RS8 SERIES
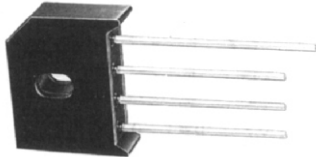
SINGLE-PHASE SILICON BRIDGE

CHENG-YI ELECTRONIC

VOLTAGE RANGE
50 TO 1000 VOLTS
CURRENT
8.0 Amperes

FEATURES

· Ideal for printed circuit board
· Realiable low cost construction utilizing molded plastic technique
· Plastic material has underwriters laboratory Flammibility Classification 94V-0
· Surge overload rating:300 amperes peak
· Mounting Torgue: 5 In. lb. max
· UL recognized file # E149311
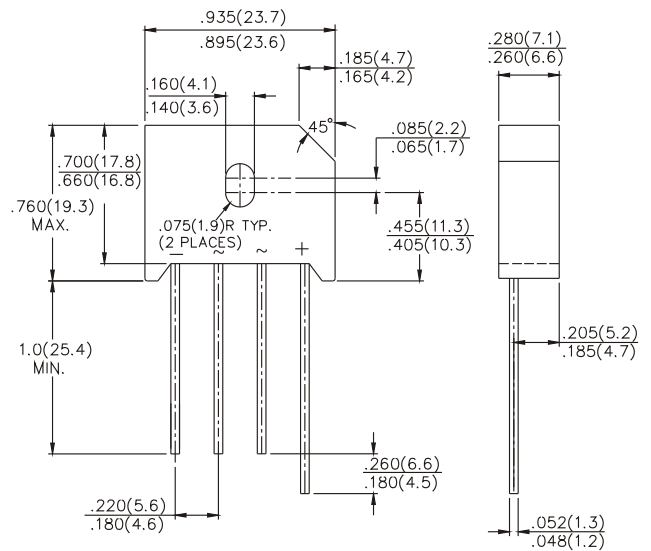
Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25^{0}C ambient temperature unless otherwise specified.
Resistive or inductive load, 60 Hz. For capacitive load, derate current by 20%.

		RS8005	RS801	RS802	RS804	RS806	RS808	RS810	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Bridge Input Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	60	100	200	400	600	800	1000	V
Maximum Average Forward @ T_C=100^{0}C Output Current @ T_A=65^{0}C	$V_{(AV)}$				8.0 8.0				A A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}				200				A
Maximum DC Forward Voltage drop per element at 4.0A DC	V_F				1				V
Maximum DC Reverse Current at rated @ T_A=25^{0}C DC Blocking Voltage Per Element @ T_A=100^{0}C	I_R				10 1				μA mA
Maximum Themal Resistance (Note)	$R\theta JC$				4.7				^{0}C/W
Operating Temperature Range	T_J				-55 to +125				^{0}C
Storage Temperature Range	T_{STG}				-55 to +150				^{0}C

RS8 SERIES

SINGLE-PHASE SILICON BRIDGE

CHENG-YI
ELECTRONIC

RATING AND CHARACTERISTICS CURVES
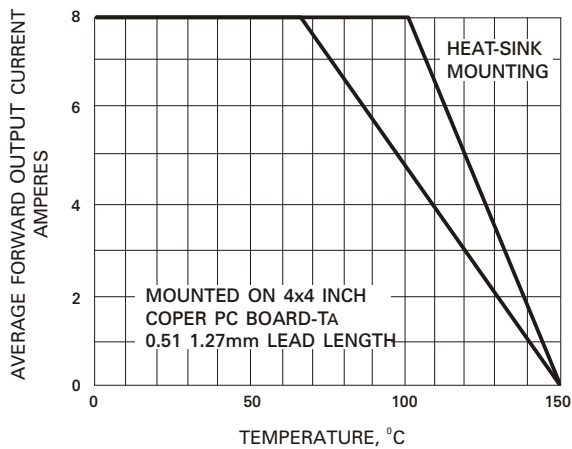RS8 SERIES

Fig.1 - DERATING CURVE
OUTPUT RECTIFIED CURRENT

HEAT-SINK MOUNTING

MOUNTED ON 4x4 INCH
COPER PC BOARD-Ta
0.51 1.27mm LEAD LENGTH

AVERAGE FORWARD OUTPUT CURRENT AMPERES

TEMPERATURE, ^{0}C

Fig.2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

$T_J=25^{o}$C
Pulse Width=300s
1% OUTY CYCLE

INSTANTANEOUS FORWARD CURRENT. (A)

