

Product Specification

Number: RNP18-NR3015-101M

Name: SMD Power Inductors

Customer: _____

Date: 2025-03-28

Customer Signature:



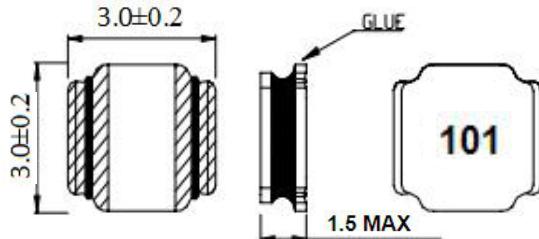
RANDA PASSIVE
The best choice for passive components

| Compi | Check | Review | Approva |
|-------|--------|--------|---------|
| Jenny | Jack.C | | |

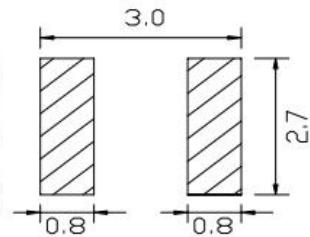
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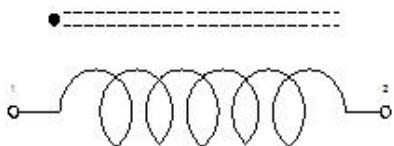
1. Dimension (Unit: mm)



2. Land Patterns



3. Schematics



4. Stamp (Example)



5. Electrical Characteristics

| No. | Part Number | Stamp | Inductance | Test Condition | DCR(mΩ) Max. | Isat (A)*Max. (L0A-L0.23A)/L0A ≤30% | Irms |
|-----|-------------------|-------|------------|----------------|-----------------|---|------|
| 01 | RNP18-NR3015-101M | 101 | 100µH±20% | 100KHz/0.25V | 300 | 0.23 | 0.21 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

*The rated current is the current at which the inductance decreases by 30% from the initial value or the DC current at which the temperature rise is $\Delta t=40^{\circ}\text{C}$,whichever is smaller($T_a=20^{\circ}\text{C}$).

RoHS

| | | | | |
|--|-------------|---------------------|---------|------------|
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TEST REPORT

PART NO:

RNP18- NR3015- 101 M

- ① Product symbol (产品代号)
- ② Dimensions (规格尺寸)
- ③ Inductance (电感量)
- ④ Inductance tolerance (感量公差): J=±5%; K=±10%;
N=±30%; M=±20%

ELECTRICAL CHARACTERISTIC

MECHANICAL DIMENSIONS

| SPEC TOL | L | DCR | | | L | W | H |
|-------------|-------|-----|--|--|------|------|------|
| | μH | mA | | | mm | mm | mm |
| | 100 | 300 | | | 3.0 | 3.0 | 1.5 |
| NO | ±20% | Max | | | ±0.2 | ±0.2 | Max |
| 1 | 95.2 | 247 | | | 3.06 | 3.03 | 1.43 |
| 2 | 99.1 | 243 | | | 3.06 | 3.05 | 1.43 |
| 3 | 102.2 | 244 | | | 3.07 | 3.03 | 1.39 |
| 4 | 97.8 | 240 | | | 3.03 | 3.05 | 1.45 |
| 5 | 97.3 | 244 | | | 3.04 | 3.02 | 1.39 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

TEST EQUIPMENTS

| | | | |
|--------|---|--------|---|
| TH2817 | | CH2815 | |
| TH1775 | ✓ | CH1062 | ✓ |
| VR131 | ✓ | | |
| HP4284 | | | |
| CH3250 | | | |

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1. General Characteristics

| Item | Conditions | Specification |
|------------------------------|---|---|
| Storage Temperature | | −40°C ~ +85°C |
| Operating Temperature | | −40°C ~ +125°C |
| Visual Check | | No distinct defects |
| Terminal Strength | With the force of 5.0N for 10±1 seconds with the coil soldered to PCB. | No terminals are peeled off |
| Temperature Feature | -55~+450°C | Inductance Coefficient (0~2000)×10 ⁻⁶ /°C |
| Reflow Heat Endurance | Refer to ETCM-001 | Refer to ETCM-001 |
| Insulation Resistance | With D.C. 100V applied to the windings and core. | Over 100MΩ |
| Dielectric Strength | With 100VDC applied for 1 minute between windings and core. | No dielectric breakdown |
| Humidity Test | Humidity 90~95% and temperature 40±2°C for 96 hours and then drying for 1 hour under normal conditions. | Inductance deviation within ±10% No mechanical defects are found. |
| Vibration Test | After 2 hour's vibration in each of 3 orientations(10~55~10Hz) with 1.5mm P-P amplitudes. | Inductance deviation within ±10% No mechanical defects are found. |
| Shock Test | Dropped once with 981m/s ² (100G) shock attitude upon a rubber block shock testing machine in 3 different directions | Inductance deviation within ±10%. No mechanical defects are found. |

2. Remarks

(1) Packing specification to be according to KB-0013.

