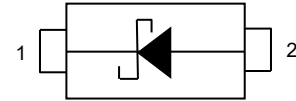


**Feature**

- 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 um

**Absolute maximum rating@25°C**

Parameter	Symbol	PSBDA20V1	PSBDA40V1	PSBDA60V1	PSBDA80V1	PSBDA100V1	PSBDA120V1	PSBDA150V1	PSBDA200V1	Unit	
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	$I_{F(AV)}$	1.0								A	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	25								A	
Max Instantaneous Forward Voltage at 1 A	$V_F$	0.55	0.70		0.85		0.90		V		
Maximum DC Reverse Current $T_a=25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a=100^\circ\text{C}$	$I_R$	0.3 10			0.2 5			0.1 2		mA	
Typical Junction Capacitance <sup>(1)</sup>	$C_J$	110		80						pF	
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	90									°C/W
Operating Junction Temperature Range	$T_J$	-55~125									°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

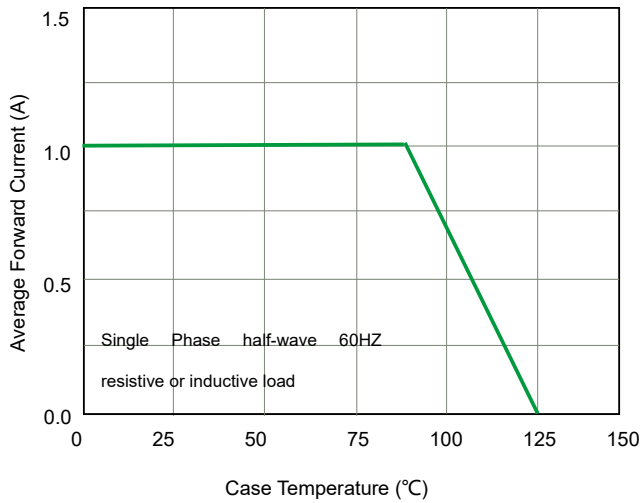


Fig1. Forward Current Derating Curve

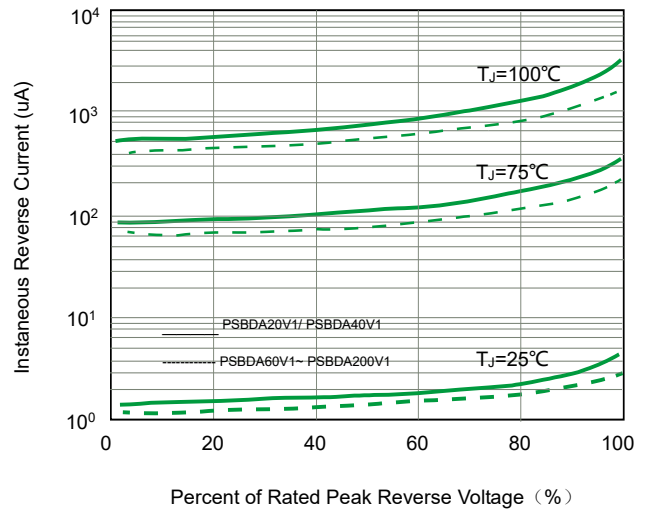


Fig2. Typical Reverse Characteristics

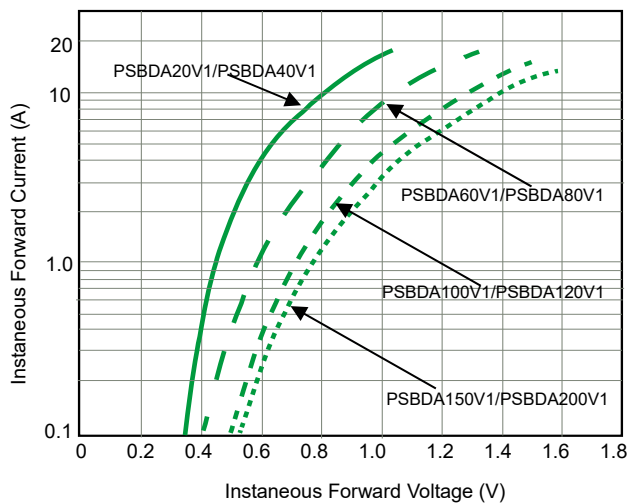


Fig3. Forward Current Derating Curve

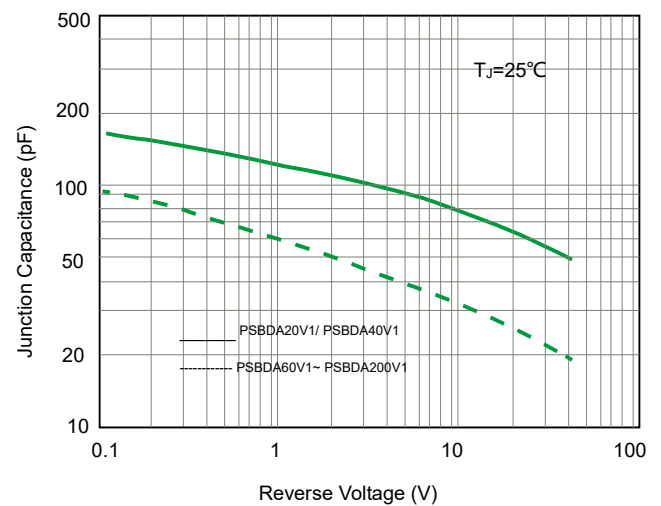


