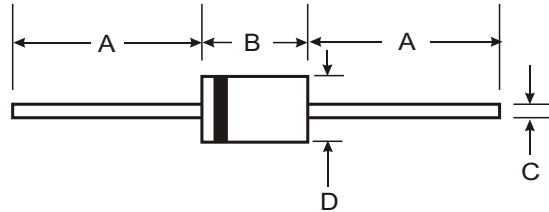


### Features

- 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 40A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Plastic Material - UL Flammability Classification 94V-0



DO-41 Plastic		
Dim	Min	Max
A	25.40	—
B	4.06	5.21
C	0.71	0.864
D	2.00	2.72
All Dimensions in mm		

### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.3 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

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

Characteristic	Symbol	SB120	SB130	SB140	SB150	SB160	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)	$I_O$	1.0					A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	40					A
Forward Voltage (Note 2) @ $I_F = 1.0A$	$V_{FM}$	0.50			0.70		V
Peak Reverse Current at Rated DC Blocking Voltage (Note 2) @ $T_A = 25^{\circ}C$ @ $T_A = 100^{\circ}C$	$I_{RM}$	0.5				mA	
		10			5.0		
Typical Thermal Resistance Junction to Lead (Note 1)	$R_{\theta JL}$	15					$^{\circ}C/W$
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	50					$^{\circ}C/W$
Operating Temperature Range	$T_j$	-65 to +125			-65 to +150		$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-65 to +150					

Notes: 1. Measured at ambient temperature at a distance of 9.5mm from the case.  
 2. Short duration test pulse used to minimize self-heating effect.

