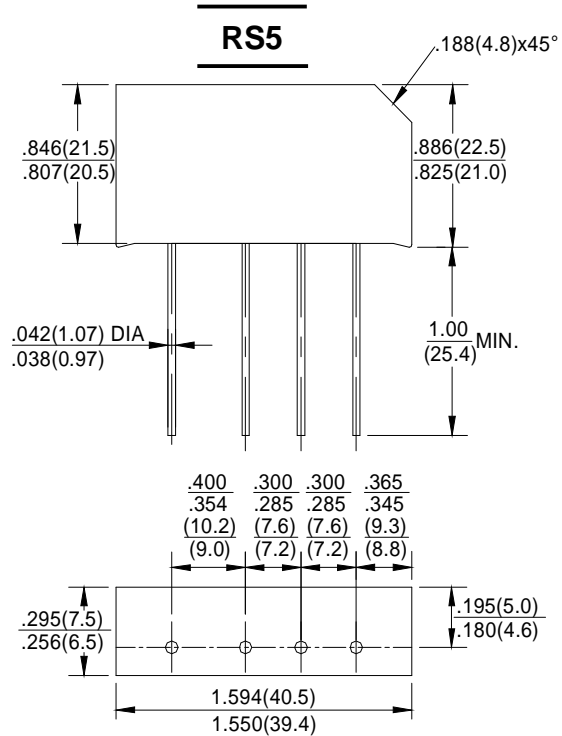


## SILICON BRIDGE RECTIFIERS

REVERSE VOLTAGE - 50 to 1000 Volts  
FORWARD CURRENT - 5.0 Amperes

### FEATURES

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



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

resistive or inductive load at 50HZ or 60HZ.

| CHARACTERISTICS  | SYMBOL                            | RS501 | RS502 | RS503 | RS504       | RS505 | RS506 | RS507 | UNIT             |
|--|-----------------------------------|-------|-------|-------|-------------|-------|-------|-------|------------------|
| Maximum Recurrent Peak Reverse Voltage   | V <sub>RM</sub>                   | 60    | 125   | 200   | 400         | 600   | 800   | 1000  | V                |
| Maximum RMS Voltage  | V <sub>RMS</sub>                  | 40    | 80    | 125   | 250         | 380   | 500   | 630   | V                |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>                   | 65    | 125   | 200   | 400         | 600   | 800   | 1000  | V                |
| Maximum Repetitive Peak Reverse Voltage (Note1)  | V <sub>RRM</sub>                  | 100   | 190   | 300   | 600         | 900   | 1200  | 1500  | V                |
| Maximum Average Forward Output Current I <sub>FAVM</sub> natural cooling, T <sub>A</sub> =45°C |                                   |       |       |       |             |       |       |       |                  |
| C-Load   | I(A)                              |       |       |       | 3.3         |       |       |       | A                |
| R+L-Load   |                                   |       |       |       | 4.0         |       |       |       |                  |
| on chassis=31in <sup>2</sup> , 200cm <sup>2</sup> , T <sub>A</sub> =45°C                       |                                   |       |       |       |             |       |       |       |                  |
| C-Load   |                                   |       |       |       | 5.0         |       |       |       |                  |
| R+L-Load   |                                   |       |       |       | 6.0         |       |       |       |                  |
| Maximum Repetitive Peak Forward Surge Current I <sub>FSM</sub>                                 | APK                               |       |       |       | 30          |       |       |       | A                |
| Peak Forward Surge Current Single @T <sub>J</sub> =25°C  | I <sub>FSM</sub>                  |       |       |       | 250         |       |       |       | APK              |
| Sine-Wave on Rated Load (JEDEC Method) @T <sub>J</sub> =150°C                                  |                                   |       |       |       | 200         |       |       |       |                  |
| I <sup>2</sup> t Rating for Fusing @T <sub>J</sub> =25°C                                       | I <sup>2</sup> t                  |       |       |       | 312         |       |       |       | A <sup>2</sup> S |
| (t<8.3ms) @T <sub>J</sub> =150°C   |                                   |       |       |       | 200         |       |       |       |                  |
| Maximum Series Resistance at V <sub>RMS</sub>  |                                   | 0.15  | 0.3   | 0.6   | 1.2         |       | 1.8   |       | OHM              |
| Maximum Reservoir Capacitor  |                                   | 10000 | 5000  | 5000  | 2500        |       | 1000  |       | uF               |
| Maximum Reverse Current at @T <sub>J</sub> =25°C   | I <sub>R</sub>                    |       |       |       | 10.0        |       |       |       | uA               |
| Rated Repetitive Peak Voltage @T <sub>J</sub> =150°C   |                                   |       |       |       |             | 6.0   |       |       |                  |
| Maximum instantaneous Forward Drop per Element at 5.0A   | V <sub>F</sub>                    |       |       |       | 1.0         |       |       |       | V                |
| Operating and Storage Temperature Range  | T <sub>J</sub> , T <sub>STG</sub> |       |       |       | -55 to +125 |       |       |       | °C               |

NOTES:1. Valid for each bridge element.

