



深圳市佑驰电子有限公司

Specification for Approval

产品名称: 电感

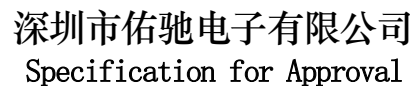
规格型号: HCTC/HTMD-5030-XXX-M

产品编号: _____

日 期: 2026-08-12

- 1、本承诺书的内容更改需经过双方确认，任一方单独的修改均视为无效。
- 2、本承诺书在送达客户后，请给予承认并即签回，如无签回下订单的，我司有权以此承诺书标准生产，并表示购买方默认许可。

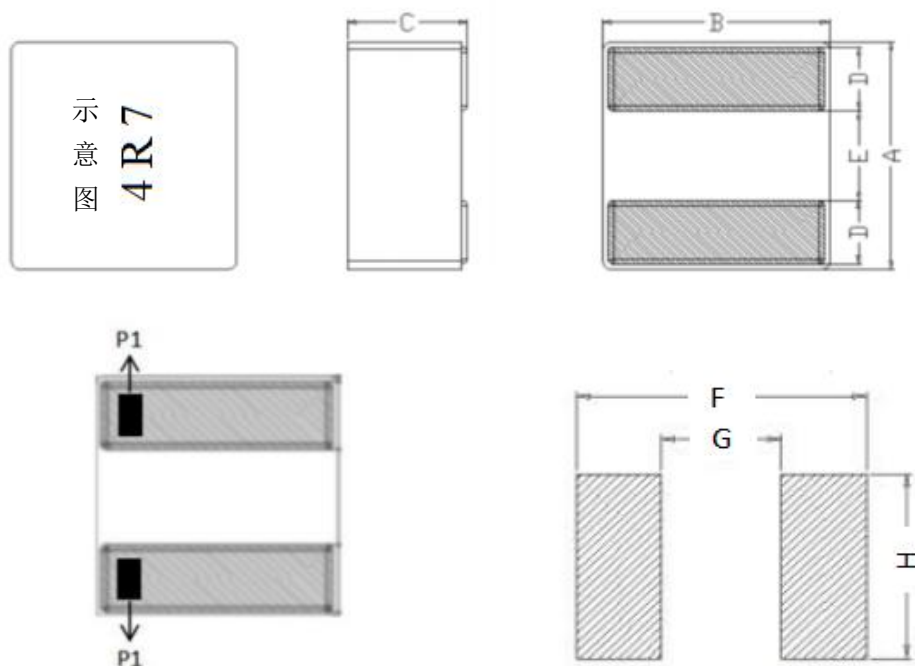
核准	审核	制作
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CUSTOMER PART NO:	REV.	DA YOU PART NO. 5030系列	ISSUE DATE Aug.12.2026
PART NAME. MOLDING INDUCTOR	DA YOU REV. V1.0	USED ON.	

1. 外观尺寸 Dimensions and Recommend PC Board Pattern (unit: mm) :



ITEF	SPEC/mm
A	5.0±0.30
B	5.0±0.30
C	3.0 / Max
D	1.3±0.20
E	2.1±0.30
F	5.5 Typ
G	1.8 Typ
H	5.5 Typ

P1 - 为两个P脚DCR测试点

P1 is the two P-pin DCR test points.

推荐焊盘尺寸

Recommend PC Board Pattern

2. 产品特性 Characteristics:

Part No.	Inductance		DC Resistance		Saturation Current		Heat Rating Current	Withstanding Voltage
	1MHz/1V		Max.	Typ.	Max.	Typ.	Typ.	Typ.
Units	μH	Q	mΩ		A		A	VDC
Symbol	L		DCR		Isat		Irms	/
HTMD-5030-R47-M	0.47±20%	20 Min	9	7	13.0	15.0	11.0	30
HTMD-5030-R68-M	0.68±20%	20 Min	12	9	10.0	11.5	9.0	30
HTMD-5030-1R0-M	1.0±20%	20 Min	15	13	9.0	10.0	8.5	30
HTMD-5030-1R5-M	1.5±20%	20 Min	25	17	8.0	9.0	8.0	30
HTMD-5030-2R2-M	2.2±20%	20 Min	29	25	6.0	7.0	6.0	30
HTMD-5030-3R3-M	3.3±20%	20 Min	38	34	5.0	6.0	5.5	30

