1. / Description, Features and Applications

SET series slow-blow 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.

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

Applications:

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

1.1 Catalogue No.，● Approved / ○ Pending

Catalog No.	Ampere Rating	Voltage Rating	Breaking Capacity	Nominal Cold Resistance (Ohms)	I^2TMelting Integral($A^2.S$)	Agency Approvals	
SET0250	250mA	250VAC	50A@300VAC 50A@250VAC 200A@125VAC	0.860	0.145	●	●
SET0300	300mA			0.620	0.162	●	●
SET0315	315mA			0.550	0.189	●	●
SET0375	375mA			0.470	0.200	●	●
SET0400	400mA			0.380	0.238	●	●
SET0500	500mA			0.320	0.275	●	●
SET0600	600mA			0.285	0.470	●	●
SET0630	630mA			0.256	0.566	●	●
SET0700	700mA			0.208	0.805	●	●
SET0750	750mA			0.175	1.240	●	●
SET0800	800mA			0.155	1.880	●	●
SET1100	1A			0.148	3.500	●	●
SET1125	1.25A			0.102	4.760	●	●
SET1150	1.5A			0.085	6.305	●	●
SET1200	2A			0.044	8.950	●	●
SET1250	2.5A			0.043	16.025	●	●
SET1300	3A			0.033	21.560	●	●
SET1315	3.15A			0.029	22.750	●	●
SET1350	3.5A			0.027	27.050	●	●
SET1400	4A			0.025	31.808	●	●
SET1500	5A			0.019	40.250	●	●
SET1600	6A			0.018	67.245	●	●
SET1630	6.3A			0.017	73.550	●	●
SET1700	7A			0.015	76.280	●	●

- *: These catalog no. cold resistance and I2t value are pending due to fuse elements shall be customized;
- DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25℃;
- Typical Pre-arching I2t are calculated at 10*In Current or 8ms;
- Min Interrupting Rating: 1.35*In.

2. Product Marking

The fuses shall have the following markings

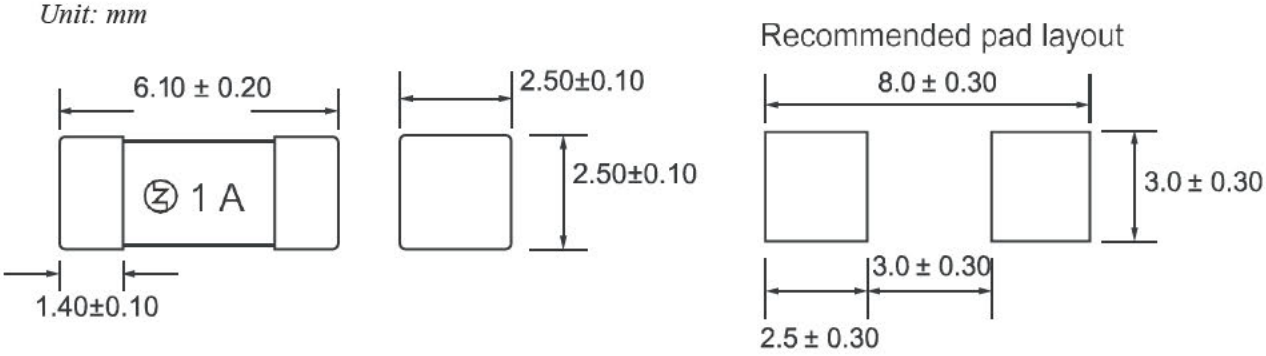
Example:

1A	Rated Current (A): **A** or **mA**

Note: Size and position of the markings shall not be provided.

