MASTER INSTRUMENT CORPORATION

SINGLE-PHASE BRIDGE RECTIFIER
RS1001 THRU RS1007

VOLTAGE RANGE **50 to 1000 Volts**
CURRENT **10.0 Amperes**

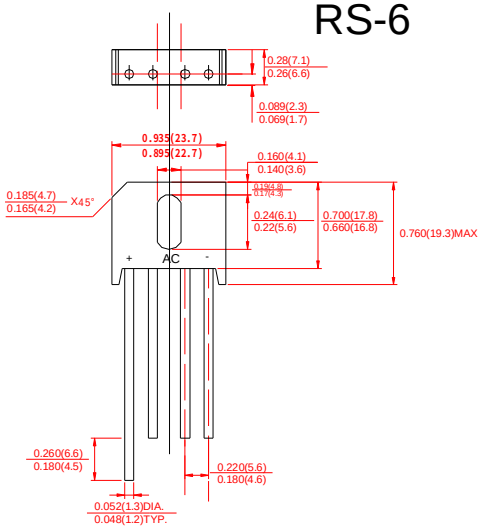
FEATURES

- Low cost
- This series is UL recognized under component index , file number E127707
- High forward surge current capability
- Ideal for printed circuit board
- High temperature soldering guaranteed: 260℃/10 second, 0.375" (9.5mm) lead length at 5 lbs. (2.3kg) tension.

MECHANICAL DATA

- Case: Transfer molded plastic
- Terminal: Lead solderable per MIL-STD-202E method 208C
- Polarity: Polarity symbols marked on case
- Mounting: Thru hole for #6 screw, 5 in.-lbs terque max
- Weight: 0.27 ounce, 7.59 gram

RS-6



Dimensions in inches and (millimeters)

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	RS1001	RS1002	RS1003	**RS1004**	RS1005	RS1006	RS1007	UNITS
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current, at	T_C=50℃ (Note 2)	$I_{(AV)}$	10.0							Amps
	T_C=100℃ (Note 2)		8.0							
	T_A=45℃ (Note 3)		6.0							
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}	350							Amps
Rating for Fusing (t<8.3ms)		I^2t	373							A^2s
Maximum Instantaneous Forward Voltage Drop per bridge element at 10.0A		V_F	1.0							Volts
Maximum DC Reverse Current at rated DC blocking voltage per element	T_A=25℃	I_R	5.0							μAmps
	T_A=100℃		1.0							mAmps
Typical Junction Capacitance (Note 1)		C_J	200							pF
Typical Thermal Resistance (Note 2)		$R_{\theta JC}$	5.0							℃/W
Operating and Storage Temperature Range		T_J, T_{STG}	-55 to +150							℃

NOTES:
1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Unit mounted on 6.0"x5.5"x0.24" thick (15x14x0.6cm) Al. plate.
3. Unit mounted in free air, no heatsink, P.C.B at 0.375" (9.5mm) lead length with 0.5"x0.5" (12x12cm) copper pads

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RATINGS AND CHARACTERISTIC CURVES RS1001 THRU RS1007

FIG.1–DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

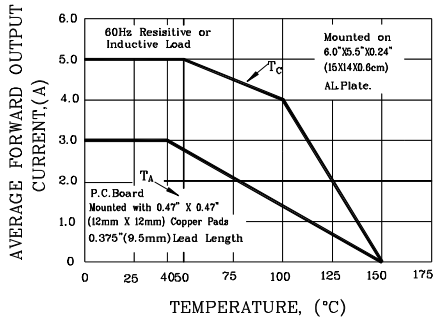

FIG.2–MAXIMUM NON–REPETITIVE PEAK FORWARD SURGE CURRENT PER ELEMENT

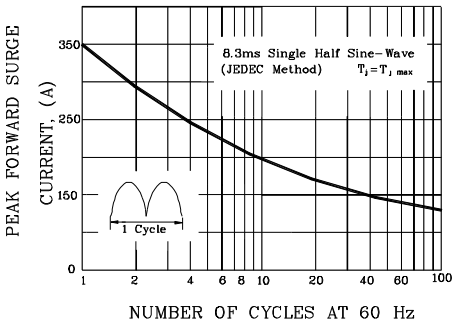

FIG.3–TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

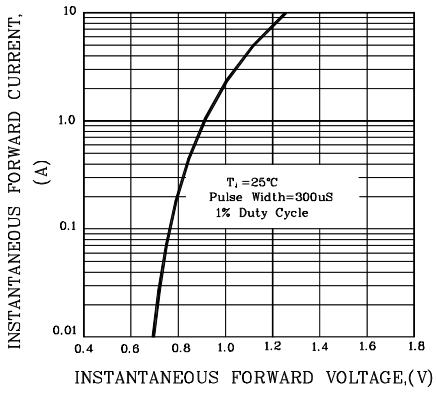

FIG.4–TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

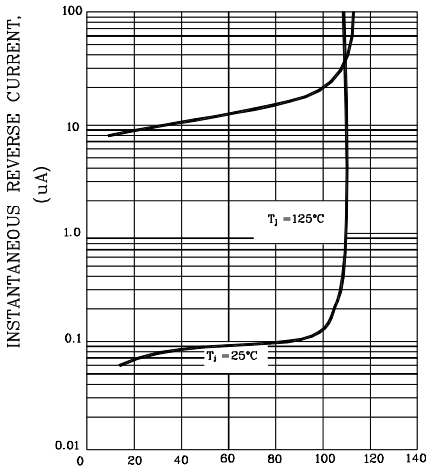
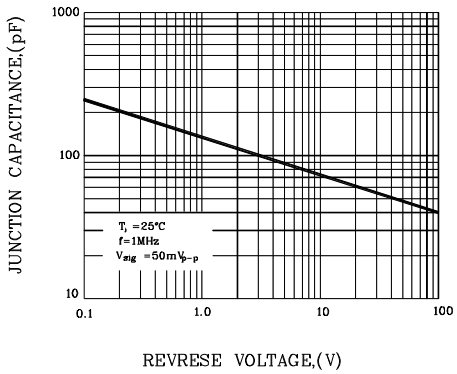
FIG.5–TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT