

# 承 认 书

## SPECIFICATION FOR APPROVAL

|                      |                    |              |   |
|----------------------|--------------------|--------------|---|
| CUSTOMER             |                    |              |   |
| CUSTOMER'S P/N       |                    |              |   |
| DATE                 | 23/Nov/2022        | REVISION NO. | A |
| PART NO.             | CKMD0624B 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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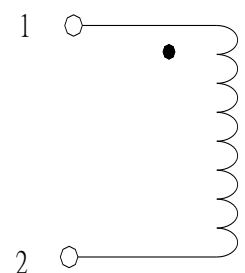
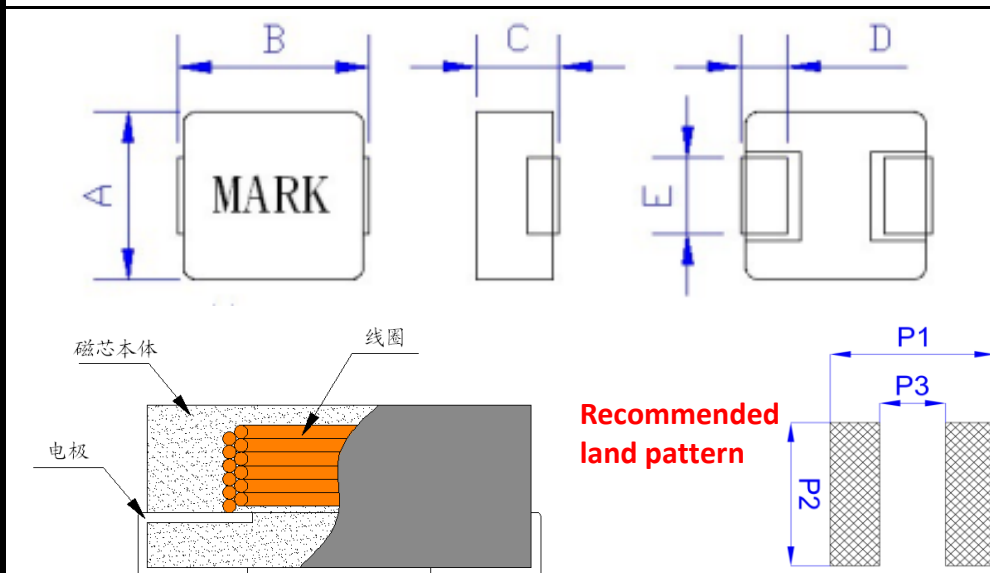
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| CUSTOMER       | 0                  | REVISION NO. | A          |
| CUSTOMER'S P/N | 0                  | PAGE         | P 1/7      |
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## 1.SHAPE & DIMENSION

UNIT: mm

SCHEMATICS



MARKING  
COLOR

BLACK

| A    | B    | C   | D    | E    | P1   | P2   | P3   |
|------|------|-----|------|------|------|------|------|
| 6.6  | 7.1  | 2.4 | 1.6  | 3    | 7.8  | 3.5  | 2.9  |
| ±0.3 | ±0.5 | MAX | ±0.5 | ±0.3 | Ref. | Ref. | Ref. |

## PART NUMBERING SYSTEM

CK MD 0624 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 |
| 黄大燕         | 黄大燕        | 林树英      |



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## 2.SERIES SPECIFICATION

### ◆CKMD0624B Series Specification:

| Part Number     | Inductance | Teat Freq | DCR (mΩ)<br>±30% |     | Saturation<br>Current<br>(A) | Temp. Rise<br>Current<br>(A) |
|-----------------|------------|-----------|------------------|-----|------------------------------|------------------------------|
|                 | (μH)       | (Hz)      | Max              | Typ | Typ                          | Typ                          |
| CKMD0624B-R22MC | 0.22       | 100KHz/1V | 3.6              | 2.4 | 30.0                         | 15.0                         |
| CKMD0624B-R47MC | 0.47       | 100KHz/1V | 7.5              | 5   | 18.0                         | 10.0                         |
| CKMD0624B-R68MC | 0.68       | 100KHz/1V | 10               | 6.9 | 16.0                         | 9.0                          |
| CKMD0624B-1R0MC | 1.00       | 100KHz/1V | 13               | 11  | 15.0                         | 7.0                          |
| CKMD0624B-1R5MC | 1.50       | 100KHz/1V | 24               | 16  | 13.0                         | 6.5                          |
| CKMD0624B-2R2MC | 2.20       | 100KHz/1V | 40               | 26  | 10.0                         | 6.0                          |
| CKMD0624B-3R3MC | 3.30       | 100KHz/1V | 50               | 34  | 9.0                          | 5.0                          |
| CKMD0624B-4R7MC | 4.70       | 100KHz/1V | 60               | 41  | 7.0                          | 4.0                          |
| CKMD0624B-6R8MC | 6.80       | 100KHz/1V | 95               | 64  | 6.5                          | 3.0                          |
| CKMD0624B-100MC | 10.00      | 100KHz/1V | 120              | 87  | 4.5                          | 2.0                          |
|                 |            |           |                  |     |                              |                              |
|                 |            |           |                  |     |                              |                              |
|                 |            |           |                  |     |                              |                              |
|                 |            |           |                  |     |                              |                              |

