Descriptions

SMD6125R series are fast acting square Surface Mount fuses are ceramic tube/end cap constructions, RoHS compliant, Halogen Free and lead(Pb) exempts of the requirements of RoHS Directive(2002/95/EC), with U.S. (UL/CSA) safety agency approvals. Provide board level primary and secondary circuit protection in a wide variety of applications. With excellent inrush current withstanding capability, excellent reliability for thermal and mechanic shock, also have a high reliability and stable solder ability, end caps are available in gold/silver/nickel plated.

Applications

- LED lighting
- Notebook PC
- Battery devices
- LCD/PDP devices
- LCD backlight in verter
- Portable Device
- Power supply
- Networking devices
- PC server
- Cooling fan system
- Storage system
- Telecom system
- Wireless base station
- White goods
- Game console
- Digital camera
- Office equipment
- Digital camera
- Automotive devices
- Medical equipment
- Industrial equipment

Features

- Fast acting
- RoHS compliant
- Conflict free metals
- Small size (6.1mm*2.5mm)
- Wide range of current rating available
- Wide operating temperature range
- Low temperature de-rating
- Tape and Reel for automatic placement

Electrical Characteristics

- Pre-Arcing Time / Current Characteristics:

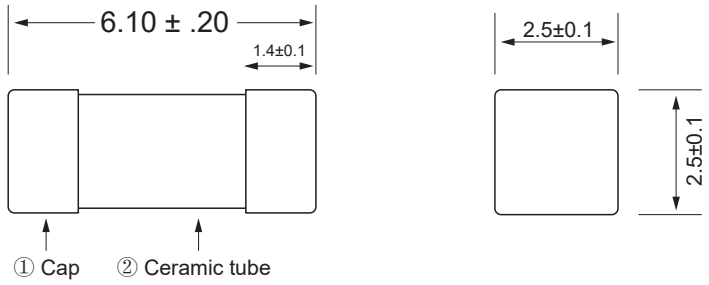
% of Ampere Rating(In)	Opening Time
100%*In	4 hours Min
200%*In	5 sec Max

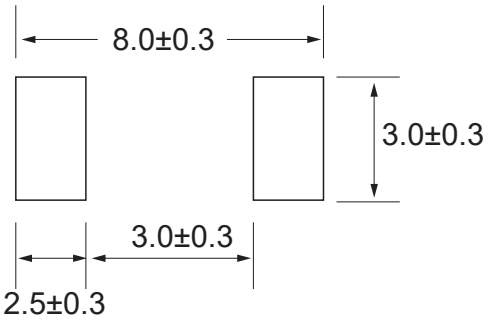
Performance Specification

Part Number	Rated Current (A)	Max Voltage Rating(V)	Interrupting Rating	Nominal Cold Resistance (mΩ)	Nominal Melting I^2t (A^2sec)
SMD6125R0062SF	0.062	250V	50A@250V 100A@125V	5650	0.00034
SMD6125R0100SF	0.10			3140	0.040
SMD6125R0160SF	0.16			2300	0.058
SMD6125R0200SF	0.20			1650	0.062
SMD6125R0250SF	0.25			1450	0.065
SMD6125R0300SF	0.30			850	0.191
SMD6125R0315SF	0.315			650	0.202
SMD6125R0375SF	0.375			610	0.330
SMD6125R0400SF	0.40			580	0.338
SMD6125R0500SF	0.50			320	0.475
SMD6125R0600SF	0.60			265	0.775
SMD6125R0630SF	0.63			256	0.986
SMD6125R0700SF	0.70			230	2.105
SMD6125R0750SF	0.75			225	2.240
SMD6125R0800SF	0.80			203	2.380
SMD6125R100SF	1.00			128	3.690
SMD6125R125SF	1.25			92.0	3.760
SMD6125R150SF	1.50			85.0	6.765
SMD6125R160SF	1.60			75.0	6.805
SMD6125R200SF	2.00			38.0	12.15
SMD6125R250SF	2.50			35.0	16.025
SMD6125R300SF	3.00			26.0	21.56
SMD6125R315SF	3.15			25.0	25.75
SMD6125R350SF	3.50			2.0	30.05
SMD6125R400SF	4.00			19.0	43.208
SMD6125R500SF	5.00			13.0	55.25
SMD6125R600SF	6.00			11.0	75.245
SMD6125R630SF	6.30			10.0	93.55
SMD6125R700SF	7.00			9.0	97.12
SMD6125R800SF	8.00	125V	100A@125V	7.8	108.75
SMD6125R1000SF	10.0			6.6	118.38
SMD6125R1200SF	12.0			4.5	140.08
SMD6125R1500SF	15.0			3.0	210.68
SMD6125R1600SF	16.0	72V	500A@72V	2.8	215.25
SMD6125R2000SF	20.0			2.0	358.08
SMD6125R2500SF	25.0			1.58	465.17
SMD6125R3000SF	30.0			1.45	989.65
SMD6125R4000SF	40.0	63V	500A@63V	1.20	1050.78