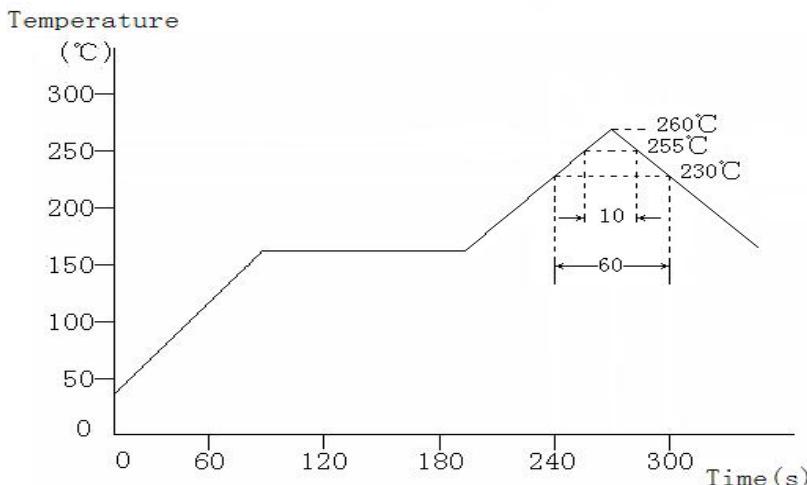
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(2) Reflow heat endurance and Recommended reflow conditions to be according to ETCM-001.

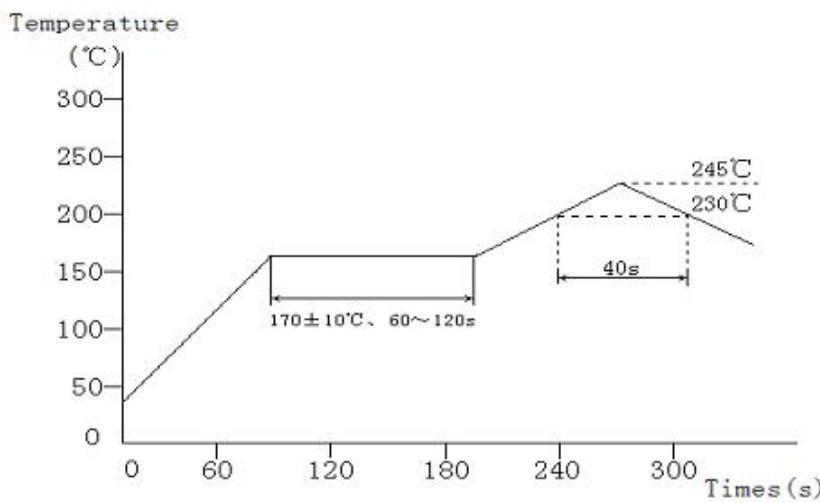
Leadfree Reflow Soldering Heat Endurance and Recommended Reflow Conditions

(1) Reflow Soldering Heat Endurance



- No mechanical and electrical defects are found after testing based on the above profile and keeping under the conditions of room temperature and humidity for 2 hours.
- Twice reflow test is acceptable with the test interval remaining 1 hour under the normal conditions.
- The reflow test profile may vary with the testing instruments

(2) Recommended Reflow Conditions

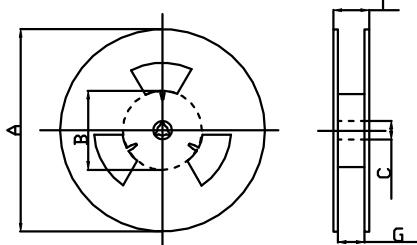


The recommended reflow profile is based on the testing instruments used, Solderability will depend on the testing equipments, reflow conditions, testing method, etc. so it is necessary to make a confirmation of them when the reflow conditions are set up.

