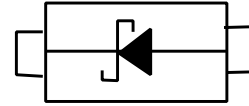


Feature

- 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


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 ¹⁾	C_j	700	pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	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

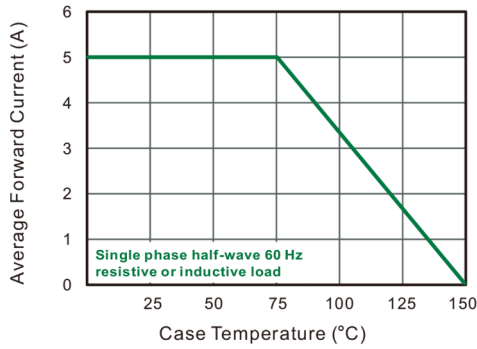


Fig.2 Typical Reverse Characteristics

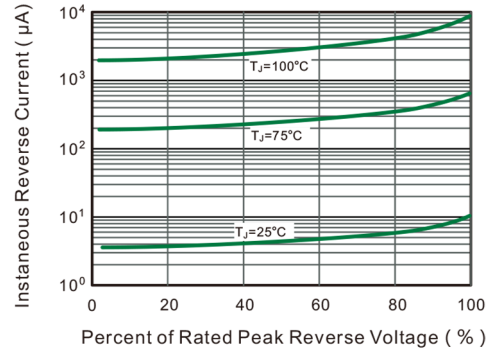


Fig.3 Typical Forward Characteristic

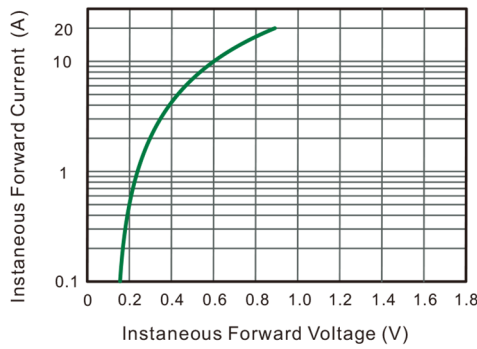


Fig.4 Typical Junction Capacitance

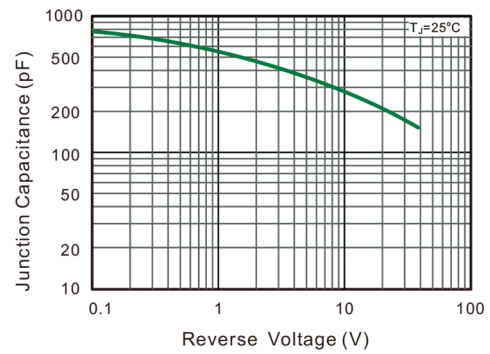


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

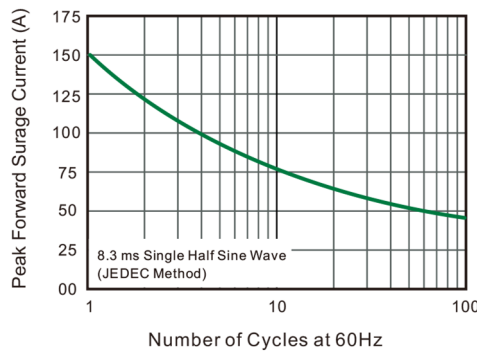
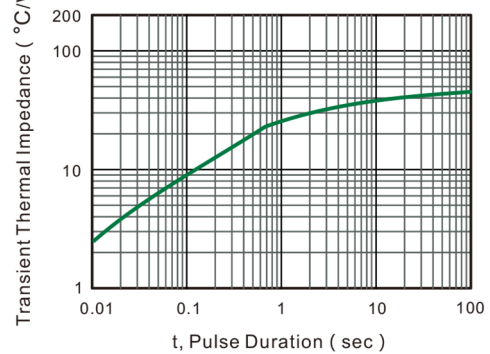
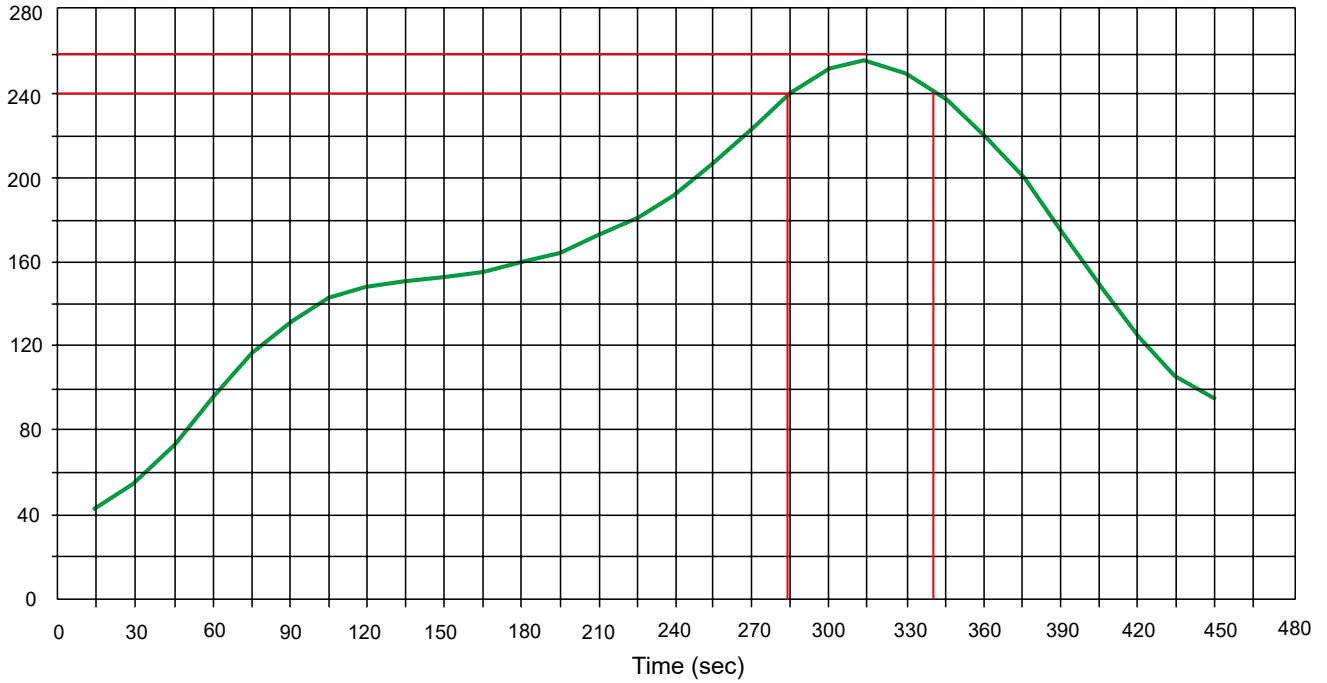


