

ES1ABF~ES1JBF

Rev.E May.-2019

描述 / Descriptions

超快恢复二极管，反向电压：50V~600V，正向电流：1.0A，薄型 SMBF 封装。

Surface Mount Superfast Recovery Rectifier, Reverse Voltage: 50 to 600V, Forward Current: 1.0A, SMBF 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。

Glass Passivated Chip Junction, Fast reverse recovery time, Lead free in comply with EU RoHS 2011/65/EU directives, For surface mounted applications. Halogen free product.

用途 / Applications

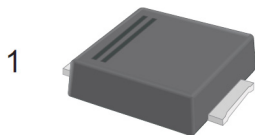
一般用途。

General purpose.

内部等效电路 / Equivalent Circuit



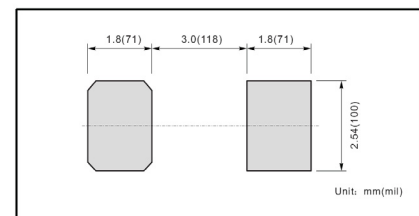
引脚排列 / Pinning



2

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°C)

参数 Parameter	符号 Symbol	数值 Rating							单位 Unit
		ES1ABF	ES1BBF	ES1CBF	ES1DBF	ES1EBF	ES1GBF	ES1JBF	
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 $T_L=100^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	35							A
Typical Junction Capacitance at $V_R=4\text{V}$, $f=1\text{MHz}$	C_j	10							pF
Typical Thermal Resistance ¹⁾	$R_{\theta JA}$	85							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55~+150							$^\circ\text{C}$

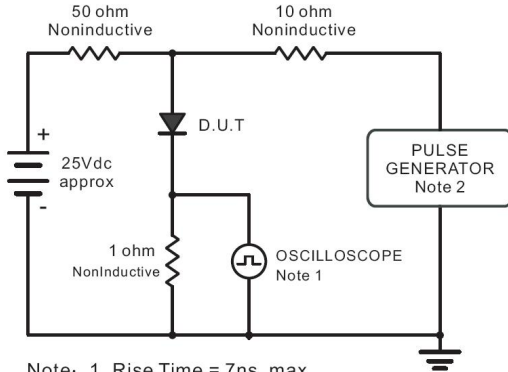
Note:

1) P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.

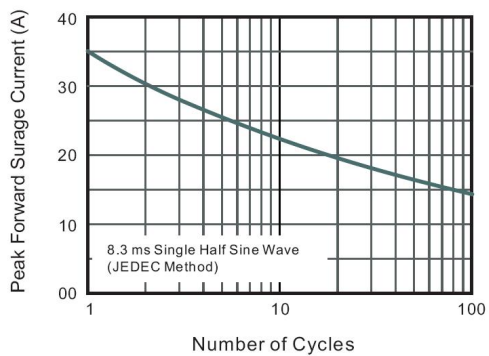
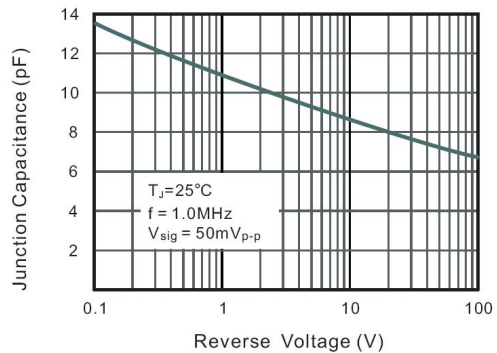
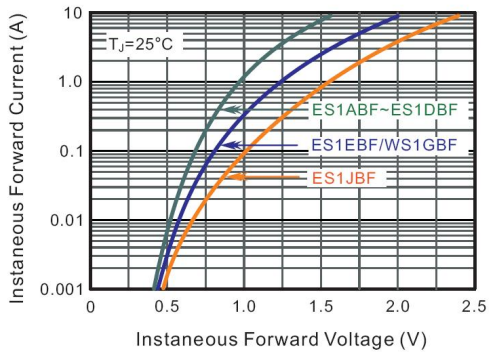
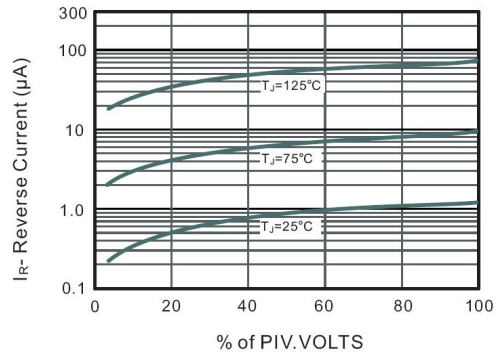
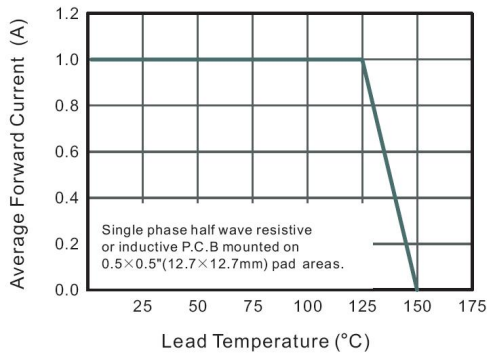
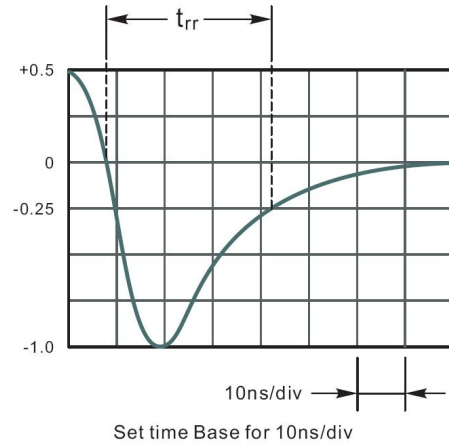
电性能参数 / Electrical Characteristics(Ta=25°C)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	数值 Rating						单位 Unit
			ES1ABF	ES1BBF	ES1CBF	ES1DBF	ES1EBF	ES1GBF	
Maximum Forward Voltage	V_F	$I_F=1.0\text{A}$	1.0			1.25		1.65	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_a=25^\circ\text{C}$	5.0						μA
		$T_a=125^\circ\text{C}$	100						μA
Maximum Reverse Recovery Time	t_{rr}	$I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{rr}=0.25\text{A}$	35						ns

