

**FEATURES**

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Also Available in Lead Free Version

MARKING:

B0520WS	B0530WS	B0540WS

SOD-323**Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C**

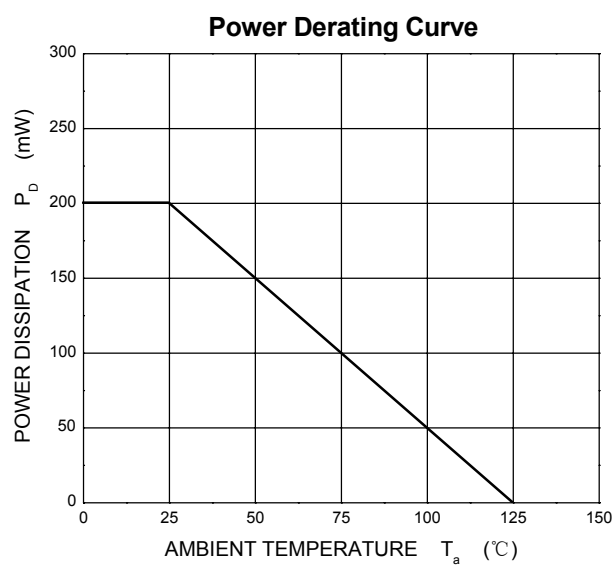
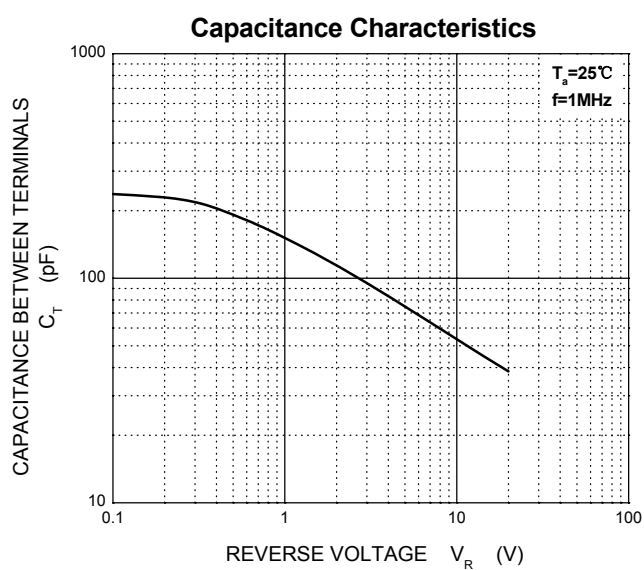
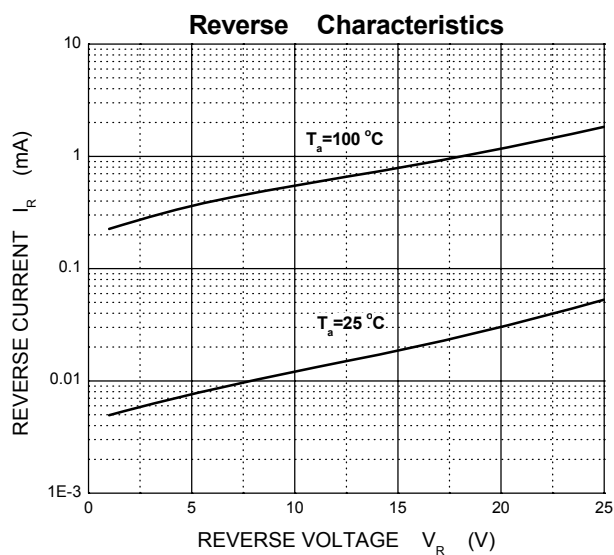
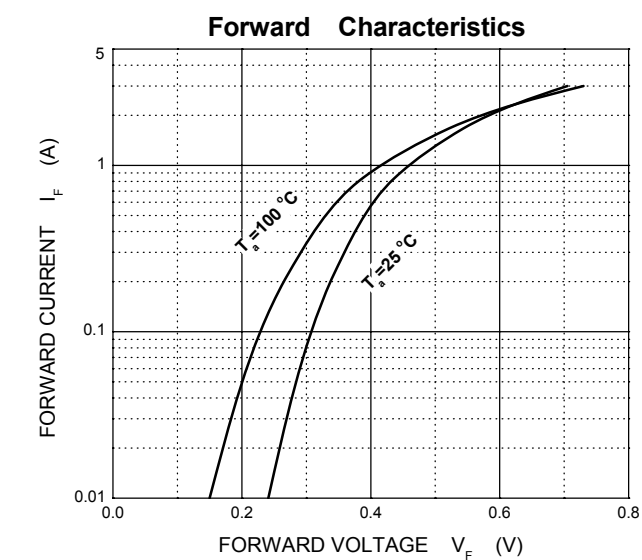
Parameter	Symbol	B0520WS	B0530WS	B0540WS	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	20	30	40	V
Peak Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectified Output Current	I_O	0.5			A
Non-repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	5.5			A
Repetitive Peak Forward Current	I_{FRM}	1.5			A
Power Dissipation	P_D	200			mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500			°C/W
Operating Junction Temperature Range	T_J	-40 ~ +125			°C
Storage Temperature Range	T_{STG}	-55 ~ +150			°C

