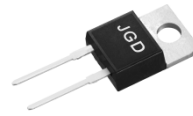


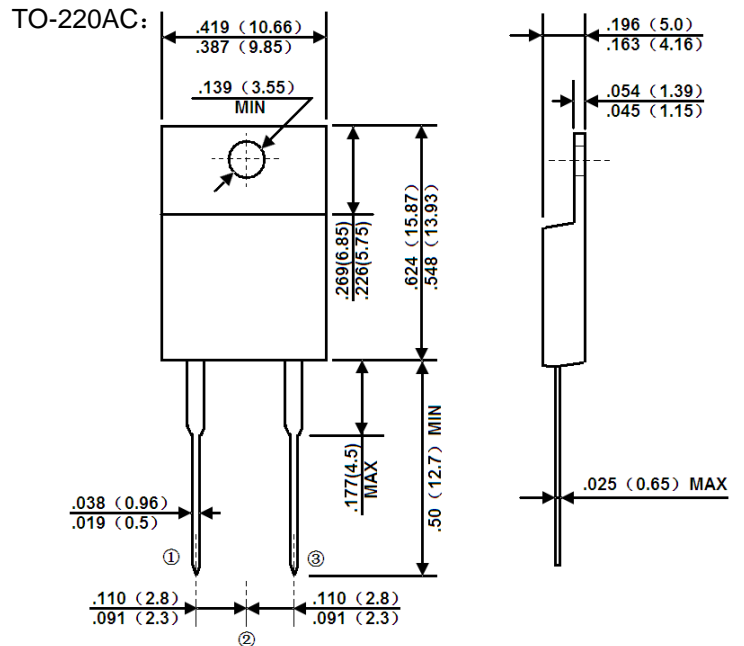
Features

- * 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 820	SB 830	SB 840	SB 850	SB 860	SB 890	SB 8100	SB 8150	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	$I_{F(AV)}$	8								A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150								A
Maximum instantaneous forward voltage (Note 1) $I_F=8$ 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/ μ s
Typical Thermal Resistance	$R_{\theta jc}$	4								°C/W
Operating junction temperature range	T_J	-55 to +125				-55 to +150				°C
Storage Temperature Range	T_{STG}	-55 to +175								°C