3. Dimensions and Structure

Unit: mm



4. Material Details

编 号 NO.	零 件 名 称 Part Name	材 质 Material
①	端帽 End caps	黄铜镀金 Au Plated Brass Cap
②	主体 Body	陶瓷管 Non-Transparent Square Ceramic Tube
③	熔丝 Fuse element	合金 Cu-Ag Alloy wire

5. Product Characteristic

NO.	Item	Content	Reference standards
1	Product Marking	Brand, Ampere Rating	
2	Operating Temperature	-55°C to 125°C	IEC60068-2-1/2
3	Solderability	T=240°C±5°C , t=3sec±0.5sec, Coverage≥95%	MIL-STD-202, Method 208

4	Resistance to Soldering Heat	10 sec at 260°C	MIL-STD-202, Method 210, Test condition B
5	Insulation Resistance (after Opening)	10,000 ohms minimum	MIL-STD-202, Method 302, Test Condition A
6	Thermal Shock	5 cycles, -65°C / +125°C, 15 minutes at each extreme	MIL-STD-202, Method 107, Test Condition B
7	Mechanical Shock	100G's peak for 6 milliseconds, 3cycles	MIL-STD-202, Method 213, Test I
8	Vibration	0.03"amplitude, 10-55 Hz in 1 min. 2hrs each XYZ=6hrs	MIL-STD-202, Method 201
9	Moisture Resistance	10 cycles	MIL-STD-202, Method 106
10	Salt Spray	5% salt solution, 48hrs	MIL-STD-202, Method 101, Test Condition B

6. Electrical Characteristics

6.1 Test Condition

25±5℃.

All electrical test is to be conducted with the ambient air at a temperature of 25±5℃.

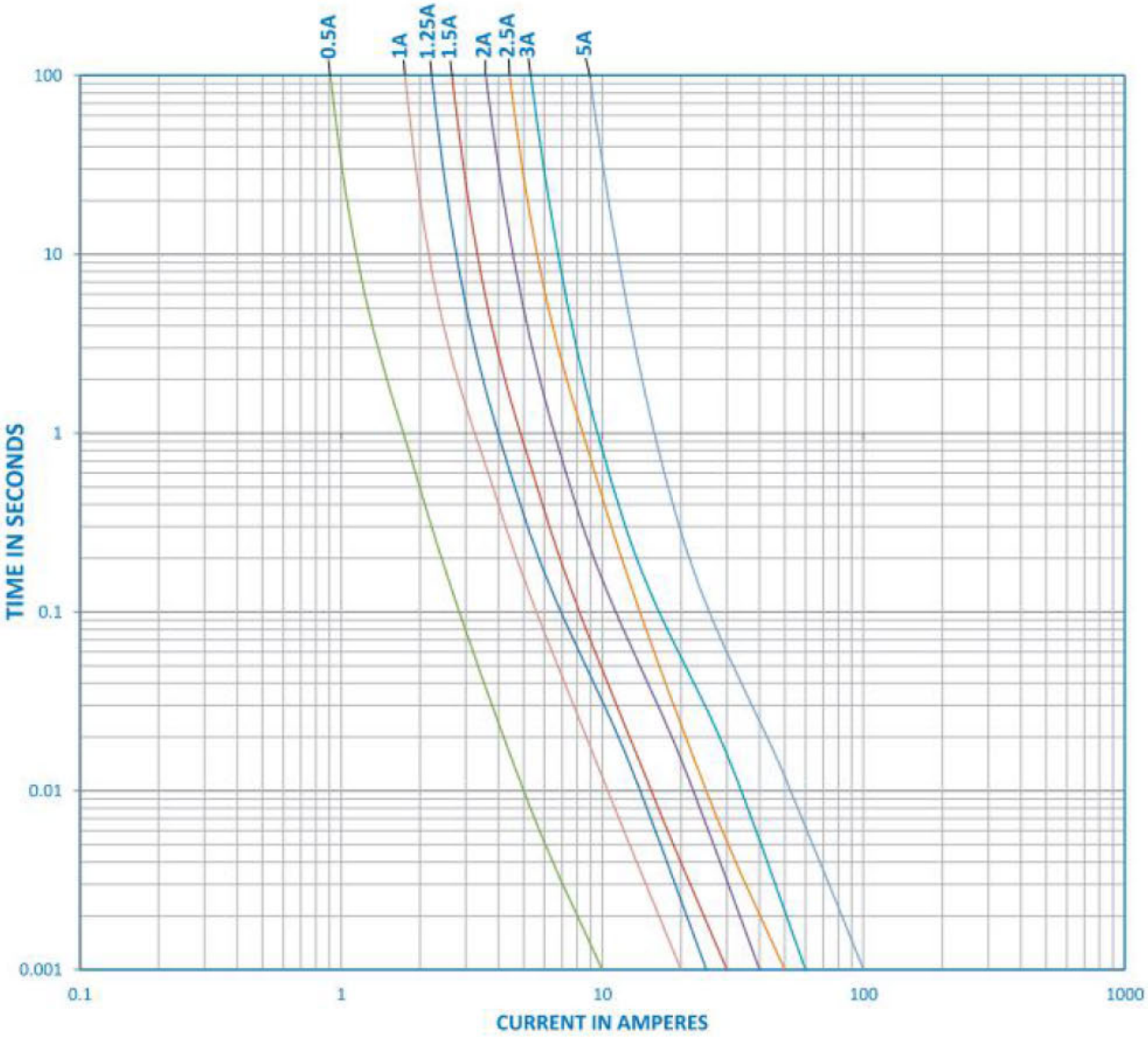
6.2 Interrupting Rating:

