

MND-04BZN2R2M-XB-RU Datasheet



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DiGi Electronics Part Number MND-04BZN2R2M-XB-RU-DG

Manufacturer Mag Layers

Manufacturer Product Number MND-04BZN2R2M-XB-RU

Description FIXED IND 2.2UH 5.5A 38.7 MOHM S

Detailed Description 2.2 µH Shielded Molded Inductor 5.5 A 38.7mOhm

Max Nonstandard



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DiGi is a global authorized distributor of electronic components.



Purchase and inquiry

| Manufacturer Product Number: | Manufacturer: |
|------------------------------|---------------------------------------|
| MND-04BZN2R2M-XB-RU | Mag Layers |
| Series: | Product Status: |
| XB | Active |
| Type: | Material - Core: |
| Molded | Metal |
| Inductance: | Tolerance: |
| 2.2 μΗ | ±20% |
| Current Rating (Amps): | Current - Saturation (Isat): |
| 5.5 A | 5.6A |
| Shielding: | DC Resistance (DCR): |
| Shielded | 38.7mOhm Max |
| Q @ Freq: | Frequency - Self Resonant: |
| | |
| Ratings: | Operating Temperature: |
| | -55°C ~ 125°C |
| Inductance Frequency - Test: | Features: |
| 100 kHz | |
| Mounting Type: | Package / Case: |
| Surface Mount | Nonstandard |
| Supplier Device Package: | Size / Dimension: |
| | 0.157" L x 0.157" W (4.00mm x 4.00mm) |
| Height - Seated (Max): | |
| 0.079" (2.00mm) | |

Environmental & Export classification

8504.50.4000

| RoHS Status: | Moisture Sensitivity Level (MSL): |
|-----------------------------------|-----------------------------------|
| ROHS3 Compliant | 1 (Unlimited) |
| REACH Status: | ECCN: |
| REACH info available upon request | EAR99 |
| HTSUS: | |



Specification Sheet

P/N: MND-04BZNSERIES-XB-RU

Products: Certifications:

Molded Power Chokes ISO9001

Multilayer Chip Inductors IATF16949

<u>Lan Transformer</u> ISO14001

RF Passive / Antennas QC080000

Automotive

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Application

Laptop, desktop and server applications

High current power supplies

Battery powered devices

PMIC

Features

RoHS compliant & halogen free

Low resistance and high current rating

Magnetic core made by high performance magnetic metal powder

Product Identification

1 2 3 4 5

MND - 04BZ N R40 M - XB-RU

- 1 Product Code
- 2 Dimensions

3 Inductance: R40 = $0.4 \mu H$

4 Inductance Tolerance: M = ±20%

⑤ Series Type: XB Type

Note: Please refer to the "Product Dimension" for detail dimensions.



Electrical Performance

| | Inductance | Rdc(mΩ) | | Heat rating | Saturation |
|---------------------|------------|---------|-------|-------------|-------------|
| Part number | ±20%@0A | | | IXUC(III22) | |
| | (µH) | Тур. | Max. | DC amps (A) | DC amps (A) |
| MND-04BZNR40M-XB-RU | 0.4 | 7.55 | 8.3 | 14 | 12.5 |
| MND-04BZNR60M-XB-RU | 0.6 | 9.5 | 10.45 | 11.7 | 10.4 |
| MND-04BZN1R0M-XB-RU | 1 | 13.25 | 14.6 | 9.6 | 8.7 |
| MND-04BZN1R5M-XB-RU | 1.5 | 21.45 | 23.6 | 7.5 | 7.1 |
| MND-04BZN2R2M-XB-RU | 2.2 | 35.2 | 38.7 | 5.5 | 5.6 |

Note

Test frequency: 100KHz, 0.25V.

Test instruments: Inductance/saturation current: Keysight 4285A or equivalent.

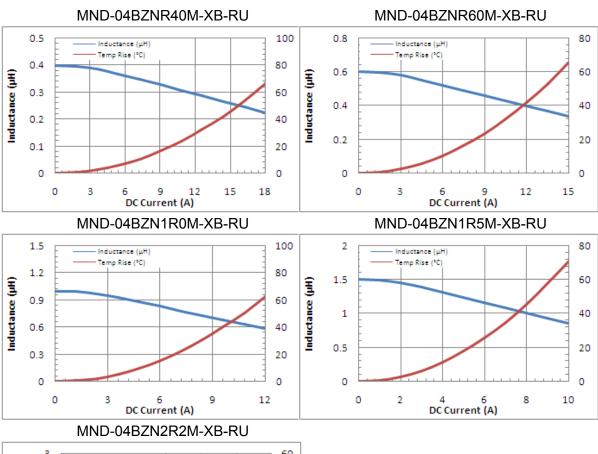
Rdc: ADEX AX1152D or equivalent.

