

Technical Data

Data Sheet N1460, Rev. A

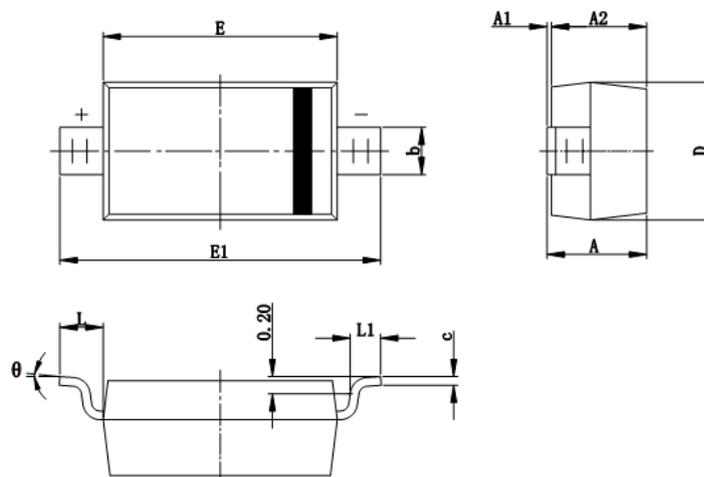
MBR230HW SCHOTTKY RECTIFIER

Applications:

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Center tap configuration

Features:

- 125 °C TJ operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical Dimensions (In mm/Inches)


Symbol	Dimensions In Millimeters		Dimensions In 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°

SOD-123

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

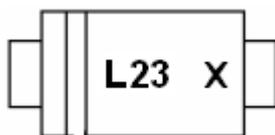


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Marking Diagram:



Where X is Date Code

L23 = Part Name

Cautions : Molding resin
Epoxy resin UL:94V-0

Ordering Information:

Device	Package	Shipping
MBR230HW	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.



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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
Average Rectified Forward Current (At Rated V_R , $T_L = 105^{\circ}\text{C}$)	I_O	2	A
Peak Repetitive Forward Current (at rated V_R , square wave, 100kHz, $T_L=95^{\circ}\text{C}$)	I_{FRM}	4.0	A
Non-Repetitive Peak Surge Current (Surge Applied at Rated Load Conditions Half-wave, Single Phase, 60 Hz)	I_{FSM}	40	A
Operating Junction Temperature Range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +125	$^{\circ}\text{C}$
Voltage Rate of Change (rated V_R , $T_J=25^{\circ}\text{C}$)	dv/dt	10000	V/ μs
Approximate Weight	wt	0.028	g
Case Style	SOD-123		

Characteristic	Symbol	Typ.	Max.	Unit
Forward Voltage @ $I_F = 1\text{A}, T_A = 25^{\circ}\text{C}$ @ $I_F = 2\text{A}, T_A = 25^{\circ}\text{C}$	V_{FM}	0.39 0.45	0.43 0.50	V
Peak Reverse Current At Rated DC Blocking Voltage @ $T_A = 25^{\circ}\text{C}$ @ $T_A = 100^{\circ}\text{C}$	I_{RM}	0.05 15	1.0 25	mA
Junction Capacitance (Note 1)	C_j	110	200	pF

Note 1. Measured at 1MHz and applied reverse voltage of 5.0V D.C.

