

MBR230LS SURFACE MOUNT SCHOTTKY BARRIER DIODE



Features

- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material —UL Recognition Flammability Classification 94V-0
- Green Products in Compliance with the ROHS Directive
- Terminals finish: 100% Pure Tin
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band

Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	30	V
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form	2	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3ms, Half Sine pulse	25	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop *	V_{F1}	@ 0.5A, Pulse, $T_J = 25^{\circ}\text{C}$ @ 2A, Pulse, $T_J = 25^{\circ}\text{C}$	0.28 0.42	0.30 0.50	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R$, $T_J = 25^{\circ}\text{C}$	0.4	1	mA
Junction Capacitance	C_j	@ $V_R = 5\text{V}$, $T_C = 25^{\circ}\text{C}$, $f_{SIG} = 1\text{MHz}$	71	100	pF
Voltage Rate of Change	dv/dt	-	-	10000	V/ μs

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

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +100	°C
Storage Temperature	T_{stg}	-	-55 to +100	°C
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	-	244	°C/W
Approximate Weight	wt	-	0.028	g
Case Style	SOD-123			

Ratings and Characteristics Curves

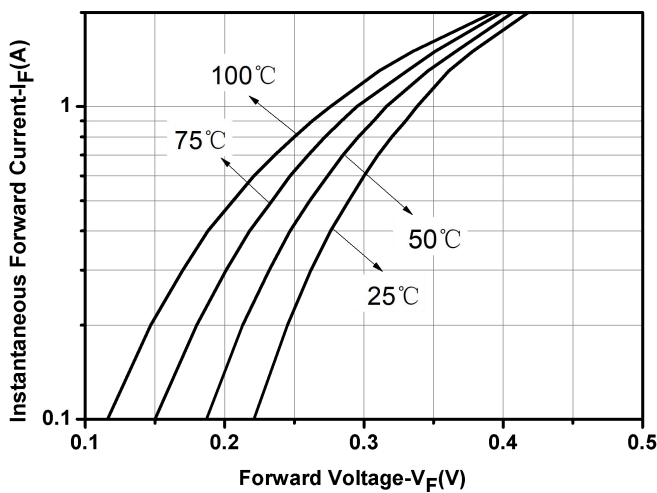


Fig.1-Typical Forward Voltage Characteristics

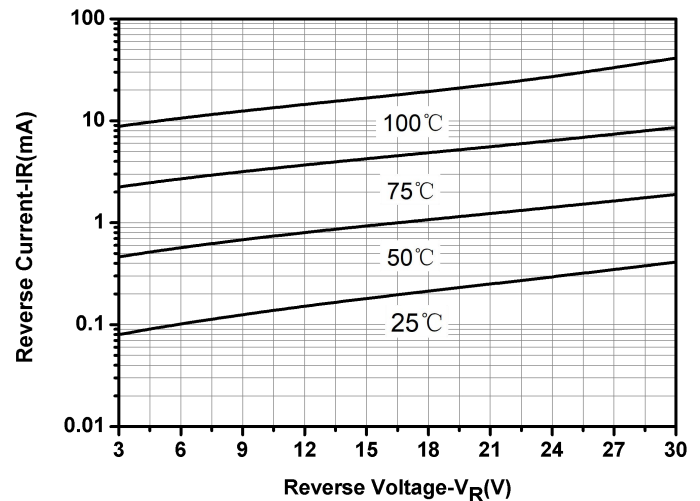


Fig.2-Typical Reverse Characteristics

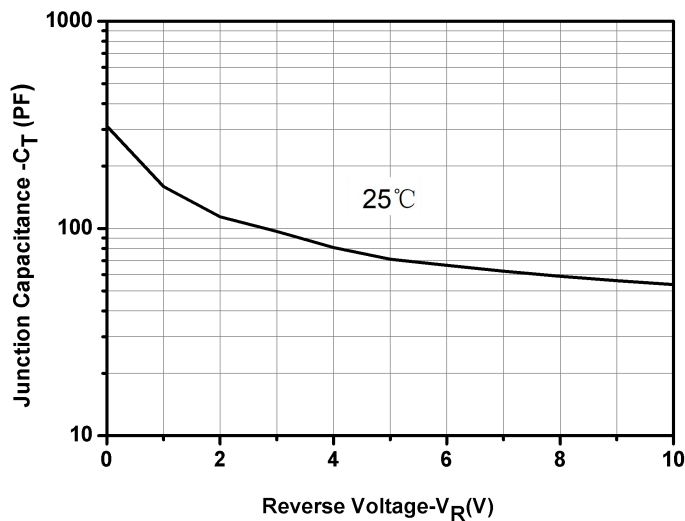
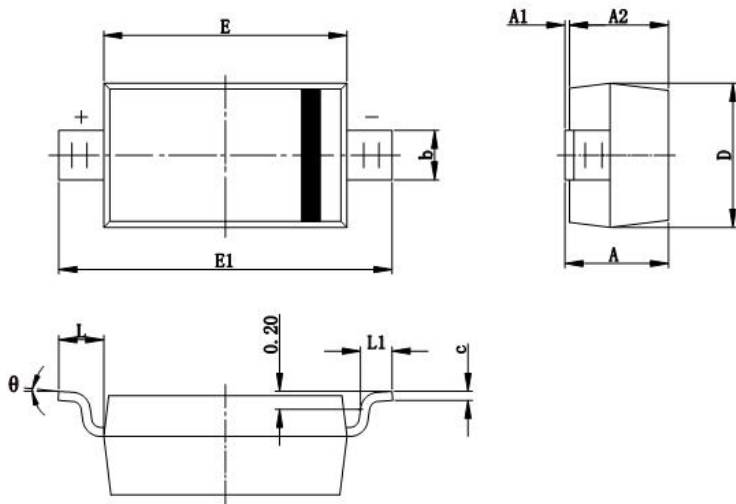


Fig.3-Capacitance vs. Reverse Voltage

Mechanical Dimensions SOD-123



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF.		0.020 REF.	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

Ordering Information

Device	Package	Shipping
MBR230LS	SOD-123 (Pb-Free)	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

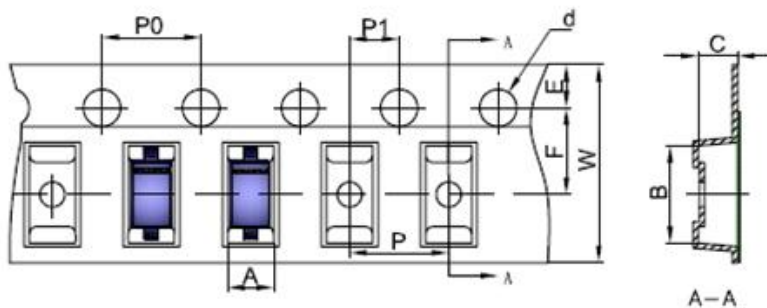


Where X is Date Code

B3N = Part Name

MBR230LS

Carrier Tape Specification SOD-123



SYMBOL	Millimeters	
	Min.	Max.
A	1.80	1.90
B	3.89	3.99
C	1.52	1.62
d	1.45	1.65
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

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