

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 70 --- 100 V
CURRENT: 2.0 A

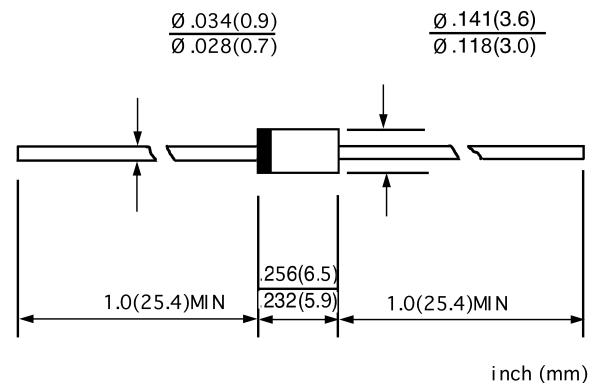
FEATURES

- ◇ 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-750, Method 2026
- ◇ 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%.

		SB270	SB280	SB290	SB2A0	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	70	80	90	100	V
Maximum RMS voltage	V_{RMS}	49	56	63	70	V
Maximum DC blocking voltage	V_{DC}	70	80	90	100	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	2.0				A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	60.0				A
Maximum instantaneous forward voltage @ 2.0A (Note 1) $T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	V_F	0.79 0.69				V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	0.5 20.0				mA
Typical junction capacitance (Note2)	C_J	250				pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	20				$^\circ\text{C/W}$
Operating junction temperature range	T_J	- 55 ---- + 125				$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 ---- + 150				$^\circ\text{C}$

NOTE: 1. Pulse test: 300us 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

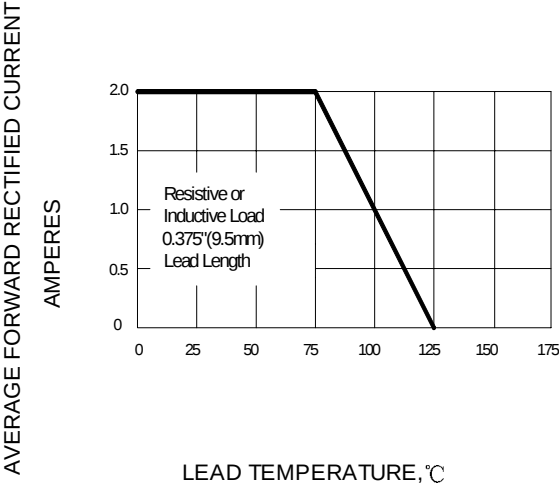


FIG.2 -- PEAK FORWARD SURGE CURRENT

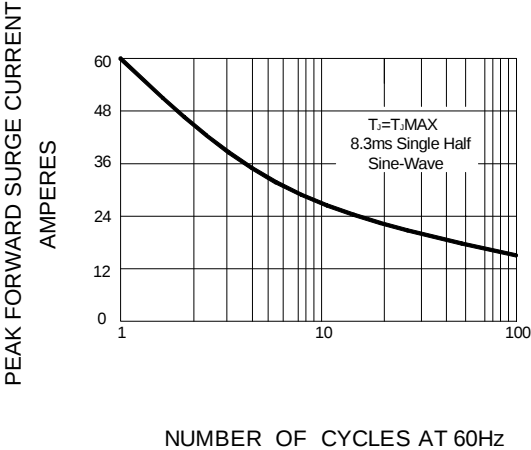


FIG.3 -- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

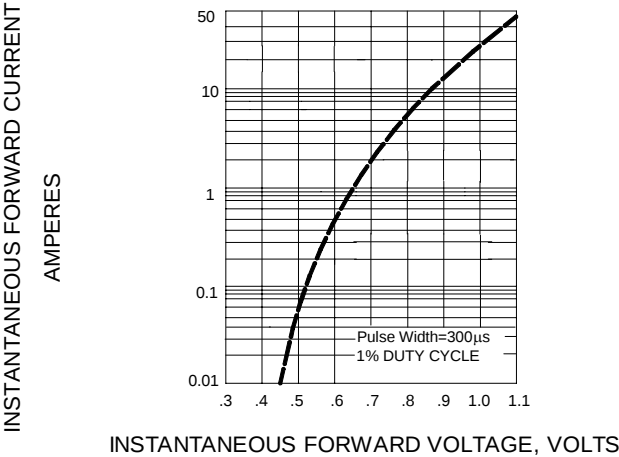


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

