

# SPECIFICATION FOR APPROVAL

## 承 認 書

**CUSTOMER**

客戶名稱：

**NUMBER**

編號: L166

**PART NO.**

品 名：SMD POWER INDUCTORS

**QUANTITY**

數量：30PCS

**DESCRIPTION**

型 號：CR4030 - R68N

**DATE**

日期： 2024-02-28

**CUSTOMER PART NO.**

客戶料號：

**NOTE**

注解：

**APPROVAL SIGNATURE**

客戶承認簽章

Approved By 核 准	Checked By 审 查	Drawn By 制 作
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## SPECIFICATIONS

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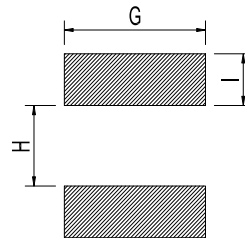
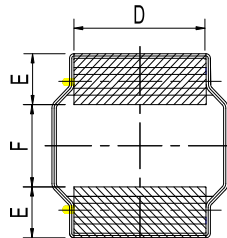
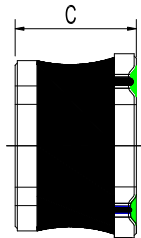
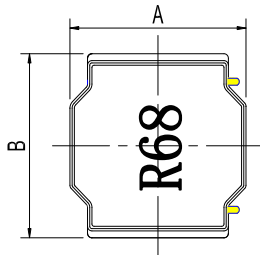
**CR4030 - R68N**

### 1. Scope

This specification apply for CR4030 of power inductors

### 2. Appearance

#### 2-1.Dimensions(mm)



#### 2-2.Recommended Land

A	4.0 ±0.2mm
B	4.0 ±0.2mm
C	3.0mm(MAX)
D	3.3±0.3mm
E	1.0±0.2mm
F	2.0±0.3mm
G	3.7 Ref
H	1.9 Ref
I	1.1 Ref

\* Dimension without tolerance is approx.

### 3. Coils Specification

#### 3-1. Connection (Bottom View)



“S” is winding start

#### 3-2. Turns and Wire

Terminal	S-F
Turns	4.75Ts
Wire	0.28mm G1 P180

\* Winding Turns are approx.

**LEAD-FREE**

**RoHS**

Compliance

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### 3-3. Electronical characteristics

Item	Specifications	Measuring Conditions	Measuring Instrument
Inductance	$0.68\mu\text{H} \pm 30\%$	100KHz/0.25V	CH1062/HIOKI3532-50
D.C.R	$13\text{m}\Omega \pm 30\%$	25°C	HIOKI 3540
Isat※1	7.3A ( $\Delta L/L \leq 30\%$ )	100KHz/0.25V	Microtest 6377&6220
Irms※2	3.9A ( $\Delta T=40^\circ\text{C}$ )	25°C	Microtest 6377&6220

※ 1.This indicates the value of current when the inductance is 30% lower than its initial value at D.C superposition

※ 2. D.C current when temperature rise  $\Delta T=40^\circ\text{C}$

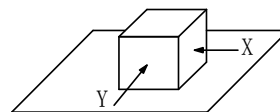
## 4. General Characteristics

4-1. Storage Temperature range :  $-40^\circ\text{C} \sim +125^\circ\text{C}$

4-2.Operating temperature range:  $-40^\circ\text{C} \sim +125^\circ\text{C}$  (Including coil's self temperature rise)

