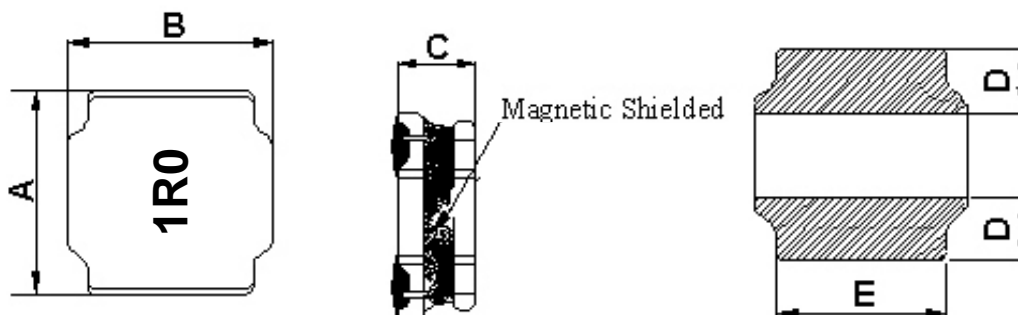


BCNRL6045 Series

1. Dimension



Series	A	B	C	D	E
BCNRL6045	6.0±0.2	6.0±0.2	4.5 Max.	1.8 Ref.	5.0 Ref.

Unit:mm

2. Part Numbering

BCNRL 6045 - 1R0 M -NL
 (1) (2) (3) (4) (5)

- (1) Product code
- (2) Dimension
- (3) Inductance 1R0=1uH
- (4) Inductance Tolerance M=±20%, N=±30%
- (5) RoHS Compliant

3. Specification

Part Number	Inductance (uH)	Tolerance	Test Frequency	DCR (Ω)±30%	Self-resonant Freq. (MHz)	Rated DC current(A) (Isat) Max.	Heat Rating Current (A) (Irms) Max.
					Min.		
BCNRL6045-1R0M-NL	1.0	± 20%	100KHz/1V	0.014	110	8.5	4.2
BCNRL6045-1R3M-NL	1.3	± 20%	100KHz/1V	0.016	95	8.0	4.0
BCNRL6045-1R8M-NL	1.8	± 20%	100KHz/1V	0.018	80	7.0	3.7
BCNRL6045-2R3M-NL	2.3	± 20%	100KHz/1V	0.021	60	6.0	3.5
BCNRL6045-3R0M-NL	3.0	± 20%	100KHz/1V	0.024	45	5.0	3.2
BCNRL6045-3R3M-NL	3.3	± 20%	100KHz/1V	0.024	41	4.0	4.3
BCNRL6045-4R5M-NL	4.5	± 20%	100KHz/1V	0.031	25	4.0	3.0
BCNRL6045-4R7M-NL	4.7	± 20%	100KHz/1V	0.032	24	4.0	3.0
BCNRL6045-6R3M-NL	6.3	± 20%	100KHz/1V	0.038	15	3.8	2.8
BCNRL6045-6R8M-NL	6.8	± 20%	100KHz/1V	0.04	15	3.6	2.8

BCNRL6045 Series

Part Number	Inductance (uH)	Tolerance	Test Frequency	DCR (Ω) \pm 30%	Self-resonant Freq. (MHz) Min.	Rated DC current(A) (Isat) Max.	Heat Rating Current (A) (Irms) Max.
BCNRL6045-100M-NL	10	\pm 20%	100KHz/1V	0.047	12	3.0	2.5
BCNRL6045-150M-NL	15	\pm 20%	100KHz/1V	0.08	10	2.4	2.2
BCNRL6045-220M-NL	22	\pm 20%	100KHz/1V	0.115	7	1.9	1.5
BCNRL6045-330M-NL	33	\pm 20%	100KHz/1V	0.145	6	1.5	1.4
BCNRL6045-470M-NL	47	\pm 20%	100KHz/1V	0.22	5	1.3	1.1
BCNRL6045-680M-NL	68	\pm 20%	100KHz/1V	0.33	4	1.0	0.9
BCNRL6045-101M-NL	100	\pm 20%	100KHz/1V	0.5	3	0.8	0.7

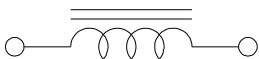
Note:

- (1) All test date is returned to 25°C ambient.
- (2) Operating temperature range : -40°C to +85°C.
- (3) Isat : DC Current (A) that will cause Lo to drop approximately 30%.
- (4) Irms : DC Current (A) that will cause an approximate Δ T of 40°C.

