

0437.750WRA Datasheet

www.digi-electronics.com



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	0437.750WRA-DG
Manufacturer	Littelfuse Inc.
Manufacturer Product Number	0437.750WRA
Description	FUSE BRD MNT 750MA 63VAC/VDC
Detailed Description	750 mA 63 V AC 63 V DC Fuse Board Mount (Cartridge Style Excluded) Surface Mount 1206 (3216 Metric)

This model 0437.750WRA is available at DiGi Electronics.

DiGi Electronics offers a global database of semiconductor and electronic component datasheets.

We welcome your inquiries regarding pricing, lead time, or other product-related questions.

 [Request a Quote](#)

 [Datasheet Search](#)



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

0437.750WRA

Series:

437A

Mounting Type:

Surface Mount

Current Rating (Amps):

750 mA

Voltage Rating - DC:

63 V

Package / Case:

1206 (3216 Metric)

Melting I²t:

0.064

Operating Temperature:

-55°C ~ 150°C

Size / Dimension:

0.126" L x 0.064" W x 0.033" H (3.20mm x 1.63mm x 0.84mm)

Manufacturer:

Littelfuse Inc.

Product Status:

Active

Fuse Type:

Board Mount (Cartridge Style Excluded)

Voltage Rating - AC:

63 V

Response Time:

Fast Blow

Breaking Capacity @ Rated Voltage:

50A AC, 100A DC

Approval Agency:

CSA, cURus

Color:

-

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8536.10.0040

Moisture Sensitivity Level (MSL):

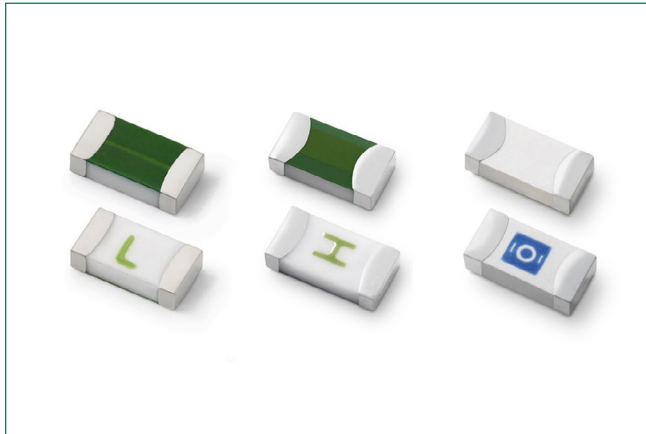
1 (Unlimited)

ECCN:

EAR99

437A Series

AEC-Q200 Qualified > 1206 Fast-Acting Ceramic Fuse



Additional Information



Resources



Accessories



Samples

Agency Approvals

Agency	Agency File Number	Ampere Range
	E10480	0.250A – 8.0A
	29862	0.250A – 8.0A
	N/A	0.250A – 1.75A
	J50519871	0.500A – 8.0A
	N/A	0.250A – 1.75A

Description

The 437A Series AECO-Qualified fuses are specifically tested to cater to secondary circuit protection needs of compact auto-electronics applications.

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 & Benefits

- Operating Temperature from -55°C to +150°C
- 100% Lead-free, Halogen-Free and RoHS compliant
- Fast response to faulty current to ensure over-current protection for sensitive electronic components
- AEC-Q200 Qualified
- Recognized to UL/CSA/NMX 248-1 and UL/CSA/NMX 248-14
- Conforms to EN/IEC 60127-1 and EN/IEC 60127-7
- Conforms to the Low Voltage Directive (LVD)

Applications

- Li-ion Battery
- LED Lighting
- Automotive Navigation System
- TFT Display
- Battery Management System (BMS)
- Instruments Clusters

Electrical Characteristics for Series

% of Ampere Rating	Ampere Rating	Opening Time at 25°C
100%	0.250A – 8A	4 hours, Minimum
250%	0.750A – 8A	5 seconds, Maximum
350%	0.750A – 8A	1 second, Maximum
	0.250A - 0.500A	5 seconds, Maximum

