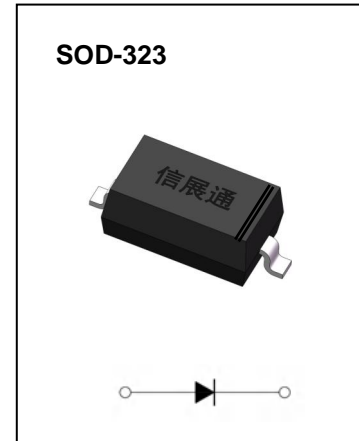


**FEATURES**

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

**MARKING:**

B0520WS	B0530WS	B0540WS

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

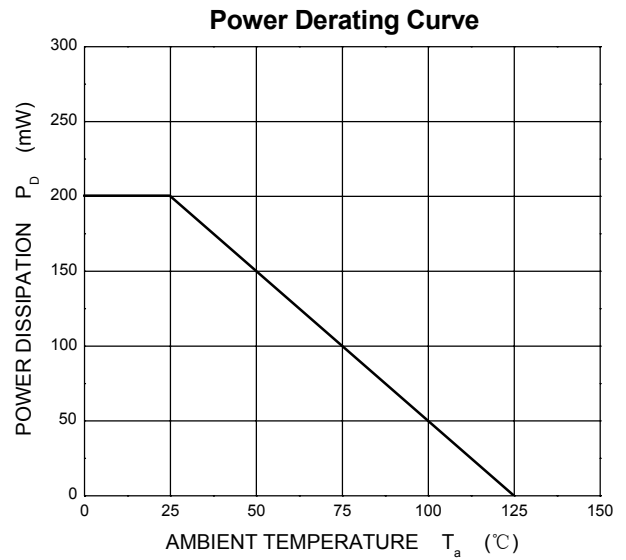
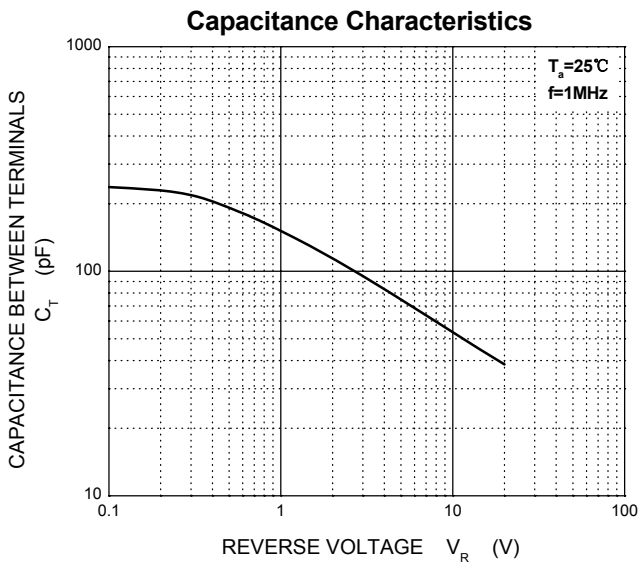
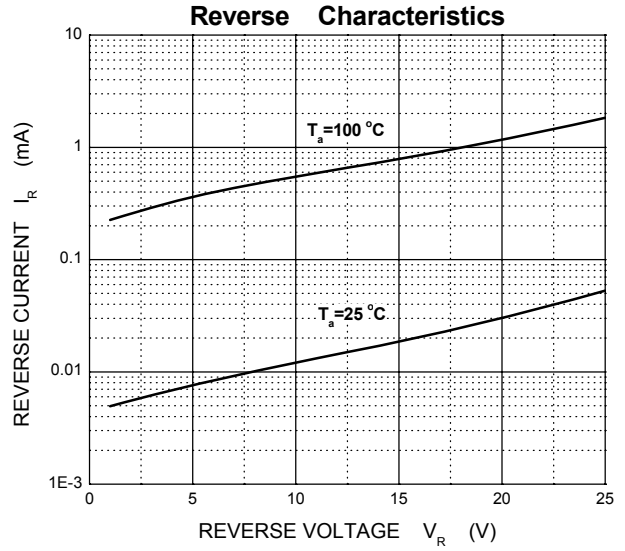
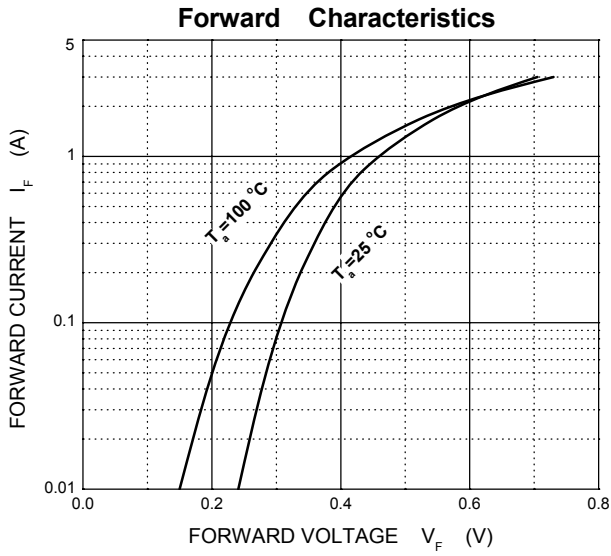
Parameter	Symbol	B0520WS	B0530WS	B0540WS	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	20	30	40	V
Peak Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	20	30	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectified Output Current	$I_o$	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	$V_{(BR)}$	$I_R = 1mA$			V
		B0520WS	20		
		B0530WS B0540WS	30 40		
Reverse voltage leakage current	$I_R$	$V_R = 20V$		0.25	mA
		$V_R = 30V$		0.50	
		$V_R = 40V$		0.02	
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

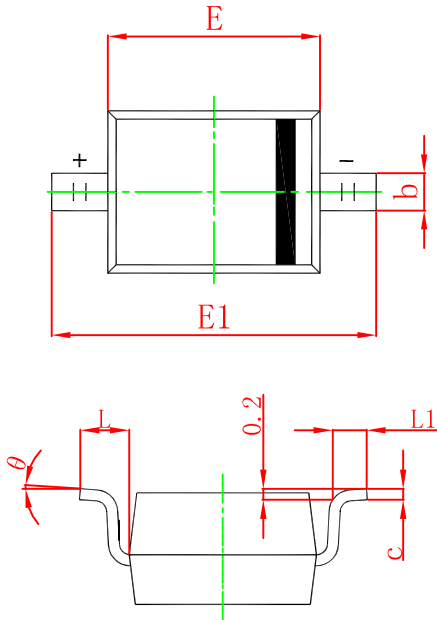


Typical Characteristics



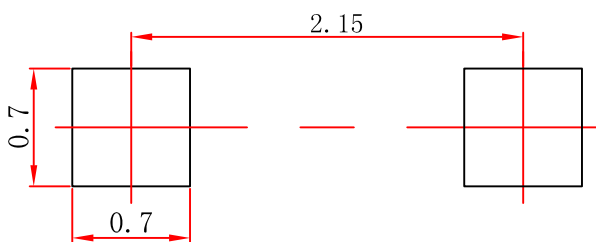


SOD-323 Package Outline Dimensions



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:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

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