Test Equipment:

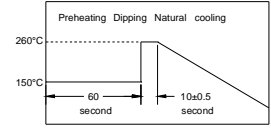
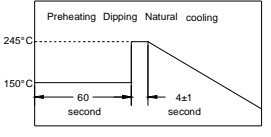
- (1) Inductance : LCR test meter : HP4284A.
- (2) DCR test meter : DU5010.
- (3) Rate current : LCR test meter : Chroma 16502, or equivalent.

4. Schematic Diagram

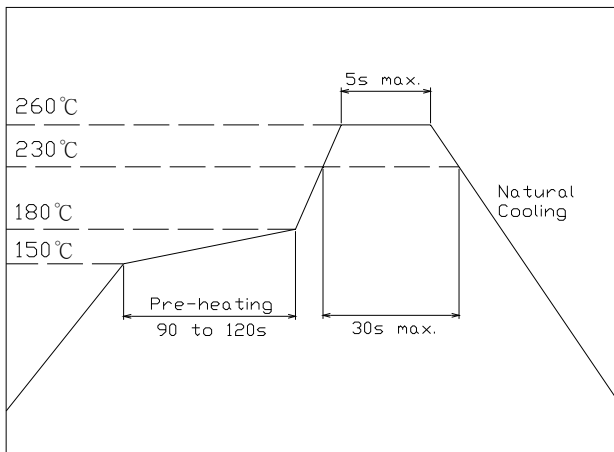


BCNRL6045 Series

5. Reliability and Test Condition

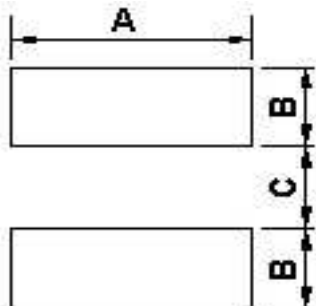
Item	Performance	Test Condition															
Operating Temperature	-40~+125°C																
Storage temperature	-40~+125°C																
Rated Current	Base on temp. rise & $\Delta L/LOA \leq 35\%$																
Temperature Rise Test	40°C typ. (Δt)																
Solder heat Resistance	Appearance: No significant abnormality. Inductance change: Within $\pm 20\%$.	 <p>Preheat:150°C,60sec. Solder : Sn-Ag3.0-Cu0.5 Solder temperature:260±5°C Flux: rosin Dip time:10±0.5sec.</p>															
Solderability	More than 90% of the terminal electrode should be covered with solder.	 <p>Preheat:125±25°C,60sec. Solder : Sn-Ag3.0-Cu0.5 Solder temperature:245±5°C Flux: rosin Dip time:4±1sec.</p>															
Thermal shock	Appearance: no damage. Inductance: within±20%of initial value.	<table border="1"> <thead> <tr> <th>Phase</th> <th>Temperature(°C)</th> <th>Time(min)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25±2°C</td> <td>30±3</td> </tr> <tr> <td>2</td> <td>Room Temp.</td> <td>15</td> </tr> <tr> <td>3</td> <td>+85±2°C</td> <td>30±3</td> </tr> <tr> <td>4</td> <td>Room Temp.</td> <td>15</td> </tr> </tbody> </table> <p>For SSL Condition for 1 cycle Step1:-25±2°C 30±3 min. Step2:Room temperature 15 min. Step3:+85±2°C 30±3 min. Step4: Room temperature 15 min. Number of cycles:50 Measured:50 times</p>	Phase	Temperature(°C)	Time(min)	1	-25±2°C	30±3	2	Room Temp.	15	3	+85±2°C	30±3	4	Room Temp.	15
Phase	Temperature(°C)	Time(min)															
1	-25±2°C	30±3															
2	Room Temp.	15															
3	+85±2°C	30±3															
4	Room Temp.	15															
Humidity Resistance Test	Appearance: no damage. Inductance: within±20%of initial value.	Temperature:40±2°C. Applied current:rated current. Duration:500 hrs. Humidity:90~95%															
High Temperature Resistance Test	Appearance: no damage. Inductance: within±20%of initial value.	Temperature:85±2°C. Applied current:rated current. Duration:500 hrs.															
Random Vibration Test	Appearance: Cracking, shipping and any other defects harmful to the characteristics should not be allowed. Impedance: within±30%	Frequency: 10-55-10Hz for 1 min. Amplitude: 1.52mm Directions and times: X, Y, Z directions for 2 hours. A period of 2 hours in each of 3 mutually perpendicular directions (Total 6 hours).															

6. Recommended IR Reflow



BCNRL6045 Series

7. Recommended Land Dimension

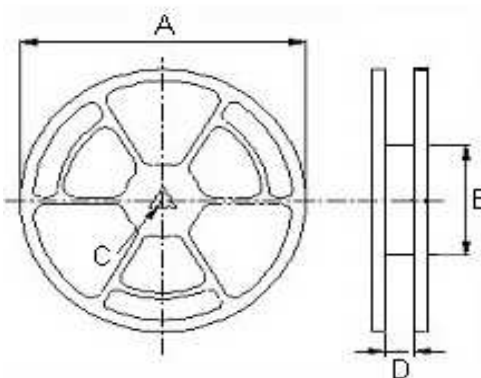
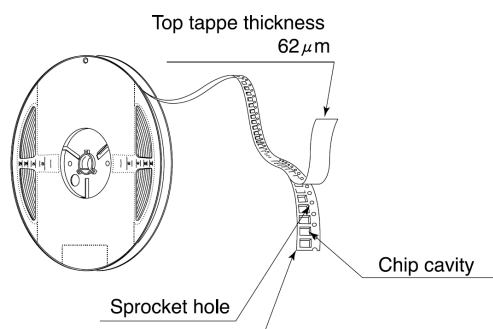


A	7.5
B	2.1
C	3.8

Unit:mm

8. Packaging

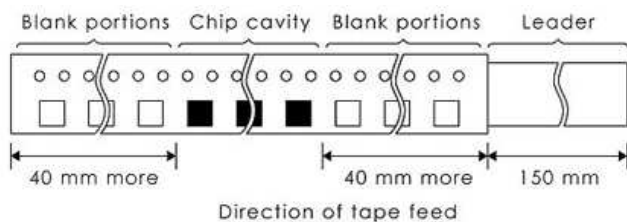
8-1 Reel Dimension



A	B	C	D
330	100	13	17.4

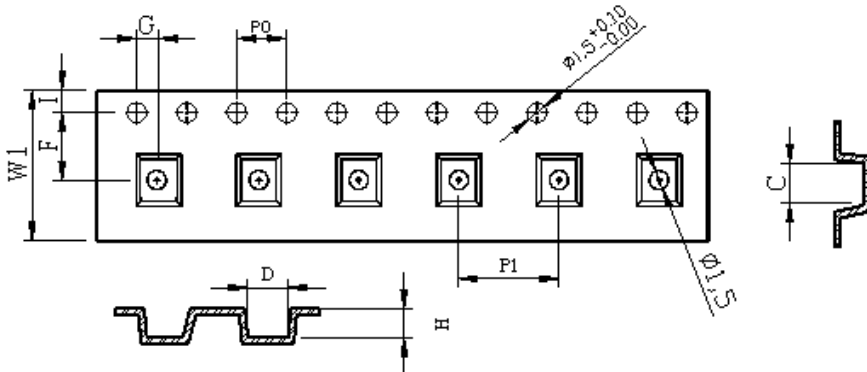
Unit:mm

8-2 Leader and Blank Portion



BCNRL6045 Series

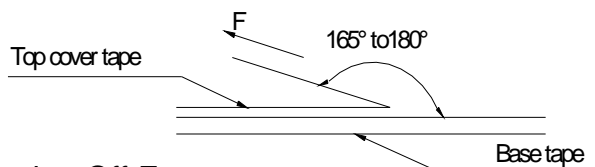
8-3 Taping Dimension/16mm



W1	16.0 ± 0.3
Y1	1.75 ± 0.1
F	7.50 ± 0.1
P0	4.00 ± 0.1
G	2.00 ± 0.1
P1	12.00 ± 0.1
C	6.2 ± 0.1
D	6.2 ± 0.1
H	5.0 ± 0.1

8-4 Packaging Quantity

P/N	Reel(Pcs)
BCNRL6045	2000



8-5 Tearing Off Force

The force tearing off cove tape is 15 to 60 grams			
in the arrow direction under the following conditions			
Room Temp (°C)	Room Humidity (%)	Room atrn (hPa)	Teaming Speed (mm/min)
5~35	45~85	860~1060	300.0