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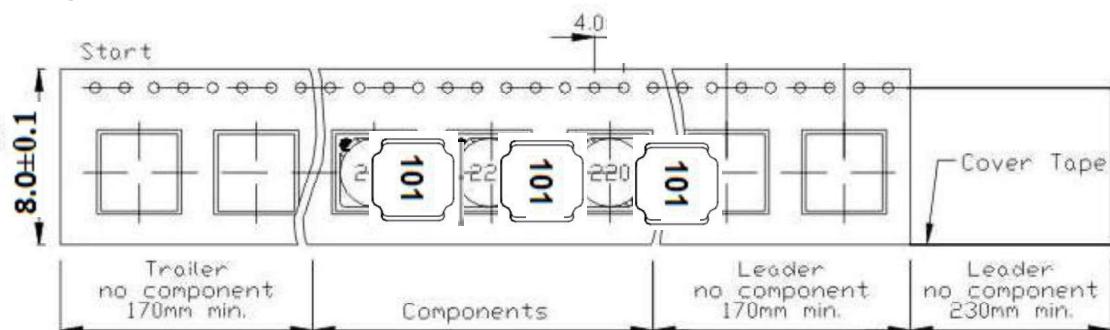


1. Reel Dimension(m/m)



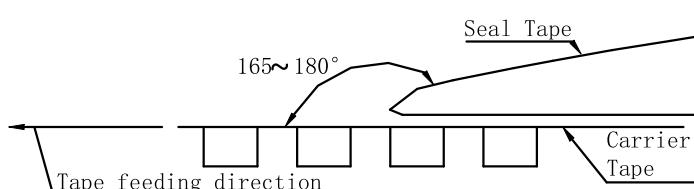
| Symbol | A | B | C | G | T |
|--------|-----|----|------|-----|------|
| Dim. | 178 | 60 | 13.5 | 8.5 | 11.1 |

2. Taping Dimension

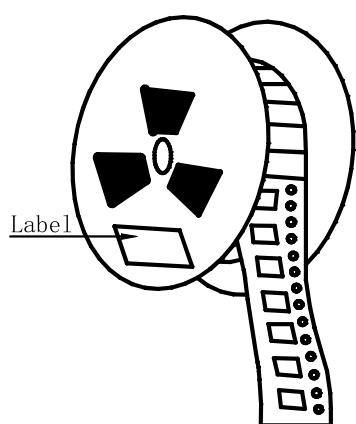


3. Tape Peel off Strength.

The force to tear off cover tape: 10~130g



4. Packing Quantities: 2000pcs/Reel.



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6. Packaging Carton

Figure -1 REEL Box Figure 200mm * 200mm * 60mm (in air) pack1

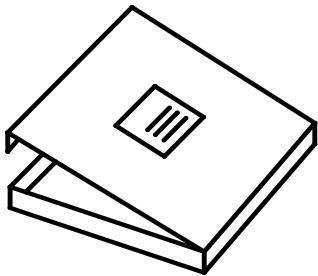
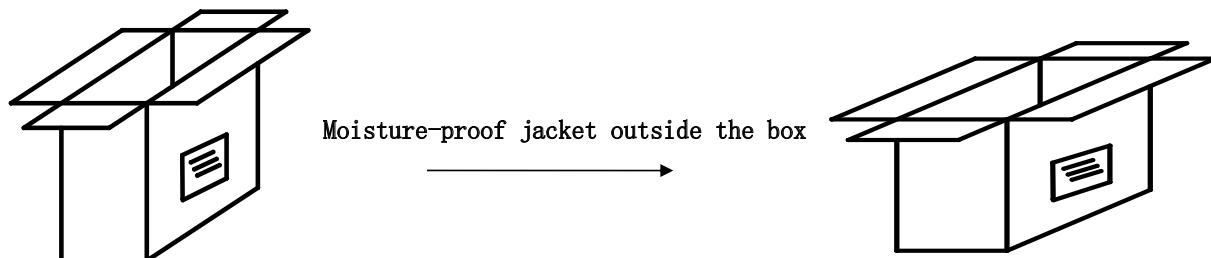


Figure -2 (Chart -2) outside the box diagram



210mm * 210mm * 60mm (in air) (20REEL box)

220mm * 220mm * 240mm (in air)

Note: If FCL is not enough orders, boxes filled with empty REEL. (If any ending, with the green line in the mark sheet of paper)