



**S50VB005 THRU S50VB100**  
**SINGLE-PHASE BRIDGE RECTIFIER**  
**GLASS PASSIVATED BRIDGE RECTIFIERS**

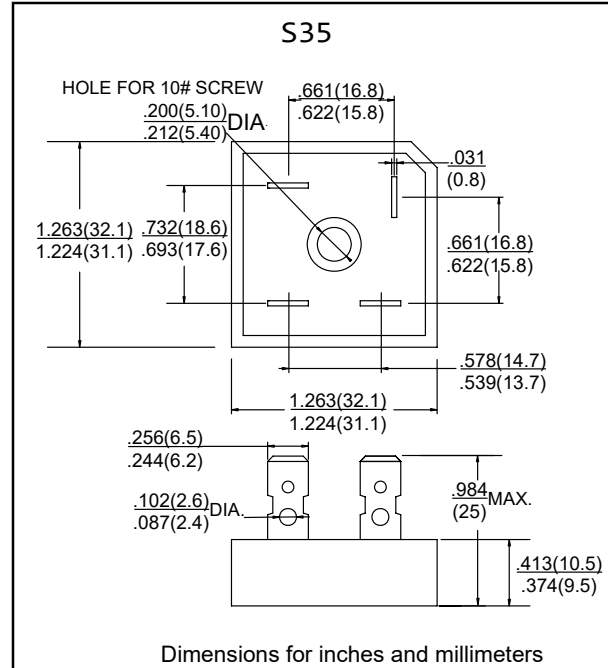
REVERSE VOLTAGE - 50 to 1000 Volts  
 FORWARD CURRENT 50 Amperes

**FEATURES**

- Rating to 1000V PRV
- High efficiency
- Glass passivated chip junction
- Electrically isolated metal case for maximum heat dissipation
- The plastic material has UL flammability classification 94V-0
- Electrically isolated base-2500 Volts

**MECHANICAL DATA**

- Case : Molded plastic with Heatsink internally mounted in the bridge encapsulation
- Polarity : As marked on Body
- Mounting : Hole for # 10 screw
- Weight : 0.7 ounces , 20 grams (terminal)



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

CHARACTERISTICS	SYMBOL	S50VB 005	S50VB 10	S50VB 20	S50VB 40	S50VB 60	S50VB 80	S50VB 100	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @T <sub>c</sub> = T <sub>a</sub>	I <sub>(AV)</sub>	50.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	450							A
Maximum forward Voltage at 25.0A DC	V <sub>F</sub>	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T <sub>J</sub> = 25°C @T <sub>J</sub> = 125°C	I <sub>R</sub>	5.0 500							uA
I <sup>2</sup> t Rating for fusing (t < 8.3ms), (Note 1)	I <sup>2</sup> t	800							A <sup>2</sup> S
Typical Junction Capacitance per element (Note 2)	C <sub>J</sub>	150							pF
Typical Thermal Resistance	R <sub>θJC</sub>	1.0							°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							°C

NOTES : 1. Measured at non-repetitive, for greater than 1ms and less than 8.3ms  
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

**RATINGS AND CHARACTERISTIC CURVES S50VB005 THRU S50VB100**

