1206 FAST ACTING SMD FUSES

12.000 Series

Description

12.000 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.

Features

- 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

Application

- Secondary circuit protectio
- Laptop, notebook, netboo
- Flat panel displays
- High definition television(HDTV)
- LCD/LED backlighting
- Computers and peripherals
- Gaming console systems
- Handheld/portable equipment
- Mobile device charges
- Automotive
- Central body control module
- Heating ventilation and air conditioning
- Doors,window lift and seat control
- Digital instrument cluster
- In-vehicle infotainment and navigation
- Electric pumps,motor control and
- Powertrain control module(PCU)/Engine
- Transimission Control Unit(TCU)

Electrical Characteristcs

Rated Current	% of Amp Rating	Opening Time
1A~30A	100%	4hours, min
1A~3A	200%	1.0s - 60 s
1A~5A	250%	5.0s max
1A~5A	300%	0.1s - 3.0 s
6A~30A	350%	5.0s max
1A~30A	1000%	0.2ms - 20.0 ms

Agency information

File Number:E365879, Guide JDYX2/JDYX8

Product Characteristcs

Materials	**Body**: Ceramic **Terminatons**: Silver over-plated with tin **Element:** Alloy(Ag,Cu,Zn) **Cover Coat**Glass
Operatng Temperature	-55°C to 125°C Consult temperature rerating curve chart.
Thermal Shock	300 cycles -55°C to 125°C
Humidity	MIL-STD-202F, Method 103B,Condition D
Vibraton	Per MIL-STD-202F, Method 201A
Insulaton Resistance (Afer Opening)	Greater than 10,000 ohms
Resistance to Soldering Heat	MIL-STD-202G,Method 210F, Condition D

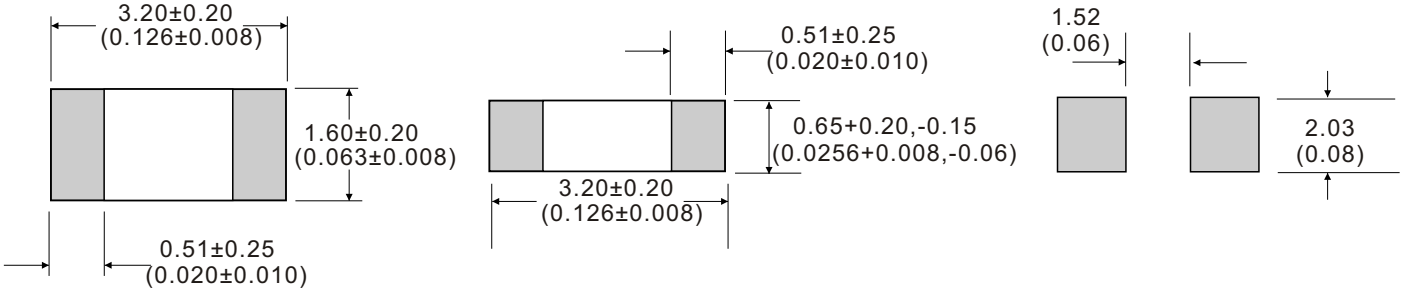
12.000 Series

Specification

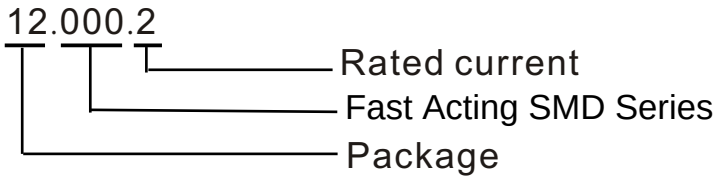
Part NO. 料号	Rated Voltage 额定电压	Rated Current 额定电流	Breaking Capacity 分断能力	Typical Cold Resistance (Ω) 冷电阻	Typical Pre-Arcing $I^2t(A^2S)$ 融化热能	Marking 标示
12.000.1	72VDC	1A	100A@72VDC	0.485	0.18	H
12.000.1.5	72VDC	1.5A	100A@72VDC	0.218	0.4	K
12.000.2	72VDC	2A	100A@72VDC	0.133	1.1	N
12.000.2.5	72VDC	2.5A	100A@72VDC	0.079	1.7	O
12.000.3	72VDC	3A	100A@72VDC	0.049	2.2	P
12.000.3.5	63VDC	3.5A	100A@63VDC	0.037	2.7	R
12.000.4	63VDC	4A	100A@63VDC	0.033	3.2	S
12.000.4.5	63VDC	4.5A	100A@63VDC	0.028	4.2	X
12.000.5	63VDC	5A	100A@63VDC	0.022	6	T
12.000.6	32VDC	6A	100A@32VDC	0.0155	12	F
12.000.7	32VDC	7A	100A@32VDC	0.0115	18	J
12.000.8	32VDC	8A	100A@32VDC	0.008	18	V
12.000.10	32VDC	10A	100A@32VDC	0.007	30	U
12.000.12	32VDC	12A	100A@32VDC	0.0059	45	W
12.000.15	24VDC	15A	300A@24VDC	0.0038	33	Y
12.000.20	24VDC	20A	300A@24VDC	0.0029	80	Q
12.000.25	24VDC	25A	300A@24VDC	0.0016	60	L
12.000.30	24VDC	30A	300A@24VDC	0.0013	100	Z

