承认书

SPECIFICATION FOR APPROVAL

客户 Customer	
客户料号 Customer P/N	
安规型号 Safety Model	
品名 Description	**Differential Mode Inductor**
产品型号 Product Model	**T028-125-123uH±15%(Z6256)**
供应商料号 PART NO.	**Z6256**
图纸编号 Drawing No.	**2025081902**
版本 REV	**A2**

出图 DRAWING		
制作 Prepared	**审核 Checked**	**批准 Approved**
杨勇元	夏欢	陈林
DATE : 2025/8/20		

客户承认 CUSTOMER APPROVE

惠州市长瑞工贸有限公司

（Huizhou Changrui Industry and Trade Co., Ltd.）

惠州市长瑞智造电子有限公司

（Huizhou Changruizhizao Electronics Co., Ltd.）

Web:www.changereal.cn/Tel:0752-2280100/Fax:0752-2280130

地址(Add)： 惠州市惠城区水口街道水青路1号联东U谷1栋11楼

11th Floor, Building 1, Liandong U Valley, No.1 Shuiqing Road, Shuikou Street, Huicheng District, Huizhou City

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CHANGE LIST 变更履历

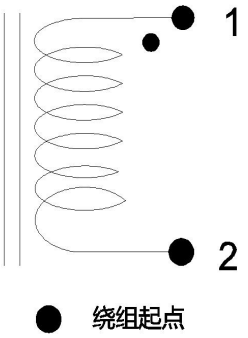
DATE 日期	VERSION 版本	CHANGE CONTENT 修订内容	PREPARED 制定	CHECKED 审核
2025/8/19	A0	Initial release	杨勇元	夏欢
2025/8/28	A1	底座材质变更为PM9823;更新阻抗曲线图	杨勇元	夏欢
2025/11/26	A2	增加供应商料号	杨勇元	夏欢

Note: 规格书变更需升级版本.

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1. SCHEMATICS (接线图）：



2. WINDING CONSTRUCTION（绕组结构）：

ORDER	S - F 开始 - 结束	WIRE SIZE 线径	TURNS 圈数	NOTES 说明
N1	1 - 2	UEW-F Φ0.25mm 本色	45.5Ts	密绕

Not

3. ELECTRICAL SPECIFICATION (at 25°C) 电性规格

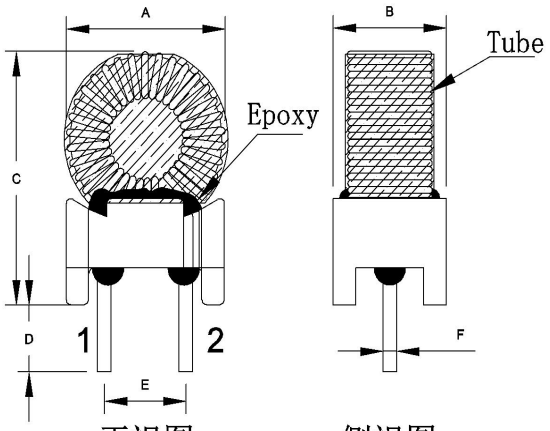
Test Item 测试项目	SPEC 规格	Test Condition 测试条件	Test Instruments 测试仪器
Inductance L 电感	123uH ±15%	100KHz, 0.25V，R100Ω	ZX1373X-12A
DCR 直流阻抗	250mΩ max	at25℃	TH2512B
Layer short 层间短路	1000V REF	波形无异常	2882A-5
HI-POT 高压测试(COIL-CORE)	500V AC	1mA 3S	WB2670A
Insulation impedance 绝缘阻抗(COIL-CORE)	100MΩ min	500V DC	ZX9320S-4
Isat 饱和电流	0.8A	L≥40%L0	ZX1373X-12A
	1.673A	L≥16%L0	ZX1373X-12A
	1.88A	L≥12%L0	ZX1373X-12A
Irms 温升电流	0.8A	Δ T≤40℃	ZX1373X-12A

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杨勇元	夏欢	陈林

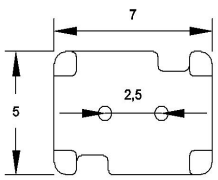
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4. DIMENSIONS 尺寸: (Unit:mm)



