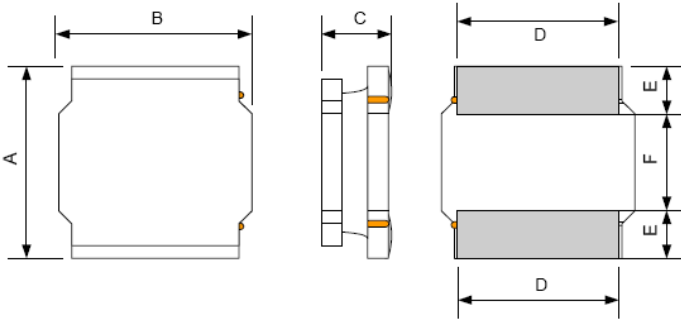


1. Dimension



Series	A	B	C	D	E	F
BCNRL6020B	6.0±0.3	6.0±0.3	2.0 Max.	4.9±0.3	1.55±0.3	2.9±0.3

Unit: mm

2. Part Numbering

BCNRL 6020B - 1R0 M - NL
(1) (2) (3) (4) (5)

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

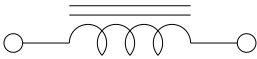
3. Specification

Part Number	Inductance (μH)	Tolerance	Test Frequency	DCR (Ω) Max.	Saturation Current ₃ (A) (I _{sat}) Max.	Heat Rating Current ₄ (A) (I _{rms}) Max.
BCNRL6020B-R50N-NL	0.5	±30%	100KHz/1V	0.018	4.50	4.00
BCNRL6020B-R68N-NL	0.68	±30%	100KHz/1V	0.022	6.55	3.80
BCNRL6020B-R82N-NL	0.82	±30%	100KHz/1V	0.022	5.30	3.80
BCNRL6020B-1R0M-NL	1.0	±20%	100KHz/1V	0.020	4.15	3.50
BCNRL6020B-1R2M-NL	1.2	±20%	100KHz/1V	0.029	5.90	3.20
BCNRL6020B-1R5M-NL	1.5	±20%	100KHz/1V	0.029	4.25	3.20
BCNRL6020B-1R8M-NL	1.8	±20%	100KHz/1V	0.036	4.85	2.75
BCNRL6020B-2R2M-NL	2.2	±20%	100KHz/1V	0.036	3.75	2.75
BCNRL6020B-3R3M-NL	3.3	±20%	100KHz/1V	0.046	3.15	2.60
BCNRL6020B-4R7M-NL	4.7	±20%	100KHz/1V	0.075	3.00	2.00
BCNRL6020B-5R6M-NL	5.6	±20%	100KHz/1V	0.075	2.40	1.90
BCNRL6020B-6R8M-NL	6.8	±20%	100KHz/1V	0.103	2.20	1.80

Part Number	Inductance (μH)	Tolerance	Test Frequency	DCR (Ω) Max.	Saturation Current ₃ (A) (Isat) Max.	Heat Rating Current ₄ (A) (Irms) Max.
BCNRL6020B-8R2M-NL	8.2	±30%	100KHz/1V	0.137	2.10	1.40
BCNRL6020B-100M-NL	10	±30%	100KHz/1V	0.137	1.75	1.40
BCNRL6020B-120M-NL	12	±30%	100KHz/1V	0.156	1.45	1.30
BCNRL6020B-150M-NL	15	±20%	100KHz/1V	0.189	1.20	1.20
BCNRL6020B-180M-NL	18	±20%	100KHz/1V	0.234	1.20	1.08
BCNRL6020B-220M-NL	22	±20%	100KHz/1V	0.265	1.05	1.00
BCNRL6020B-330M-NL	33	±20%	100KHz/1V	0.390	0.95	0.84
BCNRL6020B-470M-NL	47	±20%	100KHz/1V	0.559	0.70	0.80

1. All test data is referenced to 20°C ambient;
2. Rated current: Isat or Irms, whichever is smaller;
3. Isat: DC current at which the inductance drops approximate 30% from its value without current;
4. Irms: DC current that causes the temperature rise (ΔT =40°C) from 20°C ambient.

4. Schematic Diagram

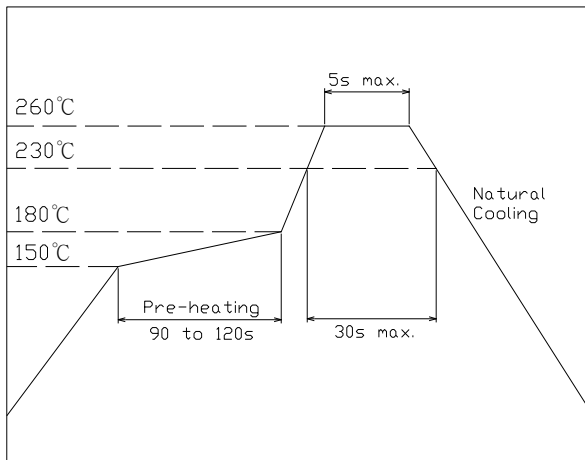


5. Reliability and Test Condition

Item	Performance	Test Condition
Operating Temperature	-40~+125°C	
Storage temperature	-40~+125°C	
Rated Current	Base on temp. rise & ΔL/LOA ≤ 30%	
Temperature Rise Test	40°C typ. (Δt)	
Solder heat Resistance	Appearance: No significant abnormality. Inductance change: Within ± 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>

