SENSITRON

SEMICONDUCTOR

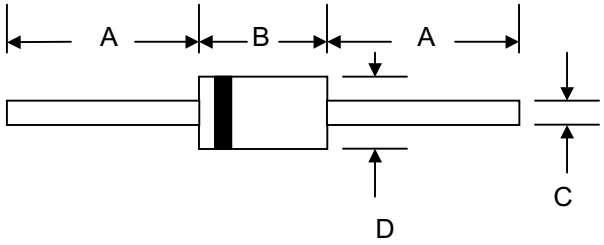
SB520-SB560

5.0A SCHOTTKY BARRIER RECTIFIER

Data Sheet 2828, Rev.A

Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Green Products in Compliance with the RoHS Directive



Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

DO-201AD				
Dim	**Min**	**Max**	**Min**	**Max**
A	25.40	—	1.000	—
B	8.50	9.50	0.334	0.374
C	1.20	1.30	0.047	0.051
D	5.00	5.60	0.197	0.220
	In mm		**In inch**	

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	SB520	SB530	SB540	SB550	SB560	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	V
Average Rectified Output Current (Note 1) @T_L = 100°C	I_O	5.0					A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150					A
Forward Voltage (Note 2) @I_F = 5.0A	V_{FM}	0.55			0.63		V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage (Note 2) @T_A = 100°C	I_{RM}	0.2 20					mA
Typical Junction Capacitance (Note 3)	C_j	550			400		pF
Typical Thermal Resistance Junction to Ambient (Note 1) (Note 4)	$R_{\theta JA}$ $R_{\theta JL}$	25 8					K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150					°C

Note: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.
2. Short duration test pulse used to minimize self-heating effect.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
4. Thermal resistance junction to lead vertical P.C.B. mounted, 0.375" (9.5mm) lead length.

