



# THE DATASHEET OF RBU405M



**SINGLE-PHASE GLASS PASSIVATED  
SILICON BRIDGE RECTIFIER**  
VOLTAGE RANGE 50 to 1000 Volts CURRENT 4.0 Amperes

**FEATURES**

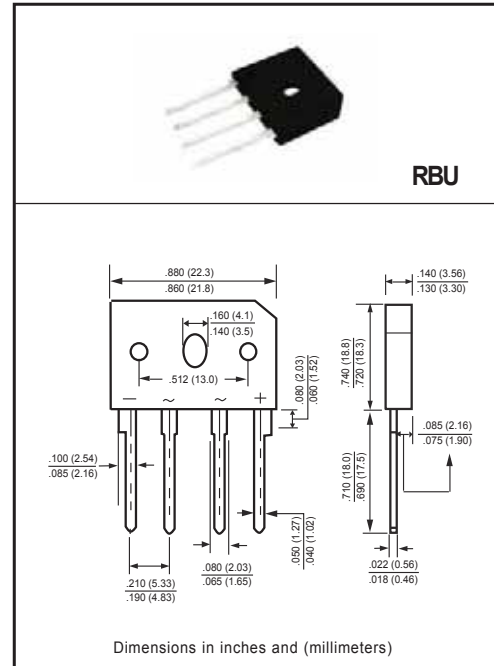
- \* Ideal for printed circuit board
- \* Surge overload rating: 150 amperes peak
- \* Mounting position: Any

**MECHANICAL DATA**

- \* UL listed the recognized component directory, file #E252754
- \* Epoxy: Device has UL flammability classification 94V-O

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings 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%.



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

RATINGS	SYMBOL	RBU401M	RBU402M	RBU403M	RBU404M	RBU405M	RBU406M	RBU407M	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum RSM Voltage	V <sub>RSM</sub>	150	200	300	500	700	900	1100	Volts
Maximum Average Forward Rectified Current at T <sub>C</sub> = 100°C	I <sub>O</sub>	4.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	150							Amps
Typical Current Squared Time	I <sup>2</sup> t	93.37							A <sup>2</sup> S
Typical Junction Capacitance (Note 3)	C <sub>J</sub>	40							pF
Typical Thermal Resistance (Note 1)	R <sub>θJC</sub>	4.2							°C/W
	R <sub>θJA</sub>	22							
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150							°C

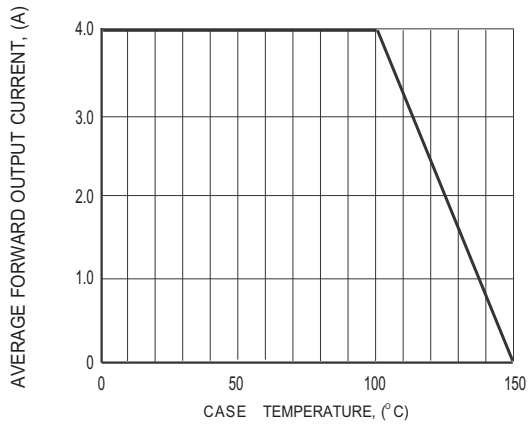
**ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)**

CHARACTERISTICS	SYMBOL	RBU401M	RBU402M	RBU403M	RBU404M	RBU405M	RBU406M	RBU407M	UNITS
Maximum Instantaneous Forward Voltage at 4.0A DC	V <sub>F</sub>	1.0							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> = 25°C	1.0							uAmps
	@T <sub>A</sub> = 125°C	200							

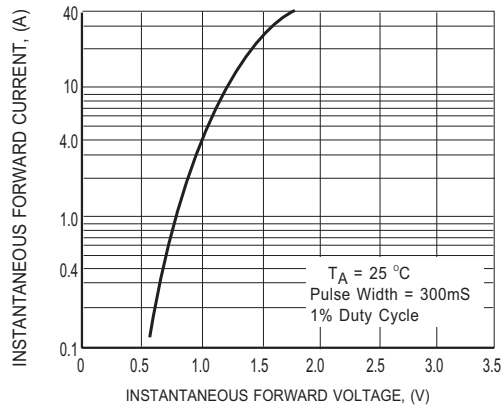
NOTES : 1. Thermal Resistance : Heat-sink case mounted or if PCB mounted.  
2. " RoHS compliant".  
3. Measured at 1MHz and applied reverse voltage of 4.0 voltage.

