



上海立凯电控科技有限公司

Shanghai LineKey Technology Co., Ltd.

RoHS

Specification For Approval

规格书

SFA NO.: LK-0593-13

DATE: 2023-06-12

客户名称: _____

部件名称: 功率变压器

客户料号: _____

公司料号: LT51-111

供方确认			客户确认
制 作	审 核	核 准	
吴 子 晗	薄 双 燕	陈 余 想	

SPEC/更改记录

版本	序号	更改描述	更改原因	备注
A 0				

ADD (地址): 上海市浦东新区商城路 800 号斯米克大厦1102室
Room 1102, CIMIC Tower, No.800, ShangCheng Road, Pudong, Shanghai, China

TEL (电话): 021-61993616

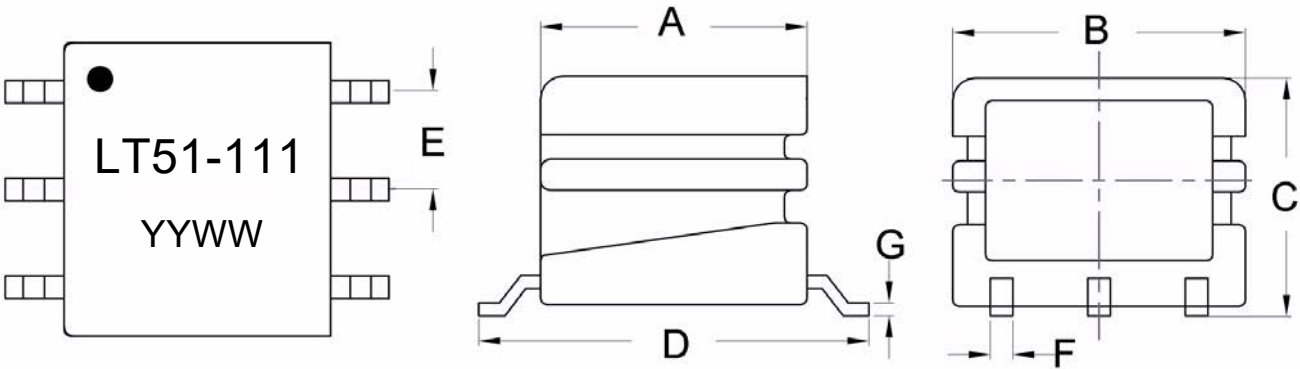
FAX (传真): 021-61993616

Web (网址): www.linekey.cn

E-mail (邮箱): sales@linekey.cn

Zip Code (邮编): 200120

1.机械轮廓/ (Mechanical figure & Dimensions) UNIT:mm

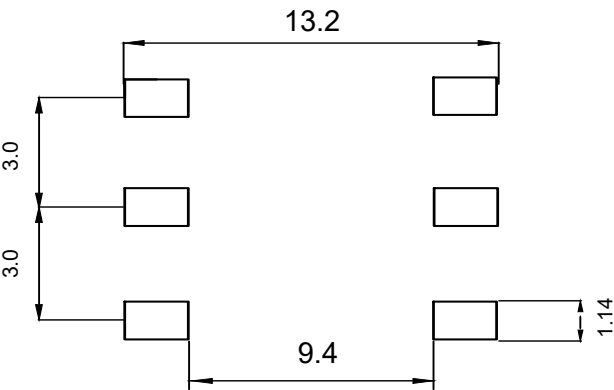


顶视图/Top View

侧视图/Side View

侧视图/Side View

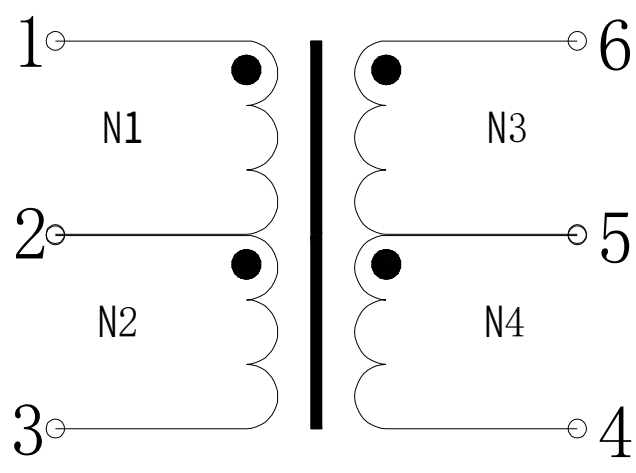
A	B	C	D	E	F	G	H	I	J	K
8.6±0.3	9.0±0.3	7.3±0.3	12.0±0.5	3.0±0.3	0.7	0.4				



