

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)					
PARAMETER	SYMBOL	VALUE			UNIT
		B5817W	B5818W	B5819W	
Non-Peak Repetitive Reverse Voltage	V _{RM}	20	30	40	V
Peak Repetitive Reverse Voltage	V _{RRM}	20	30	40	V
Working Peak Reverse Voltage	V _{RWM}	20	30	40	V
DC Blocking Voltage	V _R	20	30	40	V
RMS Reverse Voltage	V _{R(RMS)}	14	21	28	V
Average Rectified Output Current	I _O	1			A
Peak Forward Surge Current @t=8.3ms	I _{FSM}	9			A
Repetitive Peak Forward Current	I _{FRM}	1.5			A
Power Dissipation	P _D	500			mW
Thermal Resistance form Junction to Ambient	R _{thJA}	250			°C/W
Junction Temperature	T _J	125			°C
Storage Temperature Range	T _{STG}	- 55 to + 150			°C

PARAMETER		TEST CONDITION	SYMBOL	MIN	MAX	UNIT
Reverse Breakdown Voltage	B5817W	at I _R = 1 mA	V _(BR)	20		V
	B5818W			30		
	B5819W			40		
Reverse Voltage Leakage Currer	B5817W	at V _R = 20 V	I _R	--	1	mA
	B5818W	at V _R = 30 V		--		
	B5819W	at V _R = 40 V		--		
Forward Voltage	B5817W	at I _F = 1A	V _F		0.45	V
		at I _F = 3A			0.75	
	B5818W	at I _F = 1A			0.55	V
		at I _F = 3A			0.875	
	B5819W	at I _F = 1A			0.6	V
		at I _F = 3A			0.9	
Diode Capacitance		V _R =4V, f=1.0MHz	C _D	--	120	pF

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RATINGS AND CHARACTERISTICS CURVES