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Data Sheet 2828, Rev.A

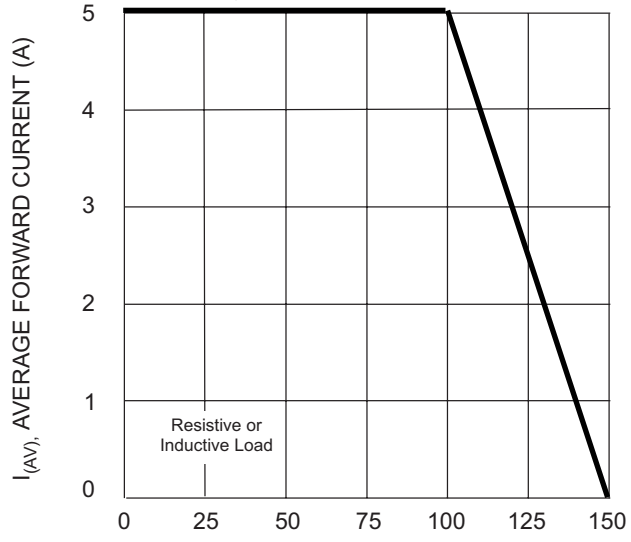

Fig. 1 Forward Current Derating Curve

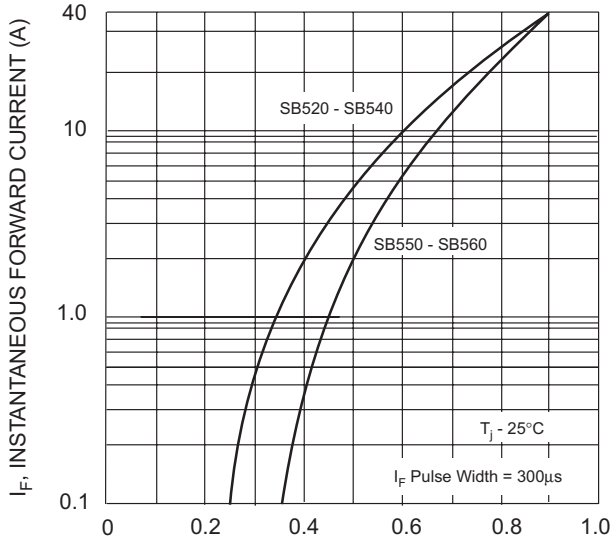

Fig. 2 Typical Forward Characteristics

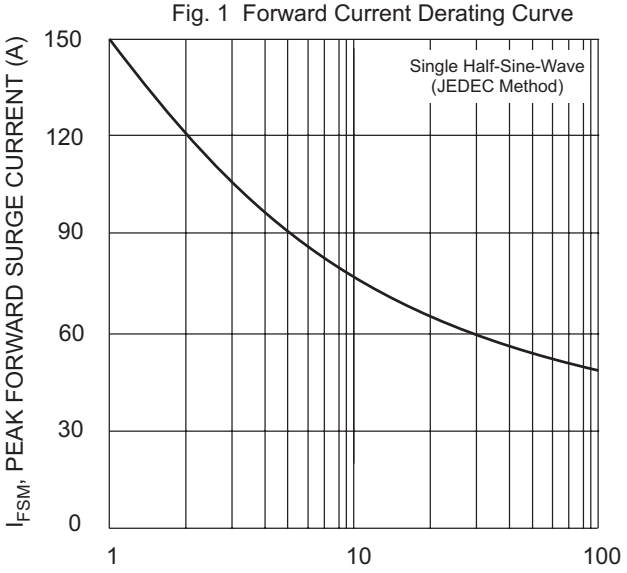

Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

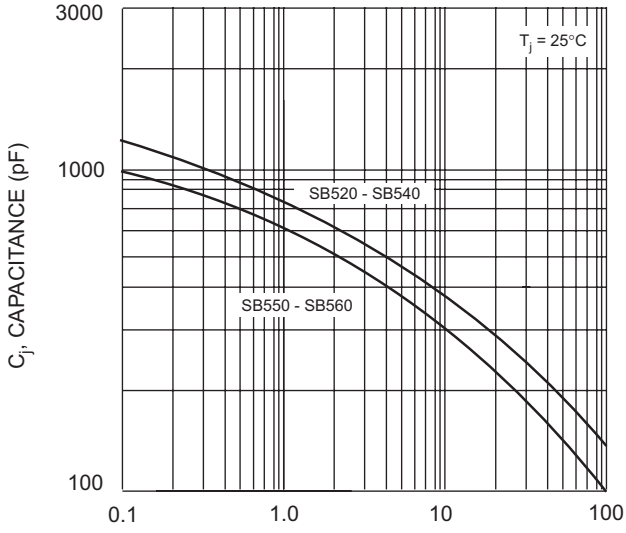

Fig. 4 Typical Junction Capacitance

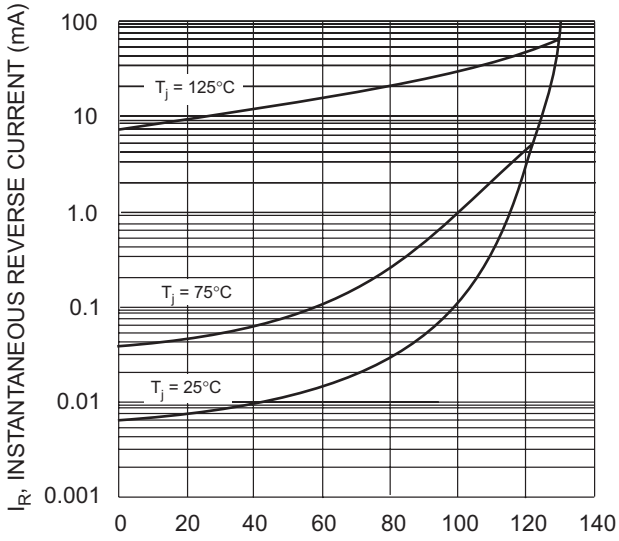

Fig. 5 Typical Reverse Characteristics

Data Sheet 2828, Rev.A