

ROHS M HF 437 Series - 1206 Fast-Acting Fuse







Agency Approvals

AGENCY	AGENCY FILE NUMBER	AMPERE RANGE
712	E10480	0.250A ~ 8A
(1)	LR29862	0.250A ~ 8A

Electrical Characteristics for Series

	Ampere ting	Ampere Rating	OpeningTime at 25°C
10	0%	250mA - 8A	4 hours, Minimum
25	0%	750mA - 8A	5 seconds, Maximum
35	0%	250mA -500mA	5 seconds, Maximum
35	0%	750mA - 8A	1 second, Maximum

Description

This 100% Lead-free, RoHS compliant and Halogen-free fuse series has been designed specifically to provide over current protection to circuits that see high working ambient temperatures (up to 150°C).

The general design ensures excellent temperature stability and performance reliability.

In addition to this, the high I2t values typical of the Littelfuse Ceramic Fuse family ensure high inrush current withstand capability.

Features

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

Applications

- Automotive Electronics
- LCD Displays
- Servers

- **Printers**
- Scanners
- Data Modems

Electrical Specifications by Item

Ampere Ama Max.		Max.	- 27	Nominal	Nominal	Nominal Voltage	Nominal Power	Agency Approvals	
Rating (A)	Rating Code Voltage		Interrupting Rating	Resistance Melting l ² t (Ohms) ² (A ² Sec.) ³		Drop At Rated Current (V)⁴	Dissipation At Rated Current (W)	717	(1)
250mA	.250	125	EQ A @ 10E V AC/DC	2.290	0.003	0.78	0.195	Х	Х
375mA	.375	125	50 A @ 125 V AC/DC	1.330	0.010	0.60	0.225	Х	Х
500mA	.500	63		0.908	0.018	0.52	0.260	X	Х
750mA	.750	63	50 A @ 63 V AC/DC	0.665	0.064	0.45	0.335	X	Х
1A	001.	63		0.360	0.100	0.41	0.415	X	Х
1.25A	1.25	63		0.318	0.256	0.40	0.496	X	Х
1.5A	01.5	63		0.209	0.324	0.39	0.579	Х	Х
1.75A	1.75	63		0.0703	0.075	0.27	0.474	X	Х
2A	002.	63		0.058	0.144	0.17	0.345	X	Х
2.5A	02.5	32		0.043	0.225	0.14	0.363	X	Х
3A	003.	32		0.033	0.400	0.15	0.462	X	Х
3.5A	03.5	32		0.027	0.576	0.16	0.560	Х	Х
4A	004.	32	50 A @ 32 V AC/DC	0.022	1.024	0.16	0.618	X	Х
5A	005.	32	WWW.DZSG.	0.016	1.936	0.09	0.484	X	Х
7A	007.	32		0.010	4.900	0.11	0.760	X	Х
8A	008.	32		0.0084	6.400	0.067	0.539	X	X

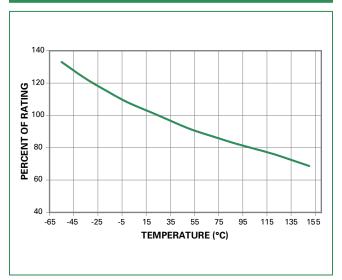
- 1. AC Interrupting Rating tested at rated voltage with unity power factor. DC Interrupting Rating tested at rated voltage with time constant < 0.8 msec.
- 2. Nominal Resistance measured with < 10% rated current.
- 3. Nominal Melting I2t measured at 1 msecs. opening time.
- 4. Nominal Voltage Drop measured 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 Rerating Curve" for additional rerating information.

Devices designed to be mounted with marking code facing up.



Temperature Rerating Curve



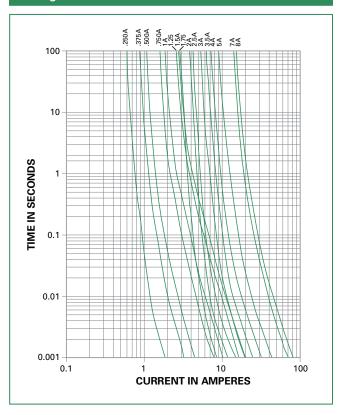
Note

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

Example:

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

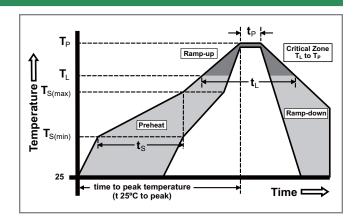
Average Time Current Curves



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 _L - Ramp-up Rate		5°C/second max.	
Reflow	-Temperature (T _L) (Liquidus)	217°C	
	-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-down Rate		6°C/second max.	
Time 25°C	to peakTemperature (T _P)	8 minutes max.	
Do not exc	ceed	260°C	





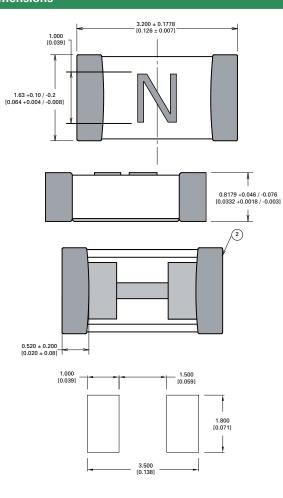


Product Characteristics

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

MIL-STD-202, Method 106G
MIL-STD-202, Method 107G, Condition B
MIL-STD-202, Method 213B, Condition A
MIL-STD-202, Method 201A
MIL-STD-202, Method 204D, Condition D
IPC/EIC/JEDEC J-STD-002B, Condition D
IEC 60127-4

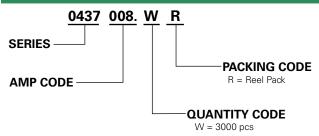
Dimensions



Part Marking System

Marking Code
D
E
F
G
Н
J
K
L
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О
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Т
w
Х

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

