

# SPECIFICATION FOR APPROVAL

## 承 認 書

**CUSTOMER**

客戶名稱：

**NUMBER**

編號： Y-16063002

**DESCRIPTION**

品 名： SMD POWER INDUCTORS

**QUANTITY**

數量： 100PCS

**PART NO.**

型 號： CR6045 - 471M

**DATE**

日期： 2023-07-15

**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
李庆辉	苏高峰	劳水花

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CUSTOMER:	SPECIFICATIONS (Revisions)	TYPE <b>CR6045-471M</b>
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**History of change**

Rev.	Effective Date	Changed Contents	Change reasons	Approved By
A0	2022-10-31	New release	/	

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# SPECIFICATIONS

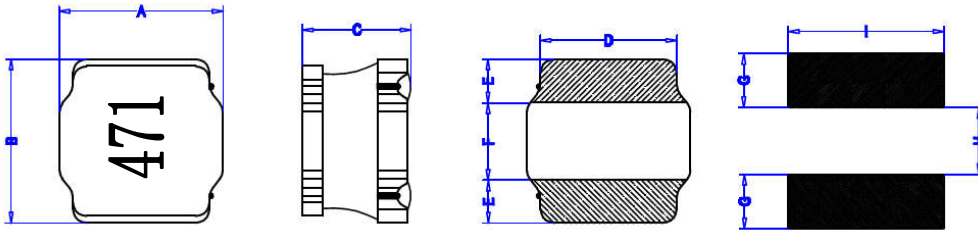
TYPE:  
**CR6045 - 471M**

## 1. Scope

This specification apply for CR6045 of power inductors

## 2. Appearance

### 2-1. Dimensions(mm)

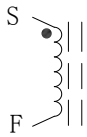


A	6.0 ± 0.3 mm
B	6.0 ± 0.3 mm
C	4.0 ± 0.5 mm
D	4.9±0.3 mm
E	1.65±0.3 mm
F	2.7±0.3 mm
G	1.7 mm
H	2.8 mm
I	5.7 mm

\* 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	108.5 Ts
Wire	Φ0.125mm G1 P180

\* Winding Turns are approx.



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### 3-3. Electronical characteristics

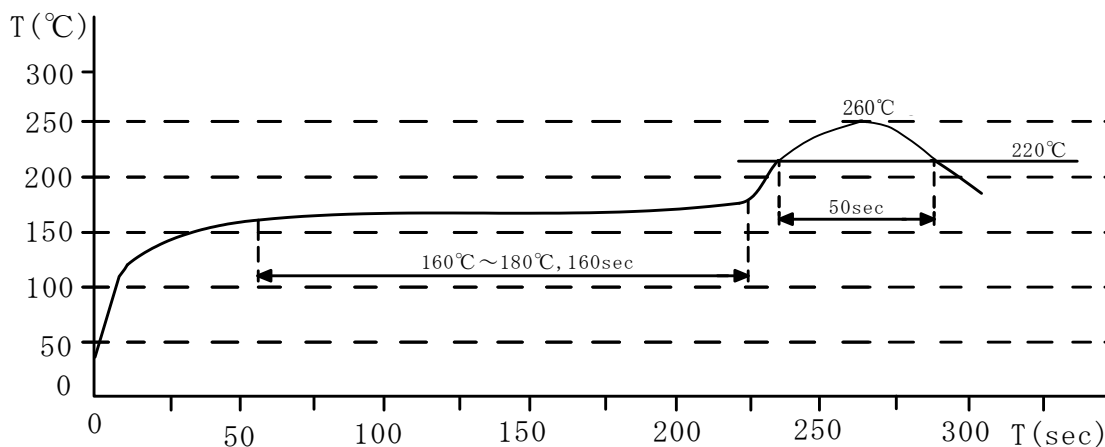
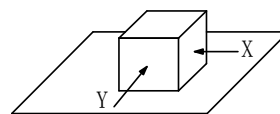
Part No.	Inductance (uH)	DCR(Ω)		Isat1 (A)		Irms2 (A)	
		Max.	Typ.	Max.	Typ.	Max.	Typ.
CR6045-471M	470±20%	2.34	1.90	0.50	0.56	0.42	0.48

- ※ L test condition: 100KHz/0.25V at 20°C ambient;
- ※ Rated current: Isat or Irms, whichever is smaller;
- ※ Isat1: direct current at which the inductance drops approximate 30% from its value without current.

