

SPECIFICATION

产品规格书

CUSTOMER 客户代码	SF-129
PRODUCT DESCRIPTION 产品描述	EP13 TRANSFORMER
Sunlord FuJun P/N 顺络富钧料号	DEP130031-129
CUSTOMER P/N 客户料号	

[☒New Released新发行 ☐Revised修订版]

SPEC No. 版本号 : A0

【This SPEC is total 7 pages 本规格共7页】

【ROHS, Compliant Parts 符合RoHS要求的产品】

Approved By 批准	Checked By 审核	Issued By 发行
Jacky Looh 陆利兵	Cole Shen 沈作荣	Aliya 王阿丽

Shenzhen Sunlord Electronics Co., Ltd.

深圳顺络电子股份有限公司

Address: Sunlord Industrial Park,Dafuyuan Industrial Zone,Longhua,Shenzhen,Guangdong P.R.,China 518110
地址: 广东省深圳市龙华区观澜大富苑工业区顺络工业园 邮编: 518110

Tel电话: 0086-755-29832333 Fax传真: 0086-755-82269029 E-Mail电子邮箱: sunlord@sunlordinc.com

JiangSu Sunlord FuJun New Energy Co.,Ltd.

江苏顺络富钧新能源有限公司

Address: No. 333 Fuming Middle Road, Tangqiao Town,Zhangjiagang City, Jiangsu P.R., China 215600
地址: 江苏省张家港市塘桥镇富民中路333号 邮编: 215600
Tel电话: 0086-0512-58910890 Fax传真: 0086-0512-58910863

【For Customer approval Only】

Date: _____

Qualification Status:

Full

Restricted

Rejected

Approved By	Verified By	Re-checked By	Checked By

Comments:

【Version change history版本更改历史记录】

[illegible]

Caution

All products listed in this specification are developed, designed and intended for use in general electronics equipment. The products are not designed or warranted to meet the requirements of the applications listed below, whose performance and/or quality require especially high reliability, or whose failure, malfunction or trouble might directly cause damage to society, person, or property. Please understand that we are not responsible for any damage or liability caused by use of the products in any of the applications below. Please contact us for more details if you intend to use our products in the following applications. 1. Aircraft equipment 2. Aerospace equipment 3. Undersea equipment 4. Nuclear control equipment 5. Military equipment 6. Power plant equipment 7. Medical equipment 8. Transportation equipment (automobiles, trains, ships, etc.) 9. Traffic signal equipment 10. Disaster prevention / crime prevention equipment 11. Data-processing equipment 12. Applications of similar complexity or with reliability requirements comparable to the applications listed in the above

注意:

本规范中列出的所有产品都是为通用电子设备开发、设计和使用的。产品的设计或保证不满足下列应用的要求，其性能和/或质量要求特别高的可靠性，或其故障、故障或故障可能直接导致对社会、人身或财产的损害。请理解，我们对在以下任何应用程序中使用产品所造成的任何损坏或责任概不负责。如果您打算在以下应用中使用我们的产品，请与我们联系以了解更多详情。1. 飞机设备 2. 航空航天设备 3. 海底设备 4. 核子控制设备 5. 军事装备 6. 发电厂设备 7. 医疗设备 8. 运输设备（汽车、火车、轮船等） 9. 交通信号设备 10. 防灾/预防犯罪设备 11. 数据处理设备 12. 应用程序具有与上述应用程序类似的复杂性或可靠性要求。

1. Aircraft equipment 飞机设备
2. Aerospace equipment 航空航天设备
3. Undersea equipment 海底设备
4. Nuclear control equipment 核控制设备
5. Military equipment 军事设备
6. Power plant equipment 发电厂设备
7. Medical equipment 医疗设备
8. Transportation equipment (automobiles, trains, ships, etc.) 运输设备（汽车、火车、轮船等）
9. Traffic signal equipment 交通信号设备
10. Disaster prevention / crime prevention equipment 防灾/预防犯罪设备
11. Data-processing equipment 数据处理设备
12. Applications of similar complexity or with reliability requirements comparable to the applications listed in the above
与上述应用程序具有类似复杂性或可靠性要求的应用程序

1. Scope范围

This specification is applied to the Micro inversion transformer DEP130031-129 本规范适用于微逆变压器 DEP130031-129

2. Product Description and Identification (Part Number) 产品说明和标识（产品料号）

- a) Description: DEP130031-129 Transformer. 描述: DEP130031-129 变压器
- b) Product Identification (Part Number) 产品标识（产品料号）

