

### SCHOTTKY BARRIER RECTIFIERS

VOLTAGE RANGE: 20 --- 60V  
CURRENT: 2.0 A

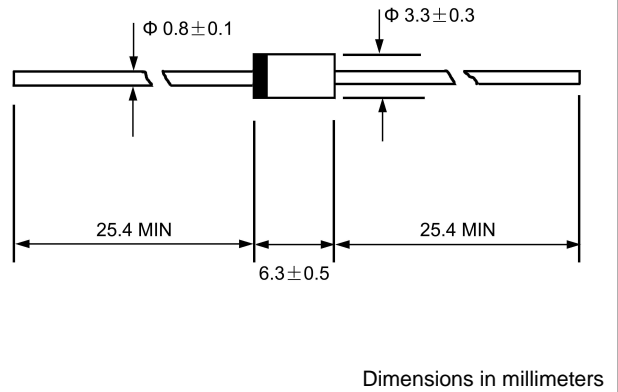
#### FEATURES

- ◇ Metal-Semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop, low switching losses
- ◇ High surge capability
- ◇ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ◇ The plastic material carries U/L recognition 94V-0

#### MECHANICAL DATA

- ◇ Case: JEDEC DO--15, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL- STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.014 ounces, 0.39 grams
- ◇ Mounting position: Any

#### DO - 15



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

		SB220	SB230	SB240	SB250	SB260	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	20	30	40	50	60	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	2.0					A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	$I_{FSM}$	50.0					A
Maximum instantaneous forward voltage @ 2.0A (Note1)	$V_F$	0.55			0.70		V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	$I_R$	0.5 20.0					mA
Typical junction capacitance (Note2)	$C_J$	170					pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	35					$^\circ C/W$
Operating junction temperature range	$T_J$	- 55 ---- + 125					$^\circ C$
Storage temperature range	$T_{STG}$	- 55 ---- + 150					$^\circ C$

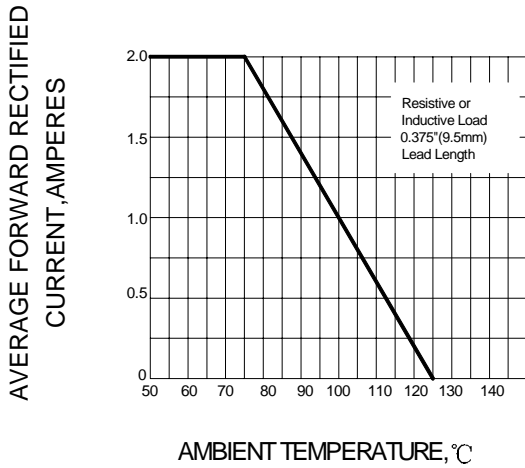
Note: 1. Pulse test : 300  $\mu$  s pulse width, 1% duty cycle.

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

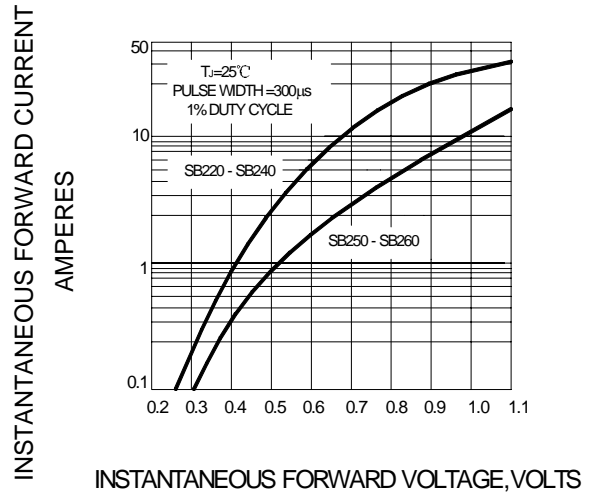
3. Thermal resistance junction to ambient.

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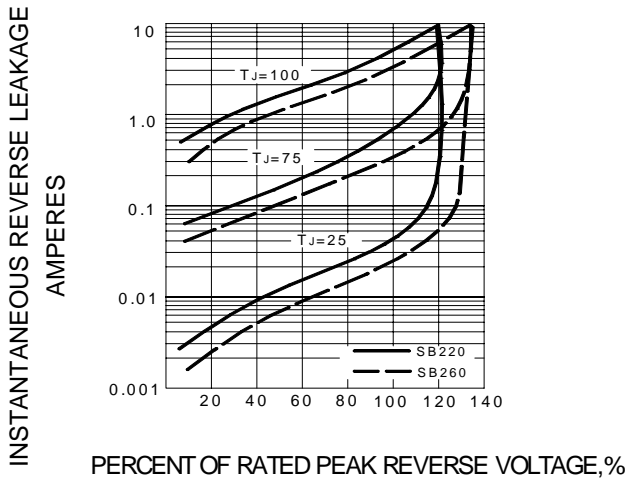
**FIG.1 – FORWARD CURRENT DERATING CURVE**



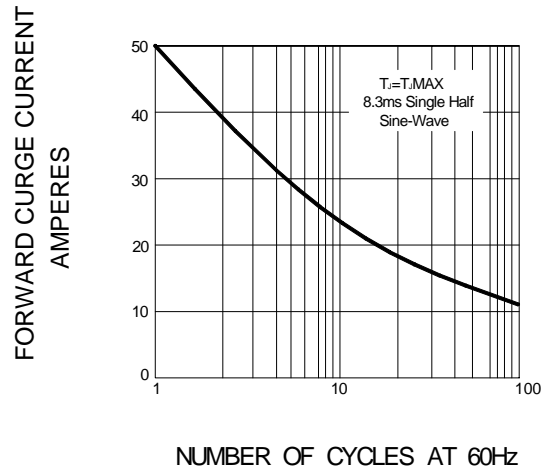
**FIG.2 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.3 – TYPICAL REVERSE CHARACTERISTICS**



**FIG.4 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.5 – TYPICAL JUNCTION CAPACITANCE**

