

1. Dimension

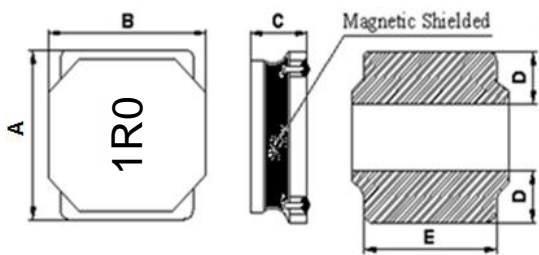


Fig. 1

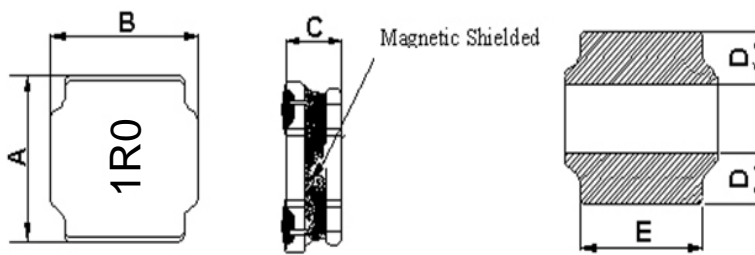


Fig.2

Series	A	B	C	D	E
BCNRL4018	4.0±0.2	4.0±0.2.	1.8 Max.	1.3±0.3	3.6 Typ.

Unit: mm

2. Part Numbering

BCNRL 4018 - 1R0 N - 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)		Isat (A) Max.	I _{rms} (A) Max.
				Typ.	Max.		
BCNRL4018-R47N-NL	0.47	± 30%	100KHz/1V	0.023	0.030	5.60	5.20
BCNRL4018-1R0N-NL	1.0	± 30%	100KHz/1V	0.025	0.033	4.80	2.00
BCNRL4018-1R5N-NL	1.5	± 30%	100KHz/1V	0.030	0.039	3.35	1.80
BCNRL4018-2R2M-NL	2.2	± 20%	100KHz/1V	0.045	0.059	2.70	1.65
BCNRL4018-3R3M-NL	3.3	± 20%	100KHz/1V	0.070	0.091	2.45	1.23
BCNRL4018-4R7M-NL	4.7	± 20%	100KHz/1V	0.090	0.117	1.70	1.20
BCNRL4018-6R8M-NL	6.8	± 20%	100KHz/1V	0.110	0.143	1.45	1.06
BCNRL4018-100M-NL	10	± 20%	100KHz/1V	0.180	0.234	1.30	0.84
BCNRL 4018-150M-NL	15	± 20%	100KHz/1V	0.250	0.325	0.94	0.65
BCNRL 4018-220M-NL	22	± 20%	100KHz/1V	0.360	0.468	0.80	0.59

Part Number	Inductance (μH)	Tolerance	Test Frequency	DCR (Ω)		Isat (A) Max.	Irms (A) Max.
				Typ.	Max.		
BCNRL 4018-330M-NL	33	± 20%	100KHz/1V	0.530	0.689	0.56	0.49
BCNRL4018-470M-NL	47	± 20%	100KHz/1V	0.650	0.845	0.57	0.42
BCNRL4018-680M-NL	68	± 20%	100KHz/1V	1.000	1.300	0.47	0.32
BCNRL4018-101M-NL	100	± 20%	100KHz/1V	1.750	2.275	0.40	0.25
BCNRL4018-151M-NL	150	± 20%	100KHz/1V	2.500	3.250	0.31	0.22
BCNRL4018-221M-NL	220	± 20%	100KHz/1V	4.000	5.200	0.27	0.17

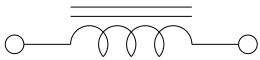
Note:

- (1) All test date is referenced to 25°C ambient.
- (2) Operating temperature range : -40°C to +105°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.

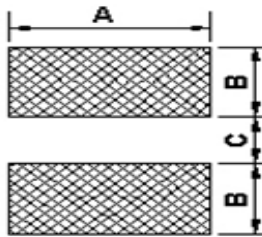
Test Equipment:

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

4. Schematic Diagram



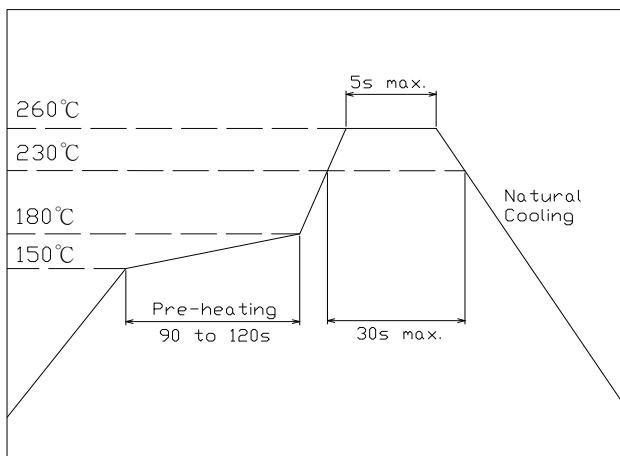
5. Recommended Land Dimension



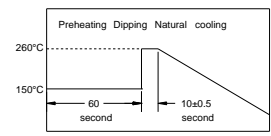
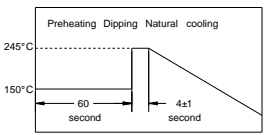
A	3.7
B	1.2
C	1.6

