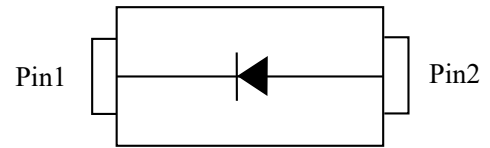


Feature

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Characteristics

- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx: Weight: 27mg, 0.00095oz

Absolute maximum rating@25°C

Parameter	Symbol	PRS1AF	PRS1BF	PRS1DF	PRS1GF	PRS1JF	PRS1KF	PRS1MF	Unit
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 $T_c=125^\circ\text{C}$	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30							A
Maximum Forward Voltage at 1 A	V_F	1.3							V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125^\circ\text{C}$	I_R	5 50							μA
Thermal Resistance Junction to Ambient Typical	$R_{\theta JA}$	80							$^\circ\text{C/W}$
Typical Junction Capacitance at $V_R=4\text{V}$, $f=1\text{MHz}$	C_J	15							pF
Maximum Reverse Recovery Time ⁽¹⁾	t_{rr}	150			250	500	nS		
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	80							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 ~ +150							$^\circ\text{C}$

Notes:1. Measured with $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$.

2.P.C.B. mounted with 2.0"X2.0" (5X5cm) copper pad areas.

Typical Characteristics

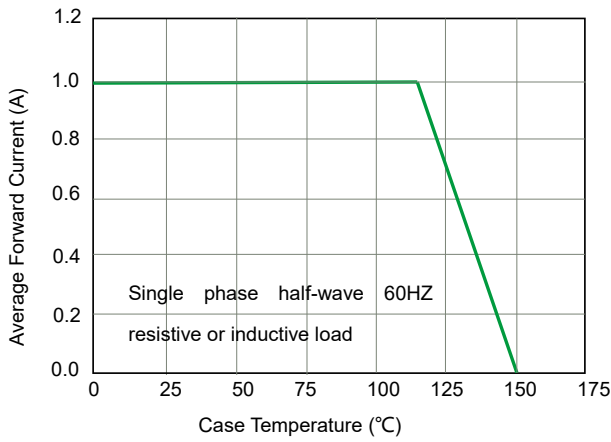


Fig 1. Forward Current Derating Curve

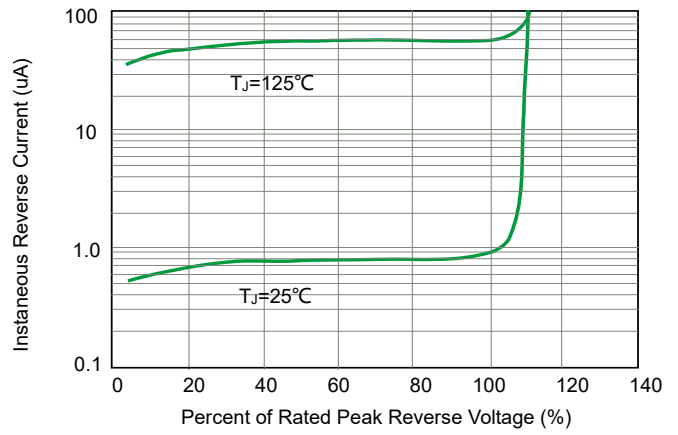


Fig 2. Typical Reverse Characteristics

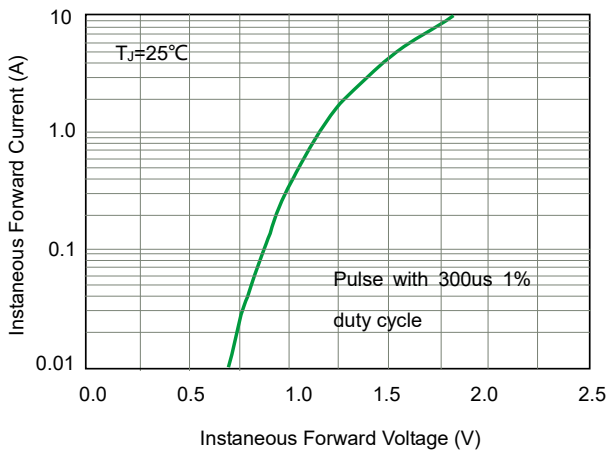


Fig 3. Typical Instantaneous Forward Characteristics

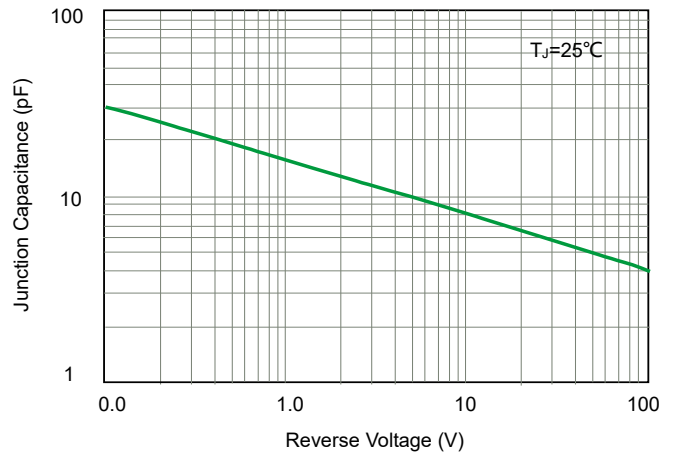


Fig 4. Typical Junction Capacitance

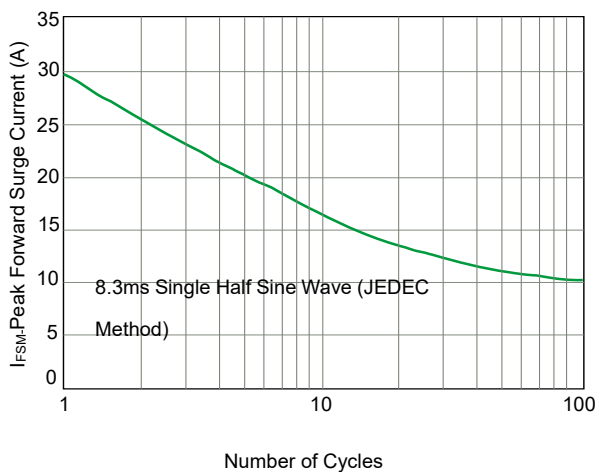
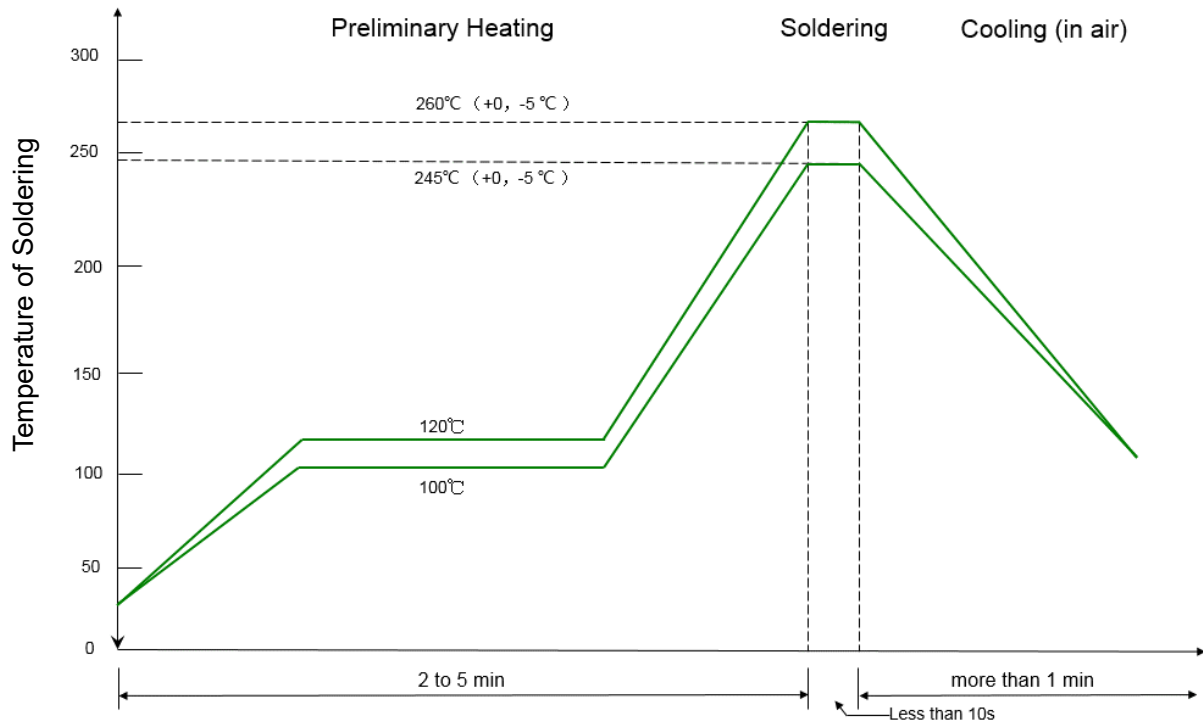