HTMD-5030-4R7-M	4.7±20%	20 Min	60	52	4.0	5.0	4.5	30
HTMD-5030-6R8-M	6.8±20%	20 Min	90	69	3.5	4.0	3.5	30
HTMD-5030-100-M	10±20%	20 Min	125	112	3.0	3.5	3.2	30
HTMD-5030-150-M	15±20%	20 Min	185	158	2.5	2.8	2.5	30
HTMD-5030-220-M	22±20%	20 Min	260	235	2.0	2.5	2.0	30
HCTC-5030-R47-M	0.47±20%	20 Min	8.5	6.5	14.0	15.0	13.0	60
HCTC-5030-R68-M	0.68±20%	20 Min	11	8	11.0	12.0	11.0	60
HCTC-5030-1R0-M	1.0±20%	20 Min	14	12	10.0	11.0	10.5	60
HCTC-5030-1R5-M	1.5±20%	20 Min	23	16	9.0	10.0	9.5	60
HCTC-5030-2R2-M	2.2±20%	20 Min	27	22	8.0	9.0	8.5	60
HCTC-5030-3R3-M	3.3±20%	20 Min	34	28	7.5	8.5	8.0	60
HCTC-5030-4R7-M	4.7±20%	20 Min	50	41	7.0	8.0	7.5	60
HCTC-5030-6R8-M	6.8±20%	20 Min	70	58	6.5	7.5	7.0	60
HCTC-5030-100-M	10±20%	20 Min	78	70	6.0	7.0	6.5	60
HCTC-5030-150-M	15±20%	20 Min	175	140	3.5	4.5	4.0	60
HCTC-5030-220-M	22±20%	20 Min	235	220	2.5	3.0	2.5	60

Note:

- (1) All test data is referenced to 25°C ambient.
- (2) When applying the heat rating current DC (Idc) to coil, it will cause an approximate ΔT of 40°C.
- (3) When applying the saturation current DC (Isat) to coil, it will cause the initial inductance value to drop 30%Typical.
- (4) Operating Temperature Range -40°C to +125°C.
- (5) Rated current:Isat (Max.) or Irms (Typ.), whichever is smaller.
- (6) Saturation Current: Typ. Value, DC current at which the inductance drops approximately 30% from its value without current;
- (7) Heat Rating Current: DC current that causes an approximate ΔT of 40°C from 20°C ambient.
- (8) AEC-Q200-G1qualified.
- (9) Application for ADAS、LED lighting、Information system、Airbag、Internet of vehicle.

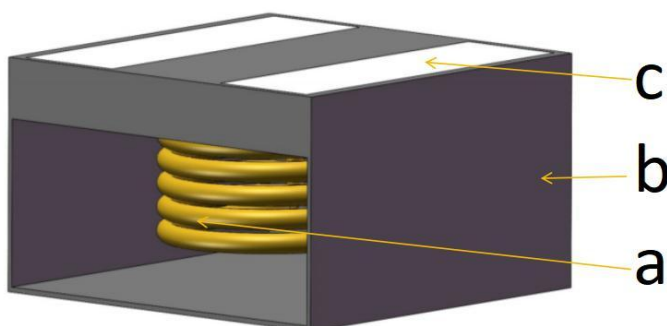
3. 品名规则 Part Numbering:

HTMD- 5030 R47 M
(1) (2) (3) (4)

- (1)Series:HTMD=Surface Mounting Power Chokes (Molded Inductor)
for automotive use(2)Dimension:50=5050 Series 30=Product Height 3.0mm
(3)Inductance:R47=0.47μH 1R0=1.0μH 100M=10μH
(4)Inductance Tolerance:J=±5% K=±10% L=±15% M=±20% N=±30%

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4. 材料清单Material List



No.	项目 ITEM	材料 Materials	
a	线 Wire	铜线 Copper wire	
b	磁芯 Core	金属合金 Metal alloy	
c	金属化电极 Terminal	铜/镍/锡 Cu/Ni/Sn	

