



**Enhanced PowerBRIDGE RECTIFIER**  
**VOLTAGE 600 Volts CURRENT 25.0 Amperes**

**FEATURES**

- \* Low leakage
- \* Low forward voltage
- \* Surge overload rating: 250 amperes peak
- \* Mounting position: Any

**MECHANICAL DATA**

- \* Epoxy: Device has UL flammability classification 94V-0
- \* Case: RBUH
- \* Terminals: Matt Tin plated leads, solderable per J-STD-002 and JESD22-B102
- \* Polarity: As marked on body
- \* Mounting Torque: 10 cm-kg (8.8 inches-lbs) max.
- \* Recommended Torque: 5.7 cm-kg (5 inches-lbs)



RBUH

Please See Page 3 for Dimension

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
resistive or inductive load.

Dimensions in inches and (millimeters)

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	RBUH2506M	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	600	Volts
Maximum RMS Voltage	$V_{RMS}$	420	Volts
Maximum DC Blocking Voltage	$V_{DC}$	600	Volts
Maximum Average Forward Rectified Current at (Fig. 1, 2)	$T_C = 60\text{ }^{\circ}\text{C}^{(4)}$	25.0	Amps
	$T_A = 25\text{ }^{\circ}\text{C}^{(5)}$	3.5	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	300	Amps
Typical Current Squared Time	$I^2t$	373	A <sup>2</sup> /Sec
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150	°C

ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)

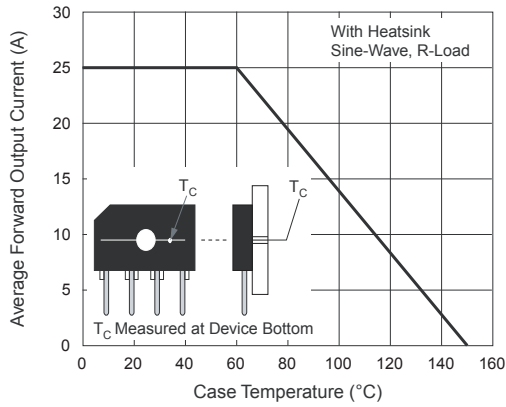
CHARACTERISTICS	SYMBOL	TYP.	MAX.	UNITS	
Maximum Instantaneous Forward Voltage at 12.5A DC <sup>(6)</sup>	$V_F$	@TA = 25 C	0.97	Volts	
		@TA = 100°C	0.87		
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	@TA = 25°C	-	5.0	uAmps
		@TA = 100°C	120	350	

THERMAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)

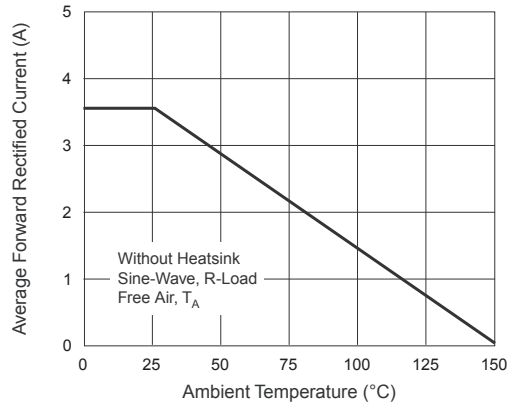
PARAMENTER	SYMBOL	RBUH2506M	UNITS
Typical thermal resistance	$R_{\theta JC}^{(4)}$	2.0	°C/W
	$R_{\theta JA}^{(5)}$	20	

- NOTES : 1. "Fully ROHS compliant", "100% Sn plating (Pb-free)".  
 2. \*\*\* Heat Sink Temperature.  
 3. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.  
 4. With 60W air cooled heatsink  
 5. With heatsink free air  
 6. Pulse test: 300 us pulse width, 1% duty cycle

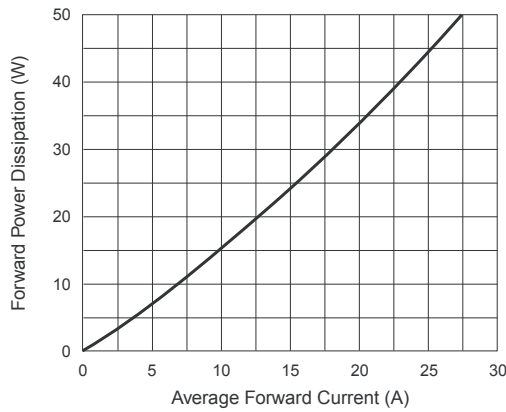
## RATING AND CHARACTERISTICS CURVES ( RBUH2506M )