2023-07  
REV:E

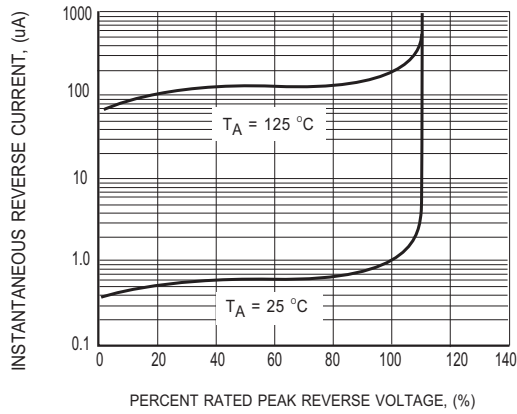
# RATING AND CHARACTERISTICS CURVES ( RBU401M THRU RBU407M )



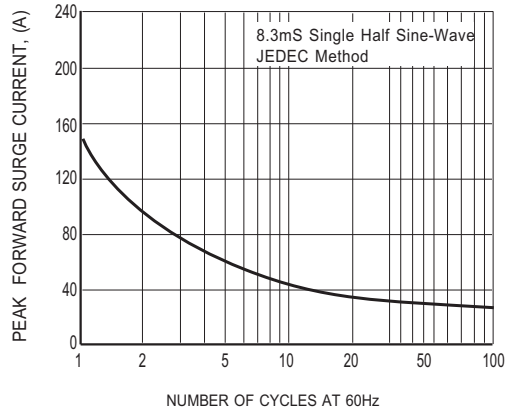
**FIG.1 DERATING CURVE OUTPUT RECTIFIED CURRENT**



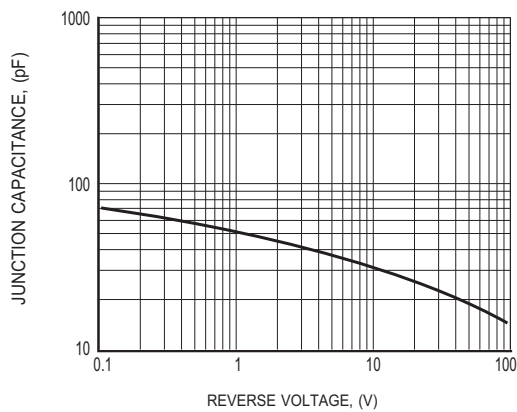
**FIG.2 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS**



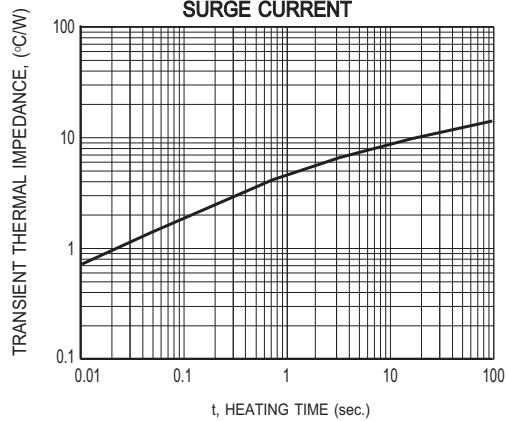
**FIG.3 MAXIMUM REVERSE CHARACTERISTICS**



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

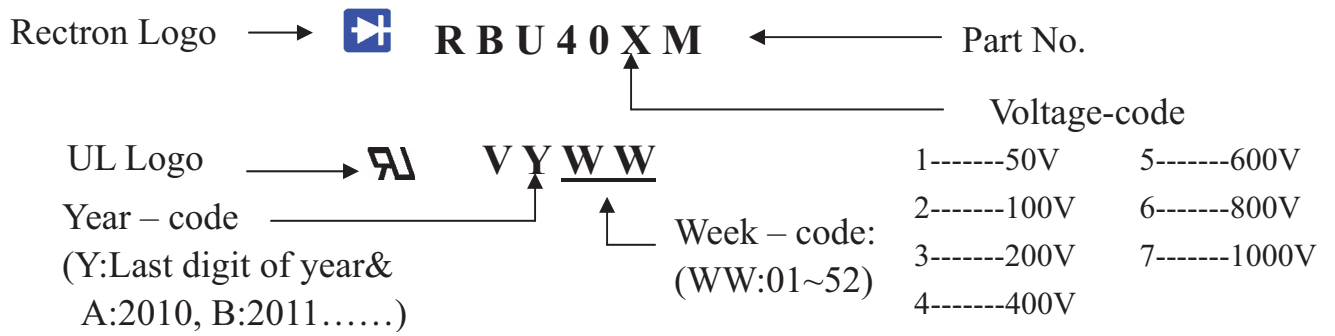


**FIG.5 TYPICAL JUNCTION CAPACITANCE PER LEG**



**FIG.6 TYPICAL TRANSIENT THERMAL IMPEDANCE**

## Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### 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





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