



Sinochip Electronics Co.,LTD.



General

- Fast acting, Inrush withstand capability
- Wire-In-Air performance
- Wide range of current rating available
- 6.1mm× 2.5mm square shape surface mount
- Higher temperature profiles
- -50°C~125°C operating temperature
- Excellent environmental integrity
- RoHS compliant
- Halogen-free

Agency / Certificate Information

Agency	File Number	Ampere Range
	JDYX2.E319540	1A~20A
	JDYX8.E319540	1A~20A
	PSE11020297	1A~5A
	PSE11020296	6.3A~10A

Certificate	File Number
ISO9001:2008	J10Q20600R0S
ISO14001:2004	J10E20601R0S
ISO/TS16949:2009	0117251

Application

- Battery pack
- PC related equipment and peripherals (Hard drive, Printer, etc.)
- Digital camera (Digital still camera)
- Game equipment
- LCD monitor, LCD modules
- Wireless basestation
- Power supply
- Medical device

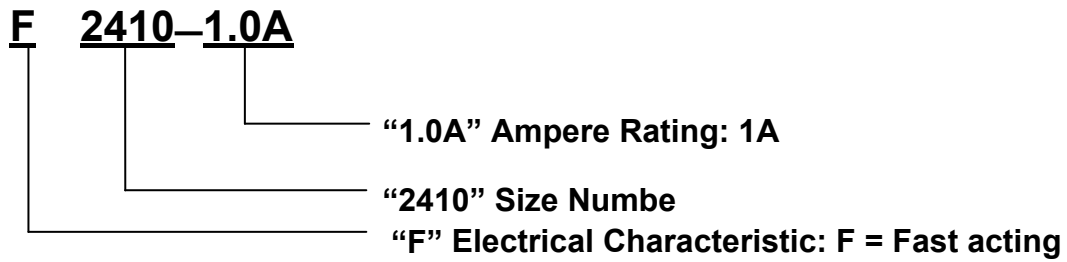
Ordering Information

Part Number	Current Rating (A)	Voltage Rating (V)	Interrupting Rating	Typical Cold DCR* (mΩ)	Nominal I ² T** (A ² S)
F2410 -1.0A	1	125	UL 50A 125V AC 160V DC PSE 100A 100V AC	100	0.355
F2410-1.25A	1.25	125		89	0.481
F2410-1.6A	1.6	125		58	0.847
F2410-2.0A	2	125		32	0.84
F2410-2.5A	2.5	125		27	1.403
F2410-3.15A	3.15	125		21	2.054
F2410-4.0A	4	125		16	3.44
F2410-5.0A	5	125		14	4.843
F2410-6.3A	6.3	125		10	10.558
F2410-7.0A	7	125		9.4	10.584
F2410-8.0A	8	125	7.4	17.628	
F2410-10.0A	10	125	5.9	30.3	
F2410-12.0A	12	65	UL 50A 65VAC/DC	4.8	42.221
F2410-15.0A	15	65		3.7	69.753
F2410-20.0A	20	65		3	132

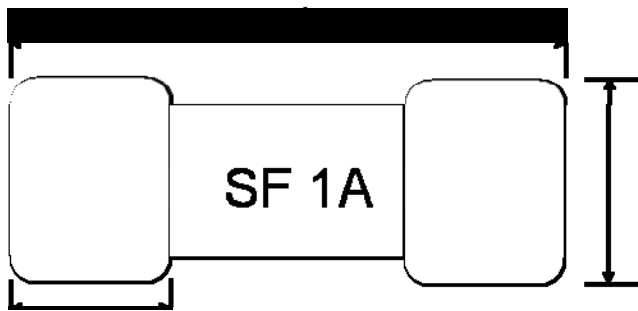
* Measured at ≤10% rated current and 25 °C

