

# SPECIFICATION FOR APPROVAL

## 承 認 書

**CUSTOMER**

客戶名稱：

**NUMBER**

编号: Y-18070401

**DESCRIPTION**

型 號： CR5040 - 222M

**QUANTITY**

數量： 50PCS

**PART NO.**

品 名： SMD POWER INDUCTORS

**DATE**

日期： 2022-01-07

**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	刘 志 坚	劳 水 花

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## SPECIFICATIONS

TYPE:

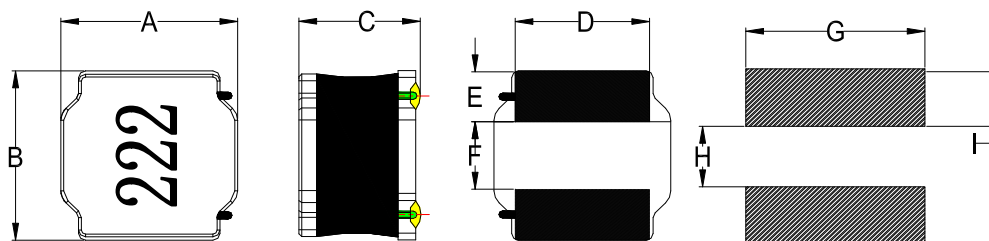
**CR5040 - 222M**

### 1. Scope

This specification apply for CR5040 of power inductors

### 2. Appearance

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

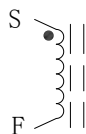


A	$5.0 \pm 0.2\text{mm}$
B	$5.0 \pm 0.2\text{mm}$
C	4.0mm(Max)
D	$4.0 \pm 0.3\text{mm}$
E	$1.25 \pm 0.3\text{mm}$
F	$2.5 \pm 0.3\text{mm}$
G	4.2mm
H	2.3mm
I	1.4mm

\* 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	263.5 Ts
Wire	0.07mm G1 P180

\* Winding Turns are approx.

**LEAD-FREE**

**RoHS**

Compliance

Note :

1. 线包涂胶。
2. 印黑色字体。

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TYPE:

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### 3-3. Electronical characteristics

Item	Specifications	Measuring Conditions	Measuring Instrument
Inductance	2.2mH $\pm$ 20% Within	100KHz/0.25V	CH1062/HIOKI3532-50
D.C.R	13 $\Omega$ $\pm$ 30%	25°C	HIOKI 3540
Isat ※1	0.17A	100KHz/0.25V	Microtest 6377&6220
Irise ※2	0.10A	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  $\Delta T=40^{\circ}\text{C}$  ( $T_a=20^{\circ}\text{C}$ )

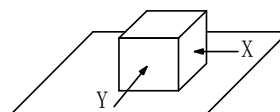
## 4. General Characteristics

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)

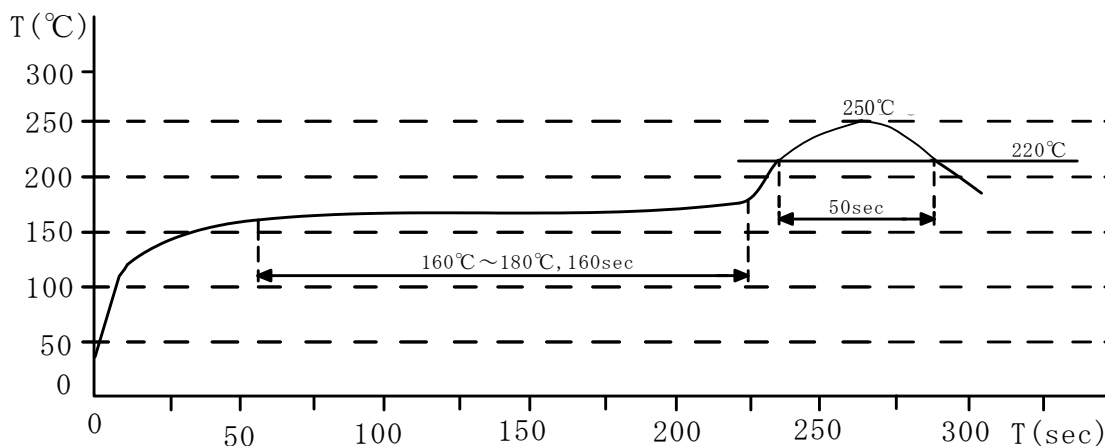
4-3.External appearance : No external defects can be found in the visual inspection.

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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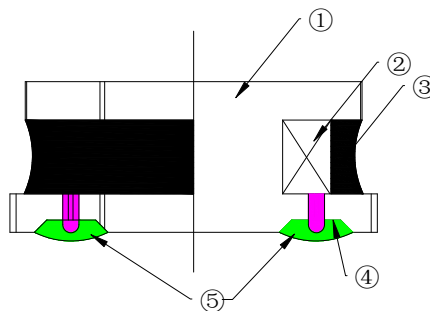
## SPECIFICATIONS

