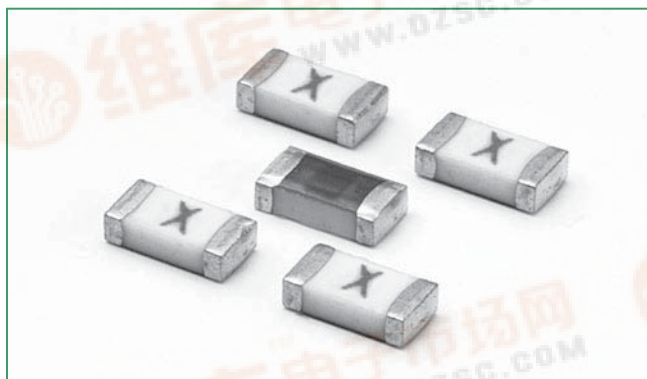


### 查询"440"供应商

RoHS  **HF 440 Series, 1206 High I<sup>2</sup>t Fuse**



#### 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 I<sup>2</sup>t 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
- Suitable for both leaded and lead-free reflow / wave soldering
- 100% Lead-free, RoHS compliant and Halogen-free
- Ultra high I<sup>2</sup>t values

#### Applications

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



#### Agency Approvals

AGENCY	AGENCY FILE NUMBER	AMPERE RANGE
	E10480	1.75A - 8A
	Pending	1.75A - 8A

#### Electrical Characteristics for Series

% of Ampere Rating	Ampere Rating	Opening Time at 25°C
100%	1.75A - 8A	4 hours, Minimum
350%	1.75A - 8A	5 secs., Maximum

#### Electrical Specifications by Item

Ampere Rating (A)	Amp Code	Max. Voltage Rating (V)	Interrupting Rating (AC/DC) <sup>1</sup>	Nominal Resistance (Ohms) <sup>2</sup>	Nominal Melting I <sup>2</sup> t (A <sup>2</sup> Sec.) <sup>3</sup>	Nominal Voltage Drop At Rated Current (V) <sup>4</sup>	Nominal Power Dissipation At Rated Current (W)	Agency Approvals	
									
1.75	1.75	32	50 A @ 32 V AC/DC	0.04121	0.3312	0.07769	0.136	x	x
2	002.	32		0.03582	0.4326	0.07921	0.158	x	x
2.5	02.5	32		0.026706	0.8191	0.0747	0.187	x	x
3	003.	32		0.022	1.232	0.7418	0.223	x	x
3.5	03.5	32		0.01877	1.789	0.07566	0.265	x	x
4	004.	32		0.01515	2.601	0.07088	0.284	x	x
5	005.	32		0.01119	4.761	0.06544	0.327	x	x
7	007.	32		0.00794	8.464	0.06963	0.487	x	x
8	008.	32		0.00646	12.95	0.065526	0.524	x	x

#### Notes:

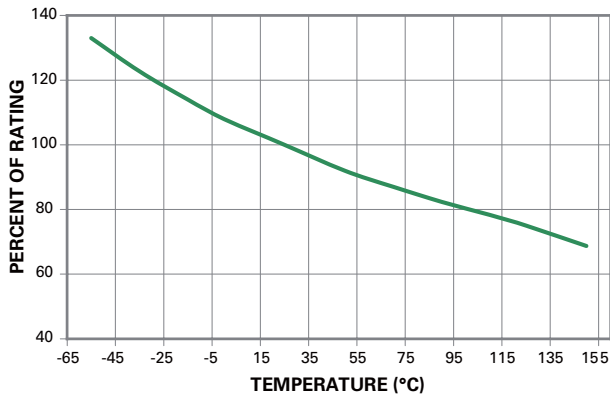
- AC Interrupting Rating tested at rated voltage with unity power factor. DC Interrupting Rating tested at rated voltage with time constant < 0.8 msec.
- Nominal Resistance measured with < 10% rated current.
- Nominal Melting I<sup>2</sup>t measured at 1 msec. opening time.
- Nominal Voltage Drop measured at rated current after temperature has stabilized.

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.

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#### Temperature Derating Curve



Note:

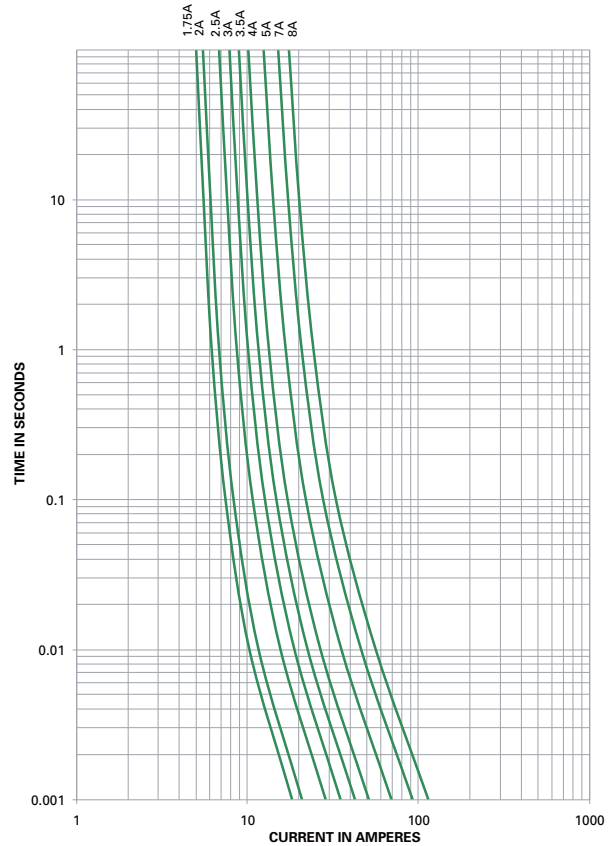
- Derating depicted in this curve is in addition to the standard derating of 20% for continuous operation.

