



Description

R12.000 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

Applications

- Secondary circuit protection
- Laptop, notebook, netbook
- 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 Characteristics

Rated Current	% of Amp Rating	Opening Time
250mA~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
250mA~750mA	350%	5.0s max
6A~30A	350%	5.0s max
250mA~30A	1000%	0.2ms - 20.0 ms

Agency information

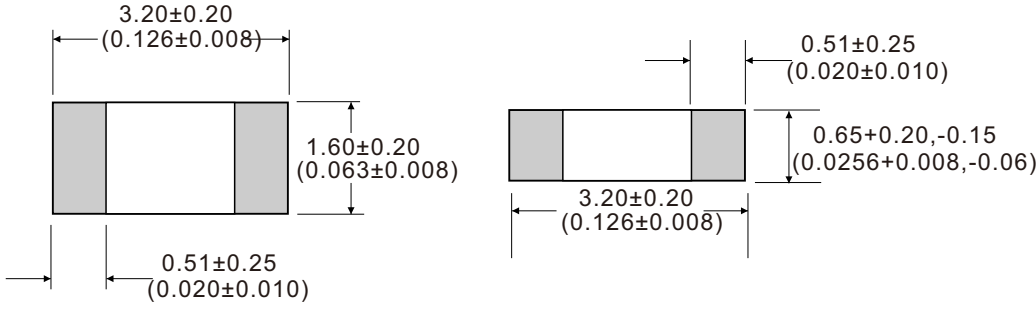
File Number:E340427, Guide JDYX2/JDYX8

Specifications

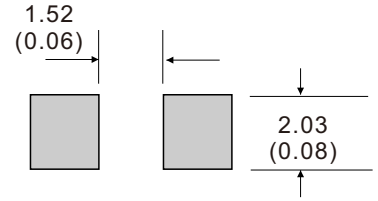
Part No.	Rated Voltage (V)			Rated Current (A)	Breaking Capacity (A)	Typical Cold Resistance (mOhms)	Typical Voltage Drop (mV)	Typical Pre-Arcing I ² t (A ² Sec)	Marking																																																						
R12.000.0.25	125Vdc	72Vdc	63Vdc	250mA	100A@72Vdc	100A@32Vdc	3700	1350	0.00038	.25																																																					
R12.000.0.375				375mA							100A@63Vdc	1850	720	0.00077	E																																																
R12.000.0.5				500mA												1050	690	0.0019	B																																												
R12.000.0.75				750mA																775	680	0.15	G																																								
R12.000.1				1A																				485	550	0.18	H																																				
R12.000.1.5				1.5A																								218	355	0.4	K																																
R12.000.2				2A																												133	310	1.1	N																												
R12.000.2.5				2.5A																																79	230	1.7	O																								
R12.000.3				3A																																				49	185	2.2	P																				
R12.000.3.5				3.5A																																								37	175	2.7	R																
R12.000.4				4A																																												33	160	3.2	S												
R12.000.4.5				4.5A																																																28	150	4.2	X								
R12.000.5				5A																																																				22	135	6	T				
R12.000.6				6A																																																								15.5	140	12	F
R12.000.7				7A																																																											
R12.000.8	8A	8.0	100	18	V																																																										
R12.000.10	10A					7.0	90	30	U																																																						
R12.000.12	12A									5.9	85	45	W																																																		
R12.000.15	15A													3.8	75	63	Y																																														
R12.000.20	20A																	2.9	70	80	Q																																										
R12.000.25	25A																					1.6	60	90	25																																						
R12.000.30	30A																									1.3	60	100	30																																		

Dimensions

(Unit: mm/inch)



