

/ Revised record

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E	2017-11				
F	2019-3-15	ALL	0 1 2 3M1~M7 4 5 3SMAF 6 * + 7 8 3 19 1 2 6 : S1AF~S1MF ; 2 9 < = 6 : S1MF/**** ; > ? @ A	B C D	E F G
G	2019-6-4	1 9 4 9 6	H I J K L H M % N O P Q 4 5 R S T U P 9 < = P	B C D	V F W
H	2020-3-23	5 9 6	< = X Y F	Z [	V F W
I	2021-11-17	2	$C_j = 9\text{pF}$ 6 : $C_j = 15\text{pF}$ \ $R_{\theta JA}$ =115°C/W改为 $R_{\theta JA} = 80^\circ\text{C/W}$ 增 加 $R_{\theta JC}$, 更新参数曲线图、回流 焊图。	Z [	V F W

/ 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 to 1000V, Forward

Current: 1.0A, SMAF thin package.

/ 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.

/ Applications

一般用途。

General purpose.

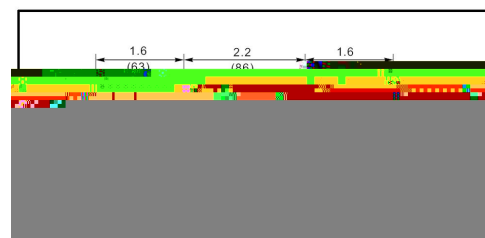
/ Equivalent Circuit



/ Pinning



The recommended mounting pad size



/ Marking

见印章说明。 See Marking Instructions.

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 ¹⁾	C_j	15							pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	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							$^\circ\text{C}/\text{W}$

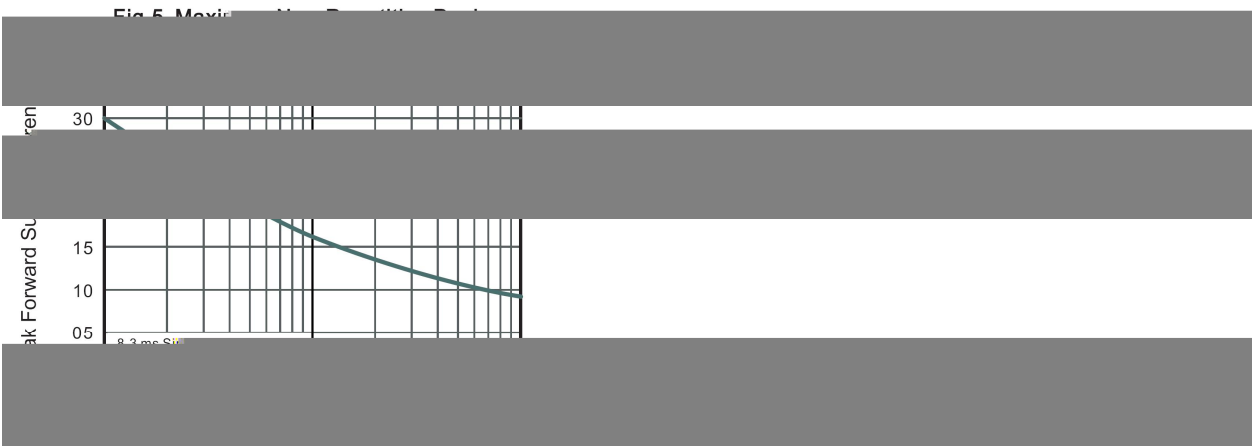
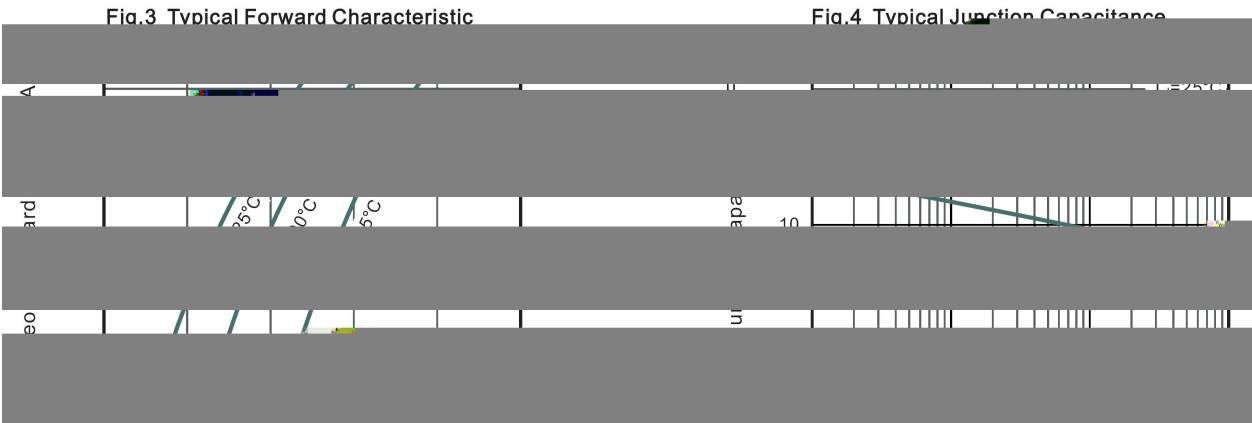
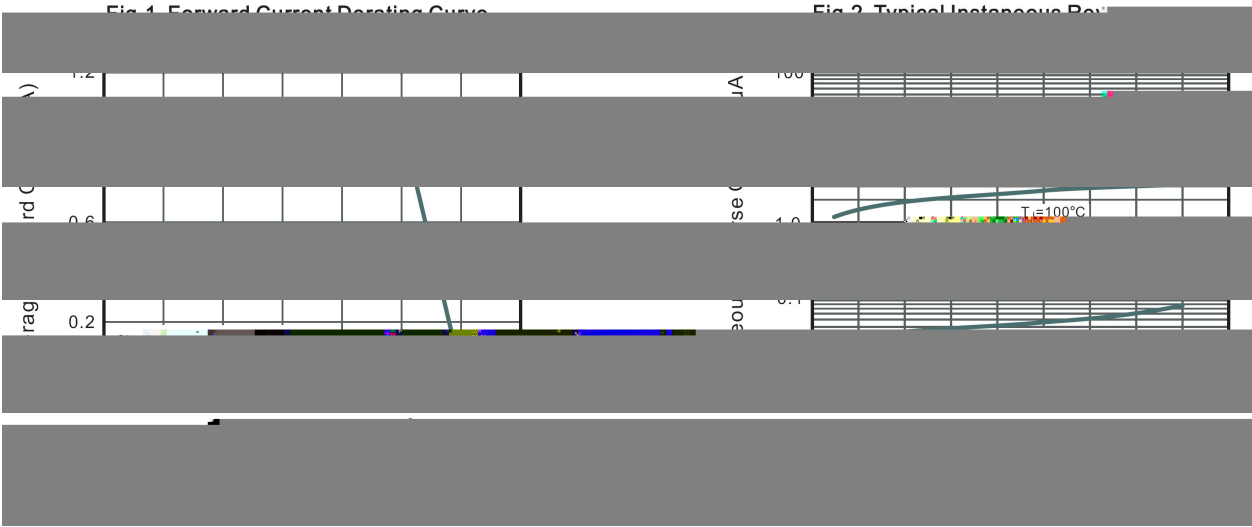
Note:

- 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.

参数 Parameter	符号 Symbol	测试条件 Test Conditions	数值 Rating							单位 Unit
			S1AF	S1BF	S1DF	S1GF	S1JF	S1KF	S1MF	
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							μA
		$T_a=125^\circ\text{C}$	50							μA



/ Electrical Characteristic Curve



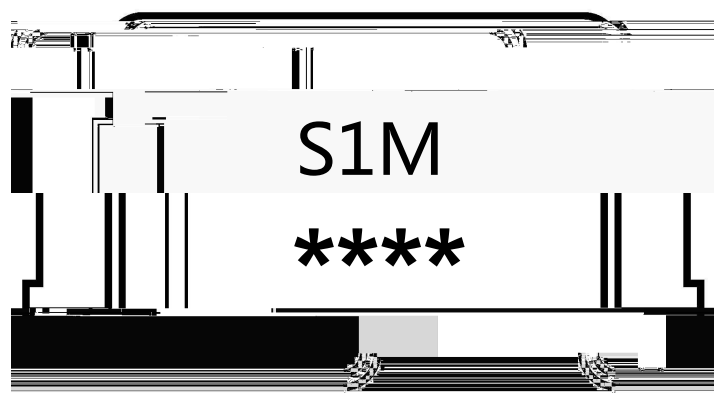
/ Package Dimensions



/ Marking Instructions

Marking	
Type number	Marking code
S1AE	S1A
S1BF	S1B
S1DF	S1D
S1GF	S1G
S1IF	S1I
S1KF	S1K
S1MF	S1M

/ Marking Instructions



S1M

1 *

3 *

Note:

S1M

Product Type Code

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

() / **Temperature Profile for IR Reflow Soldering(Pb-Free)**

Note:

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

/ **Resistance to Soldering Heat Test Conditions**

260±5°C	10±1 sec.	Temp.:260±5°C	Time:10±1 sec
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/ **Packaging SPEC.**

/ REEL

Package Type	Units	Dimension	(unit mm ³)
只 卷盘 卷盘 盒 只 盒 盒 箱 只 箱			