

# D5SBA10 ~ D5SBA60

# SILICON BRIDGE RECTIFIERS

**PRV : 100 ~ 600 Volts**

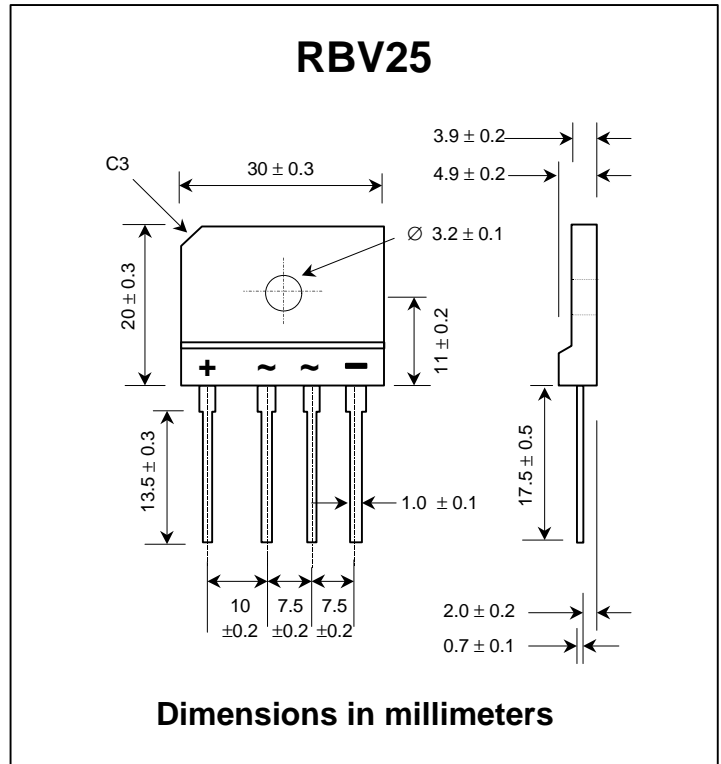
**Io : 6 Amperes**

**FEATURES :**

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ideal for printed circuit board
- \* Very good heat dissipation
- \* **Pb / RoHS Free**

**MECHANICAL DATA :**

- \* Case : Reliable low cost construction utilizing molded plastic technique
- \* Epoxy : UL94V-O rate flame retardant
- \* Terminals : Plated lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Any
- \* Weight : 7.7 grams



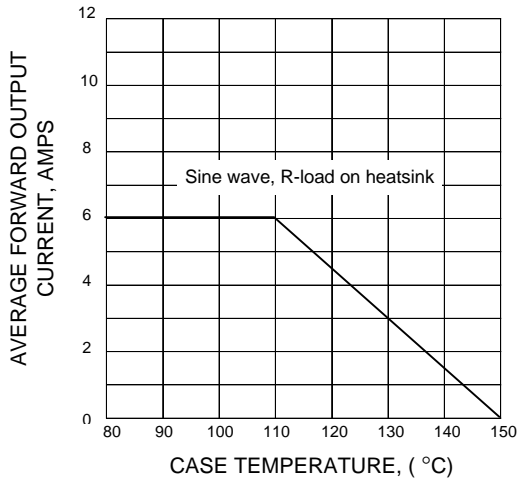
**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Rating at 25°C ambient temperature unless otherwise specified.

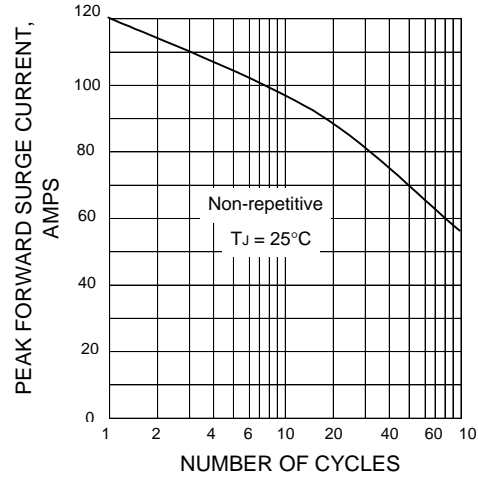
RATING	SYMBOL	D5SBA10	D5SBA20	D5SBA40	D5SBA60	UNIT
Maximum Reverse Voltage	V <sub>RM</sub>	100	200	400	600	V
Maximum Average Forward Current (50Hz Sine wave, R-load)	I <sub>F(AV)</sub>	6 (With heatsink, T <sub>c</sub> = 110°C) 2.8 (Without heatsink, T <sub>a</sub> = 25°C)				A
Maximum Peak Forward Surge Current, T <sub>j</sub> = 25°C (50Hz sine wave, Non-repetitive 1 cycle peak value)	I <sub>FSM</sub>	120				A
Current Squared Time at 1ms ≤ t < 10 ms, T <sub>c</sub> =25°C	I <sup>2</sup> t	60				A <sup>2</sup> S
Maximum Forward Voltage per Diode at I <sub>F</sub> = 3.0 A	V <sub>F</sub>	1.05				V
Maximum DC Reverse Current, V <sub>R</sub> =V <sub>RM</sub> ( Pulse measurement, Rating of per diode)	I <sub>R</sub>	10				µA
Maximum Thermal Resistance, Junction to case	R <sub>θJC</sub>	3.4 (With heatsink)				°C/W
Maximum Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>	26 (Without heatsink)				°C/W
Operating Junction Temperature	T <sub>J</sub>	150				°C
Storage Temperature Range	T <sub>STG</sub>	- 40 to + 150				°C

**RATING AND CHARACTERISTIC CURVES ( D5SB10 ~ D5SB60 )**

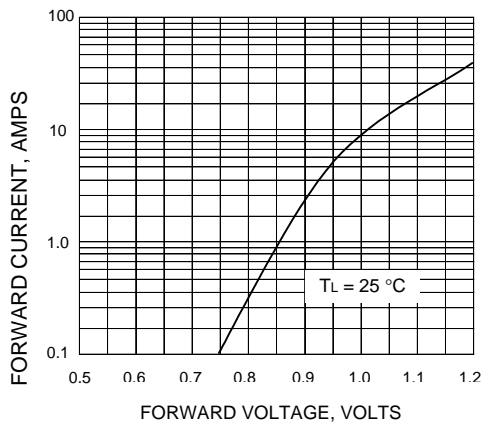
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



**FIG.4 - POWER DISSIPATION**

