承　　认　　书

SPECIFICATION FOR APPROVAL

CUSTOMER			
CUSTOMER'S P/N			
DATE	2026.5.19	REVISION NO.	A
PART NO.	CKNR4030Z-221MC		
DRAWN NO.	CK2605001		
DESCRIPTION.	SMD POWER INDUCTOR		
Customer's Signature			

Approved by	Checked by	Drawn by
黄大燕	黄大燕	赵龙宇
2026.5.19	2026.5.19	2026.5.19

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GUANG DONG CHK ELECTRONIC TECH Co., Ltd

ECN HISTORY LIST

REV	DATE	DESCRIPTION	CHECK	APPROVED

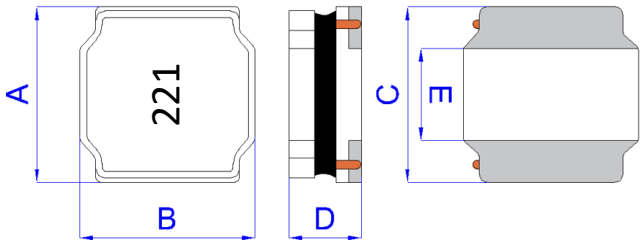
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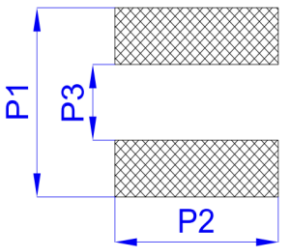
CUSTOMER	0	REVISION NO.	A
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DESCRIPTION.	SMD POWER INDUCTOR	DRAWN NO.	CK2605001
PART NO.	CKNR4030Z-221MC	DATE	2026.5.19

1.SHAPE & DIMENSION

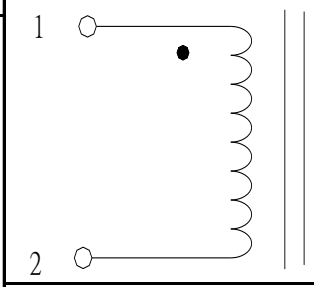
UNIT: mm



Recommended land pattern



SCHEMATICS



MARKING COLOR

BLACK

A	B	C	D	E	P1	P2	P3
4	4	4	3	2.1	4	4	1.3
±0.2	±0.2	±0.2	MAX	±0.07	Ref.	Ref.	Ref.

PART NUMBERING SYSTEM

CK	NR	4030	Z	221	M	C
1	2	3	4	5	6	7

1 CHK PRODUCTION (今凯制造)

2 PRODUCT CATEGORY （产品种类） NR-镍锌 NRS-合金

3 DIMENSIONS （尺寸规格）

4 MAERTIAL TYPE （材料类型）

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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PART NO.	CKNR4030Z-221MC	DATE	2026.5.19

2.SPECIFICATION

◆ CKNR4030Z-221MC Specification:

MEAS. ITEM	SPEC.	TEST FREQUENCY	TEST CONDITIONS
L	**220 μH ± 20%**	**100KHz/1V**	**Ta=25℃，Idc=0A**
DCR	**3.3 Ω MAX**	**BLACK**	**Ta=25℃**
Isat	**0.40 A MAX**	**100KHz/1V**	**△L/L≤30%**
Irms	**0.40 A MAX**	**100KHz/1V**	**△T≤40℃**

◆TEST CONDITION

ITEM	TEST CONDITION	TEST INSTRUMENTS
L	100KHz/1V	Microtest 6377
Isat		TH1773+Microtest 6377
Irms		
DCR	25±5℃	TH2512B

*The operating temperature is 25℃

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

*Irms: The value of D.C current when the temperature rise is △T≦40℃.(Ta=25℃)

*For CKNR4030Z-221MC size inductors,absolute maximum voltage: I 25 V.