** Melting I²T at 10 times of rated current

Catalog Symbol



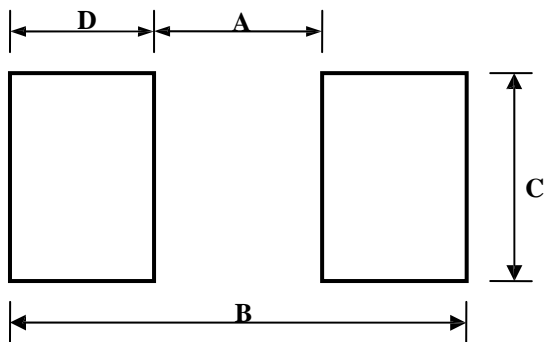
Dimensions



Unit:mm

L	W	t	D
6.1±0.2	2.5±0.1	2.5±0.1	1.4±0.1

Recommended Land Patterns



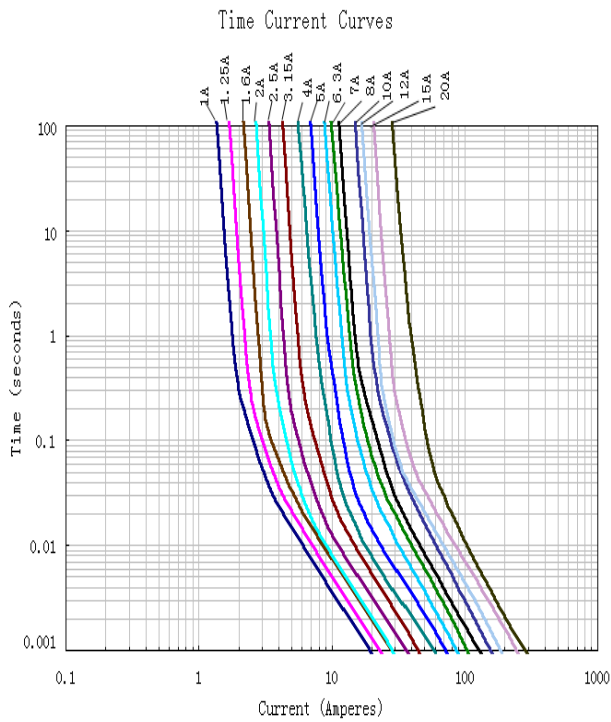
Materials

Components	Material
Body	Ceramic
Terminations	Au Plated Brass Cap
Element	Silver Plated or Copper Alloy wire

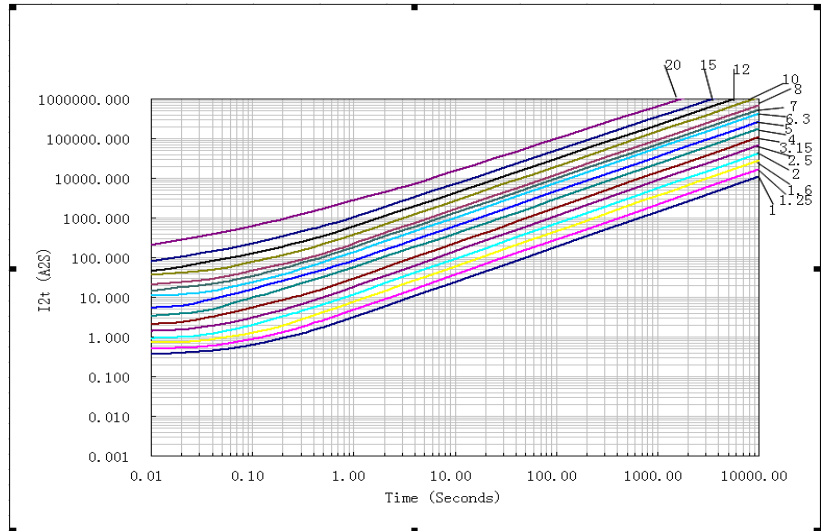
Dimensions	A	B	C	D
Spec	3.0±0.3	8.0±0.3	3.0±0.3	2.5±0.3