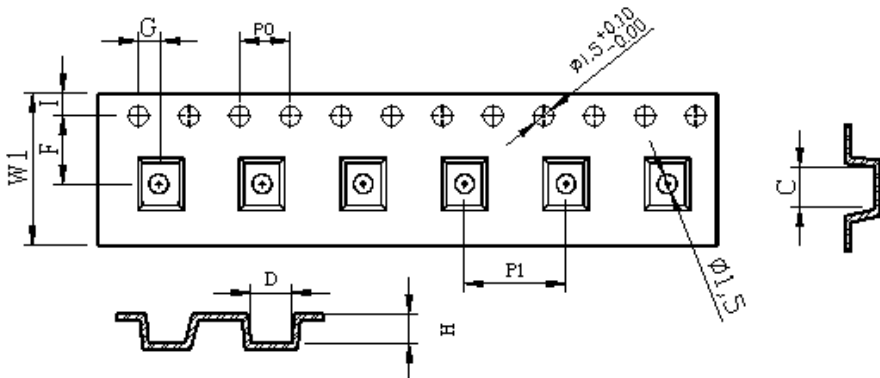
Thermal shock	Appearance: no damage. Inductance: within±20%of initial value.	<table border="1"> <thead> <tr> <th>Phase</th> <th>Temperature(°C)</th> <th>Time(min)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25±2°C</td> <td>30±3</td> </tr> <tr> <td>2</td> <td>Room Temp.</td> <td>15</td> </tr> <tr> <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>	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	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
		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																
Measured:50 times																		
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. Packaging Information

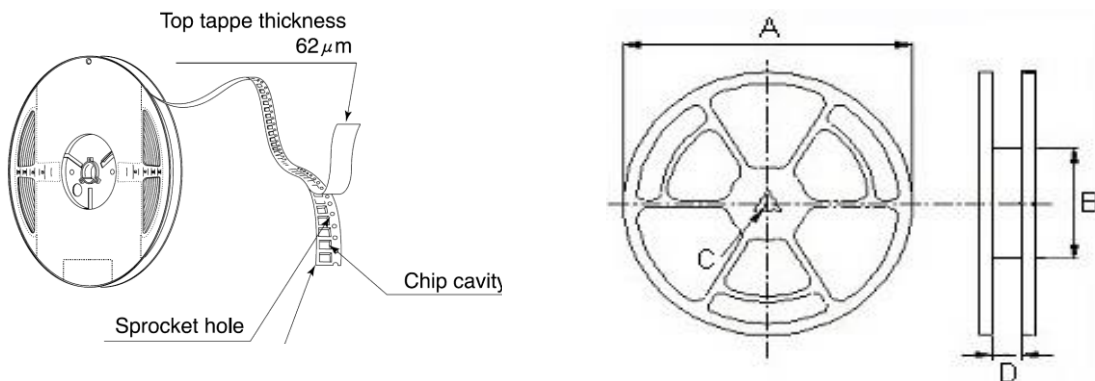
7-1 Reel Dimension



Part	Dimension
W1	16.0 ± 0.3
I	1.75 ± 0.1
F	7.50 ± 0.1
P0	4.00 ± 0.1
G	2.00 ± 0.1
P1	8.00 ± 0.1
C	6.2 ± 0.1
D	6.2 ± 0.1
H	2.5 ± 0.1

Unit: mm

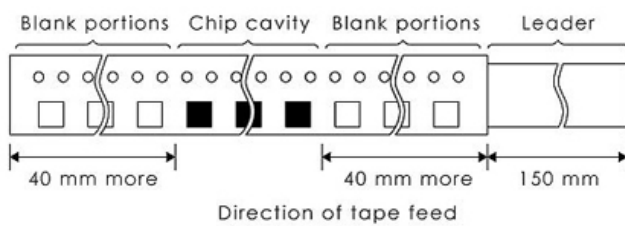
7-2 Leader and Black Portion



A	B	C	D
330	100	13	16.5

7-3 Taping Dimension/16mm

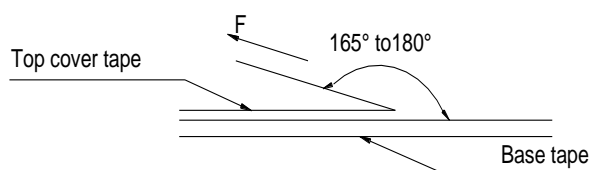
Unit: mm



7-4 Packaging Quantity

P/N	PCS/Reel
BCNRL6020B	2,500

7-5 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