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R = 1mA$ B0520WS B0530WS B0540WS	20 30 40		V
Reverse voltage leakage current	I_R	$V_R = 20V$ $V_R = 30V$ $V_R = 40V$ B0520WS B0530WS B0540WS		0.25 0.50 0.02	mA
Forward voltage	V_F	B0520WS $I_F = 0.1A$		0.330	V
		$I_F = 0.5A$		0.390	
		B0530WS $I_F = 0.1A$		0.375	V
		$I_F = 0.5A$		0.450	
		B0540WS $I_F = 0.5A$		0.510	V
		$I_F = 1A$		0.620	
Diode capacitance	C_D	$V_R = 4V, f = 1MHz$		170	pF

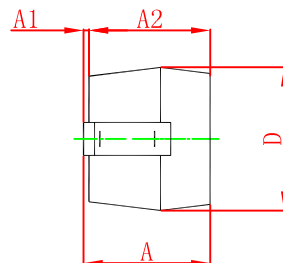
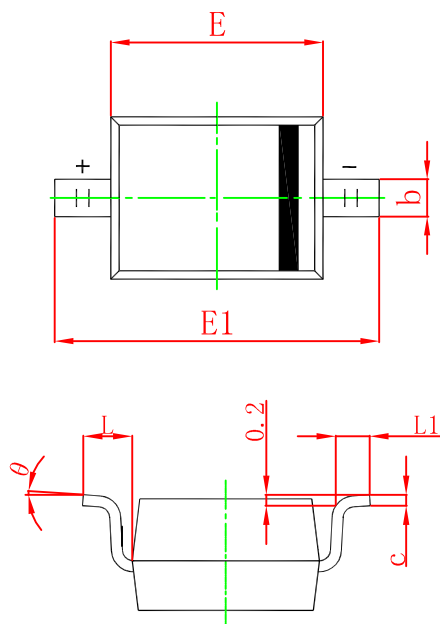


Typical Characteristics



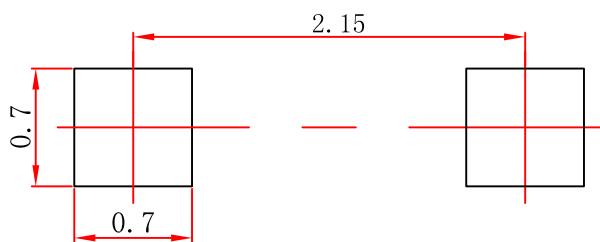


SOD-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A		1.100		0.043
A1	0.000	0.100	0.000	0.004
A2	0.800	1.000	0.031	0.039
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.750	0.098	0.108
L	0.475 REF		0.019 REF	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

SOD-323 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.