5. 储存条件/注意的事项Storage conditions/Matters need attention

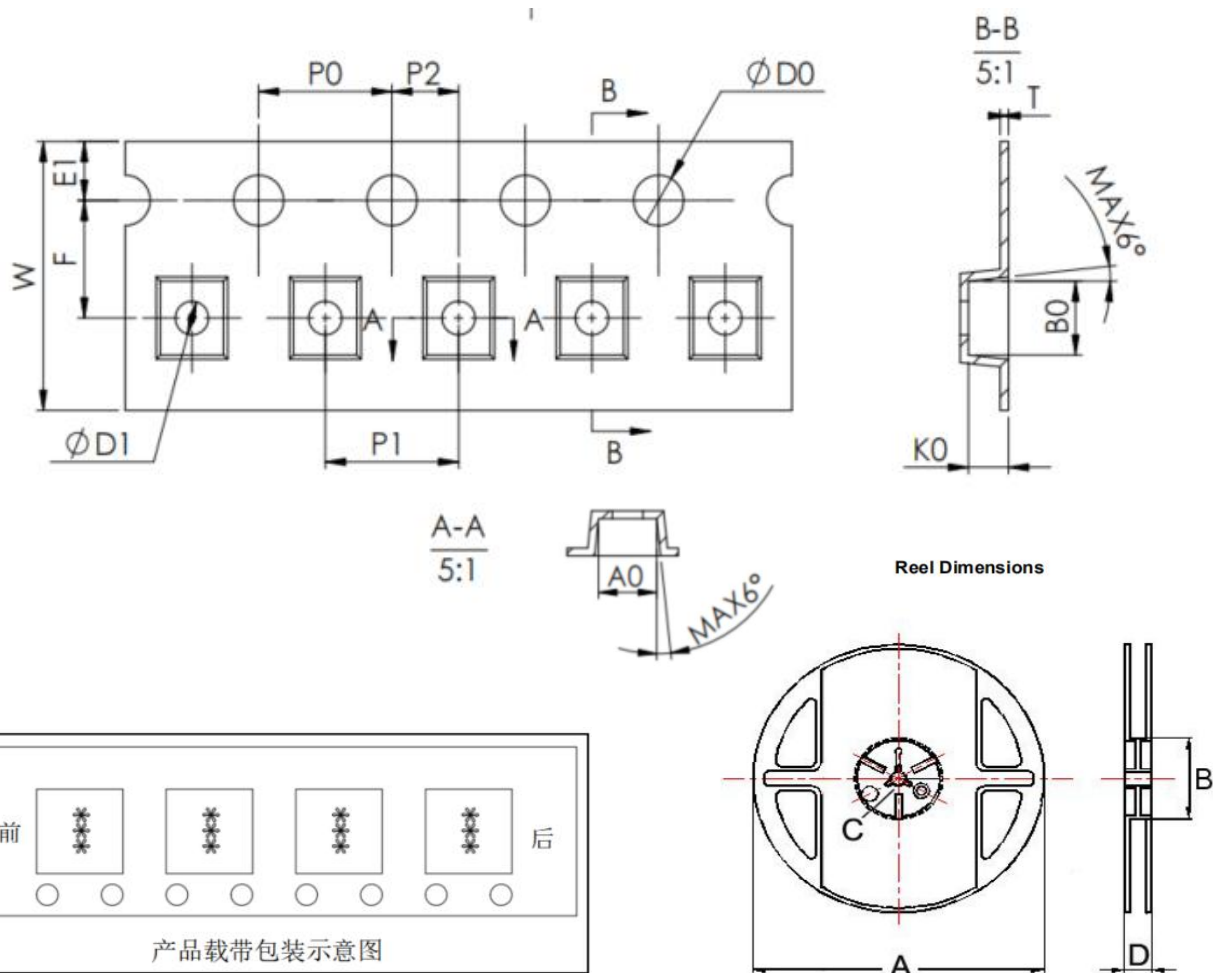
1、贮存温度、湿度条件:

Storage temperature and humidity conditions;a、产品包装与载体:温度-10℃~+40℃,相对湿度低于60%

Product packing with carrier tape:-10℃~40℃ and less than 60% RH;b、单独的产品:温度-10℃~+60℃,相对湿度低于60%Product alone:-10℃~60℃ and less than 60% RH;c、产品在6个月内使用(注意:产品一经拆开包装,须尽快使用)Products should be used within 6 months.

