

## Specification Sheet for Approved

|                    |               |
|--------------------|---------------|
| Customer Name:     |               |
| Customer Part No.: |               |
| Ceaiya Part No:    | CR3010 Series |
| Spec No:           | L310          |

### 【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         |

## Shenzhen Ceaiya Electronics Co., Ltd.

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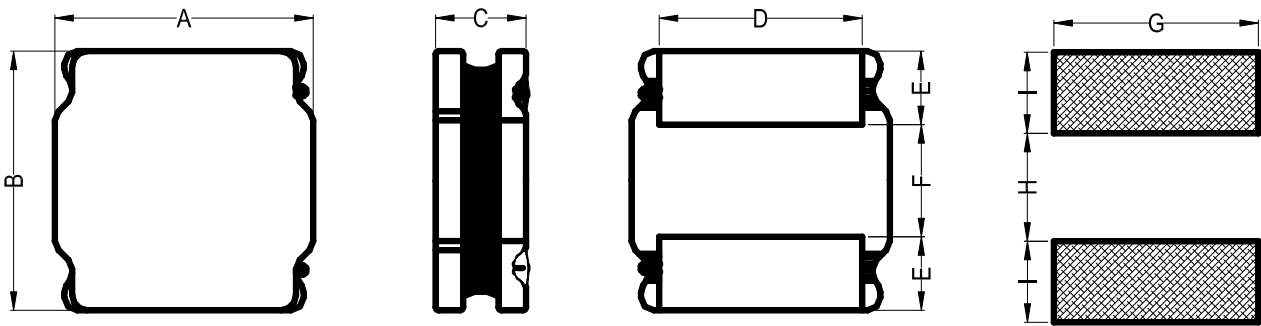
[Http://www.ceaiya.com](http://www.ceaiya.com)

Tel: 0769-89135516

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## 1. Shape and Dimension (Unit:mm)



| A         | B         | C      | D         | E         | F         | G       | H       | I       |
|-----------|-----------|--------|-----------|-----------|-----------|---------|---------|---------|
| 3.0 ± 0.2 | 3.0 ± 0.2 | 1.0Max | 2.5 ± 0.3 | 0.8 ± 0.2 | 1.4 ± 0.3 | 2.7 Ref | 1.5 Ref | 0.8 Ref |

## 2. Electronic Characteristics List

| Part Number | Inductance<br>( $\mu$ H) | Tolerance<br>( $\pm$ %) | DCR(m $\Omega$ )<br>$\pm$ 30% | Isat<br>(A) | Irise<br>(A) | Test<br>Condition |
|-------------|--------------------------|-------------------------|-------------------------------|-------------|--------------|-------------------|
| CR3010-1R0N | 1.0                      | 30                      | 65                            | 1.40        | 1.45         | 100KHz /0.25V     |
| CR3010-1R5N | 1.5                      | 30                      | 80                            | 1.27        | 1.30         | 100KHz /0.25V     |
| CR3010-2R2M | 2.2                      | 20                      | 110                           | 1.15        | 1.09         | 100KHz /0.25V     |
| CR3010-3R3M | 3.3                      | 20                      | 145                           | 0.97        | 0.96         | 100KHz /0.25V     |
| CR3010-4R7M | 4.7                      | 20                      | 225                           | 0.75        | 0.77         | 100KHz /0.25V     |
| CR3010-6R8M | 6.8                      | 20                      | 305                           | 0.65        | 0.66         | 100KHz /0.25V     |
| CR3010-100M | 10                       | 20                      | 400                           | 0.60        | 0.58         | 100KHz /0.25V     |
| CR3010-150M | 15                       | 20                      | 610                           | 0.42        | 0.47         | 100KHz /0.25V     |
| CR3010-220M | 22                       | 20                      | 930                           | 0.35        | 0.38         | 100KHz /0.25V     |

### Isat (A):

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

### Irise(A)

DC Current that will cause an approximate  $\Delta T$  of 40 °C

### Measuring Instrument :

L:HI0KI3532-50

DCR:HI0KI 3540

Isat / Irise:HP4284+42841A

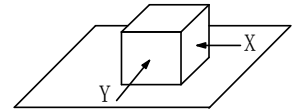
### 3. General Characteristics

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)

