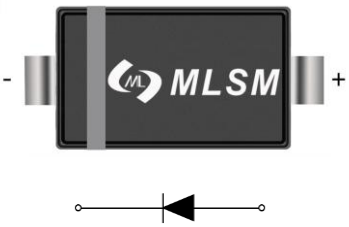
B0520LW/B0530W/B0540W

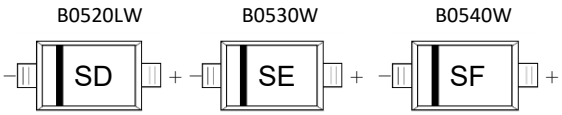
SCHOTTKY BARRIER DIODE

Features

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



SOD-123 top view



Marking and pin assignment

Pb-Free RoHS Halogen-Free

Maximum Ratings(T_a=25℃ unless otherwise noted)

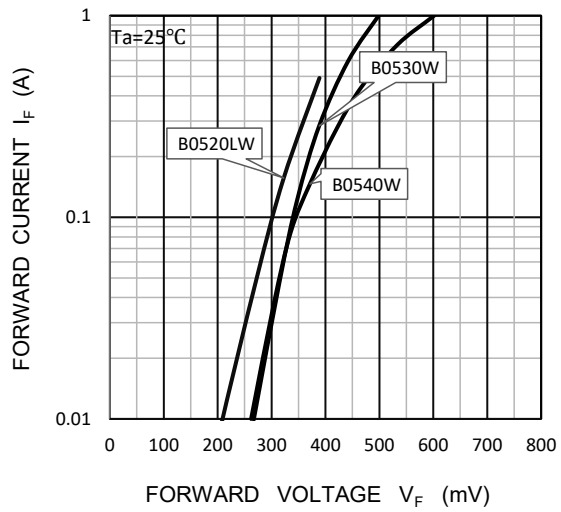
Symbol	Parameter	B0520LW	B0530W	B0540W	Unit
V_{RM}	Non-repetitive peak reverse voltage	20	30	40	V
V_{RRM}	Peak Repetitive Peak Reverse Voltage	20	30	40	V
V_{RWM}	Working Peak Reverse Voltage				
V_R	DC Blocking Voltage				
$V_{R(RMS)}$	RMS Reverse Voltage	14	21	28	V
I_O	Average rectified output current	0.5			A
I_{FSM}	Non-repetitive Peak Forward Surge Current@t= 8.3ms	5.5			A
P_D	Power Dissipation	500			mW
$R_{\Theta JA}$	Thermal Resistance from Junction to Ambient	200			°C/W
T_J	Junction Temperature	-40~+125			°C
T_{stg}	Storage Temperature	-55~+150			°C
dv/dt	Voltage rate of change	1000			V/μs

Electrical Characteristics (T_J=25℃ unless otherwise noted)

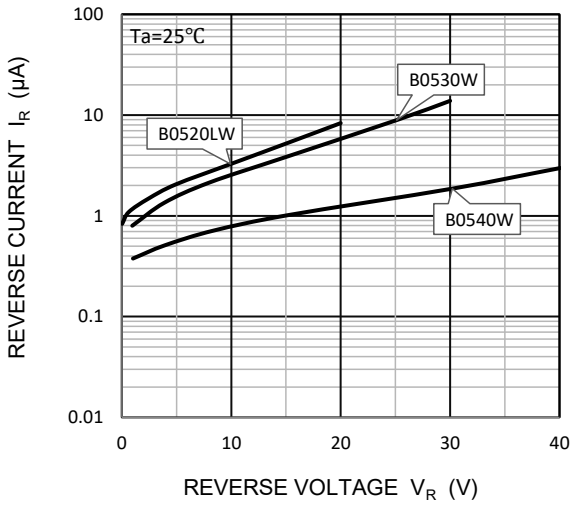
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse breakdown voltage B0520LW	I_R=250μA	20			V
	Reverse breakdown voltage B0530W	I_R=250μA	30			V
	Reverse breakdown voltage B0540W	I_R=250μA	40			V
V_F	Forward voltage	B0520LW I_F=0.1A			0.33	V
		B0520LW I_F=0.5A			0.39	V
		B0530W I_F=0.1A			0.375	V
		B0530W I_F=0.5A			0.43	V
		B0540W I_F=0.5A			0.51	V
		B0540W I_F=1.0A			0.62	V
I_R	Reverse current	B0520LW V_R=10V			75	μA
		B0520LW V_R=20V			250	μA
		B0530W V_R=15V			20	μA
		B0530W V_R=30V			130	μA
		B0540W V_R=20V			10	μA
		B0540W V_R=40V			20	μA
C_T	Diode capacitance	V_R=0V,f=1MHz			170	pF

