

1. Description, Features and Applications

B10Cs 125VAC series 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.

2. Features :

- Fast-Acting (Fast-Acting)
- 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

3. Standards and Agency Approvals



3.1 UL 248-14

Standards : In accordance with UL 248-14.

3.2 Certification:

Agency	Ampere Range	Agency File Number
UL	50mA ~ 40A	E340427(JDYX2)
cUL	50mA ~ 40A	E340427(JDYX8)

3.3 Catalogue

Symbol	Ampere Rating	Voltage Rating	Breaking Capacity	Nominal Cold Resistance (Ohms)	I ² TMelting Integral(A ² .S)	Agency Approvals			
									
B10Cs160-125	160mA	125VAC	50A@300VAC 50A@250VAC 200A@125VAC	2.308	0.056	●	●		
B10Cs200-125	200mA			1.655	0.060	●	●		
B10Cs250-125	250mA			1.456	0.063	●	●		
B10Cs300-125	300mA			0.855	0.190	●	●		
B10Cs315-125	315mA			0.656	0.200	●	●		
B10Cs375-125	375mA			0.605	0.328	●	●		
B10Cs400-125	400mA			0.580	0.335	●	●		
B10Cs500-125	500mA			0.302	0.471	●	●		
B10Cs600-125	600mA			0.268	0.771	●	●		
B10Cs630-125	630mA			0.259	0.982	●	●		
B10Cs700-125	700mA			0.233	2.102	●	●		
B10Cs750-125	750mA			0.227	2.230	●	●		
B10Cs800-125	800mA			0.205	2.375	●	●		
B10CsA01.00-125	1A			0.129	3.685	●	●		
B10CsA01.25-125	1.25A			0.095	3.755	●	●		
B10CsA01.50-125	1.5A			0.089	6.751	●	●		
B10CsA01.60-125	1.6A			0.078	6.800	●	●		
B10CsA02.00-125	2A			0.039	12.140	●	●		
B10CsA02.50-125	2.5A			0.036	16.005	●	●		
B10CsA03.00-125	3A			0.028	21.550	●	●		
B10CsA03.15-125	3.15A			0.027	25.740	●	●		
B10CsA03.50-125	3.5A			0.026	30.041	●	●		
B10CsA04.00-125	4A			0.020	43.201	●	●		
B10CsA05.00-125	5A			0.015	55.240	●	●		
B10CsA06.00-125	6A			0.013	75.205	●	●		
B10CsA06.30-125	6.3A			0.011	93.540	●	●		
B10CsA07.00-125	7A			0.010	97.110	●	●		
B10CsA08.00-125	8A			0.0080	108.700	●	●		
B10CsA10.00-125	10A			0.0072	118.320	●	●		
B10CsA12.00-125	12A			0.0050	140.050	●	●		
B10CsA15.00-125	15A			0.0035	210.630	●	●		
B10CsA16.00-072	16A			72VDC	500A@72VDC	0.0030	215.210	●	●
B10CsA20.00-072	20A			72VDC	500A@72VDC	0.0028	358.020	●	●
B10CsA25.00-072	25A	72VDC	500A@72VDC	0.00159	465.150	●	●		
B10CsA30.00-063	30A	63VDC	500A@63VDC	0.00148	980.610	●	●		
B10CsA40.00-063	40A	63VDC	500A@63VDC	0.00123	1040.720	●	●		

*: These catalog no. cold resistance and I2t value are pending due to fuse elements shall be customized;

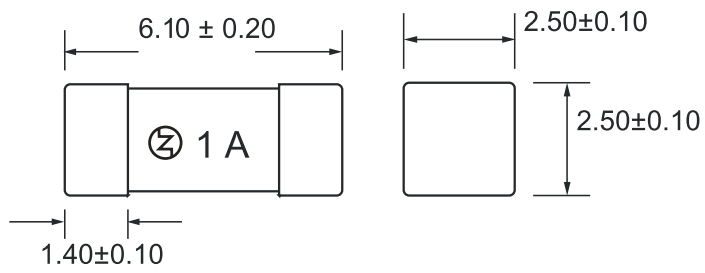
DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C ;

Typical Pre-arching I2t are calculated at 10*In Current or 8ms;

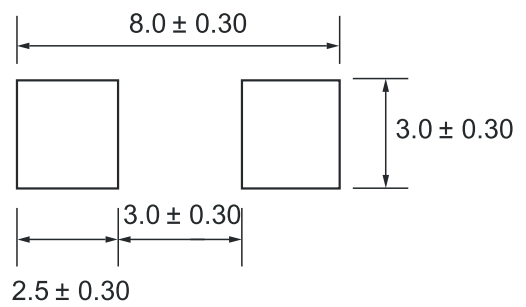
Min Interrupting Rating: 1.35*In.

