

# B5817W thru B5819W

**SURFACE MOUNT  
SCHOTTKY BARRIER DIODE**

**REVERSE VOLTAGE – 20 to 40 Volts  
FORWARD CURRENT – 1 Ampere**

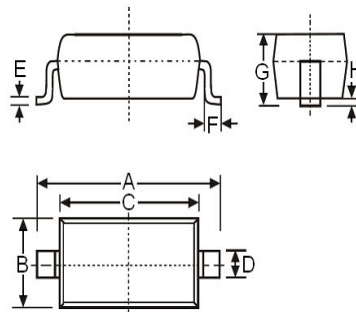
**FEATURES**

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

**MECHANICAL DATA**

- Case: SOD-123 Plastic
- Case Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture Sensitivity: Level 1 per J-STD-020D
- Lead Free in RoHS 2002/95/EC Compliant

**SOD-123**



SOD-123		
Dim.	Min.	Max.
A	3.55	3.85
B	1.50	1.70
C	2.60	2.80
D	0.45	0.65
E	0.08	0.15
F	0.25	0.45
G	1.05	1.25
H	0.00	0.10
Dimensions in millimeter		

**Maximum Ratings & Thermal Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified**

Characteristic	Symbol	B5817W	B5818W	B5819W	Units
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>				V
Working Peak Reverse Voltage	V <sub>RWM</sub>	20	30	40	
DC Blocking Voltage	V <sub>R</sub>				
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	21	28	V
Average Rectified Output Current	I <sub>F</sub>		1		A
Peak Forward Surge Current@t=8.3ms	I <sub>FSM</sub>		9		A
Repetitive Peak Forward Current	I <sub>FRM</sub>		1.5		A
Power Dissipation	P <sub>D</sub>		250		mW
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>		500		°C/W
Storage Temperature Range	T <sub>STG</sub>		-65~+150		°C

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

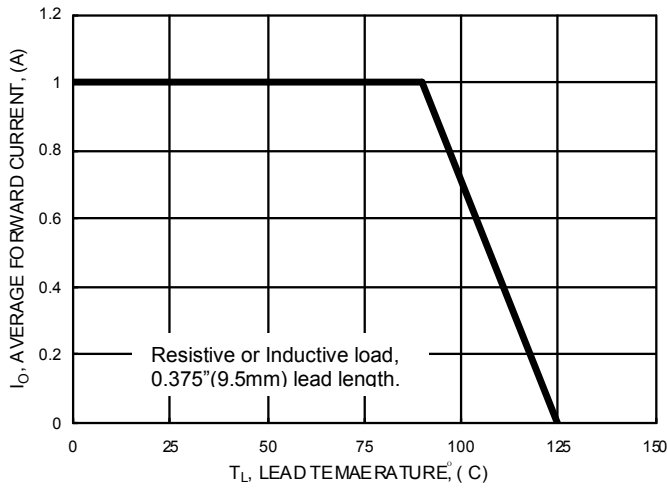
Characteristic	Test Condition	Symbol	B5817W	B5818W	B5819W	Unit
Reverse Breakdown Voltage	I <sub>R</sub> = 1mA	V <sub>BR</sub>	20	30	40	V
Maximum Forward Voltage	I <sub>F</sub> = 1A I <sub>F</sub> = 3A	V <sub>F</sub>	450 750	550 875	600 900	mV
Maximum DC Reverse Current at Rated DC Blocking Voltage	V <sub>R</sub> = 20V V <sub>R</sub> = 30V V <sub>R</sub> = 40V	I <sub>R</sub>	1 -- --	-- 1 --	-- 1 1	mA
Typical Junction Capacitance	V <sub>R</sub> = 4V, f=1MHz	C <sub>T</sub>		120		pF

