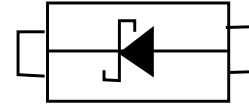


### Feature

- 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	Symbol	PSBDA F20V1	PSBDA F40V1	PSBDA F60V1	PSBDA F80V1	PSBDA F100V1	PSBDA F120V1	PSBDA F150V1	PSBDA F200V1	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	$V_{DC}$	20	40	60	80	100	120	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.0								A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	40				30				A
Max Instantaneous Forward Voltage at 1 A	$V_F$	0.55		0.70		0.85		0.90		V

Absolute maximum rating@25°C

Parameter	Symbol	PSBDA F20V1	PSBDA F40V1	PSBDA F60V1	PSBDA F80V1	PSBDA F100V1	PSBDA F120V1	PSBDA F150V1	PSBDA F200V1	Units
Maximum DC Reverse Current Ta = 25°C at Rated DC Reverse Voltage Ta =100°C	IR	0.3 10			0.2 5					mA
Typical Junction Capacitance 1)	Cj	110	80							pF
Typical Thermal Resistance 2)	RθJA	115								°C/W
Operating Junction Temperature Range	Tj	-55~+125								°C
Storage Temperature Range	Tstg	-55~+150								°C

Typical Characteristics

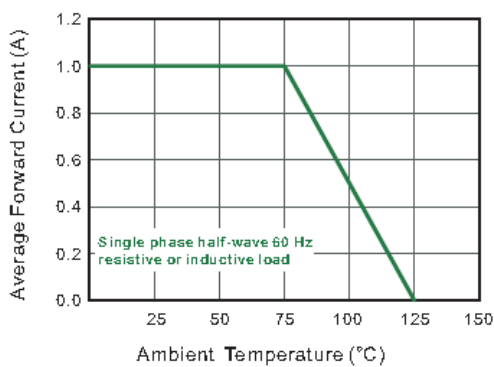


Fig.1 Forward Current Derating Curve

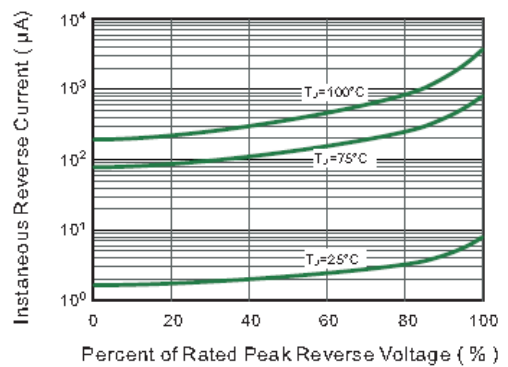
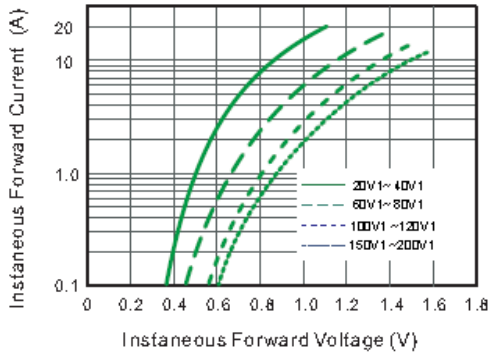
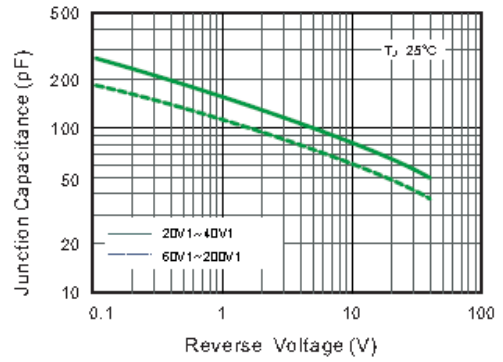


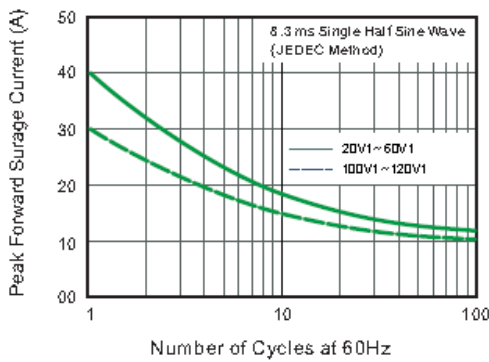
Fig.2 Typical Reverse Characteristics



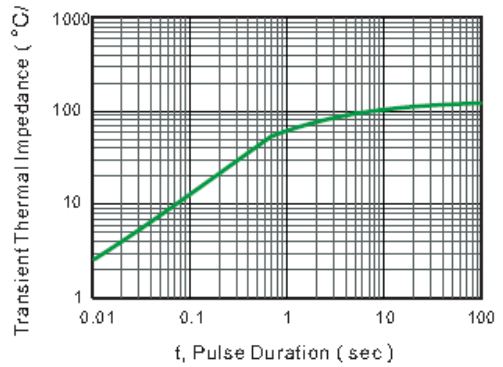
**Fig.3 Typical Forward Characteristic**



