

SB1020~SB10200 10.0Amp Schottky Barrier Rectifiers

Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg) tension

Mechanical Data

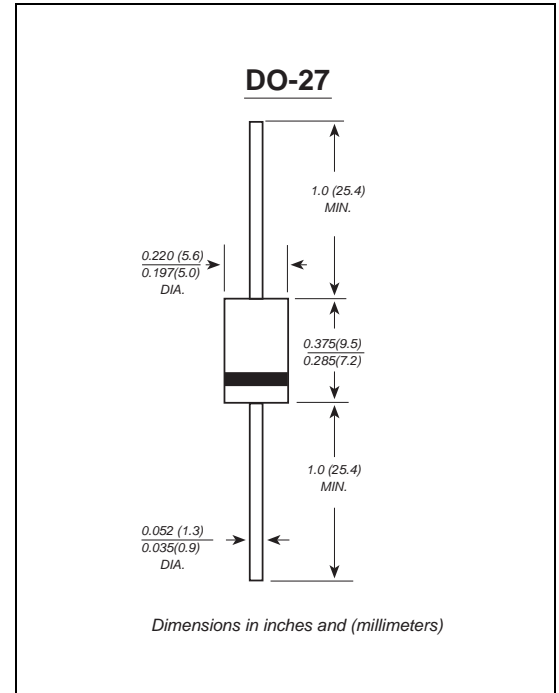
Case: JEDEC DO-27 molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.04 ounce, 1.10 grams



Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

MDD Catalog Number	SYMBOLS	SB 1020	SB 1030	SB 1040	SB 1045	SB 1060	SB 1070	SB 1080	SB 1090	SB 10100	SB 10150	SB 10200	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	45	60	70	80	90	100	150	200	VOLTS	
Maximum RMS voltage	V_{RMS}	14	21	28	31.5	42	49	56	63	70	105	140	VOLTS	
Maximum DC blocking voltage	V_{DC}	20	30	40	45	60	70	80	90	100	150	200	VOLTS	
Maximum average forward rectified current 0.375" (9.5mm) lead length (see fig.1)	I_{AV}	10.0											Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	200.0											Amps	
Maximum instantaneous forward voltage at 10.0A	V_F	0.55			0.70		0.85			0.95			Volts	
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	0.5						0.2			2.0			mA
Typical junction capacitance (NOTE 1)	C_J	450				320								pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	30.0											°C/W	
Operating junction temperature range	T_J	-65 to +125					-65 to +150							°C
Storage temperature range	T_{STG}	-65 to +150											°C	

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

Ratings And Characteristic Curves

SB1020 THRU SB10200

FIG. 1- FORWARD CURRENT DERATING CURVE

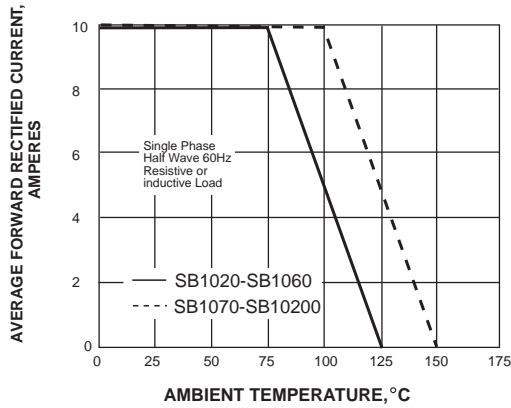


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

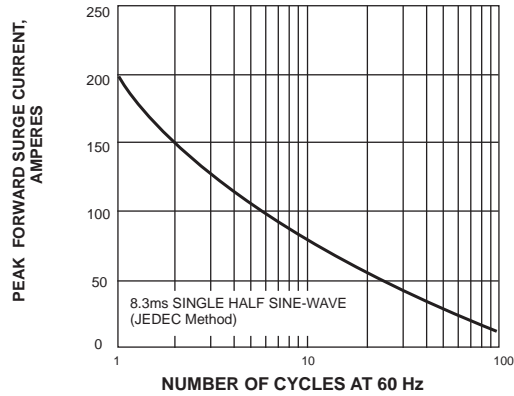


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

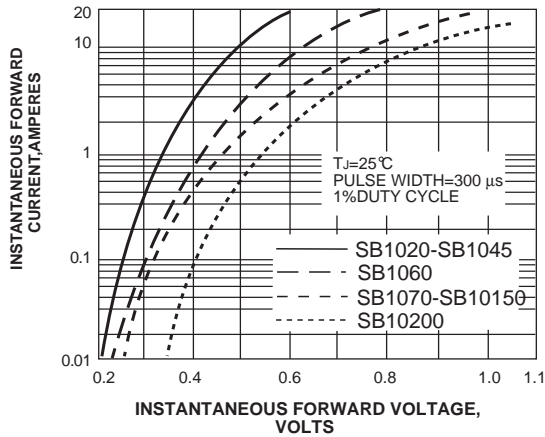


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

