

**Small Signal Product**
**SOD-123 40V/1A Schottky Diode**
**FEATURES**

- Low Forward Voltage Drop
- Surface Mounted Device
- Moisture sensitivity level 1
- Pb free and RoHS compliant


**MECHANICAL DATA**

- Case: Bend lead SOD-123 package
- High temperature soldering guaranteed: 260°C/10s
- Weight: 10mg (approximately)

**SOD-123**

**APPLICATION**

Low voltage, high frequency inverters

<b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> =25°C unless otherwise noted)					
PARAMETER	SYMBOL	VALUE			UNIT
		B5817W	B5818W	B5819W	
Non-Peak Repetitive Reverse Voltage	V <sub>RM</sub>	20	30	40	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	20	30	40	V
Working Peak Reverse Voltage	V <sub>RWM</sub>	20	30	40	V
DC Blocking Voltage	V <sub>R</sub>	20	30	40	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	21	28	V
Average Rectified Output Current	I <sub>O</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>	500			mW
Thermal Resistance form Junction to Ambient	R <sub>thjA</sub>	250			°C/W
Junction Temperature	T <sub>J</sub>	125			°C
Storage Temperature Range	T <sub>STG</sub>	- 55 to + 150			°C

PARAMETER	TEST CONDITION	SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage	at I <sub>R</sub> = 1 mA	V <sub>(BR)</sub>	B5817W	20	V
			B5818W	30	
			B5819W	40	
Reverse Voltage Leakage Current	at V <sub>R</sub> = 20 V at V <sub>R</sub> = 30 V at V <sub>R</sub> = 40 V	I <sub>R</sub>	B5817W	--	mA
			B5818W	--	
			B5819W	1	
Forward Voltage	at I <sub>F</sub> = 1 A at I <sub>F</sub> = 3 A	V <sub>F</sub>	B5817W	0.45	V
			B5818W	0.75	
	at I <sub>F</sub> = 1 A at I <sub>F</sub> = 3 A		B5818W	0.55	V
			B5819W	0.875	
	at I <sub>F</sub> = 1 A at I <sub>F</sub> = 3 A		B5819W	0.6	V
			B5819W	0.9	
Diode Capacitance	V <sub>R</sub> =4V, f=1.0MHz	C <sub>D</sub>	--	120	pF

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**RATINGS AND CHARACTERISTICS CURVES**

( $T_A=25^\circ\text{C}$  unless otherwise noted)