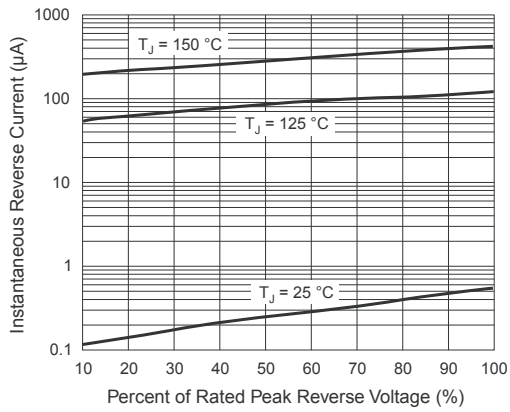
**Figure 1. Derating Curve Output Rectified Current**



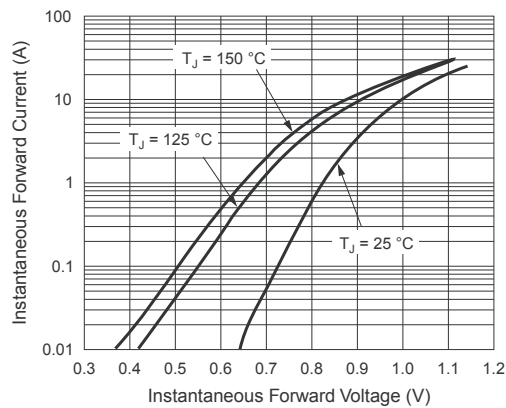
**Figure 2. Forward Current Derating Curve**



