



DESCRIPTION

The SM220B~SM2100B are available in SMB package.

ORDERING INFORMATION

Package Type	Part Number
SMB	SM220B
	SM230B
	SM240B
	SM250B
	SM260B
	SM280B
	SM290B
	SM2100B
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

FEATURES

- For surface mount applications
- Metal-Semiconductor Junction with Guarding
- Epitaxial Construction
- Metal-Semiconductor Junction with Guarding
- Very Low forward voltage drop
- High Current capability
- For use in low voltage, high frequency inverters, Free wheeling, and polarity protection applications
- High temperature soldering guaranteed:
 - 250°C /10 seconds at terminals
- Available in SMB package

APPLICATIONS

Case: Molded Plastic

Terminals: Solder Plated, Solderable per
MIL-STD-750 Method 2026

Polarity: Indicated by Cathode Band

Weight: 0.003ounce, 0.093gram



ELECTRICAL CHARACTERISTICS

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

Parameter Symbol	Symbol	SM 220B	SM 230B	SM 240B	SM 250B	SM 260B	SM 280B	SM 290B	SM 2100B	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	80	90	100	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	56	63	70	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	80	90	100	V
Maximum Average Forward Rectified Current at $T_L=105^\circ\text{C}$	$I_{(AV)}$	2.0								A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed On Rated Load (JEDEC Method)	I_{FSM}	50								A
Maximum Forward Voltage at 2.0A DC	V_F	0.55			0.75		0.85			V
Maximum DC Reverse Current at rated DC blocking voltage <small>NOTE1</small>	$T_A=25^\circ\text{C}$	0.5								mA
	$T_A=100^\circ\text{C}$	15								
Typical Junction Capacitance <small>NOTE1</small>	C_J	75								pF
Typical Thermal Capacitance <small>NOTE2</small>	$R_{\theta JA}$	15								$^\circ\text{C/W}$
Operating Temperature Range	T_J	-55 to +125								$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150								$^\circ\text{C}$

NOTE1: Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

NOTE2: Thermal Resistance Junction to Lead.



