ES1AF~ES1JF

Rev.C Feb.-2015

蓝箭电子
BLUE ROCKET ELECTRONICS

DATA SHEET

描述 / Descriptions

超快恢复二极管，反向电压：50V~600V，正向电流：1.0A，薄型 SMAF 封装。
Surface Mount Superfast Recovery Rectifier,Reverse Voltage:50 to600V,Forward Current:1.0A, SMAF thin package.

特征 / Features

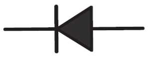
玻璃钝化芯片，反向恢复时间快，无铅符合欧盟 RoHS 指令 2011/65/EU，适用于表面贴装。无卤产品。
Features: Glass Passivated Chip Junction，Fast reverse recovery time，Lead free in comply with EU R0HS 2011/65/EU directives，For surface mounted applications.Halogen free product.

用途 / Applications

一般用途.

General purpose.

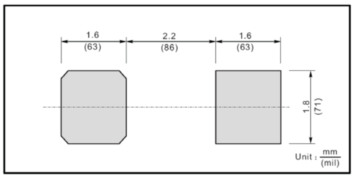
内部等效电路 / Equivalent Circuit



引脚排列 / Pinning

PIN	DESCRIPTION
1	Cathode
2	Anode

The recommended mounting pad size



印章代码 / Marking

见印章说明。See Marking Instructions

极限参数 / Absolute Maximum Ratings(Ta=25℃)

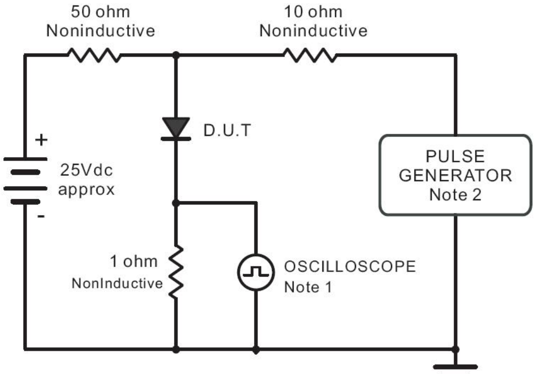
参数 Parameter	符号 Symbol	数值 Rating							单位 Unit
		ES1AF	ES1BF	ES1CF	ES1DF	ES1EF	ES1GF	ES1JF	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at T_L= 100℃	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Typical Junction Capacitance at V_R =4V,f=1MHZ	C_j	10							pF
Typical Thermal Resistance 1）	$R_{\theta JA}$	115							℃/W
Operating and Storage Temperature Range	T_j,T_{stg}	-55~+150							℃

Note:
1）P.C.B. mounted with 0.2X0.2"(5X5 mm) copper pad areas.

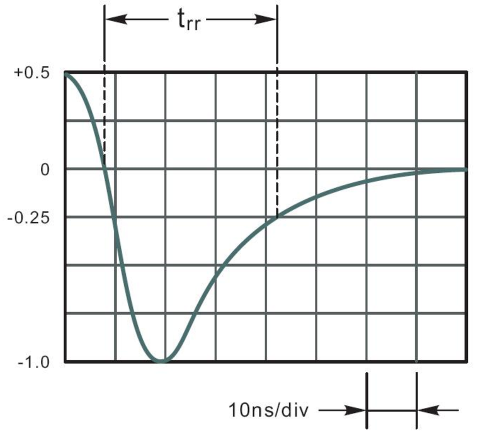
电性能参数 / Electrical Characteristics(Ta=25℃)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	数值 Rating							单位 Unit
			ES1AF	ES1BF	ES1CF	ES1DF	ES1EF	ES1GF	ES1JF	
Maximum Forward Voltage	V_F	I_F=1.0A	1.0				1.25		1.65	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	T_a=25℃	5.0							μA
		T_a=125℃	100							μA
Maximum Reverse Recovery Time	t_{rr}	I_F=0.5A I_R=1.0A I_{rr}=0.25A	35							ns

