

12 100 Series









#### Description

12 100 Series are the fuses set the industry standard for performance, reliability and quality. The solder-free design provides excellent on-off and temperature cycling characteristics during use and also makes our SMD fuses more heat and shock tolerant than typical subminiature fuses.

Electrical Characteristics						
Rated Current	1.0ln	2.5ln	3.5ln			
250mA~5A	4 hour min	5 sec max.	-			
6A~40A	4 hour min.	-	5 sec max.			



#### **Features**

- > AEC-Q200 Automotive Grade Certified
- > Rapid interruption of excessive current
- Compatible with reflow and wave solder
- Ceramic and glass construction
- > One time positive disconnect
- Lead Free and Halogen free material

#### **Specifications**

Specification							
Part No.	Rated Voltage DC	Rated Current (A)	Breaking Capacity(A) <sup>1</sup>	Typical Cold. Resistance (mOhms) <sup>2</sup>	Typical Voltage Drop (mV)	Typical Pre- Arcing I <sup>2</sup> t (A <sup>2</sup> Sec) <sup>3</sup>	Alpha Marking
12 100.0.25		250mA	50A@72Vdc 50A@63Vdc 150A@32Vdc 300A@24Vdc	3608	1407	0.0004	.25
12 100.0.375		375mA		1882	718	0.0008	Е
12 100.0.5		500mA		1028	650	0.0022	0.5
12 100.0.75	70) /	750mA		601	616	0.0057	.75
12 100.1	72V 63V 32V 24V	1A		490	510	0.10	Н
12 100.1.5		1.5A		240	367	0.15	K
12 100.2		2A		132	316	0.41	Ν
12 100.2.5		2.5A		77	240	0.65	0
12 100.3		3A		48	187	1.39	Р
12 100.3.5		3.5A		40	180	1.68	R
12 100.4		4A		35	173	1.73	S
12 100.4.5		4.5A		30	164	2.62	Х
12 100.5	32V	5A 150A@32\	150A@32Vdc	25	141	2.89	T
12 100.6	24V	6A	300A@24Vdc	16.5	142	11	F
12 100.7		7A		12	140	12.5	7
12 100.8		8A	150A@32Vdc 300A@24Vdc	8.5	110	14	М
12 100.10	24V 15A 20A 25A	10A		6.8	100	20	J
12 100.12		12A		5	85	11.5	12
12 100.15		15A		3.9	78	16.5	15
12 100.20		20A		1.8	60	47.17	20
12 100.25		25A		1.5	57	32	25
12 100.30	1	30A		1.25	68	43	30
12 100.40	32V 24V	40A	200A@32Vdc 200A@24Vdc	0.85	95	240	XL

- 1. DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source)
- 2. DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25  $^{\circ}$ C
- 3. Typical Pre-arcing I2t are measured at 10In Current

Specifications are subject to change without notice. Application testing is strongly recommended.

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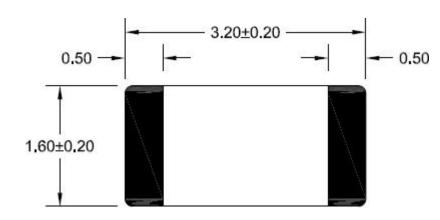




#### Dimension

Drawing not to scale (Unit: mm)

Top view



Side view:

250mA~750mA/20A~40A







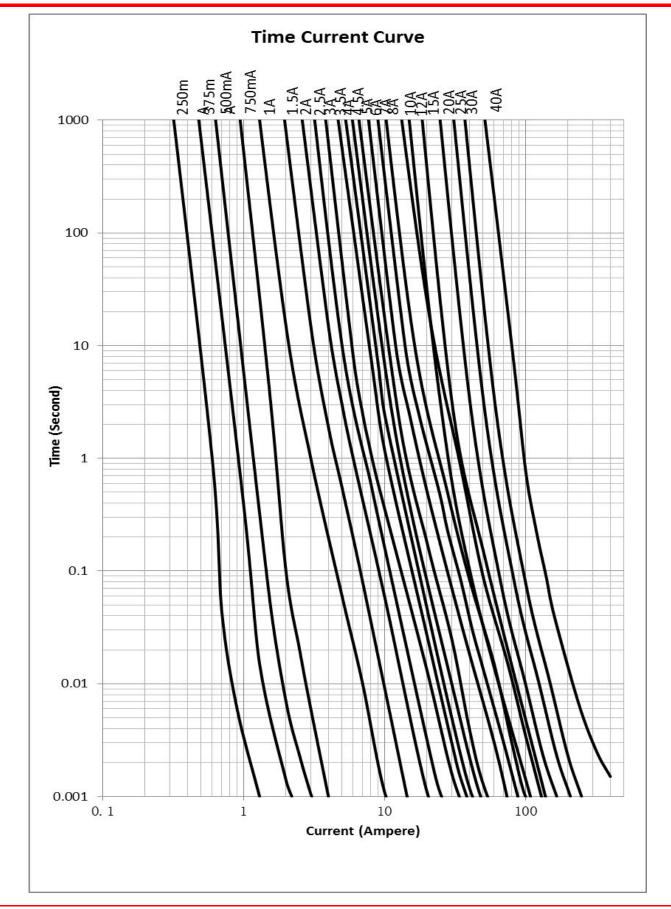
**12 100 Series** 













**12 100 Series** 

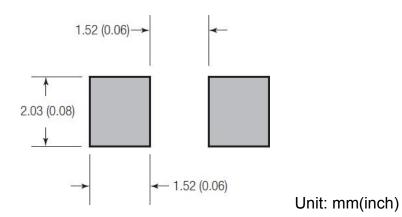








### Recommended landpattern



## Soldering method

Wave solder

■ Reservoir temperature: 260°C

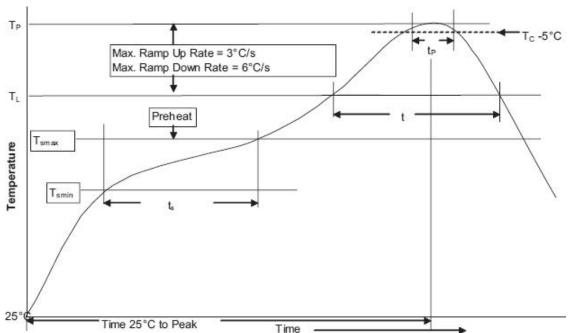
■ Time in reservoir: 10 seconds maximum

> Infrared reflow

■ Temperature: 260°C

■ Time: 30 seconds maximum

### Solder reflow profile



Profile Feature		Lead(Pb) free solder
Preheat and soak	Temperature min.(T <sub>smin</sub> )	150℃
	Temperature max. (T <sub>smax</sub> )	200℃
	<ul> <li>Time (T<sub>smin</sub> to T<sub>smax</sub>) (t<sub>S</sub>)</li> </ul>	60 - 120 Seconds
Average ramp up rate T <sub>smax</sub> to T	p	3°C / Second Max.

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#### **12 100 Series**







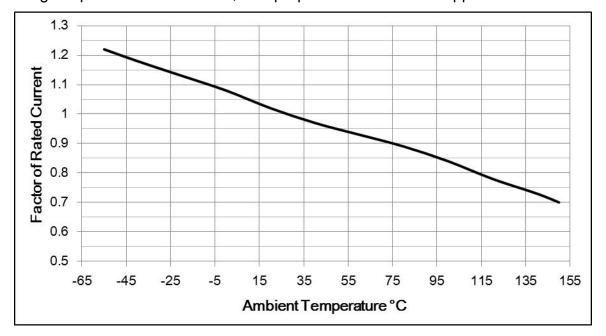


Liquidous temperature (T <sub>L</sub> )	217℃
Time at liquidous (t∟)	60 - 150 Seconds
Peak package body temperature (T <sub>P</sub> )	260℃
Time (t <sub>P</sub> ) within 5 °C of the specified classification temperature (T <sub>C</sub> )	30 Seconds
Average ramp-down rate (T <sub>P</sub> to T <sub>smax</sub> )	6°C / Second Max.
Time (25℃ to Peak Temperature)	8 Minutes Max.

### **Temperature Derating Curve**

Normal ambient temperature: 23+/-3℃

Operating temperature: -55 ~ 150°C, with proper correction factor applied



### Package

3000 fuses on 8mm tape-and-reel on a 7 inch (178mm) reel per EIA Standard 481.

--- End of Document ---

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