

## B5819WS SCHOTTKY BARRIER DIODE



### Features

- For use in low voltage, high frequency inverters
- Free wheeling, and polarity protection applications
- This is a Halogen Free device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Case: Molded plastic body
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- Polarity: Polarity symbols marked on case

### Maximum Ratings @T<sub>A</sub>=25°C unless otherwise specified

Parameter Marking code	Symbol	B5819WS SL	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	40	V
Maximum DC blocking voltage	V <sub>R</sub>		
Maximum RMS voltage	V <sub>R(RMS)</sub>	28	V
Average rectified output current	I <sub>O</sub>	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	9	A
Power Dissipation	P <sub>d</sub>	250	mW
Typical thermal resistance	R <sub>ΘJA</sub>	500	°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

### Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Units	Test Condition
Reverse Breakdown Voltage *	V <sub>(BR)</sub>	40	-	V	I <sub>R</sub> =1mA
Forward Voltage *	V <sub>FM</sub>	-	0.6	V	I <sub>F</sub> =1A
		-	0.9	V	I <sub>F</sub> =3A
Reverse Leakage Current *	I <sub>RM</sub>	-	200	uA	V <sub>R</sub> =40V
Capacitance between terminals	C <sub>T</sub>	-	120	pF	V <sub>R</sub> =4V, f=1.0MHz