※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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PART NO.	CKNR4030Z-221MC	DATE	2026.5.19

3.MATERIAL LIST & GENERAL SPECIFICATION

材料名称	型号及规格	制造商	环保要求	备注
ITEM	Materials	Manufacturer	EN.QU	Note
磁芯1（Drum Core)	镍锌（Nickel-Zinc)	SB/DJ	RoHS	
铜线（Wire）	Polyester Wire or equlvalent	ELEKTRISOLA	RoHS	
胶水（Glue)	Phenolic epoxy resin	CH	RoHS	
锡（Solder)	107H	QD	RoHS	Primary
锡（Solder)	107H	TF	RoHS	Alternative

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

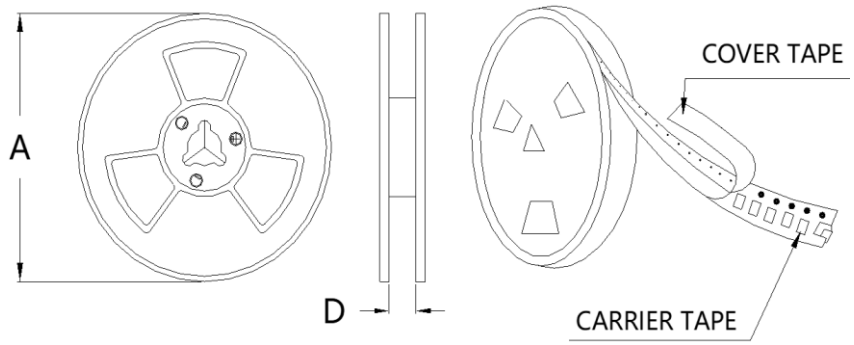
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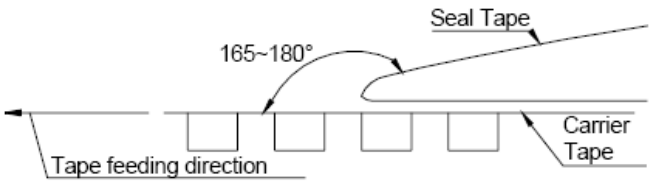
CUSTOMER	0	REVISION NO.	A
CUSTOMER'S P/N	0	PAGE	P 4/8
DESCRIPTION.	SMD POWER INDUCTOR	DRAWN NO.	CK2605001
PART NO.	CKNR4030Z-221MC	DATE	2026.5.19

4.PACKAGING(unit: mm)

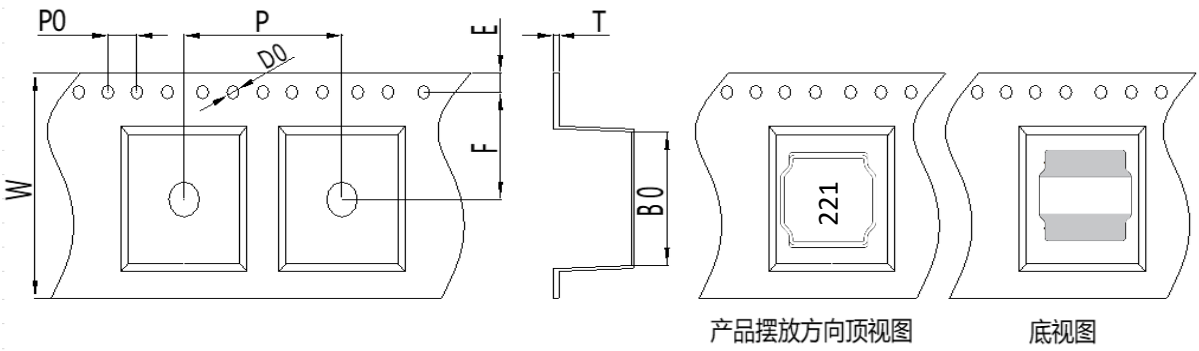
1.包装类型 **2.包装尺寸** ■ 13″ 盘 7″ 盘



	13″ 盘	7″ 盘
A	Φ330±2.0	Φ178±2.0
D	12.4	



Peel-off strength:10～100gf.
Peel-off angle:165°-180°
Peel-off speed:300mm/min.



