

承 认 书

SPECIFICATION FOR APPROVAL

CUSTOMER			
CUSTOMER'S P/N			
DATE	23/Nov/2022	REVISION NO.	A
PART NO.	CKMD0515B Series		
DRAWN NO.			
DESCRIPTION.	SMD POWER INDUCTOR		
Customer's Signature			
Approved by	Checked by	Drawn by	
黄大燕	黄大燕	林树英	
23/Nov/2022	23/Nov/2022	23/Nov/2022	



广 州 市 今 凯 电 子 有 限 公 司

GUANG ZHOU CHK ELECTRONIC Co., Ltd

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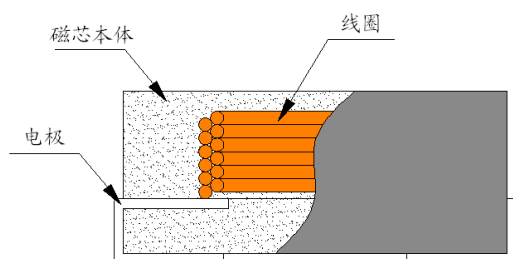
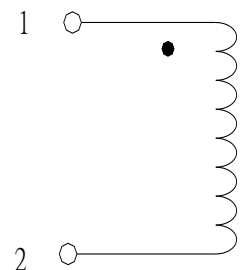
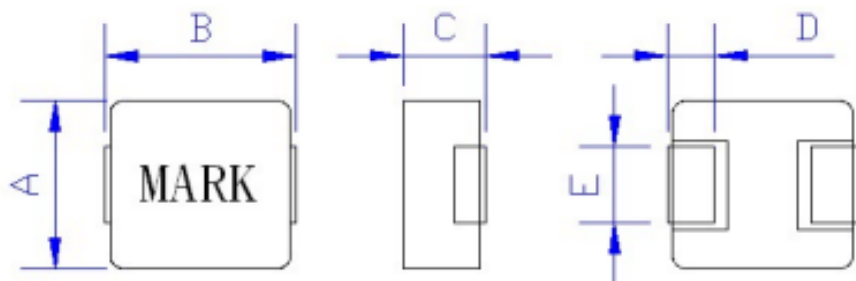
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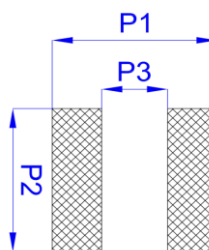
1.SHAPE & DIMENSION

UNIT: mm

SCHEMATICS



Recommended
land pattern



MARKING
COLOR

BLACK

A	B	C	D	E	P1	P2	P3
5.2	5.6	1.5	1.3	2.2	6.2	2.5	1.9
±0.3	±0.5	MAX	±0.5	±0.3	Ref.	Ref.	Ref.

PART NUMBERING SYSTEM

CK MD 0510 B - 2R2 M C

1 2 3 4 5 6 7

1 CHK PRODUCTION (今凯制造)

2 PRODUCT CATEGORY (产品种类) MD - Molding

3 DIMENSIONS (尺寸规格)

4 MATERIAL TYPE (材料类别)

5 INDUCTANCE (电感量)

6 TOLERANCE (公差)

M:±20% N:±25% Y:±30%

7 PACKAGING (包装方式)

C - 编带盘装 B - 盒装

APPROVED BY	CHECKED BY	DRAFT BY
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2.SERIES SPECIFICATION

◆CKMD0515B Series Specification:

Part Number	Inductance	Teat Freq	DCR (mΩ) ±30%		Saturation Current (A)	Temp. Rise Current (A)
	(μH)	(Hz)	Max	Typ	Typ	Typ
CKMD0515B-R47MC	0.47	100KHz/1V	15	10	12.0	8.0
CKMD0515B-1R0MC	1.0	100KHz/1V	40	28	6.0	3.5
CKMD0515B-2R2MC	2.2	100KHz/1V	94	73	4.5	2.5
CKMD0515B-3R3MC	3.3	100KHz/1V	115	100	3.5	1.8
CKMD0515B-4R7MC	4.7	100KHz/1V	145	128	3.0	1.8

◆TEST CONDITION

ITEM	TEST CONDITION	TEST INSTRUMENTS
L	100KHz/1V	Microtest 6378
Isat		Microtest 6378
Irms		Microtest 6220
DCR	20°C	RM3544-01

*The operating temperature is 25°C

*Isat: For Inductance drop 30% from its value without current

*Irms: The value of D.C current when the temperature rise is $\Delta T \leq 40^\circ\text{C}$. ($T_a = 25^\circ\text{C}$)

※此物料仅用于消费电子领域，若用于车载，航天，军事领域引起的一切品质和责任问题，我司既不承担※

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3.MATERIAL LIST & GENERAL SPECIFICATION