推荐焊盘/ Pad

拟制/PREPARED BY: 吴子晗	审核/CHECKED BY: 薄双燕	批准/RATIFYIED BY: 陈余想
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2.电气原理图/ (WINDING CONNECTION)



3.工艺要求/ (TECHNICAL REQUIREMENT)

序号 NO.	端子/PIN		线材 Wire	圈数 Turns	胶带 (turns) Tape	挡墙宽度 (mm) Margin Tape	备注 Remark
	入/In	出/Out					
N1	1	2	TIW/H - Φ0.12(mm)	9(ref)			
N2	2	3	TIW/H - Φ0.12(mm)	9(ref)			
N3	6	5	FIW4 - Φ0.12(mm)	10(ref)			
N4	5	4	FIW4 - Φ0.12(mm)	10(ref)			

4. 材料清单/ (MATERIAL LIST)

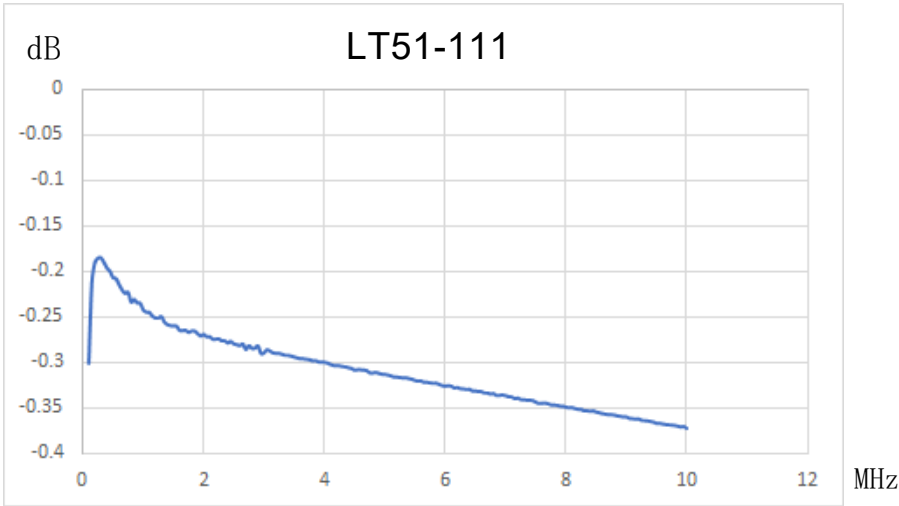
NO.	项目/Item	描述/Description	材质/Material	供应商/Supplier	UL NO.
1	Plastic Case	6Pin	PM9630	SUMITOMO BAKELITE CO LTD	E41429
2	Core	T Core	Ferrite	ACME Electronics Corporation	N/A
3	Wire	FIW 180℃	Polyurethane enameled	ZHUHAI SUNTEK WIRE CO LTD	E234867
3	Wire	TIW 180℃		WUHU OULY Electronic Co., LTD	E466302
5	Silicone Rubber	H-907H	N/A	DONG GUAN HUA CHUANG MATERIAL FTY	E304477
6	Solder Bar	SN100C	Sn99.3/Cu0.7	ANSON OR EQUIVALENT	N/A

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5.电气参数/ (ELECTRICAL SPECIFICATION)

