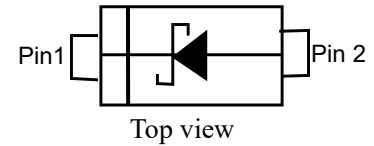


**Feature**

- 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 0.00086oz

**Absolute maximum rating@25°C**

Parameter	Symb ol	PSBDA F20V3	PSBDA F40V3	PSBDA F60V3	PSBDA F80V3	PSBDA F100V3	PSBDA F120V3	PSBDA F150V3	PSBDA F200V3	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	$I_{F(AV)}$	3.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	80								A
Max Instantaneous Forward Voltage at 3 A	$V_F$	0.55	0.70		0.85		0.95		V	

Absolute maximum rating@25°C

Parameter	Symbol	PSBDA F20V3	PSBDA F40V3	PSBDA F60V3	PSBDA F80V3	PSBDA F100V3	PSBDA F120V3	PSBDA F150V3	PSBDA F200V3	Units
Maximum DC Reverse Current Ta = 25°C at Rated DC Reverse Voltage Ta =100°C	IR		0.5 5					0.3 3		mA
Typical Junction Capacitance 1)	Cj		250				180			pF
Typical Thermal Resistance 2)	RθJA RθJC					70 18				°C/W
Operating Junction Temperature Range	Tj					-55~150				°C
Storage Temperature Range	Tstg					-55~150				°C

Note

1. Measured at 1 MHz and applied reverse voltage of 4 V D.C
2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Typical Characteristics

