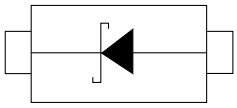
Feature



- 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: SMBF
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 57mg 0.002oz

Absolute maximum rating@25℃

Ratings at 25℃ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbol	PSBDBF20V5	PSBDBF40V5	PSBDBF60V5	PSBDBF80V5	PSBDBF100V5	PSBDBF120V5	PSBDBF150V5	PSBDBF200V5	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	$I_{F(AV)}$	5.0								A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150								A
Max Instantaneous Forward Voltage at 5 A	V_F	0.45	0.55	0.70		0.85				V

Absolute maximum rating@25℃

Parameter	Symbol	PSBDA F20V5	PSBDA F40V5	PSBDA F60V5	PSBDA F80V5	PSBDA F100V5	PSBDA F120V5	PSBDA F150V5	PSBDA F200V5	Units
Maximum DC Reverse Current Ta = 25°C at Rated DC Reverse Voltage Ta =100°C	I_R	1.0 50								mA
Typical Junction Capacitance 1)	C_j	800		500						pF
Typical Thermal Resistance 2)	$R_{\theta JA}$	40								℃/W
Operating Junction Temperature Range	T_j	-55~±125								℃
Storage Temperature Range	T_{stg}	-55~+150								℃

Notes:

1. Measured at 1MHz and applied reverse voltage of 4 V D.C.
2. P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.

Typical Characteristics

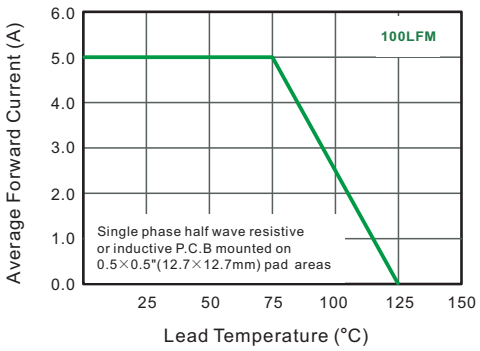


Fig.1 Forward Current Derating Curve

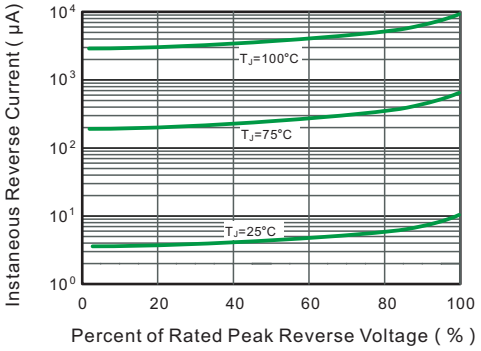


Fig.2 Typical Reverse Characteristics

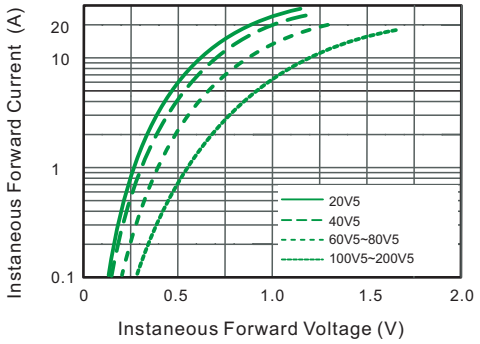


Fig.3 Typical Forward Characteristic

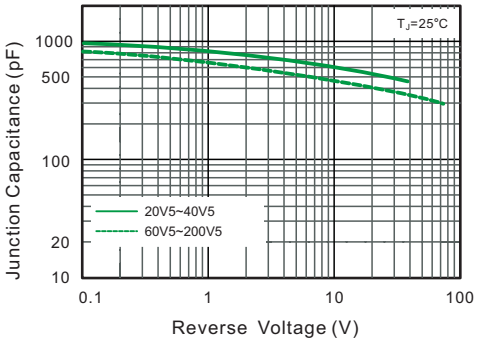


Fig.4 Typical Junction Capacitance

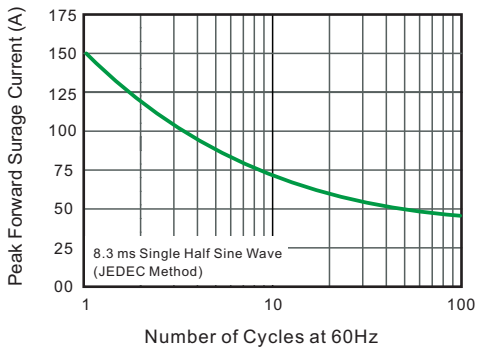


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

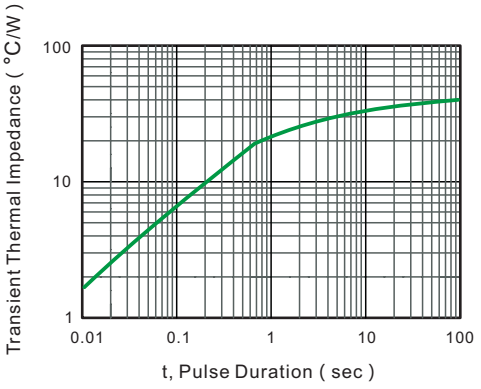
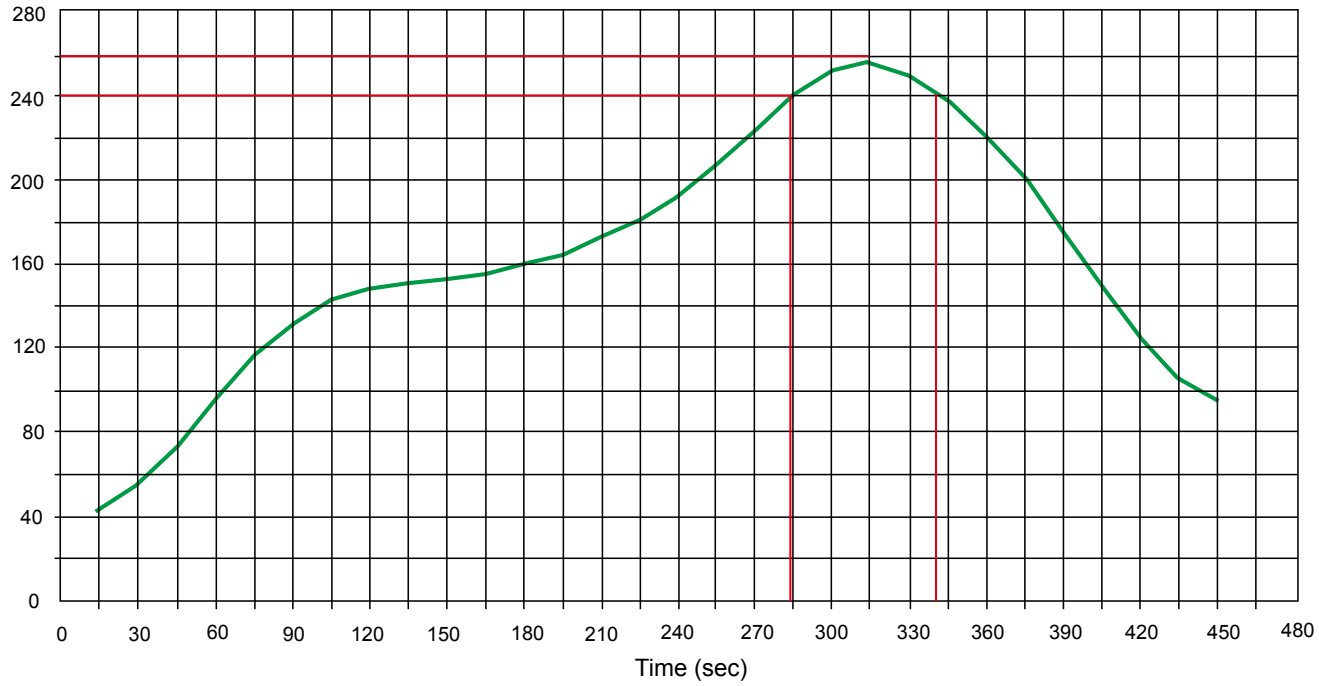


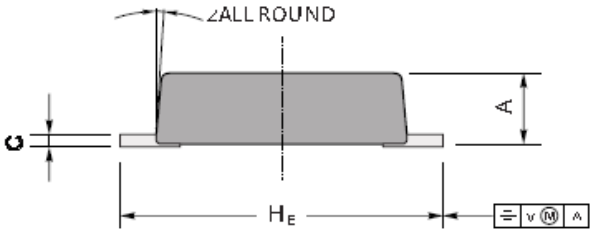
Fig.6- Typical Transient Thermal Impedance

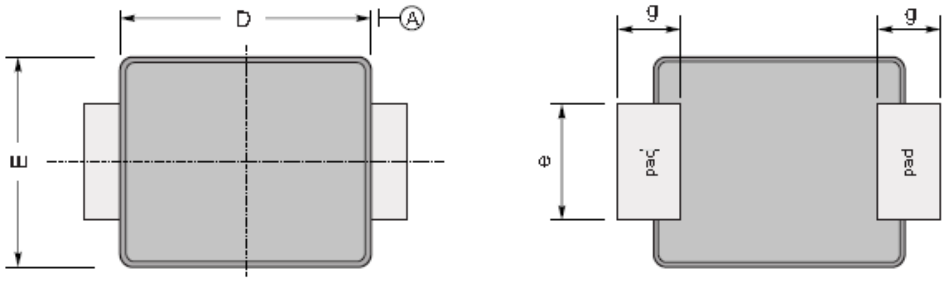
Solder Reflow Recommendation

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



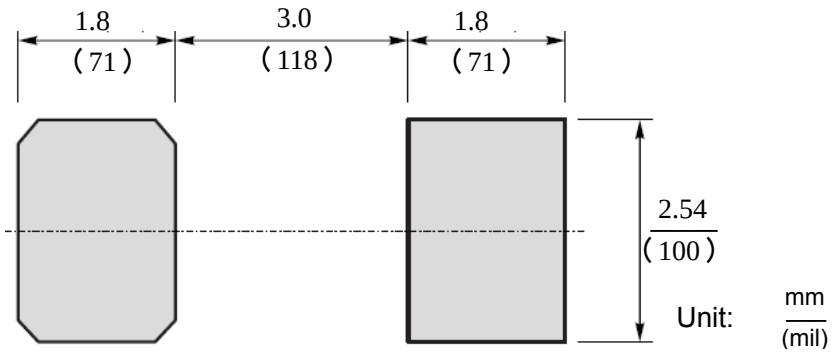
Product dimension (SMBF)





UNIT		A	C	D	E	H_E	e	g	∠
mm	max	1.3	0.26	4.4	3.7	5.5	2.2	1.0	9°
	min	1.1	0.18	4.2	3.5	5.1	1.9		
mil	max	51	10	173	146	216	86	40	
	min	43	7	165	138	200	75		

The recommended mounting pad size



Ordering information

Device	Package	Shipping
PSBDBFXXXV5	SMBF (Pb-Free)	5000/ Tape & Reel

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