

# S25VB20 ~ S25VB60

# SILICON BRIDGE RECTIFIERS

**PRV : 200 ~ 600 Volts**

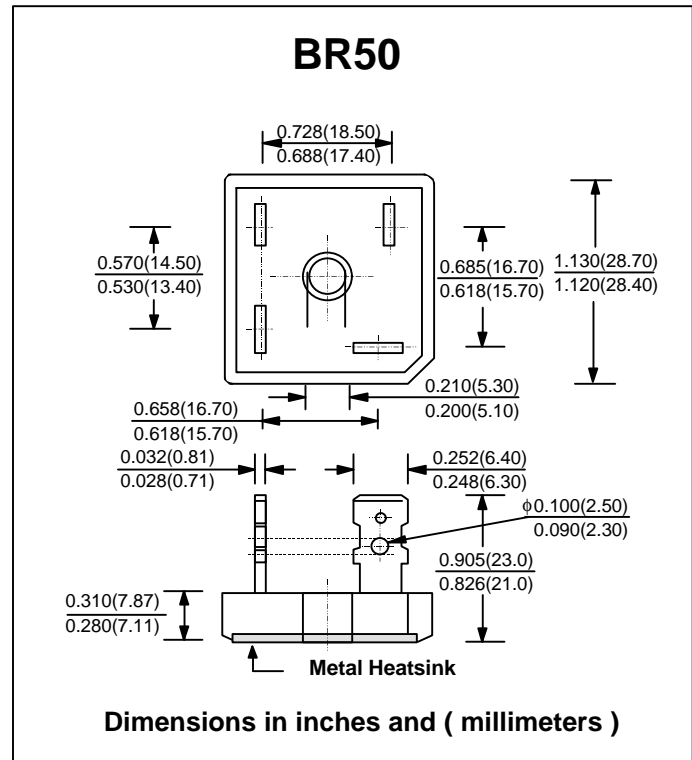
**I<sub>o</sub> : 25 Amperes**

### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ideal for printed circuit board
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : Molded plastic with heatsink integrally mounted in the bridge encapsulation
- \* Epoxy : UL94V-O rate flame retardant
- \* Terminals : plated .25" (6.35 mm). Faston
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency.
- \* Weight : 17.1 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

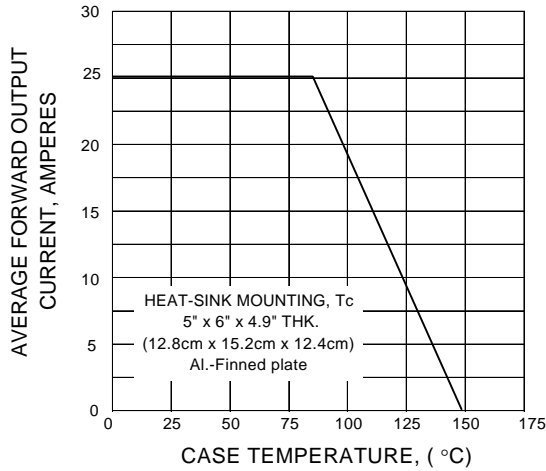
RATING	SYMBOL	S15VB20	S15VB60	UNIT
Maximum Reverse Voltage	V <sub>RM</sub>	200	600	V
Maximum Average Forward Current T <sub>c</sub> = 85°C	I <sub>F(AV)</sub>	25		A
Maximum Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	400		A
Current Squared Time at 1ms ≤ t < 10 ms.	I <sup>2</sup> <sub>t</sub>	800		A <sup>2</sup> S
Maximum Forward Voltage per Diode at I <sub>F</sub> = 12.5 A	V <sub>F</sub>	1.05		V
Maximum DC Reverse Current at V <sub>R</sub> = V <sub>RRM</sub> (Pulse Measurement, Rating of per diode)	I <sub>R</sub>	10		μA
Typical Thermal Resistance (Note 1)	R <sub>θJC</sub>	1.5		°C/W
Operating Junction Temperature Range	T <sub>J</sub>	150		°C
Storage Temperature Range	T <sub>STG</sub>	- 40 to + 150		°C

**Note :**

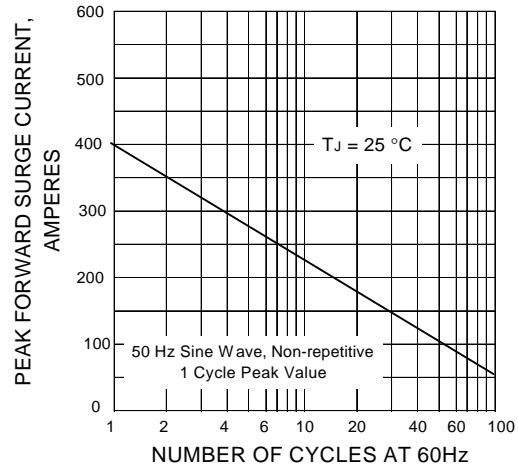
1. Thermal Resistance from junction to case with units mounted on a 5" x 6" x 4.9" (12.8cm.x 15.2cm.x 12.4cm.) Al.-Finned Plate

## RATING AND CHARACTERISTIC CURVES ( S25VB20 ~ S25VB60 )

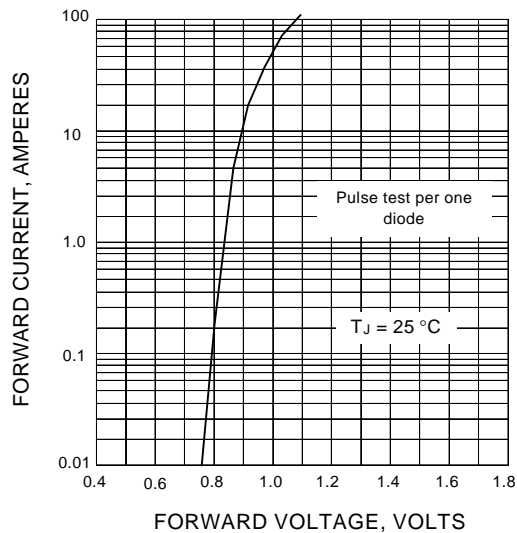
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER DIODE**