正视图 侧视图



BASE底视图





SPEC. (mm)	
A	8.8max
B	5.5max
C	12.5max
D	2.4±0.3
E	2.5±0.5
F	0.6±0.1

Note: 1.绕线;密绕，绕线需平整、均匀、紧密、圈数正确;2.装底座，线包置于底座中间,不得歪斜,线包与线包之间用须点胶固定,注意残胶不得外延以免影响B尺寸；3.成品需一般含浸(普通浸泡),凡立水浓度:0.92-0.94；4.成品需套超薄热缩套管；5.PIN长不含锡尖。

5. DEFINITION OF PRODUCT NAME 产品名称定义:

T	028-125	123uH	±15%			
A	B	C	D	E	F	G

A.产品类型：环形电感
B.磁芯尺寸规格
C.感量
D.公差
E.
F.
G.

6. GENERAL SPECIFICATON :

a. Storage temperature : -25°C ~ 130°C, R.H. : 30% ~ 70%
b. Operating temperature : -40°C ~ +130°C
c. Moisture sensitivity level (MSL) 2 (1 year floor life at <30°C/85% relative humidity)
d. Failures in time(FIT)/Mean time between failures(MTBF) 38 per billiion hours/26,315,789 hours, calculated per Telcordia SR-332

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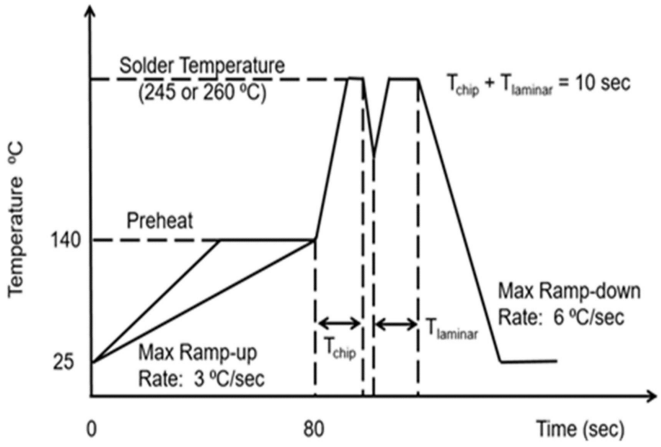
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7. MATERIAL LIST 材料清单:

No.	Item	Material Description 材料描述	Manufacturer 制造商	TEMP 温度	UL File UL档案号	Remark
1	CORE	铁硅铝T028-125	Boluo Chenxing Electronic Technology Co., Ltd.			V
2	WIRE	2UEW-FΦ0.25mm 本色	HONGQI GROUP JIANGXI COPPER CO.,LTD.	155℃	E355168	
		2UEW-FΦ0.25mm 本色	NINGBO JINTIAN NEW MATERIAL CO.. LTD	155℃	E227047	
3	VARNISH	JX-1150(*)	Yueyang GREEN Technology Co., Ltd.	130℃	E303754	
4	SN	SC07	Guangdong Zhongshi Metal Co., Ltd			
5	BASE	PM9823	SUMITOMO BAKELITE CO..LTD	150℃	E41429	
6	EPOXY	HCJ802	DONG GUAN HONG CHUANG ELECTRONIC MATERIAL CO, LTD	130℃	E504240	
7	TUBE	T2	DONGGUAN QUANTAIINDUSTRIAL CO.,LTD	125℃	E227336	

Note : Core source marded "V" means design & verify ok. 磁芯打“V” 表示设计验证Ok.