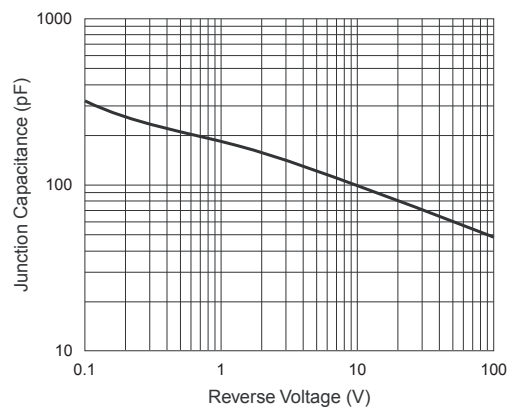
**Figure 3. Forward Power Dissipation**



**Figure 5. Typical Reverse Characteristics Per Diode**

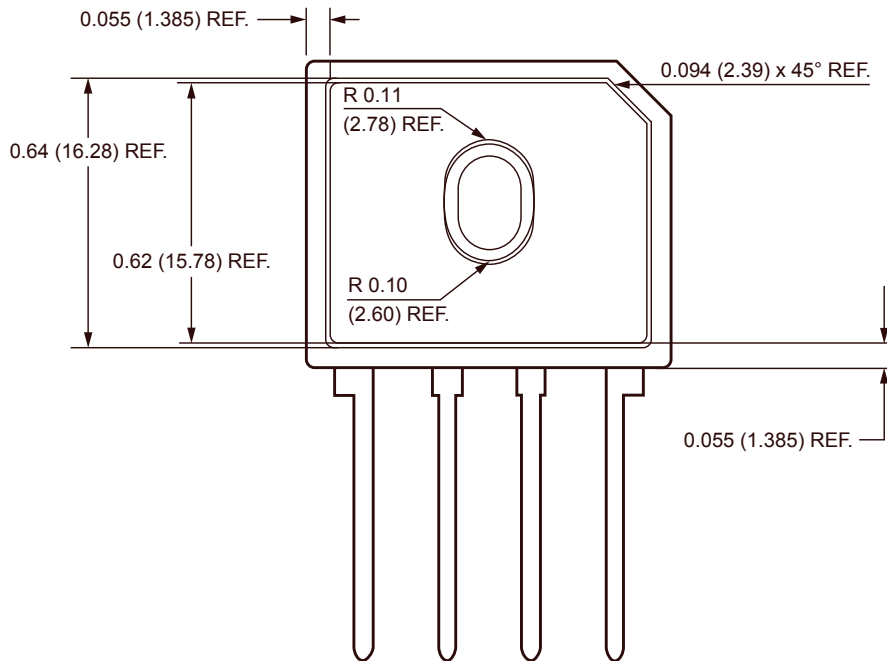
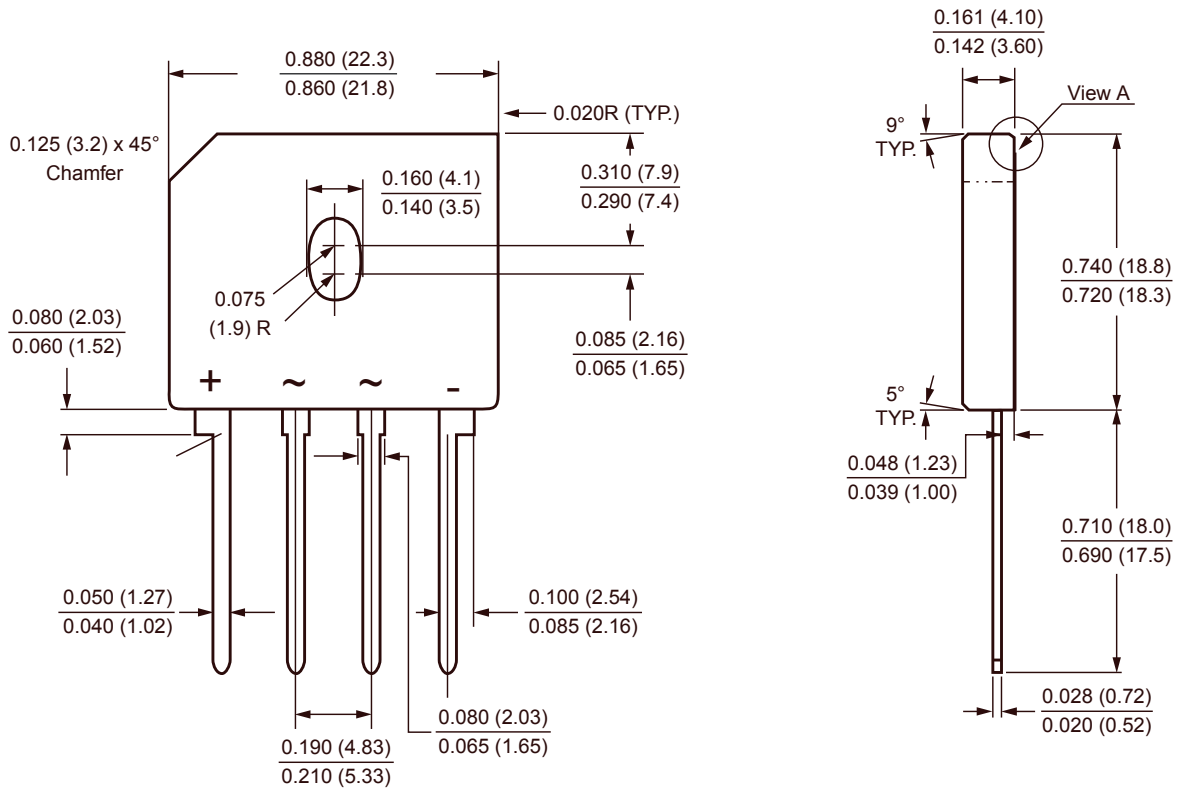


**Figure 4. Typical Forward Characteristics Per Diode**

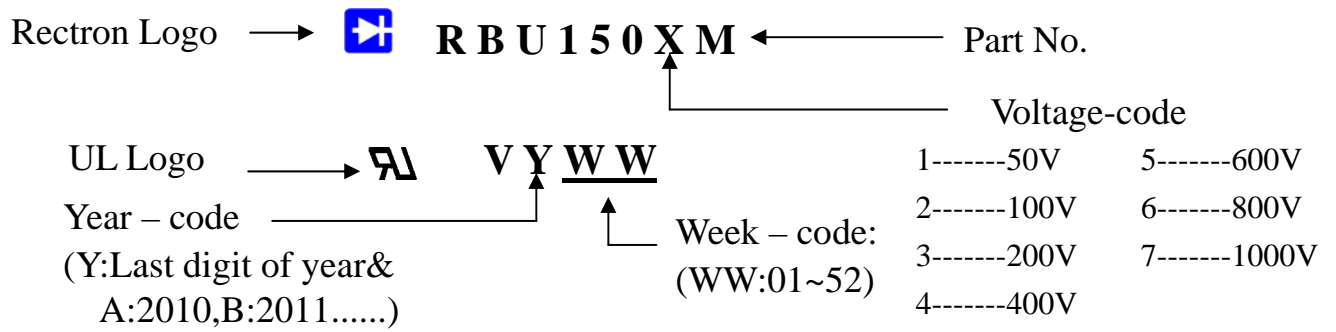


**Figure 6. Typical Junction Capacitance Per Diode**

# Dimensions in inches and (millimeters)



## Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### BULK PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
RBU	-B	450	240*239*35	502*251*126	2,700	13.00

### TUBE PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	WEIGHT(Kg)
RBU	-C	1,000	490*135*110	510*293*131	2,000	13.62

## DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.