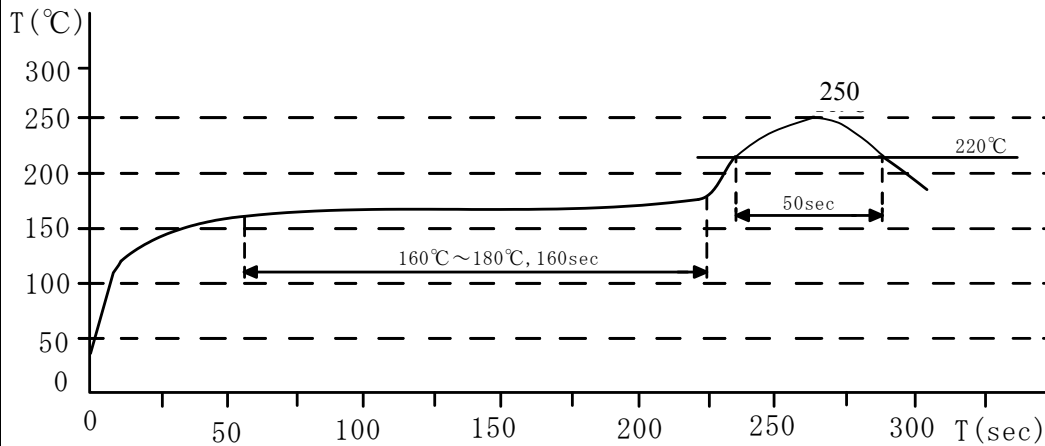
3-3. External appearance : No external defects can be found in the visual inspection.

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  $10 \pm 2$  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:

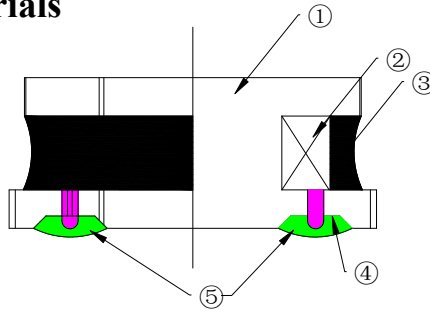


3-7. Humidity test : Inductance deviation is within  $\pm 5.0\%$  after  $96 \pm 4$  hours test under the condition of relative humidity of  $90 \sim 95\%$  and temperature of  $60 \pm 2^{\circ}\text{C}$ , and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.

**LEAD-FREE**



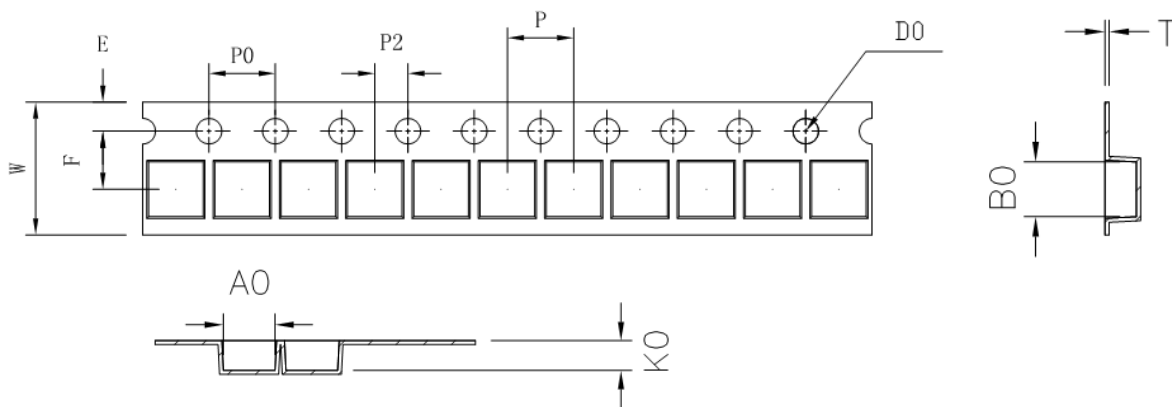
#### 4. Construction and materials



| No. | Part name          | Material  | Ceaiya P/N |
|-----|--------------------|---|------------|
| ①   | Drum Core          | Ni-Zn Ferrite Core  | TZD/CY/MT  |
| ②   | Wire               | Polyurethane enameled copper wire   | YLSL       |
| ③   | Adhesive           | Epoxy Resin Magnetic Powder   |            |
| ④   | Plating Electrodes | Plating: Ag 10-20 $\mu\text{m}$<br>Ni 1-3 $\mu\text{m}$<br>Sn 3-7 $\mu\text{m}$ |            |
| ⑤   | Outer Electrodes   | Top surface solder coating Sn99%、<br>Ag0.3%、Cu0.7%                              | YX         |