D EP 13 0031 - 129

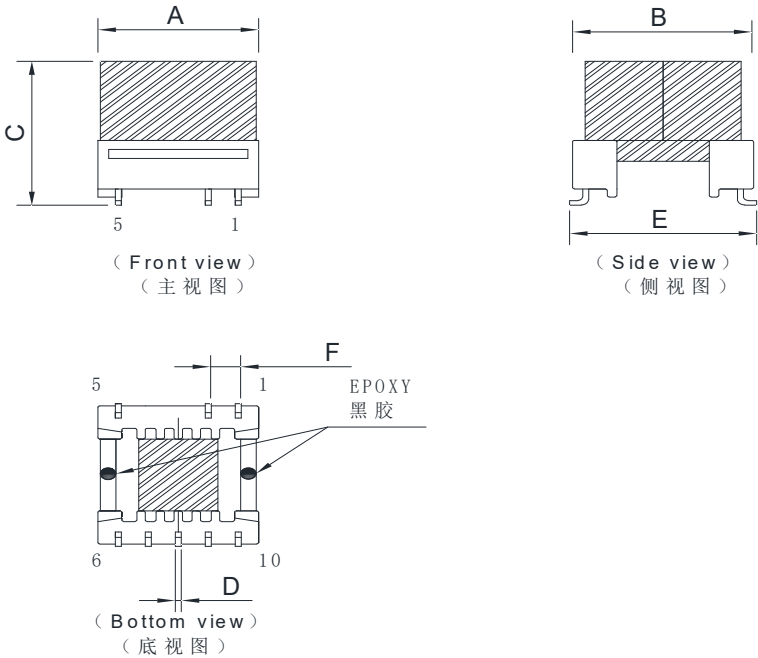
① ② ③ ④ ⑤

Named notes:命名注释:

- ①Customized Products 定制产品
- ②Core Shape 磁芯形状
- ③Core Size 磁芯尺寸
- ④Serial Number 产品序列号
- ⑤Customer Code 客户代码

3. Shape and Dimensions 形状和尺寸

3.1 Shape 外形图



Note : For RoHS compliant products:
注:对于符合RoHS标准的产品:
1.Bobbin cut pin 3,4
1.骨架拔pin 3,4
2.Assembly of air gap magnetic core on PIN 6-10 side;
2.磁芯气隙组装在PIN6-10侧
3.Fix the core with tape and black glue after assembly;
3.组装后用胶带和黑胶固定磁芯
4.The product does need to be immersed in oil,
4.产品需要浸油,
5.Marking: On the top magnetic core of the product, the word feet are facing PIN3-4 side. The content of laser coding is as follows
5.Marking:产品顶部磁芯上, 字脚朝PIN1-5侧。使用激光打码内容如下所示;
DEP130031
SL YYWW

3.2 Dimensions (Unit: mm) 外形尺寸（单位:mm）

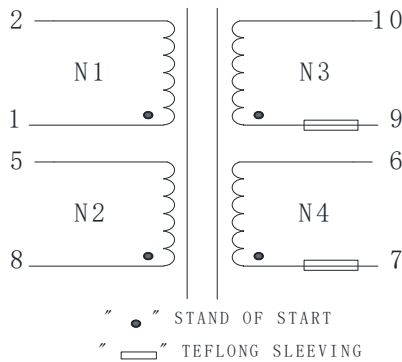
ITEM项目	A	B	C	D	E	F			
Unit(mm) 单位	15.0	16.5	16.7	SQ0.5	15.60	2.5			
TOLERANCE 公差	MAX	MAX	MAX	±0.2	±1.0	±0.5			
ITEM项目									
Unit(mm) 单位									
TOLERANCE 公差									

3.3 Appearance 外观

There is not the visual track and other mechanical damage on the product surface. Marking must be clearly and stable.
产品表面无视觉痕迹及其它机械损伤。 标识必须清晰稳定。
Core and other parts assembly stably. mounting dimensions and the location of the terminals should be in accord with standard.
磁芯与其他部件装配稳定。 端子的安装尺寸和位置应符合标准。

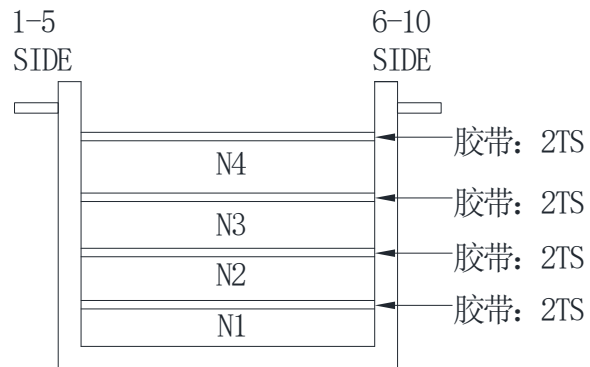
4.Circuit diagram

电路图:



5.Winding construct:

绕组结构:



6. Winding Specification 绕组规格

NO.	MARGIN TAPE WIDTH 胶带宽度		START & FINISH TERMINAL 起收脚位				WIRE SPECIFICATION 导线规格	WINDING TURN 绕组匝数	METHOD 绕制方式	TAPE TURN 胶带圈数	NOTE 注意
	PIN SIDE 脚位侧	TOP SIDE 顶面	START 起始脚	TUBE 套管	FINISH 收线脚	TUBE 套定					
N1			1		2		FIW-6 Φ 0.2mm*1P	18 TS	DENSE 密绕	2TS	
N2			8		5		2UEW-F 0.18mm*2P	15TS	DENSE 密绕	2TS	
N3			9	V	10		2UEW-F 0.18mm*2P	25TS	DENSE 密绕	2TS	
N4			7	V	6		2UEW-F 0.18mm*2P	15TS	DENSE 密绕	2TS	

NOTE: Use high-temperature tape for the winding 线包使用高温胶带

7. Electrical Test 电气测试

ITEM 项目	TEST TERMINAL 测试脚位	TEST SPECIFICATION 测试规格	TEST CONDITION 测试条件	TESTER 测试仪器
INDUCTANCE 电感量	1 -- 2	26.5uH $\pm$ 10%	1KHz ,1.0V内阻100 Ω	TH2829 OR Equivalent TH2829或等效设备
LEAKAGE INDUCTANCE				
DCR 直流电阻	1 -- 2	290.0m Ω MAX.	25 $^{\circ}$ C	TH2512B OR Equivalent TH2512B或等效设备
	8 -- 5	200.0m Ω MAX.		
	9 -- 10	315.0m Ω MAX.		
	7 -- 6	250.0m Ω MAX.		
TURNS RATIO 圈数比 NP 1-2=18TS	8 -- 5	15.0 $\pm$ 0.5TS	20KHz ,1.0V	TH2829 OR Equivalent TH2829或等效设备
	9 -- 10	25.0 $\pm$ 0.5TS		
	7 -- 6	15.0 $\pm$ 0.5TS		
HI-POT 耐高压	PIN1 -- PIN5,6,9	No breakdown	AC 3000V 3mA 60SEC	TH9320 OR Equivalent TH9320或等效设备
	PIN1,5,6,9 -- CORE	No breakdown	AC1500V 3mA 60SEC	
Insulation Resistance 绝缘阻抗	PIN1 -- PIN5,6,9		DC 500V 100M OHMS MIN	TH-9320 OR Equivalent TH-9320或等效设备
	PIN1,5,6,9 -- CORE		DC 500V 100M OHMS MIN	

Test Condition: T=25 $\pm$ 5 $^{\circ}$ C, RH=65% $\pm$ 20% Operating Temperature: -40 $^{\circ}$ C to 125 $^{\circ}$ C试验条件:T=25 $\pm$ 5 $^{\circ}$ C, 相对湿度=65% $\pm$ 20% 工作温度:-40 $^{\circ}$ C~125 $^{\circ}$ C

8. Material List

NO.序号	ITEM项目	MATERIAL DESCRIPTION 材料描述	TEMP. CLASS 耐温等级	VENDER.供应商	UL FILE NO. UL认证号
1	Bobbin 骨架 EP13	PM9630 UL94V-0	150	SUMITOMO 住友	E41429
2	CORE 磁芯	EP13 HE44	NA	HEC 东阳光	/
		EP13 DMR44	NA	DMECG 东磁	
		EP13 NH2C	NA	LianFeng 联丰	
		EP13 BP44	NA	BDK 佰磁/佰迪凯	
3	Wire 2UEW-F	MW79#	155	JinTian OR equivalent 金田 或 同等	E227047
4	Wire FIW-6	MW85#	180	Elektrisola OR equivalent 益利素勒 或 同等	E258243
5	Tape 胶带	PF-301	180	YaHua OR equivalent 亚华 或 同等	E165111
6	SOLDER 锡	Sn Cu0.7	NA	WANSHAN 万山	/
7	EPOXY 胶	3300	90	EATTO	E253983.
8	TUBE 套管	PTFE WF	200	WORE	E203950
9	VARNISH 凡立水	T4260(a)	130	TAIHU	E228349

9. Packaging Information包装信息: (Unit单位 :mm)

9.1 Storage and Manufacturer存储和制造商:

9.1.1 Storage 存储: Recommended keeping conditions推荐存储条件: 温度 **-40℃~85℃**, 相对湿度**5~95%RH (Max.)**

Service life使用寿命 : Within the limits of twelve month from being produced.自生产之日起十二个月内。

