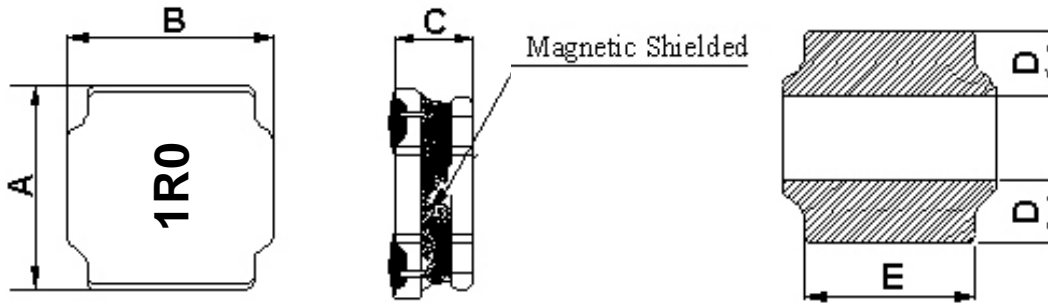


1. Dimension



Series	A	B	C	D	E
BCNRL8040	8.0±0.3	8.0±0.3	4.2 Max.	2.0±0.3	6.3±0.3

Unit: mm

2. Part Numbering

BCNRL 8040 - 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% Typ.	Saturation Current (A) Max.(Isat)	Heat Rating Current (A) Max.(Irms)
BCNRL8040-R82N-NL	0.82	± 30%	100KHz/1V	0.008	13.80	6.30
BCNRL8040-1R0N-NL	1.0	± 30%	100KHz/1V	0.008	9.85	6.30
BCNRL8040-2R2N-NL	2.2	± 30%	100KHz/1V	0.012	7.10	5.15
BCNRL8040-3R3N-NL	3.3	± 30%	100KHz/1V	0.017	6.50	4.40
BCNRL8040-4R7N-NL	4.7	± 30%	100KHz/1V	0.019	5.90	4.10
BCNRL8040-5R6N-NL	5.6	± 30%	100KHz/1V	0.021	4.45	3.85
BCNRL8040-6R8M-NL	6.8	± 20%	100KHz/1V	0.024	4.55	3.60
BCNRL8040-8R2M-NL	8.2	± 20%	100KHz/1V	0.026	4.20	3.45
BCNRL8040-100M-NL	10	± 20%	100KHz/1V	0.029	3.60	3.30

Part Number	Inductance (μH)	Tolerance	Test Frequency	DCR(Ω) ± 30% Typ.	Saturation Current (A) Max.(Isat)	Heat Rating Current (A) Max.(Irms)
BCNRL8040-120M-NL	12	± 20%	100KHz/1V	0.041	4.00	3.00
BCNRL8040-150M-NL	15	± 20%	100KHz/1V	0.047	2.95	2.60
BCNRL8040-220M-NL	22	± 20%	100KHz/1V	0.069	2.40	2.10
BCNRL8040-270M-NL	27	± 20%	100KHz/1V	0.078	2.15	2.00
BCNRL8040-330M-NL	33	± 20%	100KHz/1V	0.097	2.05	1.80
BCNRL8040-470M-NL	47	± 20%	100KHz/1V	0.136	1.75	1.55
BCNRL8040-560M-NL	56	± 20%	100KHz/1V	0.148	1.55	1.45
BCNRL8040-680M-NL	68	± 20%	100KHz/1V	0.196	1.45	1.25
BCNRL8040-820M-NL	82	± 20%	100KHz/1V	0.225	1.30	1.15
BCNRL8040-101M-NL	100	± 20%	100KHz/1V	0.290	1.15	1.00
BCNRL8040-121M-NL	120	± 20%	100KHz/1V	0.334	1.05	0.95
BCNRL8040-151M-NL	150	± 20%	100KHz/1V	0.410	1.10	1.00
BCNRL8040-181M-NL	180	± 20%	100KHz/1V	0.520	0.95	0.83
BCNRL8040-221M-NL	220	± 20%	100KHz/1V	0.599	0.85	0.80
BCNRL8040-331M-NL	330	± 20%	100KHz/1V	0.889	0.68	0.64
BCNRL8040-471M-NL	470	± 20%	100KHz/1V	1.260	0.60	0.50
BCNRL8040-681M-NL	680	± 20%	100KHz/1V	2.040	0.50	0.45
BCNRL8040-102M-NL	1000	± 20%	100KHz/1V	2.800	0.40	0.35
BCNRL8040-152M-NL	1500	± 20%	100KHz/1V	5.000	0.32	0.26

Note:

- (1) All test date is returned to 25°C ambient.
- (2) Operating temperature range : -40°C to +125°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.