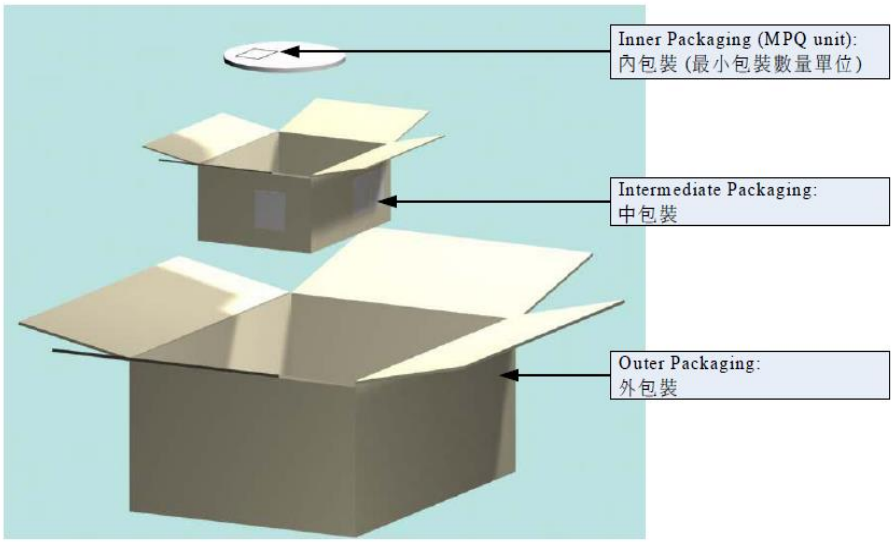
Item	W	B0	P	T	E	F	D0	P0		
DIM(mm)	12.0±0.3	4.4±0.1	8.0±0.1	0.3±0.05	1.75±0.1	5.5±0.1	1.5±0.1	4.0±0.1		

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DESCRIPTION.	SMD POWER INDUCTOR	DRAWN NO.	CK2605001
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5. CARTON



1.1 外箱: 36*36*23 cm 一箱装 2内箱
1.2 内箱: 33.5*33.5*9 cm 一箱装5卷制品
1.3 外箱材質: A三A
1.4 内箱材質: A=A
1.5 每10卷制品用一只静电袋包装
1.6 每一静电袋内放一只袋干燥剂
1.7 每一卷上面依标签样式的要求贴上标签明细
1.8 出货内外箱贴上该箱内实际内容明细
(如: 客户有特殊要求时，则依客户要求实施.)

卷轴包装数量		
每卷	2000	PCS

外箱包装数量				
每箱	10	卷,共	20000	PCS

内箱包装数量				
每箱	5	卷,共	10000	PCS

备注：如果捆包数量小于内箱捆包数量时就用内箱包装
储存条件及期限：
温度：20-25℃
湿度：≦70%
时间：六个月

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DESCRIPTION.	SMD POWER INDUCTOR	DRAWN NO.	CK2605001
PART NO.	CKNR4030Z-221MC	DATE	2026.5.19

6. RELIABILITY TEST

	Test Items	Test Conditions	Criteria
1	Low temperature storage	Placed at -40℃ for 500 hours, then measured at room ambient temperature after placing 24hours	Inductance shall be within ± 10% of the initial value.
2	High temperature storage	Placed at +125℃ for 500 hours, then measured at room ambient temperature after placing 24 hours	Inductance shall be within ± 10% of the initial value.
3	Thermal shock	Condition for 1 cycle: -40℃,30min.~+125℃,30min Number of cycles:5	Inductance shall be within ± 10% of the initial value.
4	Humidity resistance	Placed at 90 to 95%RH,+50℃ for 500 hours, then measured at room ambient temperature after placing 24 hours.	Inductance shall be within ± 10% of the initial value. Insulation resistance > 100MΩ 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 ± 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 ± 10% of the initial value.
7	Terminal strength	Add static load 4.9N(500gf) to inductor through hole of test board for 10±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±5℃, 10±1 sec, 2) 350±10℃, 3.5±0.5 sec	Inductance shall be within ± 10% of the initial value. Apperance: No damage

