

APPROVAL SHEET

WLBD1608HC High Current Chip Bead

*Contents in this sheet are subject to change without prior notice.



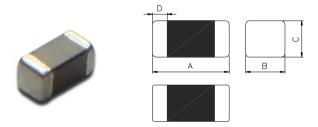
FEATURES

- 1. Closed magnetic circuit.
- 2. High current

APPLICATIONS

1. Noise reduction for general signal and DC line for General electronic circuits. Ex:PCs \ Networking and Consumer electronics.

SHAPE and DIMENSION



Chip Size				
A 1.60±0.15				
В	0.80±0.15			
С	0.80±0.15			
D	0.30±0.20			
11.9				

Units: mm

Ordering Information

WL	BD	1608	НС	U	300	Т	В
Product Code	Series	Dimensions	Series extension	Tolerance	Value	Packing Code	
WL: Inductor	BD: Chip Bead.	1.6 * 0.8 mm 1608 :EIA 0603	HC: High Current. Refer to characteristic	U: ±25%	300 =30 OHM 301 =300 OHM	T = 7" Paper Tape	B:STD



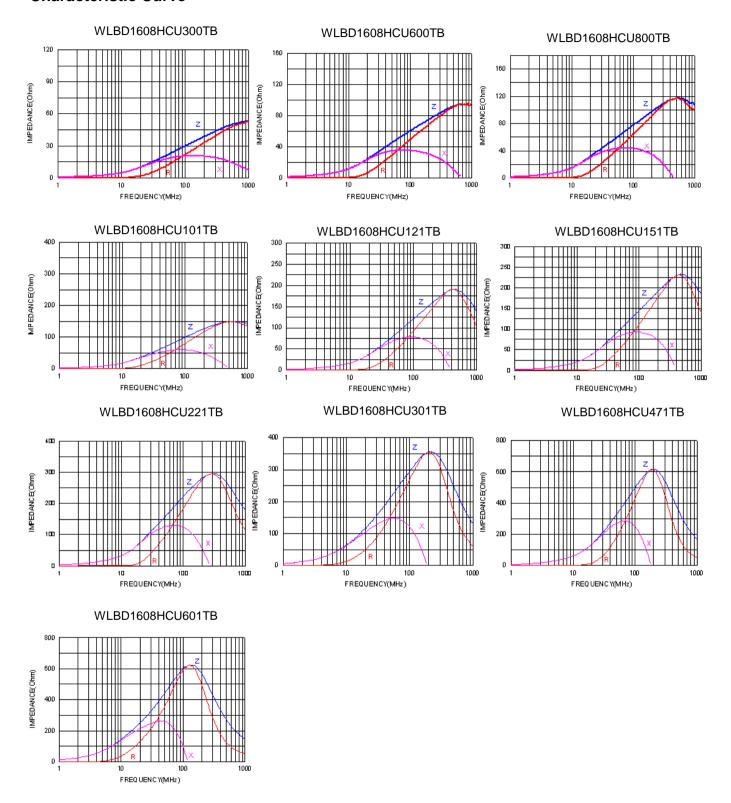
Electrical Characteristics

WLBD1608HC series

Walsin Part Number	Impedance (Ω)	Test Frequency (MHz)	DC Resistance (Ω) max.	Rated Current (mA) max.
WLBD1608HCU300TB	30±25%	100	0.04	3000
WLBD1608HCU600TB	60±25%	100	0.04	3000
WLBD1608HCU800TB	80±25%	100	0.04	3000
WLBD1608HCU101TB	100±25%	100	0.04	3000
WLBD1608HCU121TB	120±25%	100	0.10	2000
WLBD1608HCU151TB	150±25%	100	0.10	2000
WLBD1608HCU221TB	220±25%	100	0.10	2000
WLBD1608HCU301TB	300±25%	100	0.20	1000
WLBD1608HCU471TB	470±25%	100	0.20	1000
WLBD1608HCU601TB	600±25%	100	0.20	1000



Characteristic Curve





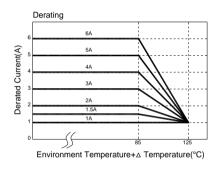
Test condition & Requirements

Item	Item Performance			Test Condition			
Operating Temperature	-40~+125℃ (Including self-temperature rise)						
Transportation Storage Temperature	-40~+125℃ (on board)	For long storage conditions, please see the Application Notice					
Impedance (Z)		Agilent42	291				
Inductance (Ls)		Agilent E	4991				
Q Factor		Agilent42	287				
DC Resistance	Refer to standard electrical characteristics list	Agilent16					
		Agilent 4338 DC Power Supply					
Rated Current		Over Rabe some	ted Cu risk	rrent requ	irements, t	here will	
Temperature Rise Test	Rated Current < 1A ΔT 20 $^{\circ}$ C Max Rated Current \geq 1A ΔT 40 $^{\circ}$ C Max	Applied the allowed DC current. Temperature measured by digital surface thermometer.			urface		
		Number	of heat	cycles: 1			
	Appearance : No damage. Impedance : within±15% of initial value	Tempera (°C		Time (s)	Temperaturamp/imme	ersion	
Resistance to Soldering Heat	Inductance: within±10% of initial value Q: Shall not exceed the specification value.	260 ±5 (solder te	emp)	10 ±1	25mm/s ±	⊧6 mm/s	
	RDC: within ±15% of initial value and shall not exceed the specification value	Depth: completely cover the termination					
Solderability	More than 95% of the terminal electrode should be covered with solder. Preheating Dipping Natural cooling 150°C 150°C 150°C 150°C 150°C 150°C	Preheat: 150°C,60sec. Solder: Sn96.5%-Ag3%-Cu0.5% Solder temperature: 245±5°C Flux for lead free: Rosin. 9.5% Depth: completely cover the termination. Dip time: 4±1sec.					
Terminal strength	Appearance: No damage. Impedance: within±15% of initial value Inductance: within±10% of initial value Q: Shall not exceed the specification value. RDC: within±15% of initial value and shall not exceed the specification value	Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020D Classification Reflow Profiles) Component mounted on a PCB apply a force (>0805:1kg <=0805:0.5kg)to the side of a device being tested. This force shall be applied for 60 +1 seconds. Also the force shall be applied gradually as not to shock the component being tested.					
Bending	Appearance: No damage. Impedance: within±10% of initial value Inductance: within±10% of initial value Q: Shall not exceed the specification value. RDC: within ±15% of initial value and shall not exceed the specification value	Shall be mounted on a FR4 substrate of the following dimensions:>=0805:40x100x1.2mm					
Vibration Test	Appearance: No damage. Impedance: within±15% of initial value Inductance: within±10% of initial value Q: Shall not exceed the specification value. RDC: within ±15% of initial value and shall not exceed the specification value	Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020D Classification Reflow Profiles) Oscillation Frequency: 10~2K~10Hz for 20 minutes Equipment: Vibration checker Total Amplitude:1.52mm±10% Testing Time: 12 hours(20 minutes, 12 cycles each of 3 orientations) ∘					
		Test cor	ndition	:	_		
Shock	Appearance: No damage. Impedance: within±10% of initial value Inductance: within±10% of initial value Q: Shall not exceed the specification value. RDC: within ±15% of initial value and shall not exceed the specification value		Peak Value (g's)	Normal duration (D) (ms)	Wave form	Velocity change (Vi)ft/sec	
			50	11	Half-sine	11.3	
			50	11	Half-sine	11.3	

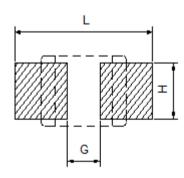
Item	Performance	Test Condition
Life test Load Humidity	Appearance: no damage. Impedance: within±15%of initial value. Inductance: within±10%of initial value. Q: Shall not exceed the specification value. RDC: within ±15% of initial value and shall not exceed the specification value	Preconditioning: Run through IR reflow for 2 times.(IPC/JEDEC J-STD-020D Classification Reflow Profiles) Temperature: 125±2°C (bead),
Thermal shock	Appearance: no damage. Impedance: within±15%of initial value. Inductance: within±10%of initial value. Q: Shall not exceed the specification value. RDC: within ±15% of initial value and shall not exceed the specification value	Preconditioning: Run through IR reflow for 2 times. (IPC/JEDEC J-STD-020D Classification Reflow Profiles) Condition for 1 cycle Step1: $-40\pm2^\circ\mathbb{C}$ 30 ± 5 min. Step2: $25\pm2^\circ\mathbb{C}$ ≤ 0.5 min Step3: $+125\pm2^\circ\mathbb{C}$ 30 ± 5 min. (Bead) Step3: $+105\pm2^\circ\mathbb{C}$ 30 ± 5 min. (Inductor) Number of cycles: 500 Measured at room temperature after placing for 24 ± 2 hrs.

**Derating Curve

For the ferrite chip bead which withstanding current over 1.5A, as the operating temperature over $85^{\circ}\mathrm{C}$, the derating current information is necessary to consider with. For the detail derating of current, please refer to the Derated Current vs. Operating Temperature curve.



Soldering and Mounting



	L (mm)	G (mm)	H (mm)
WLBD1608HC	2.6	0.6	0.8