8. SOLDERING CONDITIONS 焊锡条件:

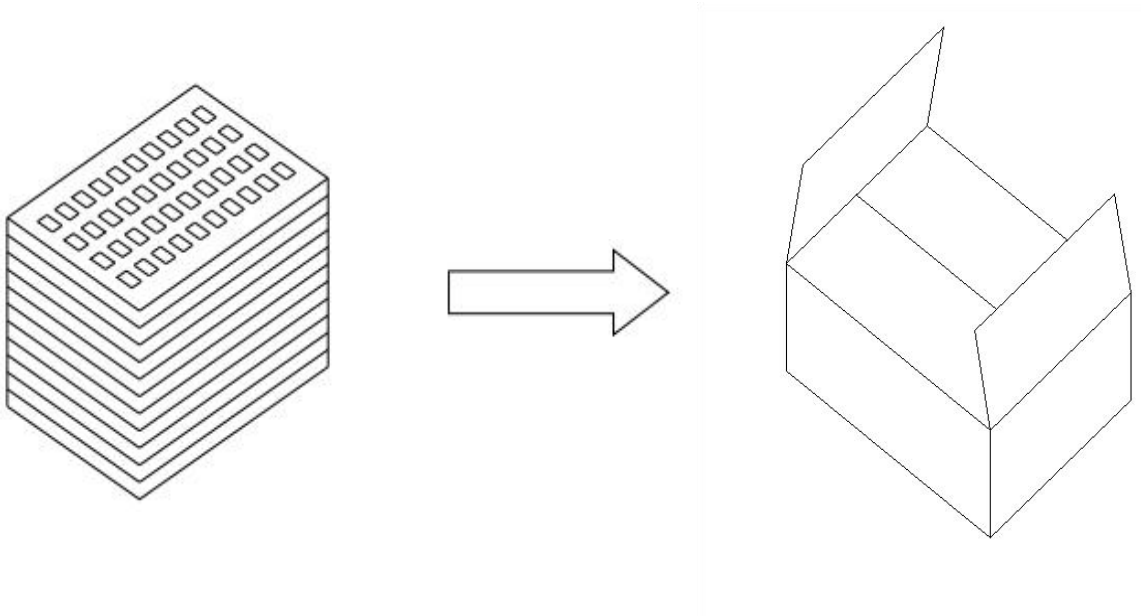
Solding process 焊接工艺	Wave soldering 波峰焊 
Resistnace to soldering heat requirements 耐焊接热要求	Soldering times 焊接次数：≥ 3次
	Wave soldering heat resistance requirements波峰焊耐热要求: 1> 器件引脚峰值温度≥265℃，265℃以上时间≥10s 2> 器件本体满足峰值温度Tp≥160℃，Tp-5℃以上时间tp≥30s，且120℃以 上时间t≥150s

杨勇元	夏欢	陈林

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9. PACKAGE SPECIFICATION 包装规格:



序号(N0)	包装材料 Packing material	尺寸 Size	材质 Material	数量 Quantity
1	吸塑Plastic uptake	378*275*13mm	PET	240/BOX
2	外箱Master Carton	385*280*145mm	K636K	5280/Carton

Remark : Weight (REF): 0.9g

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杨勇元	夏欢	陈林

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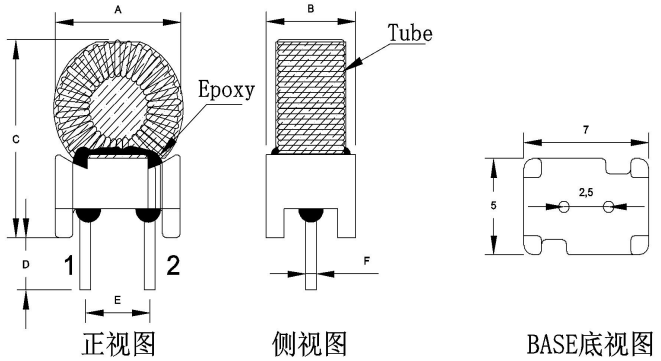
10. TEST DATA FOR PREPRODUCTION SAMPLE 样品测试数据:

Electrical Characteristic 电气特性								Dimensions 尺寸 (mm)					
Item	L	DCR	层间短路	绝缘电阻 COIL-CORE	高压测试 COIL-CORE	Isat 0.8A	Isat 1.673A	Isat 1.88A	A	B	C	D	E	F
STD.	123uH ±15%	250mΩ max	1000V 波形无异常	500V DC 100Mmin	500V AC 1mA 3S	L≥ 40%L0	L≥ 16%L0	L≥ 12%L0	8.8max	5.5max	12.5max	2.4±0.3	2.5±0.5	0.6±0.1
1	124.2	201.3	PASS	PASS	PASS	49%	22%	19%	8.21	5.04	11.27	2.56	2.56	0.59
2	125.6	202.4	PASS	PASS	PASS	51%	23%	18%	8.29	5.02	11.30	2.61	2.58	0.59
3	125.2	201.7	PASS	PASS	PASS	48%	25%	19%	8.25	5.01	11.34	2.62	2.61	0.59
4	125.4	203.5	PASS	PASS	PASS	48%	24%	18%	8.24	4.98	11.31	2.57	2.54	0.58
5	124.8	204.5	PASS	PASS	PASS	49%	23%	17%	8.23	5.06	11.32	2.59	2.53	0.58
6	126.3	203.4	PASS	PASS	PASS	49%	22%	17%	8.24	5.11	11.28	2.58	2.59	0.58
7	125.7	204.2	PASS	PASS	PASS	50%	23%	18%	8.25	5.07	11.29	2.59	2.57	0.58
8	125.7	202.8	PASS	PASS	PASS	48%	24%	19%	8.24	5.06	11.31	2.62	2.58	0.59
9	125.3	203.4	PASS	PASS	PASS	49%	23%	18%	8.23	5.04	11.34	2.61	2.57	0.59
10	125.6	201.9	PASS	PASS	PASS	48%	24%	18%	8.25	5.03	11.31	2.57	2.54	0.58
$\overline{X}$	164.1	202.91	/	/	/	48.9%	23.3%	18.10%	8.24	5.04	11.31	2.59	2.57	0.59

