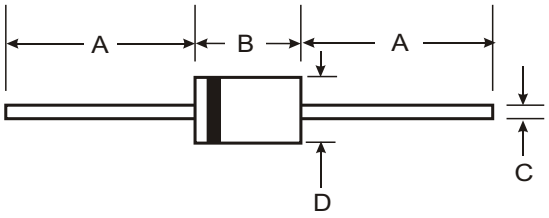
SB320 - SB360

3.0A SCHOTTKY BARRIER RECTIFIER

SPICE MODEL: SB340

Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 80A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Plastic Material - UL Flammability Classification 94V-0



DO-201AD		
Dim	**Min**	**Max**
A	25.40	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.1 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

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	SB320	SB330	SB340	SB350	SB360	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) (See Figure 1)	I_O	3.0					A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	80					A
Forward Voltage (Note 2) @ I_F = 3.0A	V_{FM}	0.50			0.74		V
Peak Reverse Current @T_A = 25°C	I_{RM}	0.5					mA
at Rated DC Blocking Voltage (Note 2) @ T_A = 100°C		20			10		
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	30					°C/W
	$R_{\theta JL}$	10					
Operating Temperature Range	T_j	-65 to +125			-65 to +150		°C
Storage Temperature Range	T_{STG}	-65 to +150					°C

Notes:
1. Measured at ambient temperature at a distance of 9.5mm from the case.
2. Short duration pulse test used to minimize self-heating effect.
3. Thermal resistance from junction to lead vertical P.C.B. mounted, 0.500" (12.7mm) lead length with 2.5 x 2.5" (63.5 x 63.5mm) copper pad.

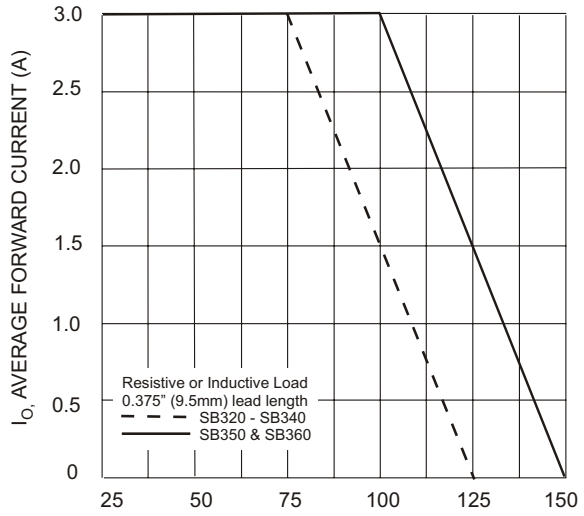


Fig. 1 Forward Current Derating Curve

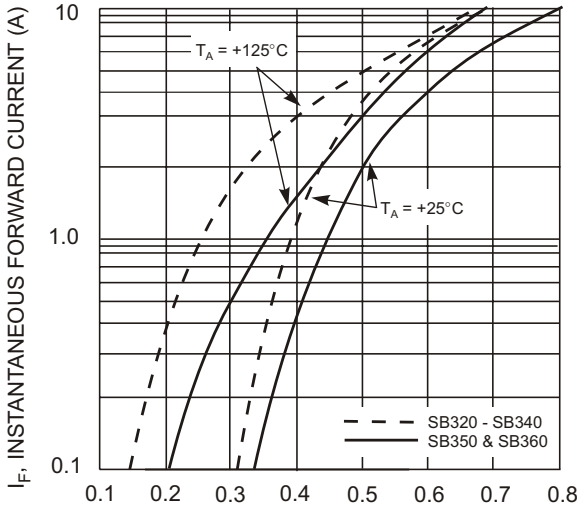


Fig. 2 Typical Forward Characteristics

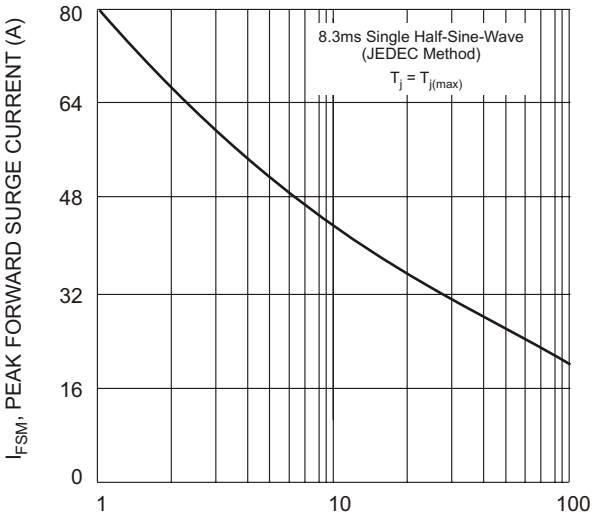


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

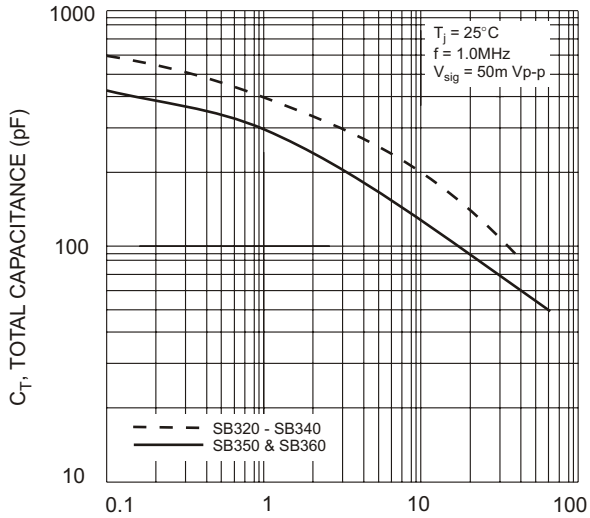


Fig. 4 Typical Total Capacitance

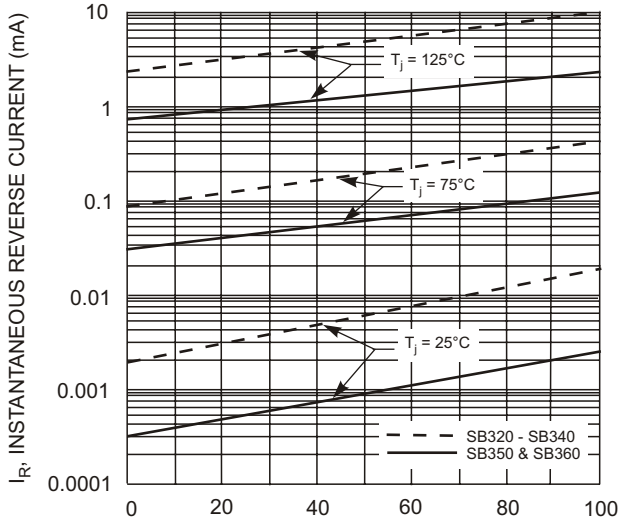


Fig. 5 Typical Reverse Characteristics