CUMSUMI®

RoHS compliant

SCHOTTKY BARRIER RECTIFIERS
Reverse Voltage – 20 to 150 Volts
Forward Current – 10 Amperes

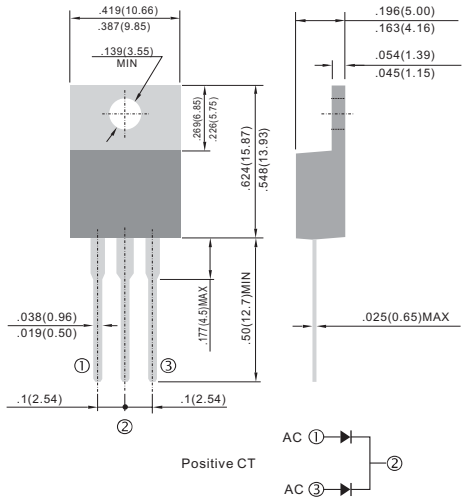
Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- High capability
- Low power loss, high efficiency
- High current capability, low forward voltage
- High surge capacity
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications

Mechanical Data

- **Case:** Molded plastic body, TO-220AB
- **Terminals:** Axial leads, solderable per MIL-STD-202, method 208
- **Polarity:** As marked
- **Mounting Position:** Any

TO-220AB Unit : inch (mm)



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	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	$I_{(AV)}$	10.0								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 @5.0A	V_F	0.55			0.70		0.85		0.95	V
Maximum D.C. Reverse Current @ Tc=25 °C	I_R	0.5					0.1			mA
at Rated DC Blocking Voltage @ Tc=100 °C		15			10		5.0			mA
Typical Junction Capacitance (Note 2)	Cj	310								pF
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	3.0								°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. Thermal Resistance from Junction to Case Per Leg, Mounted on Heatsink size of 2" x 3" x 0.25" Al-Plate.
2. Measured at 1MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (SR1020 THRU SR10150)

FIG.1- FORWARD CURRENT DERATING CURVE

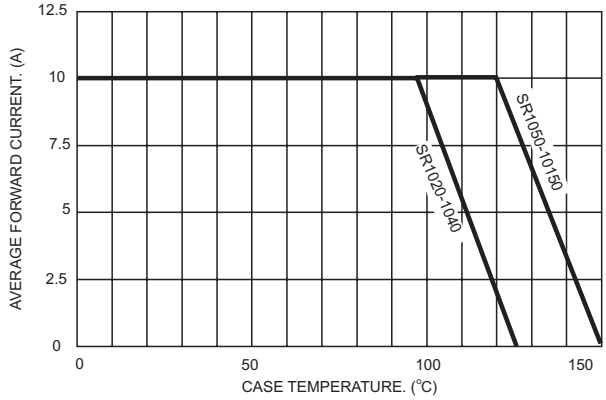


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

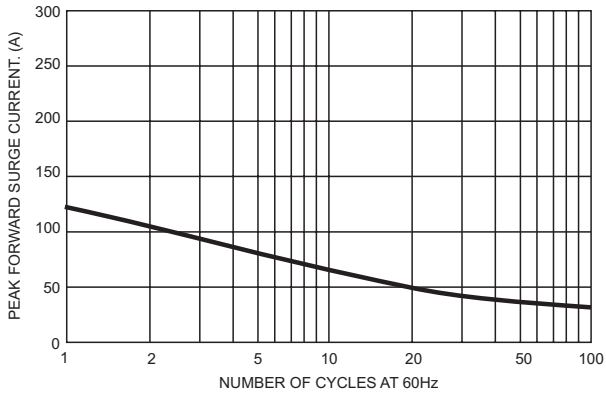


FIG.3- TYPICAL FORWARD CHARACTERISTICS PER LEG

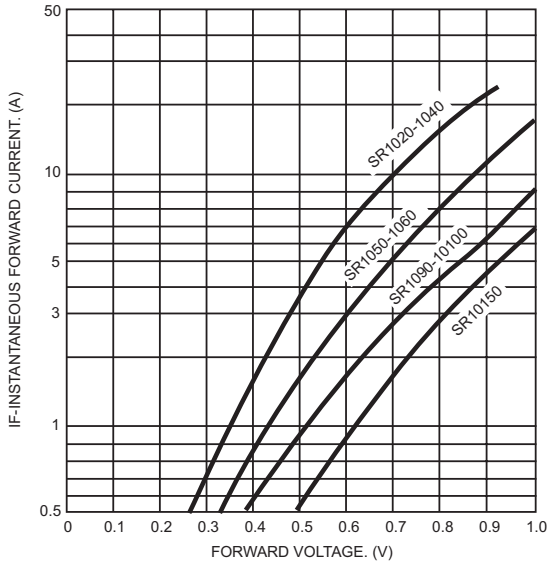


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

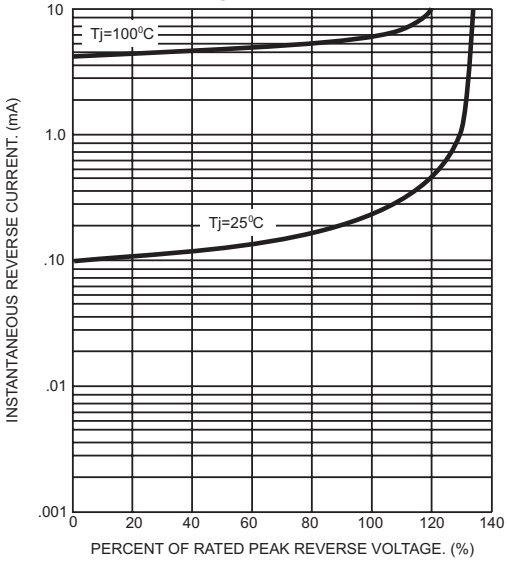


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

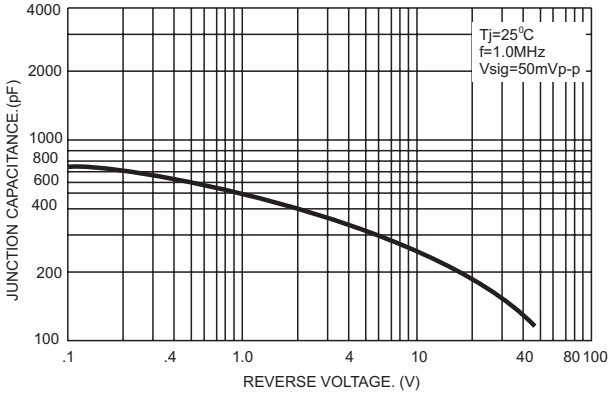


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG