

Description

K12 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 sub miniature fuses.



Electrical Characteristics			
Rated Current	1.0In	2.5In	3.5In
250mA~5A	4 hour min.	5 sec max.	–
6A~30A		–	5 sec max.

Features

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

Specifications

Specification							
Part 序号	Rated Voltage DC	Rated Current (A)	Breaking Capacity (A) ¹	Typical Cold Resistance (m Ohms) ²	Typical Voltage Drop (m V)	Typical Pre-Arcing I ² t (A ² Sec) ³	Alpha Mark
K12 100 0.25	72V 63V 32V 24V	250mA	50A@72V 50A@63V 50A@32V 300A@24V	3608	1407	0.0004	.25
K12 100 0.375		375mA		1882	718	0.0008	E
K12 100 0.5		500mA		1028	650	0.0022	0.5
K12 100 0.75		750mA		601	616	0.0057	.75
K12 100 1		1A		490	510	0.10	H
K12 100 1.5		1.5A		240	367	0.15	K
K12 100 2		2A		144	316	0.41	N
K12 100 2.5		2.5A		83	240	0.65	O
K12 100 3		3A		53	187	1.39	P
K12 100 3.5		3.5A		40	180	1.68	R
K12 100 4		4A		35	173	1.73	S
K12 100 4.5	32V 24V	4.5A	50A@32V 300A@24V	27	164	2.62	X
K12 100 5		5A		22	141	2.89	T
K12 100 7		7A		12	140	5.68	7
K12 100 8	24V	8A	300A@24V	8.5	110	8	M
K12 100 10		10A		7	100	9.5	U
K12 100 12		12A		5	85	11.5	12
K12 100 15		15A		3.5	78	16.5	15
K12 100 20		20A		1.6	60	47.17	20
K12 100 25		25A		1.4	57	32	25
K12 100 30		30A		1	68	43	30

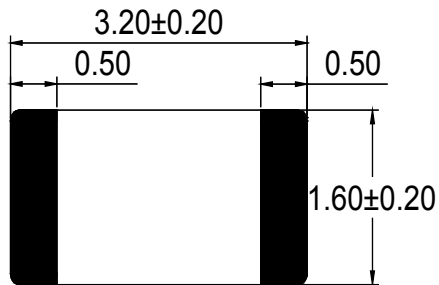
* DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source)

* DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C

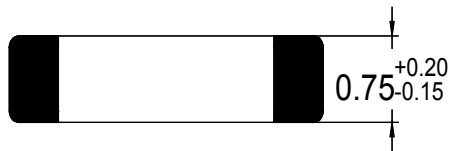
* Typical Pre-arching I²t are measured at 10In Current

Dimension

Drawing not to scale (Unit: mm)



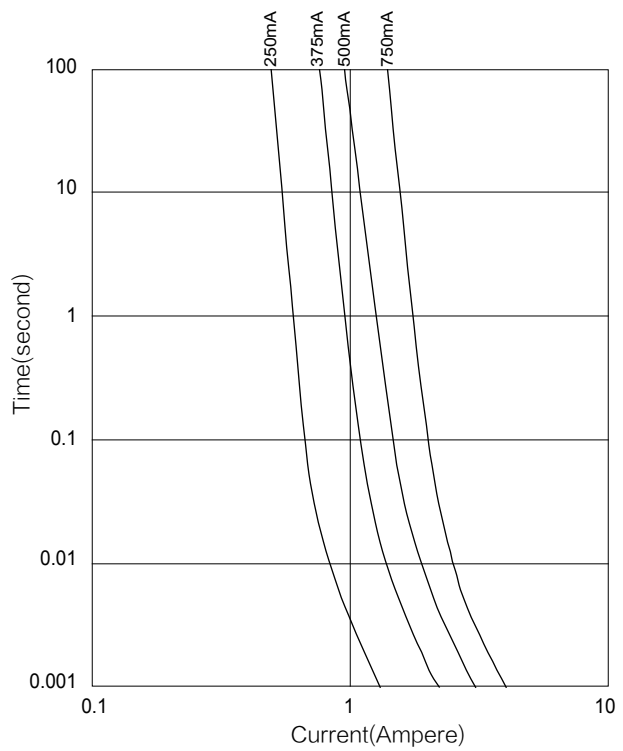
Side view: 250mA~750mA/20A~30A



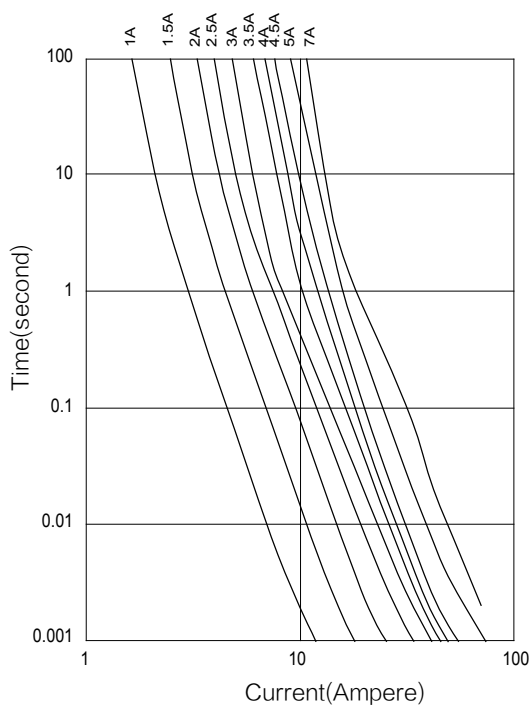
A~15A



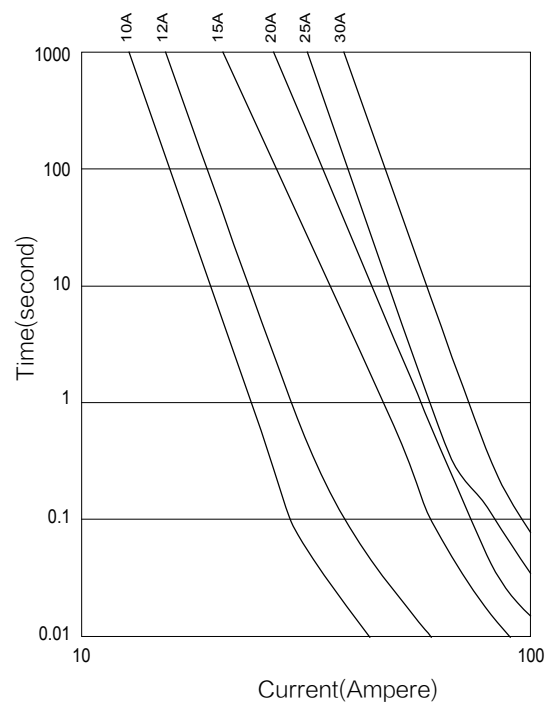
Time Current Curve



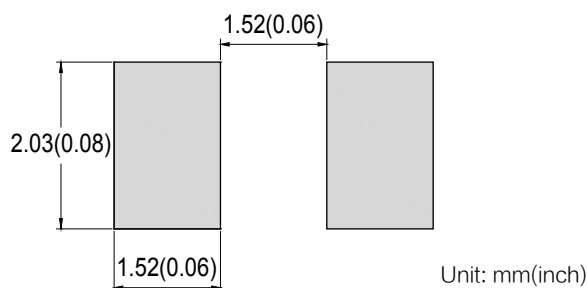
Time Current Curve



Time Current Curve



Recommended Land Pattern



Soldering Method

◆ Wave Solder

* Reservoir temperature: 260°C

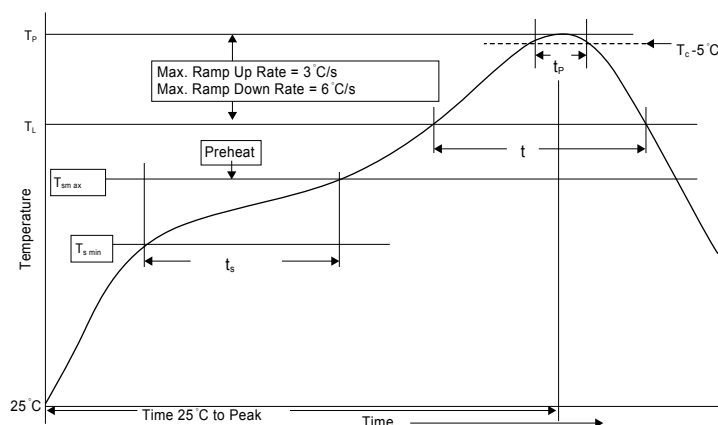
* Time in reservoir: 10 seconds maximum

◆ Infrared Reflow

* Temperature: 260°C

* Time: 30 seconds maximum

Solder Reflow Profile



Profile Feature		Lead(Pb) free solder
Preheat and soak	Temperature min.(T _{s min})	150°C
	Temperature max. (T _{s max})	200°C
	Time (T _{s min} to T _{s max}) (t _s)	60 – 120 Seconds
Average ramp up rate T _{s max} to T _p		3°C / Second Max.
Liquid ous temperature (T _L)		217°C
Time at liquid ous (T _L)		60 – 150 Seconds
Peak package body temperature (T _p)		260°C
Time (T _p) within 5°C of the specified classification temperature (T _c)		30 Seconds
Average ramp-down rate (T _p to T _{s max})		6°C / Second Max.
Time (25°C to Peak Temperature)		8 Minutes Max.

Temperature Derating Curve

Normal ambient temperature: 23+/-3°C

Operating temperature: -55 ~ 125°C, with proper correction factor applied