### ◆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※

|             |            |          |
|-------------|------------|----------|
| APPROVED BY | CHECKED BY | DRAWN BY |
| 黄大燕         | 黄大燕        | 林树英      |



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| DESCRIPTION.   | SMD POWER INDUCTOR | DRAWN NO.    | 0          |
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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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| CUSTOMER'S P/N | 0                  | PAGE         | P 4/7      |
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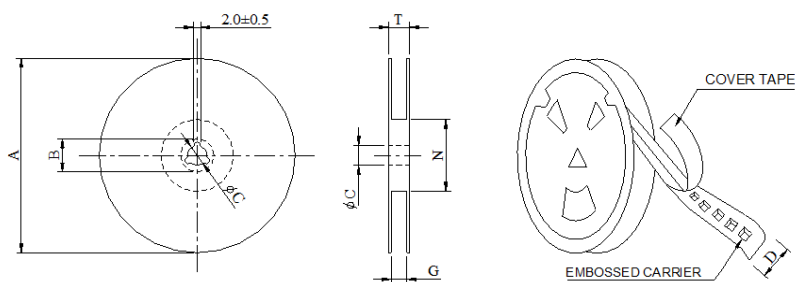
#### 4.PACKAGING(unit: mm)

##### 1.包装类型

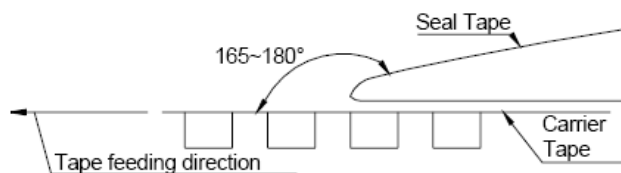
##### 2.包装尺寸

13" 盘

7" 盘



\*CARRIER TAPE WIDTH: D

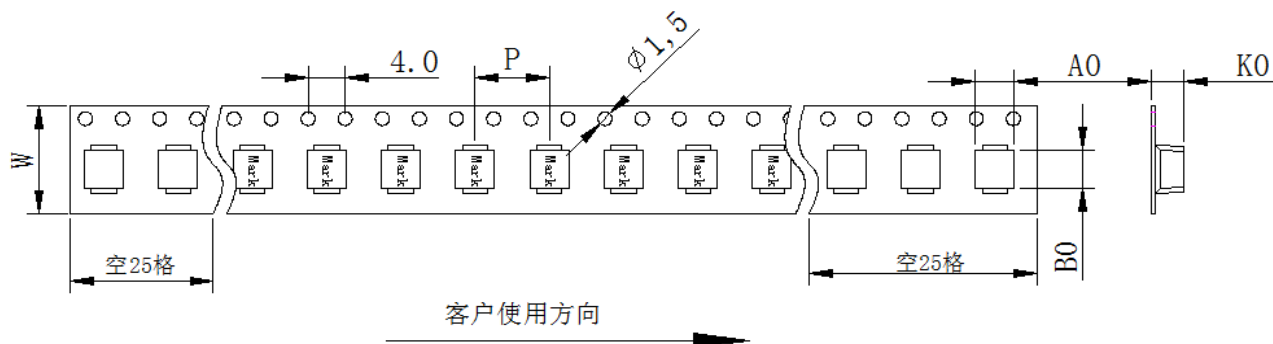


|   |                    |                    |
|---|--------------------|--------------------|
|   | 13" 盘              | 7" 盘               |
| A | $\Phi 330 \pm 2.0$ | $\Phi 178 \pm 2.0$ |