Breaking Capacity: 50A@250Vac，200A@125Vac.

6.3 Operating Characteristics

额定电流的% % of Ampere Rating(In)	熔断时间 Blowing Time
100% * In	大于 4 小时(4 hours Min)
200% * In	小于 120 秒 (120 sec Max)
1000% * In	大于 10 毫秒 (10ms Min)

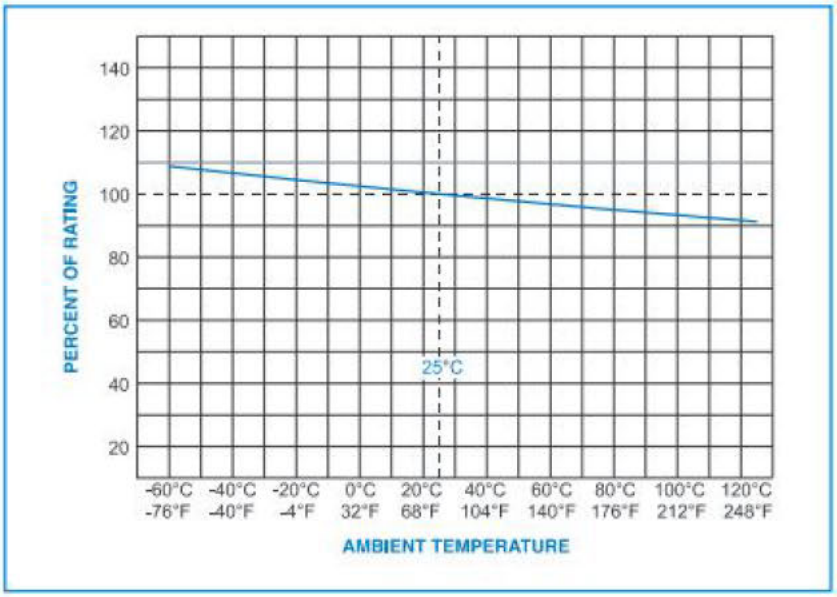
6.4 Average Time Current Curves



7. Environmental Characteristic

When choosing the fuse's specification, if the operating environmental temperature beyond the scope from 20~30℃, engineer should consider the environmental temperature's affection to fuses.

Please refer: Temperature Rerating Curve:



9. Recommended Soldering Parameters

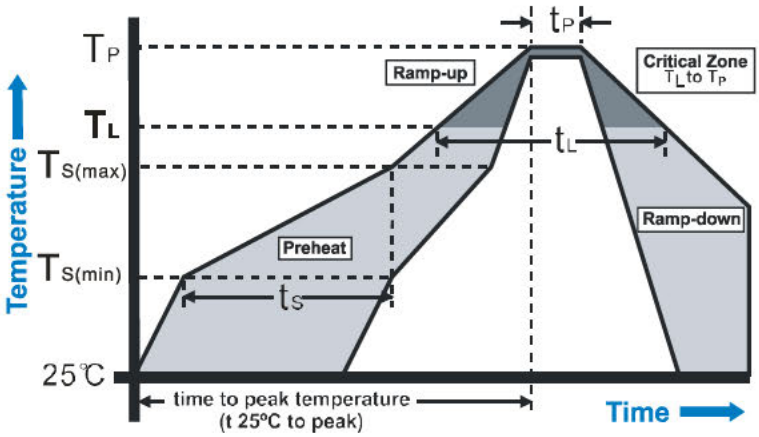
A. Wave /Reflow Soldering Parameters:

Solder paste process.

