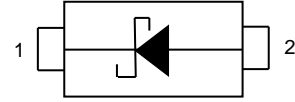


Feature

- 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

- Lead finish: 100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature: 260°C
- Device meets MSL 1 requirements
- Pure tin plating: 7 ~ 17 μm

Absolute maximum rating @25°C

Parameter	Symbol	PSBDA	PSBDA	PSBDA	PSBDA	PSBDA	PSBDA	PSBDA	PSBDA	PSBDA	Unit
		20V3	40V3	45V3	60V3	80V3	100V3	120V3	150V3	200V3	
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	45	60	80	100	120	150	200	V
Maximum RMS voltage	V_{RMS}	14	28	31.5	42	56	70	84	105	140	V
Maximum DC blocking voltage	V_{DC}	20	40	45	60	80	100	120	150	200	V
Maximum average forward rectified current	$I_{F(AV)}$	3.0									A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	80									A
Max Instantaneous forward voltage at 3A	V_F	0.55		0.70			0.85		0.95		V
Maximum DC reverse current $T_a=25^\circ\text{C}$ At rated DC reverse voltage $T_a=100^\circ\text{C}$	I_R	0.5				0.3				mA	
		5				3					
Typical junction capacitance ⁽¹⁾	C_J	450				400				pF	
Typical thermal resistance ⁽²⁾	$R_{\theta JA}$	70									°C/W
Operating junction temperature range	T_J	-55~+150									°C
Storage temperature range	T_{STG}	-55~+150									°C

Notes: 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 area.

