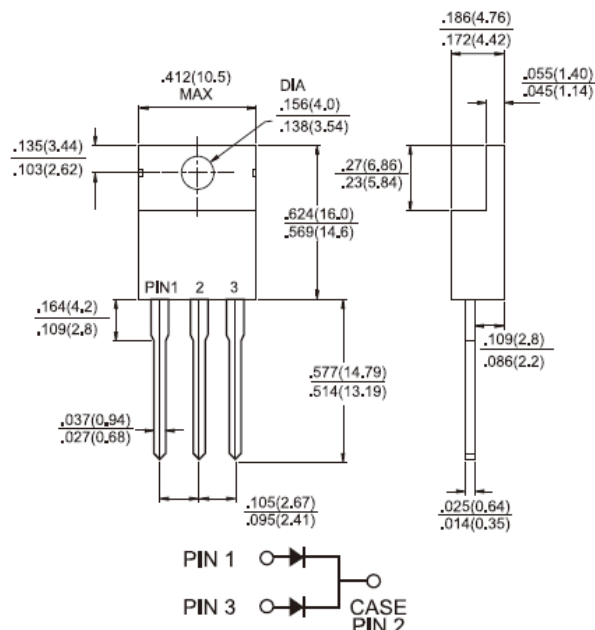



RoHS
COMPLIANCE


Features

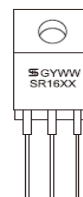
- ✧ Low power loss, high efficiency
- ✧ High current capability, low VF
- ✧ High reliability
- ✧ High surge current capability
- ✧ Epitaxial construction
- ✧ Guard-ring for transient protection
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application
- ✧ 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-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.25", (6.35mm) from case
- ✧ Weight: 1.89 grams

Dimensions in inches and (millimeters)



Marking Diagram

- SR16XX = 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 1620	SR 1630	SR 1640	SR 1650	SR 1660	SR 1690	SR 16100	SR 16150	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)}	16								A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	170								A	
Maximum Instantaneous Forward Voltage (Note 1) @ 8 A	V _F	0.55			0.70		0.90		1.05	V	
Maximum D.C. Reverse Current @ T _A =25 °C at Rated DC Blocking Voltage @ T _A =100 °C	I _R	0.5					0.1			mA	
		15			10		5			mA	
Typical Junction Capacitance (Note 2)	C _j	440			320						pF
Typical Thermal Resistance	R _{θJC}	2.5								°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 (SR1620 THRU SR16150)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

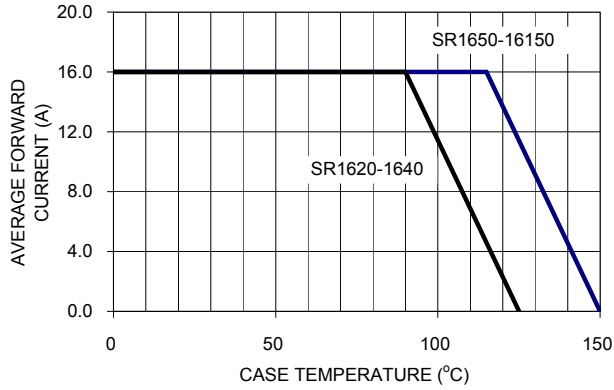


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

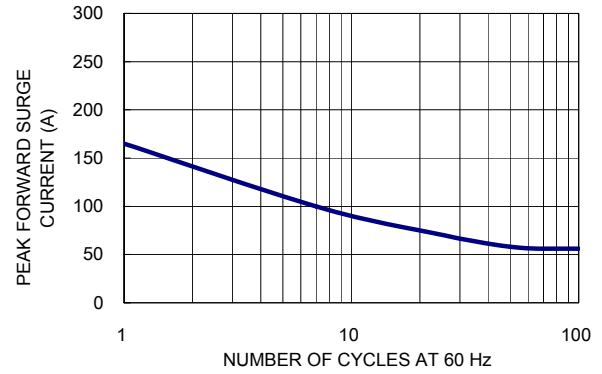


FIG. 3- TYPICAL FORWARD CHARACTERISTICS PER LEG

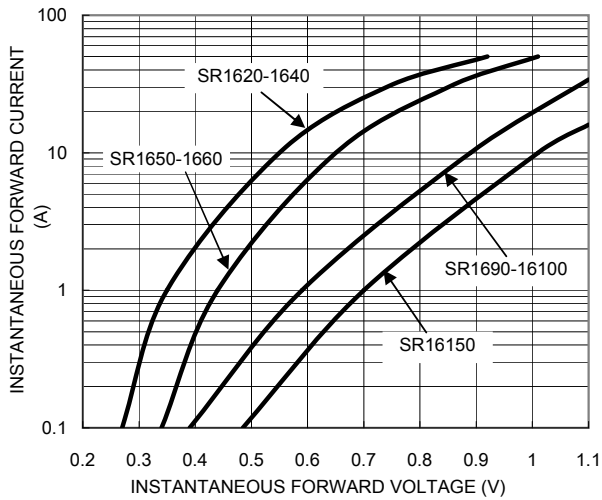


FIG. 4- TYPICAL REVERSE CHARACTERISTICS PER LEG

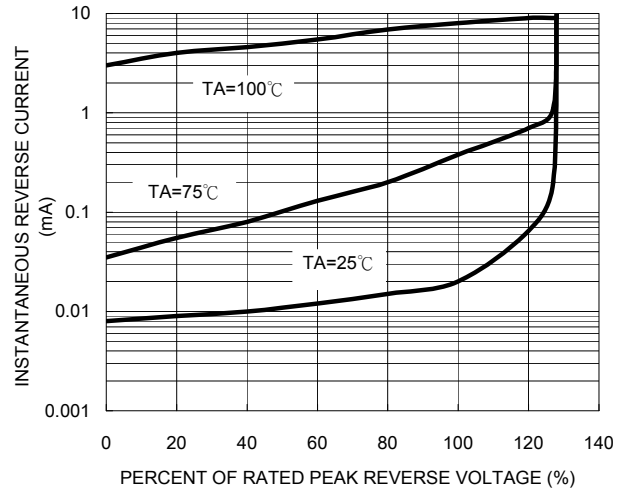


FIG. 5- TYPICAL JUNCTION CAPACITANCE PER LEG

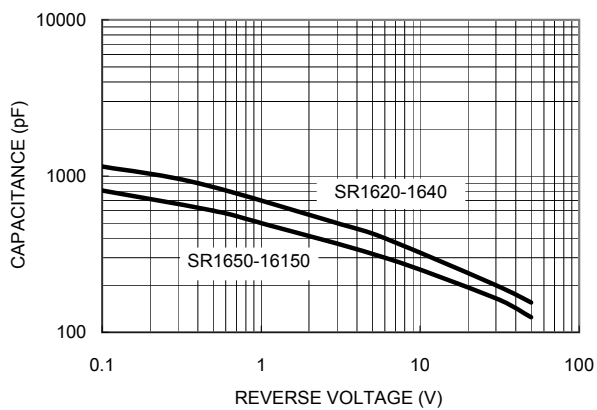


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

