

B0520W-B0540W

Schottky Barrier Diode

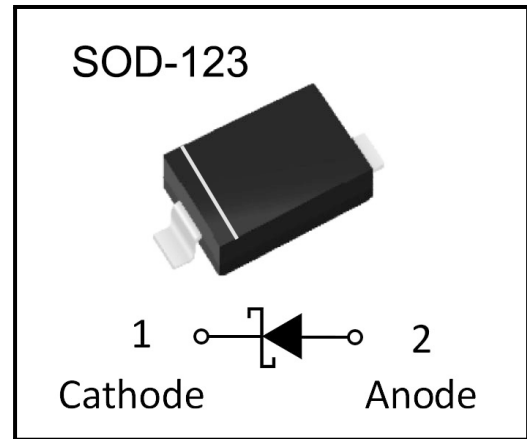
Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

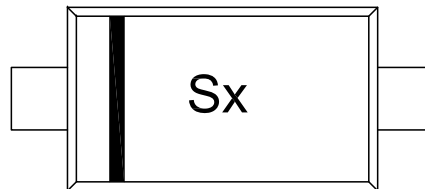
General Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SOD-123 Plastic Package

Package



Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
B0520W	SOD-123	SD	3K	Tape and reel
B0530W	SOD-123	SE	3K	Tape and reel
B0540W	SOD-123	SF	3K	Tape and reel

Maximum Ratings (@T_A=25°C unless otherwise noted)

Symbol	Parameter	B0520W	B0530W	B0540W	Unit
V _{RRM}	Maximum repetitive peak reverse voltage	20	30	40	V
V _{RMS}	Maximum RMS voltage	14	21	28	
V _{DC}	Maximum DC blocking voltage	20	30	40	
I _{FM}	Maximum average forward rectified current	0.5			A
I _{FSM}	Peak forward surge current 8.3 ms single half sine-wave	5.5			A
R _{θJA}	Typical thermal resistance	200			°C/W
P _D	Power Dissipation	500			mW
T _{STG}	Storage temperature range	-55 to +150			°C
Dv/dt	Voltage rate change	1000			V/uS

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Electrical Characteristics(@T_A=25°C unless otherwise noted)

Symbol	Parameter	Test Condition	B0520W	B0530W	B0540W	Unit
V _F	Maximum forward voltage	I _F =0.1A	0.330	0.375	—	V
		I _F =0.5A	0.385	0.430	0.510	
		I _F =1.0A	—	—	0.620	
V _R	Maximum reverse breakdown voltage	I _R =250uA	20	—	—	V
		I _R =200uA	—	30	—	
		I _R =20uA	—	—	40	
I _R	Maximum reverse current	V _R = 10V	75	—	—	uA
		V _R = 15V	—	20	—	
		V _R = 20V	250	—	10	
		V _R = 30V	—	130	—	
		V _R = 40V	—	—	20	
C _T	Capacitance between terminals	V _R = 0V, f=1MHZ	—	—	170	pF



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Typical Performance Characteristics ($T_J = 25^\circ\text{C}$, unless otherwise noted)

