

SR1020 THRU SR1060

SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage – 20 to 60 Volts

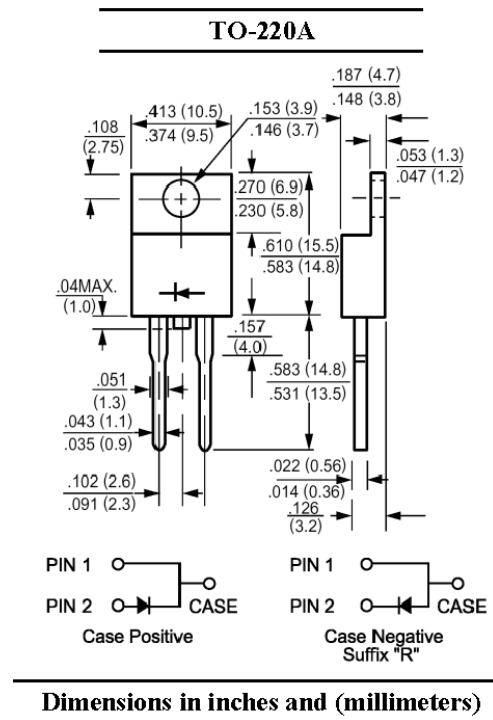
Forward Current – 10 Amperes

Features

- Plastic package has UL 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-220A
- **Terminals:** leads solderable per MIL-STD-202 method 208
- **Polarity:** As marked
- **Mounting Position:** Any



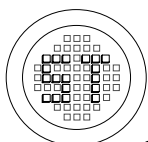
Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate by 20%

Parameter	Symbols	SR1020	SR1030	SR1040	SR1050	SR1060	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	V
Maximum Average Forward Rectified Current	$I_{(AV)}$	10					A
Peak Forward Surge Current 8.3mS Single half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	250					A
Maximum Forward Voltage at 10A DC and 25 °C	V_F	0.55			0.7		V
Maximum Reverse Current at $T_C = 25\text{ °C}$ at Rated DC Blocking Voltage $T_C = 125\text{ °C}$	I_R	1 50					mA
Typical Junction Capacitance ¹⁾	C_J	600			400		pF
Typical Thermal Resistance ²⁾	$R_{\theta JC}$	2					°C/W
Operating Temperature Range	T_J	-55 to +125			-55 to +150		°C
Storage Temperature Range	T_S	-55 to +150					°C

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 VDC

²⁾ Thermal resistance from Junction to case per leg



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FIG.1- FORWARD CURRENT DERATING CURVE

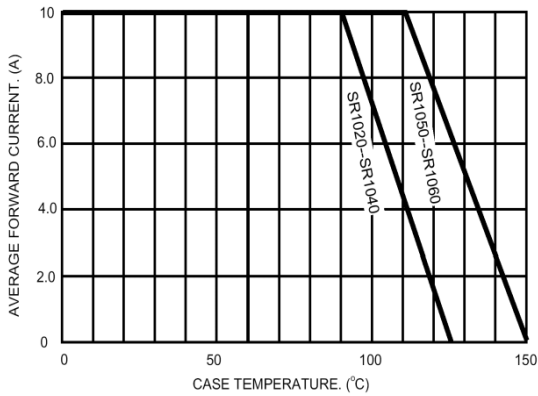


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

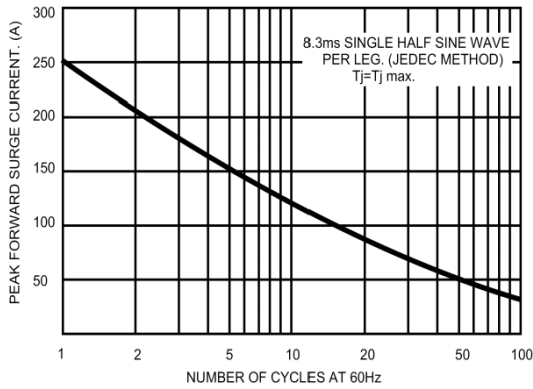


FIG.5- TYPICAL JUNCTION CAPACITANCE

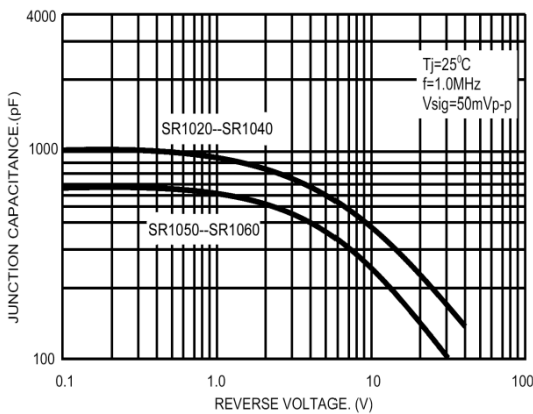


FIG.3- TYPICAL REVERSE CHARACTERISTICS

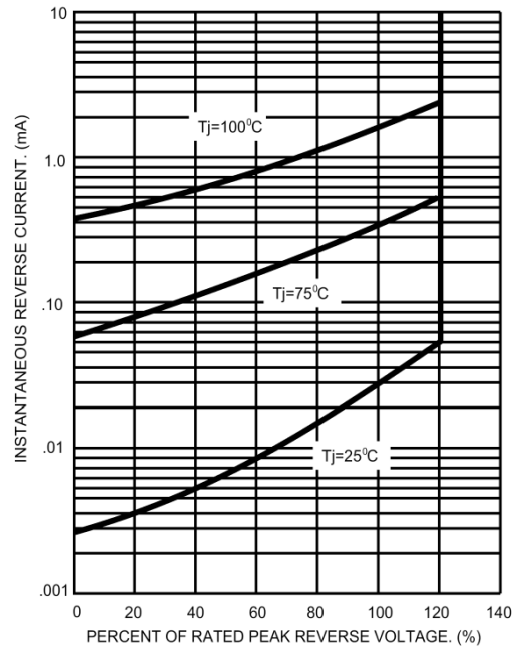
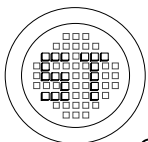
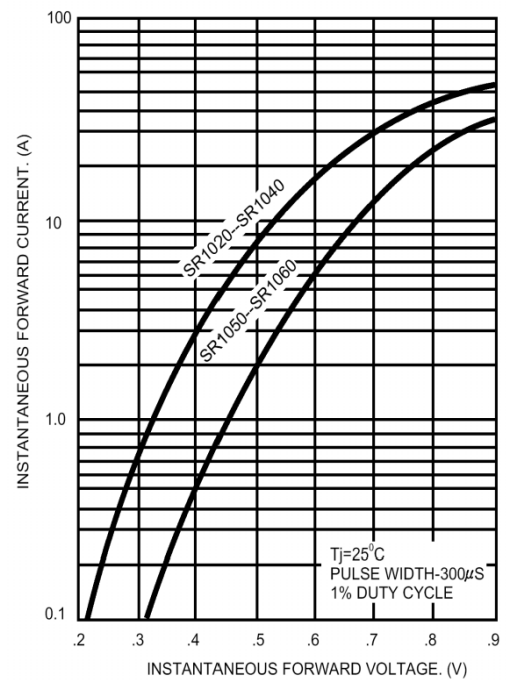


FIG.4- TYPICAL FORWARD CHARACTERISTICS



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