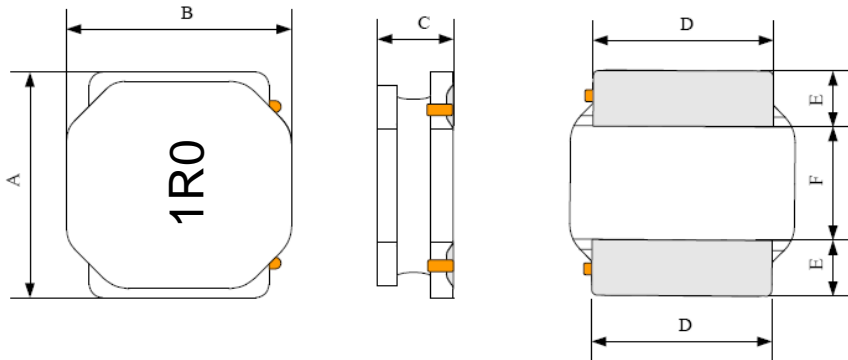


1. Dimension



Series	A	B	C	D	E	F
BCNRL5040	5.0±0.2	5.0±0.2	4.0 Max.	4.0±0.2	1.25±0.2	2.5±0.2

Unit: mm

2. Part Numbering

BCNRL 5040 - 1R0 N - NL
 (1) (2) (3) (4) (5)

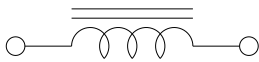
- (1) Product code
- (2) Dimension
- (3) Inductance 1R0=1.0 μH
- (4) Inductance Tolerance M=±20%, N=±30%
- (5) RoHS Compliant

3. Specification

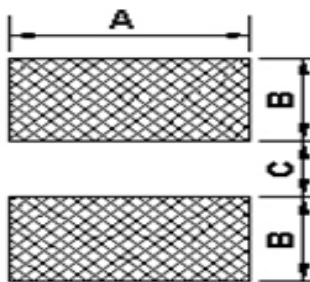
Part Number	Inductance (μH)	Tolerance	Test Frequency	DCR (Ω) ±30%	Isat (A) Max.	Irms (A) Max.
BCNRL5040-1R0N-NL	1.0	± 30%	100KHz/1V	0.012	7.35	4.90
BCNRL5040-1R2N-NL	1.2	± 30%	100KHz/1V	0.016	6.50	4.15
BCNRL5040-1R5N-NL	1.5	± 30%	100KHz/1V	0.015	6.30	4.30
BCNRL5040-1R8N-NL	1.8	± 30%	100KHz/1V	0.016	5.50	4.15
BCNRL5040-2R2N-NL	2.2	± 30%	100KHz/1V	0.019	4.90	3.80
BCNRL5040-2R7N-NL	2.7	± 30%	100KHz/1V	0.022	4.30	3.60
BCNRL5040-3R0N-NL	3.0	± 30%	100KHz/1V	0.022	4.15	3.60
BCNRL5040-3R3N-NL	3.3	± 30%	100KHz/1V	0.024	3.95	3.40
BCNRL5040-4R7N-NL	4.7	± 30%	100KHz/1V	0.030	3.50	3.00
BCNRL5040-5R6M-NL	5.6	± 20%	100KHz/1V	0.035	3.00	2.80

Part Number	Inductance e (μ H)	Tolerance	Test Frequency	DCR (Ω) \pm 30%	Isat (A) Max.	Irms (A) Max.
BCNRL5040-6R8M-NL	6.8	\pm 20%	100KHz/1V	0.043	2.90	2.50
BCNRL5040-8R2M-NL	8.2	\pm 20%	100KHz/1V	0.048	2.70	2.30
BCNRL5040-100M-NL	10	\pm 20%	100KHz/1V	0.064	2.35	2.10
BCNRL5040-150M-NL	15	\pm 20%	100KHz/1V	0.086	2.00	2.00
BCNRL5040-220M-NL	22	\pm 20%	100KHz/1V	0.129	1.60	1.50
BCNRL5040-330M-NL	33	\pm 20%	100KHz/1V	0.188	1.30	1.20
BCNRL5040-470M-NL	47	\pm 20%	100KHz/1V	0.272	1.10	1.00
BCNRL5040-680M-NL	68	\pm 20%	100KHz/1V	0.400	0.90	0.80
BCNRL5040-101M-NL	100	\pm 20%	100KHz/1V	0.560	0.75	0.70
BCNRL5040-151M-NL	150	\pm 20%	100KHz/1V	0.750	0.65	0.60
BCNRL5040-102M-NL	1000	\pm 20%	100KHz/1V	6.000	0.21	0.20

4. Schematic Diagram



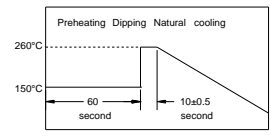
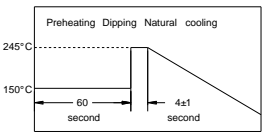
5. Recommended Land Dimension



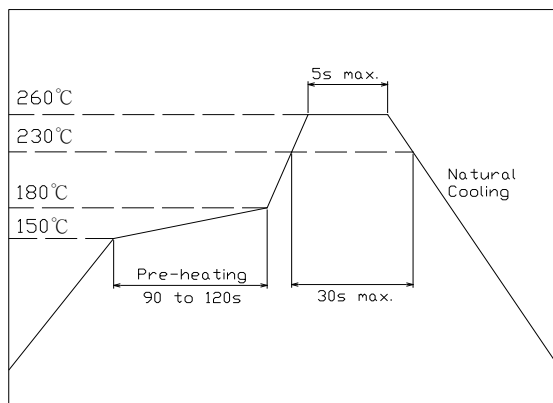
A	4.2
B	1.4
C	2.3

Unit:mm

6. Reliability and Test Condition

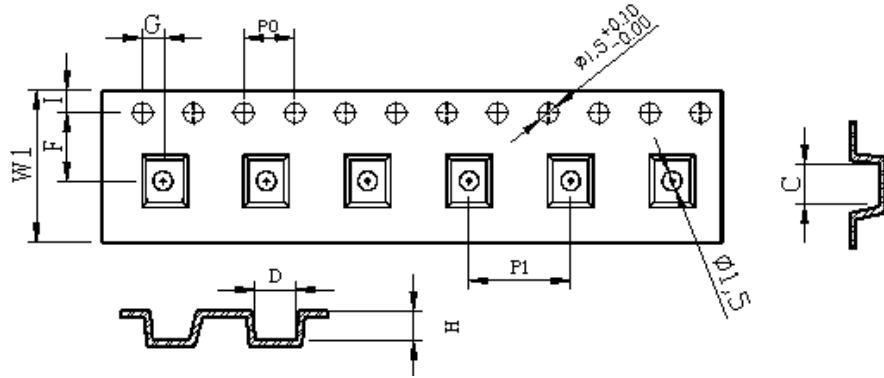
Item	Performance	Test Condition															
Operating Temperature	-40~+125°C																
Storage temperature	-40~+125°C																
Rated Current	Base on temp. rise & $\Delta L/LOA \leq 30\%$																
Temperature Rise Test	40°C typ. (Δt)																
Solder heat Resistance	Appearance: 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 $\pm 20\%$ of initial value.	<table border="1" data-bbox="758 840 1061 1086"> <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 $\pm 20\%$ 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 $\pm 20\%$ 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 $\pm 30\%$	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).															

7. Recommended IR Reflow



8. Packaging

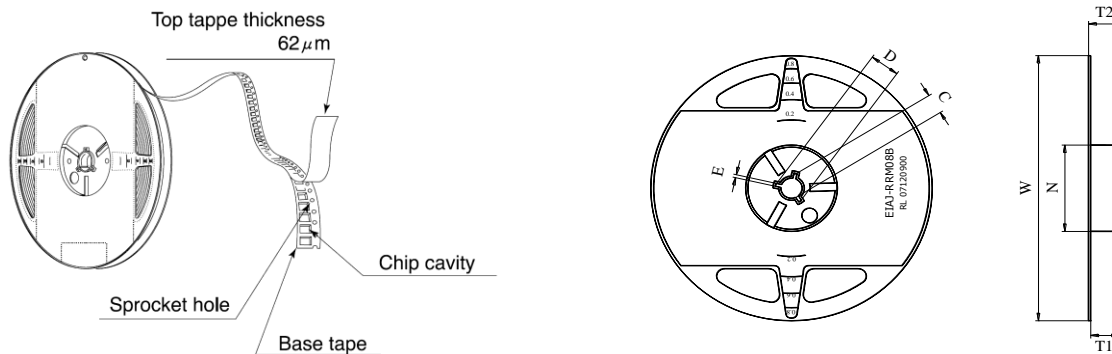
8-1 Reel Dimension



Part	Dimensions
W1	12.0 ± 0.3
I	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	5.3 ± 0.1
D	5.3 ± 0.1
H	4.2 ± 0.1

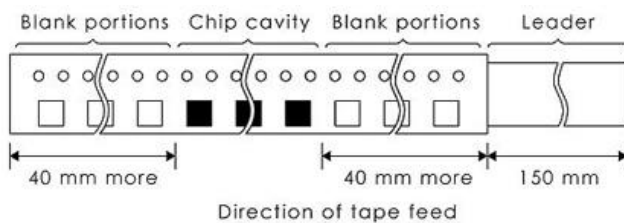
Unit: mm

8-2 Leader and Black Portion



8-3 Taping Dimension/16mm

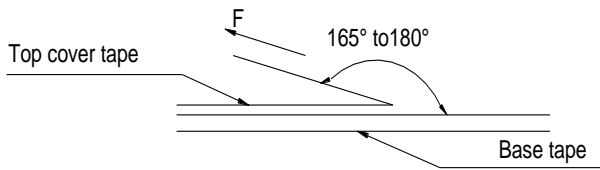
TYPE	W	D	C	T1	N	T2	E
UR-12	330±1.5	21.5+0.5/-0	13+0.5/-0.2	12.5+0.5/-0	100±1.5	17.5±0.4	2.00±0.5



8-4 Packaging Quantity

P/N	PCS/Reel
BCNRL5040	1,500

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 ($^\circ\text{C}$)	Room Humidity (%)	Room atrn (hPa)	Teaming Speed (mm/min)
5~35	45~85	860~1060	300.0