序号 NO.	项目 ITEMS	测量端 MEASURING POINT	规格参数 SPECIFICATION	测量条件(AT 25°C) TEST CONDITION	测试仪器 APPARATUS
1	电感量 Inductance	1-3	340uH Min.	100KHz/0.01V 串联测试	TH8300
2	漏感 Leakage Inductance	1-3(6-4 短接)	1.0uH Max.	100KHz/0.01V 串联测试	
3	耦合电容 Coupling Capacitance	1-6	5.25pF Typ.	100KHz/0.01V 串联测试	
4	伏秒积 Voltage-Time		10 Vus	N1/双极性波形	
5	直流电阻 DC Resistacne	1-3	419mΩ Max.	(AT 20°C)	TH2516A
		6-4	335mΩ Max.		
6	匝比 Turns Ratio	(1-3):(6-4)	1:1.1	100KHz/0.01V	GKT3259
7	绝缘耐压 Insulation Voltage	(1-3) to (6-4)	5.0KV(AC)/60S/1mA		CS9912B

6.插入损耗曲线/ (INSERTION LOSS VS FREQ.)



7. 推荐回流焊曲线/ (CLASSIFICATION REFLOW PROFILES)

Profiles are based on the IPC/JEDEC J-STD-020D standard*Figure 1 shows a typical profile and Table 1 lists the "reflow requirements"associated with this profile. Small volume SMD packages are typically classified at higher peak temperatures(**typical value is highlighted in bold,see Table 2**). Exceeding these conditions may lower product reliability.

Figure 1 – Reflow Profile for Solderability Testing

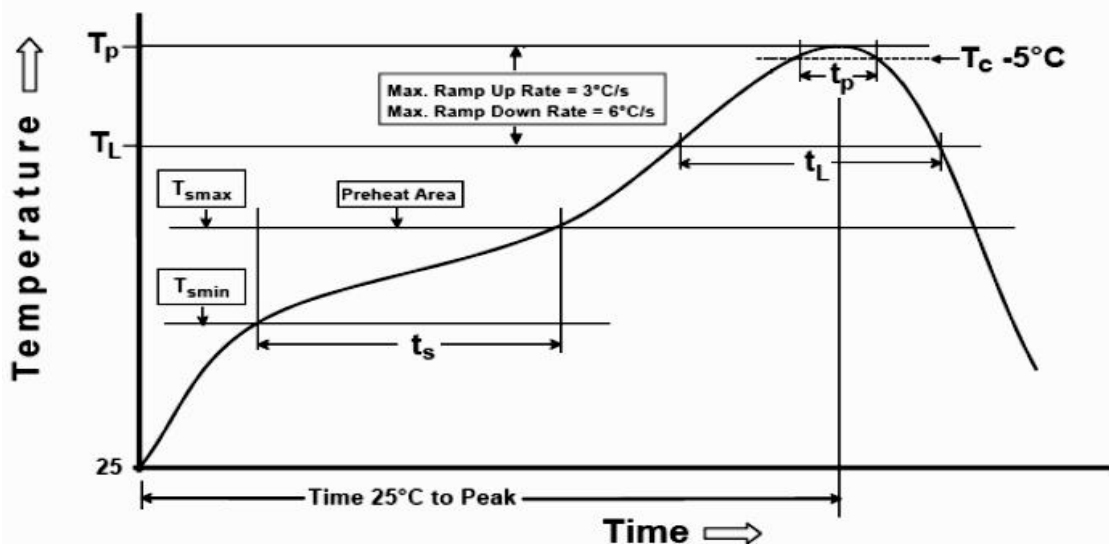


Table 1-Reflow Requirements for Solderability Testing

Reflow Parameter	Specification
Preheat temperature(T_{smin} - T_{smax})	150°C-200°C
Preheat Time(t_s)	60-180 seconds
Ramp-up Rate(T_L - T_p)	3°C/second maximum
Time Above 217°C(T_L)	60-150 seconds
Peak Temperature(T_p)	see Table 2
Time Within 5°C of Peak(T_p)	20-40 seconds
Ramp-down Rate(T_p - T_L)	6°C/second maximum
25°C to Peak Temperature(T to T_p)	8minutes maximum

*Table adapted from JEDEC Standard IPC/JEDEC J-STD-020D.

