

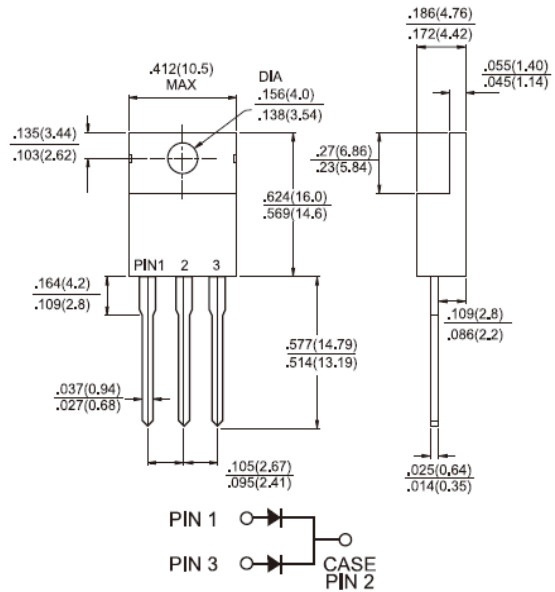


RoHS
COMPLIANCE



Features

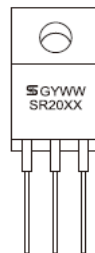
- ✧ Low power loss, high efficiency.
- ✧ High current capability, low VF.
- ✧ High reliability
- ✧ High surge current capability.
- ✧ Epitaxial construction.
- ✧ Guard-ring for transient protection.
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application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



Mechanical Data

- ✧ Cases: TO-220AB molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Pure tin plated, lead free. solderable per MIL-STD-750, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260°C/10 seconds .25",(.635mm) from case.
- ✧ Mounting torque: 5 in - lbs. max.
- ✧ Weight: 1.82 grams

Dimensions in inches and (millimeters)



Marking Diagram

- SR20XX = 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 2020	SR 2030	SR 2040	SR 2050	SR 2060	SR 2090	SR 20100	SR 20150	Units
Maximum Recurrent 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	$I_{F(AV)}$	20								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	200								A
Maximum Instantaneous Forward Voltage (Note 1) @ 10A	V_F	0.55		0.70		0.90		1.00		V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=100^\circ C$ @ $T_A=125^\circ C$	I_R	0.5				0.1				mA
		15		10		-				mA
		-				5.0				mA
Typical Junction Capacitance (Note 2)	C_j	430			360					pF
Typical Thermal Resistance	$R_{\theta JC}$	1.0								°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 : Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2 : Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (SR2020 THRU SR20150)

FIG. 1- FORWARD CURRENT DERATING CURVE

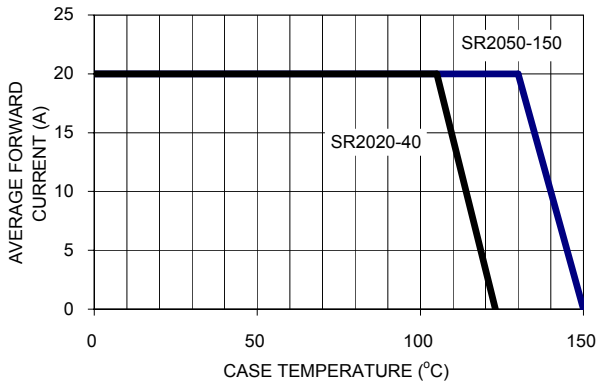


FIG. 2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

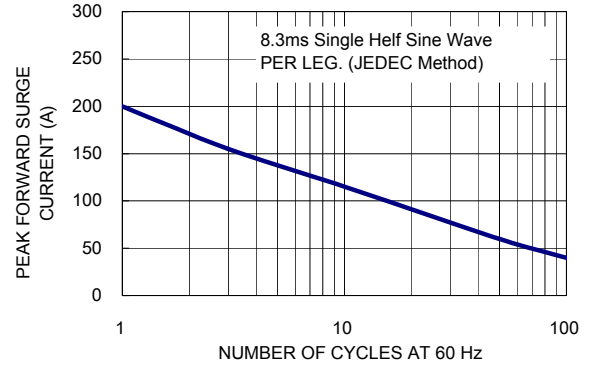


FIG. 3- TYPICAL FORWARD CHARACTERISTICS PER LEG

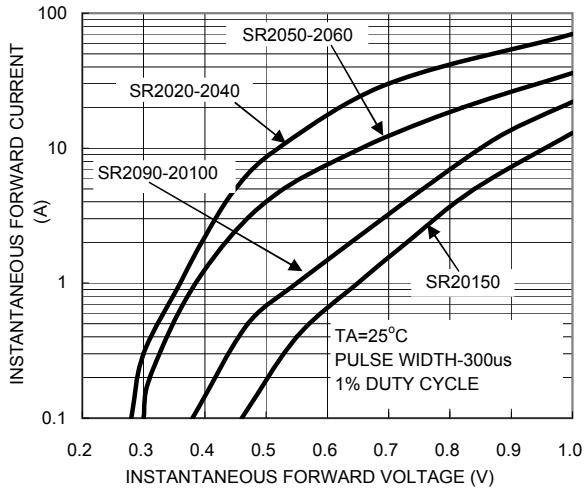


FIG. 4- TYPICAL REVERSE CHARACTERISTICS PER LEG

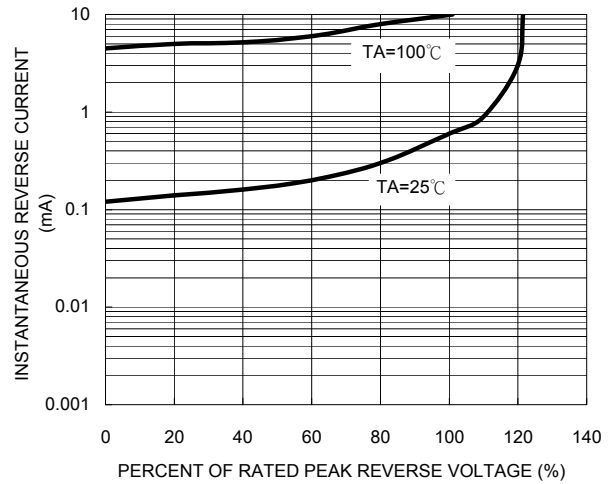


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER LEG

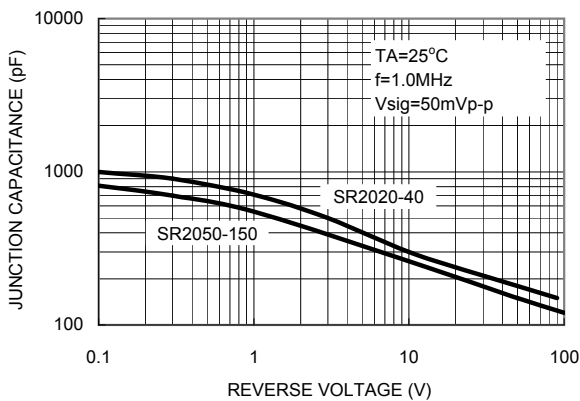


FIG. 6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