Unit:mm

Time Current Curve



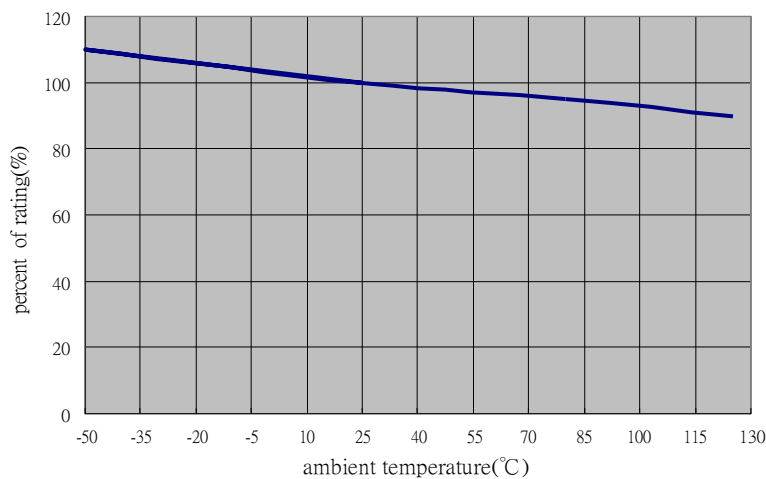
I²T vs Time Curve



Electrical Characteristics

Ampere Rating	% of Current Rating	Opening Time
1A-20A	100%	Min.4hr.
1A-10A	200%	Max.5s
12A - 20A	200%	Max.20s

Temperature Derating Curve



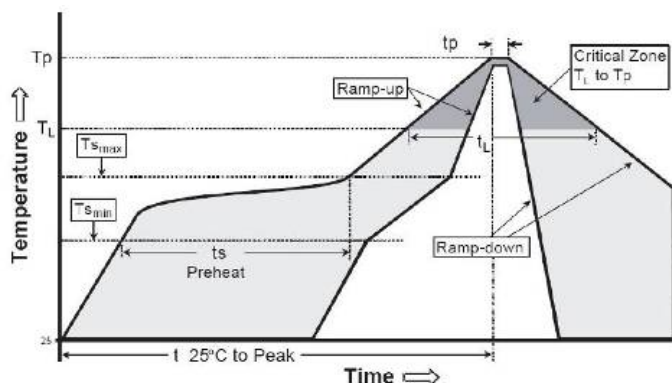
Reliability Test

Item	Test condition / Methods	Performance	Standard
Carrying capacity	100% of its rated current	No Fusing, 4hr min	UL248-14
Fusing Time	200% of its rated current	1~10A < 5 s 12~20A < 20 s	Refer to SinoChip File
Fusing Time	1000% of its rated current	1ms-10ms	IEC60127-4
Voltage Drop	100% of its rated current	1-6.3A<300mv 7-10A<220mv 12A-20A<150mv	IEC-60127-4
Endurance Test	UL:100% of its rated current PSE: 125% of its rated current	1-6.3A<70K 7-10A<85K 12-20A<105K	IEC-60127-4 UL248-14
Interrupting Ability	UL 50A@125V AC160V DC 50A@ 65VAC/DC	without permanent arcing,ignition and bursting of fuse link	UL248-14 IEC60127-4
Solderability	240°C±5 °C,3s±0.5s	95% coverage min	IEC60127-4 IEC60068-2-20; MIL-STD-202
Resistance to soldering	260 C±5°C, 10s±0.5s	△R:<10%	MIL-STD-202 Method 210
High Temperature Operating Life	T=70±2°C, 0.6In, 96h;	△R: <10%	MIL-STD-202 Method 108
Humidity(steady state)	T=40±2°C, 90~95%RH, 1000h;	△R: <10%	MIL-STD-202 Method 103
Low Temperature Storage	T=-55±3°C, 96 h	△R: <10%	IEC60068-2-1
High Temperature Storage	T=125±2°C, 96h	△R: <10%	IEC60068-2-2
Salt Spray	5% salt solution , 48 h	△R: <10%	MIL-STD-202 Method 101
Thermal Shock	5 cycles between -55°C/+125°C, 60 minutes @each extreme	△R: <±(10%R+0.005)	IEC 60068-2-14