4. Dimensions and Structure

Unit: mm



Recommended pad layout



5. Material Details

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

6. Product Characteristics

NO.	Item	Content	Reference standards
1	Product Marking	Brand, Ampere Rating	REOMAX marking standards
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

7. Electrical Characteristics

Test Condition

25±5°C

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

Interrupting Rating :

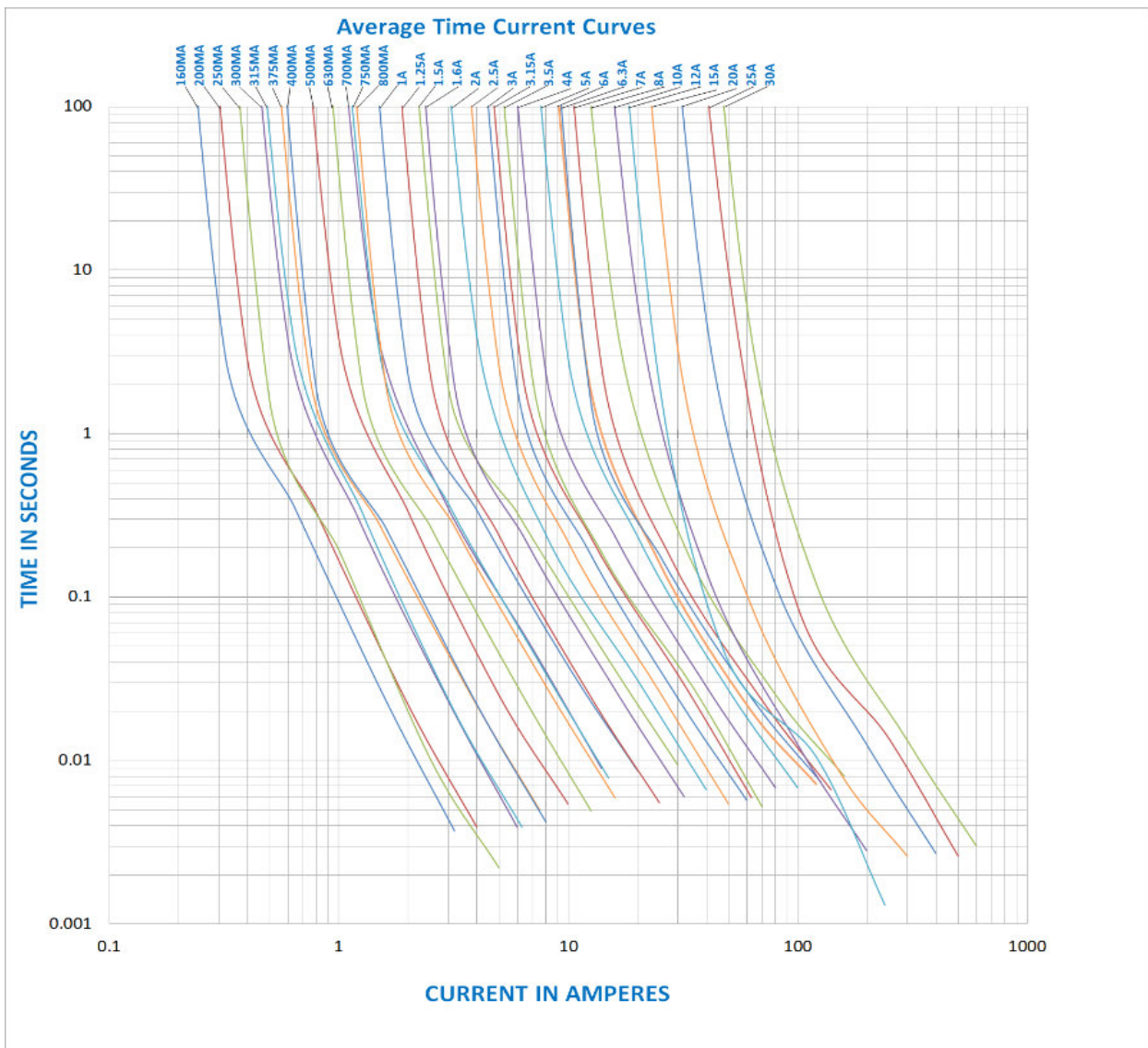
50A@250Vac, 200A@125Vac.

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

Operating Characteristics

% of Ampere Rating(In)	Blowing Time
100% * In	(4 hours Min)
200% * In	(120 sec Max)