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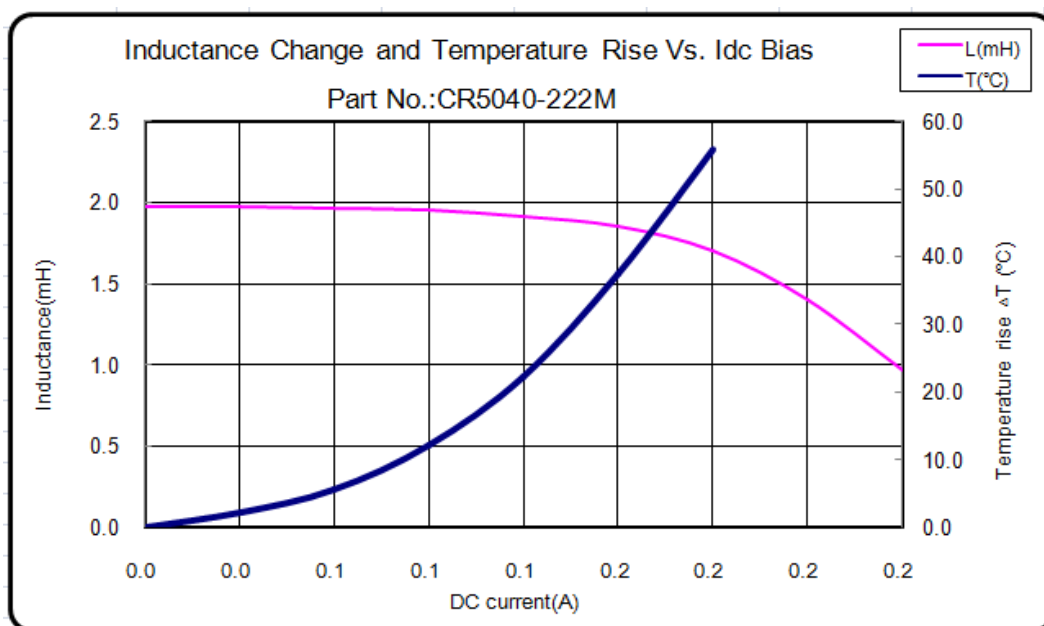
4-7.Humidity test : Inductance deviation is within  $\pm 5.0\%$  after  $96 \pm 4$  hours test under the condition of relative humidity of  $90 \sim 95\%$  and temperature of  $60 \pm 2^\circ\text{C}$ , and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.

## 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	YLSL
③	Adhesive	Epoxy Resin Magnetic Powder	DZ/JH
④	Plating Electrodes	Plating: Ag 10-20 $\mu\text{m}$ 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

## 6. Inductance Change and Temperature Rise Vs. Idc Bias



Note :

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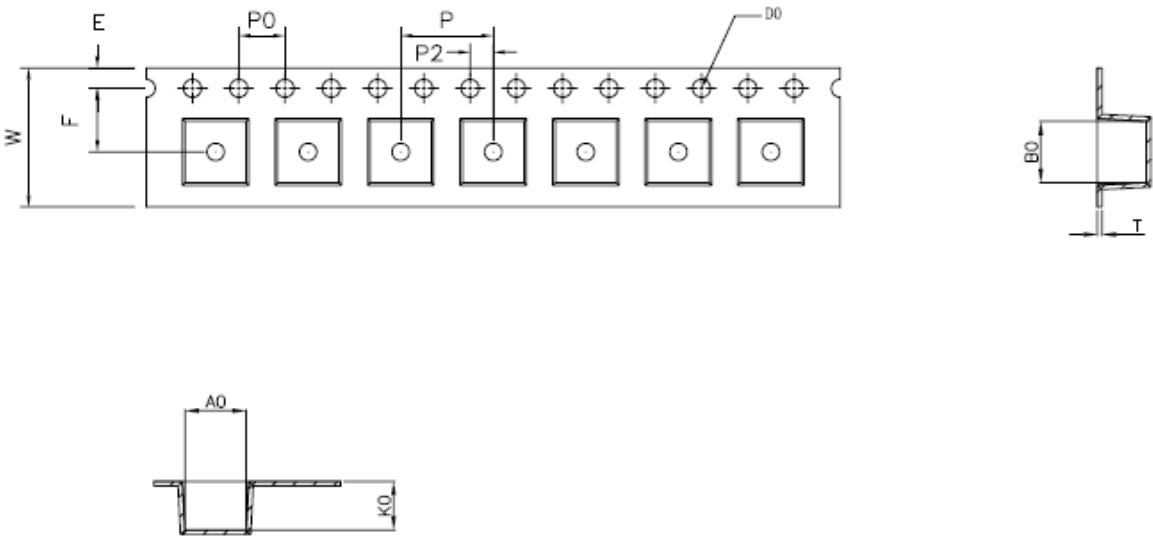
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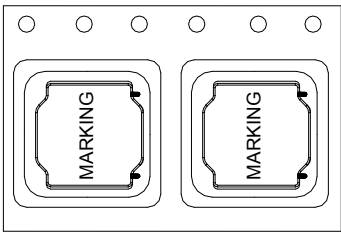
TYPE:

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7.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



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TYPE:

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Technical drawing of a carrier tape showing top, side, and end views with dimensions and labels.

**Top View Labels:**

- 最大厚度: 0.1mm  
THICKNESS: 0.1(0.004)MAX
- 顶部封带  
TOP COVER TAPE
- 165° TO 180°
- 存放槽  
EMBOSSED CAVITE
- BASE TAPE

**Bottom Left View (Carrier Tape Reel):**

- 卷盘  
Carrier Tape Reel
- A
- B
- C

**Bottom Right View (End View):**

- G+1.5/-0
- N

**Text Description:**

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

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

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

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