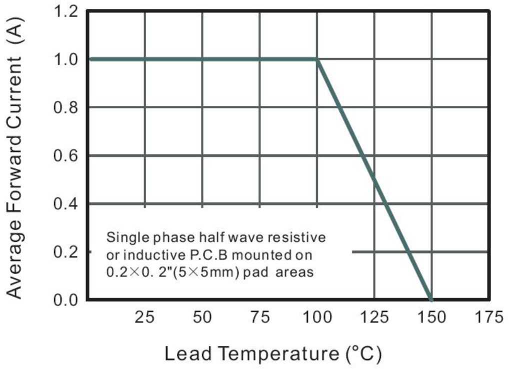
电参数曲线图 / Electrical Characteristic Curve

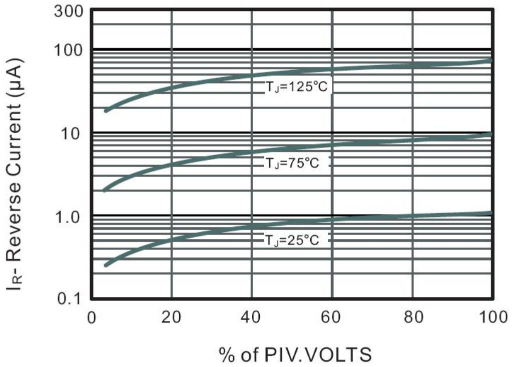


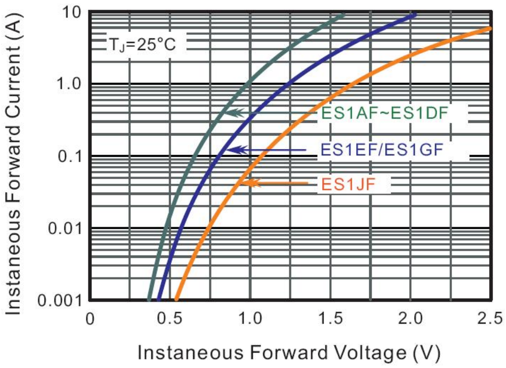
Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm,22pF.
2. Ries Time =10ns, max.
Source Impedance = 50 ohms.

