



## Surface Mount Schottky Barrier Bridge Rectifiers

Reverse Voltage - 20 to 100 Volts  
Forward Current - 1.0 Amperes

### Features

- Ideal for automatic placement
- Metal-Semiconductor junction with guarding
- Epitaxial construction
- Very low forward voltage drop
- High surge capacity
- Plastic material has UL flammability classification 94V-0

### Mechanical Data

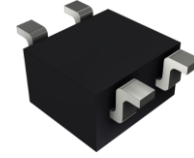
- Polarity: Symbol marked on body
- Mounting position: Any

Note: Products with logo  or  are made by HY Electronic (Cayman) Limited.

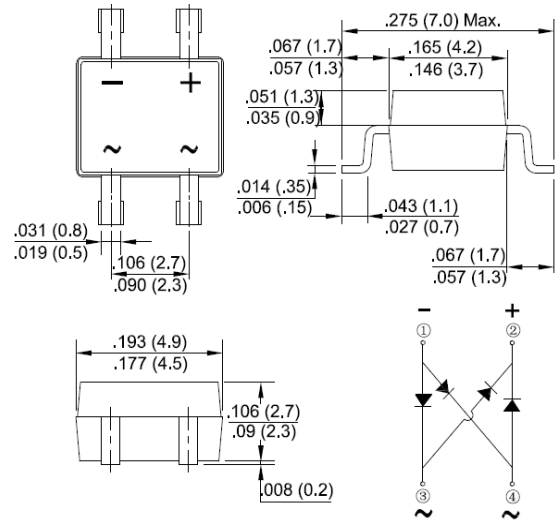
### Applications

- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications.

BS



RoHS  
COMPLIANT



Package Outline Dimensions in Inches (Millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	SB12S	SB13S	SB14S	SB15S	SB16S	SB18S	SB110S	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current @T <sub>L</sub> =100 °C	I(AV)	1.0							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	40							A
I <sup>2</sup> t Rating for Fusing (t<8.3mS)	I <sup>2</sup> t	6.6							A <sup>2</sup> s
Peak Forward Voltage per Diode at 1.0A DC	V <sub>F</sub>	0.55			0.7		0.85		V
Maximum DC Reverse Current at Rated @T <sub>J</sub> =25°C	I <sub>R</sub>	1.0							mA
DC Blocking Voltage per Diode @T <sub>J</sub> =100°C		10							
Typical Junction Capacitance (Note1)	C <sub>J</sub>	110							pF
Typical Thermal Resistance Junction to Lead	R <sub>θJL</sub>	20							°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55 to + 150							°C
Storage Temperature Range	T <sub>STG</sub>	-55 to + 150							°C