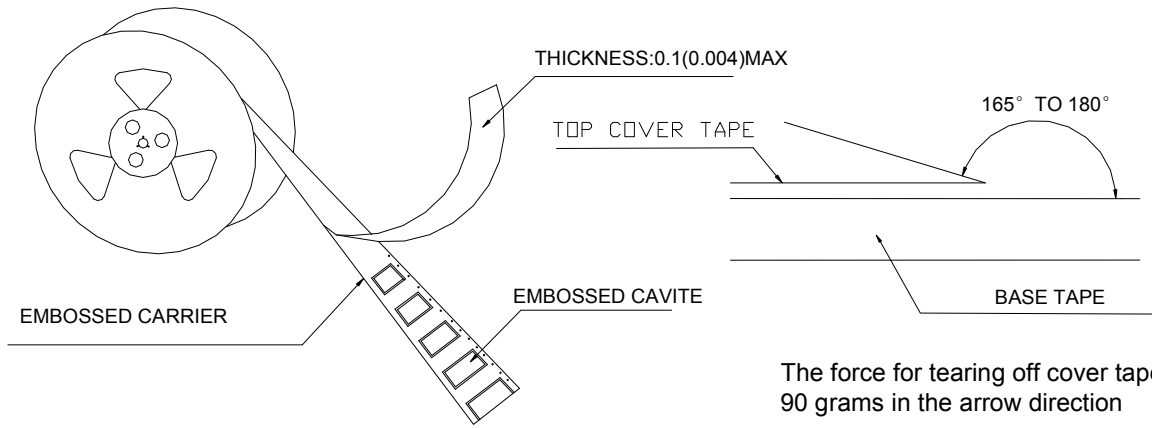
#### 5. Packaging and Marking:

5-1. Carrier Tape Dimensions:

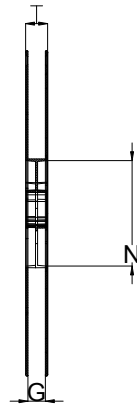
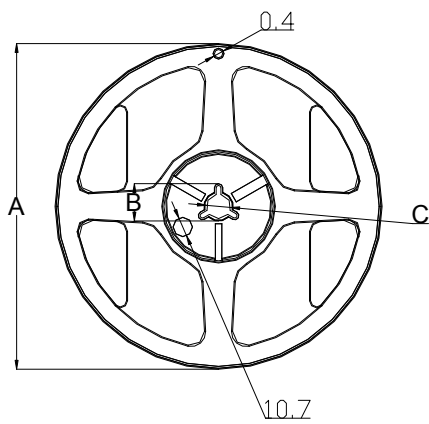


| ITEM | W         | A0         | B0         | K0         | P         | F         | E         | D0   | P0        | P2        | T          |
|------|-----------|------------|------------|------------|-----------|-----------|-----------|------|-----------|-----------|------------|
| DIM  | 8.00      | 3.2        | 3.2        | 1.4        | 4.00      | 3.50      | 1.75      | 1.50 | 4.00      | 2.00      | 0.25       |
| TOLE | $\pm 0.1$ | $\pm 0.05$ | $\pm 0.05$ | $\pm 0.05$ | $\pm 0.1$ | $\pm 0.1$ | $\pm 0.1$ | +0.1 | $\pm 0.1$ | $\pm 0.1$ | $\pm 0.05$ |

5-2. Reel Dimensions:



Carrier Tape Reel



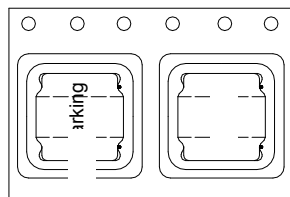
MATERIAL:PAPER/PLASTIC

| Type | A   | B        | C      | G | N  | T    |
|------|-----|----------|--------|---|----|------|
| 8mm  | 178 | 20.7±0.8 | 13±0.4 | 9 | 60 | 10.8 |

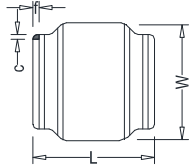
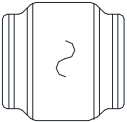
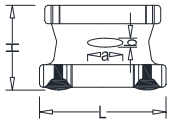
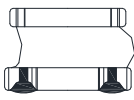
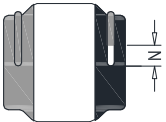
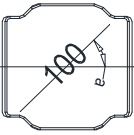
6. PACKAGE SPECIFICATION:

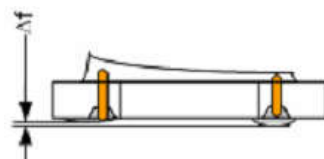
2KPCS/ Reel 20KPCS/ Inner Box 80KPCS/ Outer Box

编带方向，如右图所示



## 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<br>(2)When L>2mm,b>H/2, NG<br>(3)When L≤2mm, 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>0.5mm,NG<br>(2)For other series, cold solder N>1mm,NG             | AQL=0.65   |
| 6   | Marking Defect |  | The marking angle a>45° , NG   | AQL=0.65   |



Δf: Clearance between terminal and the surface or plate must be 0.1mm max when coil is placed on a flat plate.

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