电参数曲线图 / Electrical Characteristic Curve

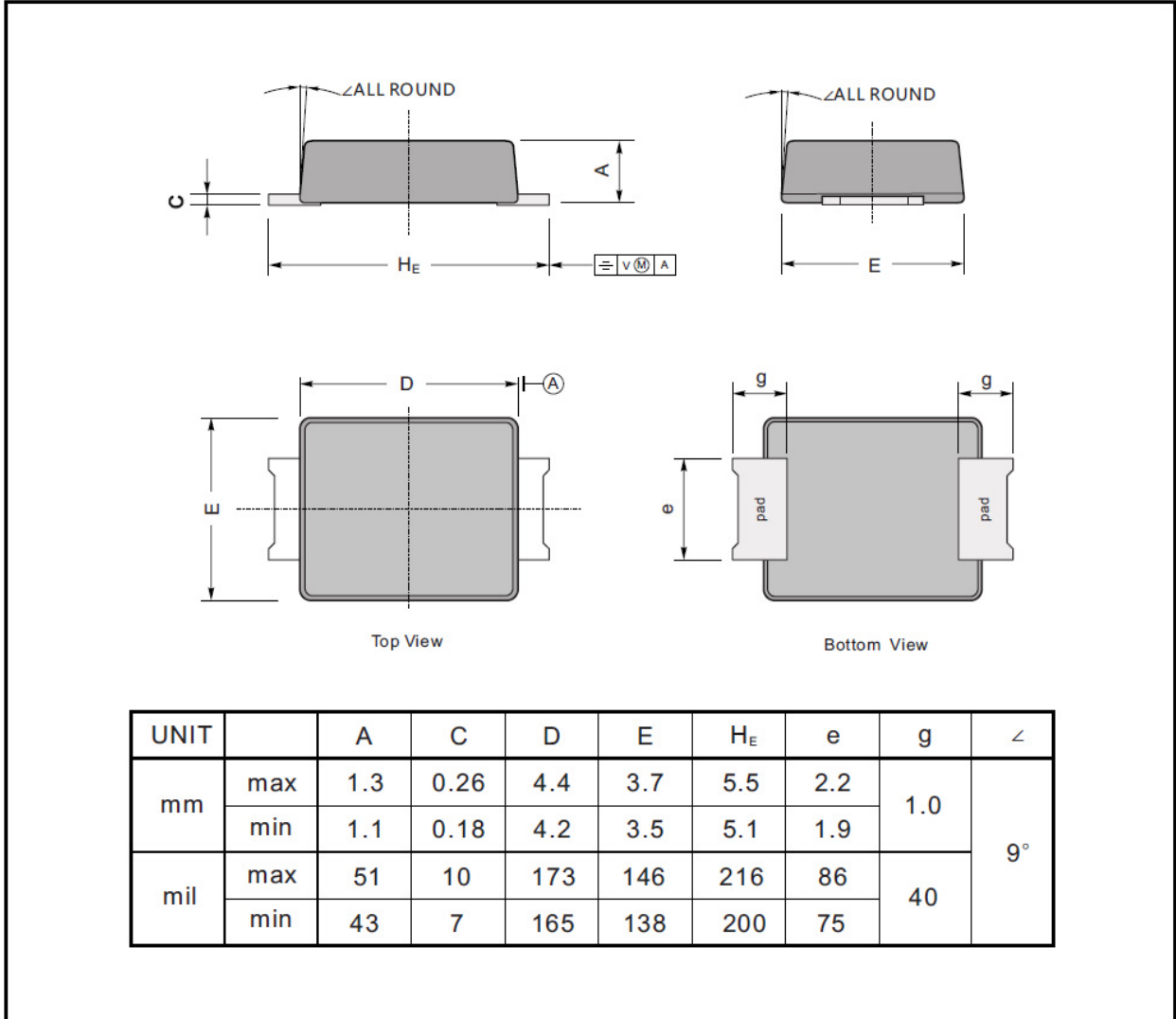


Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm, 22pF.
2. Rises Time = 10ns, max.
Source Impedance = 50 ohms.



外形尺寸图 / Package Dimensions

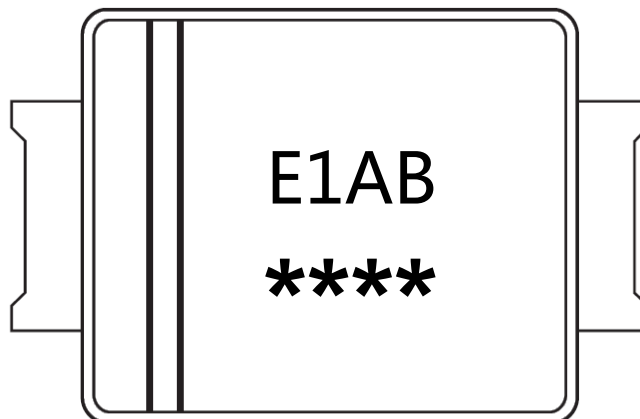
SMBF



Marking

Type number	Marking code
ES1ABF	E1AB
ES1BBF	E1BB
ES1CBF	E1CB
ES1DBF	E1DB
ES1EBF	E1EB
ES1GBF	E1GB
ES1JBF	E1JB

印章说明 / Marking Instructions



说明：

E1AB： 为型号代码

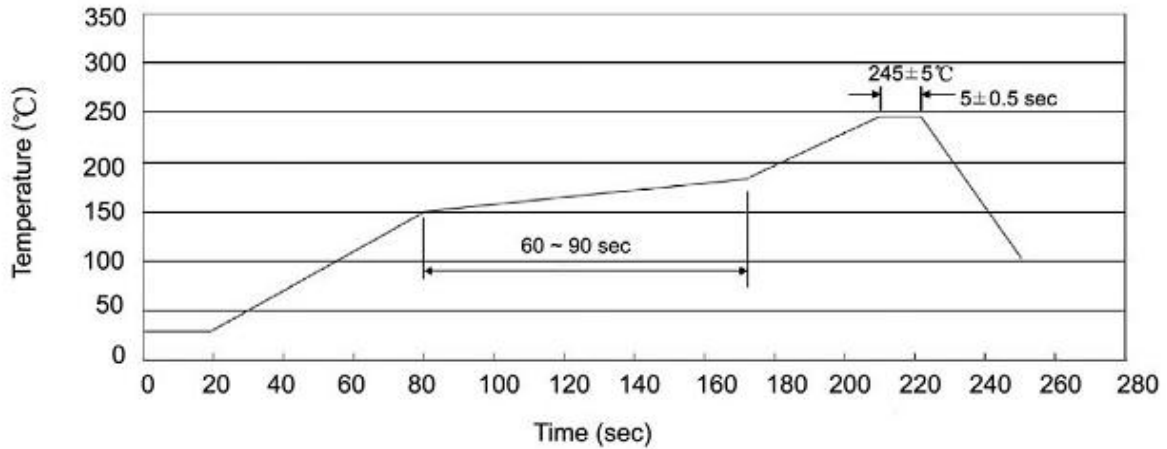
****： 为生产批号追溯码，第1个*为年月代码，后面3个*为当月小批号代码

Note:

E1AB： Product Type Code

****： Lot No. Code ,The 1st * means:YM Code ,The last 3 * means:little Lot No Code

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



说明：

- 1、预热温度 150~180°C，时间 60~90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2~10°C/sec.

Note:

- 1.Preheating:150~180°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

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

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

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
SMBF	5000	2	10000	5	50000	13" ×15	336X332X40	380X335X366

使用说明 / Notices