Notes: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

2. The typical data above is for reference only



Fig. 1 - Forward Current Derating Curve

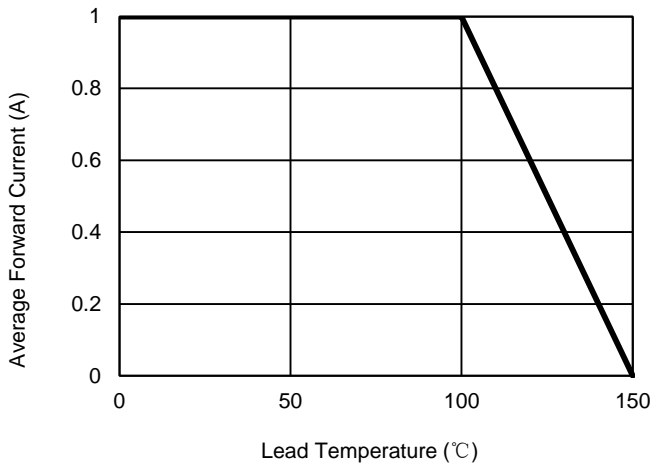


Fig. 2 - Maximum Non-Repetitive Surge Current

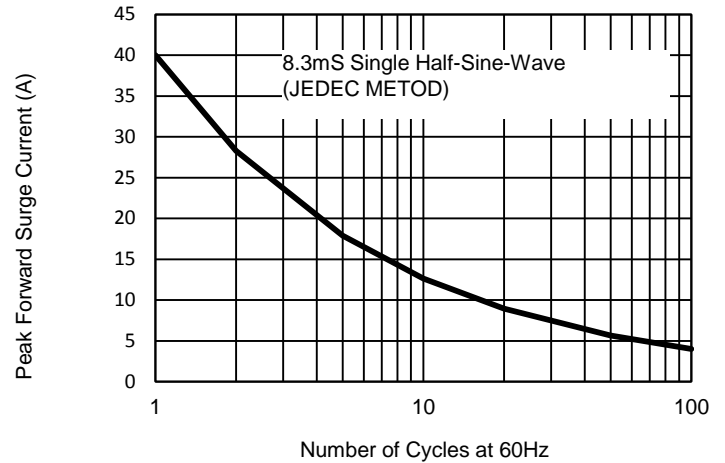


Fig. 3 - Typical Reverse Characteristics

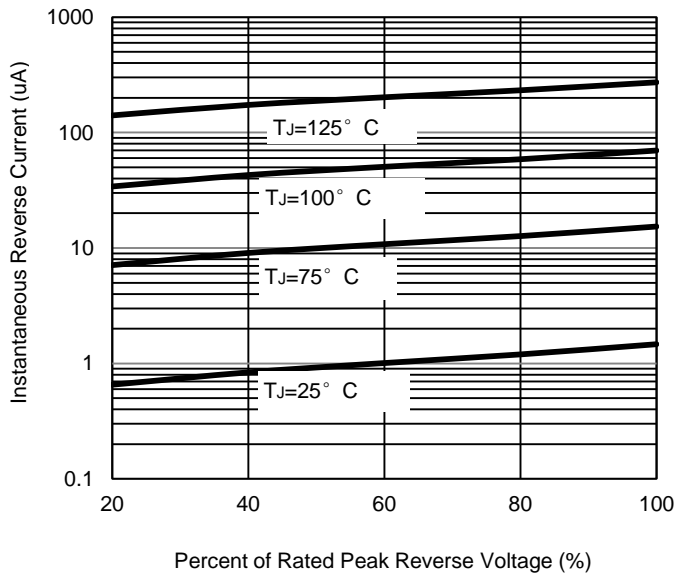


Fig. 4 - Typical Forward Characteristics

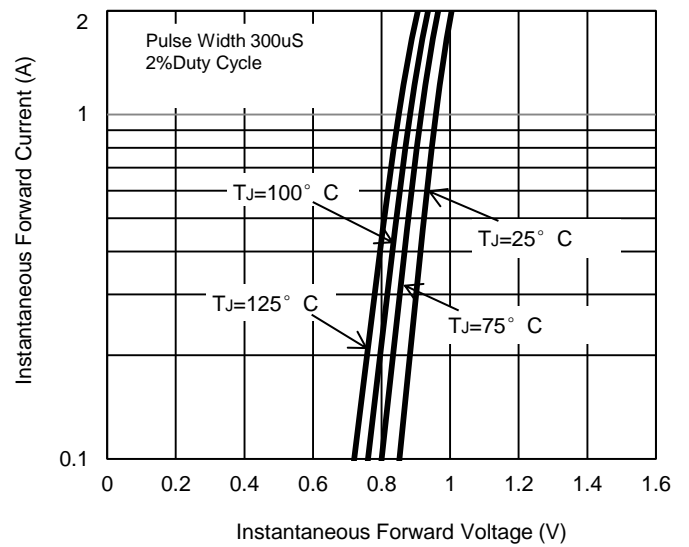
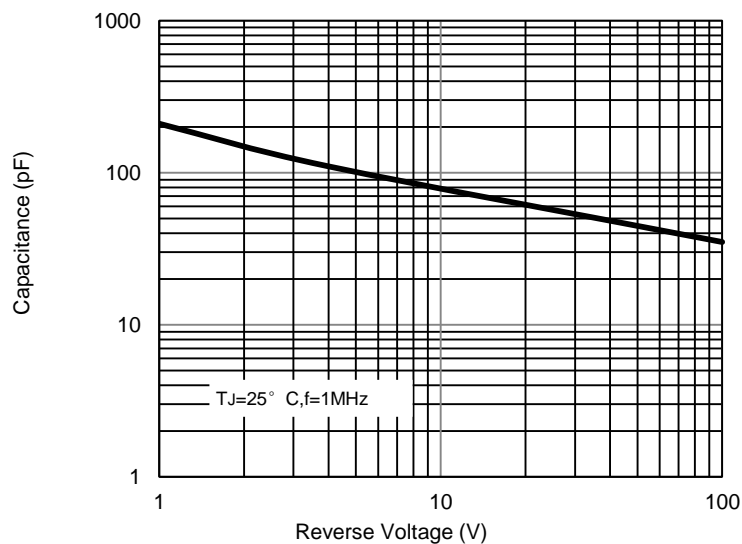


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.



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