综合判定

√	OK		NG

外观尺寸图



正视图 侧视图 BASE底视图

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杨勇元		夏欢	陈林

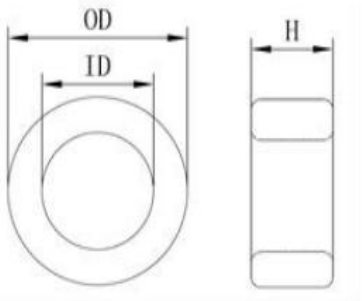
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11. CORE MATERIAL CHARACTERISTIC 磁芯材质特性

（1）外观尺寸图及尺寸检验报表:

项目	mm
外径 OD(max)	7.04±0.5
内径 ID(min)	3.96±0.5
高度 H(max)	3.1±0.4



（2）磁芯参数:

有效截面面积 Ae(cm^2)	0.047
有效磁路长度 Le(cm)	1.361
有效体积 Ve(cm^3)	0.064
单个重量 W(g/Set)	0.041

（3）电气特性:

项目	标准	测试条件	仪器
电感 Inductance	100uHMIN	100kHz/1v, φ0.25mm/45.5TS	TH2828

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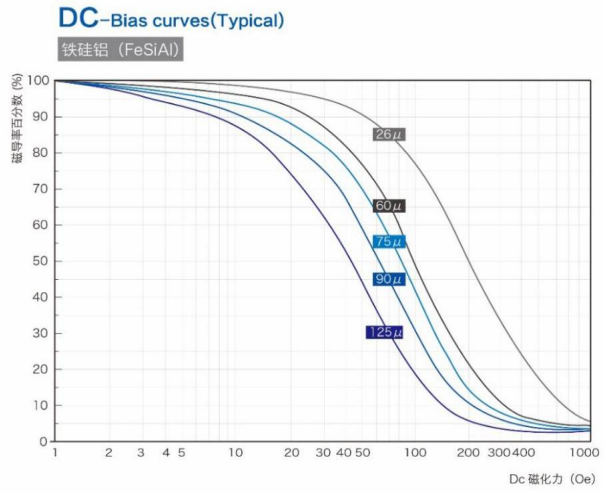
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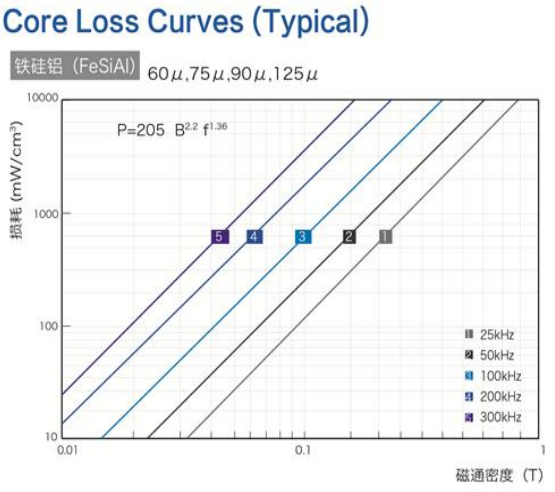
12. CORE MATERIAL CHARACTERISTIC 磁芯材质特性

（1）材质特性

初始磁导率 Initial permeability	μ	125
电感系数 A_L 常规	nH/N^2	50±10%
电感系数 A_L 二档	nH/N^2	55±10%
电感系数 A_L 三挡	nH/N^2	60±10%
电感系数 A_L 四挡	nH/N^2	65±10%
电感系数 A_L 五档	nH/N^2	70±10%
居里温度 Curie temperature	℃	≥600
密度 Density	g/cm^3	5.6

