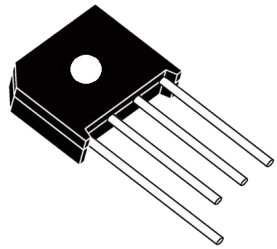
RS1001-RS1007

SINGLE-PHASE BRIDGE RECTIFIER



VOLTAGE RANGE: 50 - 1000V
CURRENT: 10 A

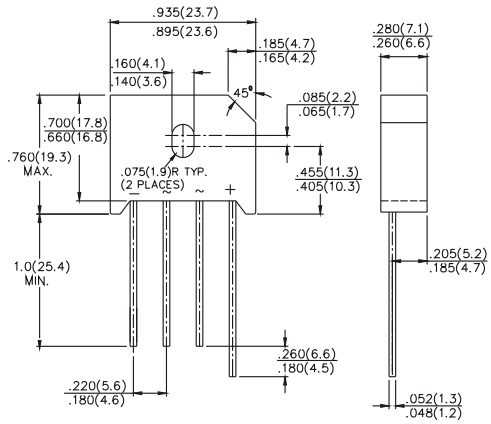
Features

- Low cost
- High forward surge current capability
- Ideal for printed circuit board

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

RoHS COMPLIANT



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	RS1001	RS1002	RS1003	RS1004	RS1005	RS1006	RS1007	Unit
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
Maximum Average Forward Rectified Output Current, at T_C=100 (Note 2)	$I_{(AV)}$	8.0							Amps
Maximum Average Forward Rectified Output Current, at T_A=45 (Note 3)	$I_{(AV)}$	6.0							Amps
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	VF	1.0							Volts
Maximum DC Reverse Current at rated DC blocking voltage per element T_A=25	I_R	5.0							µAmps
Maximum DC Reverse Current at rated DC blocking voltage per element T_A=100	I_R	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

FIG.1－DERATING CURVE FOR
OUTPUT RECITIFIED CURRENT

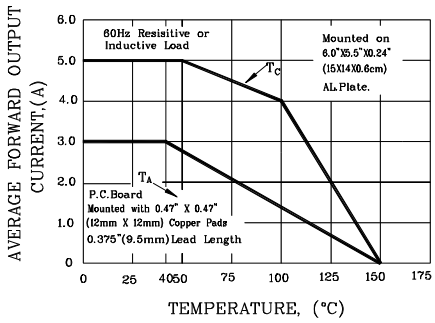


FIG.2－MAXIMUM NON－REPETITIVE PEAK
FORWARD SURGE CURRENT PER ELEMENT

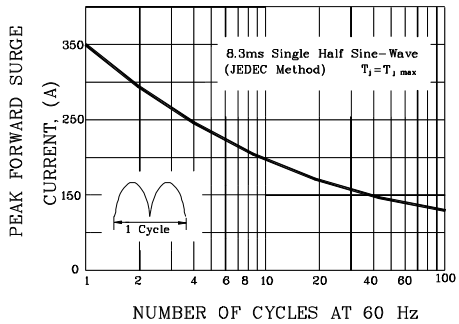


FIG.3－TYPICAL FORWARD CHARACTERISTICS
PER BRIDGE ELEMENT

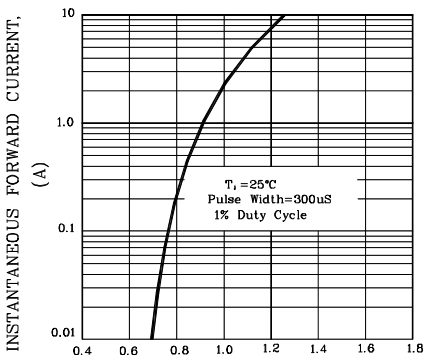


FIG.4－TYPICAL REVERSE CHARACTERISTICS
PER BRIDGE ELEMENT

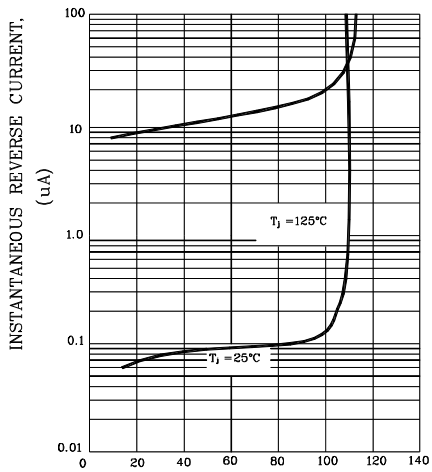


FIG.5－TYPICAL JUNCTION CAPACITANCE
PER BRIDGE ELEMENT