

RoHS & Halogen Free & REACH Compliance.

SPECIFICATION FOR APPROVAL

Customer :			礎石	
Customer P/N:				
Drawing No:			C1X21002	22
Quantity :	0	Pcs.	Date :	2021/02/19
Chilisin P/N:		BDH	H00201610	R47MDG
—				

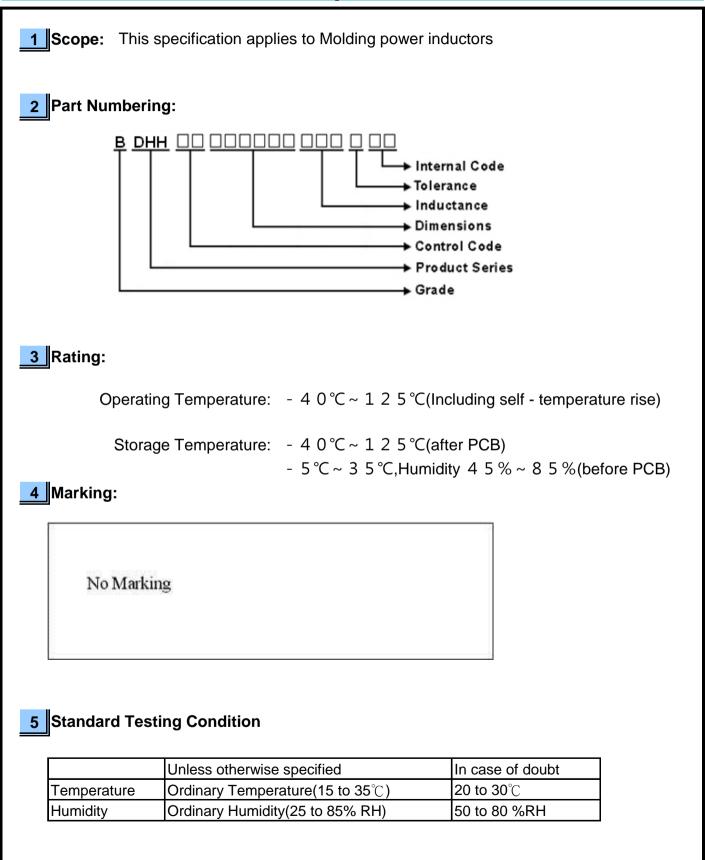
	SPECIFICATION ACCEPTED BY:	
COMPONENT		
ENGINEER		
ELECTRICAL		
ENGINEER		
MECHANICAL		
ENGINEER		
APPROVED		
REJECTED		
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Drawn by	Checked by	Approved by
張鈺雯 Chang.Yuwen	張鈺雯 Chang.Yuwen	鍾瑞民Jacky.Chung

REVISIONS

REV.	Description	Date	APPROVED BY	CHECKED	DRAWN BY
А	Preliminary release	2021/2/19	Jacky.Chung	Yuwen.Chang	Yuwen.Chang



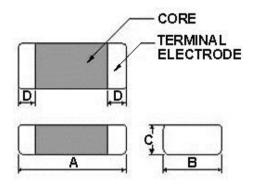
BDHH00201610 Series Specification





BDHH00201610 Series Specification

6 Configuration and Dimensions:



Dimensions in mm				
TYPE	201610			
А	2.0±0.2			
В	B 1.6±0.2			
С	1.0 Max			
D	0.5±0.3			

7 Electrical Characteristics:

Part No.	Inductance (uH)	Tolerance (±%)	Test Freq.	Irms(A) Max.(Typ)	lsat(A) Max.(Typ)	RDC(mΩ) Max.(Typ)	
BDHH00201610R47MDG	0.47	20	2MHz,1V	4.4(5.0)	5.0(5.7)	25(20)	

NOTE:

1.Operating temperature range - 4 0 °C ~ 1 2 5 °C(Including self - temperature rise)

2.Isat for Inductance drop 30% from its value without current.

3.Irms for a 40°C temperature rise from 25°C ambient.

4.All test data is referenced to 25°C ambient

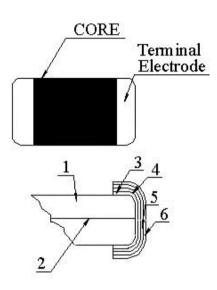
5.Absolute maximum voltage 20VDC

6. Rated current: Isat or Irms, whichever is smaller



BDHH00201610 Series Specification

8 BDHH00201610 Series 8.1 Construction:



8.2 Material List:

No	Part	Material
1	Core	Metal Powder
2	Wire	Copper wire
3	Sputter/Plating	Cu
4	Silver Electrode	Ag
5	Plating	Ni
6	Plating	Sn

