

Specification Sheet for Approved

| | |
|--------------------|---------------|
| Customer Name: | |
| Customer Part No.: | |
| Ceaiya Part No: | CR5040 Series |
| Spec No: | L023-1 |

【For Customer Approval Only】

If you Approval, Please Stamp

【RoHS Compliant Parts】

| Approved By | Checked By | Prepared By |
|-------------|------------|-------------|
| 李庆辉 | 刘志坚 | 劳水花 |

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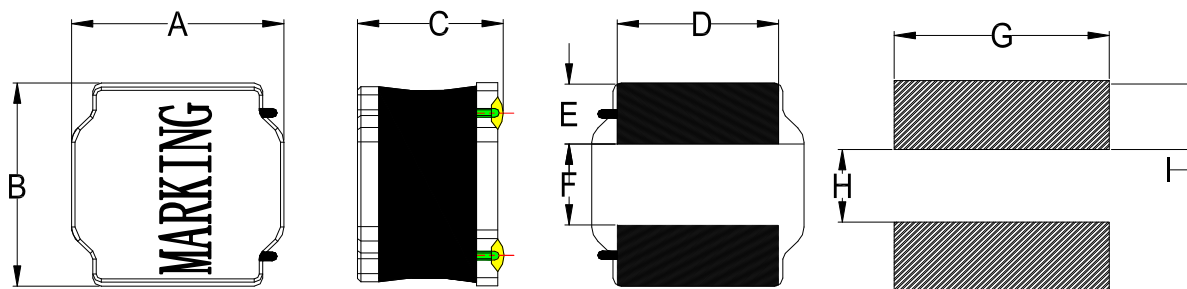
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1. Shape and Dimension (Unit:mm)



| A | B | C | D | E | F | G | H | I |
|-----------|-----------|--------|---------|----------|---------|---------|---------|---------|
| 5.0 ± 0.2 | 5.0 ± 0.2 | 4.0Max | 4.0±0.3 | 1.25±0.3 | 2.5±0.3 | 4.2 Ref | 2.3 Ref | 1.4 Ref |

注：喷码尺寸：长 3.4±0.4mm,宽 2.2±0.4mm

2. Electronic Characteristics List

| Part Number | Inductance (uH) | Tolerance (±%) | DCR(mΩ) ±30% | Isat (A) | Irise (A) | Test Condition | Marking |
|---------------|-----------------|----------------|--------------|----------|-----------|----------------|---------|
| CR5040-R24N | 0.24 | 30 | 7.5 | 12.0 | 6.50 | 1MHz /0.25V | R24 |
| CR5040-R47N | 0.47 | 30 | 10 | 8.80 | 6.00 | 1MHz /0.25V | R47 |
| CR5040-1R0N/M | 1.0 | 30/20 | 13 | 7.35 | 4.90 | 100KHz /0.25V | 1R0 |
| CR5040-1R5N | 1.5 | 30 | 15 | 6.30 | 4.30 | 100KHz /0.25V | 1R5 |
| CR5040-1R8N | 1.8 | 30 | 18 | 6.10 | 3.90 | 100KHz /0.25V | 1R8 |
| CR5040-2R2N | 2.2 | 30 | 19 | 4.90 | 3.80 | 100KHz /0.25V | 2R2 |
| CR5040-2R7N | 2.7 | 30 | 22 | 4.30 | 3.60 | 100KHz /0.25V | 2R7 |
| CR5040-3R3N | 3.3 | 30 | 24 | 3.95 | 3.40 | 100KHz /0.25V | 3R3 |
| CR5040-3R9N | 3.9 | 30 | 27 | 3.55 | 3.20 | 100KHz /0.25V | 3R9 |
| CR5040-4R7M | 4.7 | 20 | 30 | 3.50 | 3.00 | 100KHz /0.25V | 4R7 |
| CR5040-5R6M | 5.6 | 20 | 33 | 3.20 | 2.80 | 100KHz /0.25V | 5R6 |
| CR5040-6R8M | 6.8 | 20 | 43 | 2.90 | 2.50 | 100KHz /0.25V | 6R8 |
| CR5040-8R2M | 8.2 | 20 | 55 | 3.00 | 2.30 | 100KHz /0.25V | 8R2 |
| CR5040-100M | 10 | 20 | 64 | 2.35 | 2.10 | 100KHz /0.25V | 100 |
| CR5040-150M | 15 | 20 | 86 | 2.00 | 2.00 | 100KHz /0.25V | 150 |
| CR5040-220M | 22 | 20 | 129 | 1.60 | 1.50 | 100KHz /0.25V | 220 |
| CR5040-270M | 27 | 20 | 165 | 1.50 | 1.30 | 100KHz /0.25V | 270 |
| CR5040-330M | 33 | 20 | 188 | 1.30 | 1.20 | 100KHz /0.25V | 330 |
| CR5040-390M | 39 | 20 | 225 | 1.20 | 1.10 | 100KHz /0.25V | 390 |
| CR5040-470M | 47 | 20 | 270 | 1.10 | 1.00 | 100KHz /0.25V | 470 |
| CR5040-560M | 56 | 20 | 375 | 1.00 | 0.90 | 100KHz /0.25V | 560 |
| CR5040-680M | 68 | 20 | 400 | 0.90 | 0.80 | 100KHz /0.25V | 680 |
| CR5040-101M | 100 | 20 | 560 | 0.75 | 0.70 | 100KHz /0.25V | 101 |
| CR5040-221M | 220 | 20 | 1200 | 0.45 | 0.40 | 100KHz/0.25V | 221 |
| CR5040-331M | 330 | 20 | 2100 | 0.45 | 0.40 | 100KHz/0.25V | 331 |
| CR5040-471M | 470 | 20 | 2800 | 0.40 | 0.30 | 100KHz /0.25V | 471 |
| CR5040-102M | 1000 | 20 | 6600 | 0.25 | 0.20 | 100KHz /0.25V | 102 |