**Fig.4 Typical Junction Capacitance**

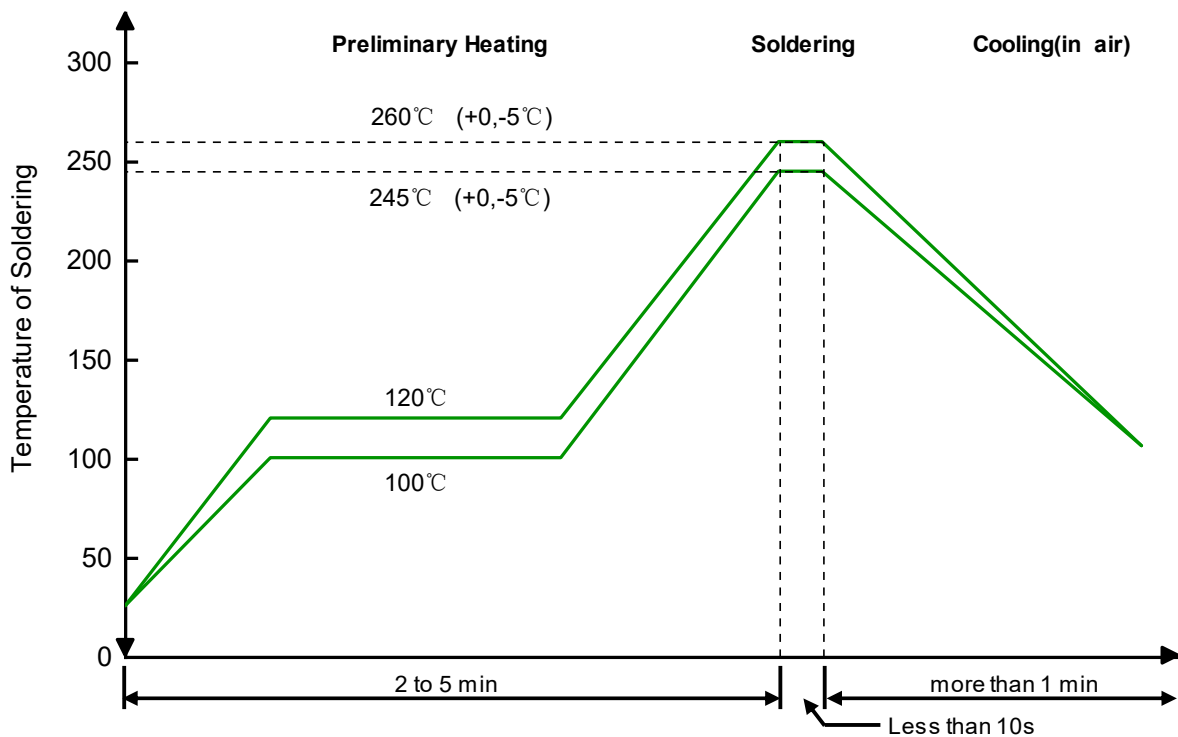


**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



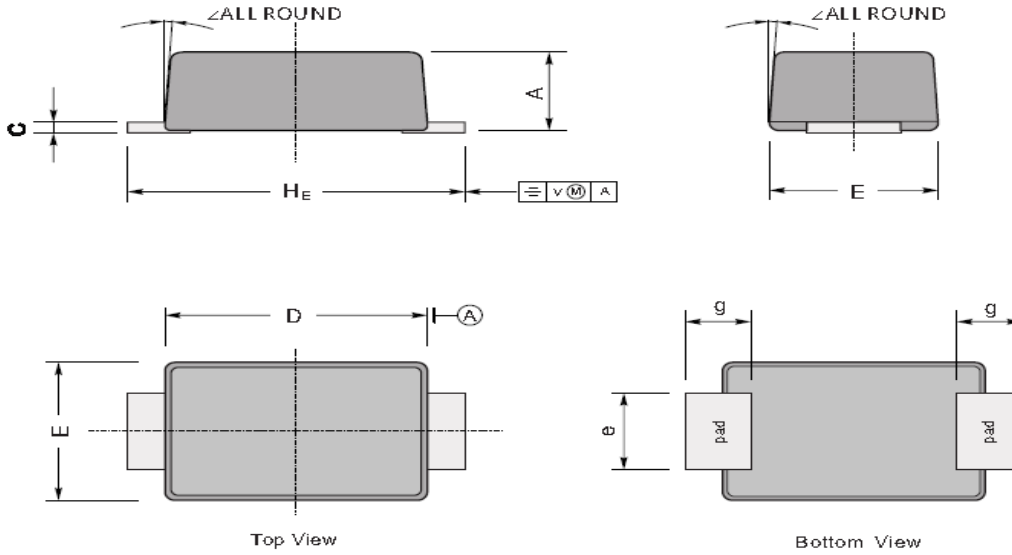
**Fig.6- Typical Transient Thermal Impedance**

## Solder Reflow Recommendation



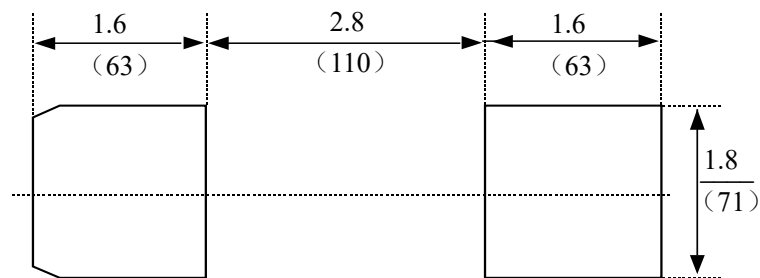
Remark: Pb free for 260°C; Pb for 245°C.

Product dimension (SMAF)



UNIT		A	C	D	E	e	g	H <sub>E</sub>	$\angle$
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

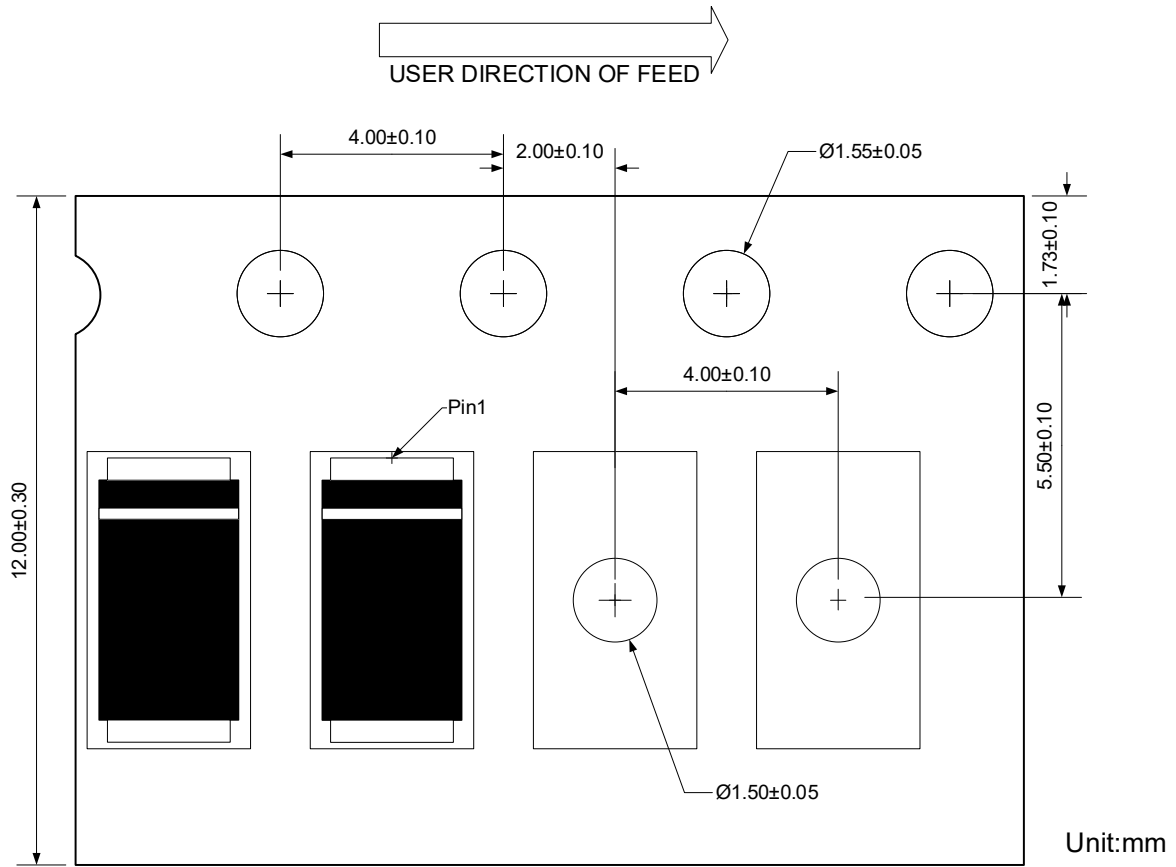


Unit:  $\frac{\text{mm}}{\text{mil}}$


Ordering information

Device	Package	Shipping
PSBDAF20~200V1	SMAF (Pb-Free)	3000/ Tape & Reel

Load with information




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