（2）磁芯曲线





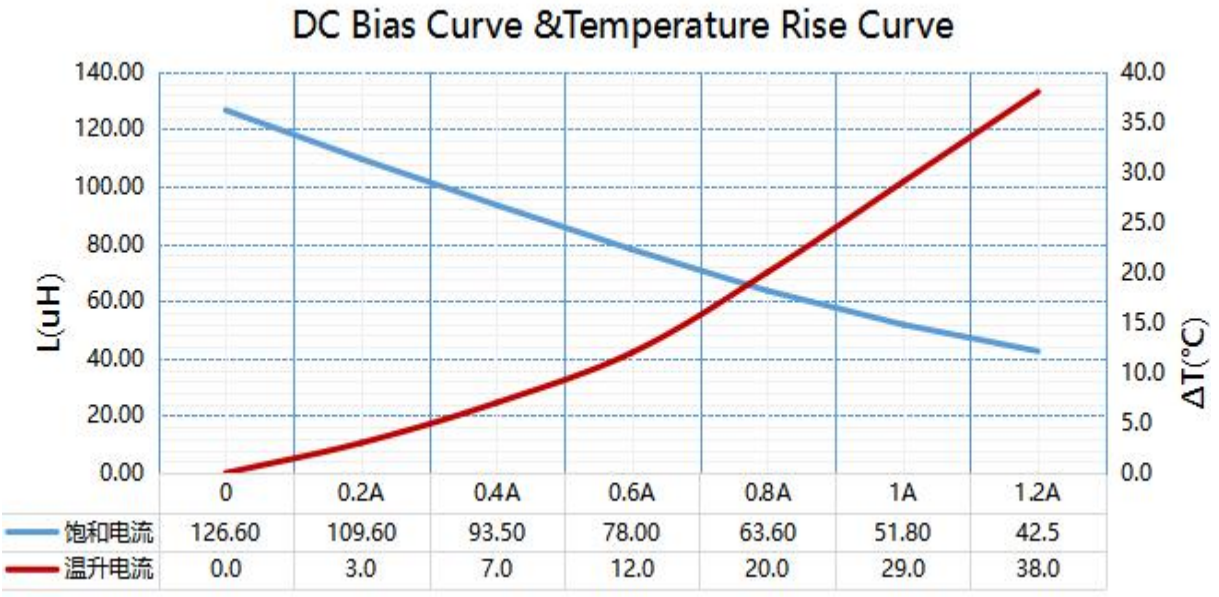
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13. DC Bias Curve &Temperature Rise Curve 直流叠加和温升电流特性曲线:

DC BIAS (A)	Inductance (uH) @1kHz, 0.25V	ΔL%	Δ T(℃)	
0 A	126	100%	0	
0.2 A	109	86.5%	3	
0.4 A	93	73.8%	7	
0.6 A	78	61.9%	12	
0.8 A	63	50.0%	20	
1 A	51	40.5%	29	
1.2 A	42	33.3%	38	



