1. Description, Features and Applications

LED AC/DC

Description

B10Cz 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.

Features:

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

Applications:

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

2. Standards and Agency Approvals

2.1 UL 248-14。

Standards：In accordance with UL 248-14.

2.2 Certification：

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

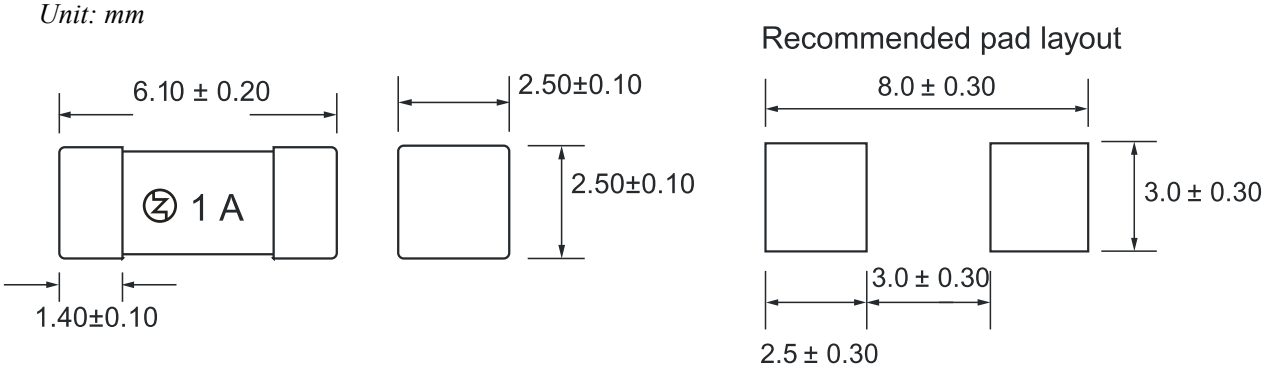
2.3 Catalogue No.， ● Approved / ○ Pending

Catalog No.	Ampere Rating	Voltage Rating	Breaking Capacity	Nominal Cold Resistance (Ohms)	I^2TMelting Integral($A^2.S$)	Agency Approvals	
						®	®
B10Cz160-125	160mA			2.300	0.058	●	●
B10Cz200-125	200mA			1.650	0.062	●	●
B10Cz250-125	250mA			1.450	0.065	●	●
B10Cz300-125	300mA			0.850	0.191	●	●
B10Cz315-125	315mA			0.650	0.202	●	●
B10Cz375-125	375mA			0.610	0.330	●	●
B10Cz400-125	400mA			0.580	0.338	●	●
B10Cz500-125	500mA			0.320	0.475	●	●
B10Cz600-125	600mA			0.265	0.775	●	●
B10Cz630-125	630mA			0.256	0.986	●	●
B10Cz700-125	700mA			0.230	2.105	●	●
B10Cz750-125	750mA			0.225	2.240	●	●
B10Cz800-125	800mA			0.203	2.380	●	●
B10CzA01.00-125	1A			0.128	3.690	●	●
B10CzA01.25-125	1.25A		50A@300VAC	0.092	3.760	●	●
B10CzA01.50-125	1.5A	125VAC	50A@250VAC	0.085	6.765	●	●
B10CzA01.60-125	1.6A		200A@125VAC	0.075	6.805	●	●
B10CzA02.00-125	2A			0.038	12.150	●	●
B10CzA02.50-125	2.5A			0.035	16.025	●	●
B10CzA03.00-125	3A			0.026	21.560	●	●
B10CzA03.15-125	3.15A			0.025	25.750	●	●
B10CzA03.50-125	3.5A			0.023	30.050	●	●
B10CzA04.00-125	4A			0.019	43.208	●	●
B10CzA05.00-125	5A			0.013	55.250	●	●
B10CzA06.00-125	6A			0.011	75.245	●	●
B10CzA06.30-125	6.3A			0.010	93.550	●	●
B10CzA07.00-125	7A			0.009	97.120	●	●
B10CzA08.00-125	8A			0.0078	108.750	●	●
B10CzA10.00-125	10A			0.0066	118.380	●	●
B10CzA12.00-125	12A			0.0045	140.080	●	●
B10CzA15.00-125	15A			0.0030	210.680	●	●
B10CzA16.00-072	16A	72VDC	500A@72VDC	0.0028	215.250	●	●
B10CzA20.00-072	20A	72VDC	500A@72VDC	0.0020	358.080	●	●
B10CzA25.00-072	25A	72VDC	500A@72VDC	0.00158	465.170	●	●
B10CzA30.00-063	30A	63VDC	500A@63VDC	0.00145	989.650	●	●
B10CzA40.00-063	40A	63VDC	500A@63VDC	0.00120	1050.780	●	●

