

SBR230LS SCHOTTKY RECTIFIER


SOD-123

Features

- 125°C T_J 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

Circuit Diagram



Applications

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

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	Value	Units
Peak Repetitive Reverse Voltage	V _{RRM}	30	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
Average Rectified Forward Current @T _L = 105°C	I _O	2	A
Peak Repetitive Forward Current (at rated V _R , square wave, 100kHz, T _L =95°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}	25	A
Operating Junction Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C
Voltage Rate of Change (rated V _R , T _J =25°C)	dv/dt	10000	V/μs

Characteristic	Symbol	Typ.	Max.	Units
Forward Voltage @I _F = 1A, T _A = 25°C @I _F = 2A, T _A = 25°C @I _F = 1A, T _A = 100°C @I _F = 2A, T _A = 100°C	V _{FM}	0.42	0.60	V
		0.50	0.75	
		0.33	0.52	
		0.45	0.67	
Peak Reverse Current @T _A = 25°C	I _{RM}	0.03	1.0	mA
At Rated DC Blocking Voltage @T _A = 100°C		10	25	
Junction Capacitance (Note 1)	C _j	80	150	pF

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

Ratings and Characteristics Curves

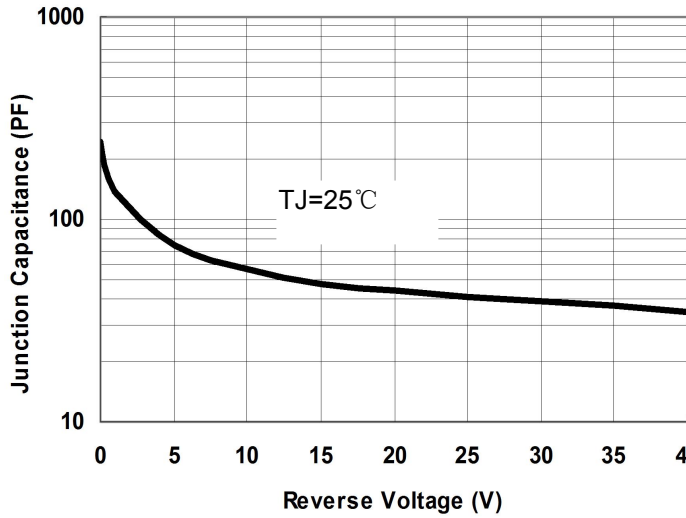


Fig.1-Typical Junction Capacitance

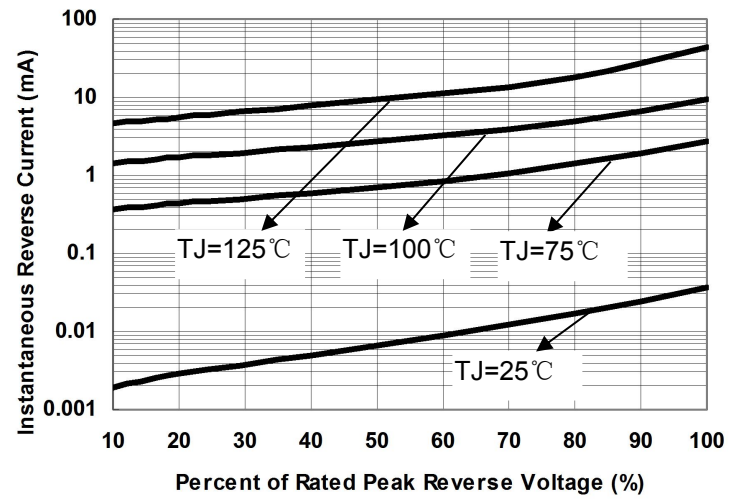


Fig.2-Typical Reverse Characteristics

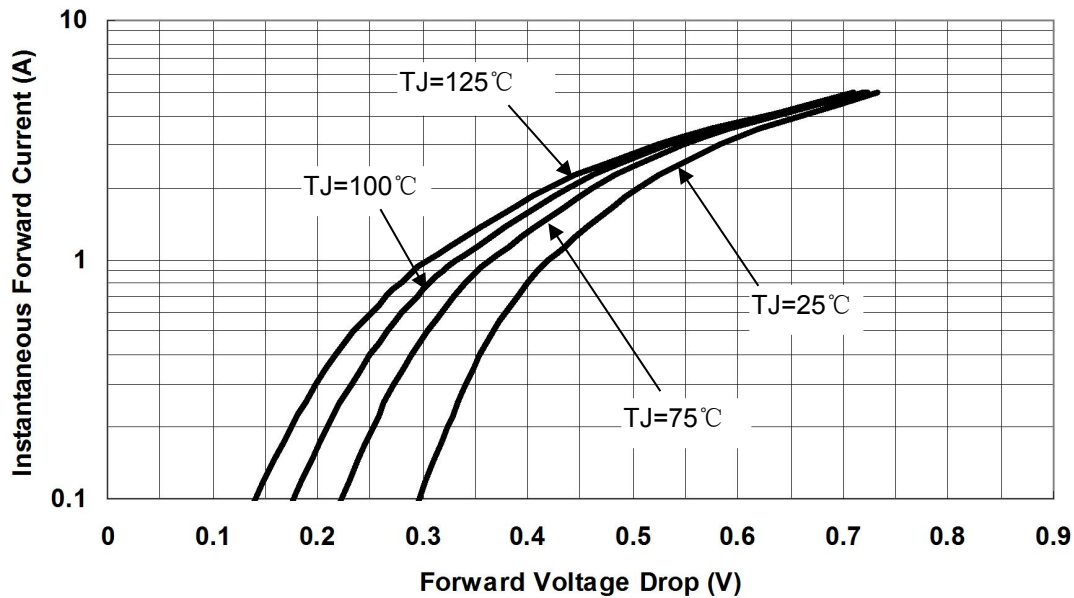
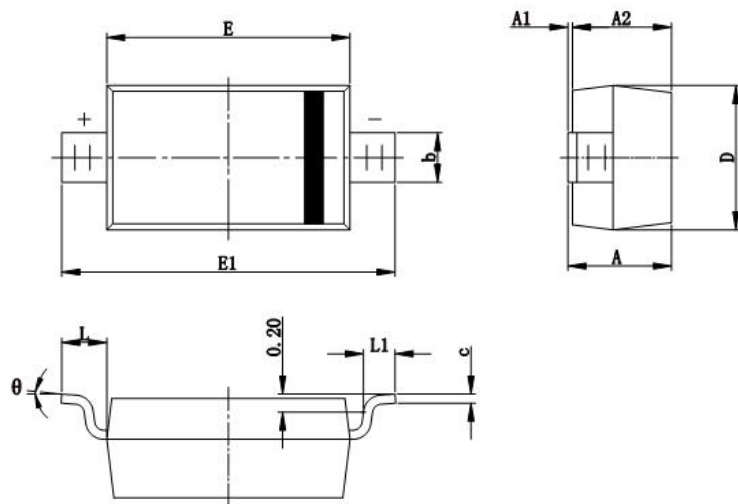


Fig.3-Typical Forward Voltage Drop Characteristics

Mechanical Dimensions SOD-123



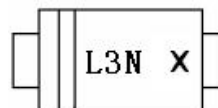
SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF.		0.020 REF.	
L1	0.250	0.450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

Ordering Information

Device	Package	Shipping
SBR230LS	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

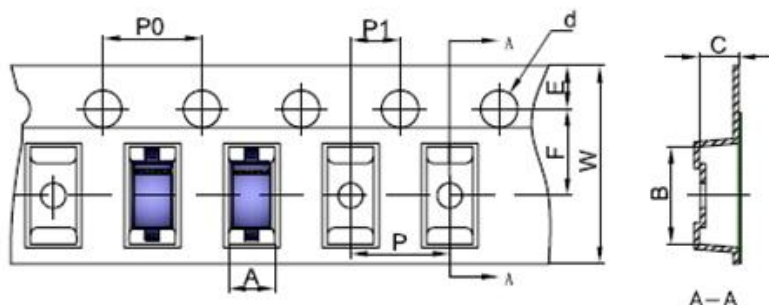


Where X is Date Code

L3N = Part Name

SBR230LS

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

Technical Data
Data Sheet N0893, Rev.D



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