Irms2: direct current when the temperature of the product rise ( $\Delta T=40^{\circ}\text{C}$ ) from 20°C ambient.

## 4. General Characteristics

- 4-1. Storage Temperature range :  $-40^{\circ}\text{C} \sim +100^{\circ}\text{C}$
- 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  $\pm 10.0\%$  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.
- 4-6. Recommended reflow condition :



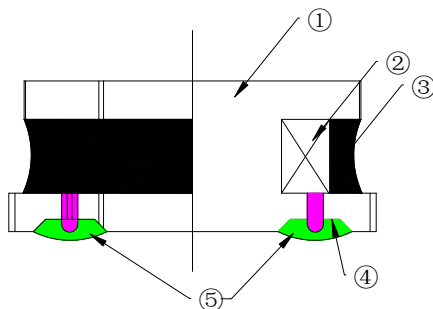
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4-7.Humidity test : Inductance deviation is within  $\pm 5.0\%$  after  $96\pm 4$  hours test under the condition of relative humidity of  $90\sim 95\%$  and temperature of  $60\pm 2^{\circ}\text{C}$ , and 1 hour storage under room ambient conditions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

## 5. Construction and materials



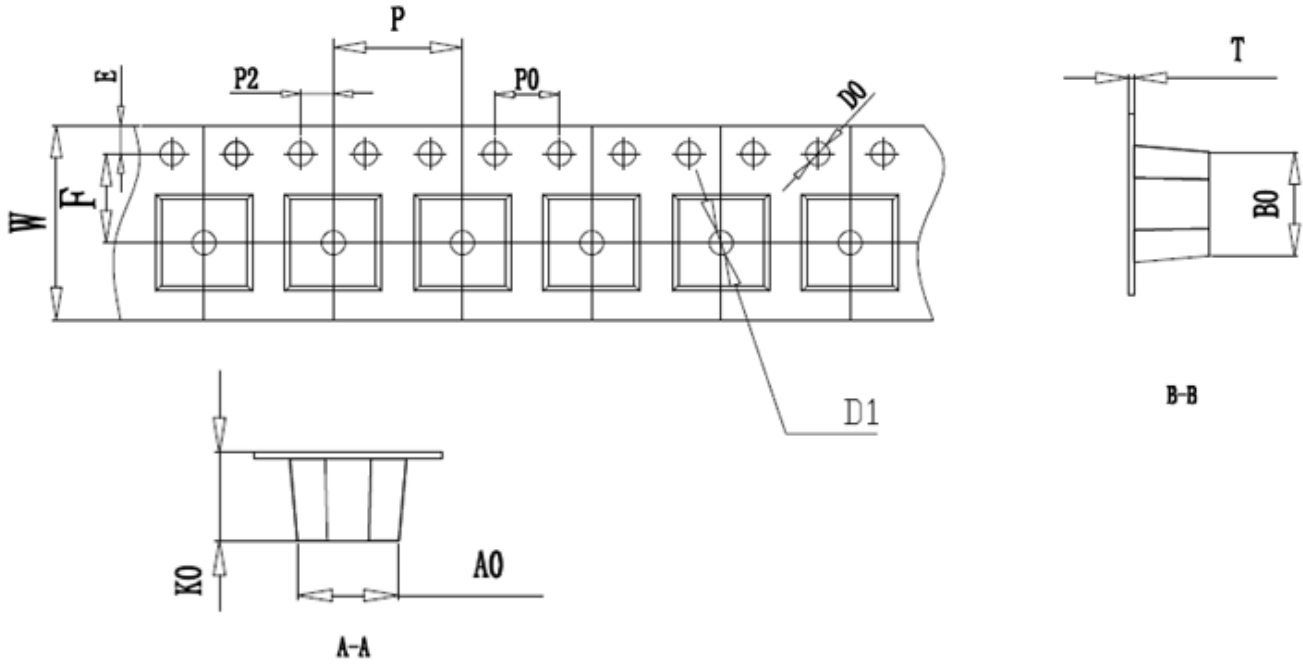
No.	Part name	Material	Ceaiya P/N
①	Drum Core	Ni-Zn Ferrite Core	CY/MT
②	Wire	Polyurethane enameled copper wire	YLSL
③	Adhesive	Epoxy Resin Magnetic Powder	CH/JH
④	Plating Electrodes	Plating: Ag 3-7 $\mu\text{m}$ Ni 1-3 $\mu\text{m}$ Sn 3-7 $\mu\text{m}$	
⑤	Outer Electrodes	Top surface solder coating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

