

### SCHOTTKY BARRIER RECTIFIER

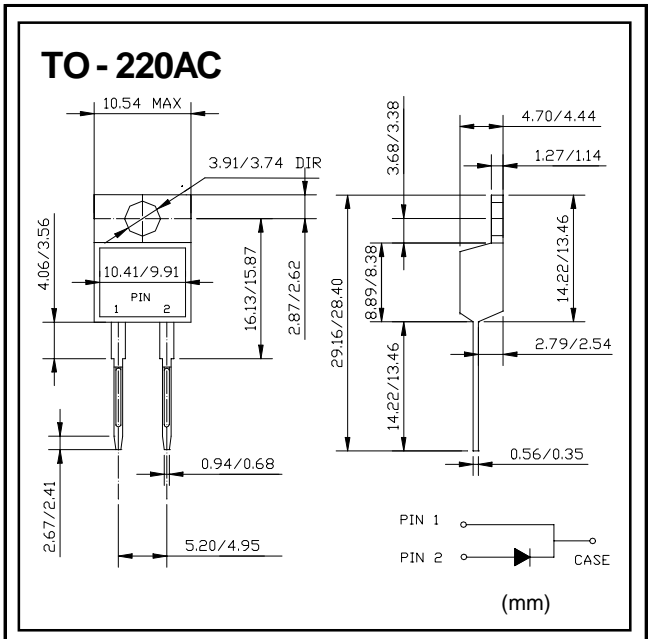
VOLTAGE RANGE: 30 --- 100 V  
CURRENT: 8.0 A

#### 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 TO-220AC, molded plastic
- ◇ Terminals: Leads solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.064 ounces, 1.81 gram
- ◇ Mounting position: Any



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

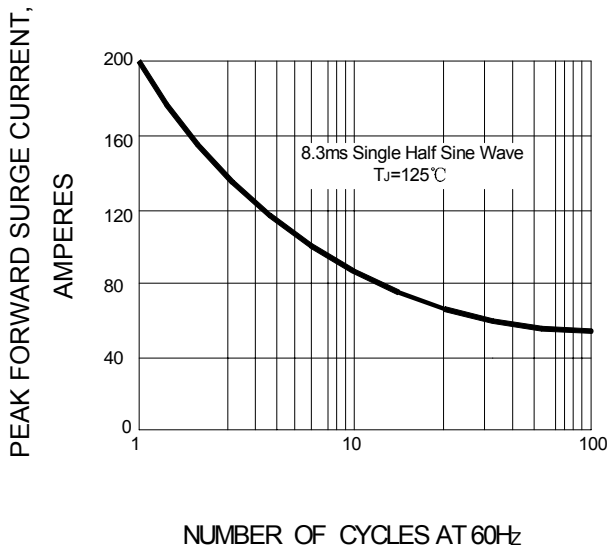
Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		SBL 830	SBL 835	SBL 840	SBL 845	SBL 850	SBL 860	SBL 870	SBL 880	SBL 890	SBL 8100	UNITS	
Maximum recurrent peak reverse voltage	$V_{RRM}$	30	35	40	45	50	60	70	80	90	100	V	
Maximum RMS voltage	$V_{RMS}$	21	25	28	32	35	42	49	56	63	70	V	
Maximum DC blocking voltage	$V_{DC}$	30	35	40	45	50	60	70	80	90	100	V	
Maximum average forward rectified current $T_C=95^\circ\text{C}$	$I_{F(AV)}$	8.0										A	
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load $T_J=125^\circ\text{C}$	$I_{FSM}$	200										A	
Maximum instantaneous forward voltage @ 8.0A	$V_F$	0.55			0.70			0.85			V		
Maximum reverse current @ $T_C=25^\circ\text{C}$ at rated DC blocking voltage @ $T_C=100^\circ\text{C}$	$I_R$	0.5										55	mA
Typical thermal resistance (Note1)	$R_{\theta JC}$	6.9										$^\circ\text{C/W}$	
Operating junction temperature range	$T_J$	-55 --- + 150										$^\circ\text{C}$	
Storage temperature range	$T_{STG}$	-55 --- + 150										$^\circ\text{C}$	

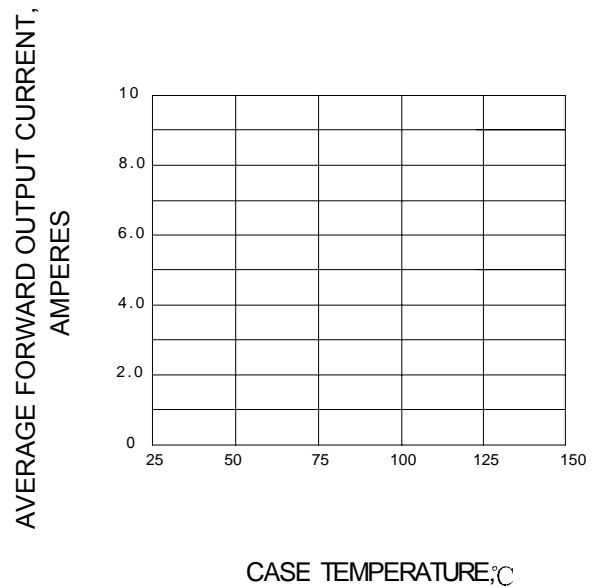
Note: 1. Thermal resistance junction to case.

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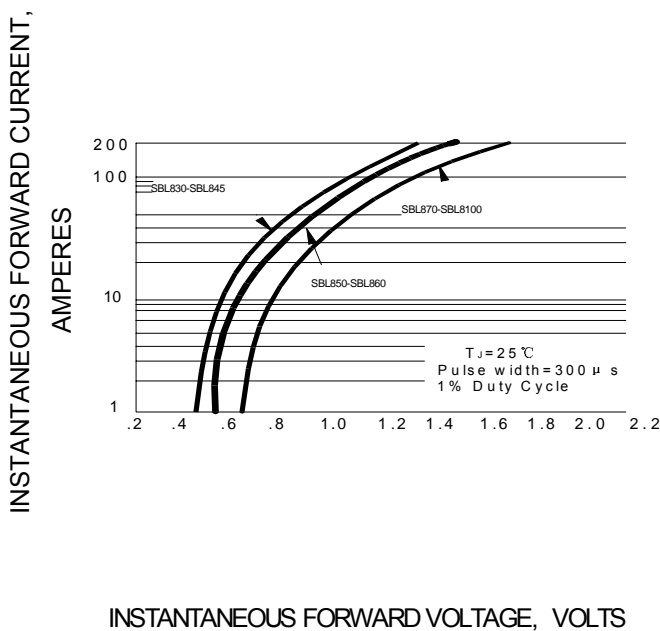
**FIG.1 – PEAK FORWARD SURGE CURRENT**



**FIG.2 – FORWARD DERATING CURVE**



**FIG.3 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.4 – TYPICAL REVERSE CHARACTERISTIC**