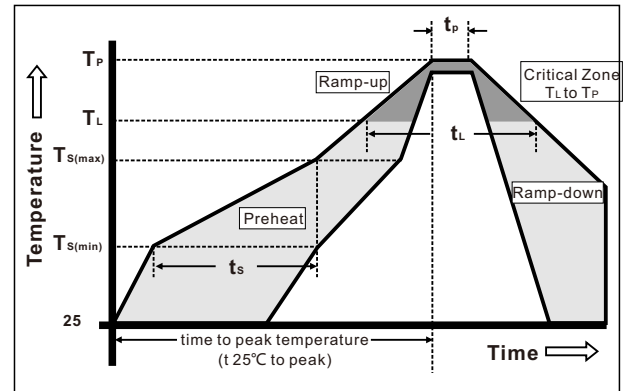
Pad layout



Installation Recommendations

1 Wave Soldering Parameters

Reflow Condition		Pb-free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	150°C
	- Temperature Max ($T_{s(max)}$)	200°C
	- Time (Min to Max) (t_s)	60 – 120 seconds
Average Ramp-up Rate (Liquidus Temp (T_L) to peak)		3°C/second max.
TS(max) to T_L - Ramp-up Rate		5°C/second max.
Reflow	- Temperature (T_L) (Liquidus)	217°C
	- Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_P)		260+0/-5°C
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

2 Hand-Solder Parameters

Solder Iron Temperature: 280±5°C
 Heating Time: 5 Seconds min
 Generally, hand-soldering is not recommended

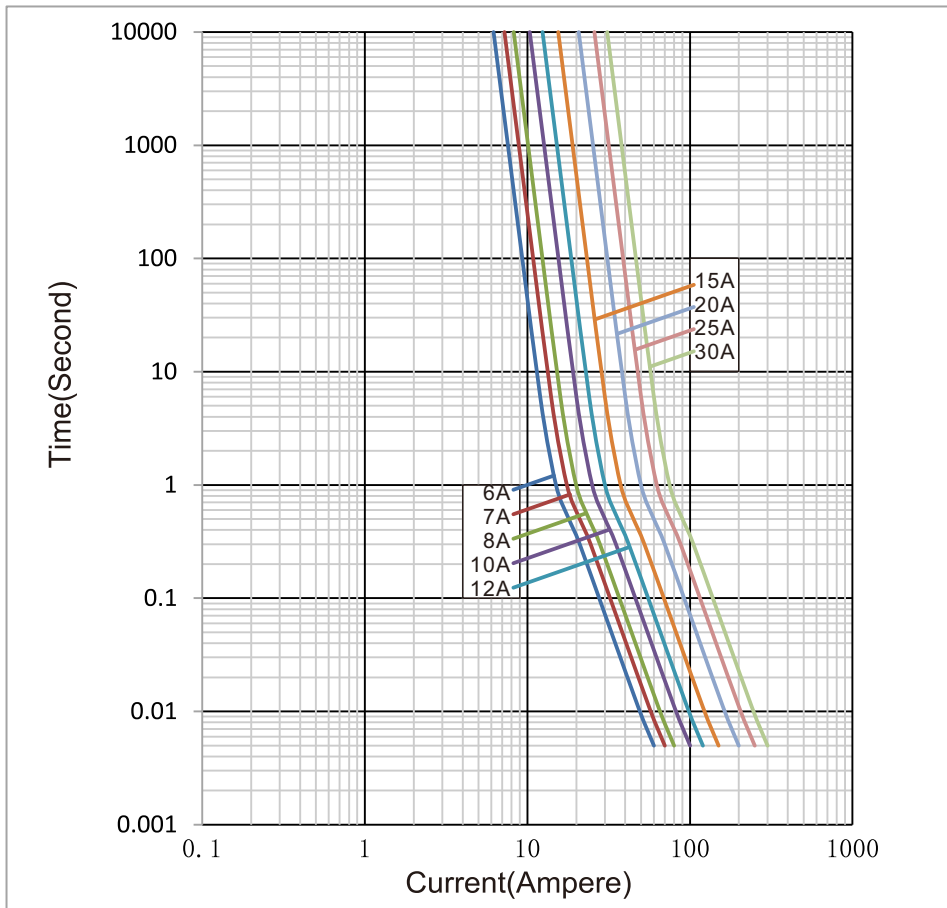
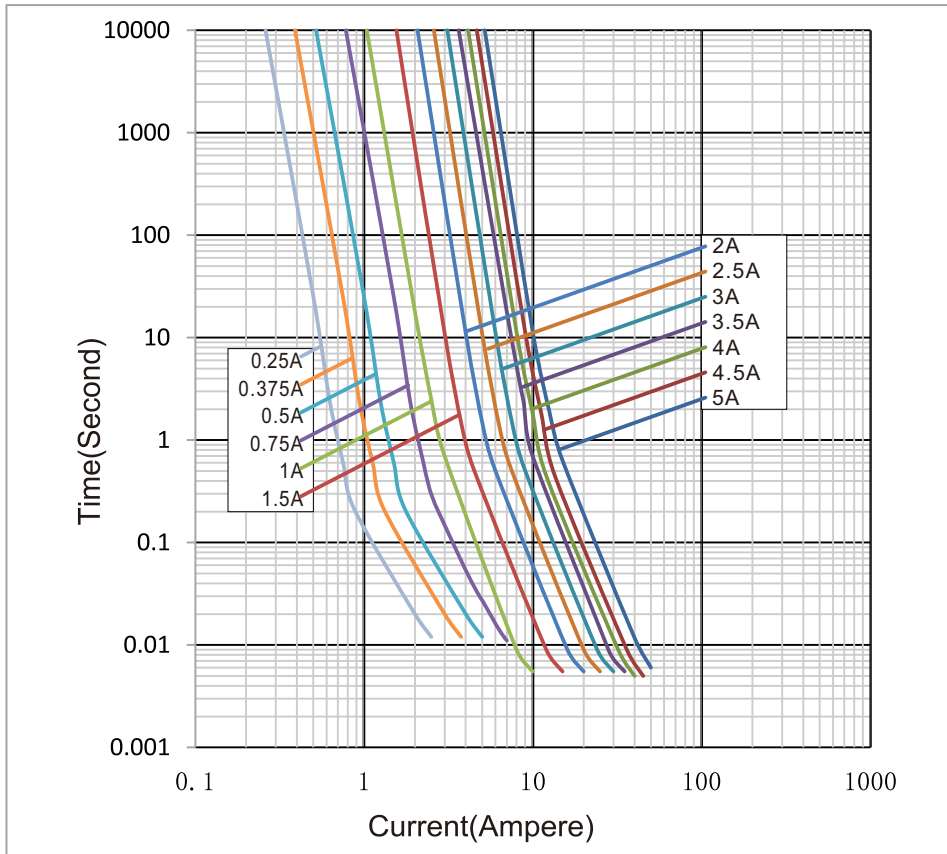
Part Numbering System