Figure 1: Forward Characteristics

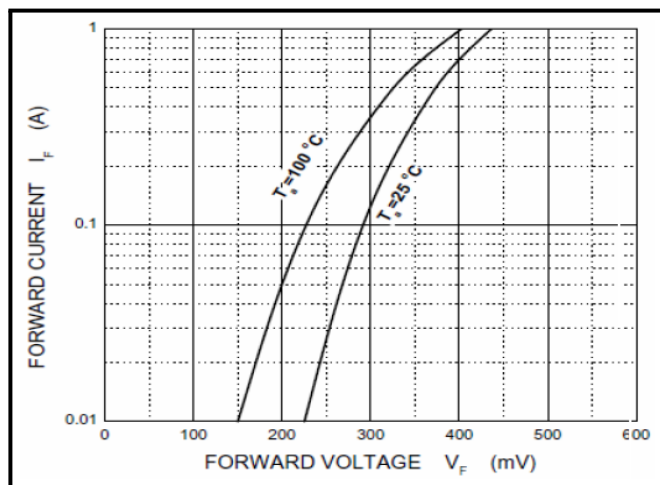


Figure 2: Reverse Characteristics

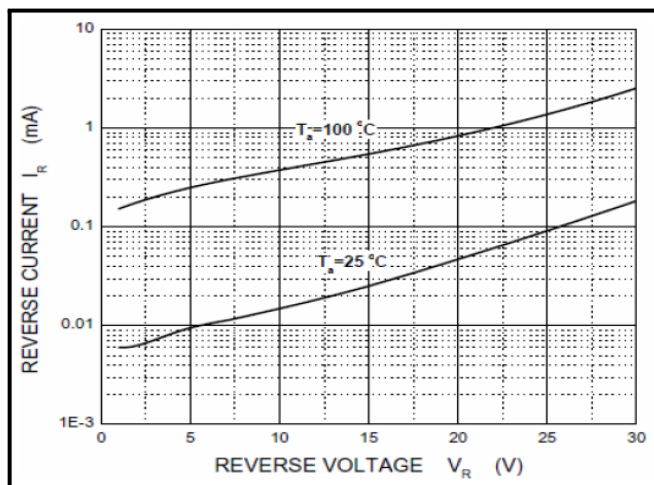


Figure 3: Capacitance Characteristics

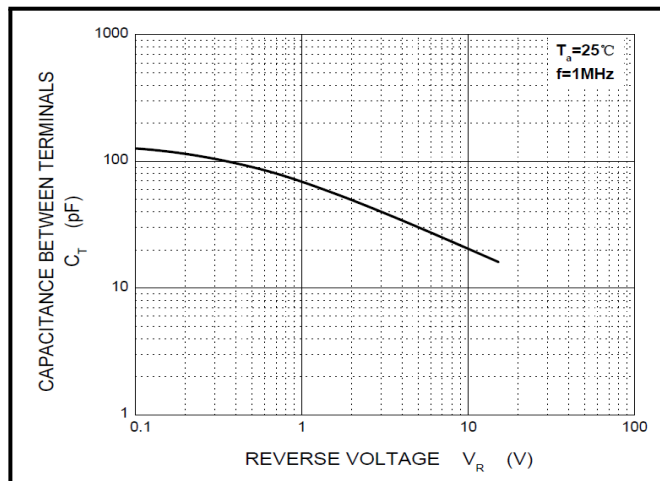
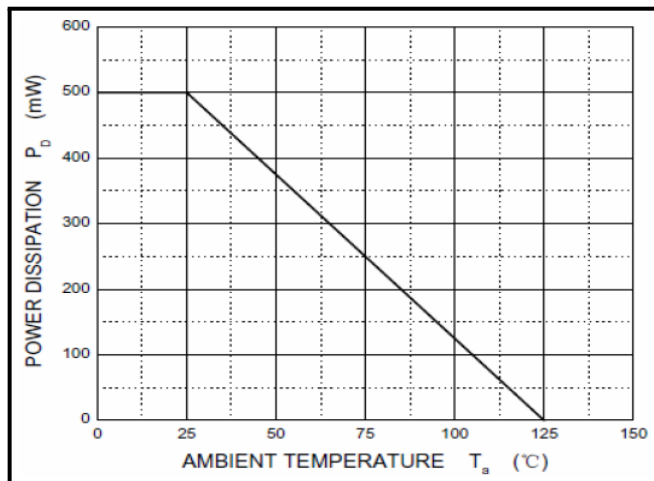


