.	Т
007.	W
008.	Х

Part Numbering System



Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	
8mm Tape and Reel	EIA-481, IEC 60286, Part 3	3000	WR	

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Revised: 12/13/18