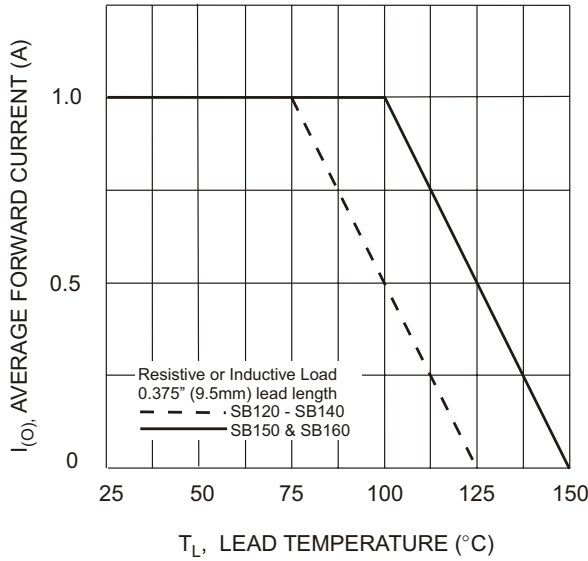


Fig. 1 Forward Current Derating Curve

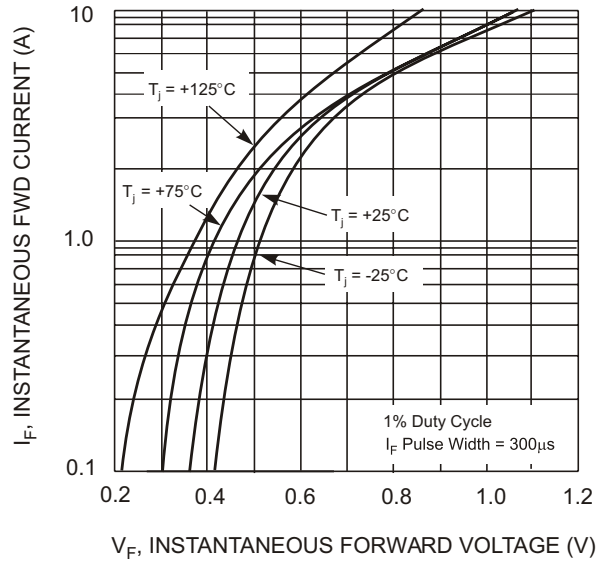


Fig. 2 Typical Forward Characteristics - SB120 thru SB140

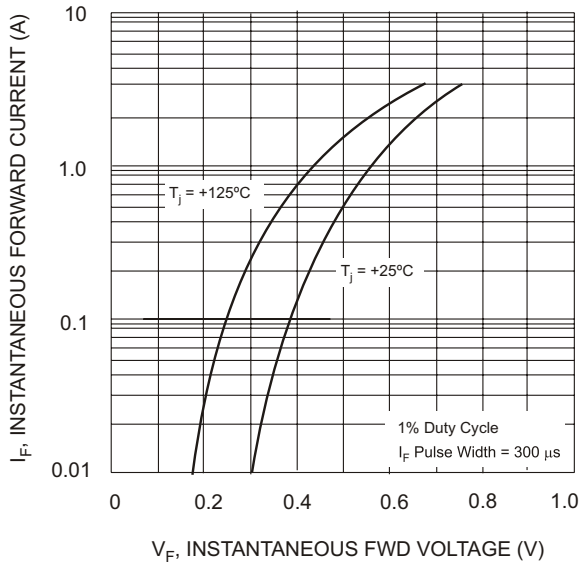


Fig. 3 Typ. Forward Characteristics - SB150 thru SB160

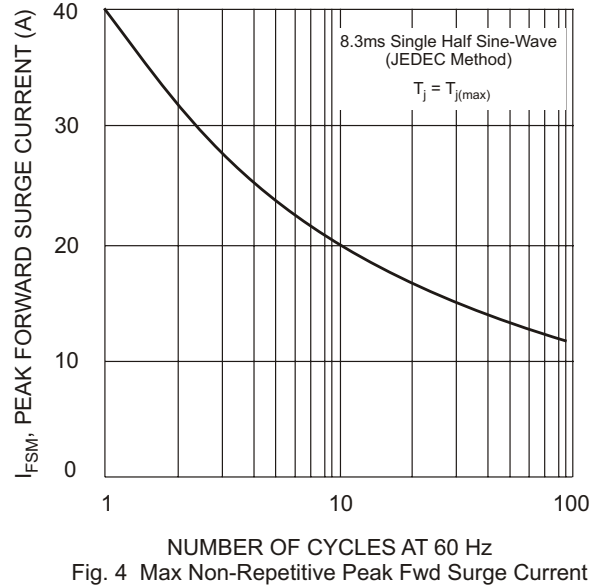


Fig. 4 Max Non-Repetitive Peak Fwd Surge Current

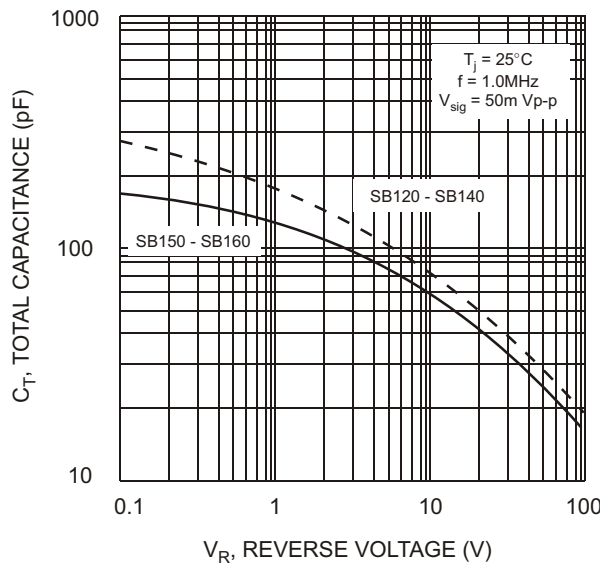


Fig. 5 Typical Total Capacitance

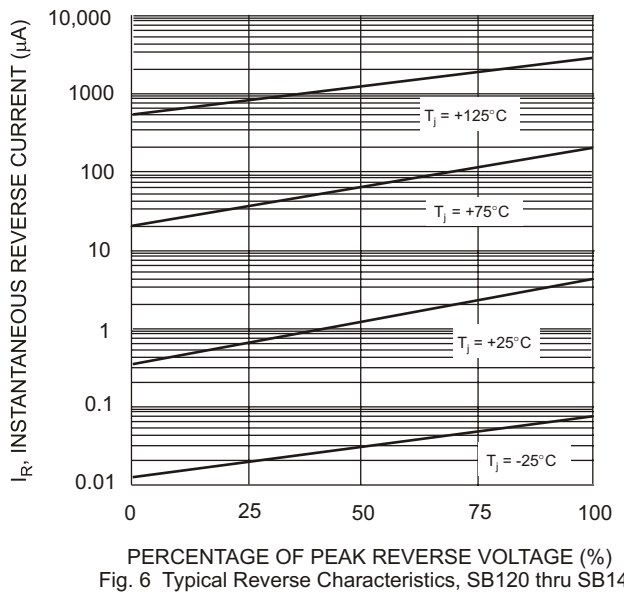
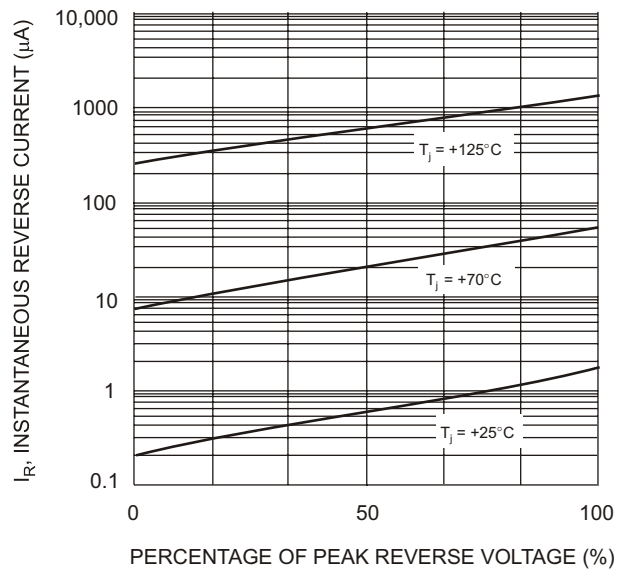


Fig. 6 Typical Reverse Characteristics, SB120 thru SB140



PERCENTAGE OF PEAK REVERSE VOLTAGE (%)  
Fig. 7 Typical Reverse Characteristics, SB150 thru SB160