TYPICAL CHARACTERISTICS

$T_A = 25^\circ\text{C}$ unless otherwise noted

Figure. 1 Forward Current Derating Curve

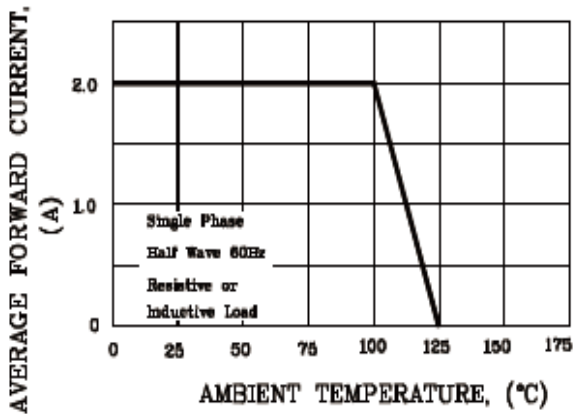


Figure. 3 Typical Instantaneous Forward Characteristics

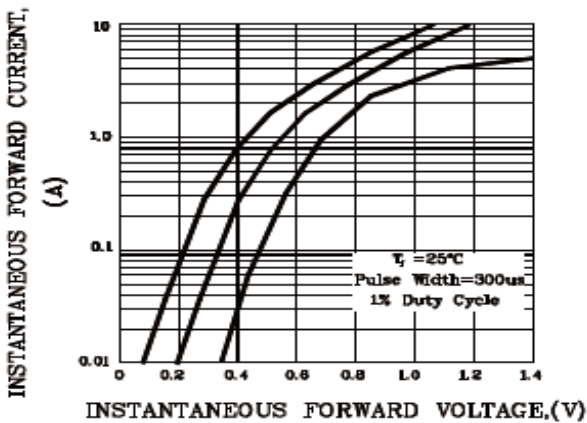


Figure. 5 Typical Reverse Characteristics

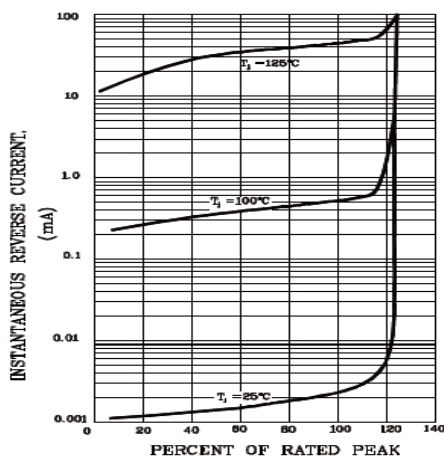


Figure. 2 Maximum Non-repetitive Surge Current

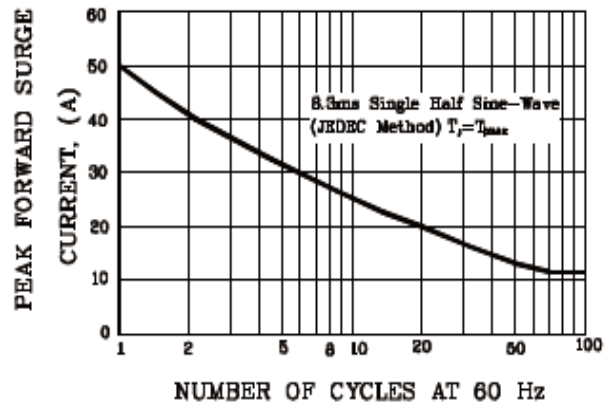
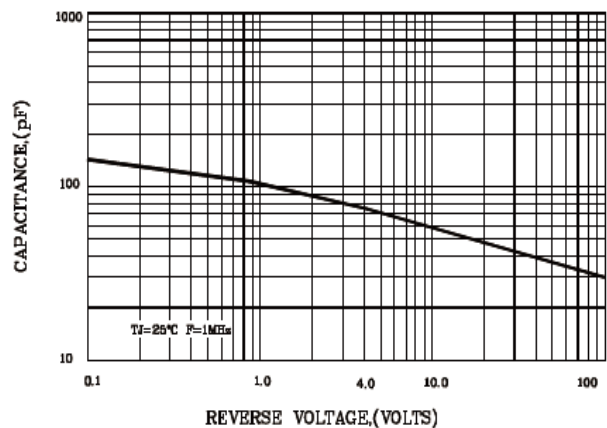


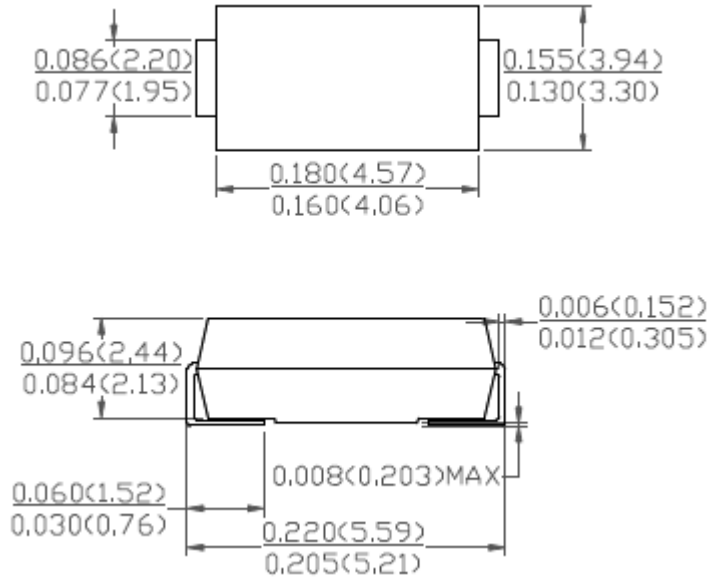
Figure. 4 Typical Junction Capacitance





PACKAGE INFORMATION

Dimension in SMB Package (Unit: mm)





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