(Note that the product should be used as soon as possible once it is folded);d、包装材料应保存在空气中不存在氯或硫的地方; The packaging material should kept where no chlorine or sulfur exists in the air;e、不要用手指触摸电极(焊接端子),因为这可能导致焊接能力的下降; Do not touch the electrodes (soldering terminals) with fingers as this may lead to deterioration of solder ability;f、个别零件强烈建议使用镊子或真空取料机,散装搬运应确保尽量减少磨损和机械冲击; The use of tweezers or vacuum pick-ups is strongly recommended for individual components. Bulk handling should ensure that abrasion and mechanical shock are minimized;

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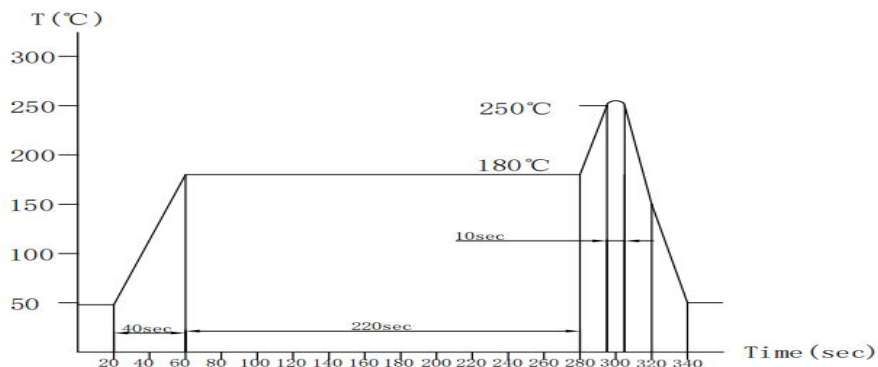
Tape Dimensions (mm)							
A0	B0	K0	T	W	P0	P1	D0
5.5±0.1	5.95±0.1	3.2±0.10	0.35±0.05	12±0.1	4±0.1	8.0±0.1	1.5±0.1

Reel Dimensions (mm)				空袋预留/mm		PCS/REEL
A	B	C	D	前空/mm	后空/mm	
330	100	13.2	18.3	160/Min	400/Min	2000

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7. Soldering and Mounting:

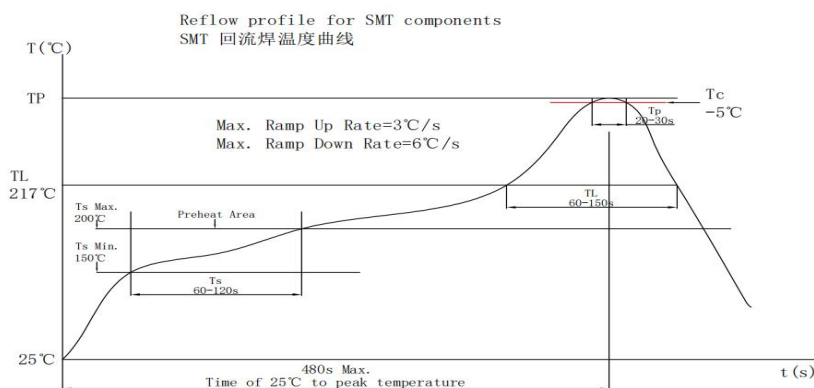
(1). 推荐回流焊条件（无铅） Recommended Reflow Conditions (Lead-free);



根据本公司的回流焊设备推荐的回流焊试验条件；

The above recommended reflow test conditions are based on the company's reflow welding equipment;

(2). 回流焊耐热性 Reflow Soldering Heat Endurance;



Classification of peak package body temperature (Tp)
封装体峰值温度(Tp)分类

无铅装配 PB-Free Assembly	封装厚度 Package Thickness	封装体积 Package Volume		
		<350mm ³	350~2000mm ³	>2000mm ³
	<1.6mm	260°C	260°C	260°C
	1.6~2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