Note: 1、 Pulse test with PW=300 μ s, 1% duty cycle

Ratings and Characteristic Curves

FIG. 1 FORWARD CURRENT DERATING CURVE

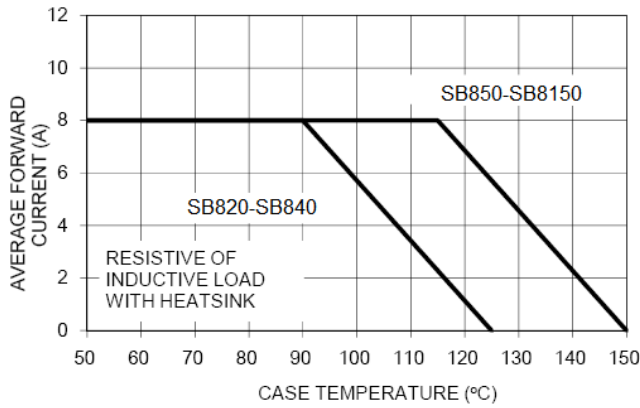


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

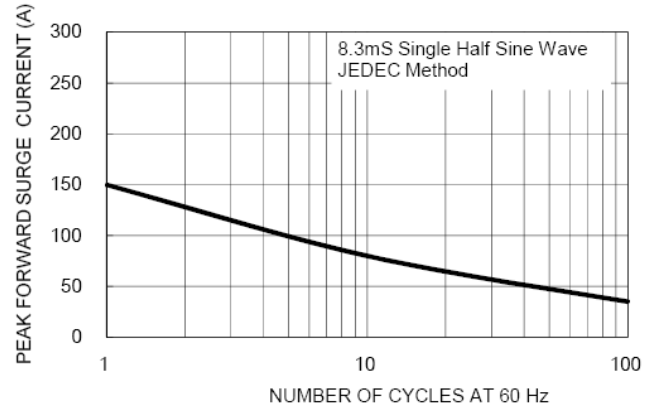


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

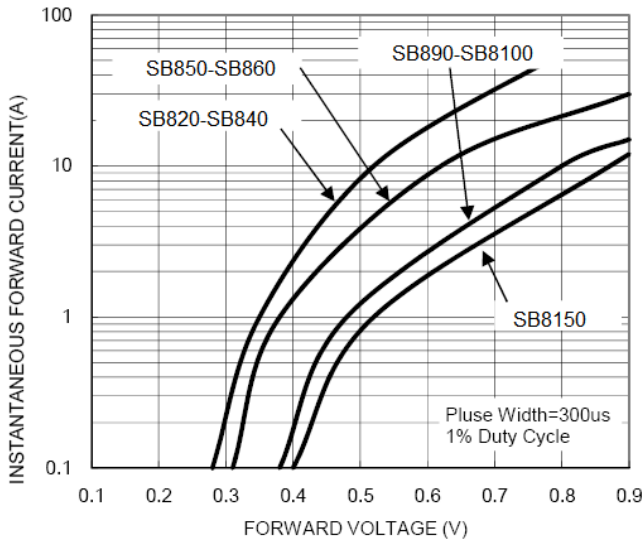


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

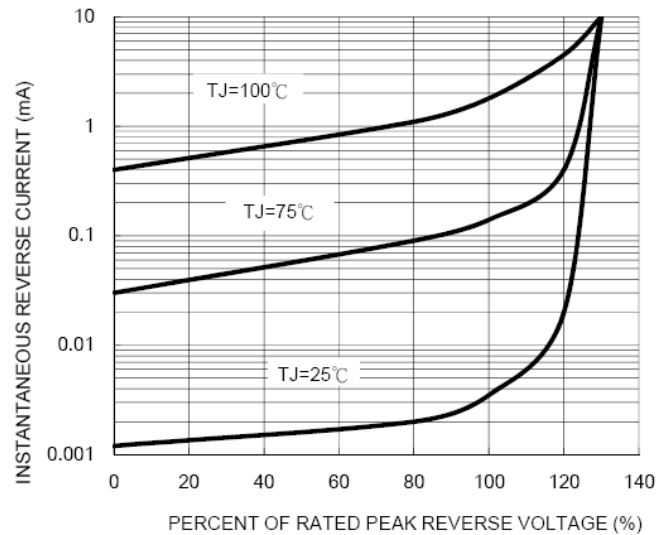


FIG. 5 TYPICAL JUNCTION CAPACITANCE

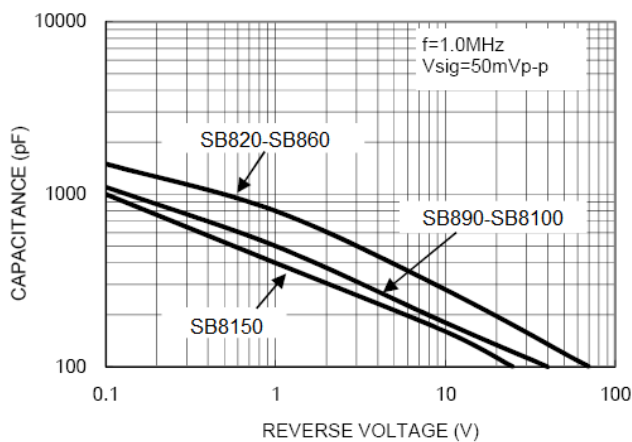
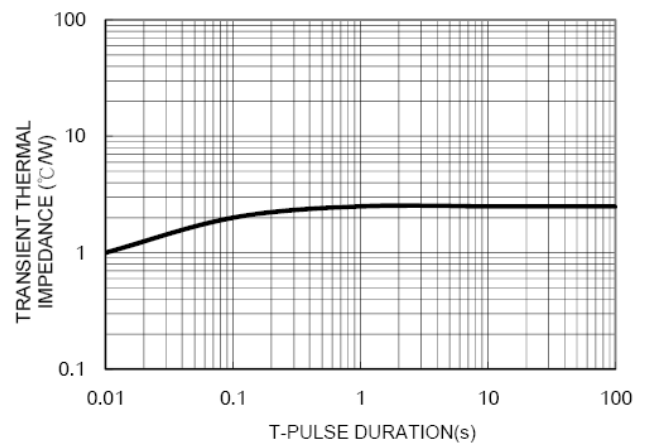


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE





SB820 THRU SB8150
Schottky Barrier Rectifiers

Ordering Information

Part No.	Package	Packing
SB820~SB8150	TO-220AC	50pcs/Tube