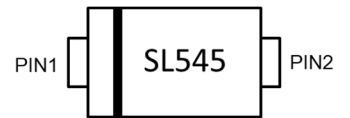
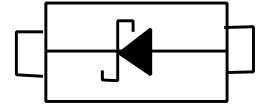


**Feature**

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



Marking

**Mechanical Characteristics**

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

**Absolute maximum rating@25°C**

Parameter	Symbol	Value	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	45	V
Maximum RMS voltage	$V_{RMS}$	32	V
Maximum DC Blocking Voltage	$V_{CC}$	45	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5	A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	150	A
Max Instantaneous Forward Voltage at 5 A	$V_F$	0.45	V
Maximum DC Reverse Current at Rated DC Reverse Voltage $T_a = 25^\circ\text{C}$	$I_R$	0.5	mA
Typical Junction Capacitance <sup>1)</sup>	$C_j$	700	pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	50	$^\circ\text{C/W}$
Junction and Storage Temperature Range	$T_J, T_{STG}$	-55~+150	$^\circ\text{C}$

Notes:

(1) Measured at 1MHz and applied reverse voltage of 4V D.C

(2) PCB mounted with 2.0"x2.0"(5x5cm) copper pad areas.

Typical Characteristics

Fig.1 Forward Current Derating Curve

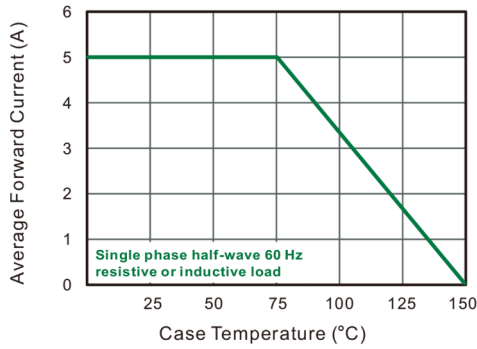


Fig.2 Typical Reverse Characteristics

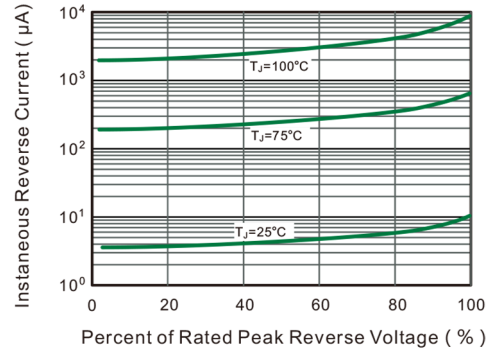


Fig.3 Typical Forward Characteristic

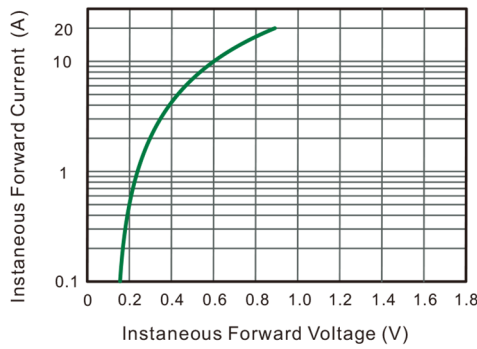


Fig.4 Typical Junction Capacitance

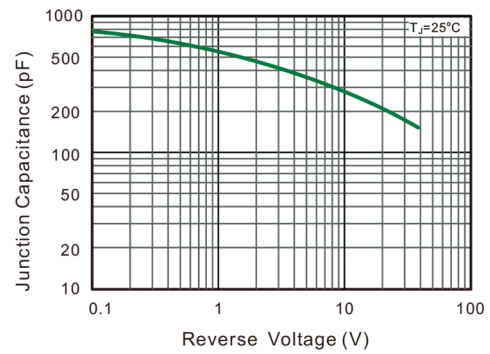


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

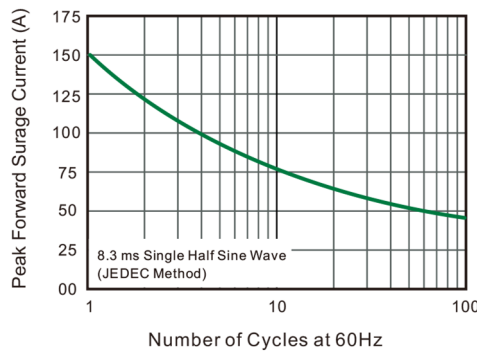
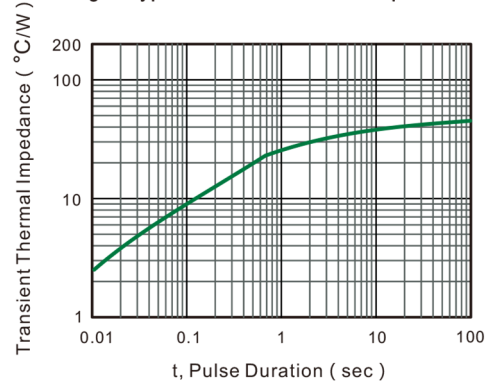
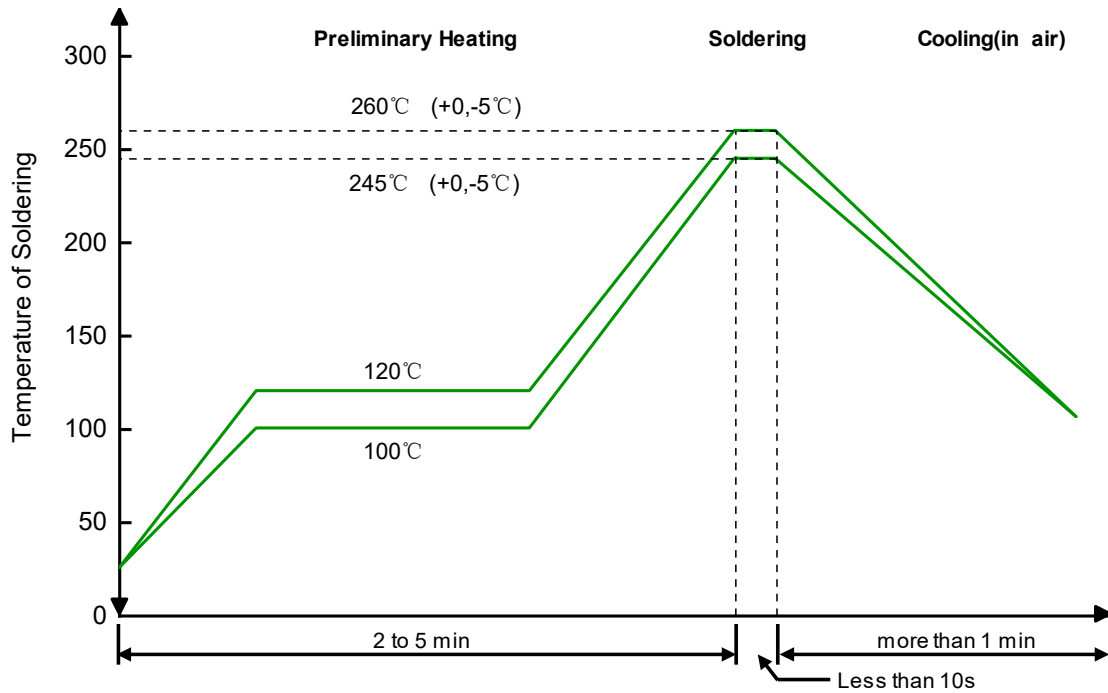