材料名称	型号及规格	制造商	备注
ITEM	Materials	Manufacturer	Note
磁芯 (Drum Core)	合金粉	AT	NA
铜线 (Wire)	聚酯亚胺漆包线	ELEKTRISOLA	NA
料片 (Base)	银白色料片	BD	NA
油墨 (Ink)	黑色油墨	TXQ	NA

GENERAL SPECIFICATION

Electrical specifications :	at 20~25℃
Operation Temperature :	-40~+125℃
Storage Temperature :	-40~+125℃

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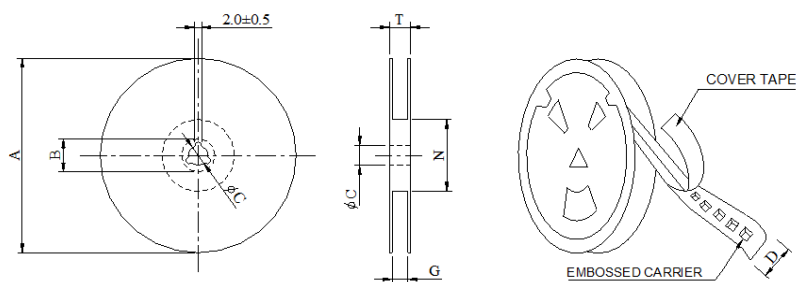
4.PACKAGING(unit: mm)

1.包装类型

2.包装尺寸

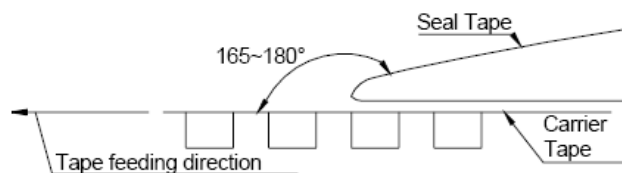
13" 盘

7" 盘



	13" 盘	7" 盘
A	$\Phi 330 \pm 2.0$	$\Phi 178 \pm 2.0$

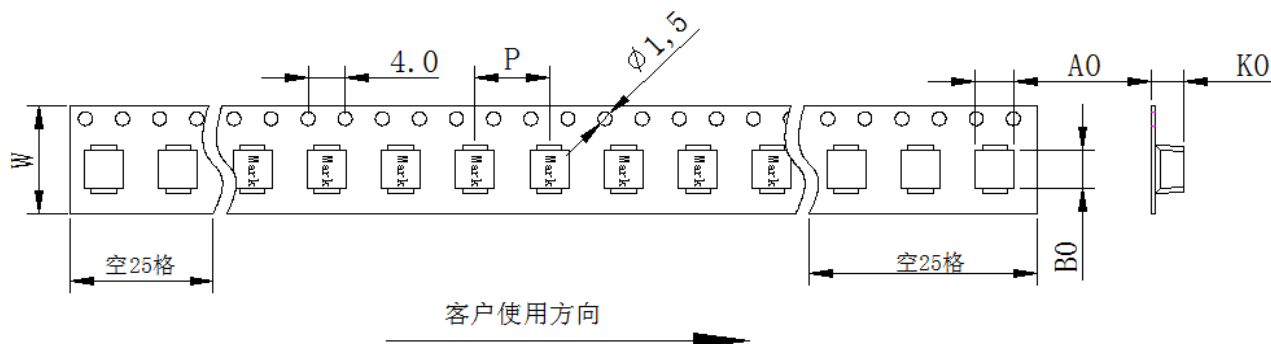
*CARRIER TAPE WIDTH: D



Peel-off strength:20~140gf.

Peel-off angle:165°-180°

Peel-off speed:300mm/min.



尺寸	P		W		A0		B0	K0
	12.0 ± 0.1		16.0 ± 0.3		5.4 ± 0.2		6.2 ± 0.2	2.2 ± 0.15
	A	B	C	D	G	N	T	
	330	21	13	16 ± 0.3	17	100	20	

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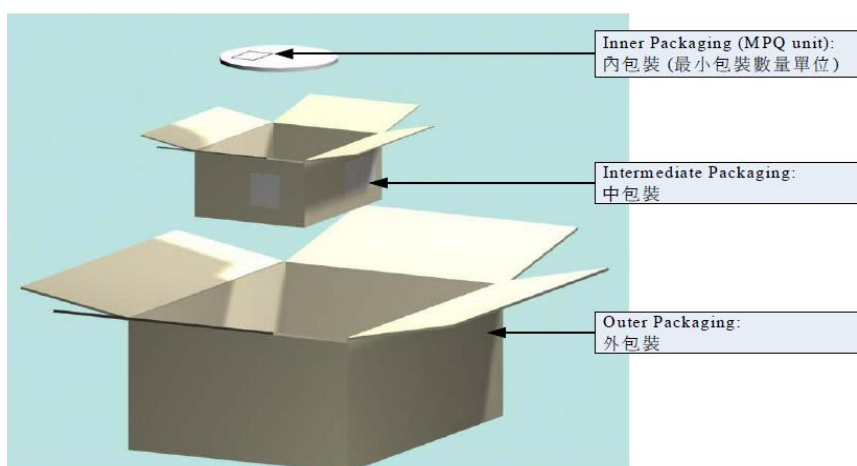