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PART NO.	CKNR4030Z-221MC	DATE	2026.5.19

7. SOLDERING CONDITIONS

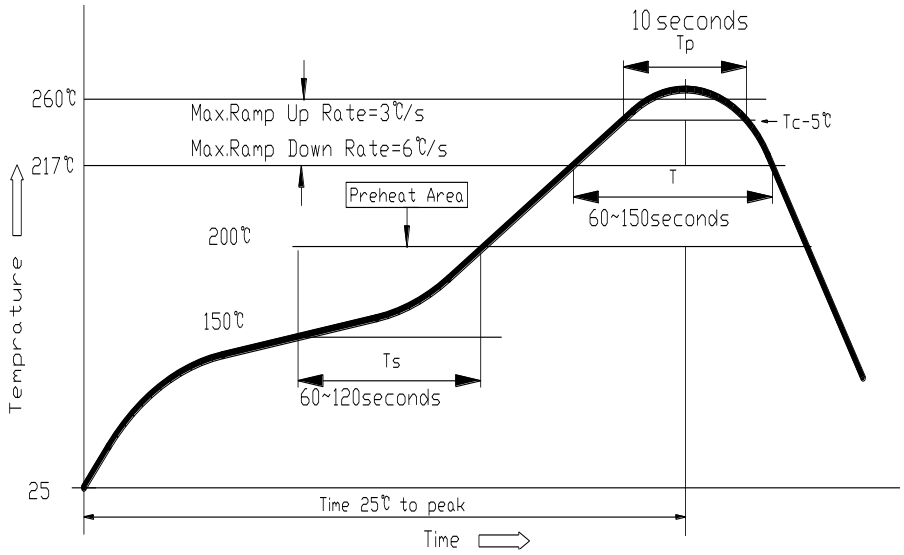
Applicable soldering process to the products is refl.

9.1 Soldering Materials

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

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

9.2 Reflow Soldering Profile



9.3 Soldering Iron

Reworking with electric solding iron must preheating at 150℃ 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.

①Temperature of soldering iron tip:350℃;

② Soldering iron power output:≤30W;

③ Diameter of soldering iron end:≤1.0mm;

④Soldering time:＜3 s

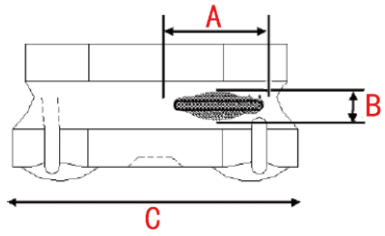


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PART NO.	CKNR4030Z-221MC	DATE	2026.5.19

8.Appearance of the standard

1.Void appearance tolerance limit



Size of voids occurring to coating resin is specified below.

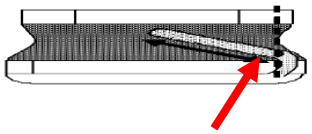
①Width direction(dimension A): Acceptable when A<=C/2

Nonconforming when B>=C/2

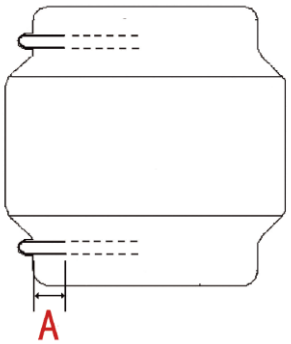
②Length direction(dimension B):Dimension b is not specified

③When total area of voids (including one exposing coil) occurring to each sides is not greater than 50% of coating resin area,that is acceptable.

