



SR2020 - SR20150

20.0 AMPS. Schottky Barrier Rectifiers

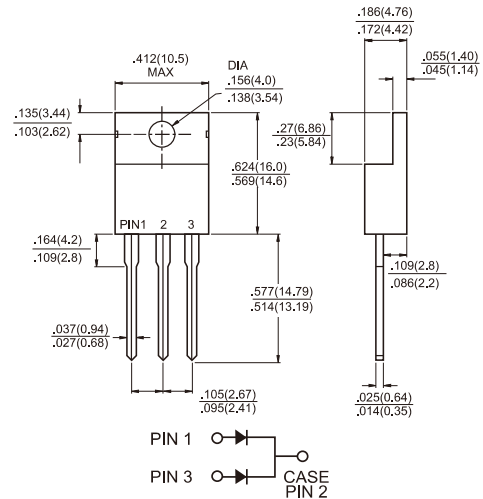
TO-220AB

Features

- ✧ UL Recognized File # E-326243
- ✧ 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.

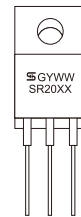
Mechanical Data

- ✧ Cases: TO-220AB molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260°C/10 seconds .25", (6.35mm) 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 See Fig. 1	$I_{F(AV)}$	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 @10A	V_F	0.55		0.70		0.90		1.00		V	
Maximum D.C. Reverse Current at Rated DC Blocking Voltage (Note1)	I_R	@ $T_A=25^\circ C$				0.5				0.1	mA
		@ $T_A=100^\circ C$				15		10		—	mA
		@ $T_A=125^\circ C$				—				5.0	mA
Typical Junction Capacitance (Note 2)	C_j	430			360					pF	
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	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	

- Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle
- 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.
- 3. Mount on Heatsink Size of (4"x6"x0.25") Al-Plate

RATINGS AND CHARACTERISTIC CURVES (SR2020 THRU SR20150)

FIG.1- FORWARD CURRENT DERATING CURVE

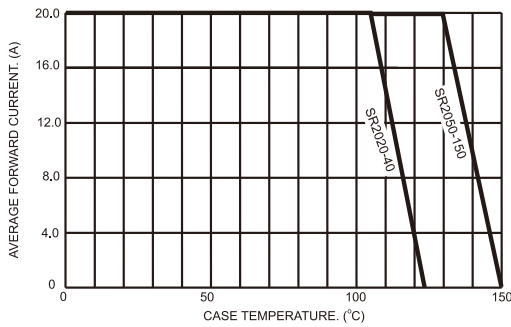


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

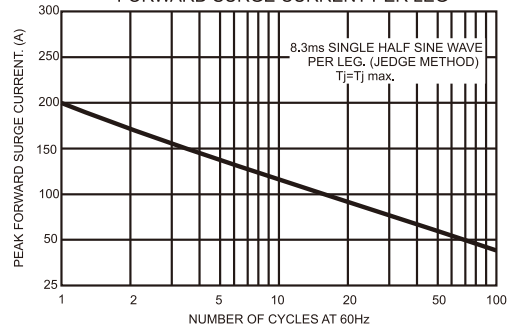


FIG.3- TYPICAL FORWARD CHARACTERISTICS PER LEG

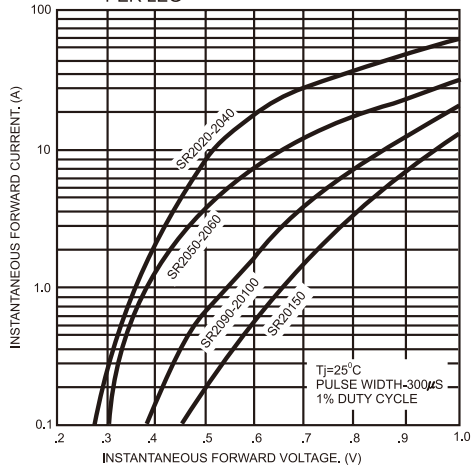


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

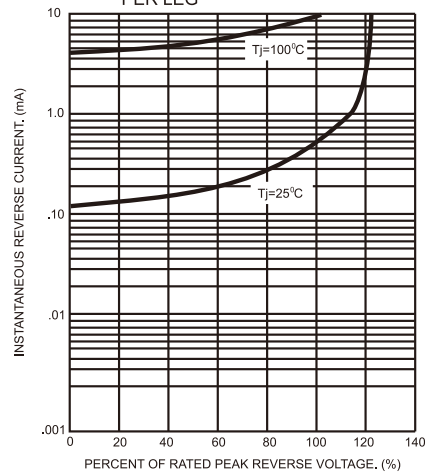


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

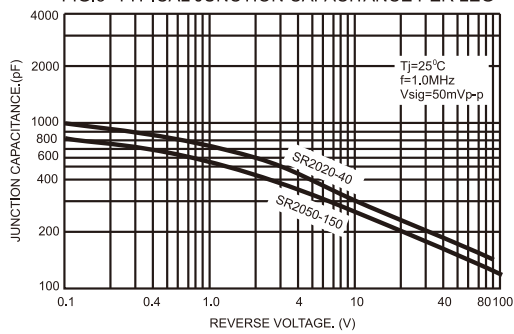


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