Notes
* 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 degrees
* Typical Pre-arcing I^2t are measured at 10In Current
* For fuse below 1A, the color of glass coating is Blue; for 1A and above, it's Green.

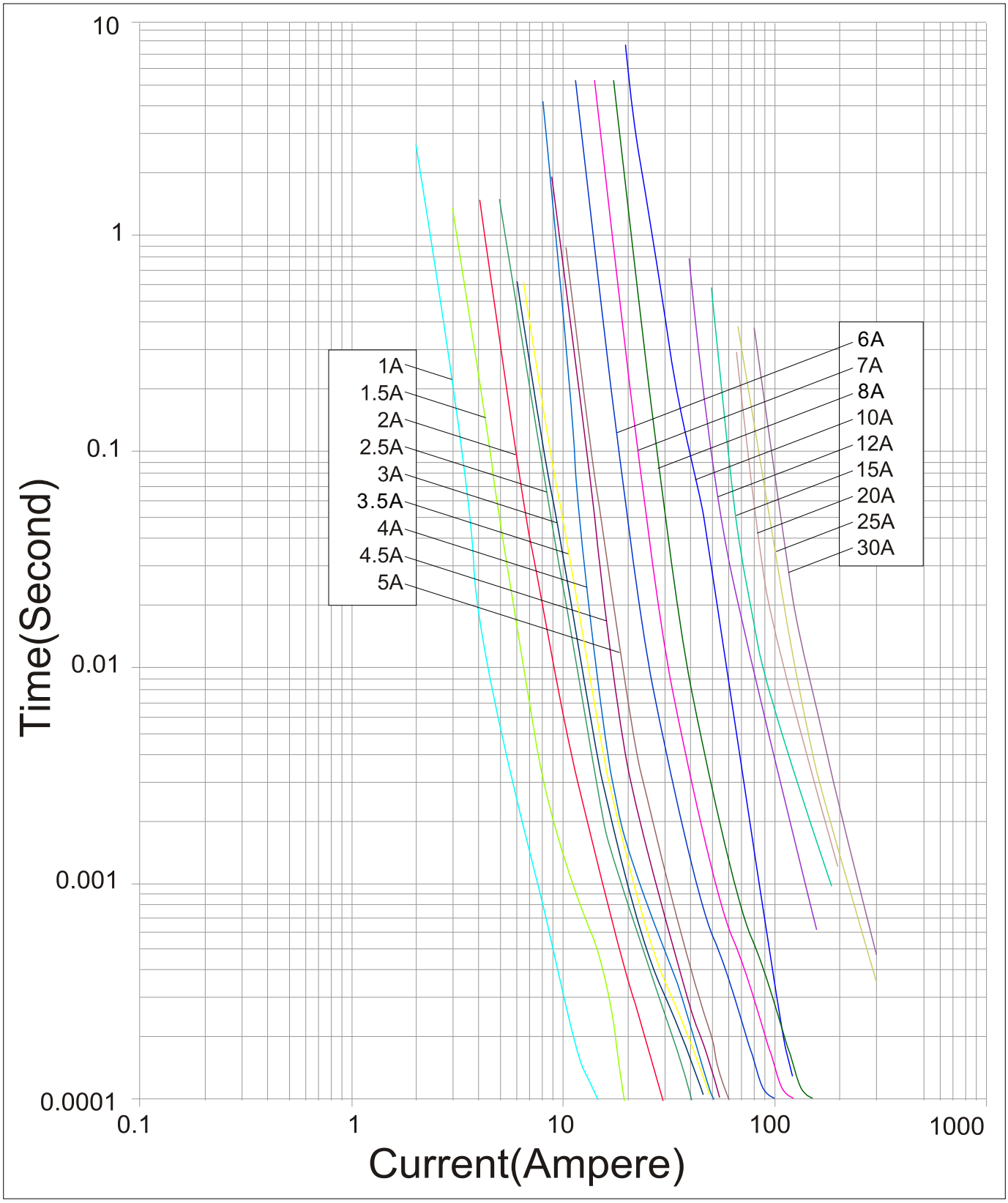
Dimensions (Unit: mm/inch)