Typical Operating Characteristics

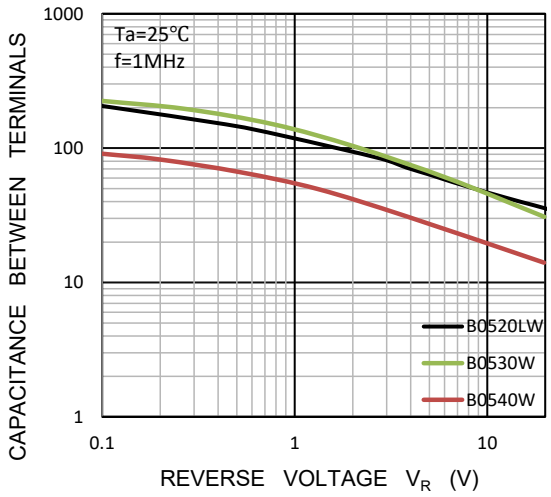
Forward Characteristics



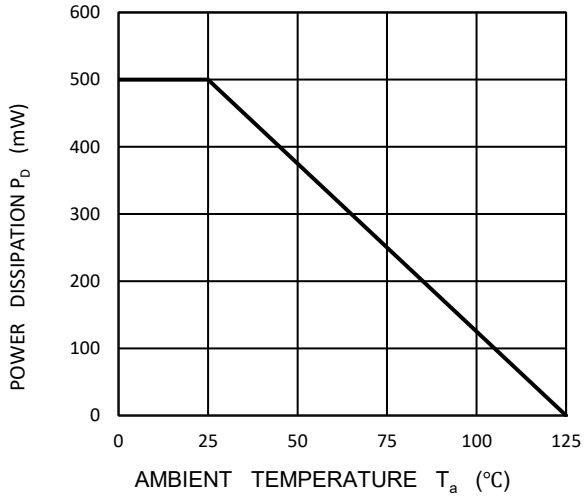
Reverse Characteristics



Capacitance Characteristics



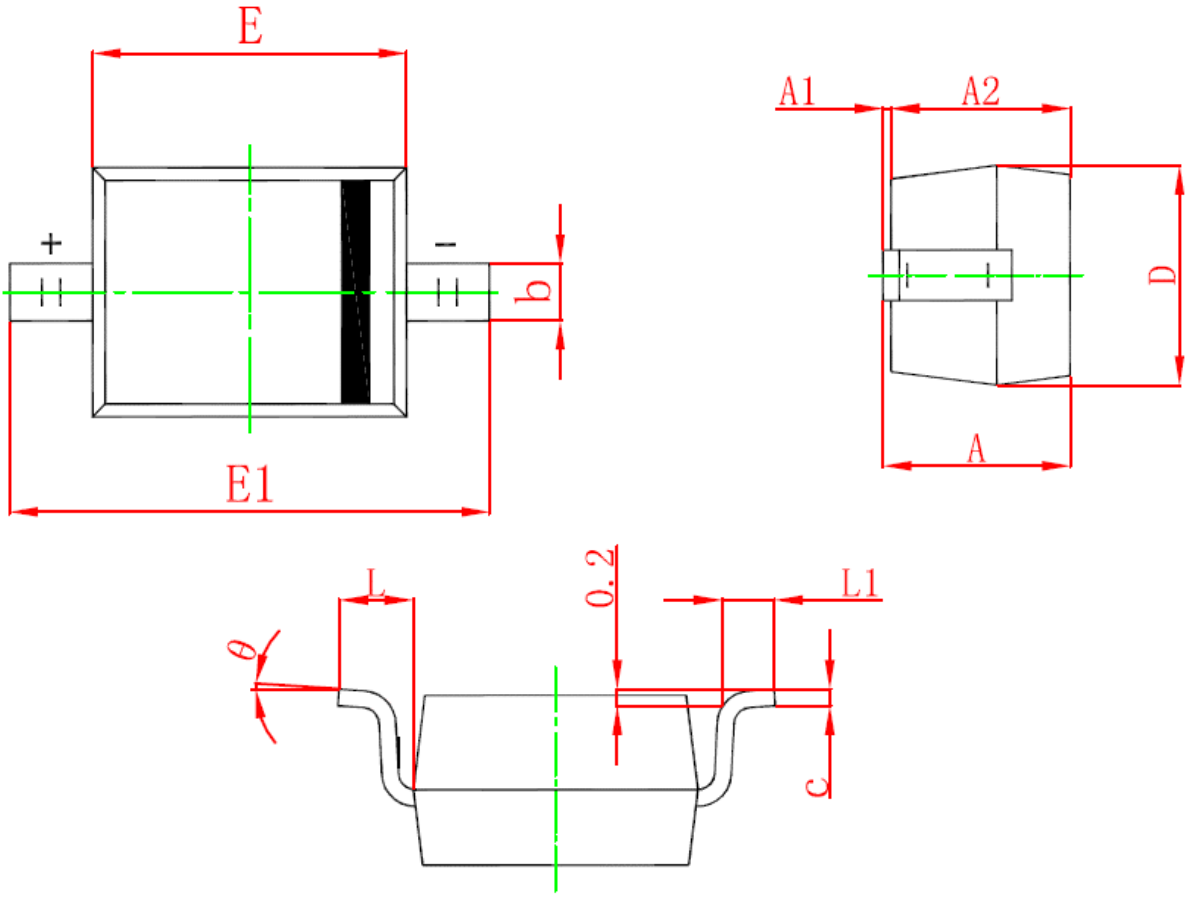
Power Derating Curve



Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
B0520LW	SOD-123	SD	3,000	45,000	180,000	7"reel
B0530W		SE				
B0540W		SF				

SOD-123 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°