2.External appearance criterion for exposed wire



Exposed end of the winding wire at the secondary side should be 3.0mm and below.



①Acceptable when A<=0.8mm

②Nonconforming when A>0.8mm

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黄大燕	黄大燕	赵龙宇

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SPECIFICATION FOR APPROVAL

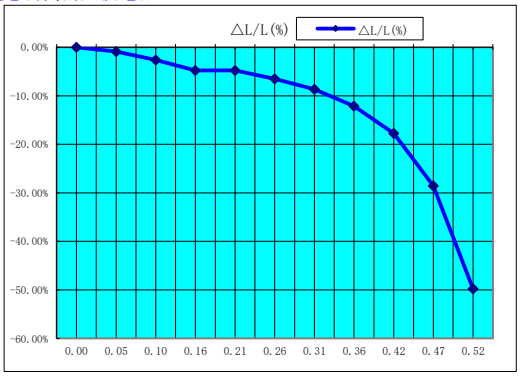
CUSTOMER	0		
CUSTOMER'S P/N	SMD POWER INDUCTOR	TEST R.H.	80~85%
JINKAI P/N:	CKNR4030Z-221MC	TEST TEMP.	20~25℃
DRAWN NO.	CK2605001	DATE	2026.5.19

TEST DATA FOR PREPRODUCTION SAMPLE

TEST RESOLUTION										DIMENSION (Unit：mm)		
MEAS. ITEM	L μh	DCR Ω	Isat A	△L/L	Irms A					長 mm	寬 mm	高 mm
SPEC.	220 ± 20%	3.3 Max.	0.40 Max.	△L/L≦-30%	0.40 △T≦40℃ ℃					4.0 ±0.2	4.0 ±0.2	3.00 MAX
TEST FREQ.	100KHz/1V		100KHz/1V									
1	209	2.55	187	-10.53%	OK					4.02	4.00	2.79
2	207	2.53	185	-10.63%	OK					4.00	4.00	2.83
3	209	2.56	188	-10.05%	OK					4.04	4.01	2.81
4	209	2.54	187	-10.53%	OK					4.00	3.99	2.80
5	208	2.54	186	-10.58%	OK					4.03	3.99	2.80
6	208	2.55	187	-10.10%	OK							
7	210	2.56	188	-10.48%	OK							
8	210	2.56	187	-10.95%	OK							
9	206	2.56	185	-10.19%	OK							
10	209	2.57	187	-10.53%	OK							
AVG.	**208.500**	**2.552**	**186.7**	**-10.46%**						**4.018**	**3.998**	**2.806**
R	**4**	**0.04**	**3**	**0.90%**						**0.04**	**0.02**	**0.04**

Isat(飽和電流):電感瞬間的突波電流

TME(秒)	Lsat(A)	L(UH)	△L/L(%)
1	0.00	231	0.00%
1	0.05	229	-0.87%
1	0.10	225	-2.60%
1	0.16	220	-4.76%
1	0.21	220	-4.76%
1	0.26	216	-6.49%
1	0.31	211	-8.66%
1	0.36	203	-12.12%
1	0.42	190	-17.75%
1	0.47	165	-28.57%
1	0.52	116	-49.78%



單點溫昇

TIME(S)	Irms(A)	L(uH)	ΔL/L(%)	Temp(℃)	ΔT(℃)
30	0.00	225	0.00%	26.9	0.0
30	0.05	220	-2.22%	27.1	0.2
30	0.10	216	-4.00%	28.4	1.5
30	0.16	215	-4.44%	29.9	3.0
30	0.21	211	-6.22%	32.4	5.5
30	0.26	210	-6.67%	35.8	8.9
30	0.31	205	-8.89%	40.1	13.2
30	0.36	198	-12.00%	45.6	18.7
30	0.42	180	-20.00%	52.6	25.7
30	0.47	141	-37.33%	60.9	34.0
30	0.52	64.8	-71.20%	74.1	47.2

