

Specification Sheet for Approved

| | |
|--------------------|-----------|
| Customer Name: | |
| Customer Part No.: | |
| Ceaiya Part No: | CR8040 系列 |
| Spec No: | L058-1 |

【For Customer Approval Only】

If you Approval, Please Stamp

【RoHS Compliant Parts】

| Approved By | Checked By | Prepared By |
|-------------|------------|-------------|
| 李庆辉 | 查凯 | 劳水花 |

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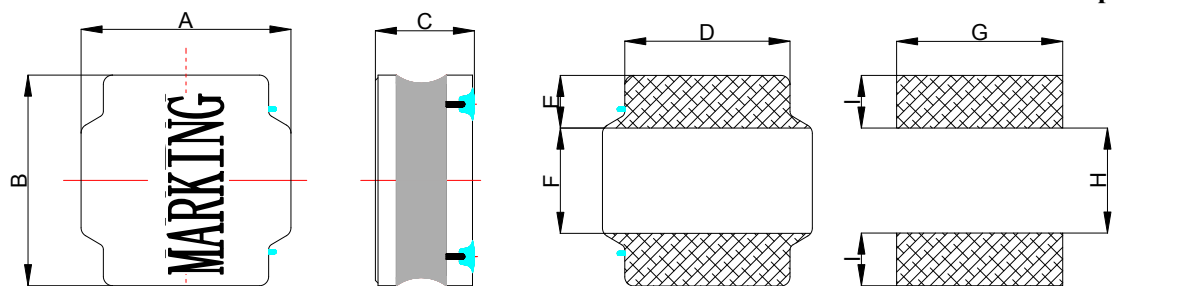
东莞地址 2: 广东省东莞清溪镇青滨东路 105 号力合紫荆智能制造中心 10 栋

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1. Shape and Dimension (Unit:mm)



注：喷码整体尺寸规格，长 4.9 ± 0.5 mm, 宽 3.1 ± 0.5 mm

| A | B | C | D | E | F | G | H | I |
|---------------|---------------|--------|---------------|----------------|---------------|--------|---------|---------|
| 8.0 ± 0.3 | 8.0 ± 0.3 | 4.2Max | 6.3 ± 0.3 | 2.15 ± 0.3 | 3.7 ± 0.3 | 7.5Ref | 3.8 Ref | 2.2 Ref |

* Dimension without tolerance is approx.

2. Electronic Characteristics List

| Part Number | Inductance (uH) | Tolerance (±%) | DCR(mΩ) ±30% | Isat (A) | Irise (A) | Test Condition | Marking |
|-------------|-----------------|----------------|--------------|----------|-----------|----------------|---------|
| CR8040-R56N | 0.56 | 30 | 5 | 11.5 | 7.6 | 1MHz /0.25V | R56 |
| CR8040-1R0N | 1.0 | 30 | 8 | 9.85 | 6.30 | 100KHz /0.25V | 1R0 |
| CR8040-1R5N | 1.5 | 30 | 10 | 8.15 | 5.65 | 100KHz /0.25V | 1R5 |
| CR8040-2R2N | 2.2 | 30 | 12 | 7.10 | 5.15 | 100KHz /0.25V | 2R2 |
| CR8040-3R3N | 3.3 | 30 | 17 | 6.50 | 4.40 | 100KHz /0.25V | 3R3 |
| CR8040-4R7N | 4.7 | 30 | 20 | 5.90 | 4.00 | 100KHz /0.25V | 4R7 |
| CR8040-5R6N | 5.6 | 30 | 24 | 5.50 | 3.80 | 100KHz /0.25V | 5R6 |
| CR8040-6R8M | 6.8 | 20 | 28 | 4.55 | 3.60 | 100KHz /0.25V | 6R8 |
| CR8040-8R2M | 8.2 | 20 | 35 | 4.20 | 3.40 | 100KHz /0.25V | 8R2 |
| CR8040-100M | 10 | 20 | 37 | 3.60 | 3.10 | 100KHz /0.25V | 100 |
| CR8040-120M | 12 | 20 | 45 | 3.30 | 2.80 | 100KHz /0.25V | 120 |
| CR8040-150M | 15 | 20 | 56 | 2.95 | 2.50 | 100KHz /0.25V | 150 |
| CR8040-180M | 18 | 20 | 58 | 2.70 | 2.40 | 100KHz /0.25V | 180 |
| CR8040-220M | 22 | 20 | 74 | 2.40 | 2.00 | 100KHz /0.25V | 220 |
| CR8040-270M | 27 | 20 | 80 | 2.15 | 1.90 | 100KHz /0.25V | 270 |
| CR8040-330M | 33 | 20 | 100 | 2.05 | 1.70 | 100KHz /0.25V | 330 |
| CR8040-470M | 47 | 20 | 158 | 1.75 | 1.50 | 100KHz /0.25V | 470 |
| CR8040-560M | 56 | 20 | 160 | 1.55 | 1.40 | 100KHz /0.25V | 560 |
| CR8040-680M | 68 | 20 | 196 | 1.45 | 1.20 | 100KHz /0.25V | 680 |
| CR8040-820M | 82 | 20 | 245 | 1.30 | 1.10 | 100KHz /0.25V | 820 |
| CR8040-101M | 100 | 20 | 295 | 1.15 | 1.00 | 100KHz /0.25V | 101 |
| CR8040-121M | 120 | 20 | 380 | 1.10 | 0.90 | 100KHz /0.25V | 121 |
| CR8040-151M | 150 | 20 | 470 | 1.10 | 0.80 | 100KHz /0.25V | 151 |
| CR8040-171M | 170 | 20 | 538 | 0.95 | 0.75 | 100KHz /0.25V | 171 |
| CR8040-181M | 180 | 20 | 610 | 0.90 | 0.75 | 100KHz /0.25V | 181 |
| CR8040-221M | 220 | 20 | 660 | 0.85 | 0.70 | 100KHz /0.25V | 221 |
| CR8040-331M | 330 | 20 | 970 | 0.68 | 0.55 | 100KHz /0.25V | 331 |
| CR8040-471M | 470 | 20 | 1400 | 0.60 | 0.48 | 100KHz /0.25V | 471 |
| CR8040-681M | 680 | 20 | 1750 | 0.50 | 0.45 | 100KHz /0.25V | 681 |

