

SPECIFICATION FOR APPROVAL

承 認 書

CUSTOMER

客户名稱：

NUMBER

编号： Y-16040902

PART NO.

品 名：SMD POWER INDUCTORS

QUANTITY

數量：20PCS

DESCRIPTION

型 號：CR4020 - 101M

DATE

日期： 2022-11-14

CUSTOMER PART NO.

客户料號：

NOTE

注解：

APPROVAL SIGNATURE

客户承認簽章

Approved By 核 准	Checked By 审 查	Drawn By 制 作
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CUSTOMER:	SPECIFICATIONS (R e v i s i o n s)	TYPE CR4020 - 101M
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History of change

Rev.	Effective Date	Changed Contents	Change reasons	Approved By
A0	2022-11-14	New release	/	

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SPECIFICATIONS

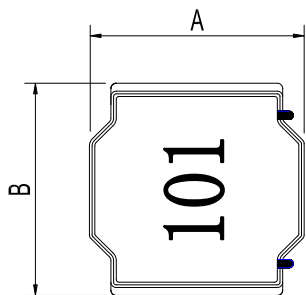
TYPE:
CR4020 - 101M

1. Scope

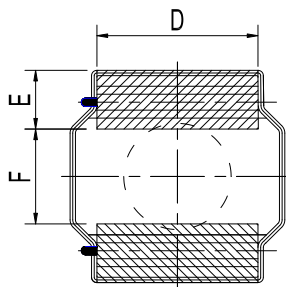
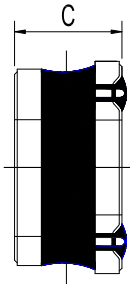
This specification apply for CR4020 of power inductors

2. Appearance

2-1. Dimensions(mm)



2-2. Recommended Land

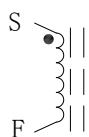


A	4.0 ±0.3mm
B	4.0 ±0.3mm
C	2.1mm(Max)
D	3.3±0.3mm
E	1.0±0.2mm
F	2.0±0.3mm

* 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	50.75Ts
Wire	Φ0.08mm G1 P180

* Winding Turns are approx.

LEAD-FREE

RoHS
Compliance

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SPECIFICATIONS

TYPE:
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3-3. Electronical characteristics

Item	Specifications	Measuring Conditions	Measuring Instrument
Inductance	100 μ H \pm 20%	100KHz/0.25V	CH1062/HIOKI3532-50
D.C.R	1.6 Ω \pm 30%	25 $^{\circ}$ C	HIOKI 3540
Isat※1	0.5A (Δ L/L \leq 30%)	100KHz/0.25V	Microtest 6377&6220
Irms※2	0.3A (Δ T=40 $^{\circ}$ C)	25 $^{\circ}$ 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 Δ T=40 $^{\circ}$ C

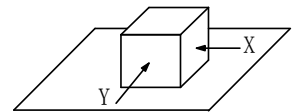
4. General Characteristics

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

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

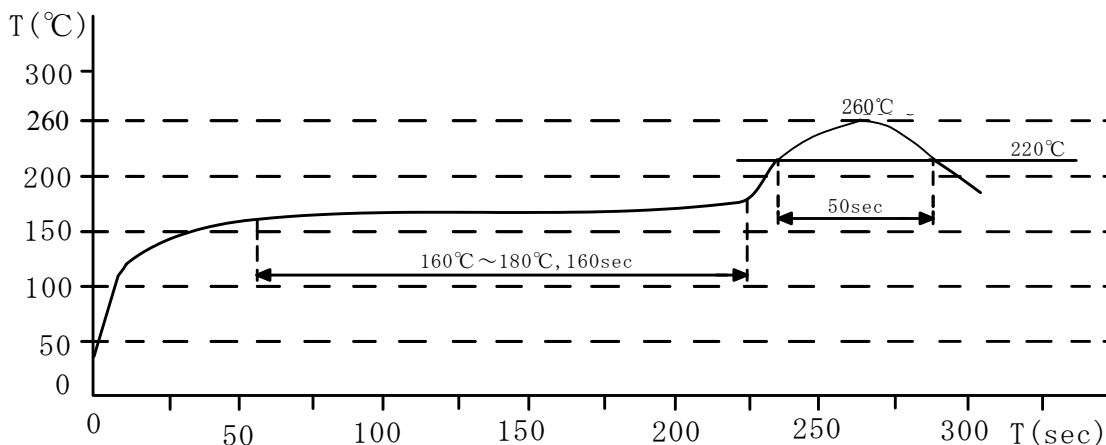
4-3. External appearance : No external defects can be found in the visual inspection.