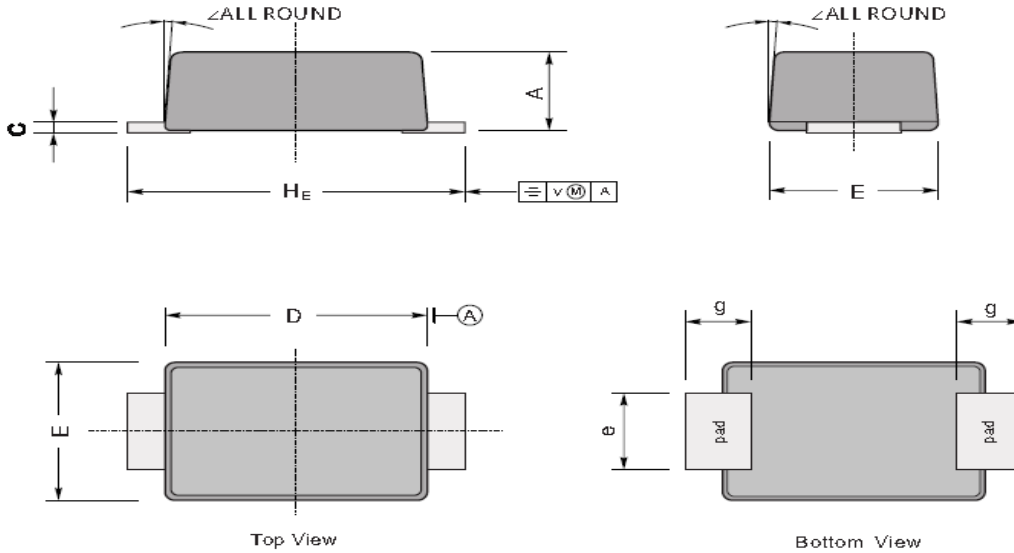
Fig 5. Maximum Non-Repetitive Peak Forward Surge Current

Solder Reflow Recommendation



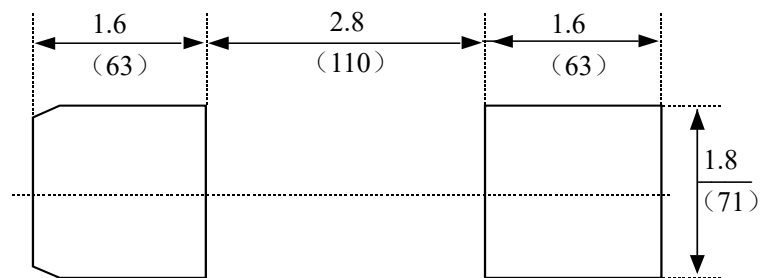
Remark: Pb free for 260°C; Pb for 245°C.

Product dimension (SMAF)



UNIT		A	C	D	E	e	g	H_E	\angle
mm	max	1.2	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	47	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

The recommended mounting pad size




Unit: $\frac{\text{mm}}{(\text{mil})}$

Ordering information

Device	Package	MPQ
PRS1AF-PRS1MF	SMAF	3000/ Tape & Reel


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