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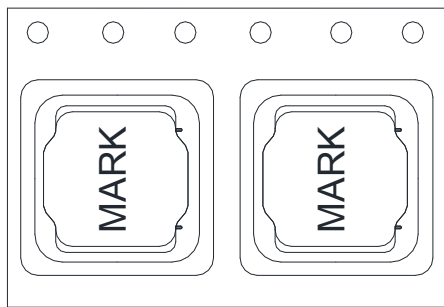
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**6. TAPE DIMENSIONS:**



ITEM	W	A0	B0	K0	P1	F	E	D0/D1	P0	P2	T
DIM	12.00	6.3	6.3	4.7	8.00	5.50	1.75	1.50	4.00	2.00	0.40
TOLE	±0.3	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	+0.1	±0.1	±0.1	±0.05

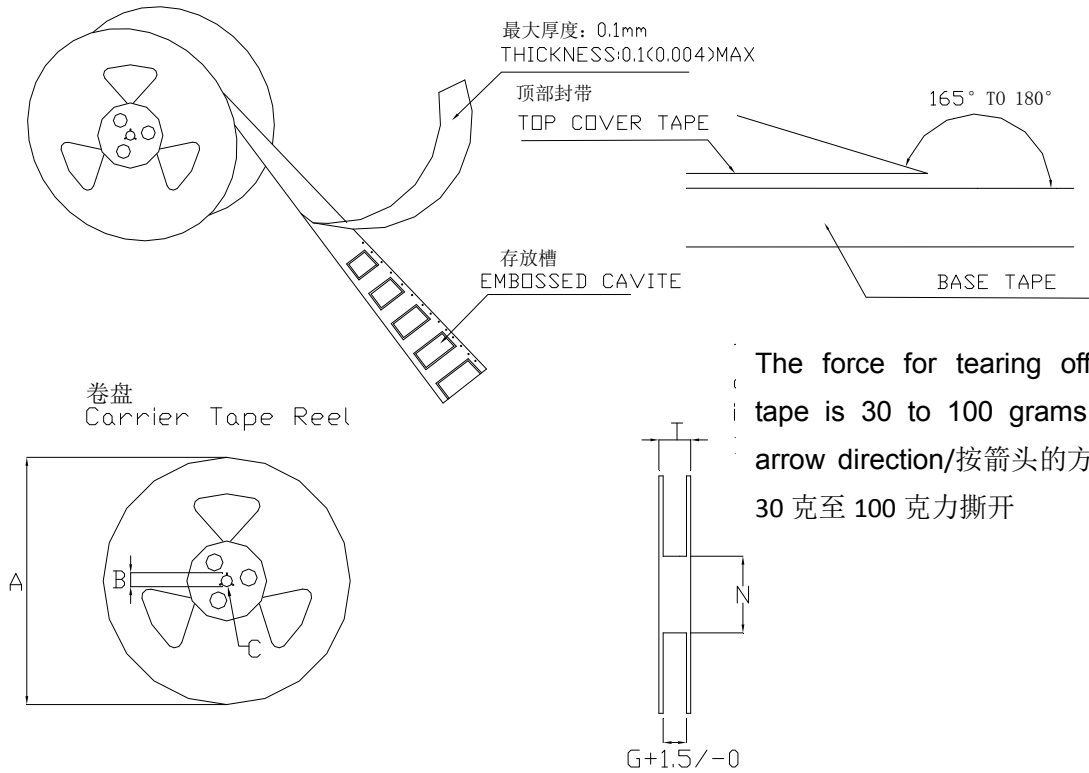


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**7. TAPE REEL DIMENSIONS:**



单位：毫米

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

PACKAGING QUANTITY :  
1500 PCS /REEL

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