- *: 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.

3. Dimensions and Structure

Unit: mm



4. 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

5. Product Characteristics

NO.	Item	Content	Reference standards
1	Product Marking	Brand, Ampere Rating	marking standards
2	Operating Temperature	-55°C to 125°C	IEC60068-2-1/2
3	Solderability	T=240℃ ±5℃ , 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

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

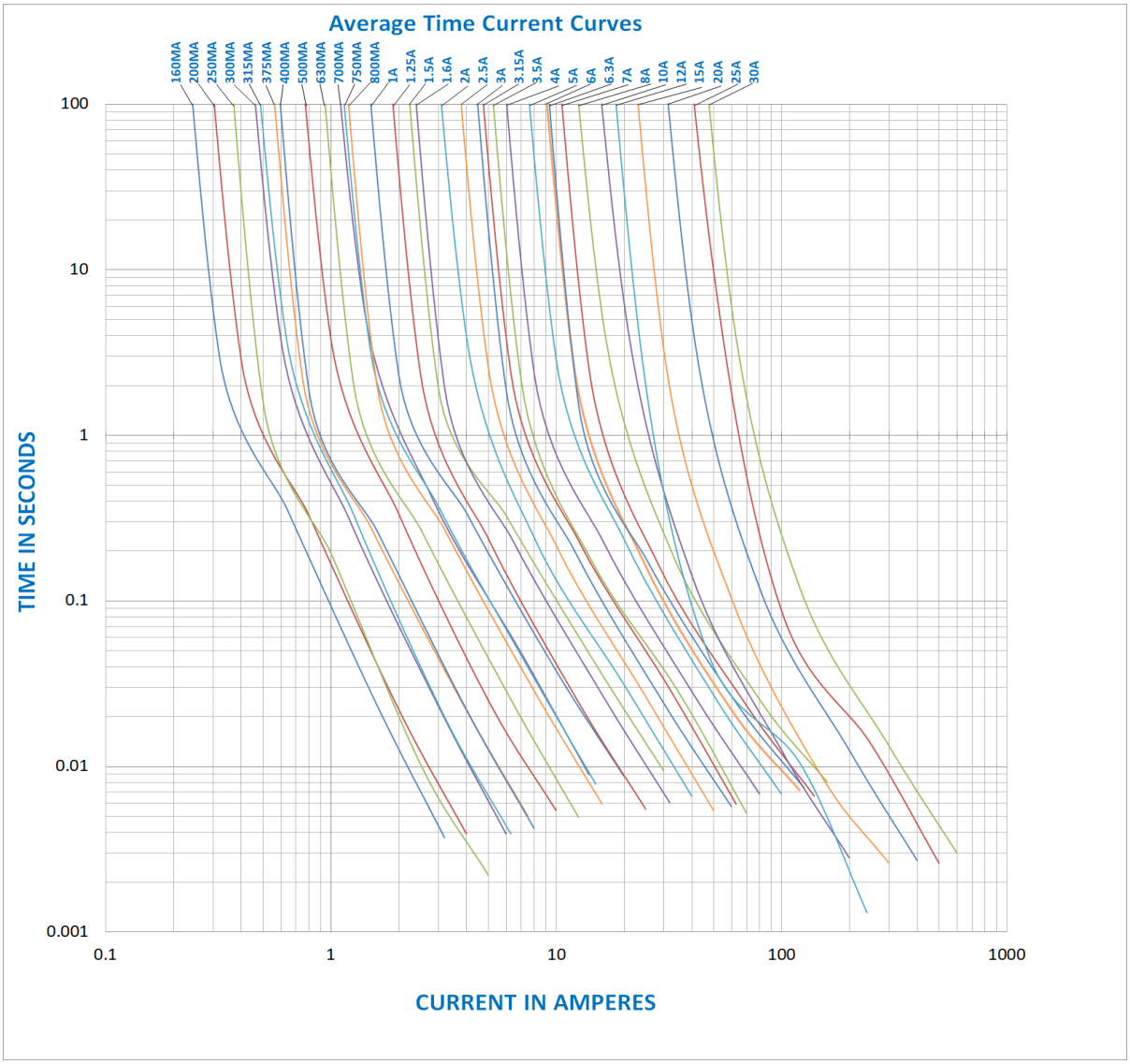
6.2 Interrupting Rating：