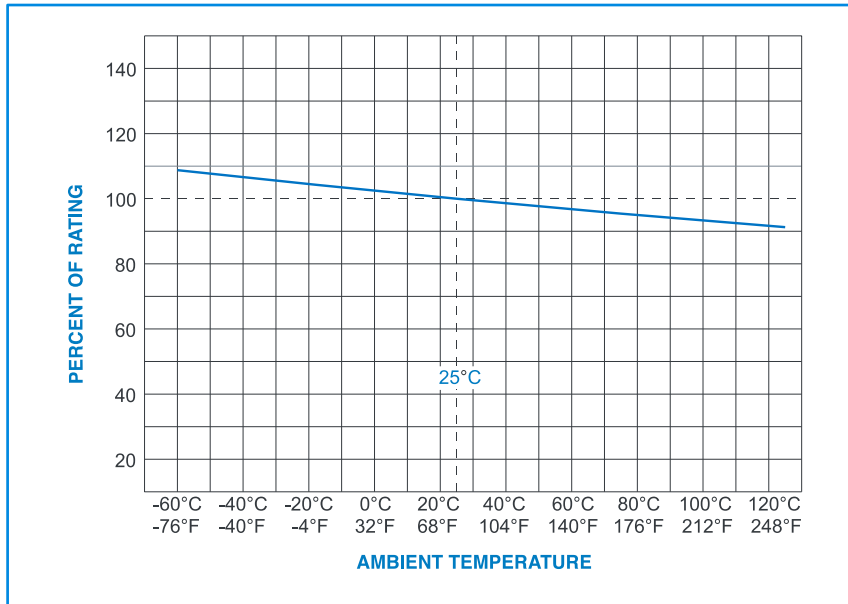
Average Time Current Curves



8. Environmental Characteristic

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

Please refer: Temperature Rerating Curve:



9. Recommended Soldering Parameters

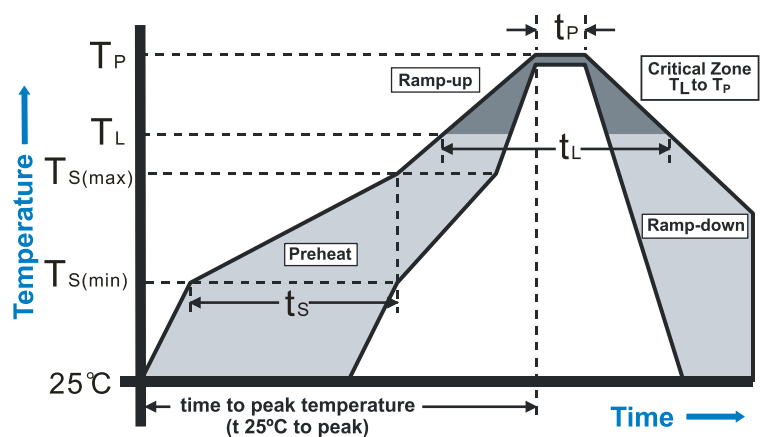
A. Wave /Reflow Soldering Parameters:

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 (TL)	220°C
	Time Max (tL)	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



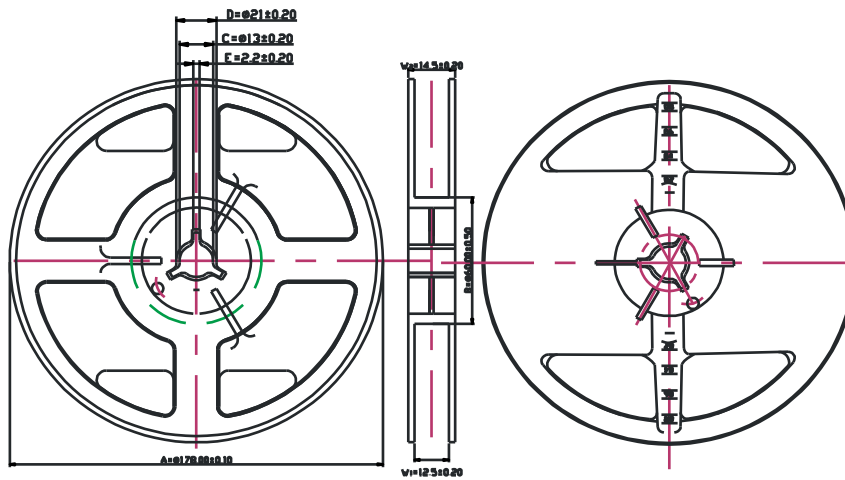
B. Hand-Solder Parameters:

Solder Iron Temperature: 300± 5°C

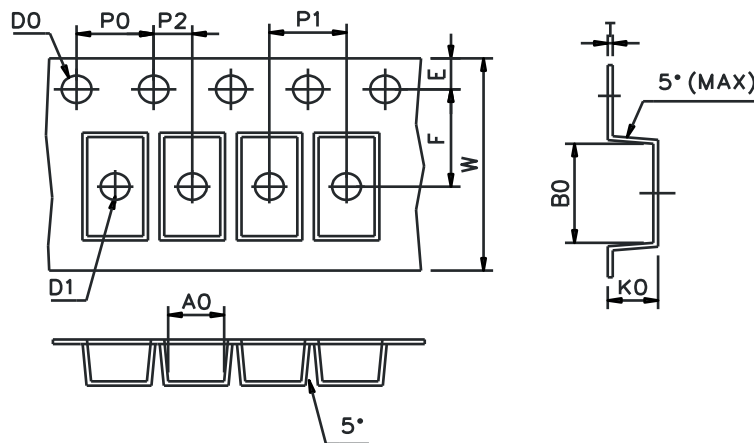
Heating Time: 1~2 s Max

10. Packaging

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

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