



SOD-323 Plastic-Encapsulate Schottky Barrier Diode

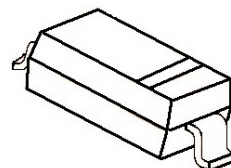
Features

- High Current Capability
- Low Forward Voltage Drop

Mechanical Data

- SOD-323 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting Position: Any

SOD-323



Marking: B0520WS: SD

B0530WS: SE

B0540WS: SF

Maximum Ratings & Thermal Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted.)

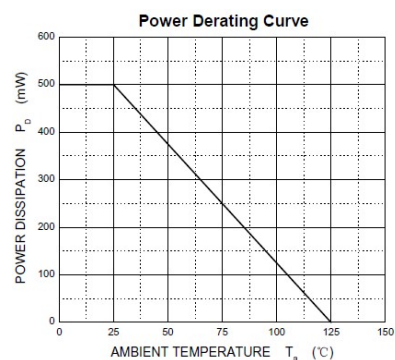
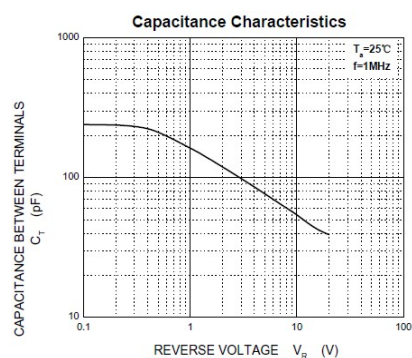
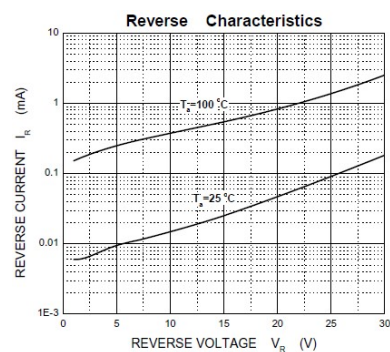
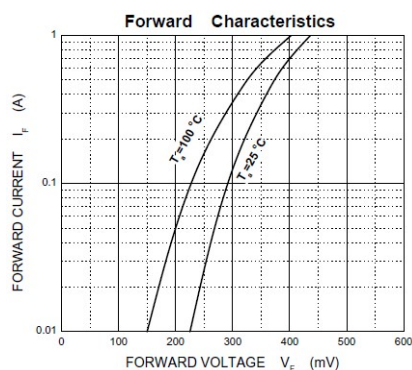
Parameters	Symbol	B0520WS	B0530WS	B0540WS	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	V
Maximum RMS voltage	V_{RMS}	14	21	28	V
Maximum DC blocking voltage	V_{DC}	20	30	40	V
Maximum average forward rectified current	I_{FM}	0.5			A
Peak forward surge current 8.3 ms single half sine-wave	I_{FSM}	5.5			A
Typical thermal resistance	$R_{\theta JA}$	500			$^{\circ}\text{C}/\text{W}$
Power Dissipation	P_D	200			mW
Junction Temperature	T_J	125			$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-50~+150			$^{\circ}\text{C}$
Voltage rate of change	Dv/dt	1000			V/uS

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

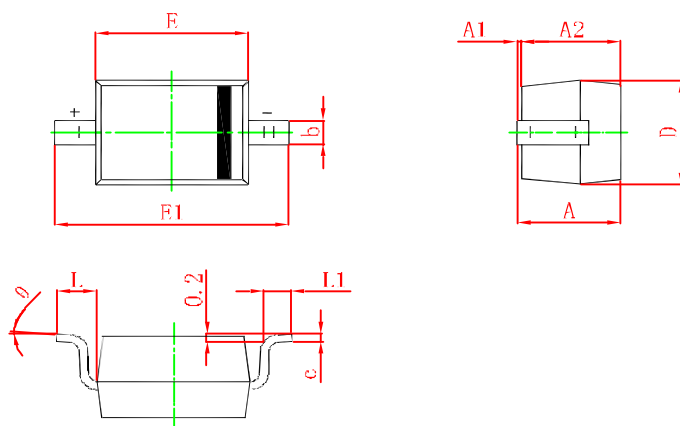
Parameters	Symbol	Test conditions	B0520WS	B0530WS	B0540WS	Unit
Maximum forward voltage	V_F	$I_F = 0.1\text{A}$	0.330	0.375	---	V
		$I_F = 0.5\text{A}$	0.390	0.450	0.510	
		$I_F = 1.0\text{A}$	---	---	0.620	
Maximum reverse breakdown voltage	V_R	$I_R=250\mu\text{A}$	20	---	---	V
		$I_R=200\mu\text{A}$	---	30	---	
		$I_R=20.0\mu\text{A}$	---	---	40	
Maximum reverse current	I_R	$V_R=10\text{V}$	75	---	---	uA
		$V_R=15\text{V}$	---	80	---	
		$V_R=20\text{V}$	250	---	10	
		$V_R=30\text{V}$	---	500	---	
		$V_R=40\text{V}$	---	---	20	
Capacitance between terminals	CT	$V_R = 0\text{V}, f = 1\text{MHz}$	170			pF



Characteristic Curves



SOD-323 Package Outline Dimensions



Symbol	Min.(mm)	Max.(mm)
A		1.000
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
L	0.475REF	
L1	0.250	0.400
θ	0°	8°