

SCHOTTKY BARRIER RECTIFIER

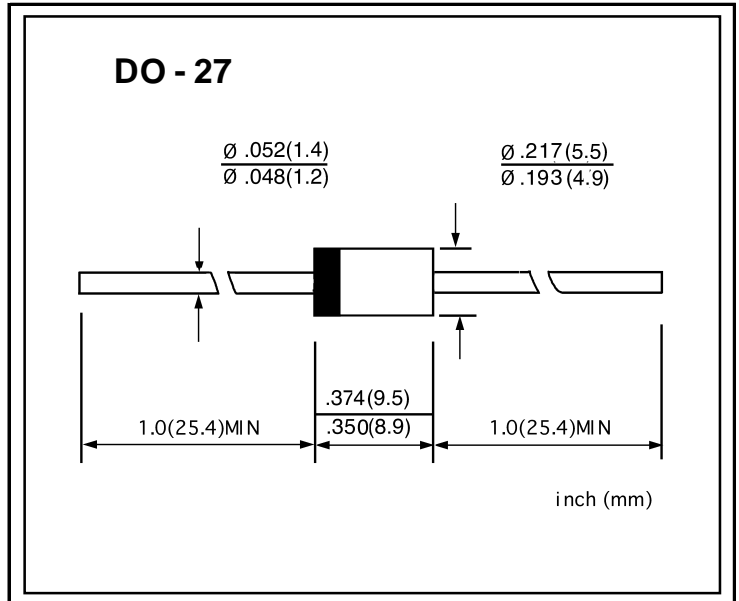
VOLTAGE RANGE: 20 --- 100 V
CURRENT: 5.0 A

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--27, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.041 ounces, 1.15 grams
- ◇ Mounting position: Any



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%.

		SB520	SB530	SB540	SB550	SB560	SB580	SB5A0	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	56	70	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	V
Maximum average forward rectified current 9.5mm lead length, (See FIG.1)	$I_{F(AV)}$	5.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	I_{FSM}	150.0							A
Maximum instantaneous forward voltage @ 5.0 A (Note 1)	V_F	0.55		0.67		0.85		V	
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	I_R	50.0			25.0				mA
Typical junction capacitance (Note2)	C_J	50							pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	10							°C/W
Operating junction temperature range	T_J	-55 --- +150							°C
Storage temperature range	T_{STG}	-55 --- +150							°C

NOTE: 1. Pulse test : 300 μ 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

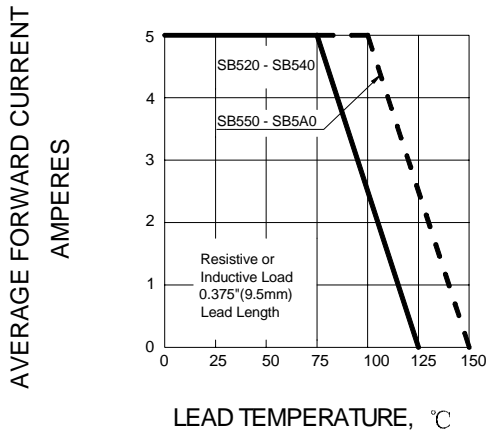


FIG.2 – TYPICAL FORWARD CHARACTERISTICS

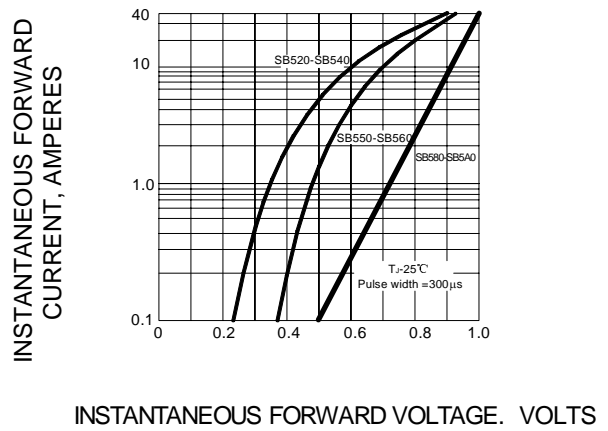


FIG.3 – MAX NON-REPETITIVE PEAK FWD SURGE CURRENT

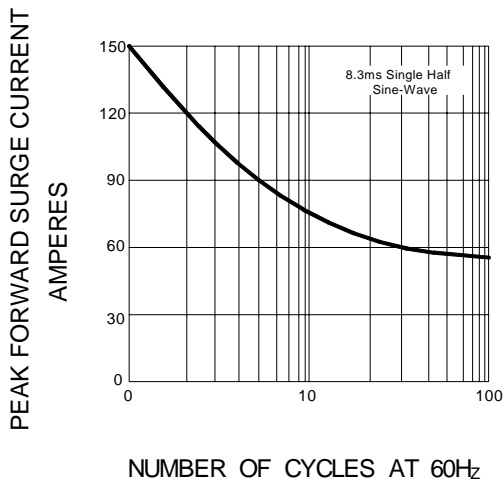


FIG.4 – TYPICAL JUNCTION CAPACITANCE

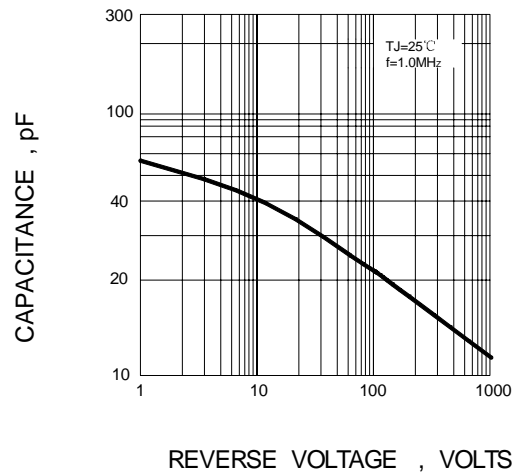


FIG.5 – TYPICAL REVERSE CHARACTERISTICS