Fig.6- Typical Transient Thermal Impedance

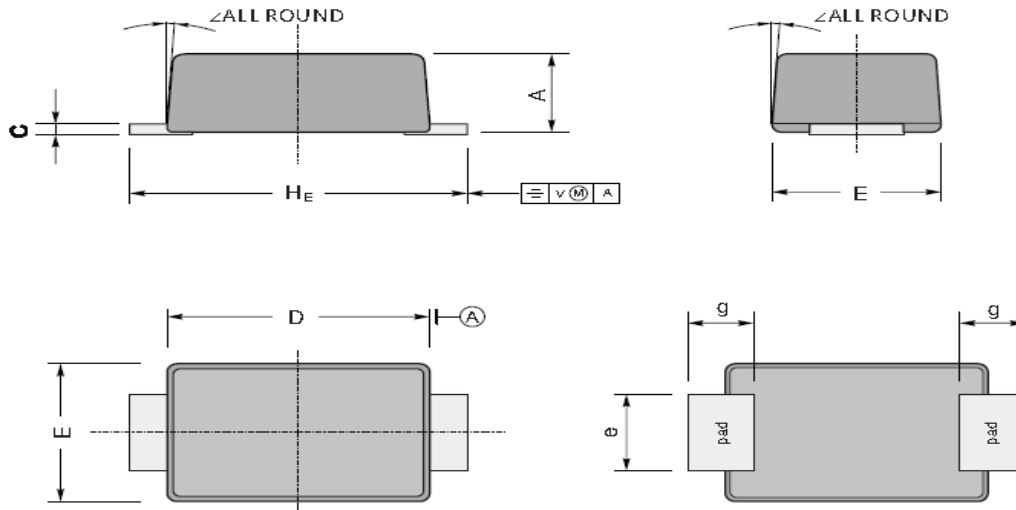


Solder Reflow Recommendation



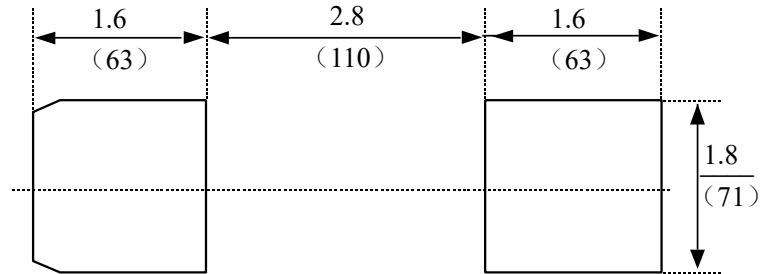
Remark: Pb free for 260°C; Pb for 245°C.

Product dimension (SMAF)



UNIT		A	C	D	E	e	g	H <sub>E</sub>	∠
mm	max	1.3	0.23	3.7	2.7	1.6	1.3	4.9	7°
	min	1.1	0.18	3.3	2.4	1.3	1.0	4.4	
mil	max	51	9.1	146	106	63	51	193	
	min	43	7.1	130	94	51	39	173	

The recommended mounting pad size

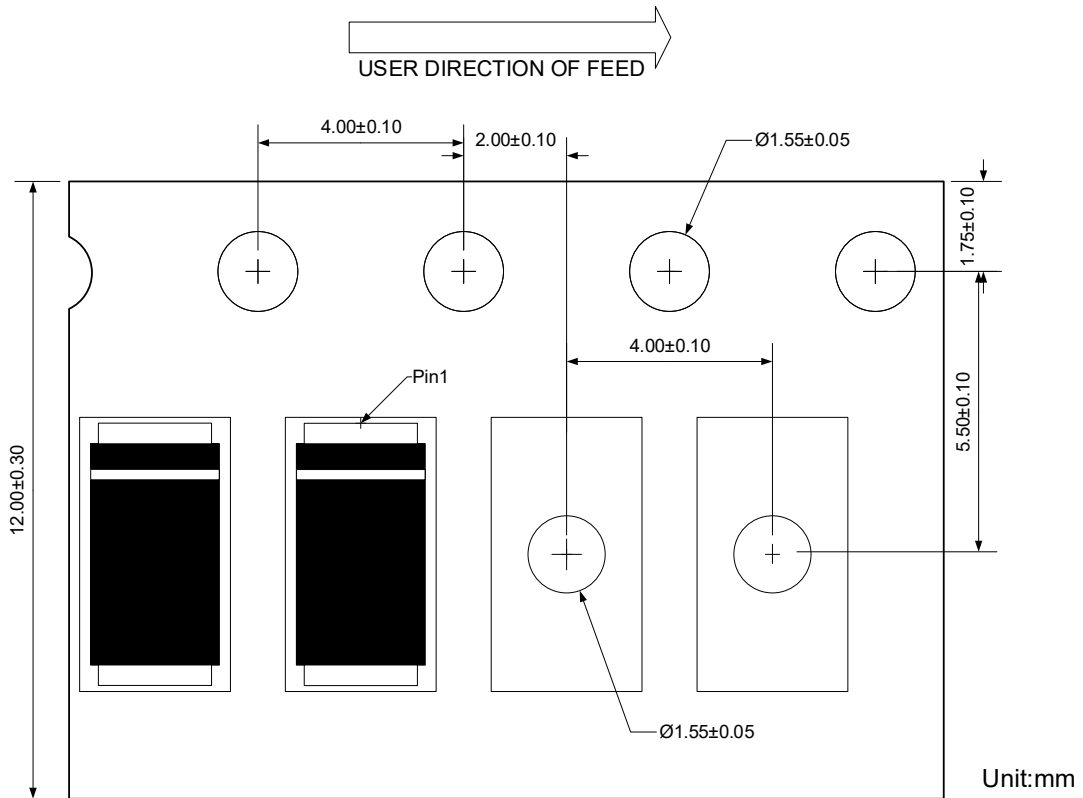


Unit:  $\frac{\text{mm}}{\text{(mil)}}$

Ordering information


Device	Package	Shipping
PSBDAF45V5	SMAF (Pb-Free)	3000/ Tape & Reel

Load with information



Unit:mm


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