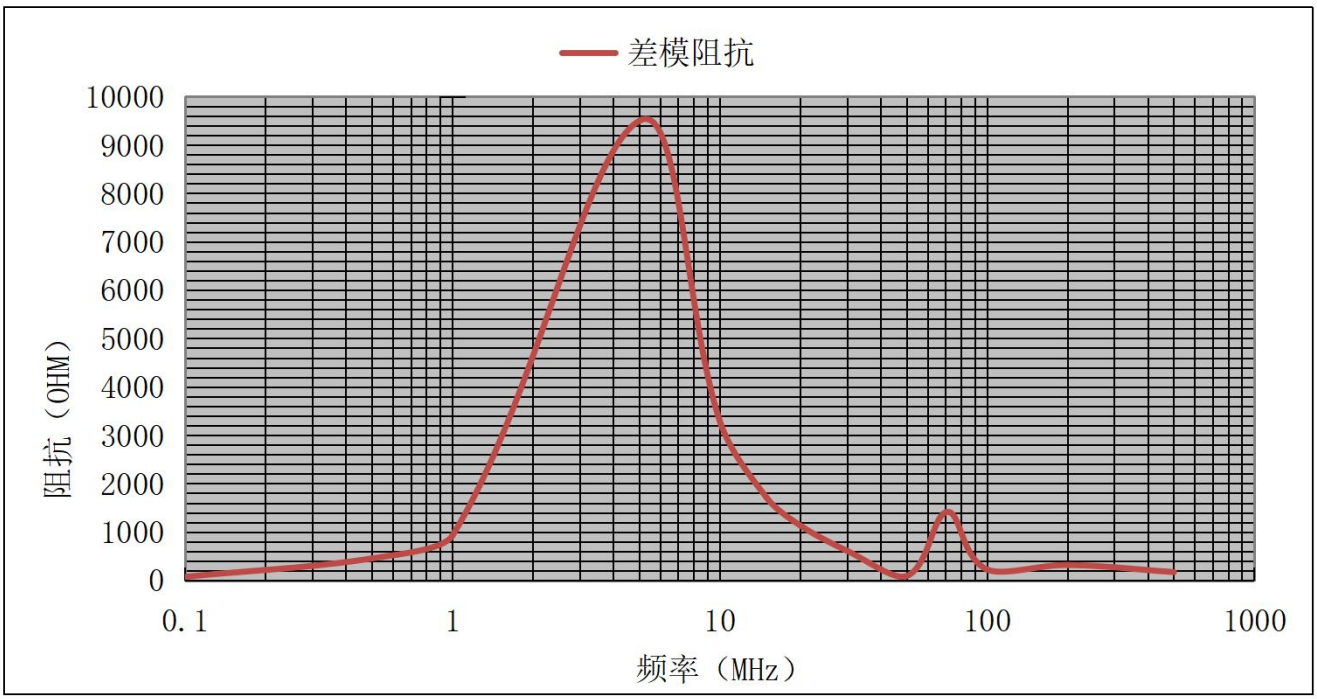
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杨勇元	夏欢	陈林

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14. IMPEDANCE CURVE 阻抗曲线:

Fequency (MHz)	0.1	0.5	1	5.09	10	15	20	50	70	100	200	500
Impendance (Ω)	80	460	935	9526	3297	1707	1139	112	1407	235	346	117

