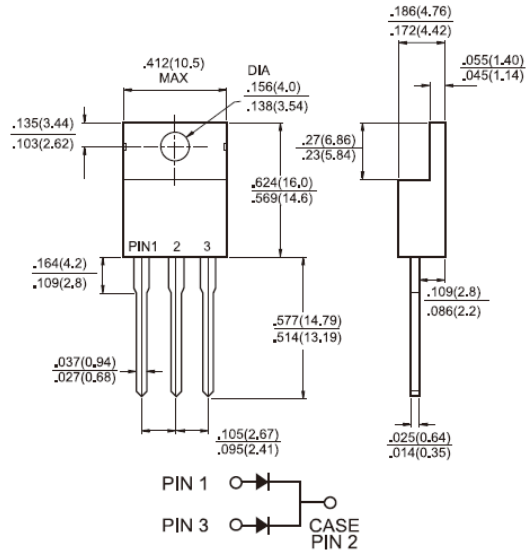




SR1020 - SR10150
10 AMPS. Schottky Barrier Rectifiers
TO-220AB

Features

- ✧ Low power loss, High efficiency
- ✧ High current capability, Low VF
- ✧ High reliability
- ✧ High surge current capability
- ✧ Epitaxial construction
- ✧ Guard-ring for transient protection
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

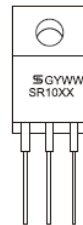


Mechanical Data

- ✧ Case: TO-220AB molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ High temperature soldering guaranteed: 260°C/10s / .25", (6.35mm) from case
- ✧ Weight: 1.88 gram

Dimensions in inches and (millimeters)

Marking Diagram



- SR10XX = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

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	SR 1020	SR 1030	SR 1040	SR 1050	SR 1060	SR 1090	SR 10100	SR 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 DC 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, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	120								A
Maximum Instantaneous Forward Voltage (Note 1) @ 5 A	V_F	0.55		0.70		0.85		0.95		V
Maximum Reverse Current @ Rated VR $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R	0.5				0.1				mA
		10		5		-				
		-				2				
Typical Junction Capacitance (Note 2)	C_j	310								pF
Typical Thermal Resistance	$R_{\theta JC}$	3								°C/W
Operating Temperature Range	T_J	- 65 to + 125				- 65 to + 150				°C
Storage Temperature Range	T_{STG}	- 65 to + 150								°C

Note1: Pulse Test with PW=300u sec, 1% Duty cycle

Note2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (SR1020 THRU SR10150)

FIG. 1 FORWARD CURRENT DERATING CURVE

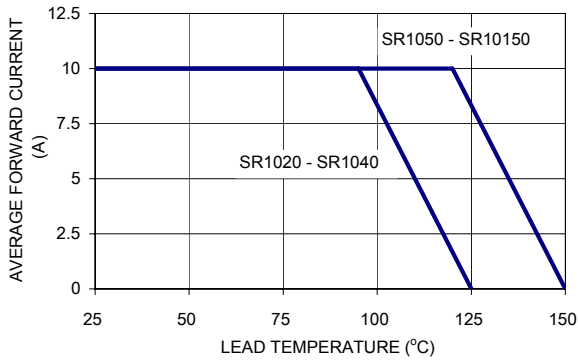


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

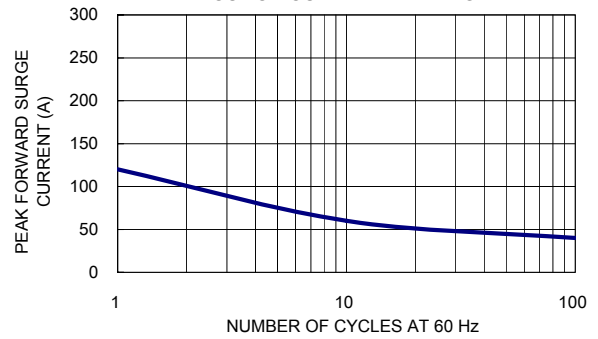


FIG. 3 TYPICAL FORWARD CHARACTERISTICS PER LEG

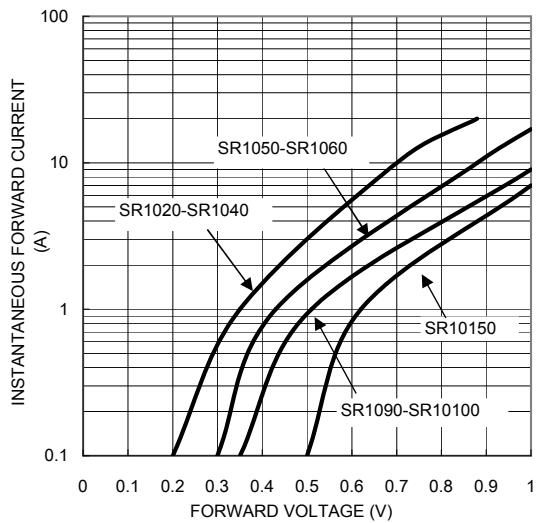


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

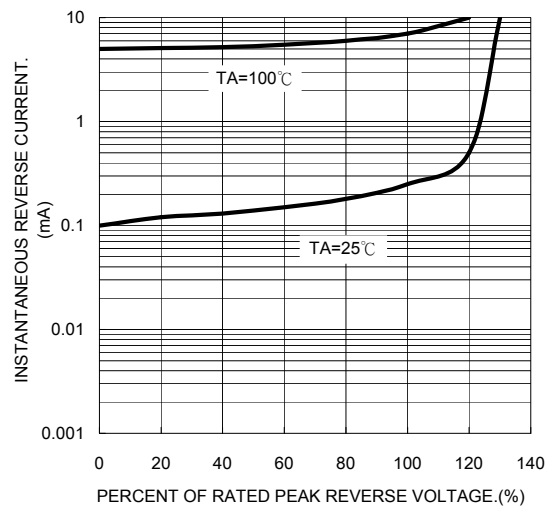


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

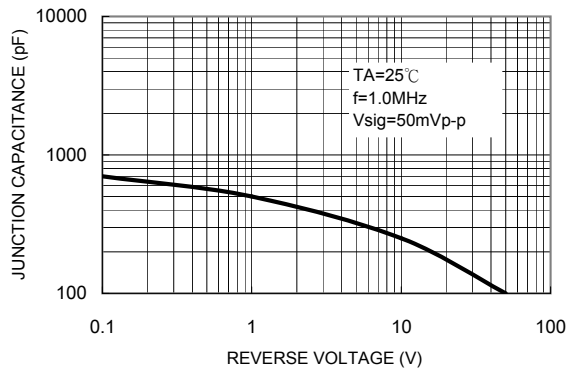


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

