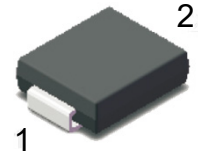
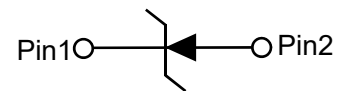


**Feature**

- 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


**Top View**
**Mechanical Characteristics**

- Package: SMC
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.22g / 0.0077oz


**Circuit Diagram**
**Absolute maximum rating@25°C**

Parameter	Symbol	PSBDC 20V5	PSBDC 40V5	PSBDC 60V5	PSBDC 80V5	PSBDC 100V5	PSBDC 120V5	PSBDC 150V5	PSBDC 200V5	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 at $T_c = 125^\circ\text{C}$	$I_{F(AV)}$	5.0								A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	175				150				A
Maximum Forward Voltage at 5 A	$V_F$	0.55		0.70		0.85				V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125^\circ\text{C}$	$I_R$					1.0		50		mA
Typical Junction Capacitance <sup>1)</sup>	$C_J$	600		400						pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	35								$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55~+150								$^\circ\text{C}$

**Notes:**

- 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

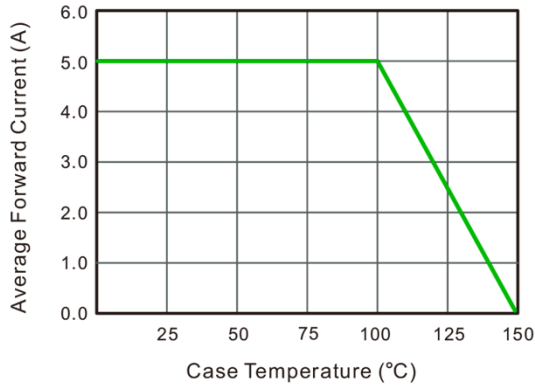


Fig.1 Forward Current Derating Curve

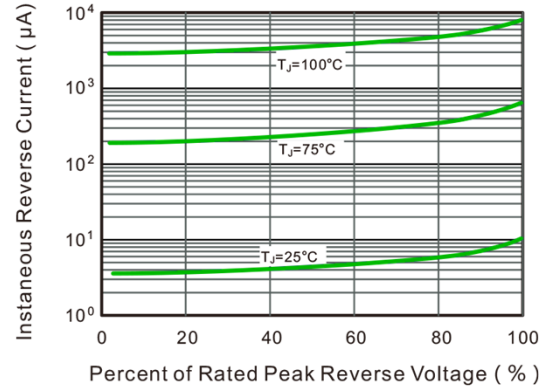


Fig.2 Typical Reverse Characteristics

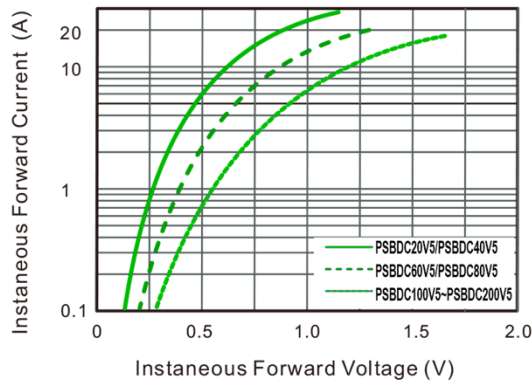


Fig.3 Typical Forward Characteristic

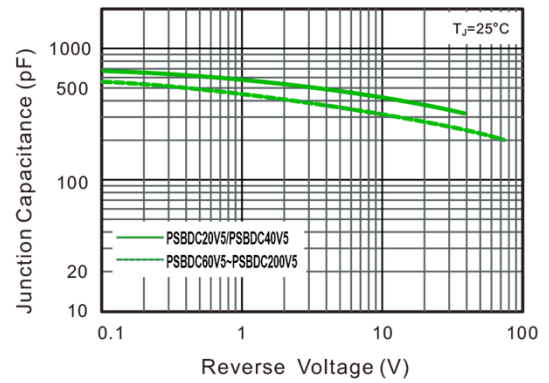


Fig.4 Typical Junction Capacitance

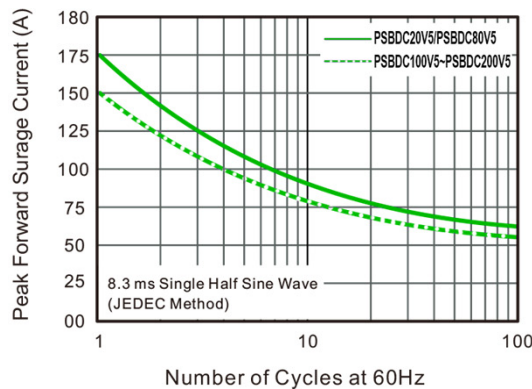


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

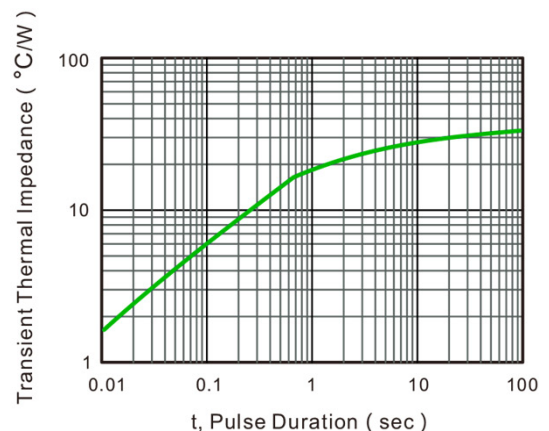
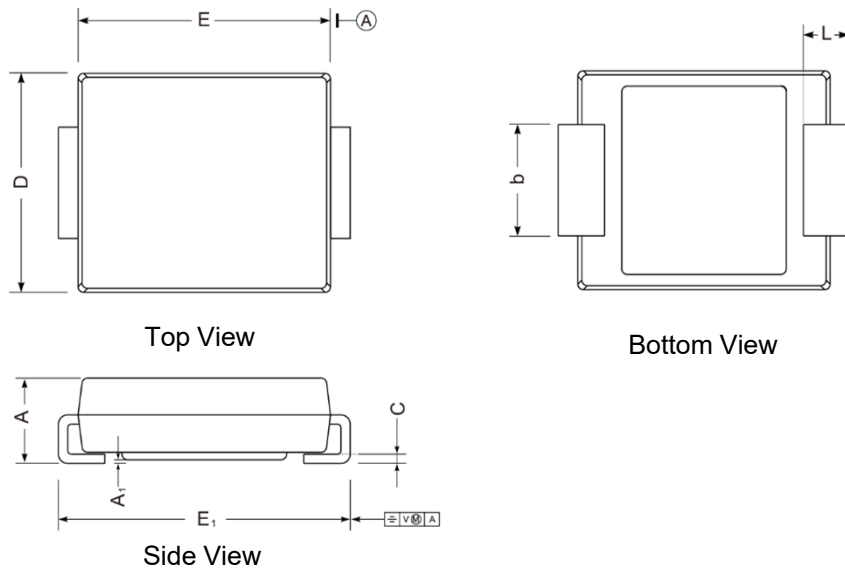
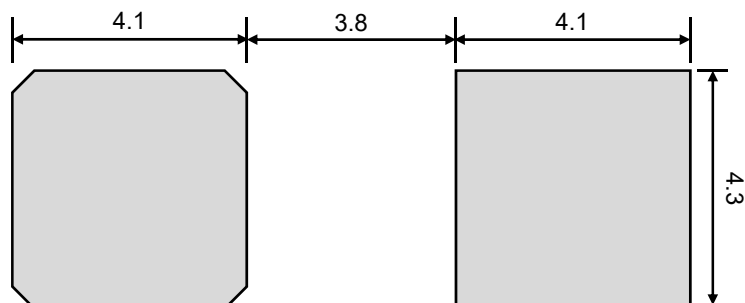


Fig.6- Typical Transient Thermal Impedance

## Product dimension (SMC)




Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	2.00	2.62	0.079	0.103
E	6.50	7.00	0.256	0.276
D	5.60	6.20	0.220	0.244
$E_1$	7.50	8.00	0.299	0.315
$A_1$	0.05	0.21	0.002	0.008
C	0.15	0.31	0.006	0.012
L	0.90	1.60	0.035	0.063
b	2.75	3.25	0.108	0.128



Suggested PCB Layout

Unit:mm


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