



# SBU6A~SBU6M

## SILICON SINGLE-PHASE BRIDGE RECTIFIER

**VOLTAGE** 50 to 1000 Volts **CURRENT** 6.0 Amperes

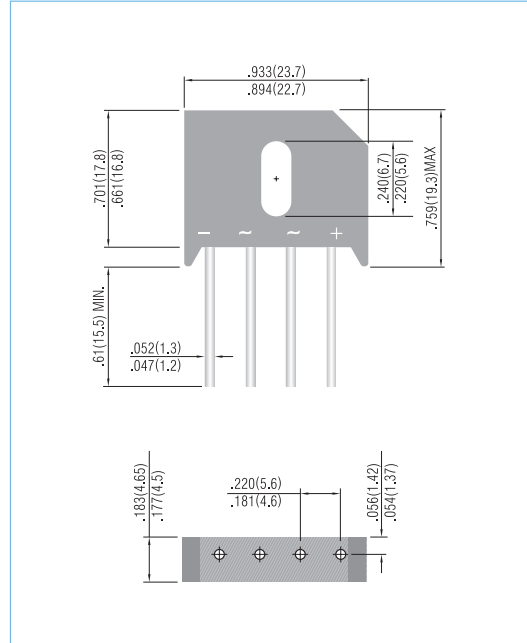
**SBU** Unit: inch ( mm )

### FEATURES

- Plastic material has Underwriters Laboratory Flammability Classification 94V-O
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique.
- High temperature soldering guaranteed:  
260°C/10 seconds/.375"(9.5mm) lead length at 5 lbs. (2.3kg) tension
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: Reliable low cost construction utilizing
- molded plastic technique
- Terminals: Leads solderable per MIL-STD-750, Method 2026
- Mounting position: Any
- Mounting torque: 5 in. lb. Max.
- Weight: 0.2 ounce, 5.6 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.  
For Capacitive load derate current by 20%.

PARAMETER	SYMBOL	SBU6A	SBU6B	SBU6D	SBU6G	SBU6J	SBU6K	SBU6M	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Bridge Input Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward $T_c=100^\circ\text{C}$ Rectified Output Current at $T_A=40^\circ\text{C}$	$I_{F(AV)}$	6.0							A
ft Rating for fusing ( $t < 8.3\text{ms}$ )	ft	210							A <sup>2</sup> sec
Peak Forward Surge Current single sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	225							Apk
Maximum Forward Voltage Drop per Bridge Element at 6.0A	$V_F$	0.98							Vpk
Maximum Reverse Leakage Current at Rated @ $T_A=25^\circ\text{C}$ Dc Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	3.0 1000							$\mu\text{A}$
Typical Thermal Resistance per leg (Note 2) Typical Thermal Resistance per leg (Note 3)	$R_{\theta JA}$ $R_{\theta JC}$	17.0 3.0							$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150							$^\circ\text{C}$

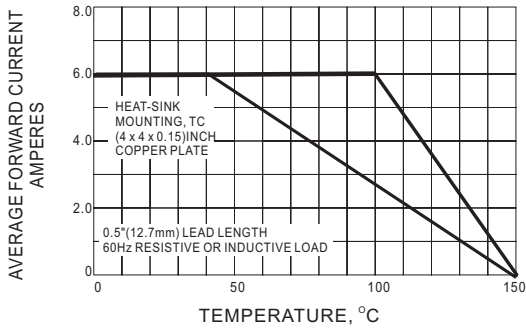
#### NOTES:

1. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw.
2. Units Mounted in free air, no heatsink, P.C.B at 0.375"(9.5mm) lead length with 0.5 x 0.5"(12 x 12mm)copper pads.
3. Units Mounted on a 2.0 x 1.6" x 0.3" thick (5 x 4 x 0.8cm) AL plate.

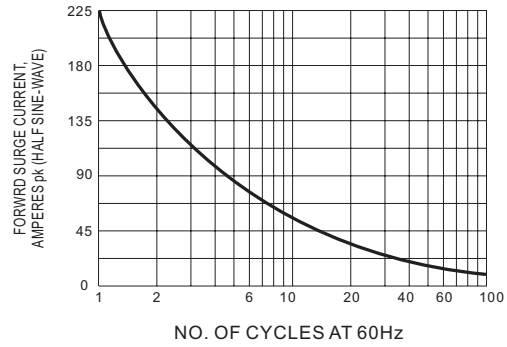


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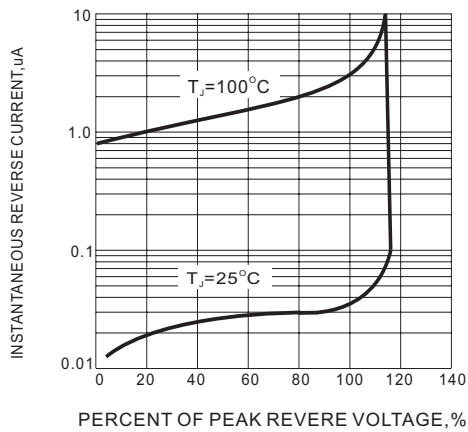
## RATING AND CHARACTERISTIC CURVES



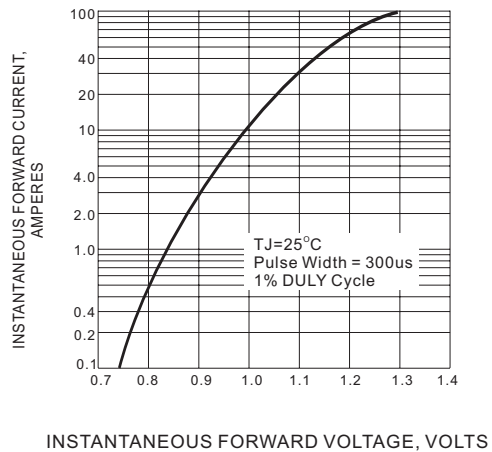
**Fig.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



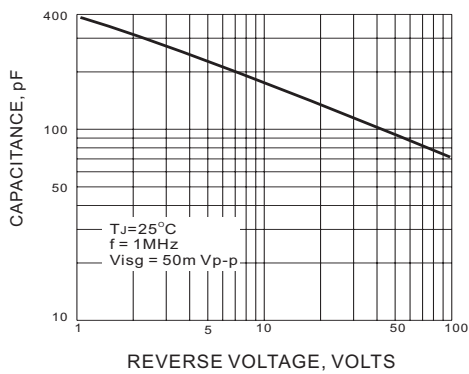
**Fig.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**Fig.3 - TYPICAL REVERSE CHARACTERISTICS**



**Fig.4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT**



**Fig.5 - TYPICAL JUNCTION CAPACITANCE**