Dimensions and Structure

- Outline Drawing and dimensions (unit : mm)





Recommended pad layout

- Material Details:

NO.	Component	Material
①	End caps	Au Plated Brass Cap
②	Body	Non-Transparent Square Ceramic Tube
③	Fuse element	Cu-Ag Alloy wire

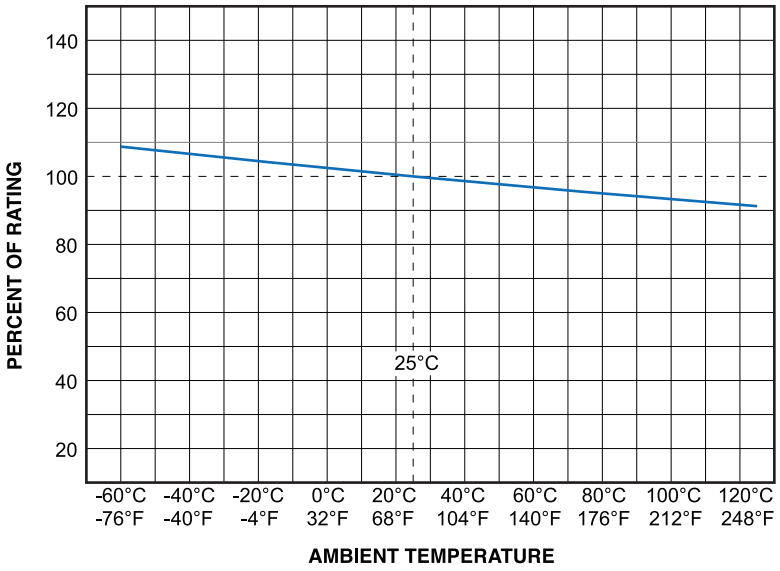
Product Characteristics

	Item	Contain	Reference standard
1	Insulation Resistance	10,000 ohms minimum	MIL-STD-202G, Method 302 Test ConditionA
2	Solderability	T=240°C±5°C, t=5+0/-0.5s, Cover⩾95%	MIL-STD-202G, Method 208H
3	Resistance to Soldering Heat	10 sec at 260°C	MIL-STD-202G, Method 210F Test Condition B
4	Thermal Shock	5 cycles, -65°C to +125°C, 15minutes @each extreme	MIL-STD-202G, Method 107G Test Condition B
5	Mechanical Shock	100G's peak for 6 milliseconds, 3 cycles	MIL-STD-202G, Method 213B Test 1
6	Vibration	0.03" amplitude, 10-55 Hz in 1 min. 2hrs each XYZ=6hrs	MIL-STD-202G, Method 201A
7	Moisture Resistance	10 cycles	MIL-STD-202G, Method 106G
8	Salt Spray	5% salt solution,48hrs	MIL-STD-202G, Method 101E Test Condition B
9	Operating Temperature	-55°C to +125°C	IEC60068-2-1/2

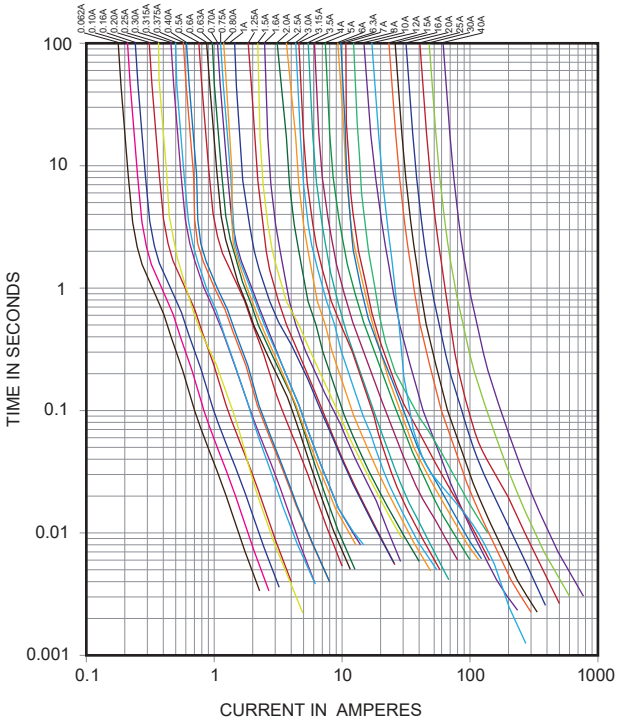
Environmental Characteristic

- Company operating temperature of the environment more than 25+/-5℃, in the selection of fuse specifications, it needs to consider the impact of the operating environment of the temperature fuse. Photo: temperature derating curve.