Solder Pot Temperature: 260°C Max

Solder Dwell Time: 5 seconds 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



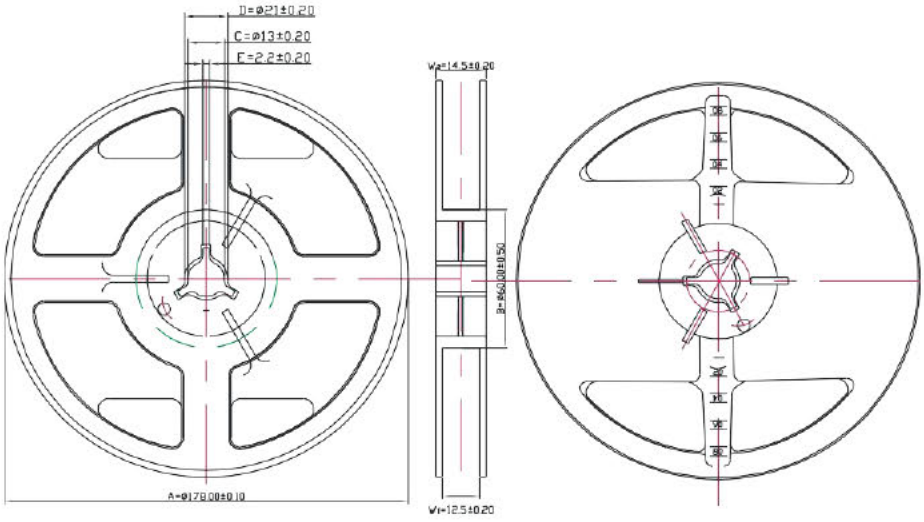
B. Hand-Solder Parameters:

Solder Iron Temperature: 300±5℃

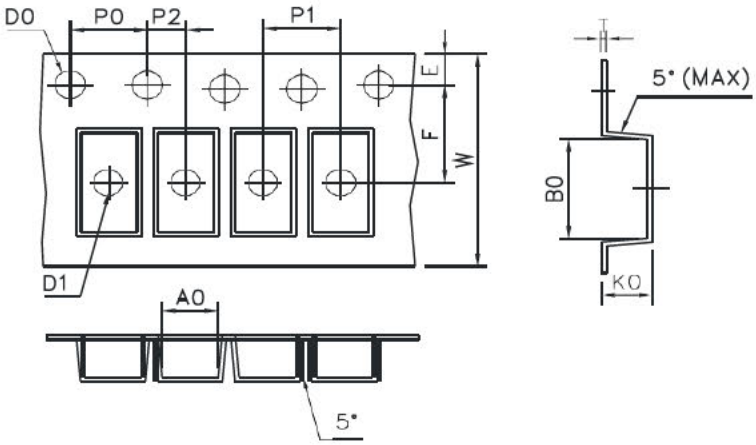
Heating Time: 1~2 s Max

10. Packaging

1000 / 1,000 pcs in 7 inches dia. reel, 12mm wide tape, 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	A_0	B_0	D_0	D_1	E	F
Spec.(mm)	2.70±0.10	6.40±0.10	1.50+0.10	1.50+0.25	1.75±0.10	5.50±0.10
Item	K_0	P_0	P_1	P_2	W	t
Spec,mm	2.70±0.10	4.00±0.10	4.00±0.10	2.00±0.10	12.00±0.15	0.25±0.05

11.Others

11.1 In the event that an impropriety is found beyond this specification, it shall be fixed by mutual agreement between the parties.