

Multilayer Chip Ferrite Ultra-High Current Beadss
◆ Features

- 1.A unique terminal electrode structure ensures permissible current 6.0A(max).
- 2.High impedance and EMI suppression effective over a wide frequency range.
- 3.Suitable reflow and wave soldering.
- 4.Low DC resistance suitable for large current signals
- 5.100% Lead(Pb) & Halogen-Free and RoHS compliant.


◆ Application

Noise suppression in power lines or extra-large current signal lines of electrical equipment such as communication equipment, computers and LCD TVs.

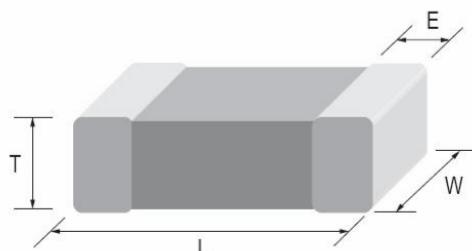
◆ Product Identification

SBH 3225 S 300 W S P
 (1) (2) (3) (4) (5) (6) (7)

- (1) Series Type
- (2) Chip Size(mm):Length X Width
- (3) Material Code
- (4) Impedance:300=30Ω;601=600Ω;
- (5) Rated Current: P=2500mA Q=3000mA R=4000mA
 $U=5000mA$ $W=6000mA$
- (6) Company Code
- (7) Packaging Style:Tape & Reel

◆ Dimensions Unit: mm

Part No	L	W	T	E
SBH3225S Series	3.2 ± 0.2	2.5 ± 0.2	1.3 ± 0.20	0.5 ± 0.3



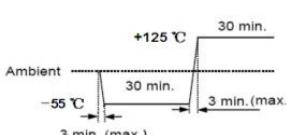
◆ Electrical Characteristics

Part Number	Impedance (Ω)	Test Freq. (MHz)	DCR Max. (Ω)	Rated Current (mA)
SBH3225S100WSP	10±25%	100	0.02	6000
SBH3225S220WSP	22±25%	100	0.02	6000
SBH3225S300WSP	30±25%	100	0.02	6000
SBH3225S600WSP	60±25%	100	0.02	6000
SBH3225S800WSP	80±25%	100	0.02	6000
SBH3225S101USP	100±25%	100	0.03	5000
SBH3225S121USP	120±25%	100	0.03	5000
SBH3225S151USP	150±25%	100	0.03	5000
SBH3225S181RSP	180±25%	100	0.06	4000
SBH3225S221RSP	220±25%	100	0.06	4000
SBH3225S301RSP	300±25%	100	0.06	4000
SBH3225S331RSP	330±25%	100	0.10	4000
SBH3225S501RSP	500±25%	100	0.10	4000
SBH3225S601QSP	600±25%	100	0.15	3000
SBH3225S102PSP	1000±25%	100	0.23	2500

◆ General Technical Data

Operating Temperature Range	-55°C~+125°C
Storage Condition	Less than 40°C and 70% RH
Soldering Method	Reflow or Wave Soldering

◆ Reliability Test Method

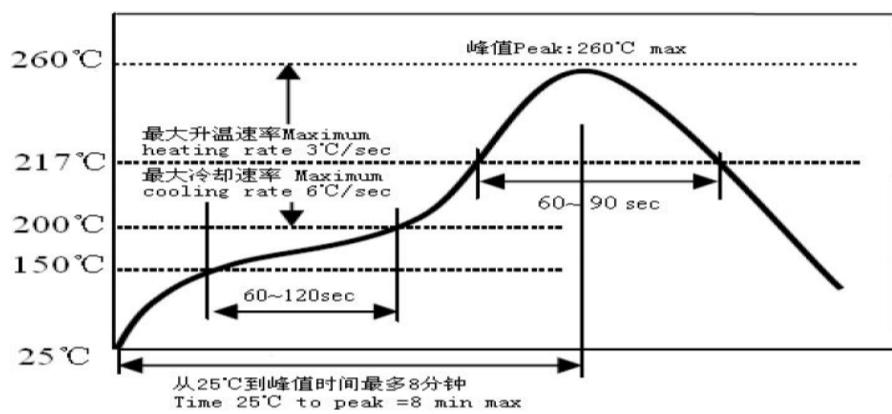
No.	Items	Requirements	Test Methods and Remarks
1	Solder ability	95% or more of electrode area shall be coated by new solder.	Preheating temperature:120°C to 150°C Preheating time: 60s Solder 96.5%Sn/3.0%Ag/0.5%Cu of the Sn solder. Solder temperature: 245±3°C Immersion tin depth:10mm Duration : 3±0.3s Dip performance to a flux of about:3 ~ 5 s
2	Resistance to Soldering Heat	No mechanical damage. Inductance : Impedance change: within ±30%	Preheating temperature: 120°C to 150°C Preheating time: 60s Solder 96.5%Sn/3.0%Ag/0.5%Cu of the Sn solder. Solder temperature: 260°C±5°C Immersion tin depth:10mm Duration : 10±1s Dip performance to a flux of about:3~5 s
3	Adhesion of electrode	The termination and body should be no damage.	Applied force: 2N force for 0603 series; 5N force for 1005 series; 7N force for 1608 series; 10N force for 2012、3216 series. 15N force for 3225、4532 series. Keep time : 10±1S
4	Low temperature resistance	No mechanical damage. Impedance change: within ±30%	Temperature:-55±2°C Testing time: 1000+24-0h
5	Vibration	No mechanical damage. Impedance change: within ±30%	Amplitude modulation: 1.5mm Test time: A period of 2h in each of 3 mutually perpendicular directions. Frequency range: 10Hz to 55Hz to 10Hz for 1min.
6	High temperature resistance	No mechanical damage. Impedance change: within ±30%	Testing time: 1000+24-0h Temperature: 125±2°C
7	Static Humidity	No mechanical damage. Impedance change: within ±30%	Humidity: 90% to 95% RH Temperature: 60°C±2°C Testing time: 1000+24-0h
8	High temperature load	No mechanical damage. Impedance change: within ±30%	impose current: at room Testing time: 1000+24-0h Temperature: 85±2°C
9	Temperature Shock	No mechanical damage. Impedance change: within ±30%	Temperature: -55°C for 30±3min +125°C for 30±3min Number of cycles: 100  <p>The diagram illustrates the temperature shock test cycle. It shows a waveform with three distinct temperature levels: Ambient, -55°C, and +125°C. The cycle starts at Ambient. It drops to -55°C for 30 min, then rises to +125°C for 30 min. This cycle repeats 100 times. The total dwell time between the high and low temperature steps is 3 min. (max.)</p>

◆ Recommended Soldering Conditions

1. Products can be applied to reflow soldering

- (1) Pre-heating should be in such a way that the temperature difference between solder and ferrite surface is limited to 150°C max. Also cooling into solvent after soldering should be in such way that the temperature difference is limited to 100°C max. Un-enough pre-heating may cause cracks on the ferrite, resulting in the deterioration of product quality.
- (2) Products should be soldered within the following allowable range indicated by the slanted line. The excessive soldering conditions may cause the corrosion of the electrode. When soldering is repeated, allowable time is the accumulated time.

2. Reflow soldering profile



- (1) PREHEAT CONDITION: 150 ~200°C/60~120SEC
- (2) ALLOWED TIME ABOVE 217°C: 60~90SEC
- (3) MAX TEMP: 260 °C
- (4) MAX TIME AT MAX TEMP: 10 SEC
- (5) SOLDER PASTE: SN/3.0AG/0.5CU
- (6) ALLOWED REFLOW TIME: 2X MAX

3. Iron soldering

Perform soldering at 350°C on 30W max. Time: < 5S Take care not to apply the tip of the soldering iron to the terminal electrodes



◆ Packaging Information

Size EIA (EIA)	SBH3225S Series
Standard Packing Quantity (pcs / reel)	3,000