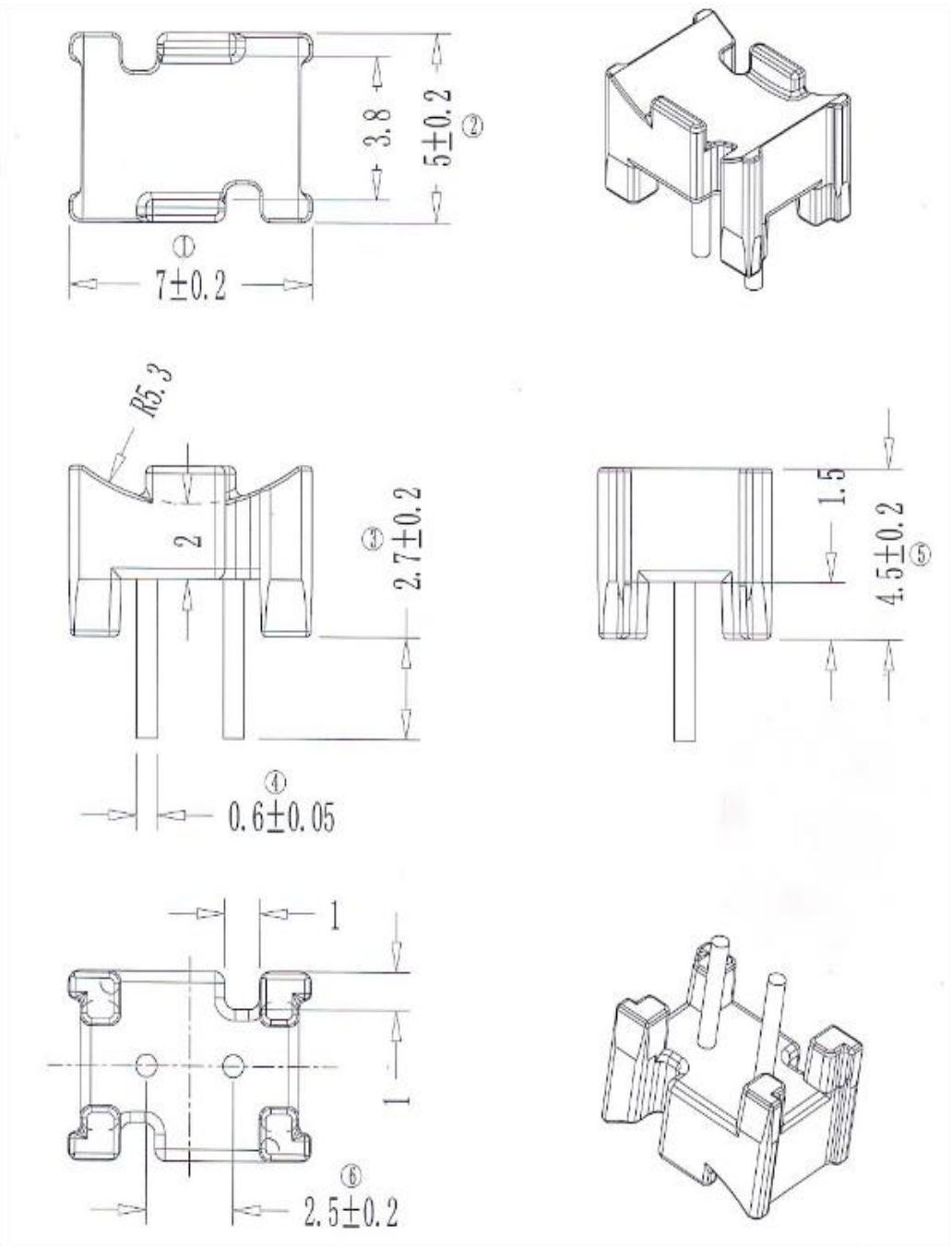


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15. BASE DRAWING 底座图纸:



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杨勇元	夏欢	陈林

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16. APPEARANCE TEST DATA 外观尺寸测试数据：(单位：mm)

Item	A	B	C	D	E	F	
STD.	8.8max	5.5max	12.5max	2.4±0.3	2.5±0.5	0.6±0.1	
1	8.21	4.95	11.40	2.45	2.55	0.58	
2	8.21	5.01	11.30	2.54	2.48	0.58	
3	8.26	5.07	11.31	2.57	2.46	0.58	
4	8.27	4.95	11.31	2.49	2.47	0.58	
5	8.23	4.96	11.30	2.55	2.48	0.58	
6	8.29	5.06	11.31	2.58	2.52	0.58	
7	8.22	5.06	11.28	2.55	2.46	0.59	
8	8.25	5.03	11.32	2.54	2.46	0.59	
9	8.21	5.06	11.36	2.51	2.48	0.58	
10	8.26	4.95	11.29	2.58	2.46	0.58	
11	8.30	5.07	11.31	2.46	2.49	0.58	
12	8.27	5.00	11.34	2.57	2.47	0.58	
13	8.26	5.07	11.31	2.60	2.55	0.58	
14	8.24	5.07	11.35	2.52	2.51	0.59	
15	8.30	4.99	11.33	2.47	2.52	0.58	
16	8.25	5.09	11.26	2.52	2.49	0.58	
17	8.21	5.08	11.35	2.54	2.52	0.58	
18	8.22	5.04	11.26	2.47	2.52	0.58	
19	8.23	5.00	11.33	2.49	2.54	0.58	
20	8.24	5.05	11.35	2.57	2.55	0.59	
21	8.30	4.98	11.28	2.53	2.53	0.59	
22	8.29	5.02	11.32	2.46	2.53	0.59	
23	8.27	5.04	11.35	2.50	2.50	0.58	
24	8.23	5.08	11.31	2.50	2.49	0.59	
25	8.21	4.97	11.38	2.50	2.53	0.59	
26	8.30	4.96	11.35	2.57	2.48	0.58	
27	8.30	5.04	11.37	2.59	2.47	0.59	
28	8.28	4.95	11.37	2.60	2.47	0.58	
29	8.24	4.99	11.40	2.57	2.54	0.58	
30	8.26	5.07	11.32	2.60	2.49	0.59	
31	8.25	4.99	11.27	2.49	2.48	0.58	
32	8.22	4.95	11.34	2.47	2.52	0.58	
33	8.26	5.03	11.30	2.57	2.49	0.58	
34	8.25	5.05	11.37	2.49	2.55	0.59	
35	8.21	4.98	11.34	2.54	2.48	0.58	
36	8.26	5.04	11.33	2.55	2.46	0.59	
MIN	8.21	4.95	11.26	2.45	2.46	0.58	
MAX	8.30	5.09	11.40	2.60	2.55	0.59	
$\overline{X}$	8.25	5.02	11.33	2.53	2.50	0.58	

