

### 描述 / Descriptions

表面贴装整流二极管，反向电压：50V~1000V，正向电流：1.0A，薄型 SMAF 封装。

Surface Mount General Purpose Silicon Rectifiers,Reverse Voltage:50 to1000V,Forward Current:1.0A,SMAF thin package.

### 特征 / Features

玻璃钝化芯片，无铅符合欧盟 RoHS 指令 2011/65/EU；适用于表面贴装，便于优化设计。无卤产品。

Glass Passivated Chip Junction,Lead free in comply with EU RoHS 2011/65/EU directives,For surface mounted applications,Easy to pick and place.Halogen free product.

### 用途 / Applications

一般用途。

General purpose.

### 内部等效电路 / Equivalent Circuit

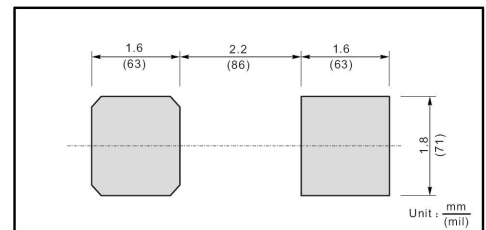


### 引脚排列 / Pinning



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°C)**

参数 Parameter	符号 Symbol	数值 Rating							单位 Unit
		S1AF	S1BF	S1DF	S1GF	S1JF	S1KF	S1MF	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_a = 65^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30							A
Typical Junction Capacitance <sup>1)</sup>	$C_j$	15							pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	80							$^\circ\text{C}/\text{W}$
	$R_{\theta JC}$	27							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55~+150							$^\circ\text{C}/\text{W}$

Note:

- 1). Measured at 1 MHz and applied reverse voltage of 4 V.D.C
- 2). P.C.B. mounted with 0.2X0.2"(5X5mm) 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
			S1AF	S1BF	S1DF	S1GF	S1JF	S1KF	
Maximum Instantaneous Forward Voltage	$V_F$	$I_F=1.0\text{A}$	1.1						V
Maximum DC Reverse Current at Maximum DC Blocking Voltage	$I_R$	$T_a=25^\circ\text{C}$	5.0						$\mu\text{A}$
		$T_a=125^\circ\text{C}$	50						$\mu\text{A}$

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Forward Current Derating Curve

