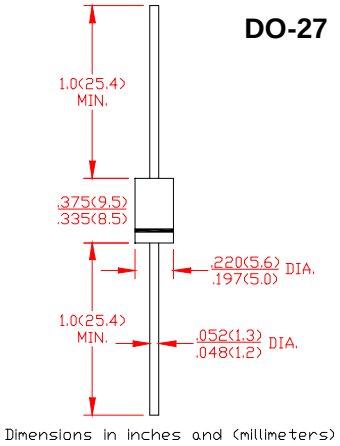
MASTER INSTRUMENT CORPORATION

Schottky Barrier Rectifiers
SR320 THRU SR3100

VOLTAGE RANGE **20 to 100 Volts**
Forward Current **3.0 Amperes**

FEATURES

- Fast switching
- Low forward voltage, high current capability.
- Low power loss high efficiency
- High current surge capability
- Fast switching for high efficiency
- High temperature soldering guaranteed: 250 °C/10 second, at terminals



MECHANICAL DATA

- Case: Transfer molded plastic
- Terminal: UL94v-0 rate flame retardant
- Polarity: Color band denotes cathode end.
- Lead Plated axial lead ,solderable per MIL-STD-202E method 208C
- Mounting position: Any.
- Weight: 0.042 ounce 1.19 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

		SYMBOLS	SR320	SR330	SR340	SR350	SR360	SR380	SR390	SR3100	UNITS
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	20	30	40	50	60	80	90	100	Volts
Maximum RMS Voltage		V_{RMS}	14	21	28	35	42	56	63	70	Volts
Maximum DC Blocking Voltage		V_{DC}	20	30	40	50	60	80	90	100	Volts
Maximum Average Forward Rectified Current, See Fig2		$I_{(AV)}$	3.0								Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	100								Amps
Maximum Instantaneous Forward Voltage Drop per bridge element at 3A		V_F	0.55			0.75		0.80	0.85		Volts
Maximum DC Reverse Current at rated DC blocking voltage per element	T_A=25 °C	I_R	3.0								MAmps
	T_A=100 °C		30								
Typical Junction Capacitance (Note 2)		C_J	200								pF
Typical Thermal Resistance (Note 3)		$R_{\theta JA}$	40								°C/W
Operating and Storage Temperature Range		T_J	-65 to +125			-65 to +150					°C
Storage Temperature Range		T_{STG}	-65 to +150								°C

NOTES:
1. Pulse test: 300 us pulse width 1% duty cycle
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
3. Thermal resistance from junction to ambient P.C.B mounted with 0.375”(9.5mm) lead lengh with 1.5”X1.5”(38 X38mm) copper pads.

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RATINGS AND CHARACTERISTIC CURVES SR320 THRU SR3100

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

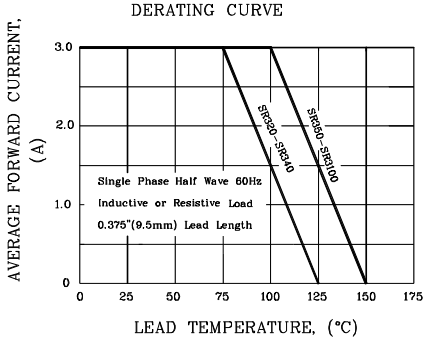

FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

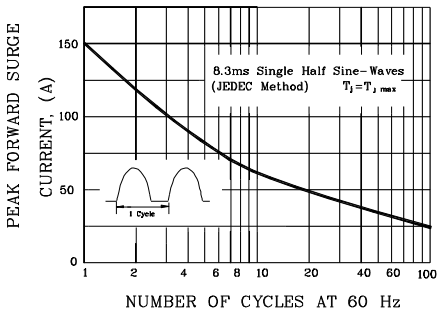

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

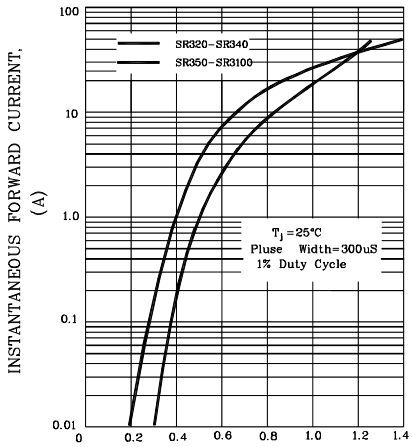

FIG.4-TYPICAL REVERSE CHARACTERISTICS

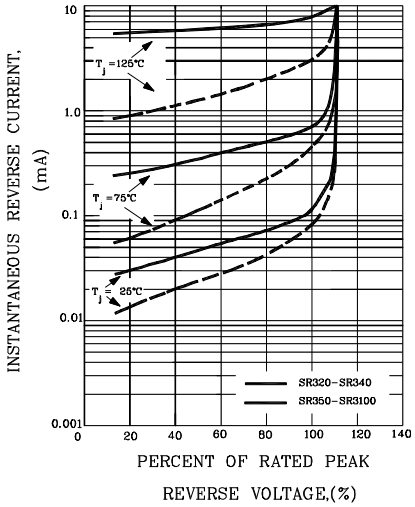

FIG.5-TYPICAL JUNCTION CAPACITANCE