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 10~55~10Hz and the amplitude of 1 minute cycle is 1.5mm PP.

4-6. Recommended reflow condition :



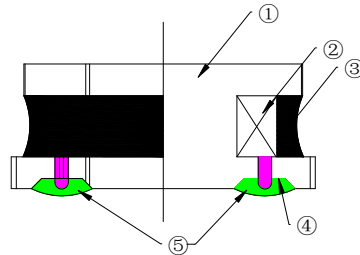
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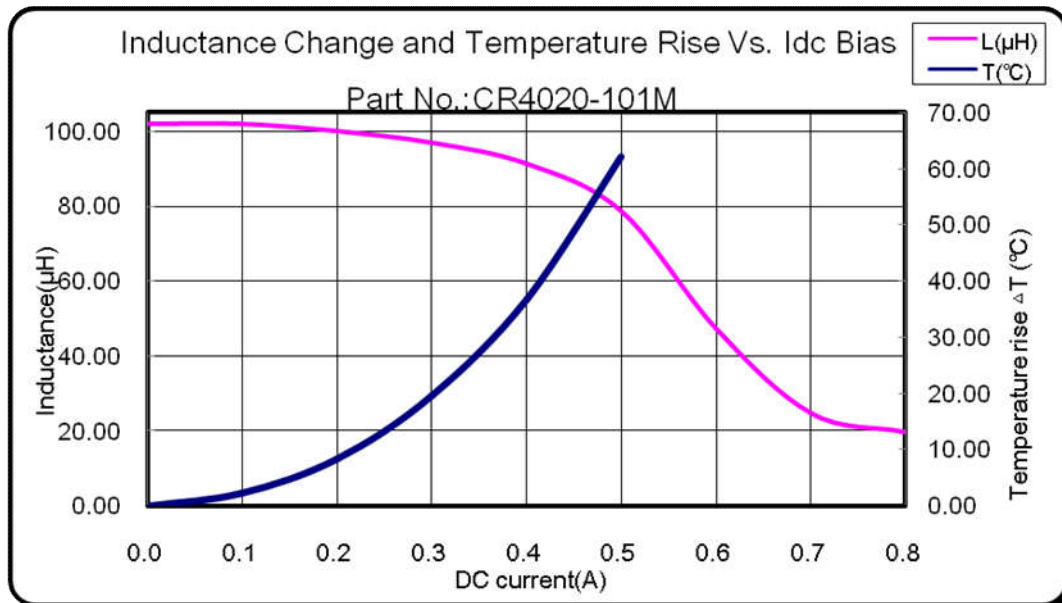
4-7.Humidity test : Inductance deviation is within $\pm 5.0\%$ after 96 ± 4 hours test under the condition of relative humidity of $90\sim 95\%$ and temperature of $60\pm 2^\circ\text{C}$, and 1 hour storage under room ambient conditions after the device is wiped with dry cloth.