Example:

For continuous operation at 75 degrees celsius, the fuse should be derated as follows:

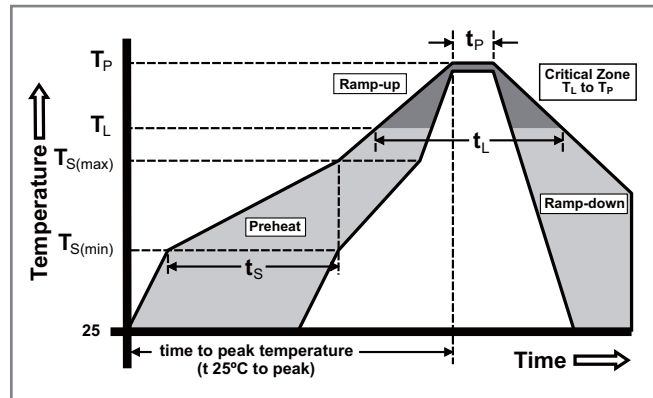
$$I = (0.80)(0.85)I_{\text{RAT}} = (0.68)I_{\text{RAT}}$$

#### Average Time Current Curves



#### Soldering Parameters

Reflow Condition		Pb-free assembly
Pre Heat	- Temperature Min ( $T_{s(\min)}$ )	150°C
	- Temperature Max ( $T_{s(\max)}$ )	200°C
	- Time (Min to Max) ( $t_s$ )	60 – 180 seconds
Average Ramp-Up Rate (Liquidus Temp ( $T_L$ ) to peak)		3°C/second max.
$T_{s(\max)}$ to $T_L$ - Ramp-up Rate		5°C/second max.
Reflow	- Temperature ( $T_L$ ) (Liquidus)	217°C
	- Temperature ( $t_L$ )	60 – 150 seconds
Peak Temperature ( $T_p$ )		260 <sup>+0/-5</sup> °C
Time within 5°C of actual peak Temperature ( $t_p$ )		10 – 30 seconds
Ramp-down Rate		6°C/second max.
Time 25°C to peak Temperature ( $T_p$ )		8 minutes max.
Do not exceed		260°C



Wave Soldering	260°C, 10 seconds max.
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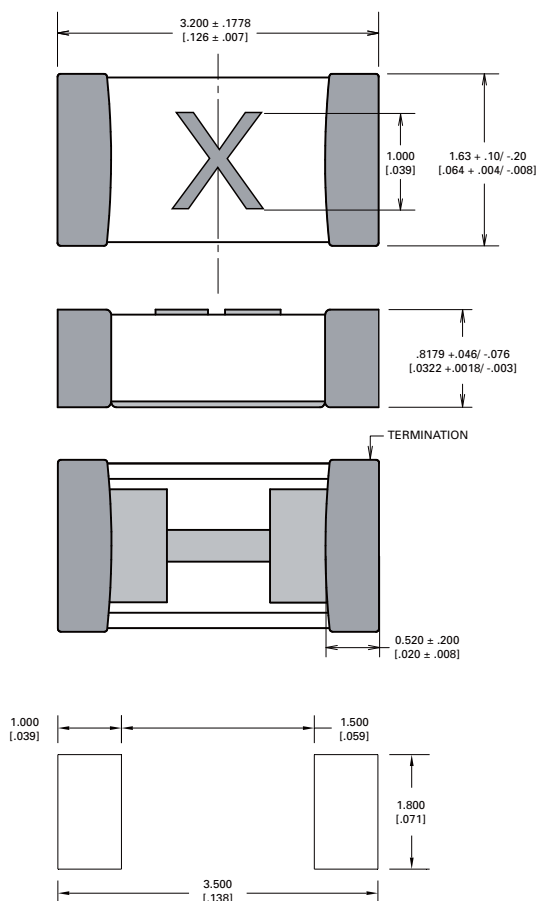
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#### Product Characteristics

<b>Materials</b>	<b>Body:</b> Advanced Ceramic <b>Terminations:</b> Ag / Ni / Sn (100% Lead-free) <b>Element Cover Coating:</b> Lead-free Glass
<b>Moisture Sensitivity Level</b>	IPC/JEDEC J-STD-020C, Level 1
<b>Solderability</b>	IPC/ECA/JEDEC J-STD-002B, Condition C
<b>Humidity Test</b>	MIL-STD-202, Method 103B, Conditions D
<b>ESD Immunity</b>	IEC 61000-4-2, 8kV Direct
<b>Resistance to Solder Heat</b>	MIL-STD-202, Method 210F, Condition B

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

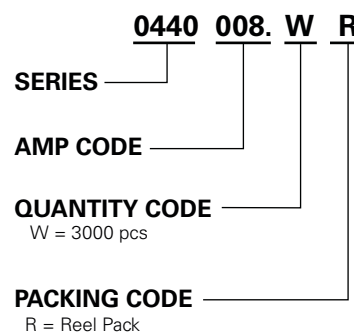
#### Dimensions



#### Part Marking System

Amp Code	Marking Code
1.75	<b>L</b>
002.	<b>N</b>
02.5	<b>O</b>
003.	<b>P</b>
03.5	<b>R</b>
004.	<b>S</b>
005.	<b>T</b>
007.	<b>W</b>
008.	<b>X</b>

#### Part Numbering System



#### Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code
8mm Tape and Reel	EIA-481-1 (IEC 286, part 3)	3000	WR

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