※ All test data is referenced to 25°C ambient;

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:HP4284+42841A

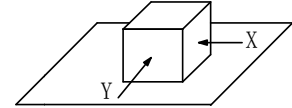
3. General Characteristics

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)

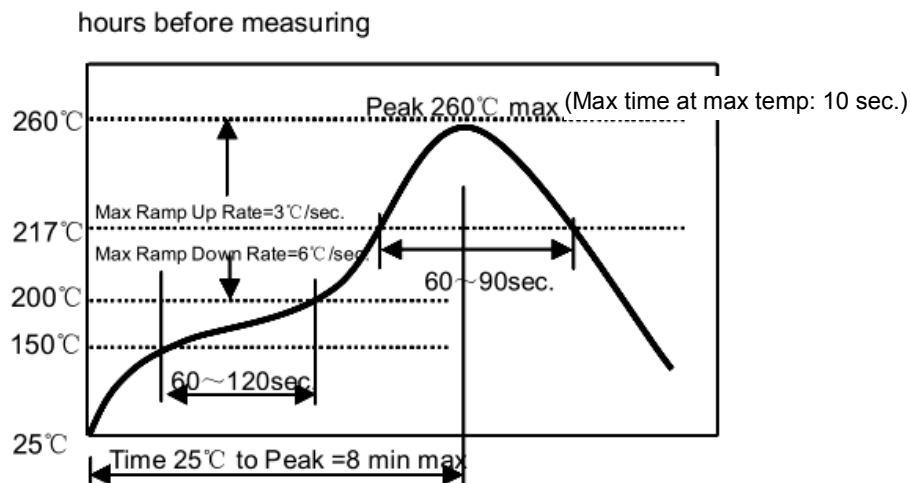
3-3. External appearance : No external defects can be found in the visual inspection.

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 60 ± 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:

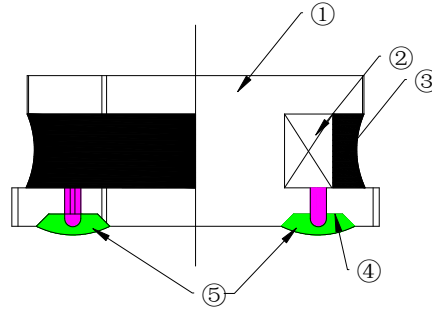


3-7. Humidity test : Inductance deviation is within $\pm 5.0\%$ after 96 ± 4 hours test under the condition of relative humidity of $90 \sim 95\%$ and temperature of $60 \pm 2^{\circ}\text{C}$, and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.