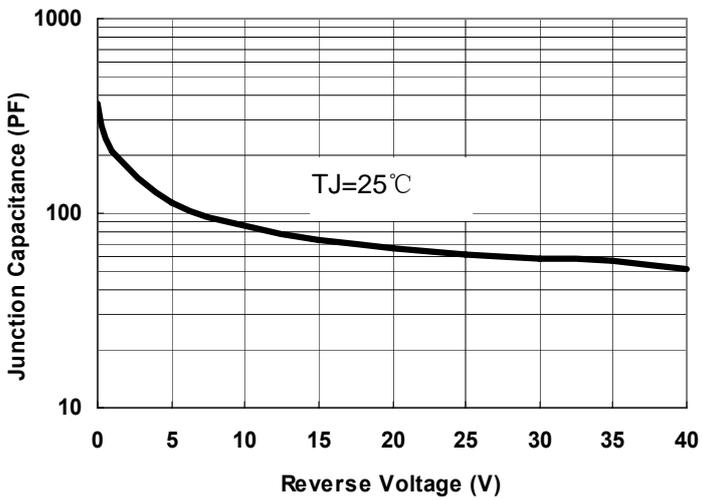


Fig.1-Typical Junction Capacitance

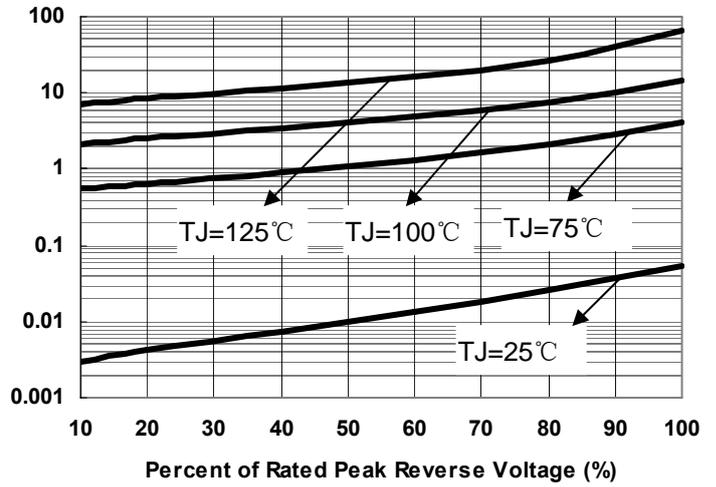


Fig.2-Typical Reverse Characteristics

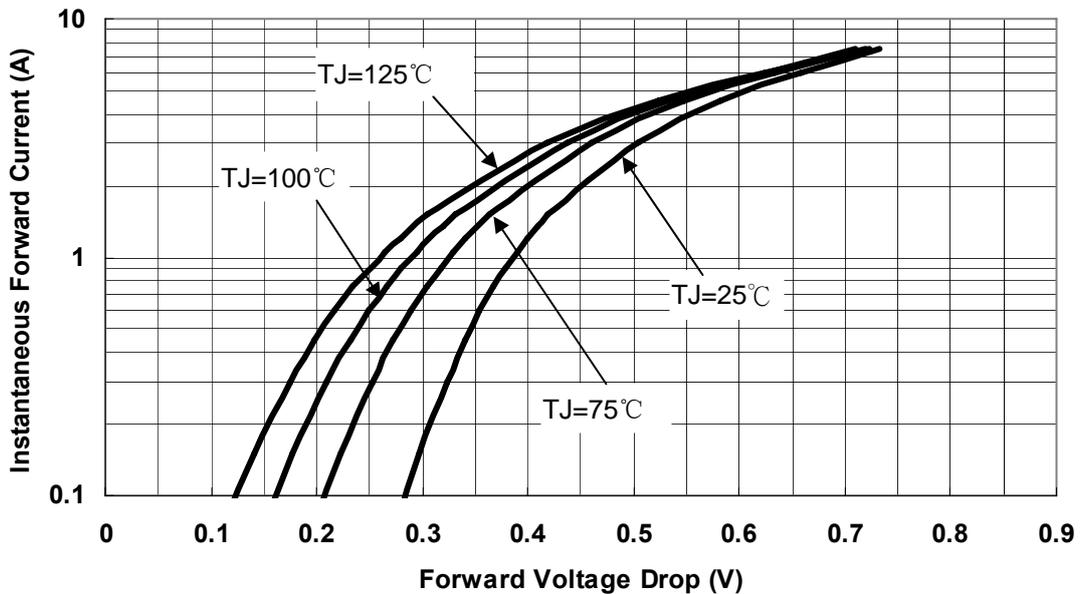


Fig.3-Typical Forward Voltage Drop Characteristics



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