



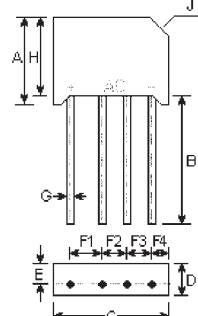
RS501 THRU RS507

SINGLE-PHASE SILICON BRIDGE
Reverse Voltage - 65 to 1000 Volts
Forward Current - 5.0 Amperes

Features

- Plastic material used carries Underwriters Laboratory recognition 94V-0
- High surge current capability
- Ideal for printed circuit board
- Typical I_R less than 1 μ A
- Built-in printed board stand offs
- High temperature soldering guaranteed: 250°C for 5 seconds

RS-5



Mechanical Data

- **Case:** Reliable low cost construction utilizing molded plastic technique
- **Terminals:** Leads solderable per MIL-STD-202, method 208
- **Mounting Position:** Any
- **Weight:** 0.92 ounce, 25.3 grams

DIM.	DIMENSIONS				Note
	inches	mm	inches	mm	
A	0.825	21.0	2.1	53.3	
B	1.5	-	2.4	-	
C	1.520	38.6	3.4	86.4	
D	0.180	4.6	0.6	15.2	
E	0.240	6.2	0.2	5.1	
F1	0.180	4.6	0.2	5.1	
F2	0.240	6.2	0.2	5.1	
F3	0.240	6.2	0.2	5.1	
F4	0.340	8.6	0.3	7.6	
G	0.075	0.022	0.07	1.8	
H	0.795	20.2	2.2	56.0	
J	0.180(4.6)x4.5"	-	-	-	

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. resistive or inductive load at 50Hz or 60Hz.

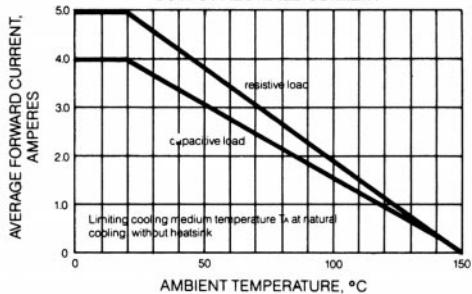
	Symbols	RS501	RS502	RS503	RS504	RS505	RS506	RS507	Units
Maximum repetitive peak reverse voltage	V_{RRM}	65	125	200	400	600	800	1000	Volts
Maximum RMS input voltage R + C-Load	V_{RMS}	40	80	125	250	380	500	630	Volts
Maximum DC blocking voltage ¹⁾	V_{DC}	65	125	200	400	600	800	1000	Volts
Maximum non-repetitive peak reverse voltage ¹⁾	V_{RSM}	100	190	300	600	900	1200	1500	Volts
Maximum average forward output current I_{FAVM} natural cooling, $T_A=45^\circ\text{C}$ C-Load R+L-Load on chassis=31in ² , 200cm ² ; $T_A=45^\circ\text{C}$ C-Load R+L-Load	$I_{(AV)}$				3.3	4.0			Amps
Maximum repetitive peak forward surge current	I_{FRM}				30.0				APK
Peak surge forward current single sine-wave on rated load $T_f=25^\circ\text{C}$ $T_j=150^\circ\text{C}$	I_{FSM}			250	200				APK
I^2t Rating for fusing ($t > 8.3\text{mS}$) $T_f=25^\circ\text{C}$ $T_j=150^\circ\text{C}$	I^2t			312	200				A ² S A'S
Minimum series resistance at V_{RMS}	R	0.15	0.3	0.6	1.2	1.8			OHM
Maximum reservoir capacitor	C	10000	5000	5000	2500	1000			μ F
Maximum reverse current at rated repetitive peak voltage $T_f=25^\circ\text{C}$ $T_j=150^\circ\text{C}$	I_R			10	6.0				μ A mA
Maximum instantaneous forward voltage drop per element at 5.0A	V_F			1.1					VPK
Operating and storage temperature range	T_J, T_{STG}			-55 to +150					°C

Note:

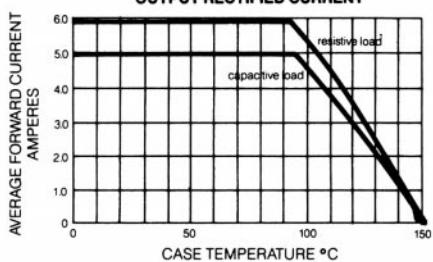
(1) Valid for each bridge element

RATINGS AND CHARACTERISTIC CURVES

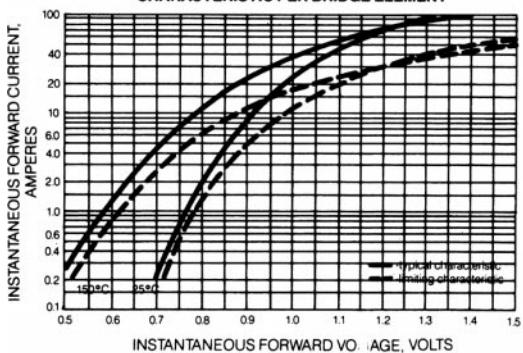
**FIG. 1 — DERATING CURVE FOR
OUTPUT RECTIFIED CURRENT**



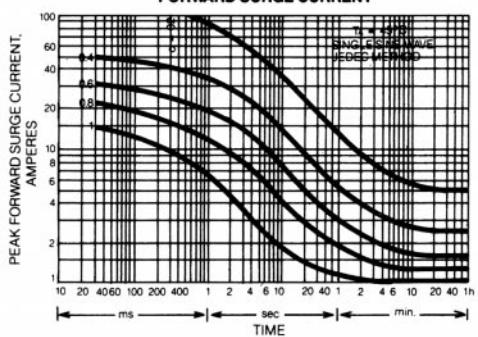
**FIG. 2 — DERATING CURVE FOR
OUTPUT RECTIFIED CURRENT**



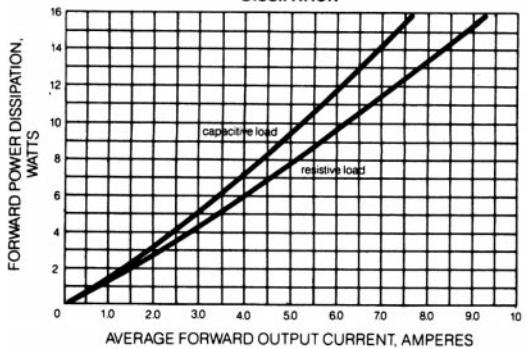
**FIG. 3 — TYPICAL INSTANTANEOUS FORWARD
CHARACTERISTIC PER BRIDGE ELEMENT**



**FIG. 4 — MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT**



**FIG. 5 — MAXIMUM TOTAL BRIDGE POWER
DISSIPATION**



**FIG. 6 — MEAN AVERAGE FORWARD CURRENT
CASE TEMPERATURE**