Unit: mm

6. Recommended IR Reflow

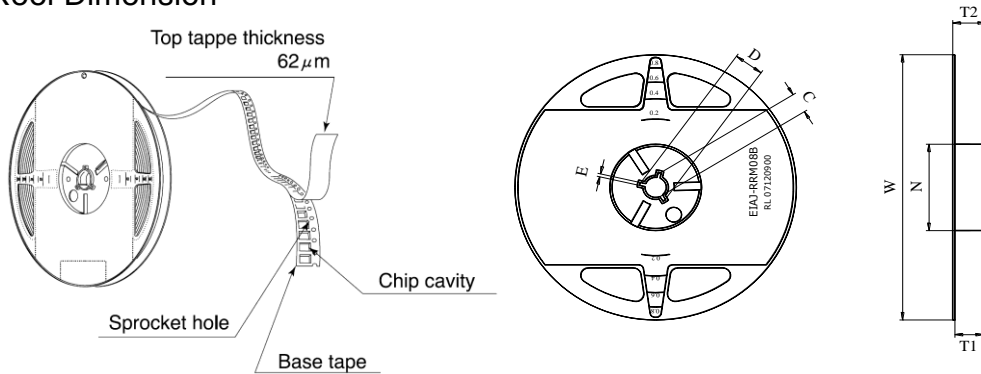


7. Reliability and Test Condition

Item	Performance	Test Condition															
Operating Temperature	-40~+105℃																
Storage temperature	-40~+105℃																
Rated Current	Base on temp. rise & $\Delta L/LOA \leq 30\%$																
Temperature Rise Test	40℃ typ. (Δt)																
Solder heat Resistance	Appearance: No significant abnormality. Inductance change: Within $\pm 20\%$.	 <p>Preheat:150℃,60sec. Solder : Sn-Ag3.0-Cu0.5 Solder temperature:260±5℃ 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℃,60sec. Solder : Sn-Ag3.0-Cu0.5 Solder temperature:245±5℃ Flux: rosin Dip time:4±1sec.</p>															
Thermal shock	Appearance: no damage. Inductance: within±20%of initial value.	<table border="1" data-bbox="758 929 1061 1176"> <thead> <tr> <th>Phase</th> <th>Temperature(℃)</th> <th>Time(min)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-25±2℃</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℃</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℃ 30±3 min. Step2:Room temperature 15 min. Step3:+85±2℃ 30±3 min. Step4: Room temperature 15 min. Number of cycles:50 Measured:50 times</p>	Phase	Temperature(℃)	Time(min)	1	-25±2℃	30±3	2	Room Temp.	15	3	+85±2℃	30±3	4	Room Temp.	15
Phase	Temperature(℃)	Time(min)															
1	-25±2℃	30±3															
2	Room Temp.	15															
3	+85±2℃	30±3															
4	Room Temp.	15															
Humidity Resistance Test	Appearance: no damage. Inductance: within±20%of initial value.	Temperature:40±2℃. 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℃. 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).															

8. Packaging

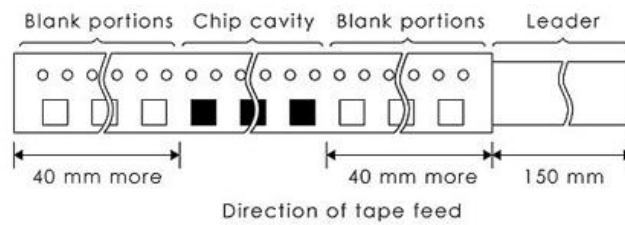
8-1 Reel Dimension



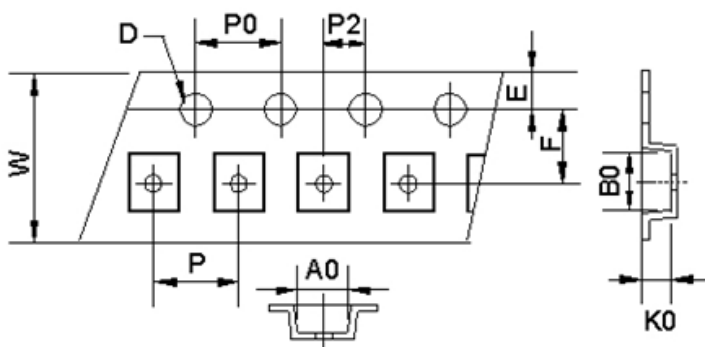
Product Series	W	N	D	C	T1	T2
13mm	330	75	21	13	17	21.5
	±1.5	Min.	±0.8	±0.8	Max.	Typ.

Unit: mm

8-2 Leader and Black Portion



8-3 Taping Dimension



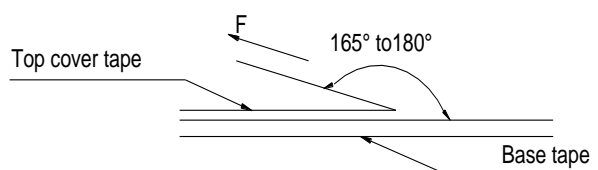
TYPE	BCNRL4018
W	12± 0.1
AO	4.25± 0.1
BO	4.25 ± 0.1
KO	2.1 ± 0.1
D	1.55 ± 0.05
E	1.75 ± 0.1
F	5.5 ± 0.1
P	8 ± 0.1
PO	4.00 ± 0.1
P2	2.0 ± 0.1

Unit: mm

8-4 Packaging Quantity

P/N	PCS/Reel
BCNRL4018	3,000

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