Typical Characteristics

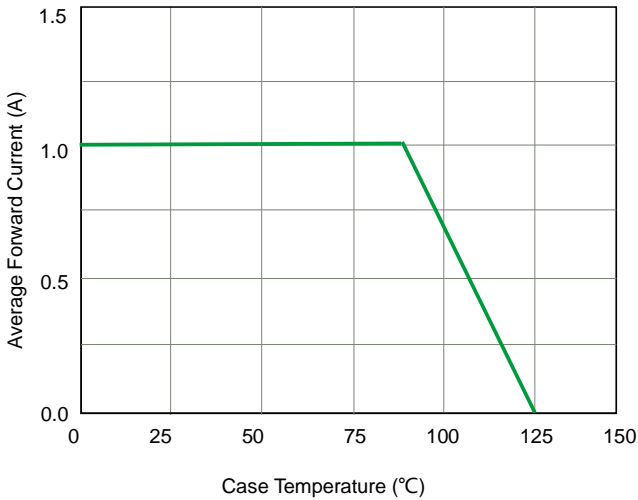


Fig1. Forward Current Derating Curve

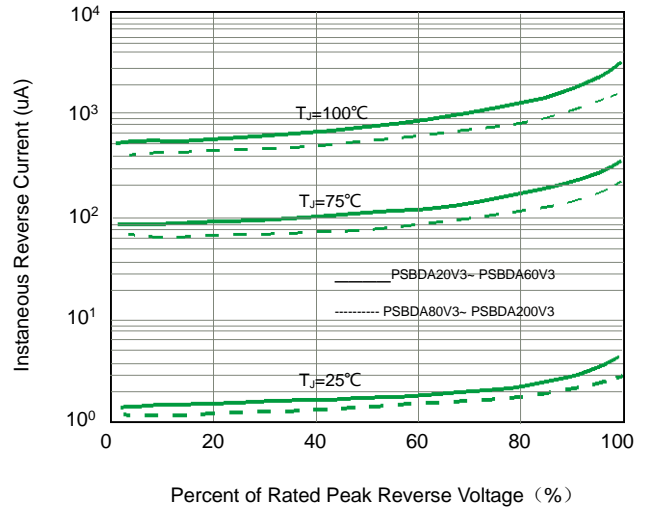


Fig2. Typical Reverse Characteristics

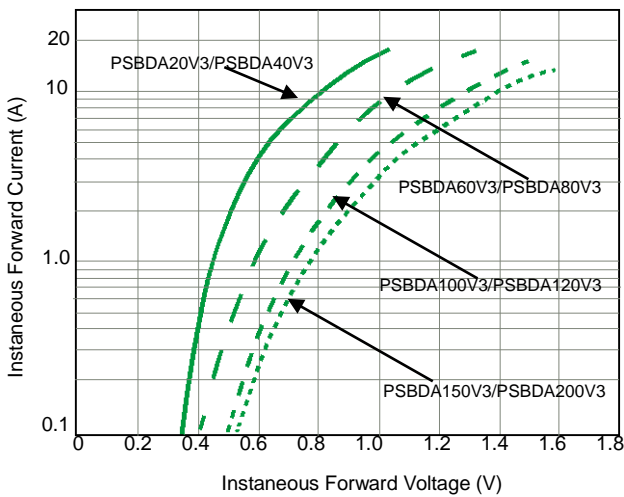


Fig3. Forward Current Derating Curve

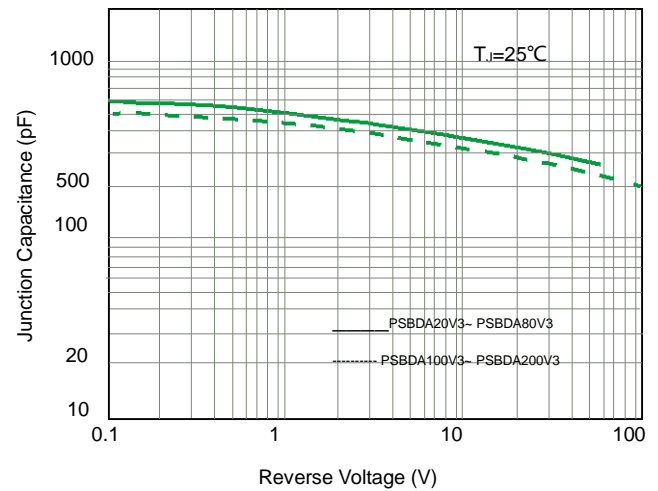


Fig4. Typical Junction Capacitance

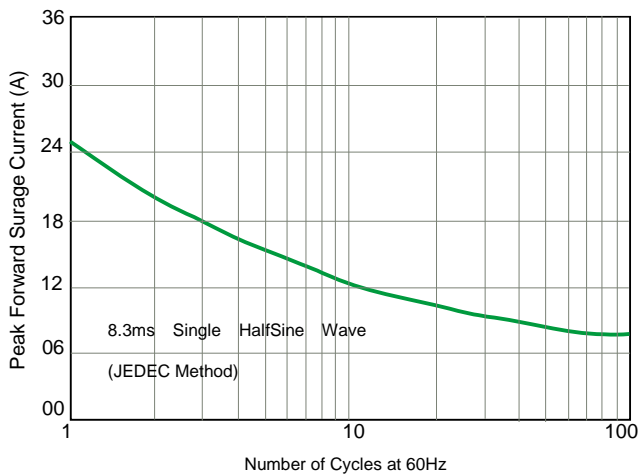


Fig5. Maximum Non-Repetitive Peak Forward Surge Current

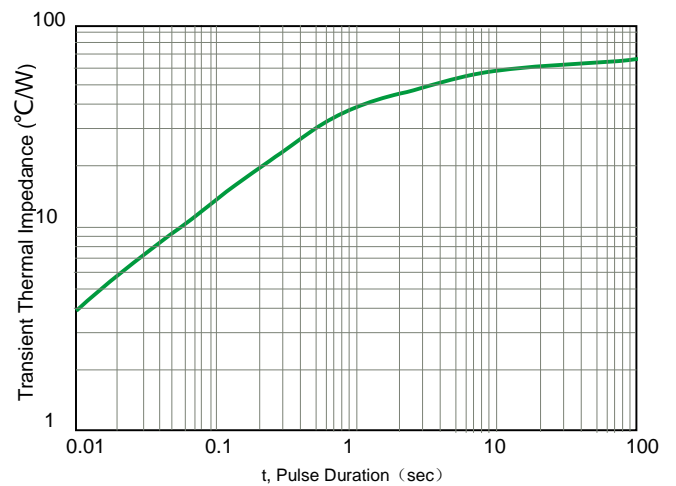
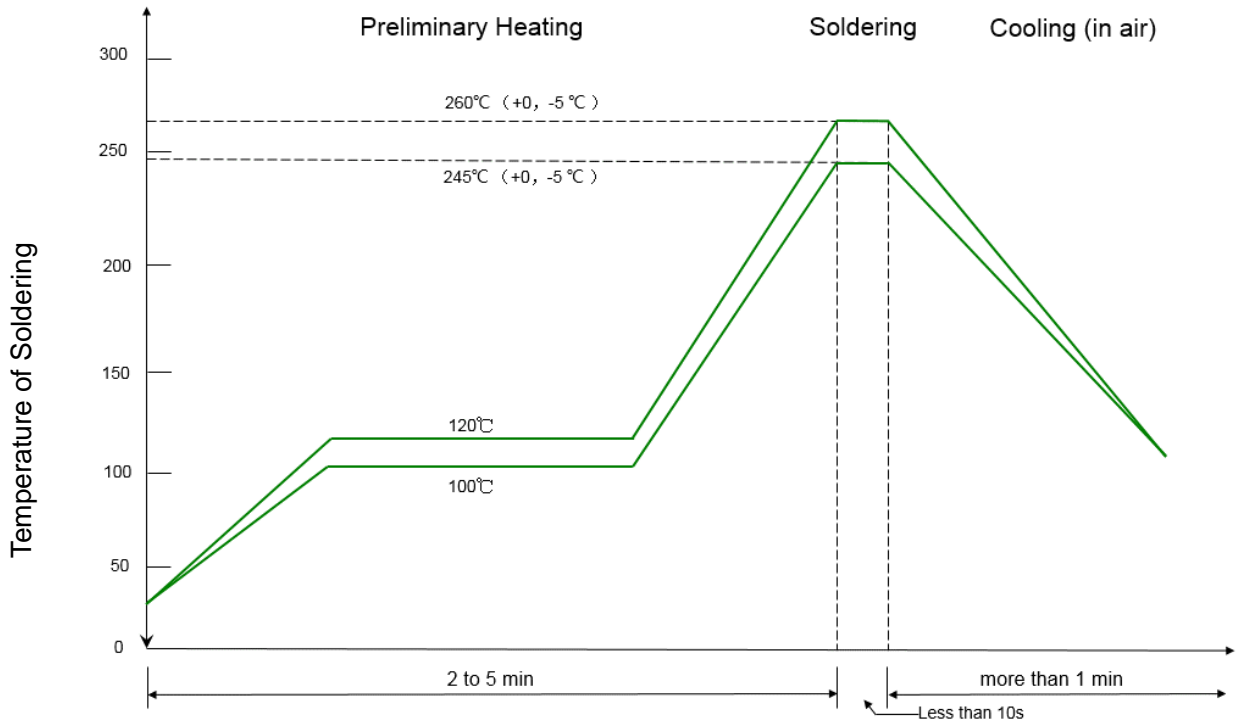