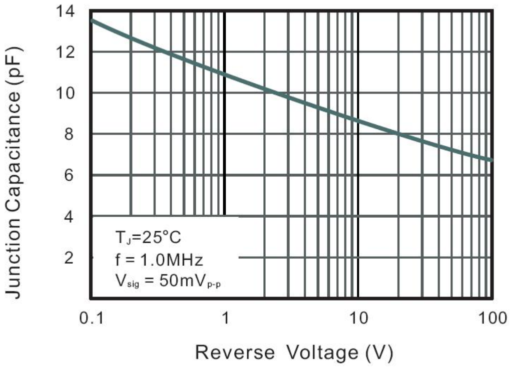


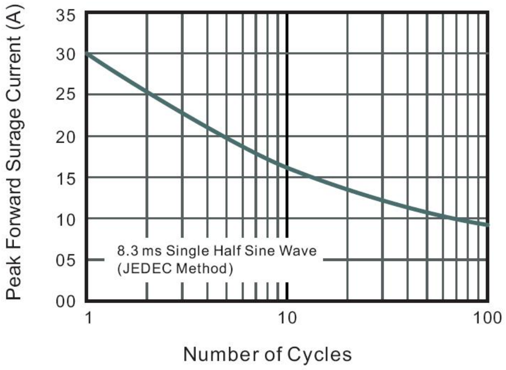
Set time Base for 10ns/div





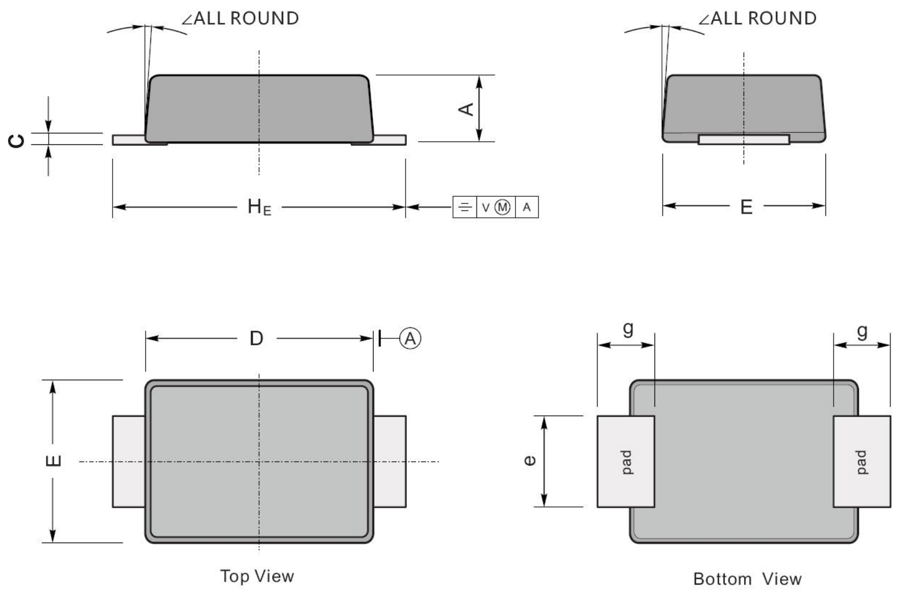






外形尺寸图 / Package Dimensions

SMAF



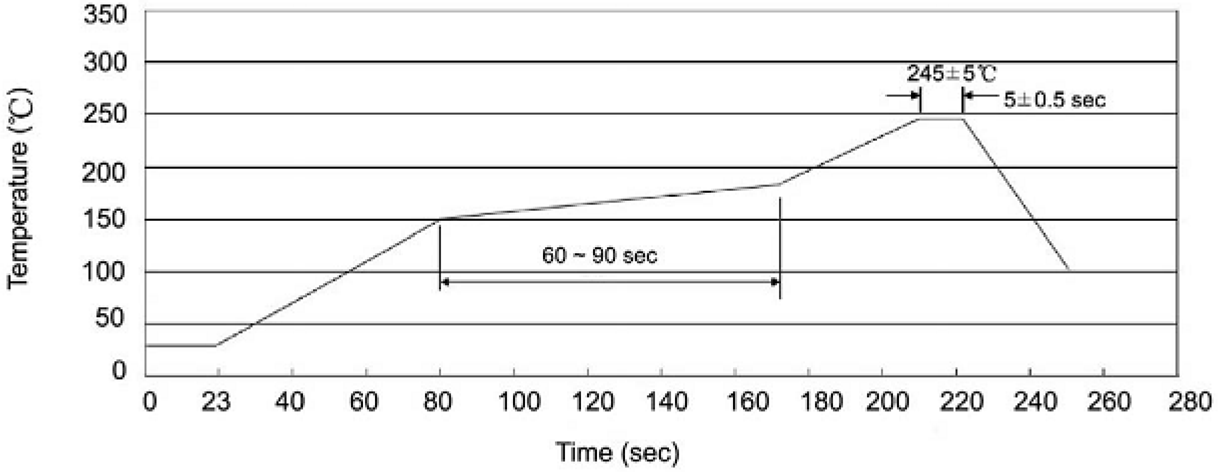
UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.1	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	43	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

印章说明 / Marking Instructions

Marking

Type number	Marking code
ES1AF	ES1A
ES1BF	ES1B
ES1CF	ES1C
ES1DF	ES1D
ES1EF	ES1E
ES1GF	ES1G
ES1JF	ES1J

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：	Note:
1、预热温度 25～150℃，时间 60～90sec;	1.Preheating:25~150℃, Time:60~90sec.
2、峰值温度 245±5℃，时间持续为 5±0.5sec;	2.Peak Temp.:245±5℃, Duration:5±0.5sec.
3、焊接制程冷却速度为 2～10℃/sec.	3. Cooling Speed: 2~10℃/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5℃ 时间：10±1 sec.

Temp.:260±5℃ Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm^3)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SMAF	3000	5	15000	5	75000	7″ ×11	185X180X105	550X210X220

使用说明 / Notices