

S50VB80

PRV : 800 Volts

Io : 50 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-0 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

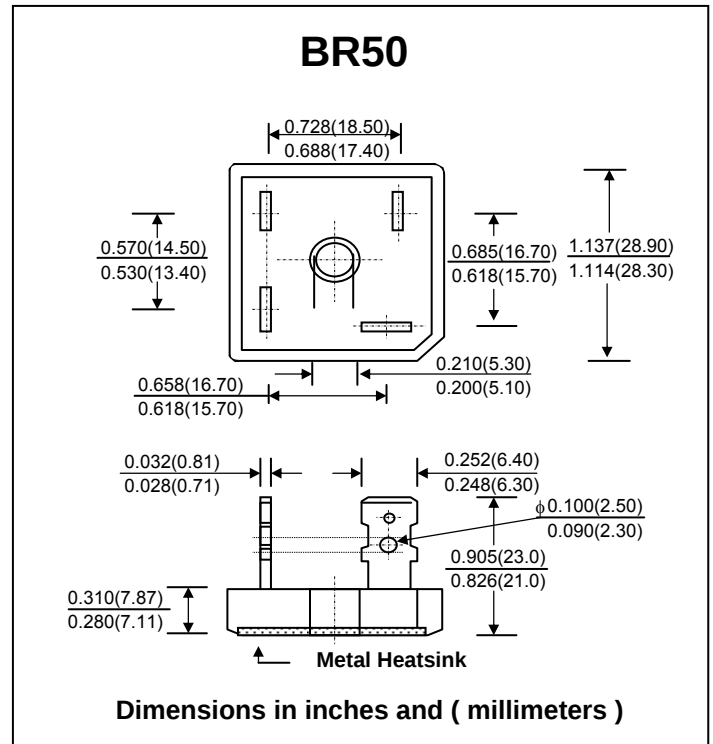
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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%.

SILICON BRIDGE RECTIFIER



RATING	SYMBOL	VALUE	UNIT
Maximum Reverse Voltage	V_{RM}	800	V
Maximum Average Forward Current 50 Hz sine wave, R-load	$I_{F(AV)}$	50 (With heatsink, $T_c = 95^\circ\text{C}$)	A
Peak Forward Surge Current, 50Hz sine wave Non-repetitive 1 cycle peak value, $T_j = 25^\circ\text{C}$	I_{FSM}	500	A
Maximum Forward Voltage per Diode at $I_F = 25\text{ A}$ (Pulse Measurement, Rating of per diode)	V_F	1.05	V
Maximum DC Reverse Current at $V_R = V_{RRM}$ (Pulse Measurement, Rating of per diode)	I_R	10	μA
Current Squared Time at $1\text{ ms} \leq t < 10\text{ ms}$. $T_c = 25^\circ\text{C}$	I^2t	800	A^2S
Typical Thermal Resistance , Junction to case	$R_{\theta JC}$	0.5	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 40 to + 150	$^\circ\text{C}$

RATING AND CHARACTERISTIC CURVES (S50VB80)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

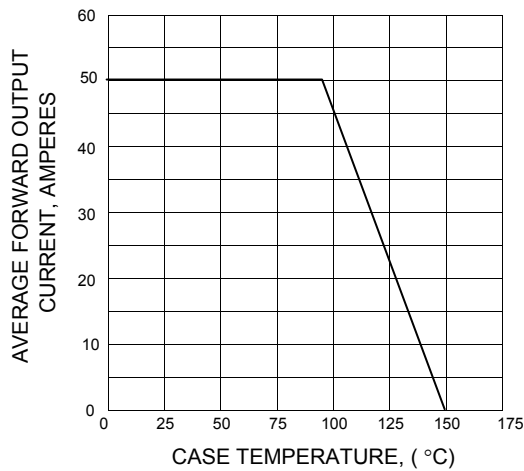


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

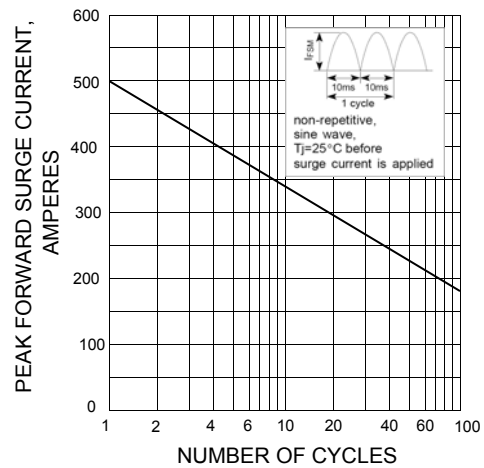


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

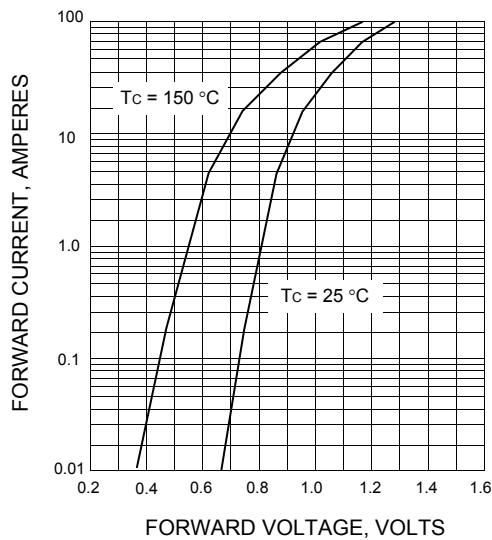


FIG.4 - POWER DISSIPATION