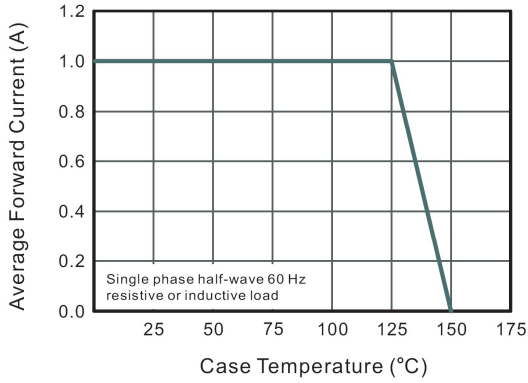


Fig.2 Typical Instaneous Reverse Characteristics

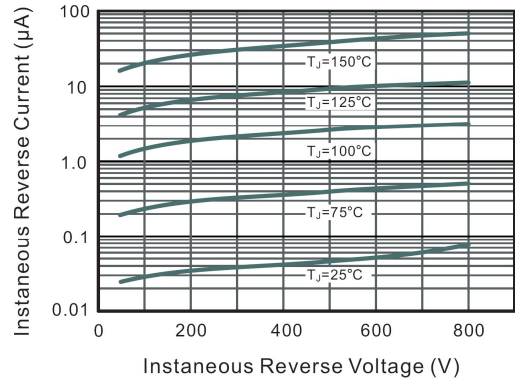


Fig.3 Typical Forward Characteristic

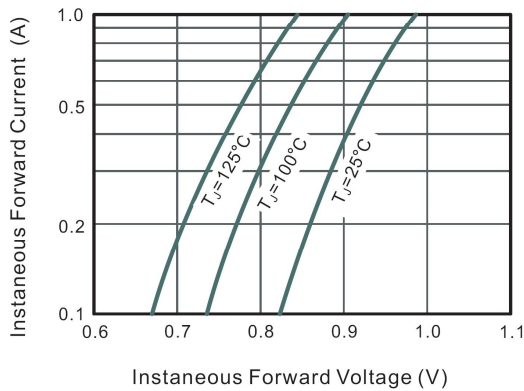


Fig.4 Typical Junction Capacitance

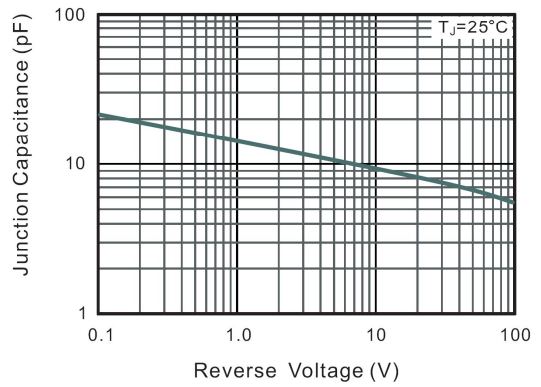
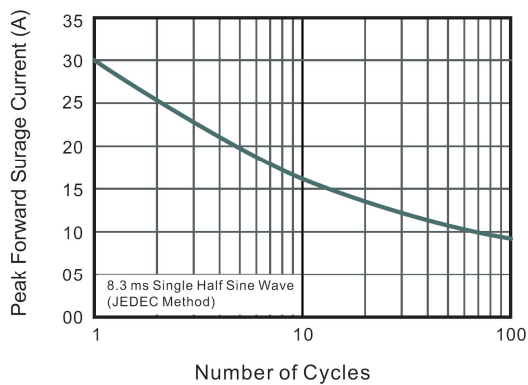
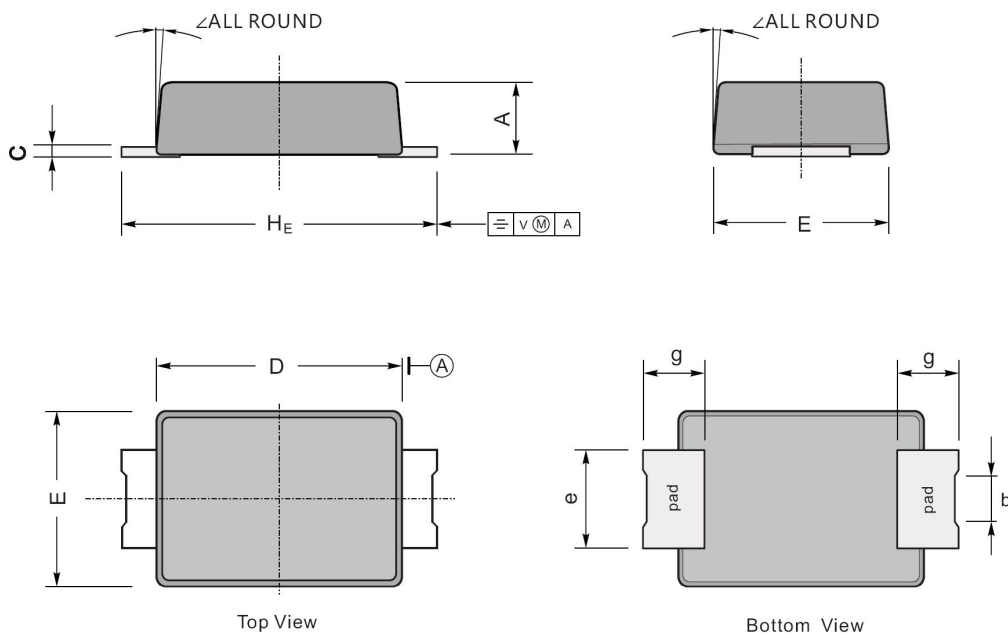


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



外形尺寸图 / Package Dimensions

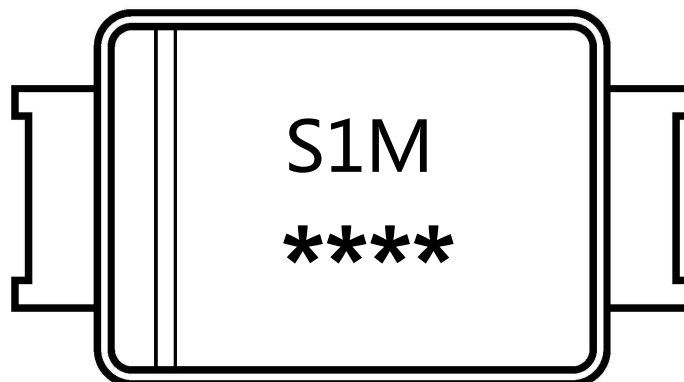


UNIT		A	C	D	E	e	g	H <sub>E</sub>	b	∠
mm	max	1.2	0.20	3.7	2.7	1.6	1.2	4.9	1.05	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	0.65	
mil	max	47	7.9	146	106	63	47	193	41	
	min	35	4.7	130	94	51	31	173	26	

# Marking

Type number	Marking code
S1AF	S1A
S1BF	S1B
S1DF	S1D
S1GF	S1G
S1JF	S1J
S1KF	S1K
S1MF	S1M

印章说明 / Marking Instructions



说明：

S1M：为型号代码

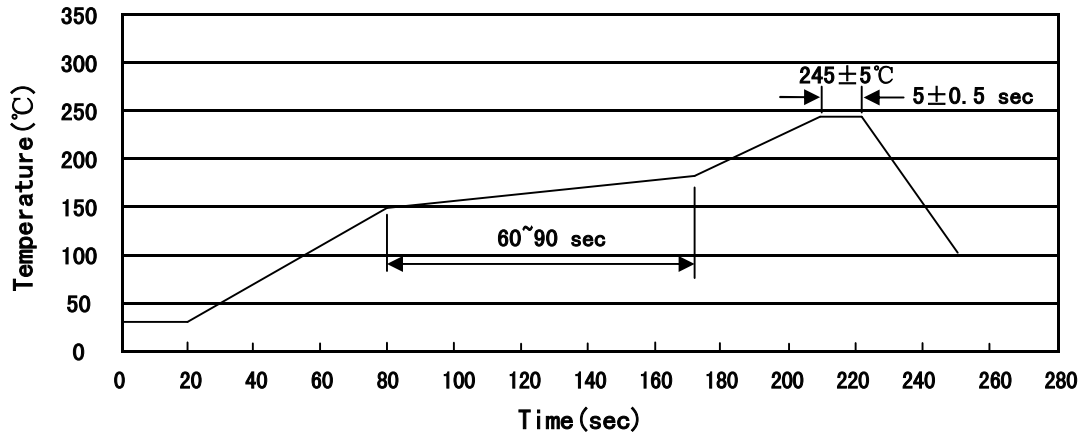
\*\*\*\*：为生产批号追溯码，第1个\*为年月代码，后面3个\*为当月小批号代码

Note:

S1M：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 <sup>3</sup> )		
	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	390X385X205

**使用说明 / Notices**

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