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 |    | 6.8±0.2 |    | 7.6±0.2 | 2.7±0.15 |
| A        | B        | C  | D       | G  | N       | T        |
| 330      | 21       | 13 | 16±0.3  | 17 | 100     | 20       |

APPROVED BY

CHECKED BY

DRAFT

黄大燕

黄大燕

林树英

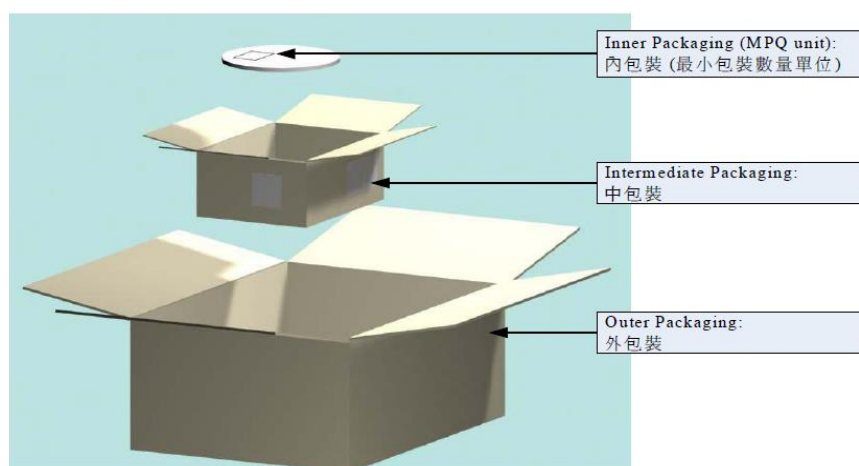


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| CUSTOMER'S P/N | 0                  | PAGE         | P 5/7      |
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## 5. CARTON



### 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               |
| CKMD0624       | 2000pcs/Reel    | 8000pcs/箱             | 16000pcs/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:<br>-40°C,30min.~+125°C,30min<br>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.<br>Insulation resistance<br>> 100M $\Omega$ 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<br>Amplitude:1.5mm or 10G<br>Sweep time: 1 oct/min<br>Test Directions: X,Y,Z<br>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:<br>1) 260 $\pm$ 5°C, 10 $\pm$ 1 sec,<br>2) 350 $\pm$ 10°C, 3.5 $\pm$ 0.5 sec | Inductance shall be within $\pm 10\%$ of the initial value.<br>Apperance: No damage                           |

|             |            |       |
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## 7. SOLDERING CONDITIONS

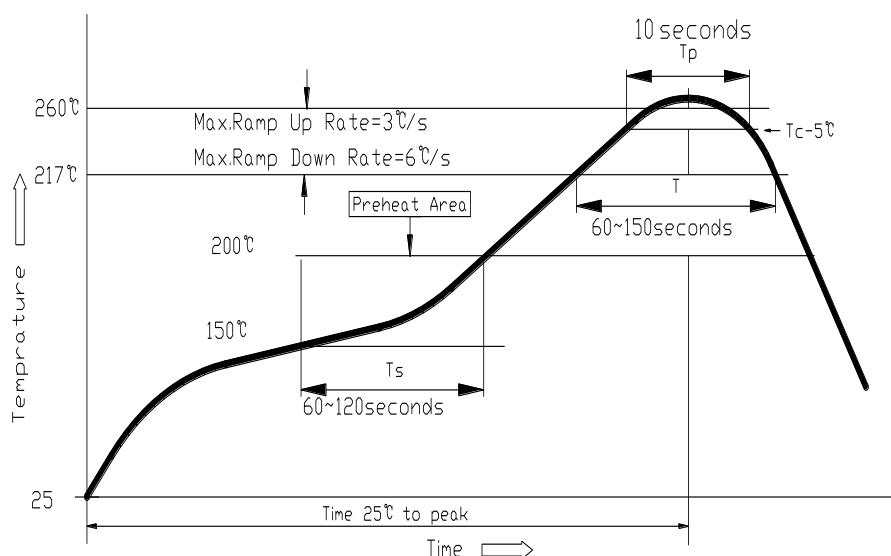
Applicable soldering process to the products is refl.

### 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: ≤ 30W;
- ③ Diameter of soldering iron end: ≤ 1.0mm;
- ④ Soldering time: < 3 s



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