The appearance and solder ability should be check, If product is not in expiry date.如果产品不在有效期内，应检查其外观和可焊性。

9.1.2 Manufacturer: Shenzhen Sunlord Electronics Co., Ltd. 制造商 :深圳顺络电子股份有限公司

Sunlord Industrial Park, Dafuyuan Industrial Zone, Guanlan, Shenzhen, China

广东省龙华区观澜大富苑工业区顺络工业园

TEL电话: +86-0755-82400574 FAX传真: +86-0755-82269029

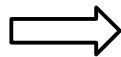
JiangSu Sunlord FuJun New Energy Co.,Ltd. 制造商 :江苏顺络富钧新能源有限公司

No. 333 Fuming Middle Road, Tangqiao Town,Zhangjiagang City, Jiangsu P.R., China

江苏省张家港市塘桥镇富民中路333号

TEL电话:0086-0512-58910890 FAX传真:0086-0512-58910863

9.1.3 Packing: 包装:



***PCS per roll, 1 box
of 3 rolls * ***=***pcs

Each box: 2 boxes *
PCS=pcs

Weight:

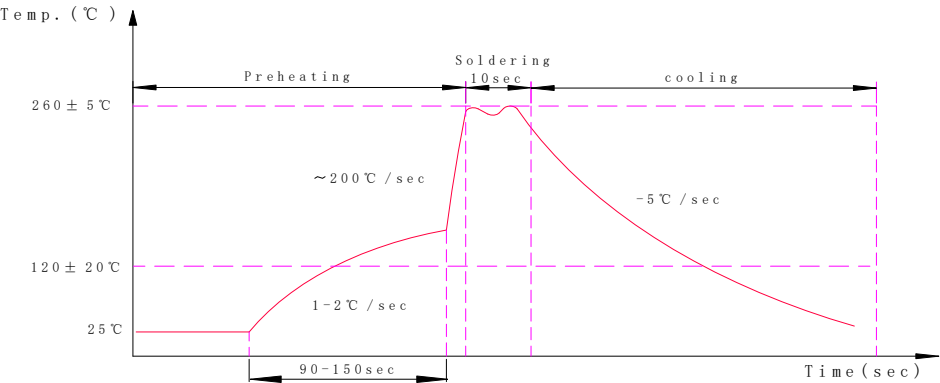
Single weight/PCS: g

gross weight/box: Kg

net weight/box: Kg

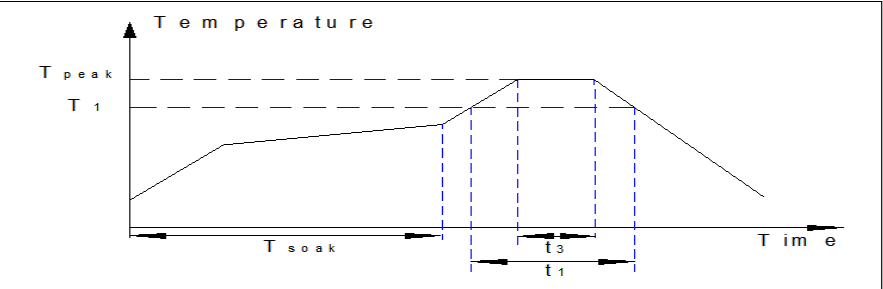
10. THERMAL PROFILE 焊接简要:

10.1 Wave soldering 波峰焊介绍:



Profile feature	Time	Temperature
Preheating time	90~150 sec	
Heating rate during preheat		1~2°C / sec
Final preheat temperature		120±20°C
Ramp-up rate		~200°C / sec
Dip time and temperature	2.5~5 sec	260±5°C
Ramp-down rate		~5°C / sec

10.2 Reflow soldering profile 回流焊介绍:



Pb-free reflow profile requirements for soldering heat resistance			
Parameter	Reference	Specification	
		Large Body Thickness ≥2.5mm and Volume ≥350mm³	Small Body Thickness ≥2.5mm and Volume <350mm³
Temperature gradient in preheating		3°C/s max.	
Soak time 150°C- 200°C	Tsoak	60 -180 seconds	
Time above 217°C (T1)	t1	60 - 150 seconds	
Time within 5°C of actual peak	t3	20 -40 seconds	
Peak temperature in reflow	Tpeak	245°C (+0/-5°C)	250°C (+0/-5°C)
Temperature gradient in cooling		6°C/second Max.	
Time 25 °C to Peak Temperature		8 minutes Max.	