Table 2-Peak Temperatures for Lead Free Components

Package Thickness	Volume mm3	Volume mm3	Volume mm3
	<350	350-2000	>2000
<1.6mm	260+0-5°C	260+0-5°C	260+0-5°C
1.6-2.5mm	260+0-5°C	250+0-5°C	245+0-5°C
>2.5mm	250+0-5°C	245+0-5°C	245+0-5°C

拟制/PREPARED BY:

吴子晗

审核/CHECKED BY:

薄双燕

批准/RATIFYIED BY:

陈余想

电子样品检验报告

客户名称		部件名称	耦合变压器
客户料号		公司料号	LT51-111

一、电气性能 环境温度：25℃ 湿度：75%

测试项目	测试标准&要求		测试数据									
			1	2	3	4	5	6	7	8	9	10
电感量	1-3 (340uH Min.)	100KHz/0.01V 串联测试	571	484	524	545	549	583	51.	567	557	534
漏感	1-3(6-4短接) (1.0uH Max.)	100KHz/0.01V 串联测试	0.23	0.29	0.48	0.27	0.26	0.35	0.25	0.22	0.21	0.20
耦合电容	1-6 (5.25pF Typ.)	100KHz/0.01V 串联测试	5.5	4.7	5.2	5.0	5.2	5.1	5.0	5.2	5.4	5.2
匝比	(1-3):(6-4) = 1:1.1		OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
直流电阻	1-3(419mΩ Max.)		315.8	312.5	311.7	312.8	310.0	314.1	308.7	307.3	310.5	311.5
	6-4(335mΩ Max.)		275.9	277.0	282.7	283.1	276.7	277.3	279.0	276.8	275.4	276.8
绝缘耐压	(1-3) to (6-4)	5.0KV (AC) / 60S / 1mA	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