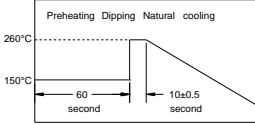
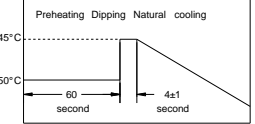
Test Equipment:

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

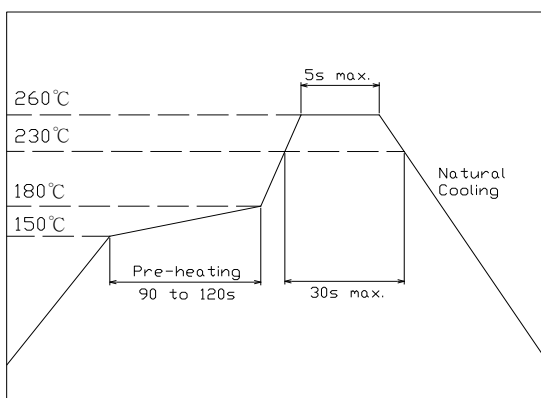
4. Schematic Diagram



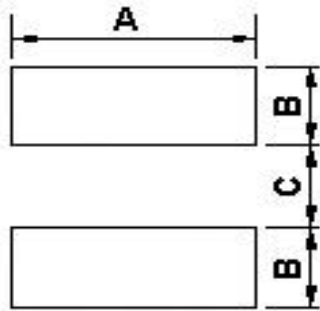
5. Reliability and Test Condition

Item	Performance	Test Condition															
Operating Temperature	-40~+125°C																
Storage temperature	-40~+125°C																
Rated Current	Base on temp. rise & $\Delta L/LOA \leq 30\%$																
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±20%of initial value.	<table border="1" data-bbox="750 929 1053 1176"> <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



7. Recommended Land Dimension

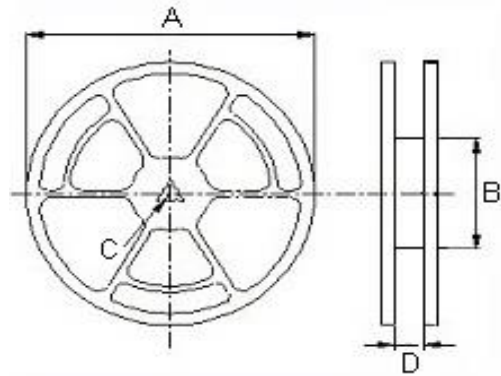
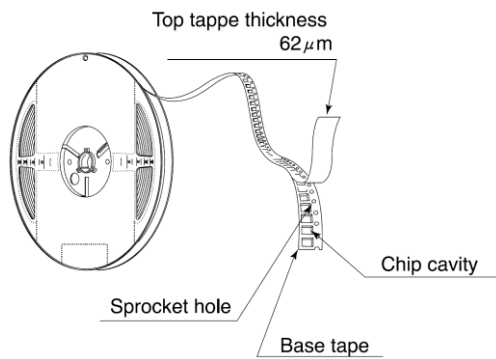


A	7.5
B	2.2
C	3.8

Unit: mm

8. Packaging

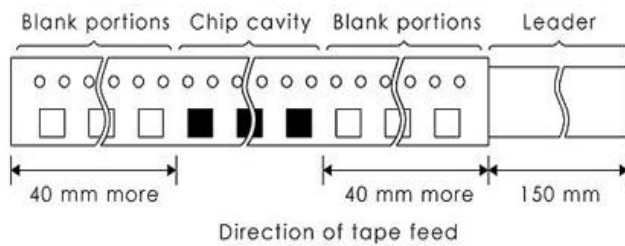
8-1 Reel Dimension



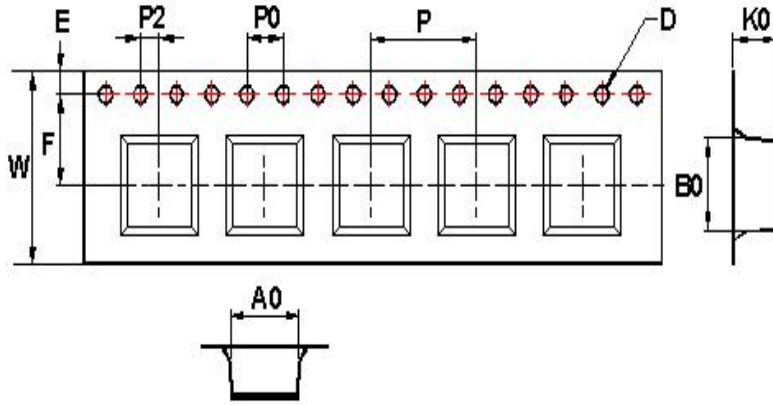
A	B	C	D
330	100	13	17.4

Unit: mm

8-2 Leader and Blank Portion



8-3 Taping Dimension



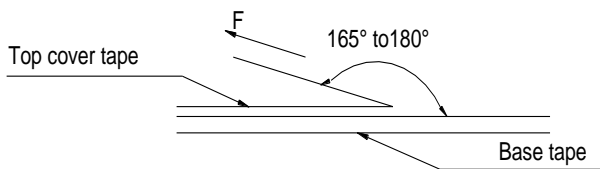
Part	Dimension
A0	8.5
B0	8.5
K0	4.3
D	1.55
E	1.75
F	7.5
W	16.0
P	12.0
P0	4.0
P2	2.0

Unit: mm

8-4 Packaging Quantity

Series	PCS/Reel
BCNRL8040	1,000

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