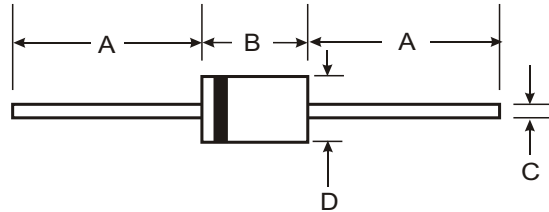


Features

- 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_A = 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	V _{RRM}	20	30	40	50	60	V
Working Peak Reverse Voltage	V _{RWM}						
DC Blocking Voltage	V _R						
RMS Reverse Voltage	V _{R(RMS)}	14	21	28	35	42	V
Average Rectified Output Current (Note 1)	I _o	1.0					A
(See Figure 1)							
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)	V _{FM}	0.50		0.70		V	
Peak Reverse Current	I _{RM}	0.5					mA
@ T _A = 25°C							
at Rated DC Blocking Voltage (Note 2)		10		5.0			
Typical Thermal Resistance Junction to Lead (Note 1)	R _{θJL}	15					°C/W
Typical Thermal Resistance Junction to Ambient	R _{θJA}	50					°C/W
Operating Temperature Range	T _j	-65 to +125			-65 to +150		°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.

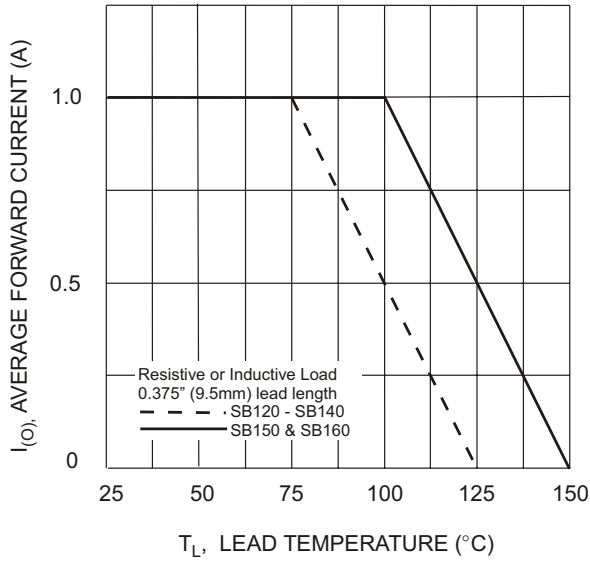


Fig. 1 Forward Current Derating Curve

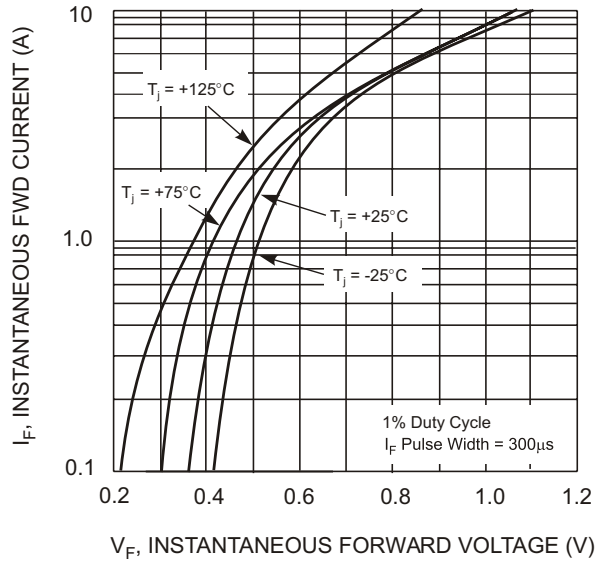


Fig. 2 Typical Forward Characteristics - SB120 thru SB140

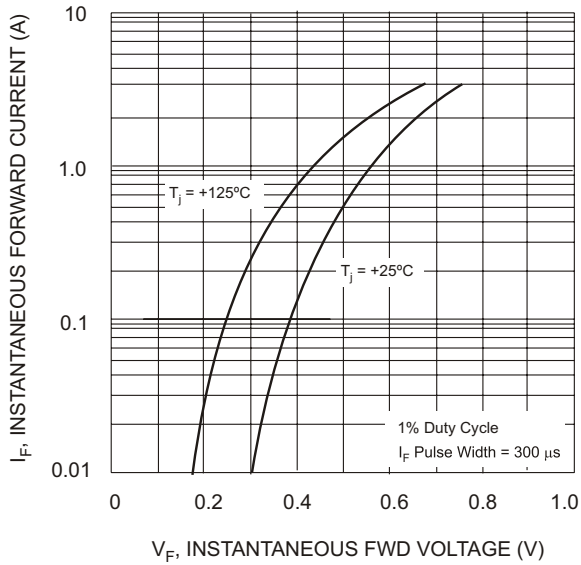


Fig. 3 Typ. Forward Characteristics - SB150 thru SB160

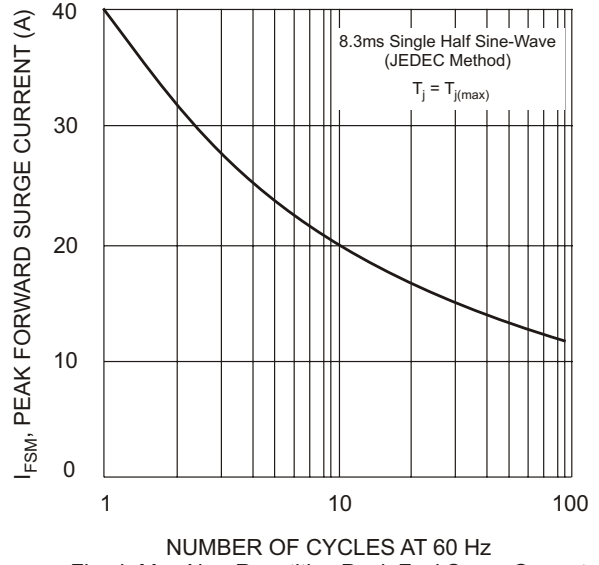


Fig. 4 Max Non-Repetitive Peak Fwd Surge Current

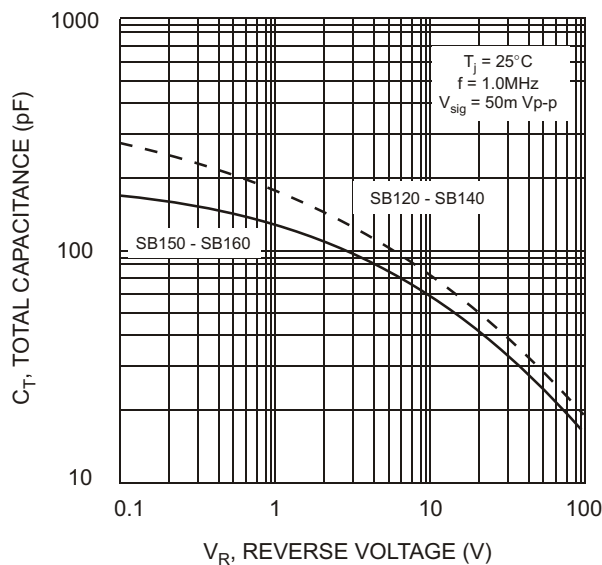


Fig. 5 Typical Total Capacitance

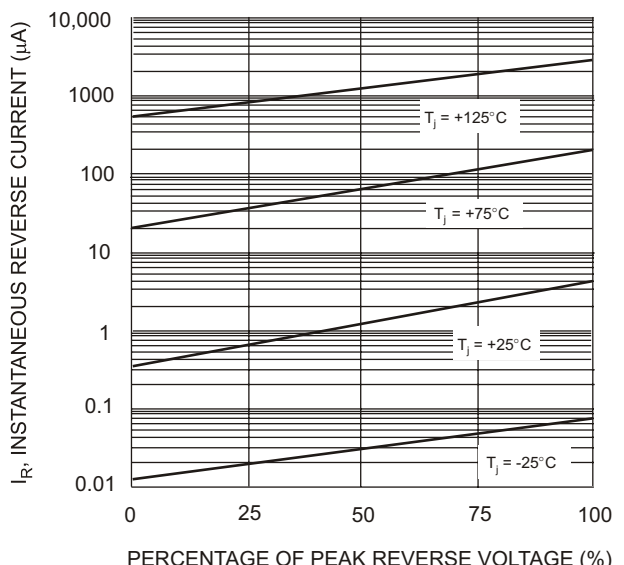
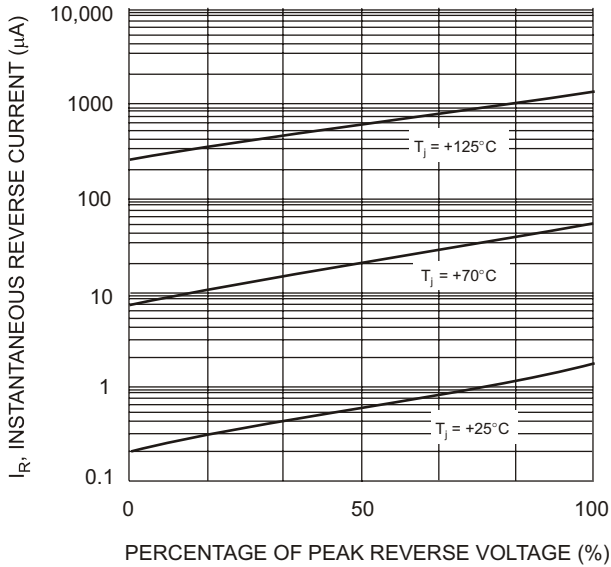


Fig. 6 Typical Reverse Characteristics, SB120 thru SB140



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