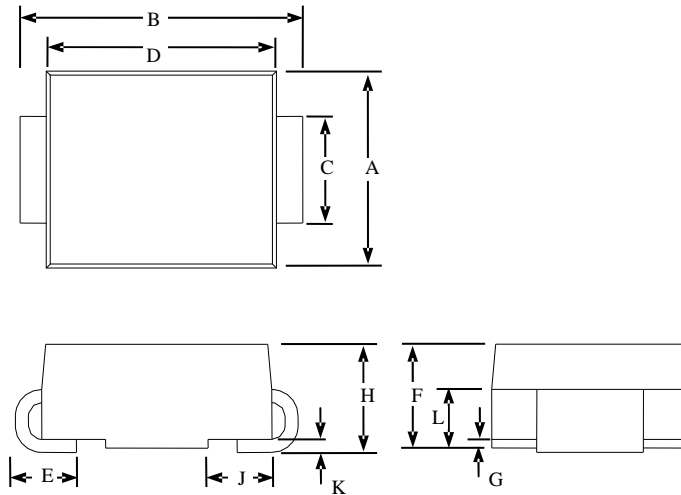
Fig6. Typical Transient Thermal Impedance

Solder Reflow Recommendation

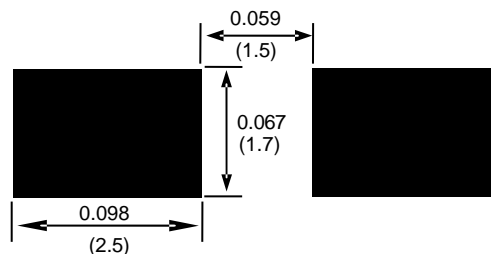


Remark: Pb free for 260°C; Pb for 245°C.

Product dimension(SMA)



Dimension	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.086	0.110	2.18	2.79
B	0.185	0.209	4.70	5.31
C	0.051	0.067	1.29	1.70
D	0.160	0.180	4.06	4.57
E	0.036	0.056	0.91	1.42
F	0.069	0.087	1.75	2.20
G	0.002	0.008	0.05	0.20
H	0.069	0.091	1.75	2.31
J	0.035	0.053	0.89	1.35
K	0.008	0.014	0.20	0.35
L	0.039	0.049	0.99	1.24




Suggested PCB Layout

DIMENSIONS ARE : $\frac{\text{INCHES}}{\text{(Millimeters)}}$

Ordering information

Device	Package	Reel	MPQ
PSBDAXXXV3	SMA(Pb-Free)	13"	5000/ 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.