

## SOD- 123 Plastic-Encapsulate Schottky Barrier Diode

### Features

- High Current Capability
- Low Forward Voltage Drop

### Mechanical Data

- SOD-123 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting Position: Any



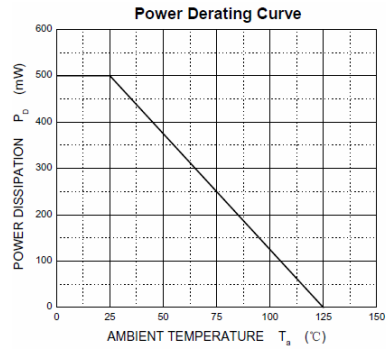
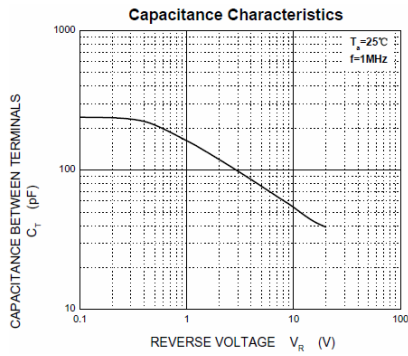
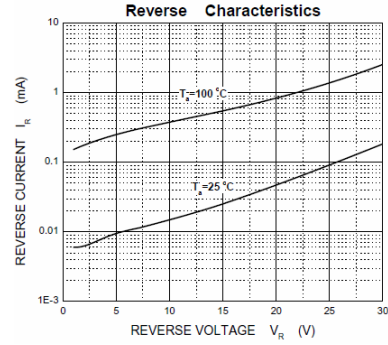
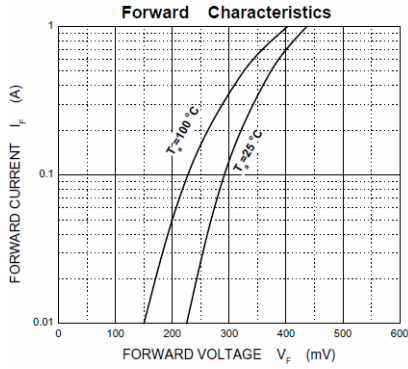
**Marking: SOD-123**  
 B0520W: SD  
 B0530W: SE  
 B0540W: SF

Maximum Ratings & Thermal Characteristics (T <sub>A</sub> = 25°C unless otherwise noted)					
Parameters	Symbol	Value			Unit
		B0520W	B0530W	B0540W	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	V
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	V
Non-repetitive Peak Forward Current	I <sub>FM</sub>	0.5			A
Peak forward surge current 8.3 ms single half sine-wave	I <sub>FSM</sub>	5.5			A
Power dissipation	P <sub>D</sub>	500			mW
Typical thermal resistance	R <sub>θJA</sub>	200			°C/W
Storage temperature range	T <sub>STG</sub>	-50-+150			°C
Voltage rate of change	D <sub>v/dt</sub>	1000			V/uS

Electrical Characteristics (T <sub>A</sub> = 25°C unless otherwise noted)						
Parameter	Symbols	Test Condition	Limits			Unit
			B0520W	B0530W	B0540W	
Maximum reverse breakdown voltage	VR	IR=250uA	20			V
		IR=200uA		30		
		IR=20uA			40	
Maximum reverse current	IR	VR=10V	75			uA
		VR=15V		20		
		VR=20V	250		10	
		VR=30V		130		
Maximum forward voltage	VF	IF=0.1A	0.330	0.375		V
		IF=0.5A	0.385	0.430	0.510	
		IF=1.0A			0.620	
Capacitance between terminals	C <sub>J</sub>	VR=0V, f=1MHZ			170	pF

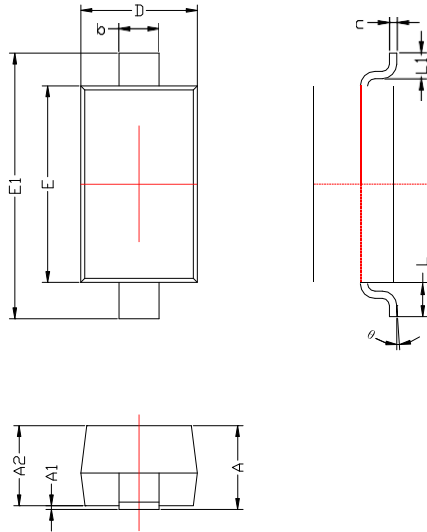
## Ratings and Characteristics Curves

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



## Package Outline Dimensions

millimeters



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.450	0.650
c	0.080	0.150
D	1.500	1.700
E	2.600	2.800
E1	3.550	3.850
L	0.500REF	
L1	0.250	0.450
$\theta$	0°	8°

## Revision History

Document Version	Date of release	Description of changes
Rev.A	2020.03.31	First issue

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