

# RBV5000 - RBV5010

PRV : 50 - 1000 Volts

Io : 50 Amperes

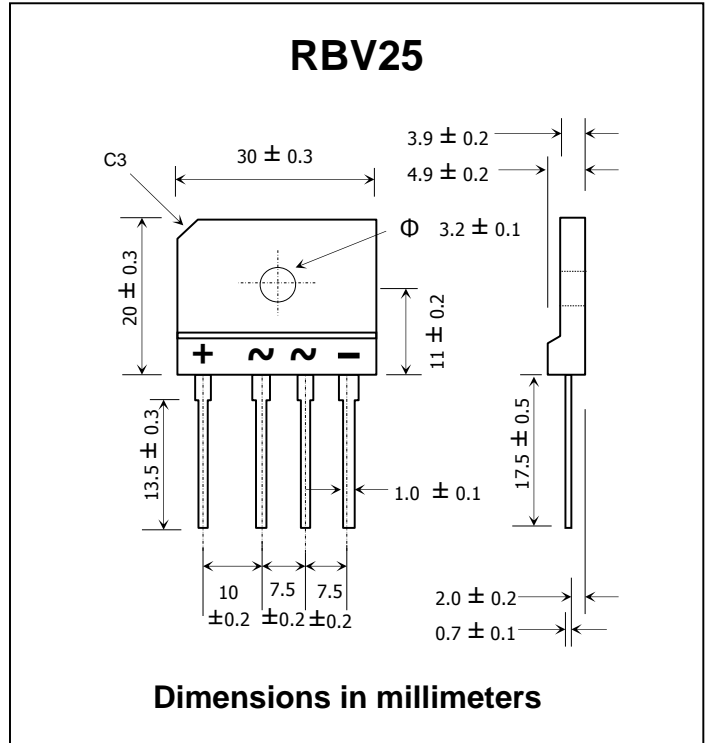
### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Rated isolation-voltage 2000 V<sub>AC</sub>
- \* Ideal for printed circuit board
- \* Very good heat dissipation
- \* Moisture Sensitivity Level 1 (Unlimited)
- \* Pb / RoHS Free

### MECHANICAL DATA :

- \* Case : Reliable low cost construction utilizing molded plastic technique
- \* Epoxy : UL94V-0 rate flame retardant
- \* Terminals : Plated lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Any
- \* Weight : 8.17 grams ( Approximaly )

## SILICON BRIDGE RECTIFIERS



### 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%.

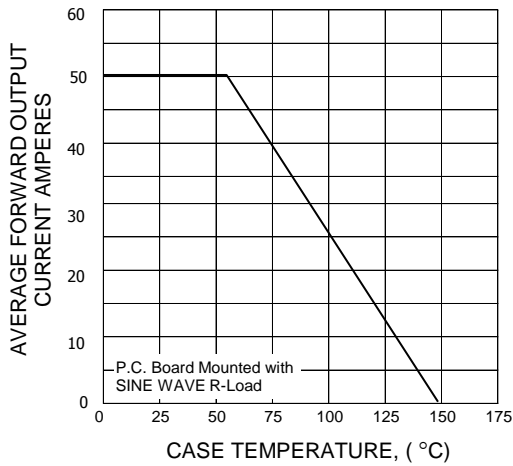
RATING	SYMBOL	RBV 5000	RBV 5001	RBV 5002	RBV 5004	RBV 5006	RBV 5008	RBV 5010	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Current T <sub>c</sub> = 55°C	I <sub>F(AV)</sub>	50							A
Peak Forward Surge Current Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	400							A
Current Squared Time at t < 8.3 ms.	I <sup>2</sup> t	660							A <sup>2</sup> S
Maximum Forward Voltage per Diode at I <sub>F</sub> = 25 A	V <sub>F</sub>	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T <sub>a</sub> = 25 °C	10							μA
	T <sub>a</sub> = 100 °C	200							μA
Typical Thermal Resistance (Note 1)	R <sub>θJC</sub>	1.5							°C/W
Mounting Torque (Recommended torque :0.5 N.m)	TOR	0.8							N.m
Operating Junction Temperature Range	T <sub>J</sub>	- 40 to + 150							°C
Storage Temperature Range	T <sub>STG</sub>	- 40 to + 150							°C

**Note :**

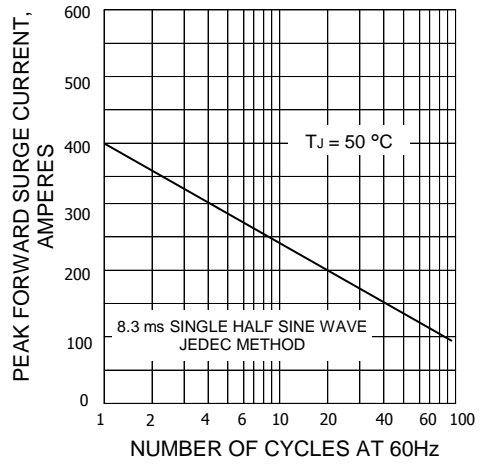
1. Thermal Resistance from junction to case with units mounted on heatsink.

**RATING AND CHARACTERISTIC CURVES ( RBV5000 - RBV5010 )**

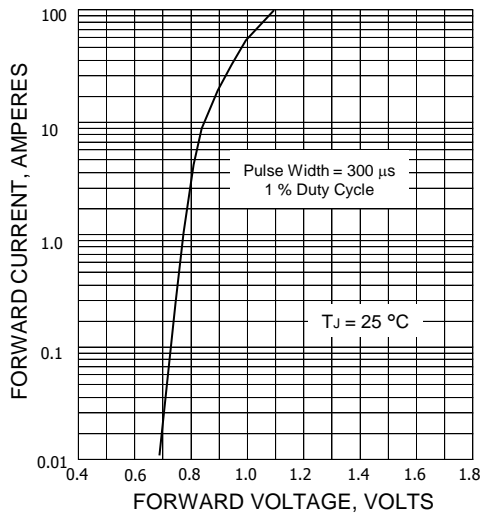
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



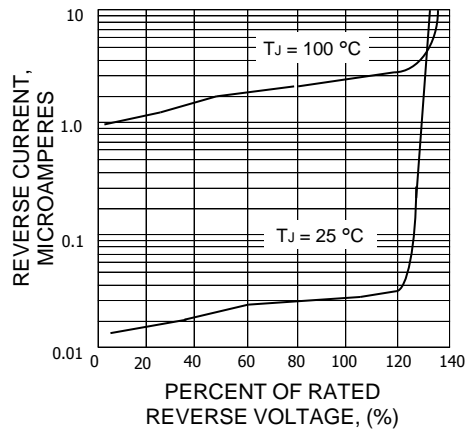
**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



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



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



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