Recommended Solder Curve

1. Infrared Reflow:
 Temperature : 260°C
 Time : 5s max.

Recommend Reflow profile



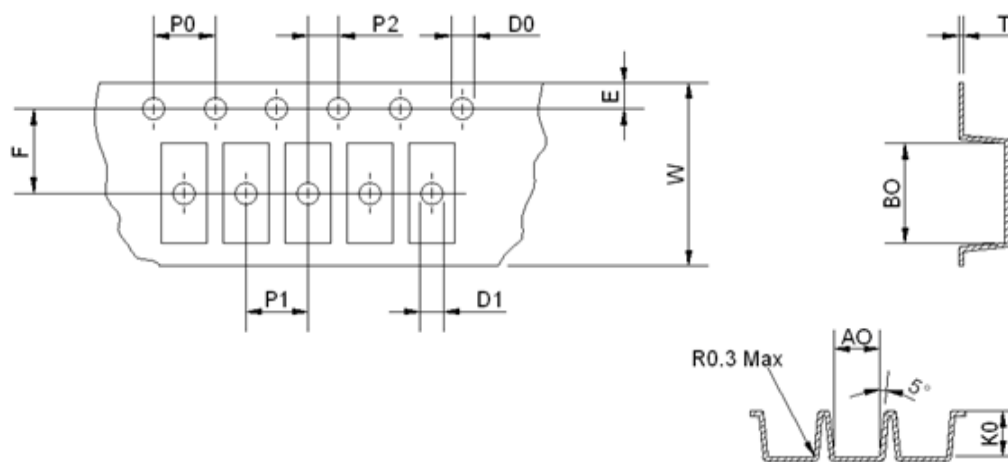
Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate($T_{s_{max}}$ to T_p)	3°C/s max.
Preheat Temperature Min($T_{s_{min}}$) Temperature Max($T_{s_{max}}$) Time($T_{s_{min}}$ to $T_{s_{max}}$)	150°C 200°C 60-120s
Peak Temperature(T_p)	260°C
Time within 5°C of actual Peak Temperature(T_p)	5s
Melting tin time(t_L)	20~40s
Ramp-Down Rate	6°C/s max.
Time 25°C to Peak Temperature	8 minutes max.

2. Wave soldering
 Reservoir Temperature : 260°C
 Time in Reservoir : 10s max.

3. Hand Soldering
 Temperature : 350°C
 Time : 5s max.

Packaging

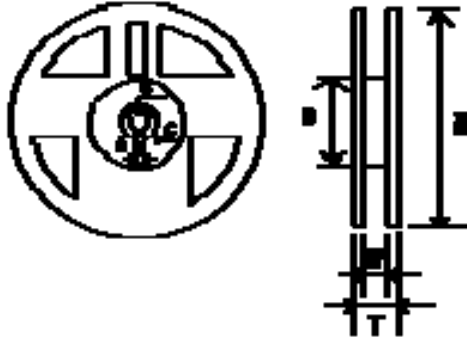
1000 pieces of fuses in emboss taper and reeled on a 178mm(7 inch) reel



Symbol	A0	B0	K0	P0	P1	P2
Spec	3.00±0.10	6.50±0.10	3.00±0.10	4.00±0.10	4.00±0.10	2.00±0.10
Symbol	E	F	D0	D1	W	T
Spec	1.75±0.10	5.50±0.05	1.50±0.10	1.50MIN	12.0±0.20	0.30±0.05

Unit:mm

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Unit:mm

Type	M	W	T	A	B	C	D
Spec	178 ± 2.0	12.5 ± 1.0	14.5 ± 1.5	2.0 ± 0.5	13.0 ± 0.5	21.0 ± 0.5	58.0 ± 2.0

Storage

- The ambient temperature shall between 5~30°C.
- The relative humidity recommended for storage is between 25~ 60%.
- Sealed plastic bags with desiccant shall be used to reduce the oxidation of the termination and shall only be opened prior to use. The products shall not be stored in areas where harmful gases containing sulfur or chlorine are present.