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

Fig. 1 Typical Forward Characteristics

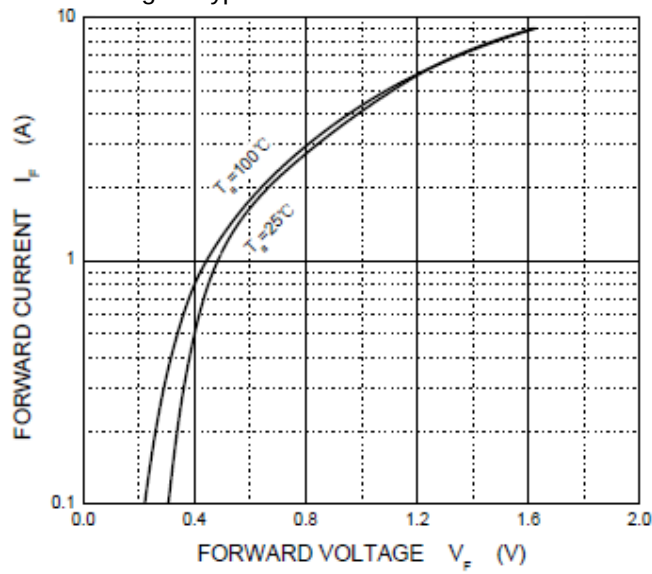


Fig. 2 Typical Reverse Characteristics

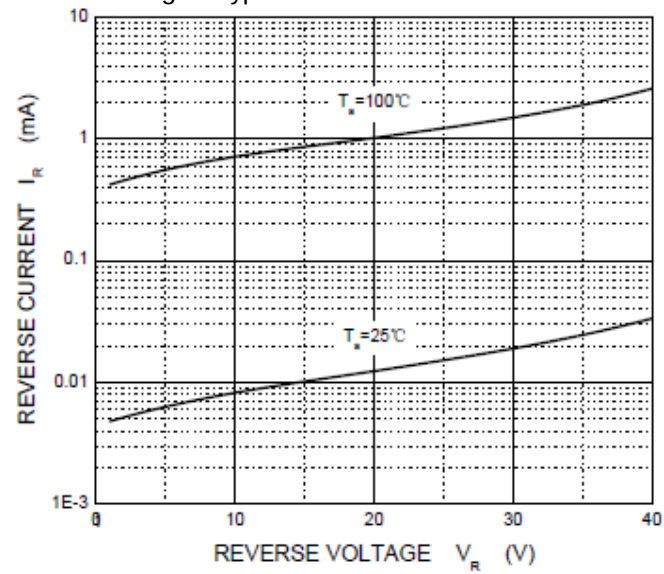


Fig. 3 Typical Capacitance vs. VR

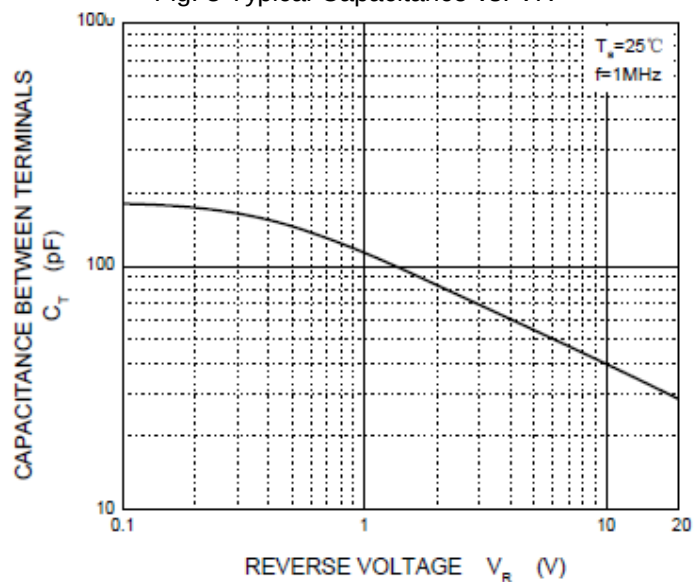
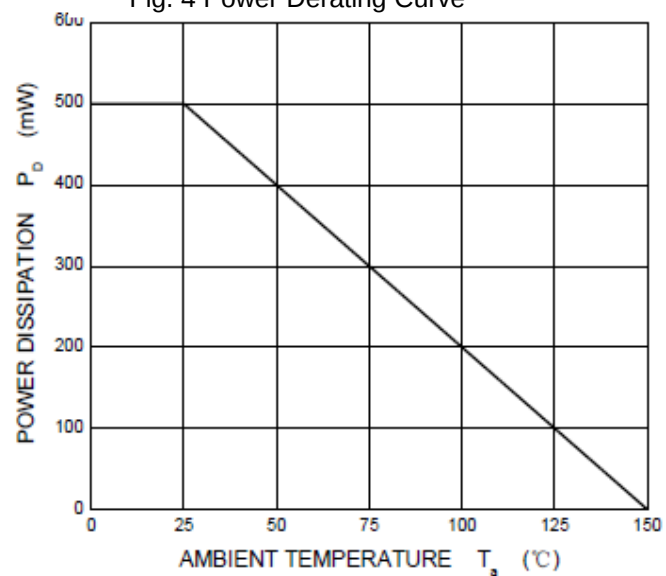


Fig. 4 Power Derating Curve



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ORDERING INFORMATION

PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING	MARKING
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

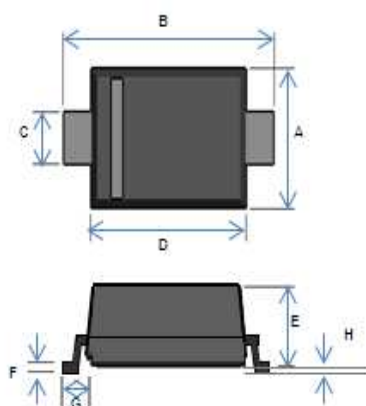
EXAMPLE

PREFERRED P/N	PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
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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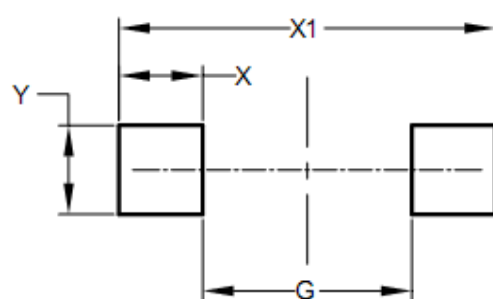
PACKAGE OUTLINE DIMENSIONS

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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