



RS501 THRU RS507

SINGLE-PHASE SILICON BRIDGE

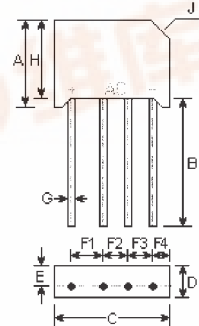
Reverse Voltage - 65 to 1000 Volts

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			
	MIL	MIL	MIL	MIL
A	0.825	0.855	21.0	21.7
B	1.0		25.4	
C	1.525	1.595	39.4	40.5
D	0.155	0.165	4.0	4.2
E	0.245	0.255	6.2	6.5
F1	0.285	0.305	7.3	7.8
F2	0.285	0.305	7.3	7.8
F3	0.285	0.305	7.3	7.8
F4	0.245	0.255	6.2	6.5
G	0.338	0.342	8.6	8.7
H	0.795	0.825	20.2	21.0
J	0.150 (MIN) 0.160 (MAX)			

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 5.0 6.0							Amps
Maximum repetitive peak forward surge current	I_{FRM}	30.0							APK
Peak surge forward current single sine-wave on rated load $T_J=25^\circ\text{C}$ $T_J=150^\circ\text{C}$	I_{FSM}	250 200							APK
I ² t Rating for fusing $T_J=25^\circ\text{C}$ $T_J=150^\circ\text{C}$ (t>8.3mS)	I^2t	312 200							A ² S A ² 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 $T_J=25^\circ\text{C}$ $T_J=150^\circ\text{C}$	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:



RATINGS AND CHARACTERISTIC CURVES

FIG. 1 — DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

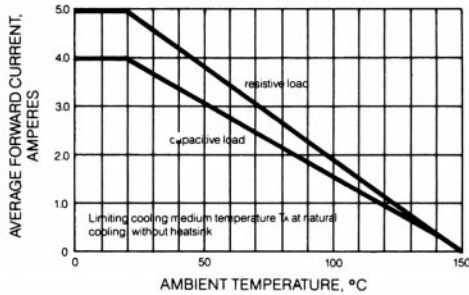


FIG. 2 — DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

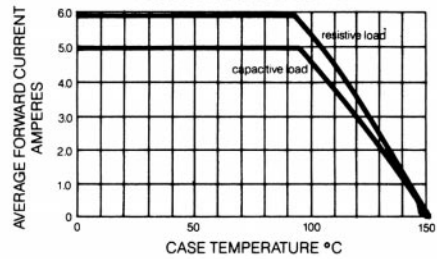


FIG. 3 — TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC PER BRIDGE ELEMENT

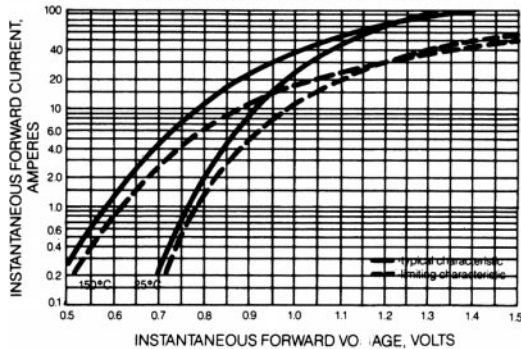


FIG. 4 — MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

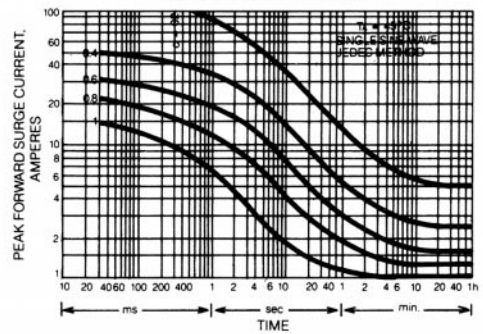


FIG. 5 — MAXIMUM TOTAL BRIDGE POWER DISSIPATION

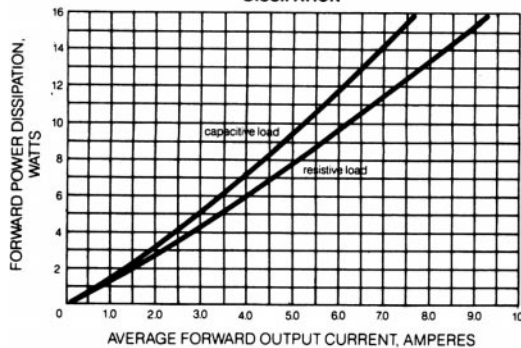


FIG. 6 — MEAN AVERAGE FORWARD CURRENT CASE TEMPERATURE