Fig4. Typical Junction Capacitance

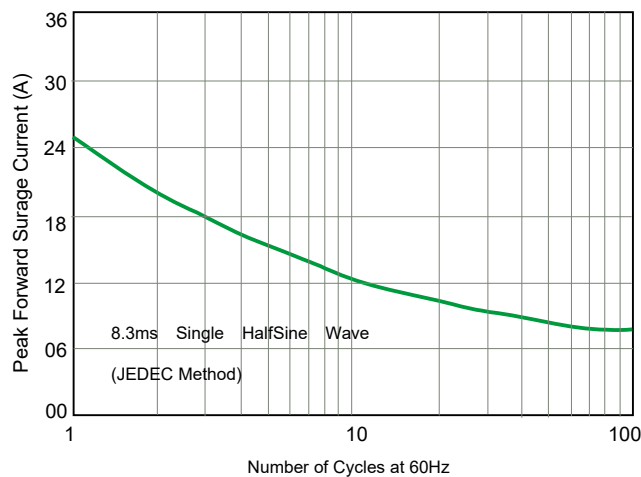


Fig5. Maximum Non-Repetitive Peak Forward Surge Current

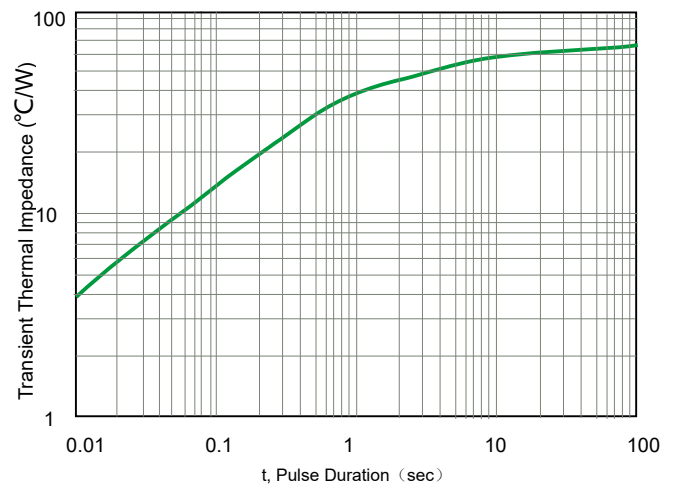
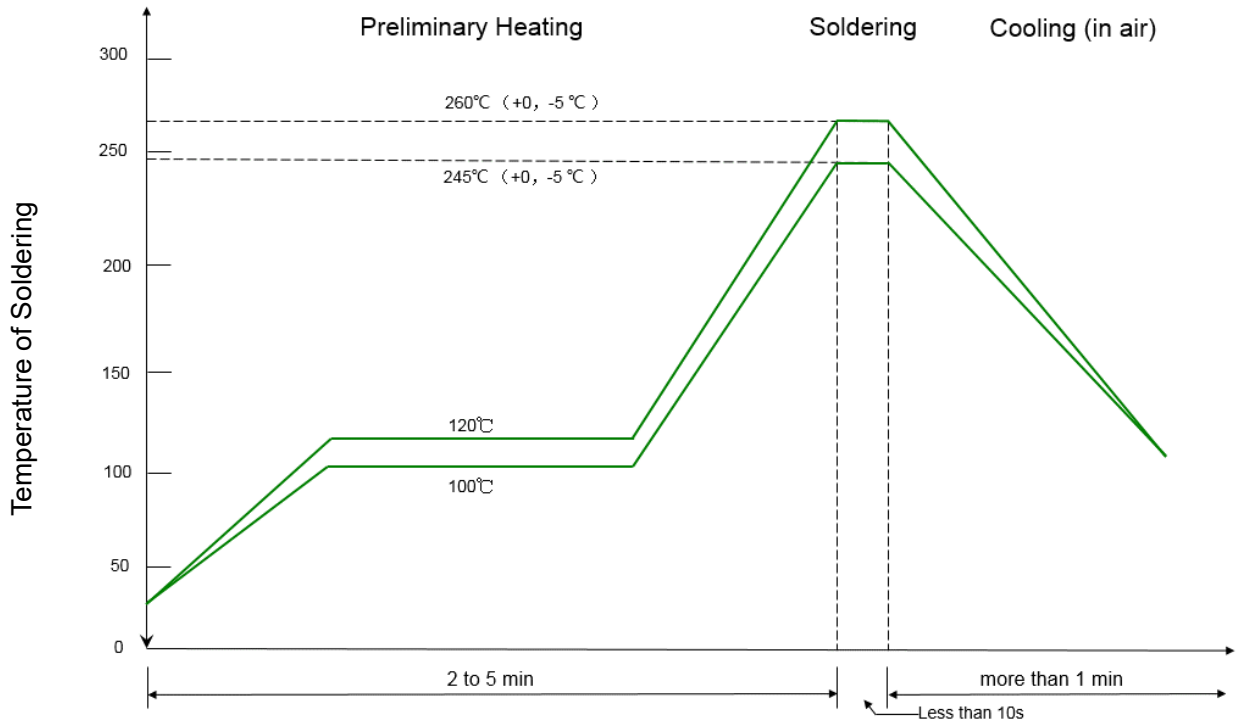


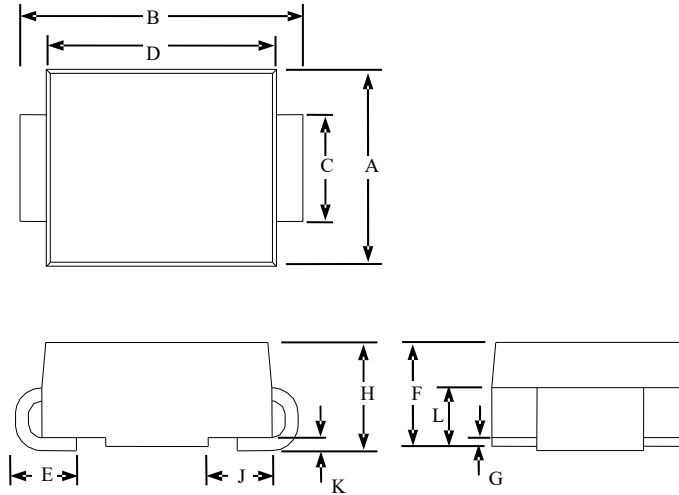
Fig6. Typical Transient Thermal Impedance

Solder Reflow Recommendation

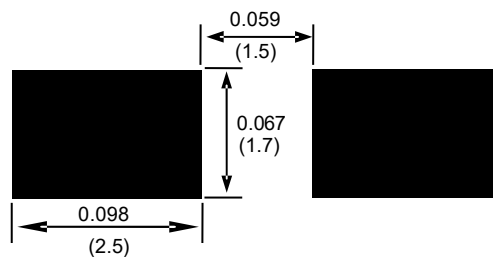


Remark: Pb free for 260°C; Pb for 245°C.

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
PSBDAXXXV1	SMA(Pb-Free)	13"	5000/ Tape & Reel


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