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

6.3 Operating Characteristics

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

6.4 Average Time Current Curves

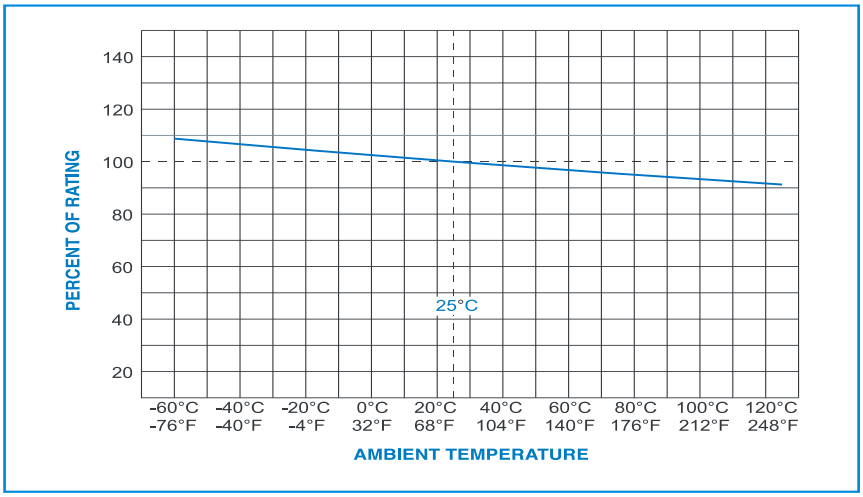


7. Environmental Characteristic

25±5℃

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:



8. Soldering Parameters

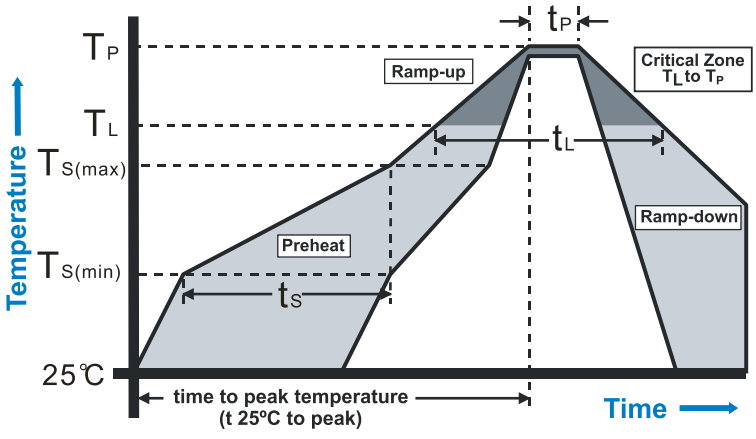
A. Wave /Reflow Soldering Parameters:

Solder paste process.

Solder Pot Temperature: 260℃ 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℃
	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