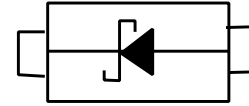


### Feature

- 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	PSBDA F20V5	PSBDA F40V5	PSBDA F60V5	PSBDA F80V5	PSBDA F100V5	PSBDA F120V5	PSBDA F150V5	PSBDA F200V5	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	40	60	80	100	120	150	200	V
Maximum RMS voltage	$V_{RMS}$	14	28	42	56	70	84	105	140	V
Maximum DC Blocking Voltage	$V_{CC}$	20	40	60	80	100	120	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	120								A
Max Instantaneous Forward Voltage at 5 A	$V_F$	0.55		0.70		0.85				V

Absolute maximum rating@25°C

Parameter	Symbol	PSBDA F20V5	PSBDA F40V5	PSBDA F60V5	PSBDA F80V5	PSBDA F100V5	PSBDA F120V5	PSBDA F150V5	PSBDA F200V5	Units
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$	$I_R$	1.0 50								mA
Typical Junction Capacitance <sup>1)</sup>	$C_j$	500	300							pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	60								$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_j$	-55~150								$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55~150								$^\circ\text{C}$

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

(2) P.C.B mounted with 2.0"x2.0"(5x5cm) copper pad areas.

Typical Characteristics

Fig.1 Forward Current Derating Curve

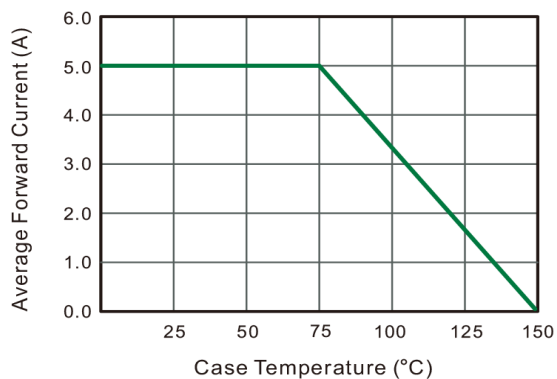


Fig.2 Typical Reverse Characteristics

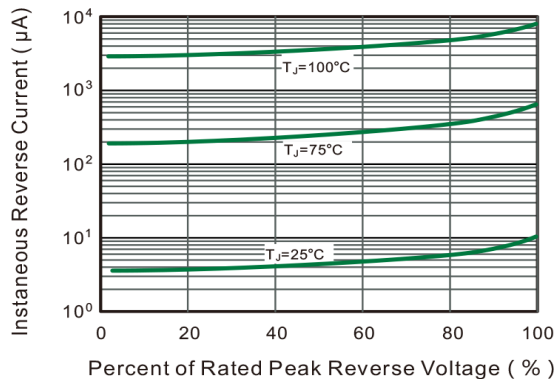


Fig.3 Typical Forward Characteristic

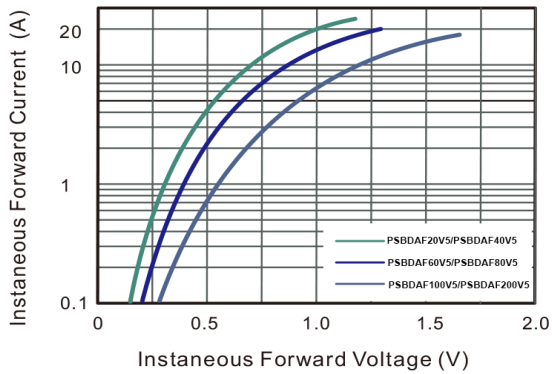


Fig.4 Typical Junction Capacitance

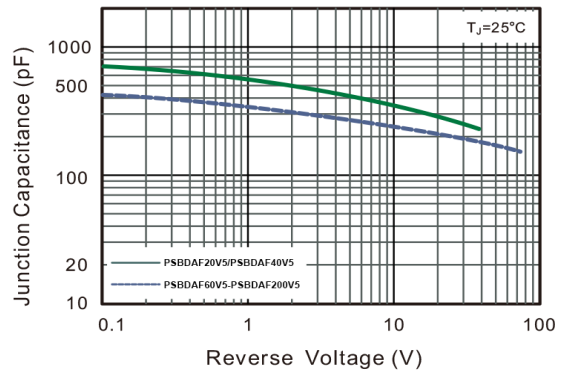


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

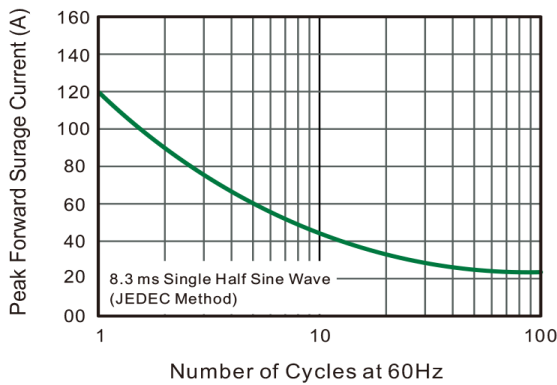
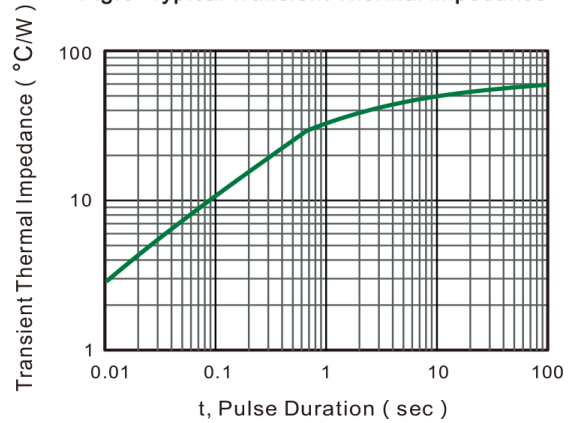
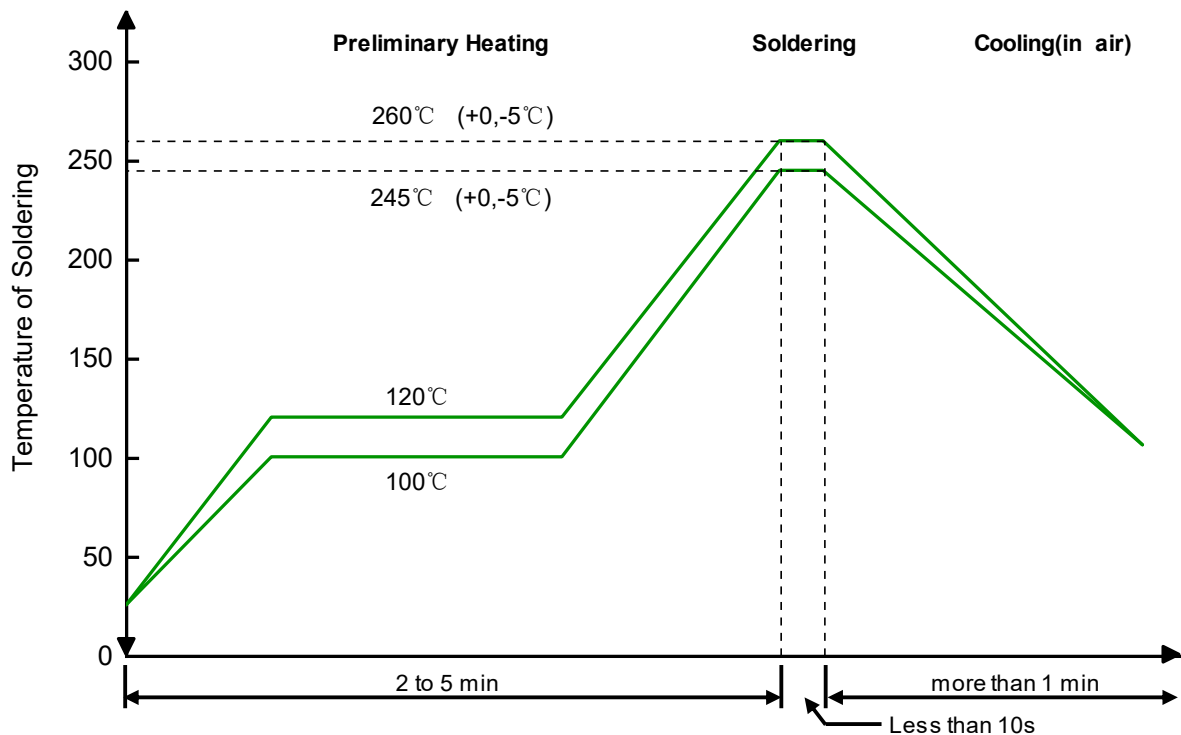