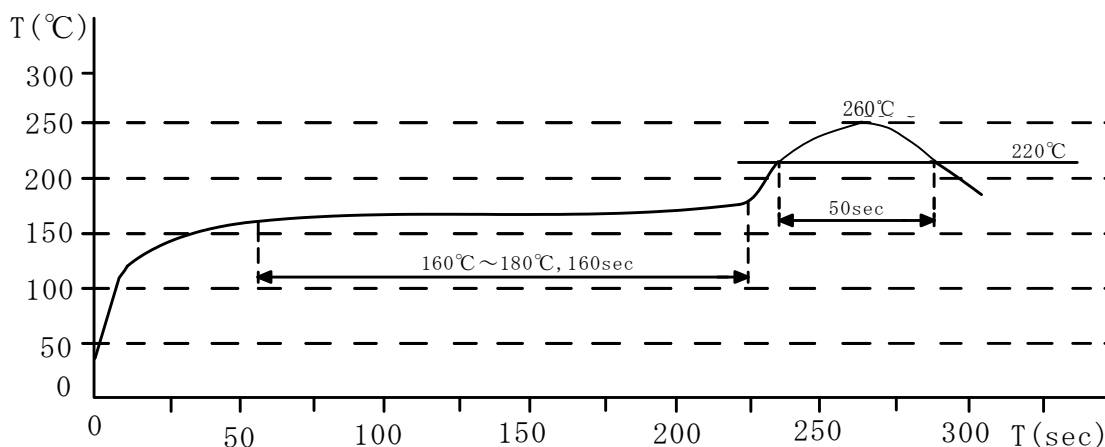
4-3.External appearance : No external defects can be found in the visual inspection.

4-4.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)



4-5.Vibration test : Inductance deviation is within  $\pm 10\%$  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.

4-6.Recommended reflow condition :



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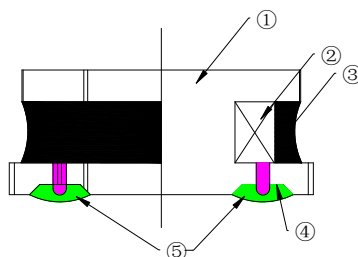
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4-7.Humidity test : Inductance deviation is within  $\pm 5.0\%$  after  $96 \pm 4$  hours test under the condition of relative humidity of  $90 \sim 95\%$  and temperature of  $60 \pm 2^\circ\text{C}$ , and 1 hour storage under room ambient conditions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

## 5. Construction and materials



No.	Part name	Material	Ceaiya P/N
①	Drum Core	Ni-Zn Ferrite Core	MT/CY
②	Wire	Polyurethane enameled copper wire	3210200
③	Adhesive	Epoxy Resin	7001007
④	Plating Electrodes	Plating: Ag 3-7 $\mu\text{m}$ Ni 1-3 $\mu\text{m}$ Sn 3-7 $\mu\text{m}$	
⑤	Outer Electrodes	Top surface solder coating Sn99%、 Ag0.3%、Cu0.7%	

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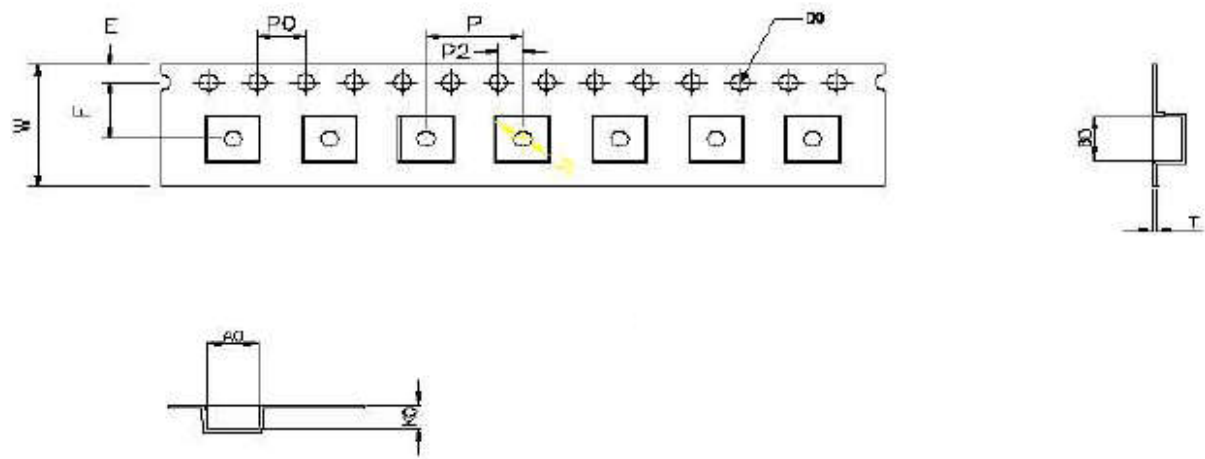
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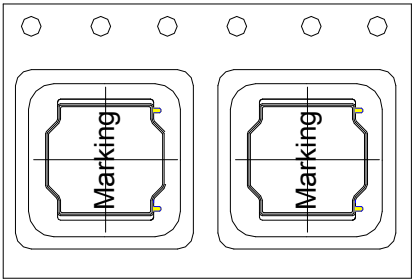
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6. TAPE DIMENSIONS:



ITEM	W	A0	B0	K0	P	F	E	D0	D1	P0	P2	T
DIM	12.00	4.5	4.5	3.2	8.00	5.50	1.75	1.50	1.50	4.00	2.00	0.30
TOLE	+0.30 -0.10	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	+0.1	+0.1	±0.1	±0.1	±0.05

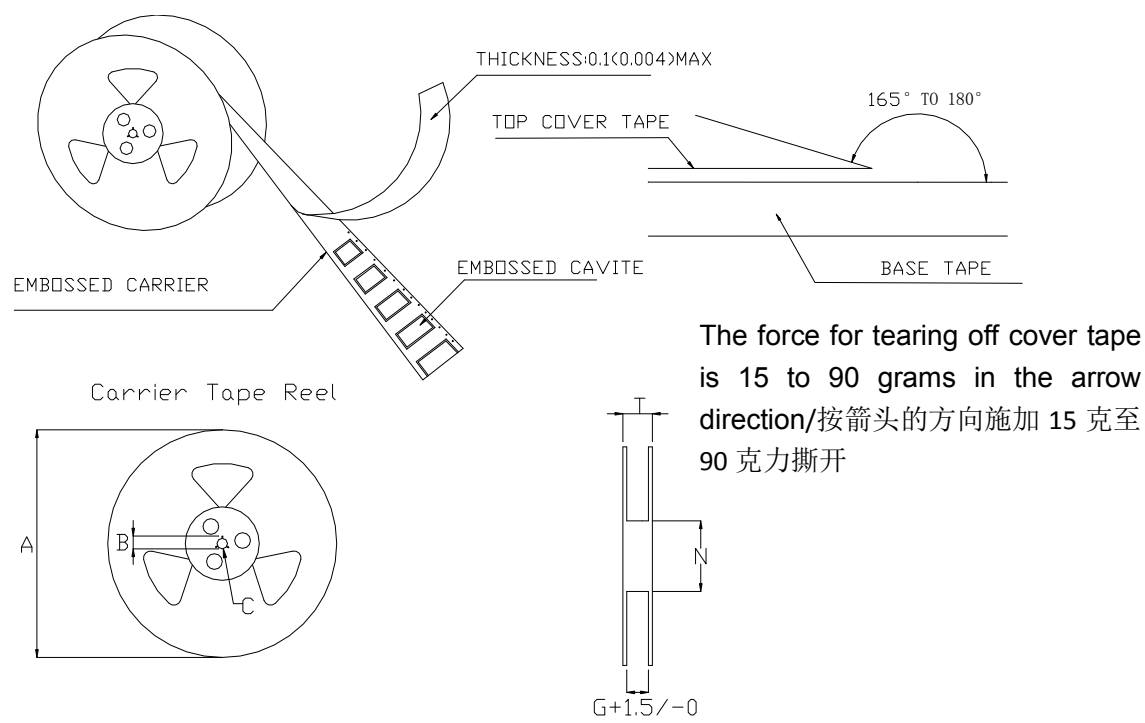


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7. TAPE REEL DIMENSIONS:



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

PACKAGING QUANTITY : :  
2KPCS/ Reel    6KPCS/ Inner Box    18KPCS/ Outer Box

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