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8. Reliability Test:				
No.	Test Items	Test Methods		Requirements
1	Visual	Inspect the appearance at least 10X.		No visible mechanical damage
2	Physical Dimension	Length, width, thickness of the components.		Meet the specifications
3	Pre-and Post-Stress Electrical Test	Inductance of the components DC resistance of the components.		(1) The electrical values before the test meet the specifications (2) The electrical values after the test meet the rate of change requirements;Inductance change: Within±20%
4	Terminal Strength	(1) Precondition:3 reflow cycles; (2) Test condition:17.7N,X,Y direct, 60(+5)s,Speed:1.0mm/s.		No removal or split of the termination or other defects shall occur
5	Board Flex	(1) Precondition:3 reflow cycles; (2) Test condition:2mm,60(+5)s.		No visible mechanical damage
6	Solder Ability	Method 1: (1) Pretreatment:125℃,4h; (2) 245℃,5(-0.5,+0)s,25±6mm/s; (3) Solder.Sn/3.0Ag/0.5Cu.		Wetting shall be exceeded 95% coverage
		Method 2: (1) Steam aging:8h±15min; (2) 245℃,5(-0.5,+0)s,25±6mm/s; (3) Solder.Sn/3.0Ag/0.5Cu.		
		Method 3: (1) Steam aging:8h±15min; (2) 245℃,5(-0.5,+0)s,25±6mm/s; (3) Solder.Sn/3.0Ag/0.5Cu.		No more than 5% of the solder able termination exhibits exposed underlying, nonwetttable base metal or metallization layers or portions of the ceramic substrate after exposure to molten solder

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No.	Test Items	Test Methods		Requirements
7	Resistance to Soldering Heat	Method 1: Max 260℃/10s,3 times. Solder:Sn/3.0Ag/0.5Cu. Note:Reflow Profile refer to reflow profile 1		(1) No visible mechanical damage (2) Inductance change: Within ±20% (3) DCR:Satisfy electrical characteristic.
8	High Frequency vibration	Reflow 3 tines,10-2000Hz,5g,20min/Cycle,4 hours in each 3 mutually perpendicular directions (total of 12 hours).		
9	Mechanical Shock	Reflow 3 times,Half sine shock pulse,100g, 6ms,6 shocks in each 3 mutually perpendicular directions (total of 18 shocks).		(1) No visible mechanical damage (2) Inductance change: Within±20% (3) DCR:Satisfy electrical characteristic.
10	Temperature Cycling	Reflow 3 times,ambient temperature -40℃/(30min) Ambient temperature+125℃/(30min),transforming Interval:20s,1000cycles.		
11	Low Temperature Exposure (Storage)	(1) Precondition: 3 reflow cycles; (2) Test condition: ambient temperature -40℃±2℃ 1000(24)hours		
12	High Temperature Exposure (Storage)	(1) Precondition: 3 reflow cycles; (2) Test condition: ambient temperature 125℃ ±2℃, 1000(24)hours		
13	Biased Humidity	Reflow 3 times,ambient temperature 85℃,85%RH,1000 hours.		
14	Operational Life	Reflow 3 times,ambient temperature 125±2℃,1000(24)hours,rated current.		
15	MSL	Team A: (1) Pre- and post-Stress Electrical and Visual Test; (2) High temperature Bake:125+5/-0℃,24h; (3) Temperature&Humidity Soak:85℃,85%RH,168h; (4) Reflow:MAX.260℃/10s,3 times.		(1)No visible mechanical damage (2) Inductance change: Within ±20%

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No.	Test Items	Test Methods		Requirements
16	Flammability	Refer to MIL-STD-202 Method 111,UL-94		(1) t1 or t2:≤10s; (2) t1 plus t2 for the 5 specimens:≤50s; (3) T2+t3 for each specimen:≤30s; (4) No after-flame or after-glow of any specimen up to the holding clamp; (5) No cotton indicator ignited by flaming particles or drops.
17	ESD Test	HBM ESD discharge waveform,each 1 time of ± polarity.Voltage refer to 4KV: Inductance≥22μh; 8kv:Inductance<22μh;		(1) No visible mechanical damage (2) Inductance change:Within ±20% (3) DCR:Satisfy electrical characteristic.
18	Electrical Characteristics	Ambient temperature 25℃ (15±3min) →ambient temperature -40℃(15±3min) →ambient temperature 125℃ (15±3min)		Inductance change:Within ±20% of reference value measuring at 25℃
19	Solvent Resistance Test	Add Aqueous wash chemical. OKEM Clean or equivalent Do not use banned solvents.		(1) No specified markings which are missing in whole or in part, faded, smeared,blurred, or shifted (dislodged) to the extent; (2) No specimen shall have cracks, separations, crazing, swelling, softening, and degradation of body material,end caps and seals if present.