Fig.1 Forward Current Derating Curve

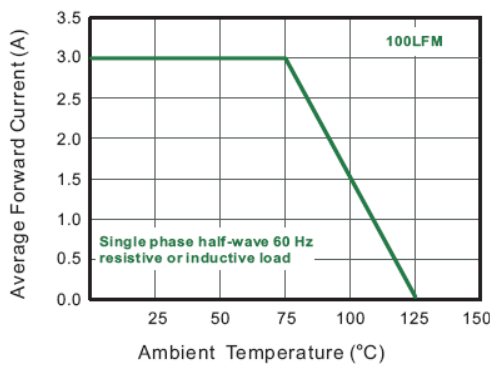


Fig.2 Typical Reverse Characteristics

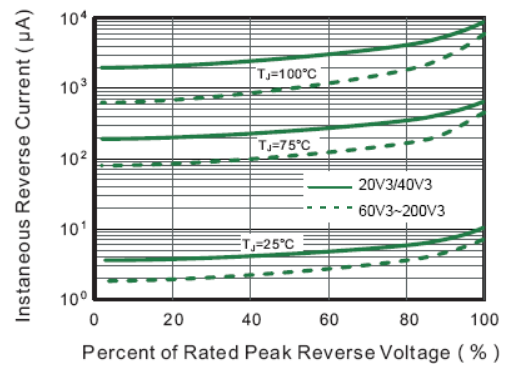


Fig.3 Typical Forward Characteristic

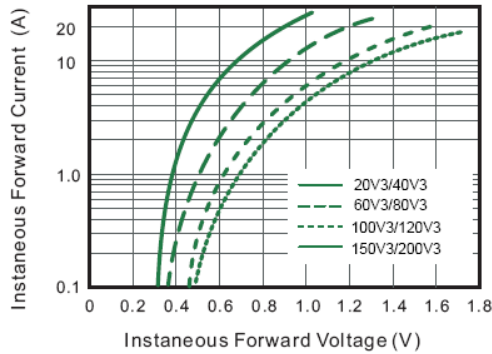


Fig.4 Typical Junction Capacitance

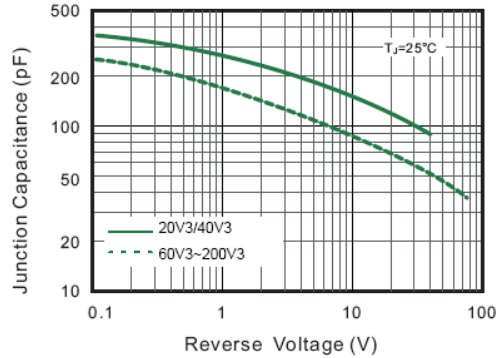


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

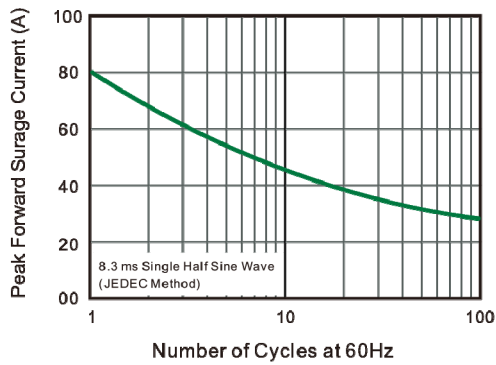
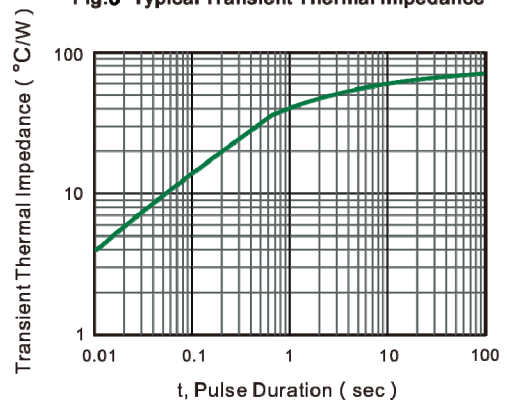
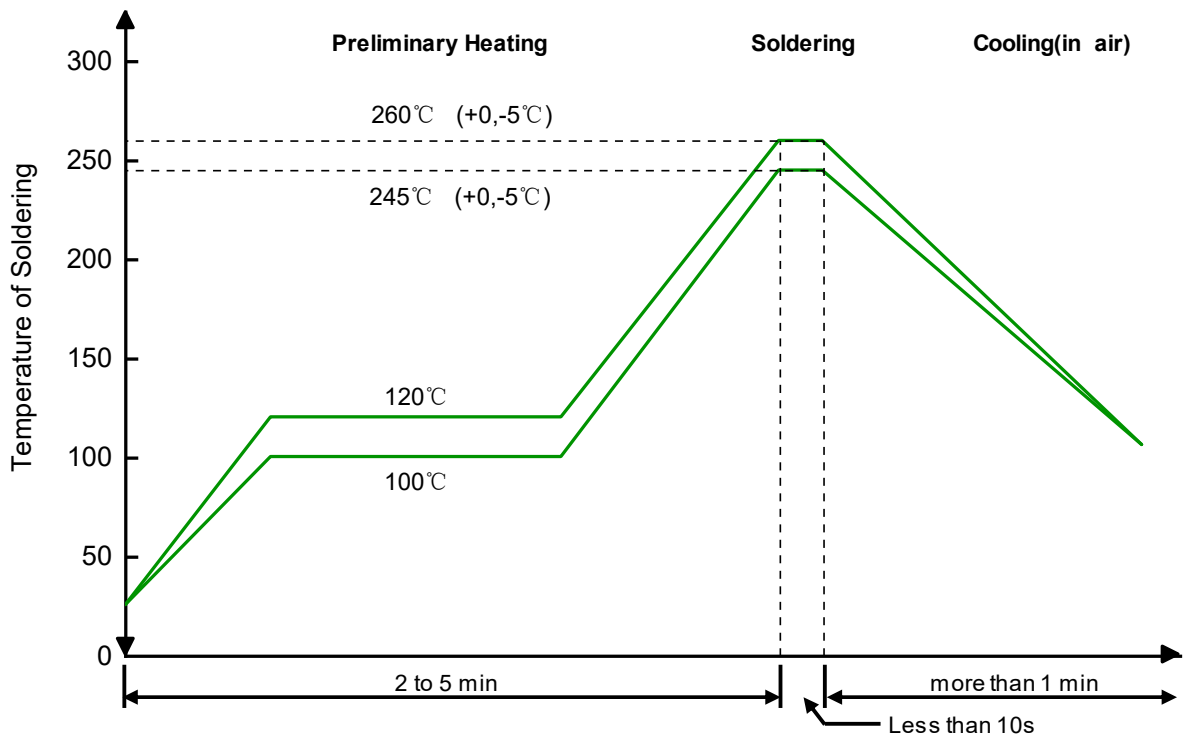


Fig.6 Typical Transient Thermal Impedance

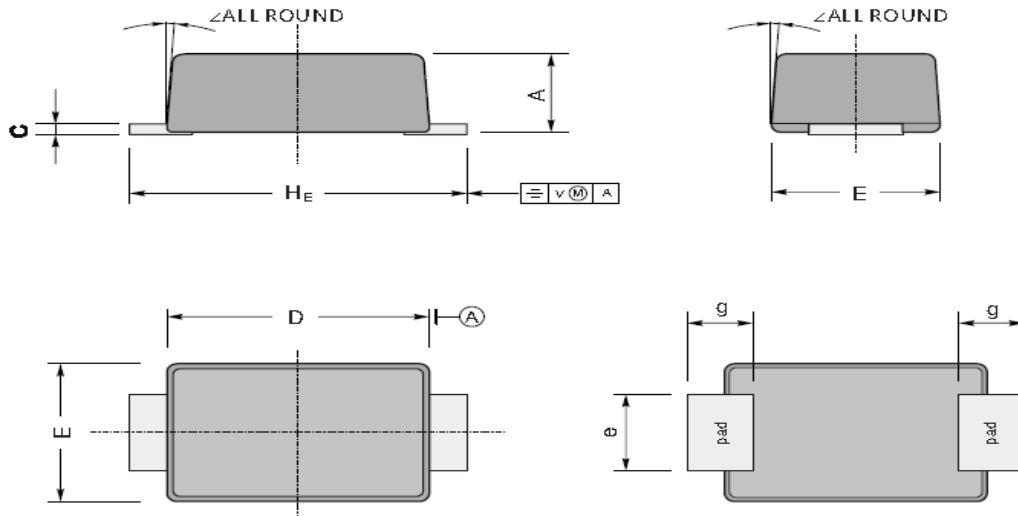


Solder Reflow Recommendation



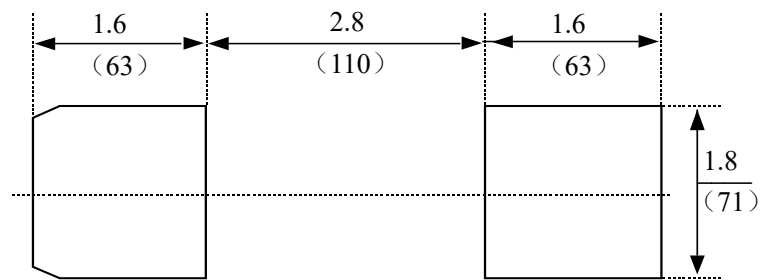
Remark: Pb free for 260 $^\circ\text{C}$ ; Pb for 245 $^\circ\text{C}$ .

Product dimension (SMAF)



UNIT		A	C	D	E	e	g	$H_E$	$\angle$
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
PSBDAFXXXV3	SMAF (Pb-Free)	3000/ Tape & Reel


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