Fig.6- Typical Transient Thermal Impedance

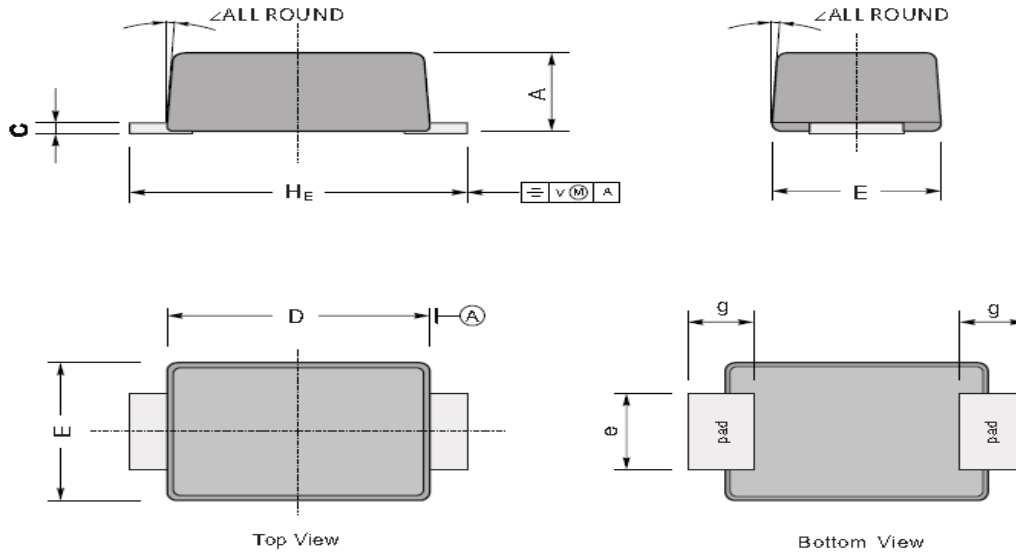


Solder Reflow Recommendation



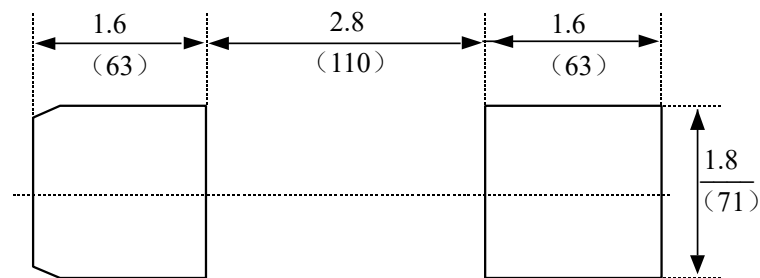
Remark: Pb free for 260°C; Pb for 245°C.

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	0.9	0.18	3.3	2.4	1.3	1.0	4.4	
mil	max	51	9.1	146	106	63	51	193	
	min	35	7.1	130	94	51	39	173	

The recommended mounting pad size




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

Ordering information

Device	Package	Shipping
PSBDAF20~200V5	SMAF (Pb-Free)	3000/ Tape & Reel


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