REV. 1, Oct-2010, KSHR08

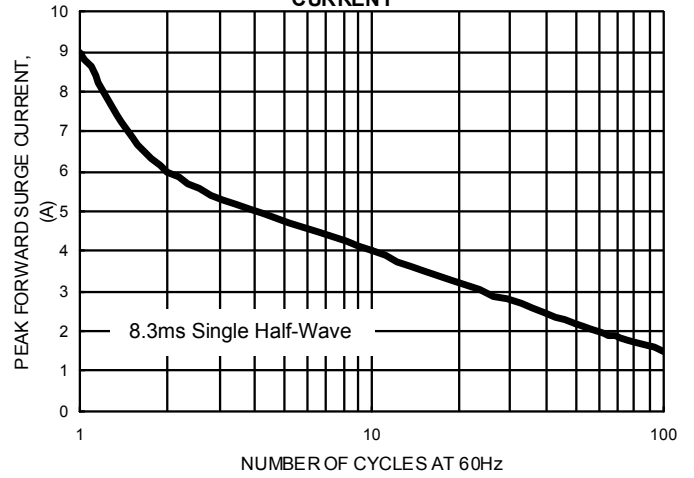
# RATING AND CHARACTERISTIC CURVES B5817W thru B5819W



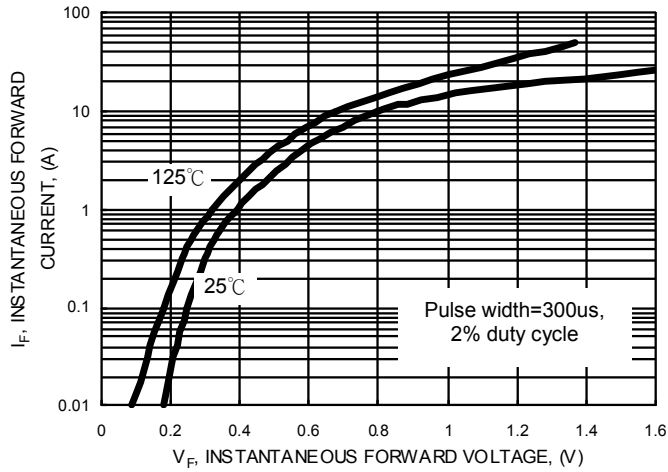
**FIG.1- FORWARD CURRENT DERATING CURVE**



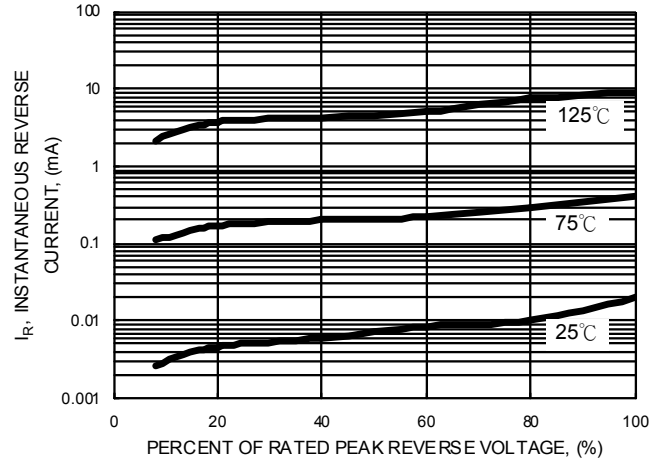
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



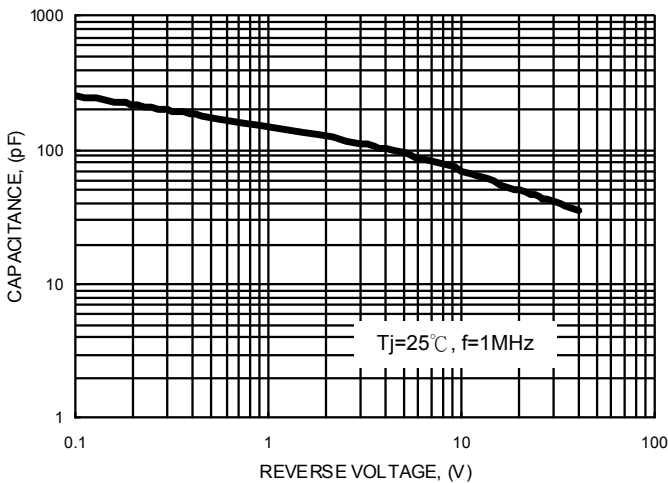
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL REVERSE CHARACTERISTICS**



**FIG.5- TYPICAL JUNCTION CAPACITANCE**



**Device Marking :**

Device P/N	Marking	Equivalent Circuit Diagram
B5817W	SJ	
B5818W	SK	
B5819W	SL	

## **Important Notice and Disclaimer**

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