5. Construction and materials



No.	Part name	Material	Ceaiya P/N
①	Drum Core	Ni-Zn Ferrite Core	TW/YN/YX
②	Wire	Polyurethane enameled copper wire	YLSL
③	Adhesive	Epoxy Resin	7001007
④	Plating Electrodes	Plating: Ag 10-20 μm Ni 1-3 μm Sn 3-7 μm	
⑤	Outer Electrodes	Top surface solder coating Sn99%、 Ag0.3%、Cu0.7%	

6. Inductance Change and Temperature Rise Vs. Idc Bias



Note :

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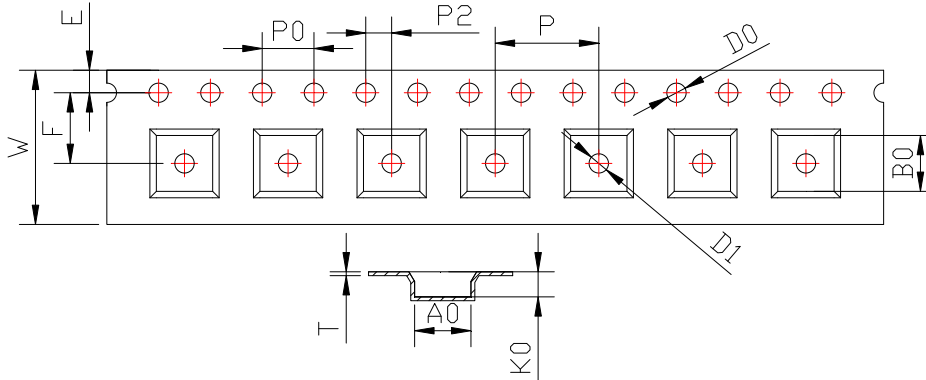
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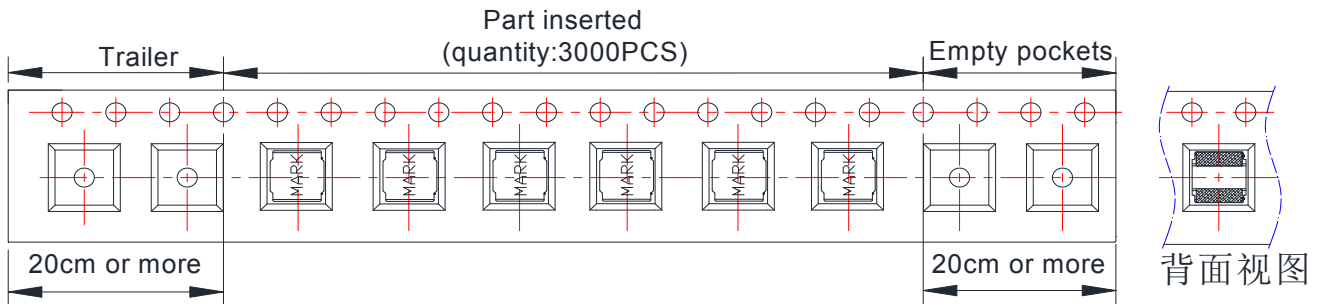
7. Packaging and Marking:

7-1. Carrier Tape Dimensions:

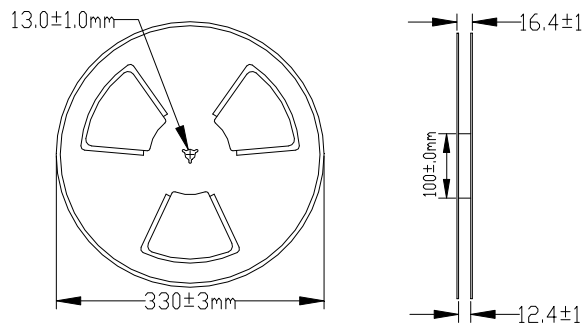


ITEM	W	A0	B0	K0	P	F	E	D0	D1	P0	P2	T
DIM	12.00	4.3	4.3	2.25	8.00	5.50	1.75	1.50	1.50	4.00	2.00	0.30
TOLE	+0.30 -0.10	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	+0.1	+0.1	±0.1	±0.1	±0.05

7-2. Taping Dimensions:



7-3. Reel Dimensions:



8. PACKAGE SPECIFICATION:

3KPCS/ Reel 9KPCS/ Inner Box 27KPCS/ Outer Box

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