Electrical Specifications by Item

Ampere Rating (A)	Amp Code	Max. Voltage Rating (V)	Interrupting Rating ¹	Nominal Resistance (Ohms) ²	Nominal Melting I ² t (A ² Sec.) ³	Nominal Voltage Drop At Rated Current (V) ⁴	Nominal Power Dissipation At Rated Current (W)	Agency Approvals				
0.250	.250	125	50A @ 125VAC/DC	2.290	0.003	0.78	0.195	x	x	x	-	x
0.375	.375	125		1.330	0.010	0.60	0.225	x	x	x	-	x
0.500	.500	63	50A @ 63VAC/DC	0.908	0.018	0.52	0.260	x	x	x	x	x
0.750	.750	63	50A @ 63VAC/DC 100A @ 63VDC	0.600	0.064	0.45	0.338	x	x	x	x	x
1.00	001.	63	50A @ 63VAC/DC	0.420	0.100	0.41	0.410	x	x	x	x	x
1.25	1.25	63		0.318	0.256	0.40	0.500	x	x	x	x	x
1.50	01.5	63		0.209	0.324	0.39	0.585	x	x	x	x	x
1.75	1.75	63		0.071	0.075	0.27	0.473	x	x	x	x	x
2.00	002.	63	50A @ 45VAC/63VDC 50A @ 32VAC/35VDC	0.062	0.144	0.20	0.400	x	x	x	x	x
2.50	02.5	63		0.043	0.441	0.15	0.375	x	x	x	x	x
3.00	003.	63		0.035	0.506	0.14	0.420	x	x	x	x	x
3.50	03.5	63		0.027	0.777	0.13	0.455	x	x	x	x	x
4.00	004.	63		0.022	1.024	0.13	0.520	x	x	x	x	x
5.00	005.	63		0.0159	2.30	0.13	0.650	x	x	x	x	x
7.00	007.	35		0.0100	5.02	0.13	0.910	x	x	x	x	x
8.00	008.	35		50A @ 32VAC/35VDC	0.008	7.23	0.13	1.040	x	x	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 I²t measured at 1 msec. opening time.
- Nominal Voltage Drop measured at rated current after temperature has stabilized.

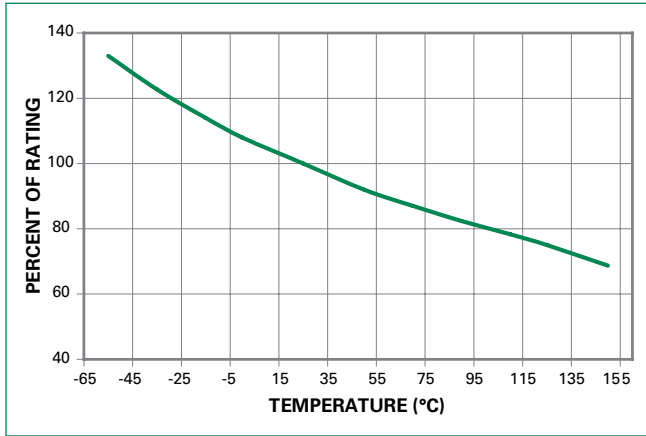
- 50A @ 32VAC/35VDC is AECO Tested

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 Re-rating Curve" for additional re-rating information. Devices designed to be mounted with marking code facing up.

437A Series

AEC-Q200 Qualified > 1206 Fast-Acting Ceramic Fuse

Temperature Re-rating Curve



Note:

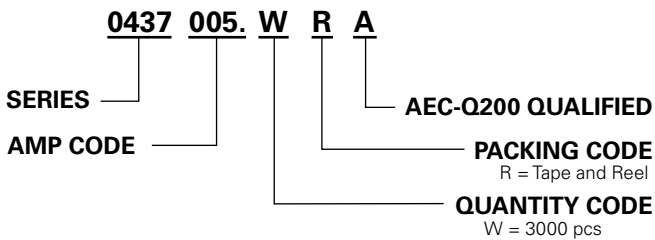
1. Re-rating depicted in this curve is in addition to the standard re-rating of 20% for continuous operation.

Example:

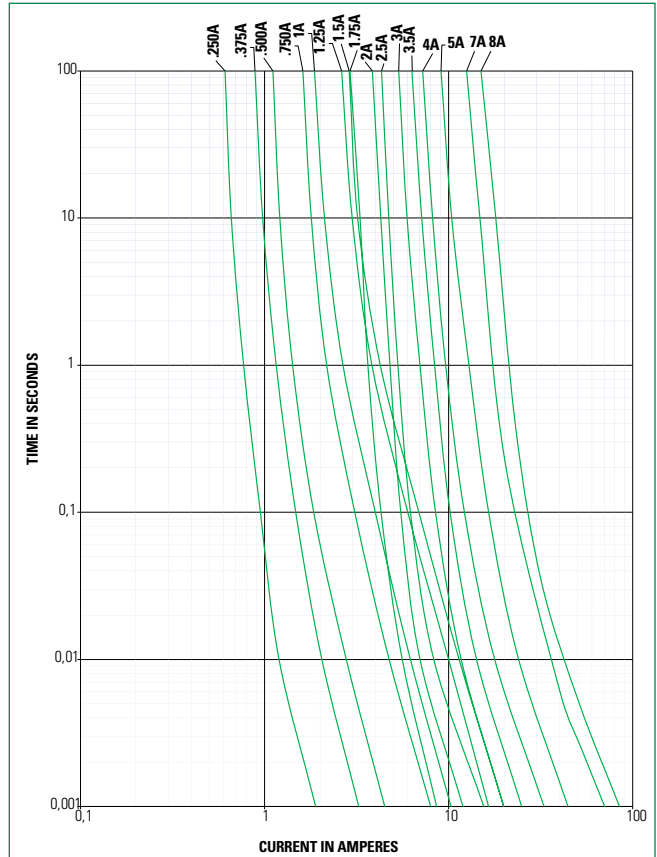
For continuous operation at 75 degrees celsius, the fuse should be rerated as follows:

$$I = (0.80)(0.85)_{75} = (0.68)_{75}$$

Part Numbering System

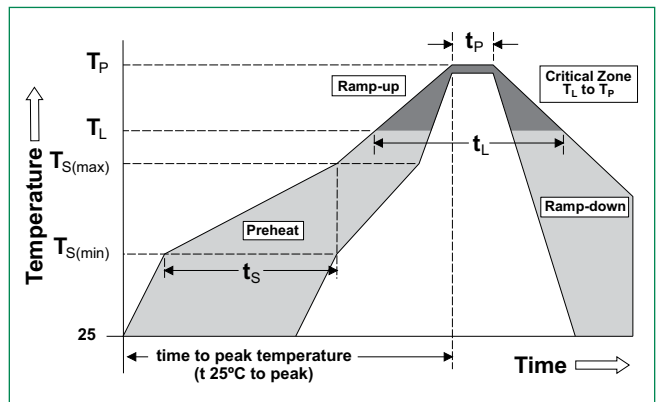


Average Time Current Curves



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)		5°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_r)	60 – 150 seconds
Peak Temperature (T_p)		260 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		5°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.



437A Series

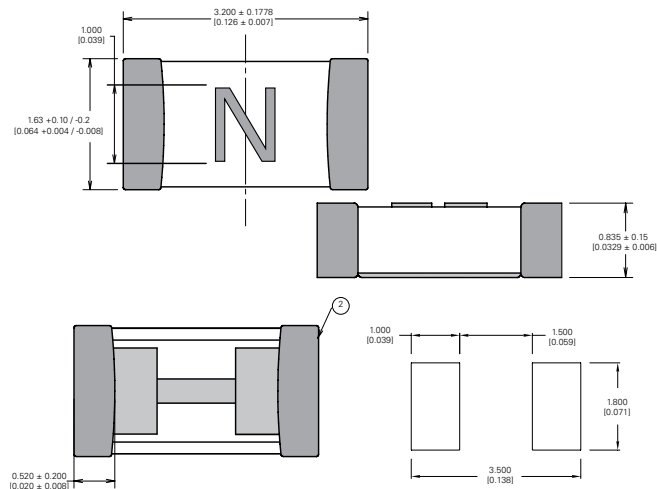
AEC-Q200 Qualified > 1206 Fast-Acting Ceramic Fuse

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/EIC/JEDEC J-STD-002, Condition B
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/EIC/JEDEC J-STD-002, Condition D
Terminal Strength	IEC 60127-4

High Temperature Storage	MIL-STD-202 Method 108 with exemptions
Thermal Shock Test	JESD22 Method JA-104, Test Conditions B and N
Biased Humidity	MIL-STD-202 Method 103, 85°C/85% RH with 10% operating power for 1000 hrs
Operational Life	MIL-STD-202 Method 108, Test Condition D
Resistance To Solvents	MIL-STD-202 Method 215
Mechanical Shock	MIL-STD-202 Method 213, Test Condition C
High Frequency Vibration	MIL-STD-202, Method 204
Resistance To Soldering Heat	MIL-STD-202 Method 210, Test Condition B
Solderability	JESD22-B102E Method 1
Terminal Strength For SMD	AEC-Q200-006
Board Flex	AEC-Q200-005
Electrical Characterization	Conducted at minimum, ambient and maximum temperatures.

Dimensions mm(inches)



Part Marking System

Amp Code	Marking Code
.250	D
.375	E
.500	F
.750	G
001.	H
1.25	J
01.5	K
1.75	L
002.	N
02.5	Q
003.	P
3.500	R
004.	S
005.	T
007.	W
008.	X

Packaging

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

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 www.littelfuse.com/disclaimer-electronics.

OUR CERTIFICATE

DiGi provide top-quality products and perfect service for customer worldwide through standardization, technological innovation and continuous improvement. DiGi through third-party certification, we stricly control the quality of products and services. Welcome your RFQ to

Email: Info@DiGi-Electronics.com



Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.