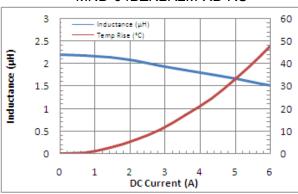
Notes:

- 1. The heat rating current (Idc) will cause temperature rise approximate 40°C.
- 2. The saturation current (Isat) will cause initial inductance drop approximate 30%.
- 3. All test data is referenced at 25°C ambient.
- 4. Operating temperature range -55°C to +125°C.
- 5. The part temperature (ambient + temp rise) should not exceed 125°C under the worst condition.
- 6. The temperature of component is affected by application conditions, e.g. circuit design, copper thickness of PCB and cooling conditions, the actual component temperature should be tested in the end application.



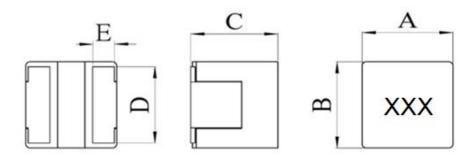
Electrical Characteristics







Product Dimension



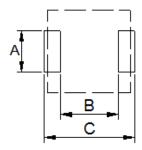
Code: $XXX = R40 = 0.4 \mu H$

| Dimension Part number | Α | В | С | D | E |
|-----------------------|-----------|-----------|---------|-----------|-----------|
| MND-04BZNSERIES-XB-RU | 4.0 ± 0.3 | 4.0 ± 0.3 | 2.0 Max | 3.4 ± 0.2 | 1.0 ± 0.4 |

Unit: mm



Recommended PCB Layout



| Туре | 04BZ |
|------|------|
| А | 3.7 |
| В | 1.39 |
| С | 3.35 |

Unit: mm

Safety precaution

- 1. Do not make any through holes and copper pattern in the dotted line area. Except a copper pattern to the electrode.
- 2. Don't design/mount any components in contact with this product.

This power choke coil itself does not have any protective function in abnormal condition such as overload, short circuit, open conditions and etc, it shall be confirmed as the end product that there is no risk of smoking, fire, dielectric withstand voltage, insulation resistance and etc. in abnormal conditions to provide protective devices and/or protection circuit in the end product.



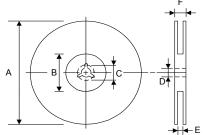
Packaging

Peel-off force



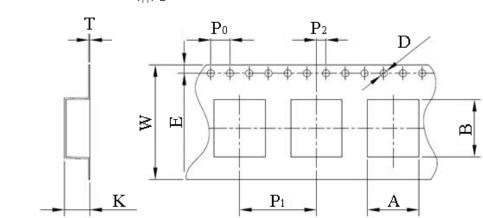
The peel off force of cover tape is 10 to 70 grams in the arrow direction.

Dimensions



| Туре | А | В | С | D | Е | F |
|-------|-------|-------|--------|--------|-----------|--------|
| 330mm | 330±2 | 100±1 | 20±0.5 | 13±1.0 | 12.4+2/-0 | 17.4±2 |

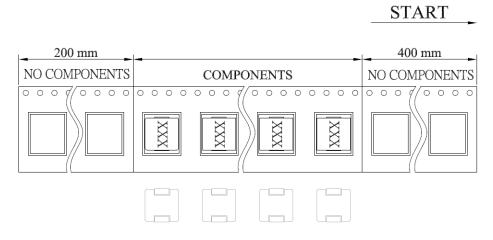
Unit: mm



| TYPE | SIZE | А | В | W | P ₁ | К |
|------|------|---------|----------------|----------|----------------|-----------|
| | | 4.3±0.1 | 4.4±0.1 | 12.0±0.3 | 8.0±0.1 | 2.4±0.1 |
| MND | 04BZ | P_0 | P ₂ | D | E | Т |
| | | 4.0±0.1 | 2.0±0.1 | 1.5±0.1 | 1.75±0.1 | 0.35±0.05 |

Unit: mm



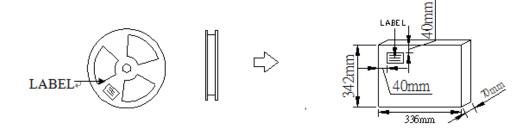


Taping quantity

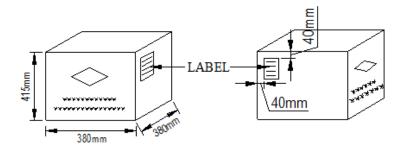
| | · , |
|----------|------|
| Series | 04BZ |
| PCS/Reel | 2000 |

Carton box

Middle packaging: 3 reels/box



External packaging: 5 boxes/carton







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