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5. CARTON



Carton dimensions and packing quantity

包装箱尺寸与包装数量

Inner Carton: 335*335*90mm

Out Carton: 360*360*230mm

Product Series	Quantity / Reel	Inner Carton Quantity	Out Carton Quantity
产品系列	每卷包装数	内盒包装数	外箱包装数
CKMD0515	3000pcs/Reel	12000pcs/箱	24000pcs/箱

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6. RELIABILITY TEST

Test Items		Test Conditions	Criteria
1	Low temperature storage	Placed at -40°C for 500 hours, then measured at room ambient temperature after placing 24hours	Inductance shall be within $\pm 10\%$ of the initial value.
2	High temperature storage	Placed at +125°C for 500 hours, then measured at room ambient temperature after placing 24 hours	Inductance shall be within $\pm 10\%$ of the initial value.
3	Thermal shock	Condition for 1 cycle: -40°C,30min.~+125°C,30min Number of cycles:5	Inductance shall be within $\pm 10\%$ of the initial value.
4	Humidity resistance	Placed at 90 to 95%RH,+50°C for 500 hours, then measured at room ambient temperature after placing 24 hours.	Inductance shall be within $\pm 10\%$ of the initial value. Insulation resistance > 100M Ω at DC
5	Drop	Drop specimen three times on concrete floor from a height of 1 meter which mounted on test board	Inductance shall be within $\pm 10\%$ of the initial value.
6	Vibration	Frequency::10~55~10Hz Amplitude:1.5mm or 10G Sweep time: 1 oct/min Test Directions: X,Y,Z Test Time: 2 hours each direction	Inductance shall be within $\pm 10\%$ of the initial value.
7	Terminal strength	Add static load 4.9N(500gf) to inductor through hole of test board for 10 $\pm$ 2 sec.	No detachment of terminal pin and no breakage of wire
8	Soldering heat resistance	Dip Inductor's terminal in solder bath of following conditions: 1) 260 $\pm$ 5°C, 10 $\pm$ 1 sec, 2) 350 $\pm$ 10°C, 3.5 $\pm$ 0.5 sec	Inductance shall be within $\pm 10\%$ of the initial value. Apperance: No damage

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7. SOLDERING CONDITIONS

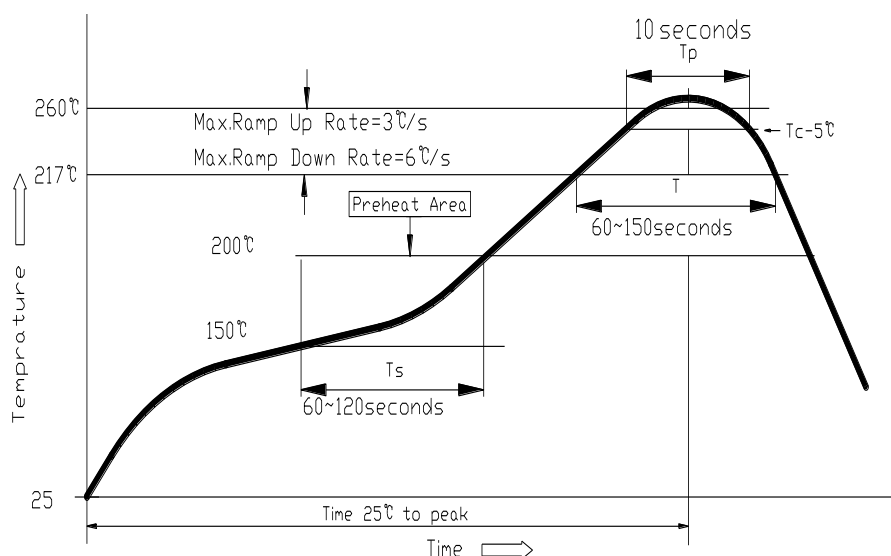
Applicable soldering process to the products is refl.

9.1 Soldering Materials

(1) Solder: Sn-3.0Ag-0.5Cu

(2) Flux: Use rosin-based flux, but not strongly acidic flux (with chlorine exceeding 0.2wt%). Do not use water-soluble flux.

9.2 Reflow Soldering Profile



9.3 Soldering Iron

Reworking with electric soldering iron must preheating at 150°C for 1 minute is required, and do not directly touch the core with the tip of the soldering iron. The reworking soldering conditions are as follows.

- ① Temperature of soldering iron tip: 350°C;
- ② Soldering iron power output: $\leq 30W$;
- ③ Diameter of soldering iron end: $\leq 1.0mm$;
- ④ Soldering time: $< 3s$



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