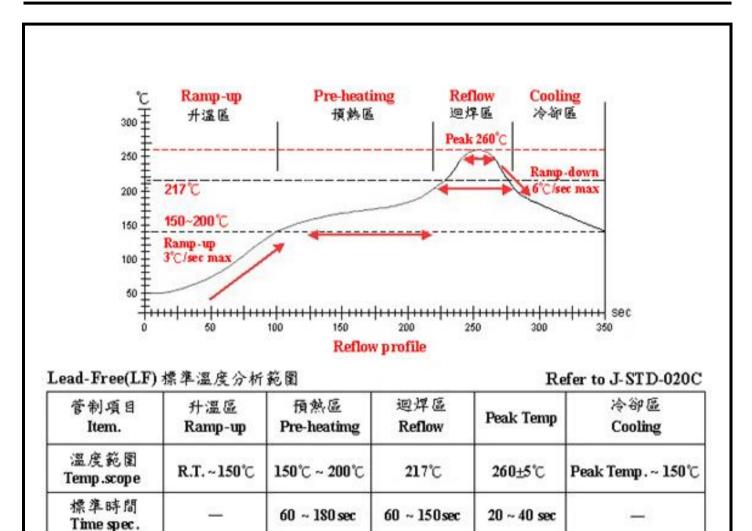


BDHH00201610 Series Specification 9 Reliability Of Molding power inductors

	echanical Performance	-					
No	Item	Specification		Test Method			
1-1-1	Flexure Strength	The forces applied on the right	Test device shall be soldered on the substrate				
		conditions must not damage	Substrate Dimension: 100x40x1.6mm				
		the terminal electrode and the	Deflection: 2.0mm				
		metal body	al body Keeping Time: 30sec				
1-1-2	Vibration	Appearance:No damage (for	Test d	evice shall be soldered on the substra	ite		
		microscope of CASTOR MZ-45 20X)	Oscilla	ation Frequency: 10 to 55 to 10Hz for 7	1 min		
		Inductance change shall be	Amplit	ude: 1.5mm			
		within ±20%	Time:	2hrs for each axis (X, Y & Z), total 6hr	S		
1-1-3	Resistance to Soldering Heat	Appearance: No damage	Pre-he	eating: 150 $^\circ\!\!\mathbb{C}$, 1min			
		More than 75% of the terminal.	Solder	Composition: Sn/Ag3.0/Cu0.5(Pb-Fre	ee)		
		electrode should be covered	Solder	Temperature: 260±5°C			
		with solder.	Immer	sion Time: 10±1sec			
		Inductance: within ±20% of					
		initial value					
1-1-4	Solder ability	The electrodes shall be at	Pre-he	ating: 150℃, 1min			
		least 95% covered with new		Composition: Sn/Ag3.0/Cu0.5(Pb-Fre	ee)		
		solder coating	Solder Temperature: 245±5°C				
		3		sion Time: 4±1sec			
1-1-5	Terminal Strength Test	No split termination	Test d	ite,			
	-	Chip,	then a	pply a force in the direction of the arro	w.		
			Force				
				ng Time: 10±1sec			
		Mounting Pad					
1-2.E	nvironmental Performance	9					
No	ltem	Specification		Test Method			
1-2-1	Temperature Cycle	Appearance: No damage	One c	ycle:			
		Inductance:within±20% of	Step	Temperature (°C)	Time (min)		
		initial value	1	-40±3	30		
			2	25±2	3		
			3	125±3	30		
			4	25±2	3		
			Total:	100cycles	-		
			Measu	ired after exposure in the room conditi	ion for 24hrs		
1-2-2	Humidity Resistance	1	Temperature: 60±2℃				
	-		Relative Humidity: 90 ~ 95% / Time: 500hrs				
			Measured after exposure in the room condition for 24h				
1-2-3	High	1		erature: 85±3°C			
0	Temperature Resistance			/e Humidity: 0% / Time: 500hrs			
				ired after exposure in the room conditi	ion for 24hrs		
1-2-4	l ow	1		erature: $-40\pm3^{\circ}$			
	Temperature Resistance			/e Humidity: 0% / Time: 500hrs			
				-	ion for 24brs		
			Measured after exposure in the room condition for 2				



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實際時間
Time result

NOTE :

1. Re-flow possible times : within 2 times

2. Nitrogen adopted is recommended while in re-flow

75 ~ 100 sec

90 ~ 120 sec

20 ~ 35 sec

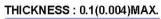


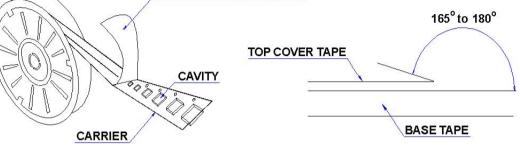
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10 Packaging:

10.1 Packaging -Cover Tape

The force for tearing off cover tape is 10 to 100 grams in the arrow direction.

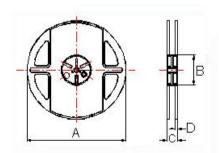




10.2 Packaging Quantity

TYPE	PCS/REEL
201610	3000

10.3 Reel Dimensions



Dimensions in mm	
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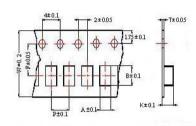
TYPE	А	В	С	D
201610	178	60	12	1.5

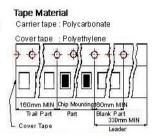


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10 Packaging:

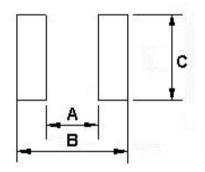
10.4 Tape Dimensions in mm





TYPE	Α	В	Т	W	Р	F	K
201610	1.80	2.20	0.22	8	4	3.5	1.15

11 Recommended Land Pattern:



Dime	nsions	in	mm	
Dime	11210112	111	111111	

TYPE	А	В	С
201610	0.7	2.3	1.8

12 Note:

- 1. Please make sure that your product has been evaluated and confirmed against your specifications when our product is mounted to your product.
- 2. Do not knock nor drop.
- 3. All the items and parameters in this product specification have been prescribed on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product deviating from such agreement.
- 4. Please keep the distance between transformer/coil and other components (refer to the standard IEC 950)
- 5.After manufacturing process, there might be slight irregular shape on the edge of the products, and it's a normal phenomenon that can be neglected
- 6. The moisture sensitivity level (MSL) of products is classified as level 1.



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