\* Pulse width < 300 μs, duty cycle < 2%

**Ratings and Characteristics Curves**

FIG. 1- FORWARD CURRENT DERATING CURVE

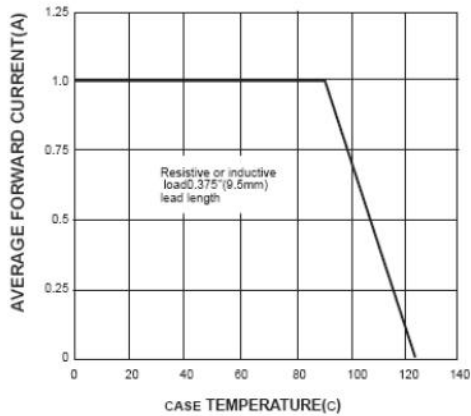


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

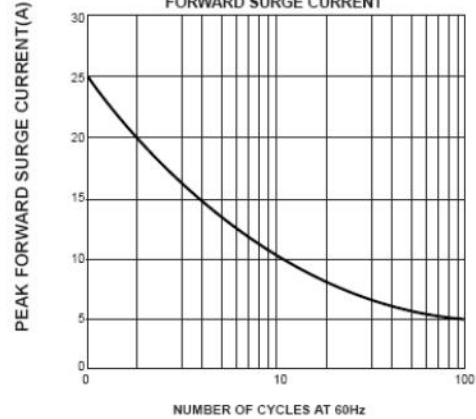


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

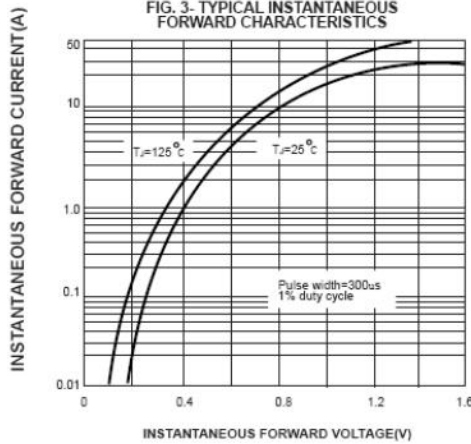


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

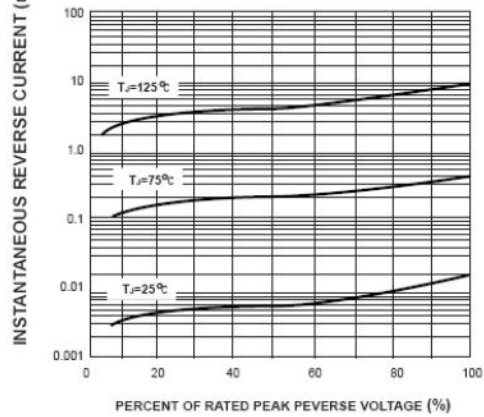


FIG. 5- TYPICAL JUNCTION CAPACITANCE

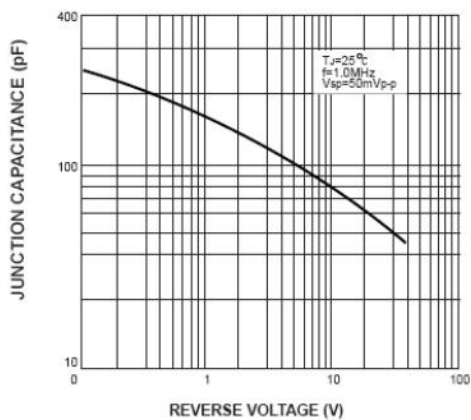
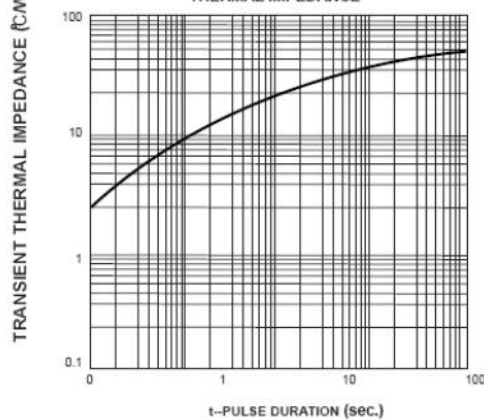
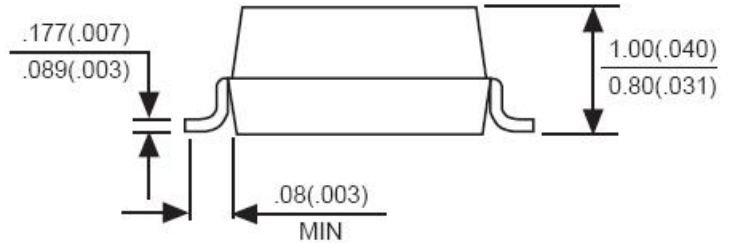
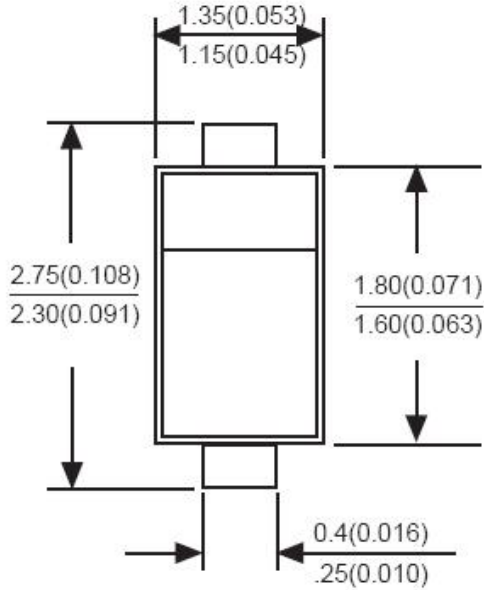


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



**Mechanical Dimensions SOD-323(Inches/Millimeters)**

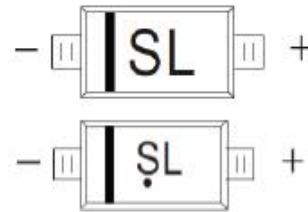


**Ordering Information**

Device	Package	Shipping
B5819WS	SOD-323	3000pcs / reel
B5819WSTR	SOD-323	3000pcs / reel

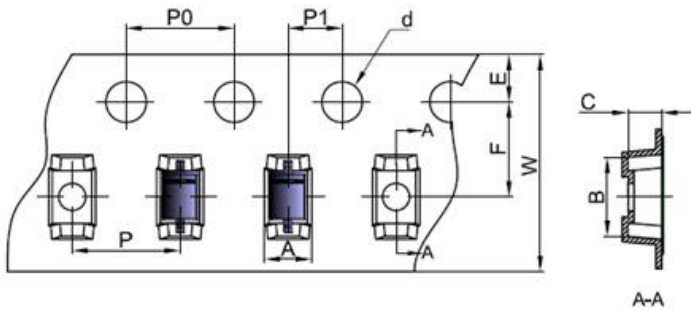
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**



The marking bar indicates the cathode  
Solid dot = Green molding compound device, if none, the normal device.

**Carrier Tape Specification SOD-323**



SYMB OL	Millimeters	
	Min.	Max.
B	2.85	2.95
C	1.20	1.30
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30



B5819WS

**Technical Data**  
**Data Sheet N2030, Rev. B**



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