Isat : DC Saturation Current that will cause initial inductance to drop approximately 30% max.

Irise : DC Current that will cause an approximate ΔT of 40 °C

Measuring Instrument :

L:HIOKI3532-50

DCR:HIOKI 3540

Isat / Irise: HP4284A+42841

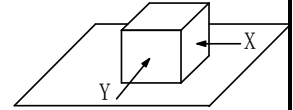
3. General Characteristics

3-1. Storage Temperature range : $-40^{\circ}\text{C} \sim +105^{\circ}\text{C}$

3-2. Operating temperature range: $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$ (Including coil's self temperature rise)

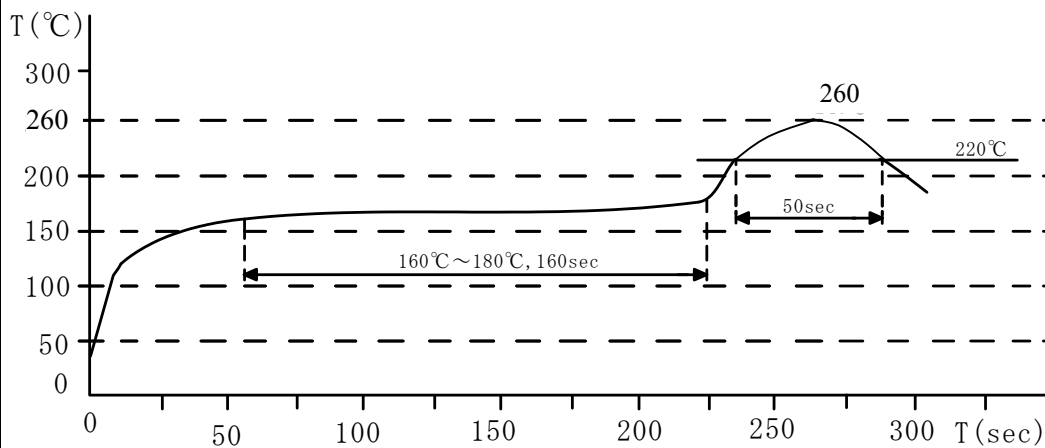
3-3. External appearance : No external defects can be found in the visual inspection.

3-4. Electrode strength : No electrode detachment should be found when the device is pushed in two directions of X and Y with the force of 10.0N for 10 ± 2 seconds after soldering between copper plate and the electrodes.
(Refer to figure at right)



3-5. Vibration test : Inductance deviation is within $\pm 10.0\%$ after 1 hour sweeping vibration in each three directions, namely, forward and backward, up and down, right and left. The frequency is $10 \sim 55 \sim 10\text{Hz}$ and the amplitude of 1 minute cycle is 1.5mm PP.

3-6. Recommended reflow condition :

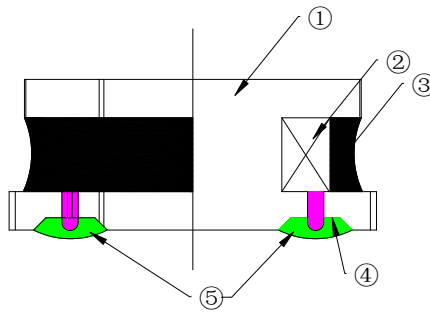


3-7. Humidity test : Inductance deviation is within $\pm 5.0\%$ after 96 ± 4 hours test under the condition of relative humidity of $90 \sim 95\%$ and temperature of $60 \pm 2^{\circ}\text{C}$, and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.

LEAD-FREE

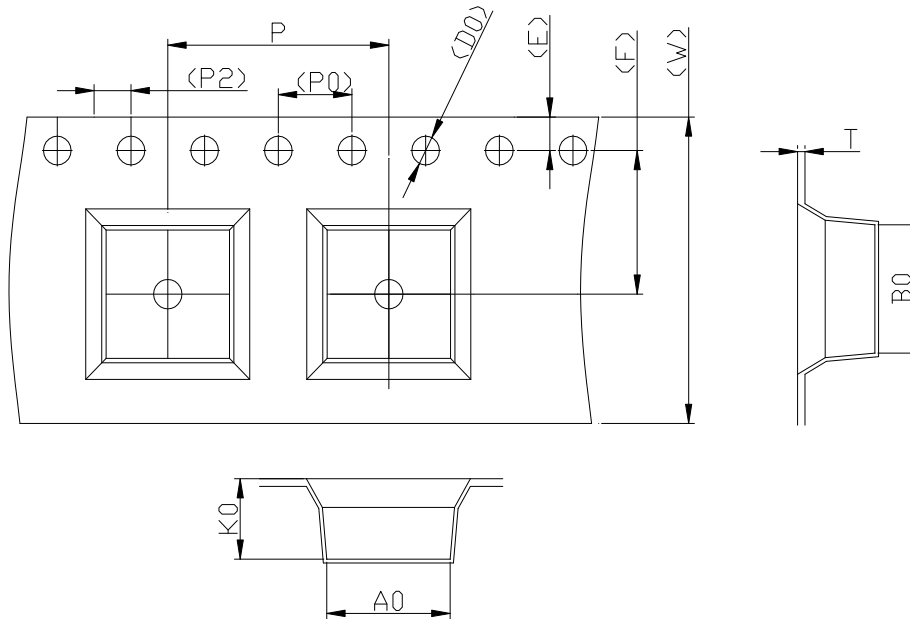


4. Construction



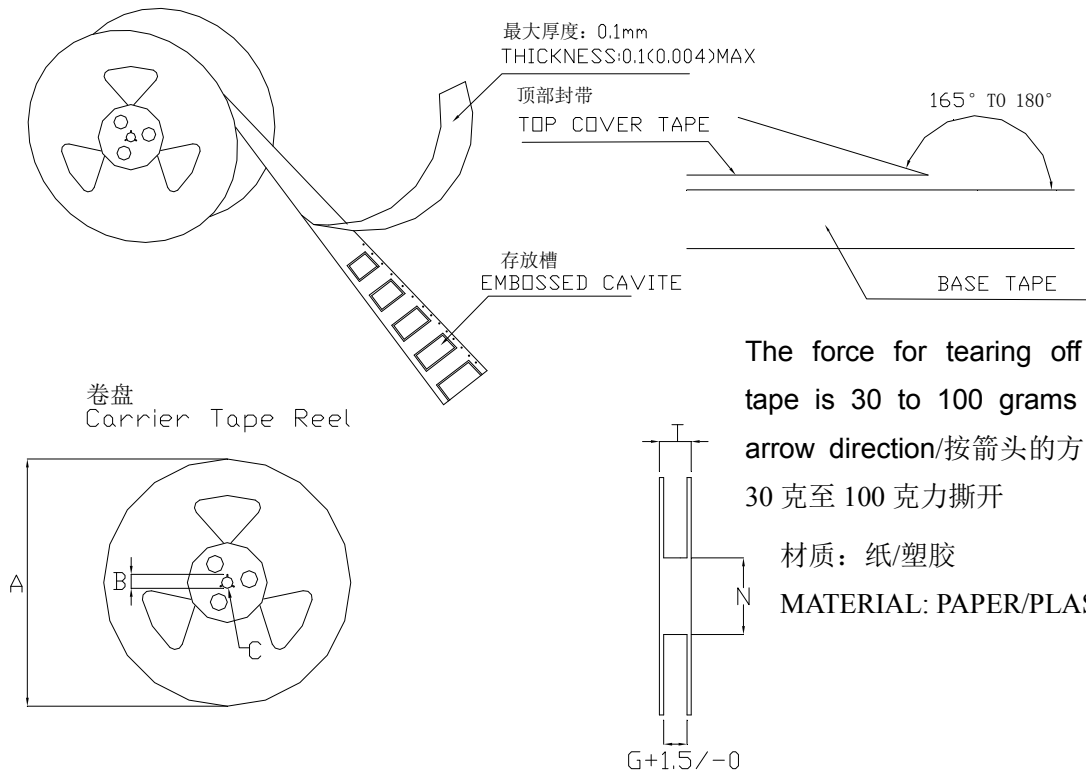
| No. | Part name | Material | Manufacturer |
|-----|--------------------|---|--------------|
| ① | Drum Core | Ni-Zn Ferrite Core | CY/FY |
| ② | Wire | Polyurethane enameled copper wire | YLSL |
| ③ | Adhesive | Epoxy Resin Magnetic Powder | DZ/JH |
| ④ | Plating Electrodes | Plating: Ag 10-20 μm Ni 1-3 μm Sn 3-7 μm | |
| ⑤ | Outer Electrodes | Top surface solder coating Sn99%、 Ag0.3%、Cu0.7% | YX |

5. Package Specification



| ITEM | W | A0 | B0 | K0 | P | F | E | D0 | D1 | P0 | P2 | T |
|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|------|-----------|-----------|------------|
| DIM | 16.00 | 8.40 | 8.40 | 4.2 | 12.00 | 7.50 | 1.75 | 1.50 | 1.50 | 4.00 | 2.00 | 0.35 |
| TOLE | ± 0.3 | ± 0.1 | ± 0.1 | ± 0.1 | ± 0.1 | ± 0.1 | ± 0.1 | +0.1 | +0.1 | ± 0.1 | ± 0.1 | ± 0.05 |

6. CARRIER REEL DIMENSIONS:

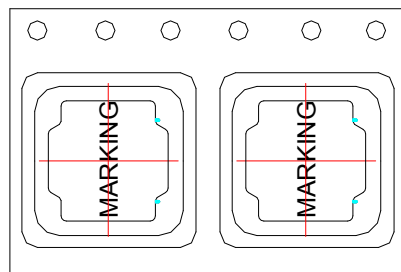


Unit: mm

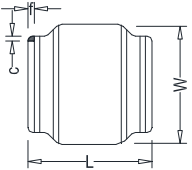
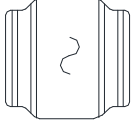
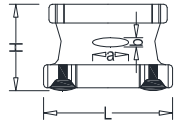
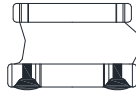
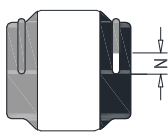
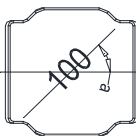
| Type | A | B | C | G | N | T |
|------|-----|--------|--------|------|-----|------|
| 16mm | 330 | 21±0.8 | 13±0.4 | 16.4 | 100 | 20.4 |

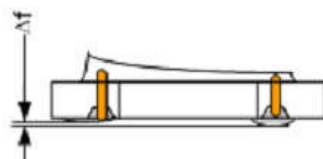
7. PACKAGE SPECIFICATION :

1KPCS/Reel 3KPCS/Inner Box 9KPCS/Outer Box



Visual Inspection Standard of Product

| No. | Defect Item | Figure | Rejection Identification | Acceptance |
|-----|----------------|---|---|------------|
| 1 | Core Defect |  | The defect length(c or f)more than L/6 or W/6 , NG | AQL=0.65 |
| 2 | Core Crack |  | Visual cracks , NG | AQL=0.65 |
| 3 | Starvation |  | (1)Resin starved length a more than L/2, NG (2)When $L > 2\text{mm}$, $b > H/2$, NG (3)When $L \leq 2\text{mm}$, b don't control | AQL=0.65 |
| 4 | Excessive glue |  | The length, width or height of product beyond specified value, NG | AQL=0.65 |
| 5 | Cold Solder |  | (1)For CR2520** Series , cold solder $N > 0.5\text{mm}$,NG (2)For other series, cold solder $N > 1\text{mm}$,NG | AQL=0.65 |
| 6 | Marking Defect |  | The marking angle $a > 45^\circ$, NG | AQL=0.65 |



Δf : Clearance between terminal and the surface of plate must be 0.2mm max when coil is placed on a flat plate.

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