Fig. 1 Typical Forward Characteristics

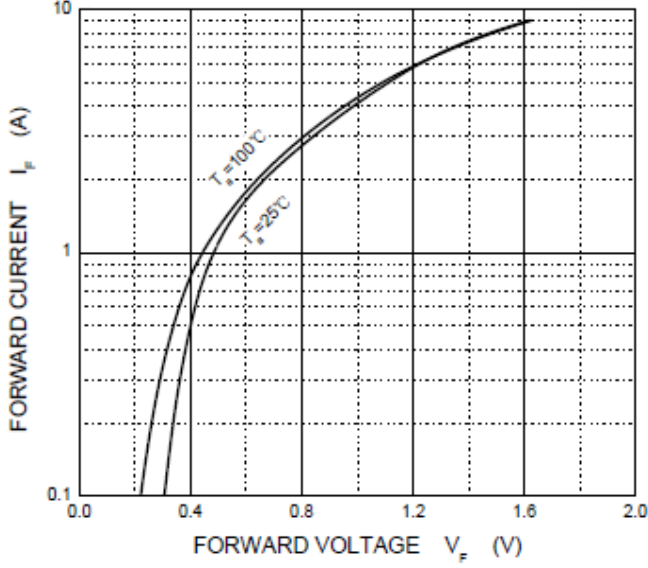


Fig. 2 Typical Reverse Characteristics

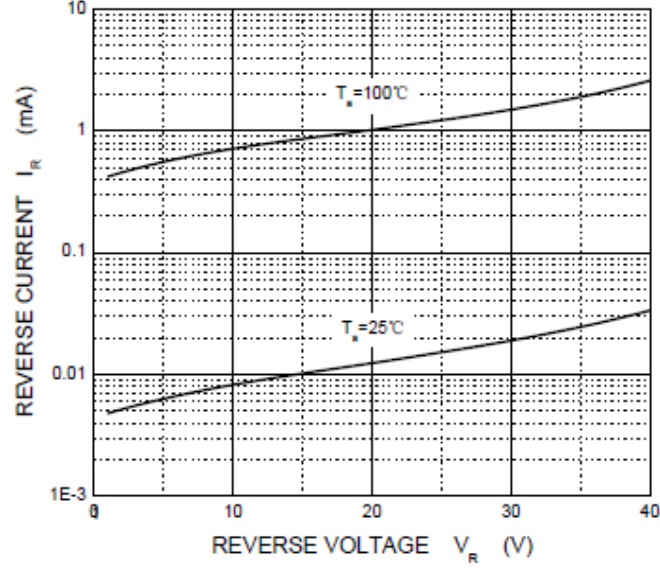


Fig. 3 Typical Capacitance vs. VR

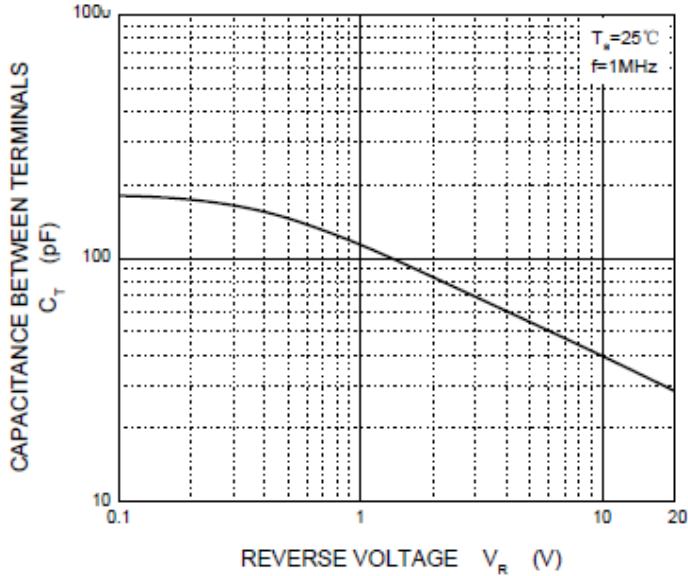
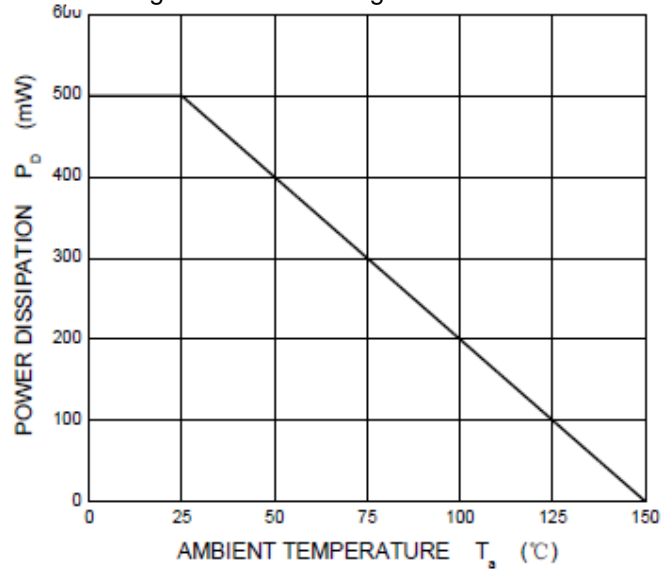


Fig. 4 Power Derating Curve



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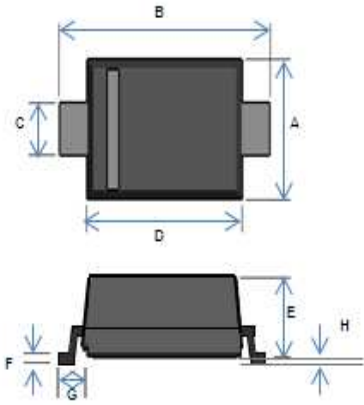
<b>ORDERING INFORMATION</b>						
<b>PART NO.</b>	<b>MANUFACTURE CODE</b>	<b>PACKING CODE</b>	<b>GREEN COMPOUND CODE</b>	<b>PACKAGE</b>	<b>PACKING</b>	<b>MARKING</b>
B5817W	(Note)	RB	G	SOD-123	3K / 7" Reel	SJ
B5818W		RB	G	SOD-123	3K / 7" Reel	SK
B5819W		RB	G	SOD-123	3K / 7" Reel	SL
B5817W		RP	G	SOD-123	3K / 7" Reel	SJ
B5818W		RP	G	SOD-123	3K / 7" Reel	SK
B5819W		RP	G	SOD-123	3K / 7" Reel	SL

Note: Indicator of manufacturing site for manufacture special control, if empty means no special control requirement

<b>EXAMPLE</b>					
<b>PREFERRED P/N</b>	<b>PART NO.</b>	<b>MANUFACTURE CODE</b>	<b>PACKING CODE</b>	<b>GREEN COMPOUND CODE</b>	<b>DESCRIPTION</b>
B5817W RPG	B5817W		RP	G	Green compound
B5817W RBG	B5817W		RB	G	Green compound
B5817W-M0 RPG	B5817W	M0	RP	G	Green compound
B5817W-N0 RBG	B5817W	N0	RB	G	Green compound

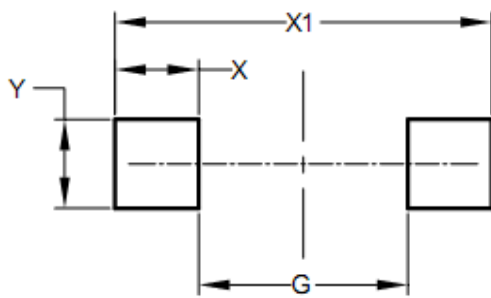
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**PACKAGE OUTLINE DIMENSIONS  
SOD-123**



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.40	1.80	0.055	0.071
B	3.55	3.85	0.140	0.152
C	0.45	0.70	0.018	0.028
D	2.55	2.85	0.100	0.112
E	0.95	1.35	0.037	0.053
F	0.05	0.15	0.002	0.006
G	0.50 REF		0.02 REF	
H	-	0.10	-	0.004

**SUGGESTED PAD LAYOUT**



DIM.	Unit (mm)	Unit (inch)
	Min	Min
G	2.25	0.089
X	0.90	0.035
X1	4.05	0.159
Y	0.95	0.037

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