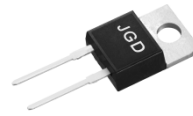


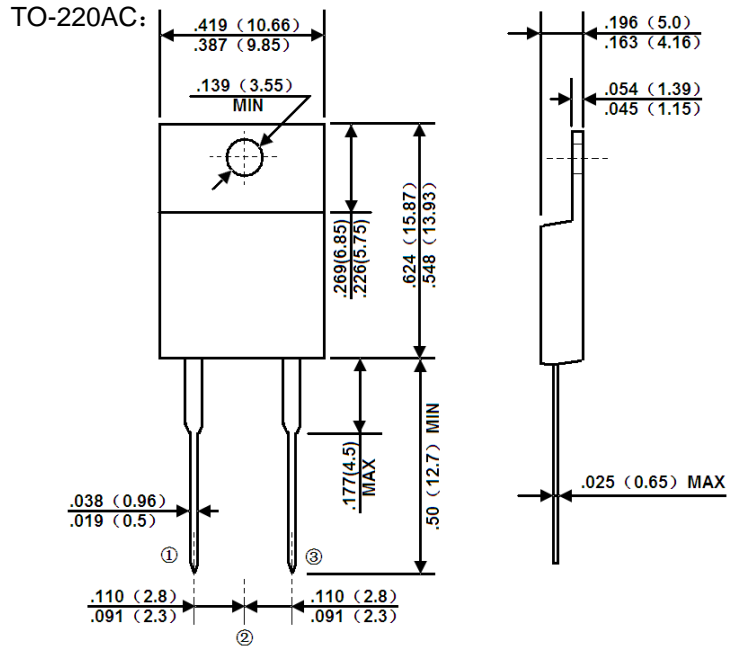
### Features

- \* Low power loss, high efficiency
- \* Guard-ring for overvoltage protection
- \* High surge current capability
- \* Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC



RoHS  
COMPLIANT

### Package Outline Dimensions in inches (millimeters)



### Mechanical Data

- \* Case: TO-220AC
- \* Molding compound, UL flammability classification rating 94V-0
- \* Terminal: Matte tin plated leads, solderable per JESD22-B102 Meet JESD 201 class 1A whisker test
- \* Polarity: As marked
- \* Mounting torque: 5 in-lbs maximum

### Maximum Ratings and Electrical Characteristics

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

Type Number	Symbol	SB 1020	SB 1030	SB 1040	SB 1050	SB 1060	SB 1090	SB 10100	SB 10150	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	90	100	150	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	63	70	105	V
Maximum D.C Blocking Voltage	$V_{DC}$	20	30	40	50	60	90	100	150	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	10								A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	170								A
Maximum instantaneous forward voltage (Note 1) $I_F=10$ A	$V_F$	0.55			0.70		0.85		0.95	V
Maximum reverse current @ rated VR $T_J=25$ °C $T_J=100$ °C $T_J=125$ °C	$I_R$	0.5				0.1				mA
		15		10		-				
		-				5				
Voltage rate of change (Rated VR)	$dV/dt$	10000								V/ $\mu$ s
Typical Thermal Resistance	$R_{\theta jc}$	2								°C/W
Operating junction temperature range	$T_J$	-55 to +125				-55 to +150				°C
Storage Temperature Range	$T_{STG}$	-55 to +150								°C