INSTANTANEOUS FORWARD VOLTAGE, (V)
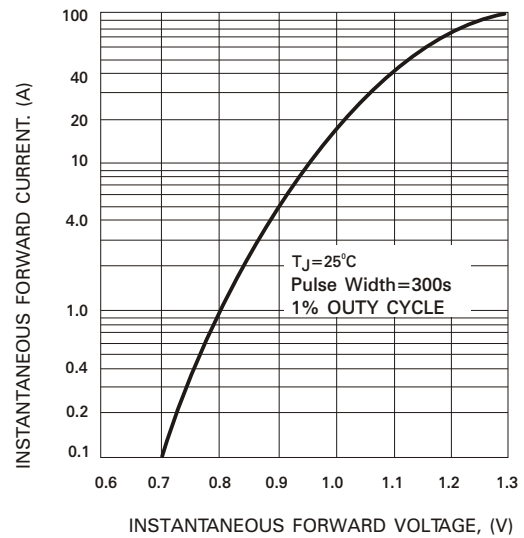
Fig.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

$T_J=150$C
8.3ms Single Half Sine Wave
JEDEC Method

NUMBER OF CYCLES AT 60 Hz
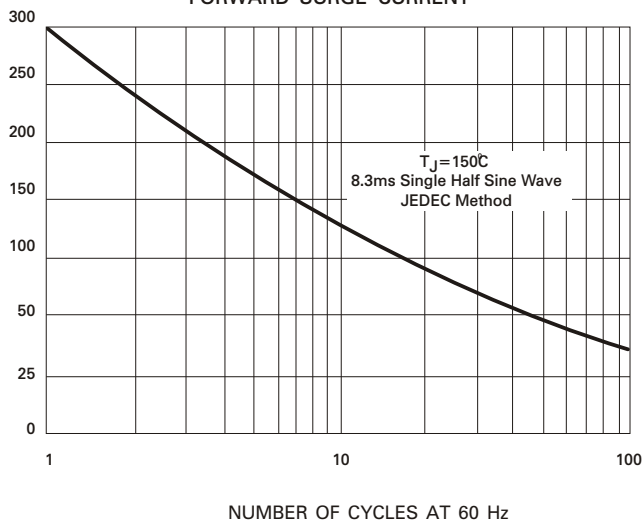
Fig.4 - TYPICAL REVERSE CHARACTERISTICS

$T_C=100$C

$T_A=25^{o}$C

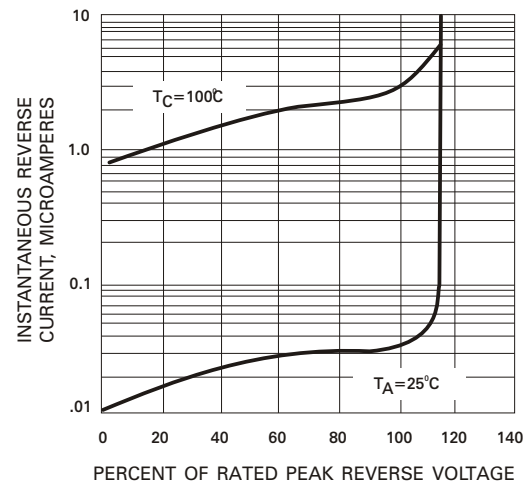INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

PERCENT OF RATED PEAK REVERSE VOLTAGE

Fig.5 - TYPICAL JUNCTION CAPACITANCE PER ELEMENT

$T_J=25^{o}$C

CAPACITANCE, pF

REVERSE VOLTAGE, VOLTS