LEAD-FREE

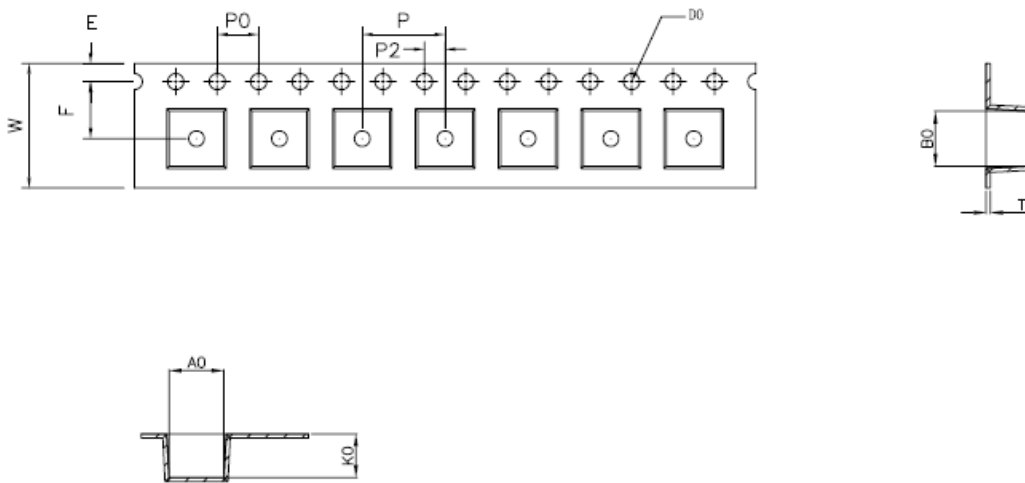


4. Construction and materials



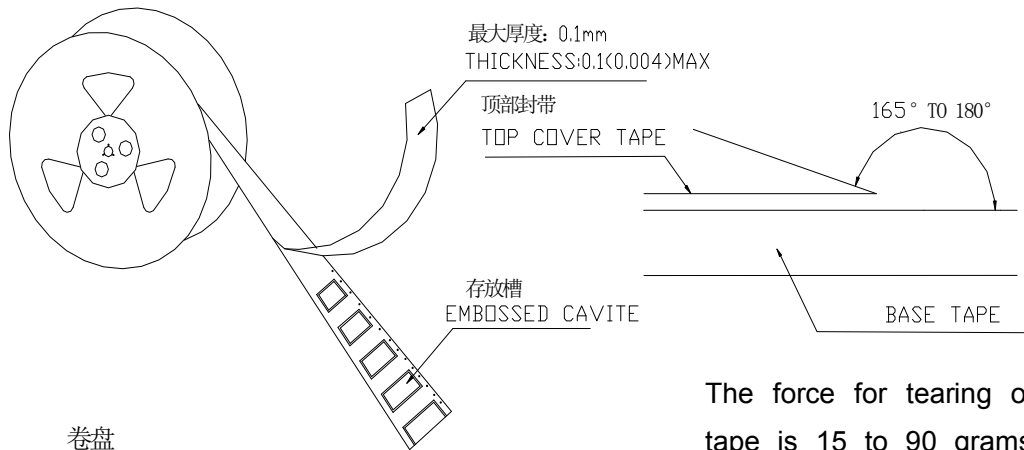
| No. | Part name | Material | Ceaiya P/N |
|-----|--------------------|---|------------|
| ① | Drum Core | Ni-Zn Ferrite Core | MT/CY/TW |
| ② | Wire | Polyurethane enameled copper wire | YLSL |
| ③ | Adhesive | Epoxy Resin Magnetic Powder | |
| ④ | Plating Electrodes | Plating: Ag 3-7 μ m Ni 1-3 μ m Sn 3-7 μ m | |
| ⑤ | Outer Electrodes | Top surface solder coating Sn99%、 Ag0.3%、Cu0.7% | YX |

5.Package Specification

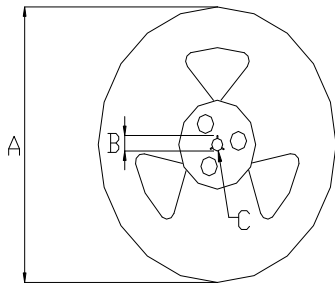


| ITEM | W | A0 | B0 | K0 | P | F | E | D0 | D1 | P0 | P2 | T |
|------|-----------|-----------|-----------|------------|-----------|------------|-----------|------|------|-----------|-----------|------------|
| DIM | 12.00 | 5.3 | 5.3 | 4.3 | 8.00 | 5.50 | 1.75 | 1.50 | 1.50 | 4.00 | 2.00 | 0.4 |
| TOLE | ± 0.3 | ± 0.1 | ± 0.1 | ± 0.15 | ± 0.1 | ± 0.15 | ± 0.1 | +0.1 | +0.1 | ± 0.1 | ± 0.1 | ± 0.05 |

6. CARRIER REEL DIMENSIONS:



卷盘
Carrier Tape Reel



The force for tearing off cover tape is 15 to 90 grams in the arrow direction/按箭头的方向施加 15 克至 90 克力撕开

材质: 塑胶

MATERIAL: PLASTIC

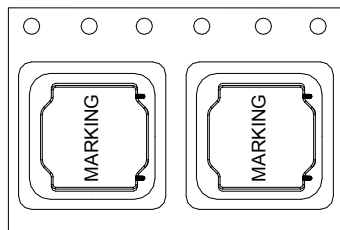


Unit: mm

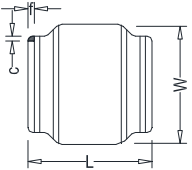
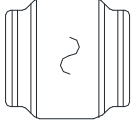
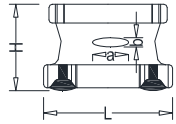
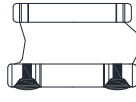
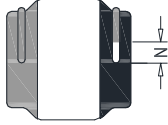
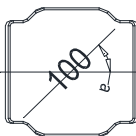
| Type | A | B | C | G | N | T |
|------|-----|--------|--------|------|-----|------|
| 12mm | 330 | 21±0.8 | 13±0.4 | 12.4 | 100 | 16.4 |

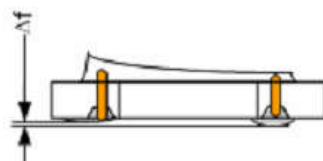
7. PACKAGE SPECIFICATION :

1.5KPCS/Reel 4.5KPCS/Inner Box 13.5KPCS/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.