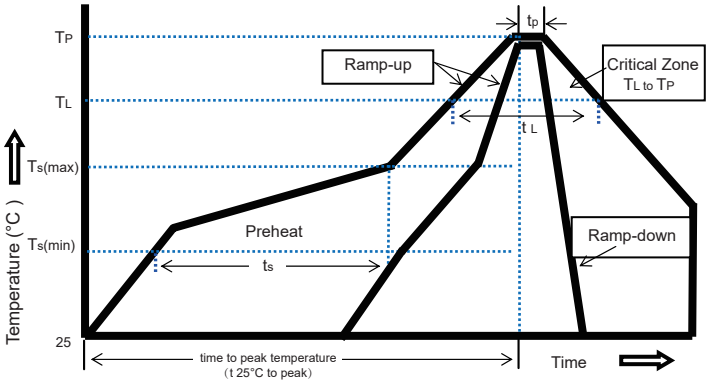
Temperature Rerating Curve



Average Time-Current Curve



Recommended Soldering Parameters

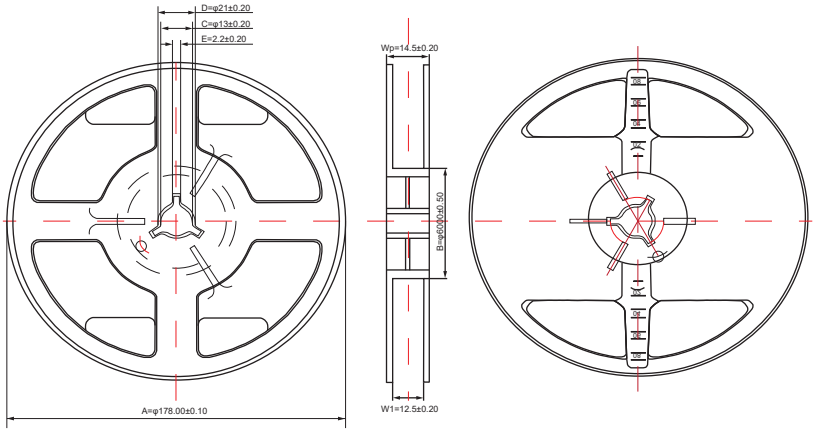


Soldering Method		Parameter
Reflow solder	Solder paste process	
	Solder Pot Temperature	260°C max
	Solder Dwell Time	5 seconds max
Hand-Solder	Solder Iron Temperature	300±5°C max
	Heating Time	1-2 s max

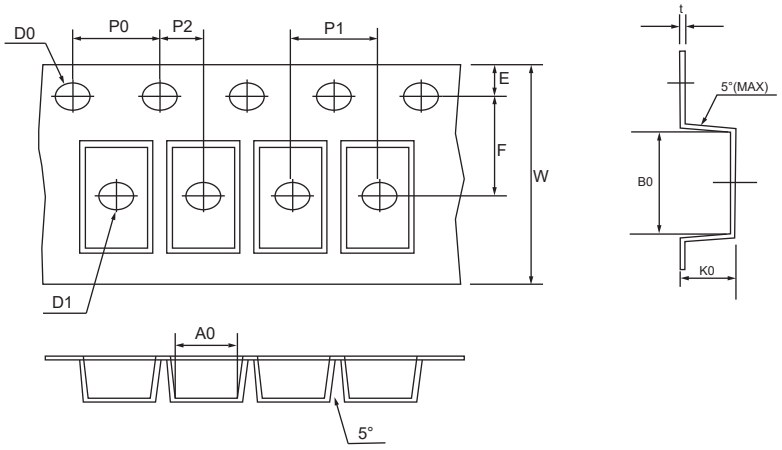
Reflow Condition		Pb-Free assembly
Average ramp-up rate(Ts(max)to Tp)		5°C/second max.
Preheat	Temperature Min (Ts(min))	150°C
	Temperature Max (Ts(max))	200°C
	Time (Min to Max)(ts)	60~120 seconds
Reflow	Temperature (T_L)	220°C
	Time Max (t_L)	60 seconds
Peak Temperature (Tp)		260°C max
Ramp-down Rate		5°C/second max
Time 25°C to peak Temperature(Tp)		8 minutes max

Packing

No.	Quantity &Packaging Code
SMD6125R	1500 fuses/reel (12mm tape-and-reel on a 7 inch (178mm) reel per EIA Standard 481)



Item	A	B	C	D	E	W1	W2
Spec.(mm)	178±0.10	60±0.50	13±0.20	21±0.20	2.2±0.20	12.5±0.20	14.5±0.20



Item	A0	B0	D0	D1	E	F
Spec.(mm)	2.70±0.10	6.4±0.10	1.5±0.10	1.50±0.25	1.75±0.10	5.50±0.10
Item	**K0**	**P0**	**P1**	**P2**	**W**	**t**
Spec.(mm)	2.70±0.10	4.00±0.10	4.00±0.10	2.0±0.10	12.00±0.15	0.25±0.05