

Surface Mount Schottky Barrier Diode

 Lead(Pb)-Free

Features:

- * Low Forward Voltage Drop
- * Guard Ring Construction for Transient Protection
- * High Conductance

Mechanical Data:

- * Case: SOD-323
- * Plastic Material –UL Recognition Flammability Classification 94V-0
- * Leads: Solderable per MIL-STD-202, Method 208
- * Polarity: Cathode Band
- * Weight: 0.004 grams(approx.)

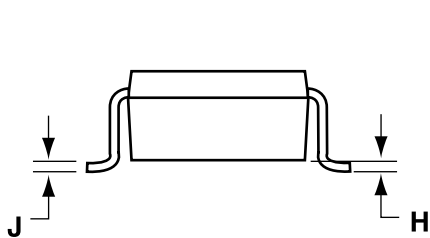
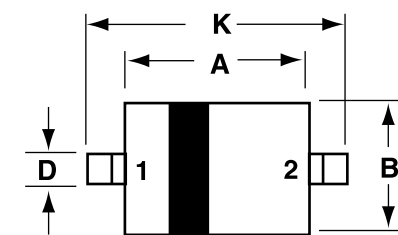
SCHOTTKY DIODE
500 mAMPERS
20-40 VOLTS



SOD-323

SOD-323 Outline Demensions

Unit:mm



Dim	MILLMETERS	
	Min	Max
A	1.60	1.80
B	1.15	1.35
C	0.80	1.00
D	0.25	0.40
E	0.15 REF	
H	0.00	0.10
J	0.089	0.377
K	2.30	2.70

PIN 1.CATHODE
2.ANODE

Maximum Ratings ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	B0520LWS	B0530WS	B0540WS	Unit
Peak Repetitive 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	500			mA
Peak Forward Surge Current	I_{FSM}	5.5			A
Power Dissipation	P_d	410			mW
Thermal Resistance junction to Ambient	$R_{\theta JA}$	244			$^{\circ}\text{C}/\text{W}$
Operating Temperature Range	T_J	+125			$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65 to +125			$^{\circ}\text{C}$
Voltage Rate of Change	dv/dt	1000			$\text{V}/\mu\text{s}$

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

Characteristic	Symbol	B0520LWS	B0530WS	B0540WS	Unit
Reverse Breakdown Voltage $I_R=250\mu\text{A}$ $I_R=130\mu\text{A}$ $I_R=20\mu\text{A}$	$V_{(BR)R}$	20 - -	- 30 -	- - 40	V
Forward Voltage $I_F=0.1\text{A}$ $I_F=0.5\text{A}$ $I_F=1.0\text{A}$	V_F	0.3 0.385 -	0.375 0.430 -	- 0.510 0.62	V
Reverse Current $V_R=10\text{V}$ $V_R=15\text{V}$ $V_R=20\text{V}$ $V_R=30\text{V}$ $V_R=40\text{V}$	I_R	75 - 250 - -	- 20 - 130 -	- - 10 - 20	μA
Capacitance between terminals $V_R=1.0\text{V}$, $f=1.0\text{MHz}$	C_T		170		pF
Reverse Recovery Time $I_F=I_R=10\text{mA}$ $I_{rr}=0.1 \times I_R$, $R_L=100\text{W}$	t_{rr}		4.0		ns

Device Marking

Item	Marking	Equivalent Circuit diagram
B0520LWS	SD	
B0530WS	SE	
B0540WS	SF	

Electrical Characteristic curves($T_A=25^\circ\text{C}$)

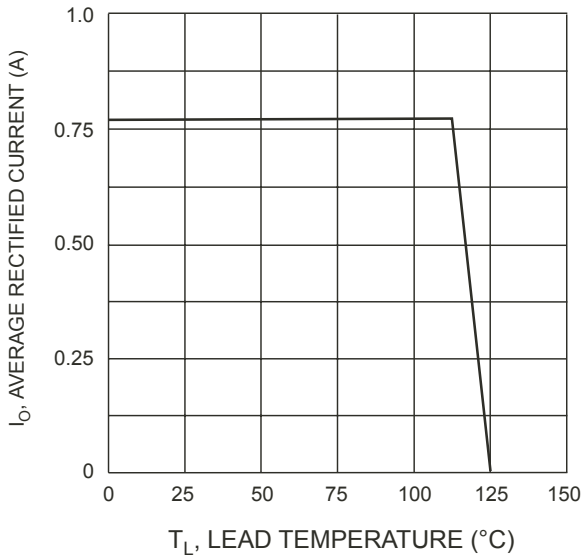


Fig. 1 Forward Current Derating Curve

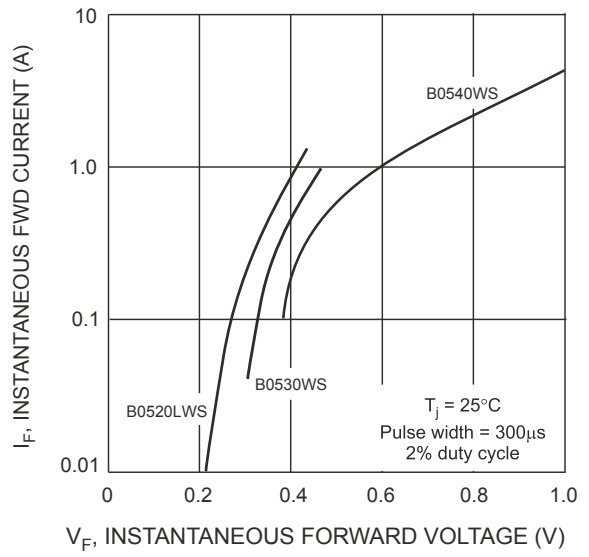


Fig. 2 Typical Forward Characteristics

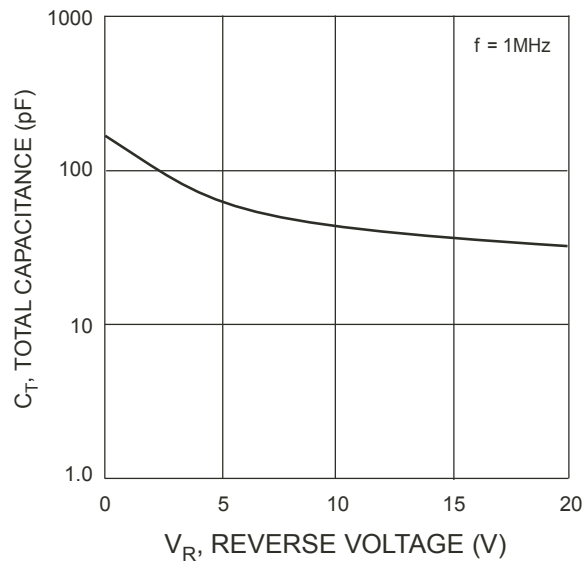


Fig. 3 Typ. Total Capacitance vs Reverse Voltage