测试仪器：

1.TH2827C 2.TH2516A 3.GKT3259 4.CS9912B

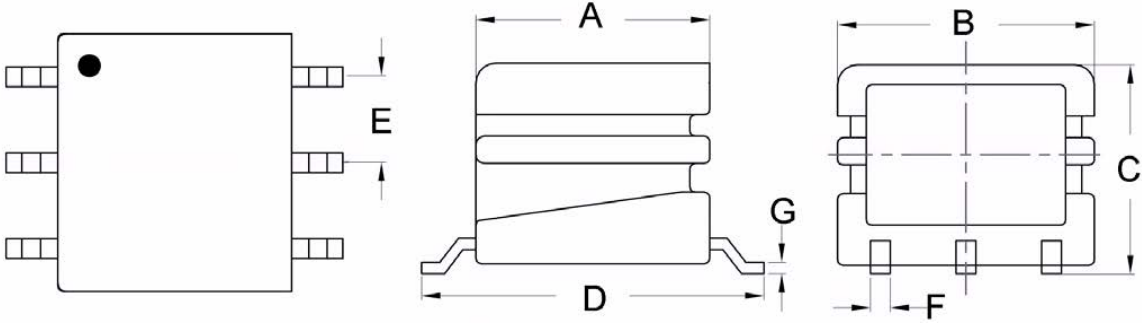
备注：

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电子样品检验报告

客户名称		部件名称	耦合变压器
客户料号		公司料号	LT51-111

产品图纸



产品尺寸

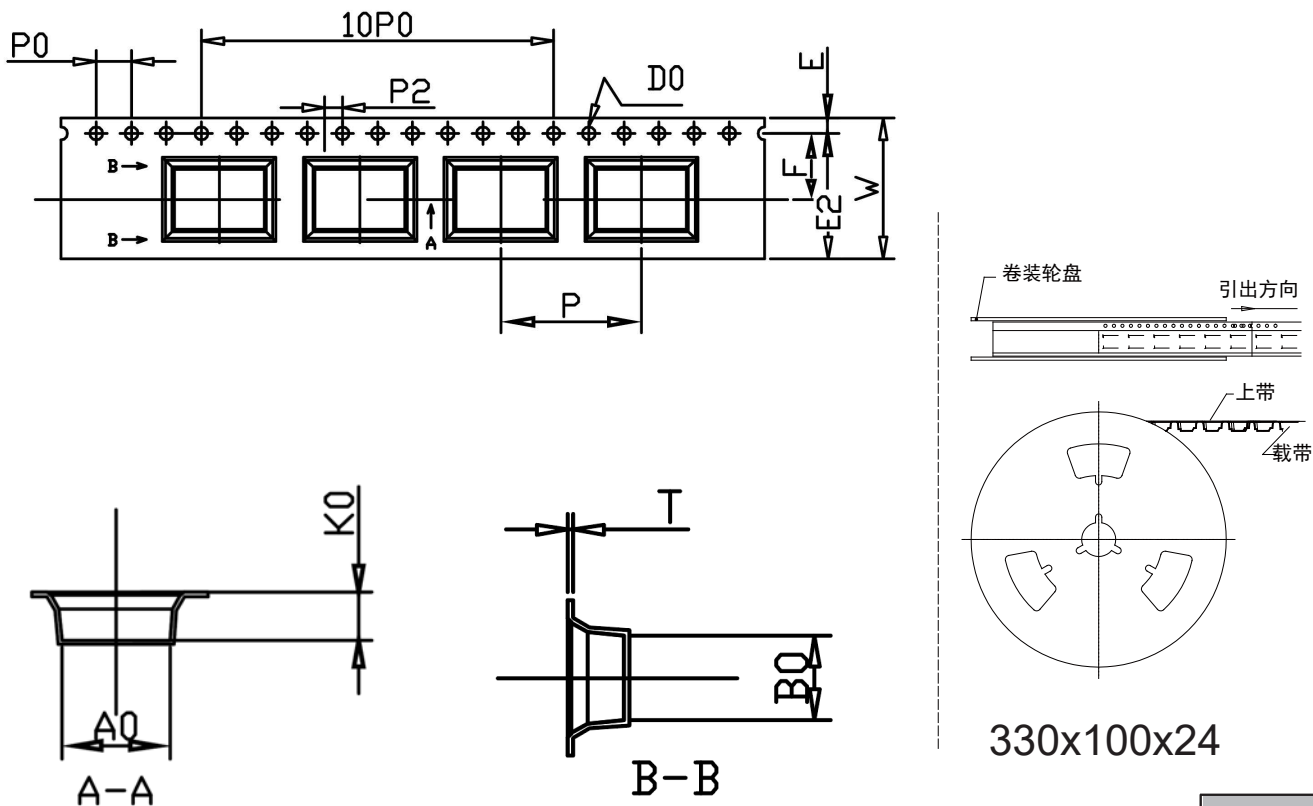
编号	A	B	C	D	E	F	G
	8.6±0.3	9.0±0.3	7.3±0.3	12.0±0.5	3.0±0.3	0.7 Ref	0.4 Max
1	8.58	8.97	7.22	11.94	2.97	0.75	0.44
2	8.58	8.98	7.26	11.99	2.94	0.74	0.45
3	8.65	8.95	7.21	12.00	2.96	0.74	0.44
4	8.52	8.96	7.22	11.93	2.96	0.75	0.47
5	8.53	8.96	7.25	11.94	2.95	0.74	0.46
6	8.59	8.97	7.25	11.98	2.94	0.75	0.44
7	8.66	8.96	7.26	11.98	2.96	0.75	0.47
8	8.58	9.00	7.23	11.94	2.93	0.75	0.46
9	8.69	8.97	7.26	11.97	2.92	0.75	0.44
10	8.61	8.99	7.27	12.00	2.97	0.75	0.45
平均值	8.60	8.97	7.24	11.97	2.95	0.75	0.45
结果	OK	OK	OK	OK	OK	OK	OK

测试仪器:

1. 游标卡尺

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包装信息



包装数 pcs.
350

	E(mm)	E2(mm)	F(mm)	P2(mm)	D0(mm)	P0(mm)	10P0(mm)	W(mm)	P(mm)	A0(mm)	B0(mm)	K0(mm)	T(mm)
公差	±0.1	Min.	±0.1	±0.1	+0.1-0.0	±0.1	±0.2	±0.3	±0.1	±0.1	±0.1	±0.1	±0.05
数量	1.75	22.25	11.5	2.0	1.5	4.0	40.0	24.0	20.0	12.3	9.3	8.1	0.5

外箱标签

上海立凯电控科技有限公司
Shanghai Linekey Technology Co., Ltd.
客户编码: xxxxxxxx Order Number: xxxxxxxx
Quantity: xx PCS Date Code: xxxx-xx-xx

xxxxxxx

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