Part Numbering System



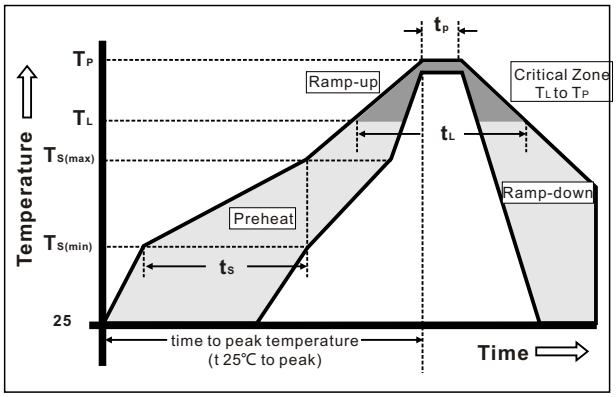
Time -Current Curves



Installation Recommendations

Wave Soldering Paameters

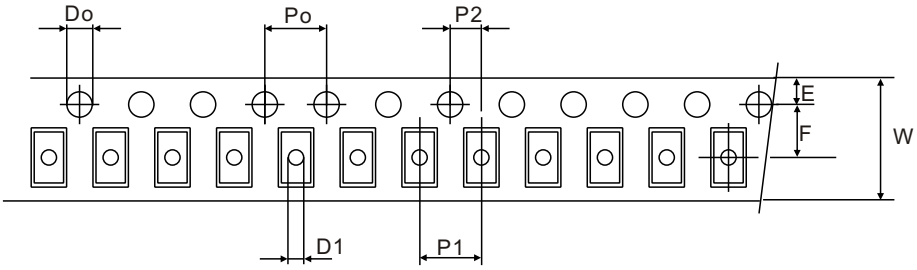
Reflow Conditon		Pb-free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	150℃
	- Temperature Max ($T_{s(max)}$)	200℃
	- Time (Min to Max) (t_s)	60 – 120 seconds
Average Ramp-up Rate (Liquidus Temp (TL) to peak)		3℃/second max.
TS(max) to TL - Ramp-up Rate		5℃/second max.
Reflow	- Temperature (T_L) (Liquidus)	217℃
	- Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_P)		260+0/-5℃
Time within 5° C of actual peak Temperature (t_p)		30 seconds
Ramp-down Rate		6°C/second max
Time 25° C to peak Temperature (T_P)		8 minutes max.
Do not exceed		260°C

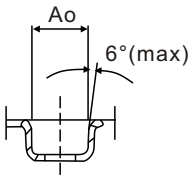


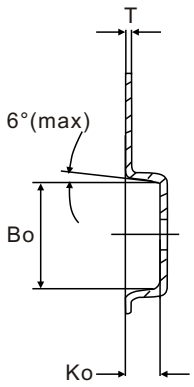
Solder Pot Temperature: 260°C max

Solder Dwell Time: 10 Seconds max

Packaging Dementions







Symbol	Ao	Bo	Ko	Po	P1	P2
Spec	1.80±0.10	3.50±0.10	1.27±0.10	4.00±0.10	4.00±0.10	2.00±0.10
Symbol	E	F	Do	D1	W	T
Spec	1.75±0.10	3.50±0.10	1.50±0.10	1.00(Max)	8.00±0.10	0.23±0.02

(Unit: mm)

Reel Dementions (Unit: mm)

Type	A±0.5	B±0.5	C±1	D±1	M±2	W±1.5	T±2.0
0603	2.5	13	31	80	178	10	3.5

Chip Size	Parts on 7 inch(178mm) Reel
1206(3216)	3000