Fig.6- Typical Transient Thermal Impedance

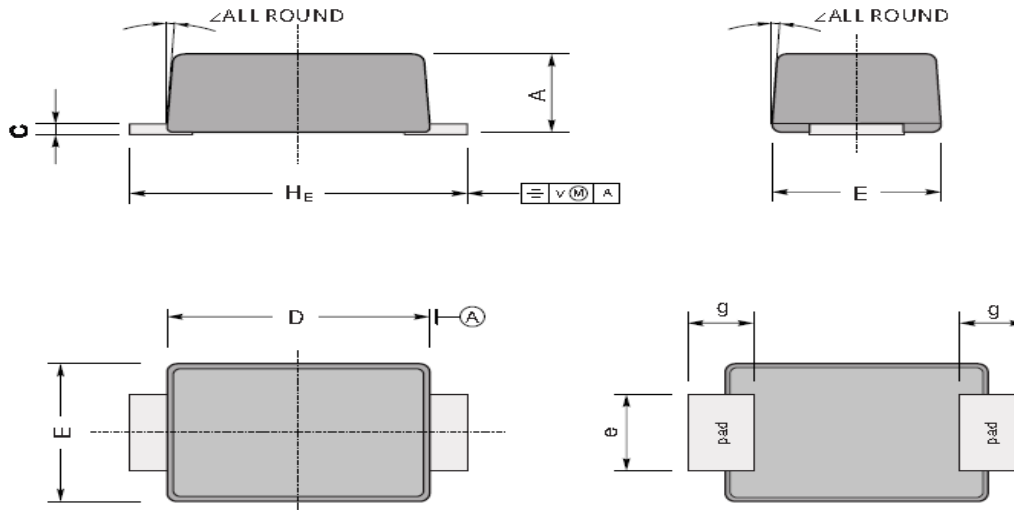


Solder Reflow Recommendation

Peak Temp=257°C, Ramp Rate=0.802deg. °C/sec

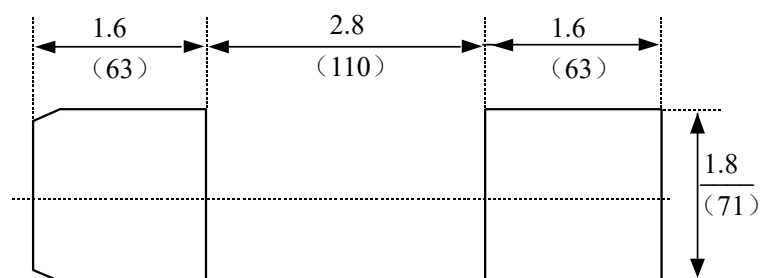


Product dimension (SMAF)



UNIT		A	C	D	E	e	g	HE	∠
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


IMPORTANT NOTICE

 and **Prisemi**[®] are registered trademarks of **Prisemi Electronics Co., Ltd** (Prisemi) ,Prisemi reserves the right to make changes without further notice to any products herein. Prisemi makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Prisemi assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in Prisemi data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. Prisemi does not convey any license under its patent rights nor the rights of others. The products listed in this document are designed to be used with ordinary electronic equipment or devices, Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

Website: <http://www.prisemi.com>

For additional information, please contact your local Sales Representative.

©Copyright 2009, Prisemi Electronics

 **Prisemi**[®] is a registered trademark of Prisemi Electronics.

All rights are reserved.