Product Characteristics

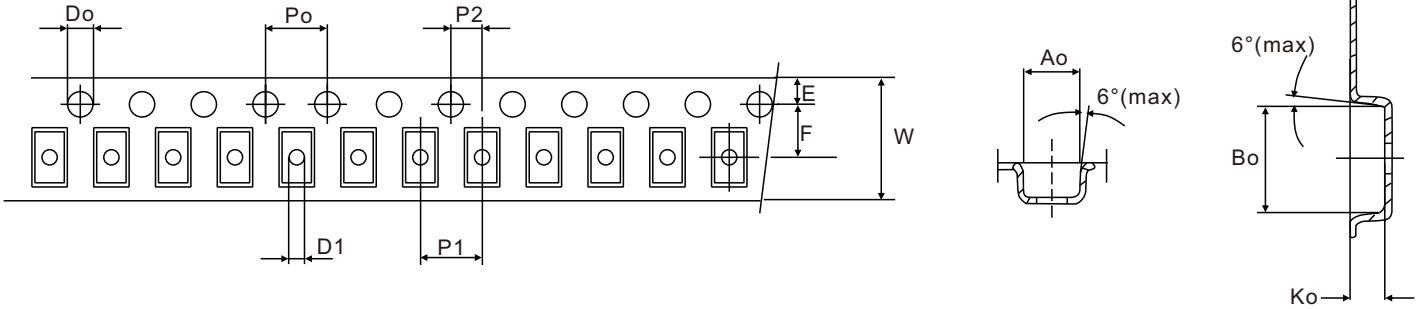
Materials	Body: Ceramic Terminations: Silver over-plated with tin Element: Alloy(Ag,Cu,Zn) Cover Coat: Glass
Operating Temperature	-55°C to 125°C Consult temperature derating curve chart.
Thermal Shock	300 cycles -55°C to 125°C
Humidity	MIL-STD-202F, Method 103B, Condition D
Vibration	Per MIL-STD-202F,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

