

FEATURES

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



SOD123

PIN	DESCRIPTION
1	Cathode
2	Anode

MECHANICAL DATA

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



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	$V_{(BR)}$	20		V
	B5818W		30		
	B5819W		40		
Reverse Voltage Leakage Currer	B5817W	I_R	--	1	mA
	B5818W		--		
	B5819W		--		
Forward Voltage	B5817W	V_F	at $I_F = 1A$	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

RATINGS AND CHARACTERISTICS CURVES

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

Fig. 1 Typical Forward Characteristics

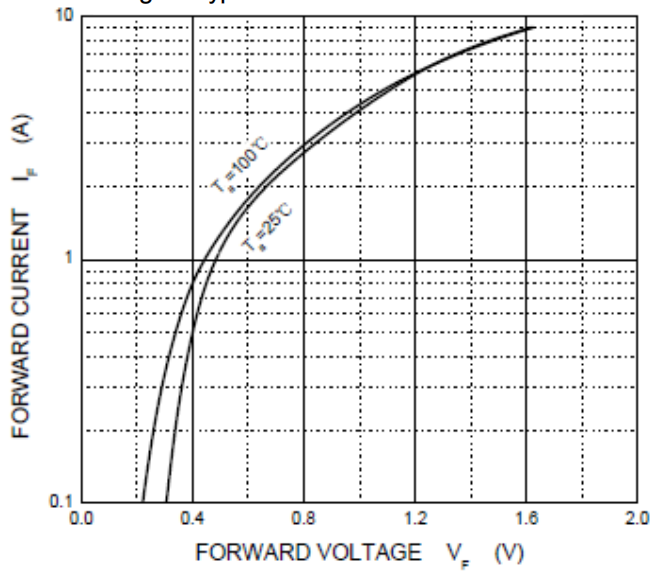


Fig. 2 Typical Reverse Characteristics

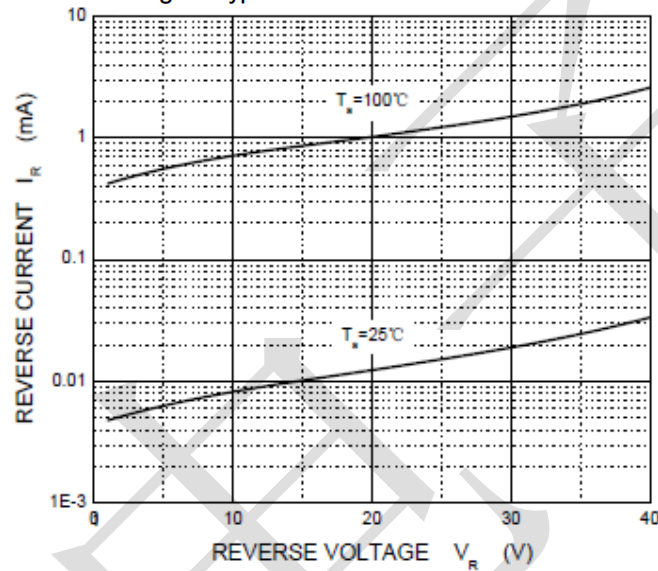


Fig. 3 Typical Capacitance vs. VR

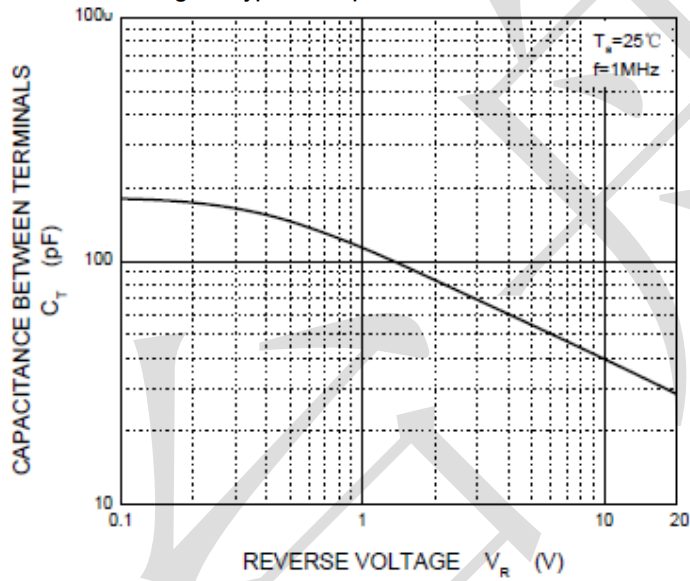
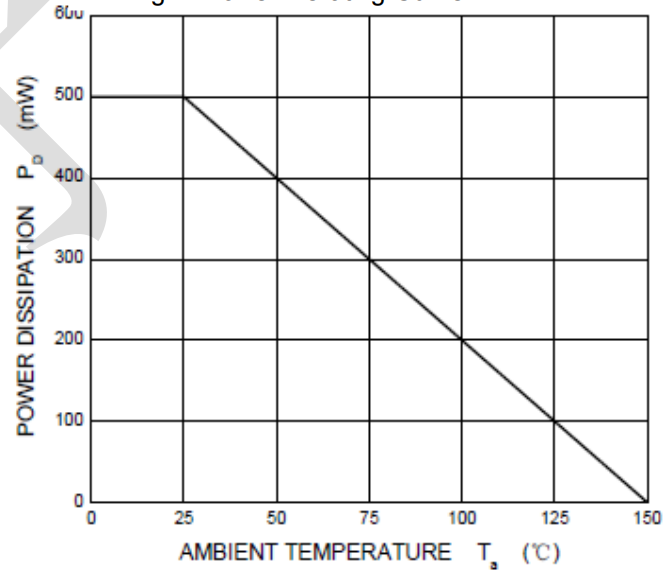
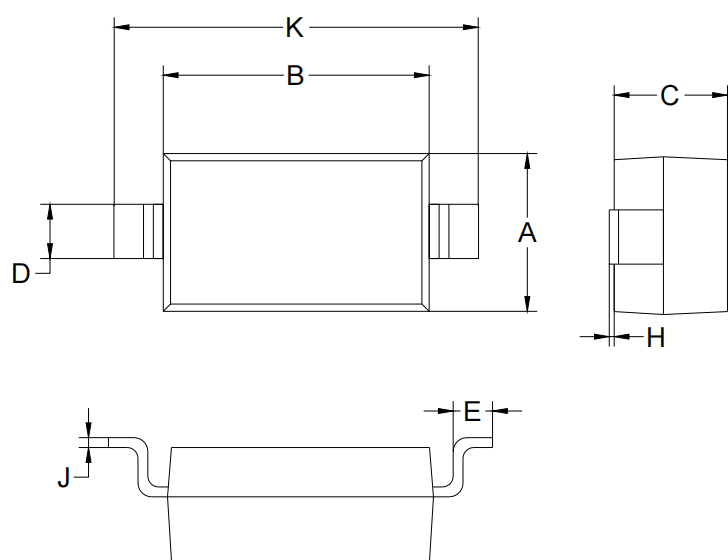


Fig. 4 Power Derating Curve



Outline Drawing - SOD123 (unit: mm)



SOD-123		
Dim	Min	Max
A	1.45	1.75
B	2.55	2.85
C	1.00	1.30
D	0.50	0.60
E	0.25	0.45
H	0.02	0.10
J	0.05	0.15
K	3.55	3.85

Mounting Pad Layout-SOD123 (unit: mm)