PREPARED BY	CHECKED BY	APPROVAL BY
杨勇元	夏欢	陈林

SPECIFICATION FOR APPROVAL

CUSTOMER		REV NO.	A2
MODEL NO.	Differential Mode Inductor	PAGE NO.	PAGE 13 OF 13
CUST P/N:		DW NO.	2025081902
PART NO.	Z6256	DATE	2025/8/20

17.Electrical Characteristic TEST DATA 电气特性测试数据

Item	L	DCR	Isat 0.8A	Isat 1.673A	Isat 1.88A	层间短路	绝缘电阻	高压测试
STD.	123uH ±15%	250mΩ max	L≥ 40%L0	L≥16%L0	L≥12%L0	1000V 波形 无异常	500V DC 100Mmin	500V AC 1mA 3S
1	124.9	200.4	49%	23.2%	18.2%	PASS	PASS	PASS
2	126.7	200.0	50%	22.6%	18.9%	PASS	PASS	PASS
3	125.6	200.4	49%	22.9%	18.9%	PASS	PASS	PASS
4	125.1	200.4	49%	24.2%	17.2%	PASS	PASS	PASS
5	124.5	200.5	51%	23.5%	18.6%	PASS	PASS	PASS
6	125.3	200.3	50%	23.3%	17.7%	PASS	PASS	PASS
7	125.7	200.4	50%	23.3%	17.6%	PASS	PASS	PASS
8	125.3	200.4	49%	23.4%	17.6%	PASS	PASS	PASS
9	126.0	200.2	50%	23.8%	19.2%	PASS	PASS	PASS
10	125.6	200.2	51%	23.4%	18.8%	PASS	PASS	PASS
11	126.4	200.0	50%	23.3%	18.4%	PASS	PASS	PASS
12	124.5	200.2	50%	22.2%	17.3%	PASS	PASS	PASS
13	126.1	200.5	50%	23.5%	19.2%	PASS	PASS	PASS
14	126.6	200.2	49%	24.3%	17.5%	PASS	PASS	PASS
15	125.7	200.4	50%	24.1%	18.8%	PASS	PASS	PASS
16	126.3	200.1	50%	23.1%	18.7%	PASS	PASS	PASS
17	124.7	200.0	49%	22.7%	18.2%	PASS	PASS	PASS
18	125.1	200.0	49%	23.5%	17.7%	PASS	PASS	PASS
19	126.4	200.2	50%	23.6%	18.1%	PASS	PASS	PASS
20	124.8	200.0	49%	22.5%	17.5%	PASS	PASS	PASS
21	125.2	200.3	49%	22.4%	17.6%	PASS	PASS	PASS
22	124.8	200.5	50%	23.2%	19.0%	PASS	PASS	PASS
23	126.2	200.4	51%	22.9%	17.7%	PASS	PASS	PASS
24	125.8	200.2	51%	24.2%	18.7%	PASS	PASS	PASS
25	124.6	200.5	51%	22.8%	17.8%	PASS	PASS	PASS
26	125.0	200.4	50%	22.8%	17.4%	PASS	PASS	PASS
27	126.0	200.0	50%	22.9%	17.6%	PASS	PASS	PASS
28	124.6	200.0	49%	22.4%	18.4%	PASS	PASS	PASS
29	125.4	200.3	50%	22.7%	17.9%	PASS	PASS	PASS
30	126.0	200.1	49%	24.3%	17.9%	PASS	PASS	PASS
31	124.8	200.2	49%	23.2%	19.2%	PASS	PASS	PASS
32	124.3	200.3	50%	24.3%	18.1%	PASS	PASS	PASS
33	124.4	200.0	48%	23.5%	18.3%	PASS	PASS	PASS
34	125.6	200.4	50%	22.6%	18.7%	PASS	PASS	PASS
35	126.4	200.3	49%	23.4%	17.5%	PASS	PASS	PASS
36	126.4	200.2	49%	24.2%	18.2%	PASS	PASS	PASS
MIN	124.3	200.0	48%	22.2%	17.2%	/	/	/
MAX	126.7	200.5	51%	24.3%	19.2%	/	/	/
$\overline{X}$	125.5	200.2	50%	23.3%	18.2%	/	/	/

PREPARED BY		CHECKED BY	APPROVAL BY
杨勇元		夏欢	陈林