Note:1、 Pulse test with PW=300 $\mu$ s, 1% duty cycle

### Ratings and Characteristic Curves

FIG. 1 FORWARD CURRENT DERATING CURVE

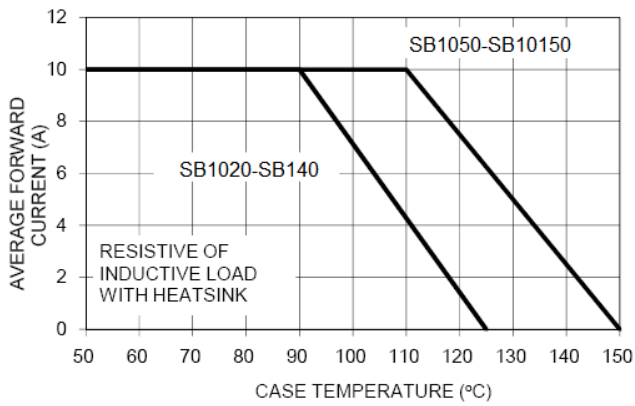


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

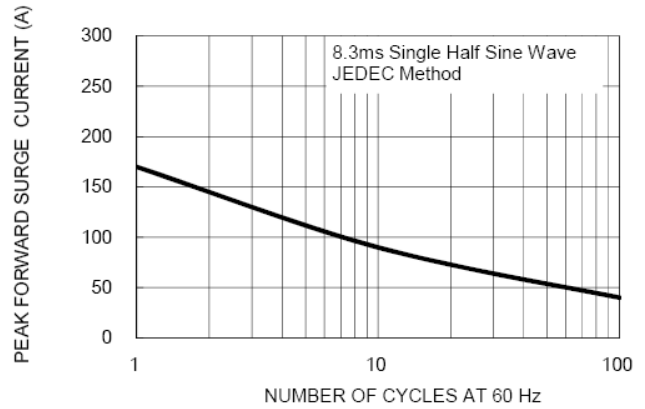


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

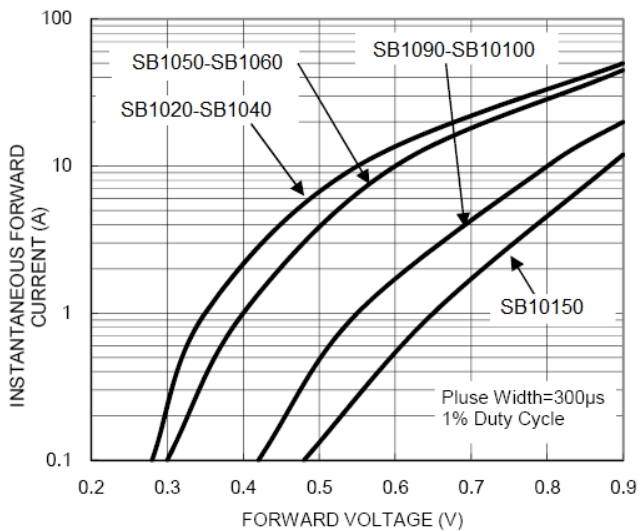


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

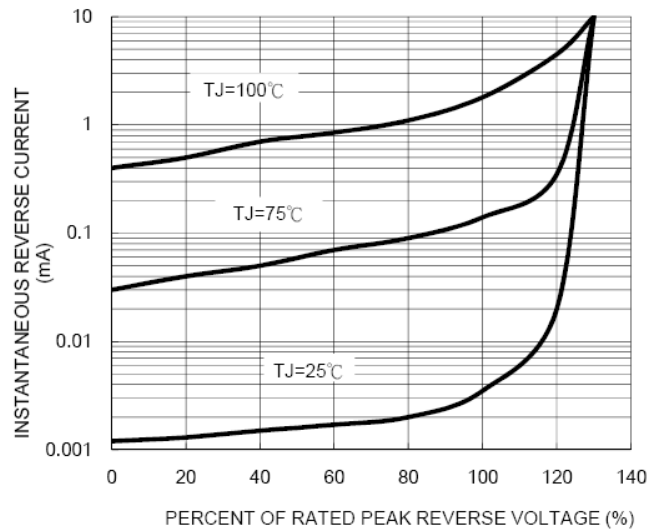


FIG. 5 TYPICAL JUNCTION CAPACITANCE

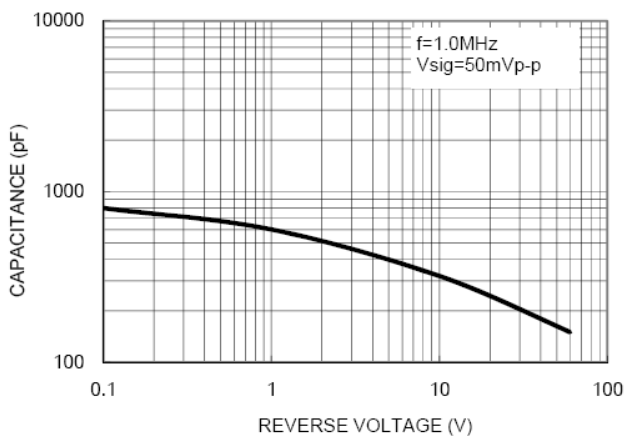
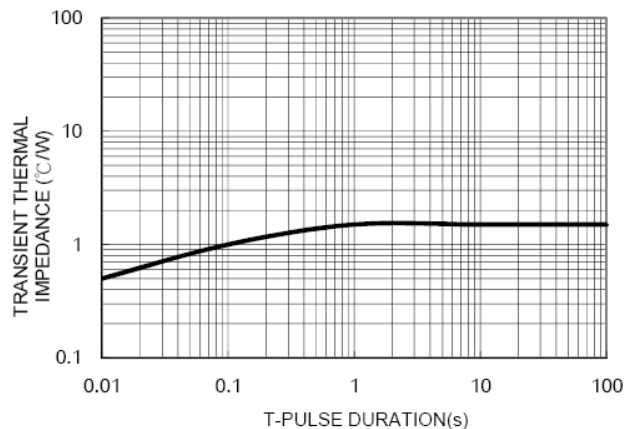


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE





**SB1020 THRU SB10150**  
*Schottky Barrier Rectifiers*

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**Ordering Information**

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<b>Part No.</b>	<b>Package</b>	<b>Packing</b>
SB1020~SB10150	TO-220AC	50pcs/Tube