

SCHOTTKY BARRIER RECTIFIERS

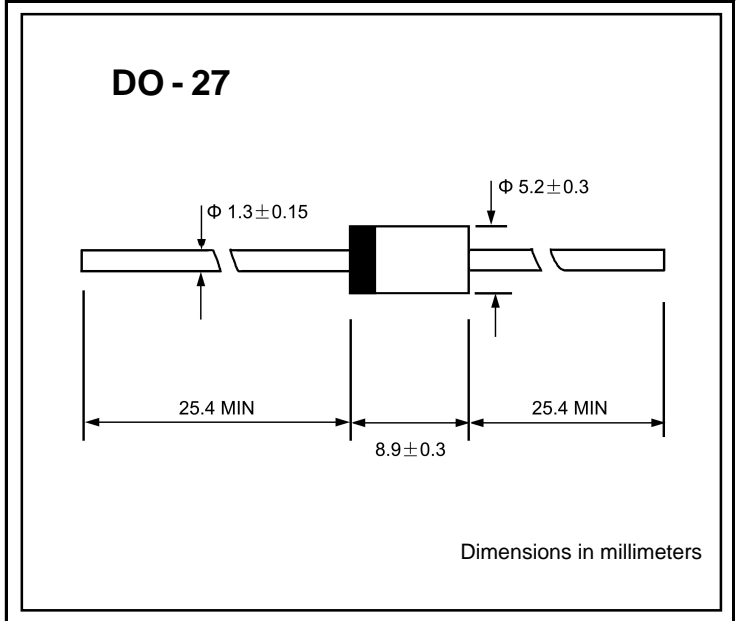
VOLTAGE RANGE: 20 --- 70 V
CURRENT: 3.0 A

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%.

		SB320	SB330	SB340	SB350	SB360	SB370	UNITS
Maximum recurrent peak reverse voltage	V_{RRM}	20	30	40	50	60	70	V
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	49	V
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	70	V
Maximum average forward rectified current 9.5mm lead length, (see fig.1)	$I_{F(AV)}$	3.0						A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	I_{FSM}	80.0						A
Maximum instantaneous forward voltage @ 3.0 A (Note 1)	V_F	0.5			0.74			V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	I_R	0.5			10.0			mA
		20.0			10.0			
Typical junction capacitance (Note2)	C_J	40						pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	40						°C/W
Operating junction temperature range	T_J	-55 --- +125			-55 --- +150			°C
Storage temperature range	T_{STG}	-55 --- +150						°C

NOTE: 1. Pulse test : 300 μs pulse width, 1% duty cycle.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Thermal resistance junction to ambient

FIG.1 -- FORWARD CURRENT DERATING CURVE

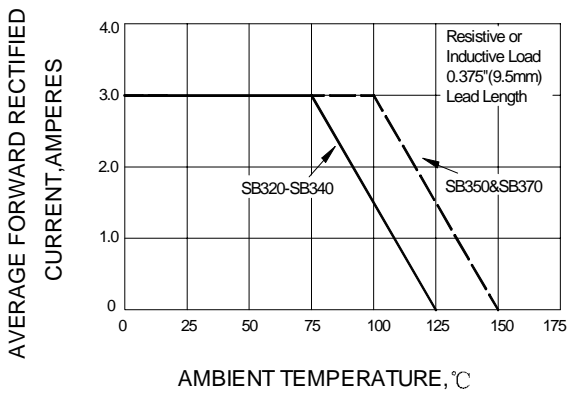


FIG.2 --MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

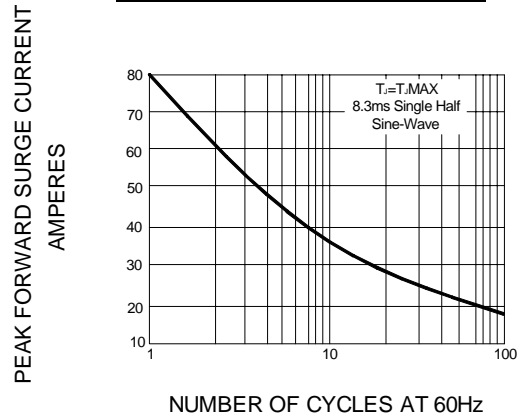


FIG.3 --TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

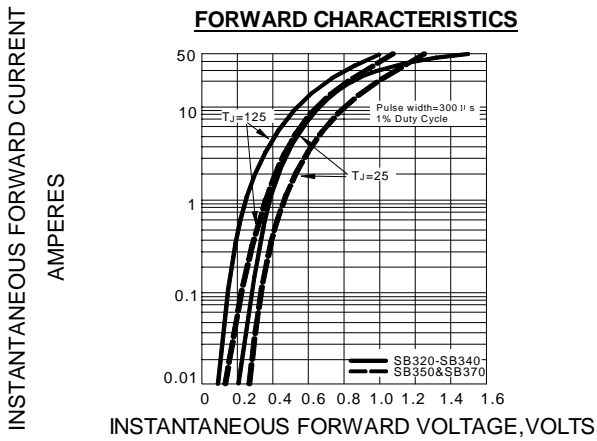


FIG.4--TYPICAL REVERSE CHARACTERISTICS

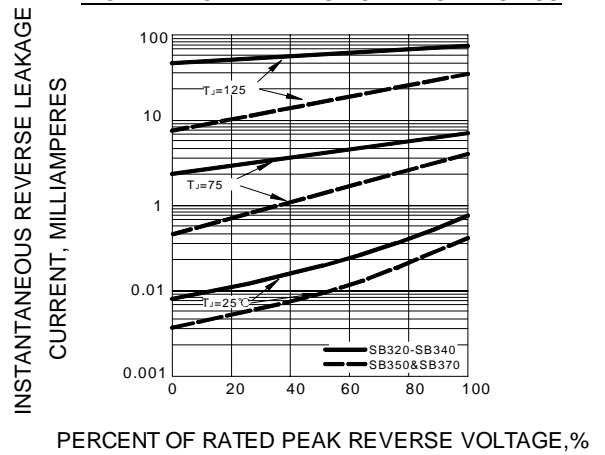


FIG.5--TYPICAL JUNCTION CAPACITANCE

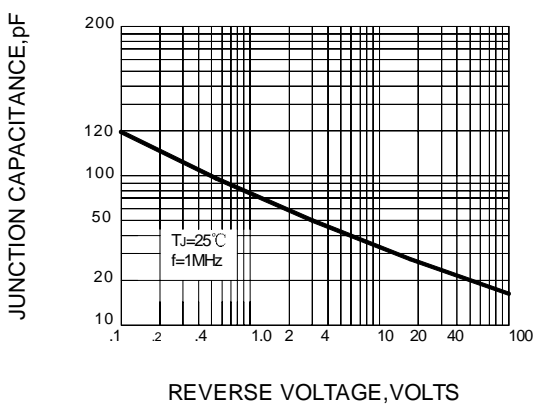


FIG.6--TYPICAL TRANSIENT THERMAL IMPEDANCE