Time Current Curve



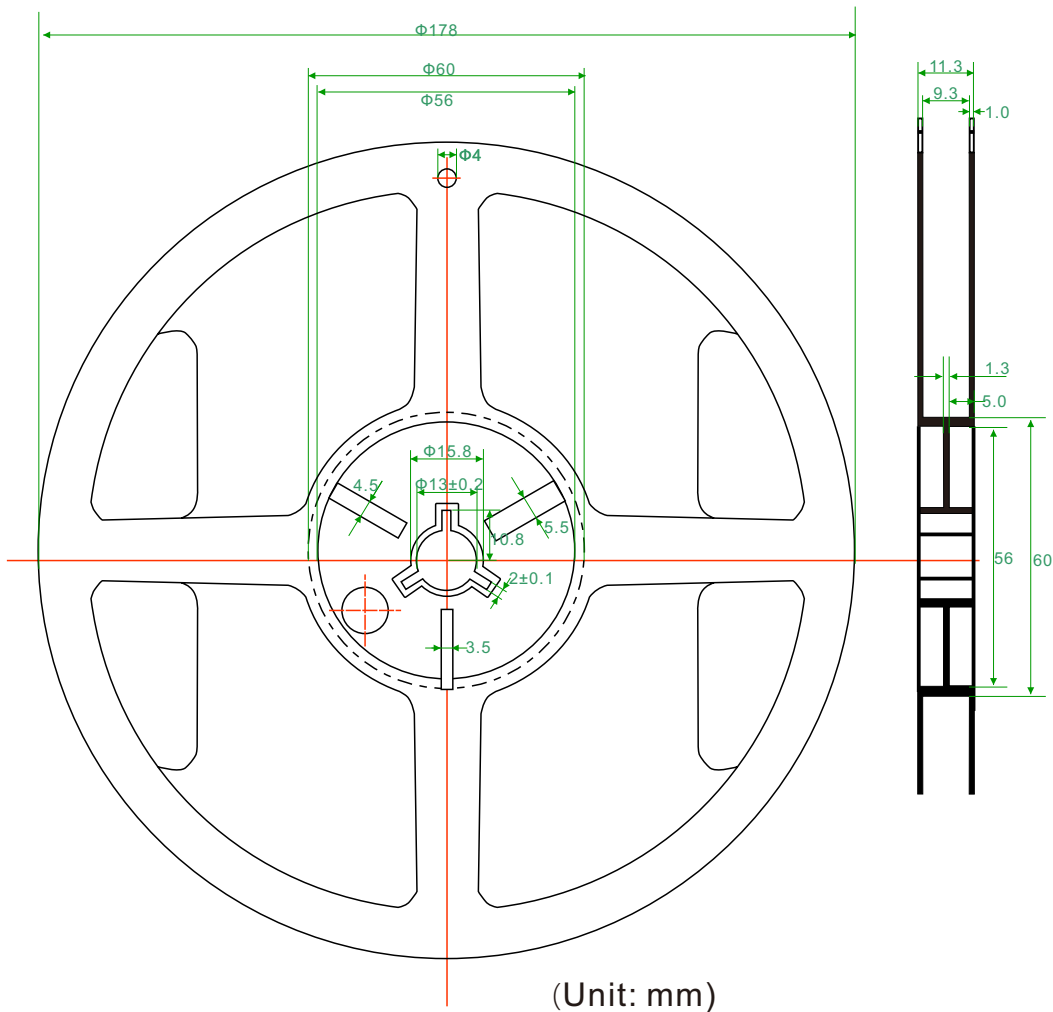
Packaging

3,000 pieces of fuses in plastic or paper taper (3000pcs)



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	0.25±0.05

(Unit: mm)



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