# RATING AND CHARACTERISTIC CURVES

## RS5 SERIES



FIG.1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

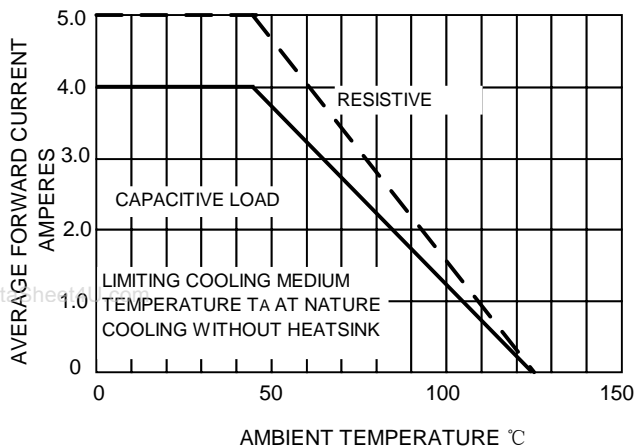


FIG.1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

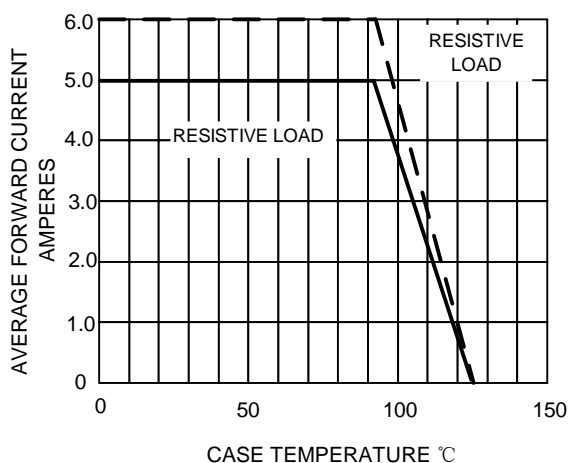


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC PER BRIDGE ELEMENT

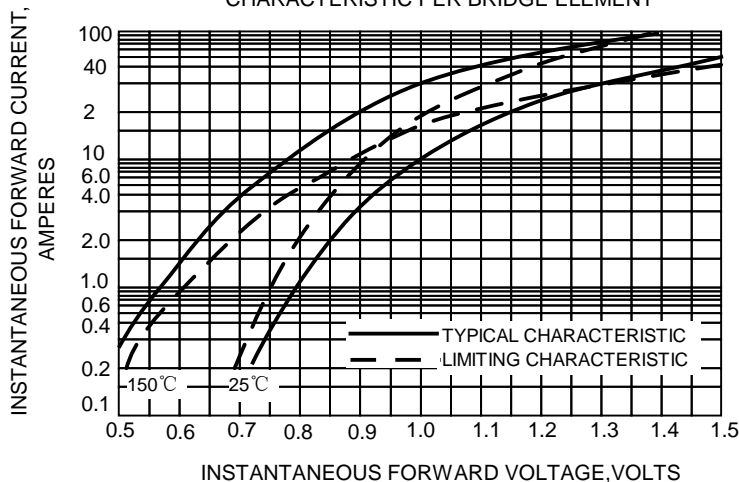


FIG.4-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

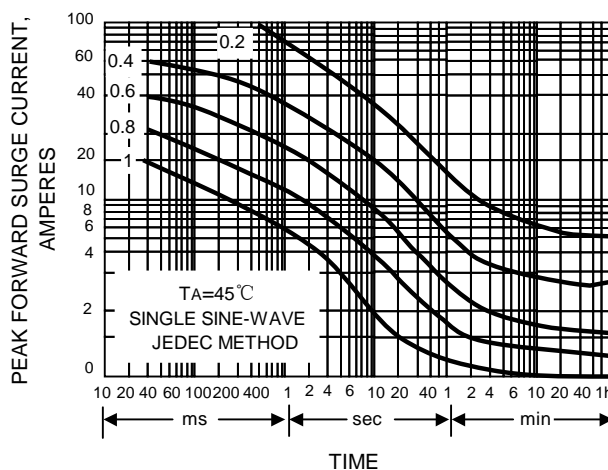


FIG.5-MAXIMUM TOTAL BRIDGE POWER DISSIPATION

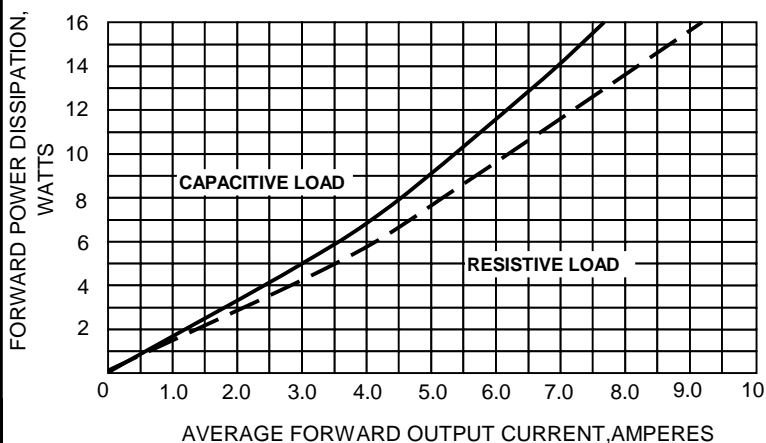


FIG.6-MEAN AVERAGE FORWARD CURRENT CASE TEMPERATURE