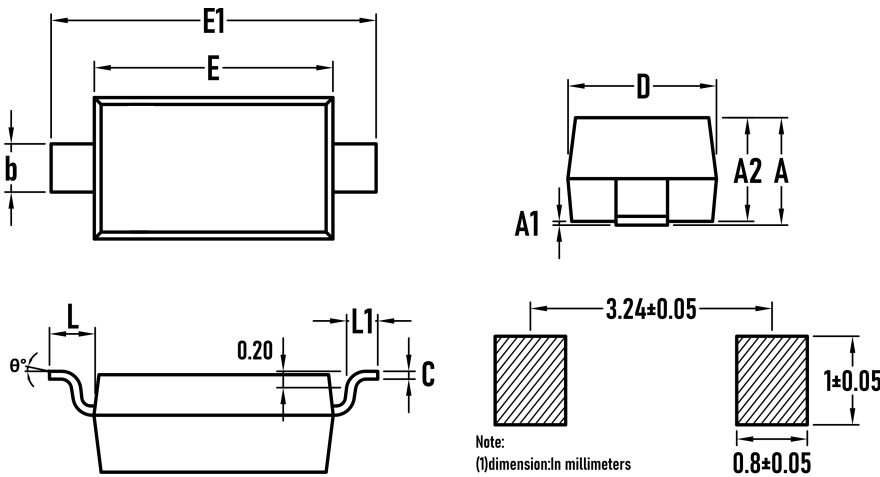
Figure 4: Power Derating Curve



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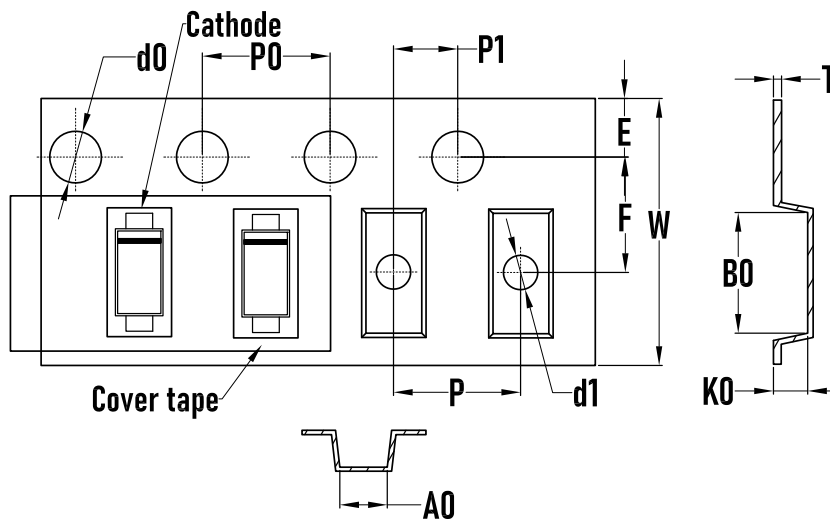
Schottky Barrier Diode

Package Information - SOD-123



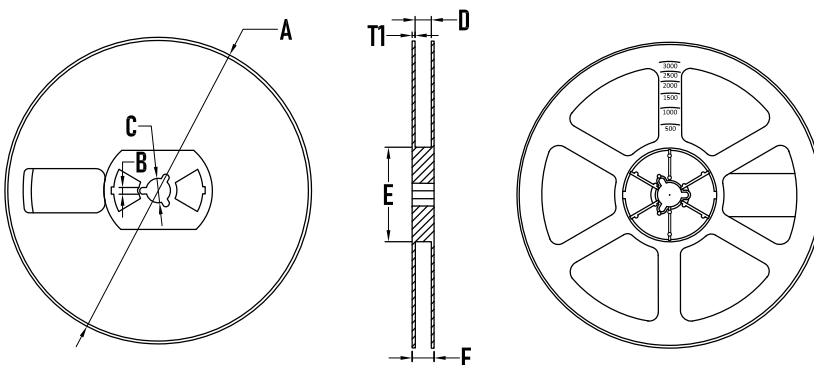
Symbol	Millimeters		Inches	
	MIN	MAX	MIN	MAX
A	0.950	1.350	0.037	0.053
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500REF		0.020REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

Packaging Tape - SOD-123



SYMBOL	MILLIMETER
A0	2.10±0.1
B0	4.0 ±0.1
d0	1.5±0.1
d1	1.0±0.1
E	1.75±0.1
F	3.50±0.1
K0	1.25±0.1
P	4.00±0.1
P0	4.00±0.1
P1	2.00±0.1
W	8.00±0.1
T	0.2±0.02

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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