

Schottky Barrier Diode

B0520LW/B0530W/B0540W

FEATURES

- Low forward voltage drop.
- Guard ring construction for transient Protection.
- High conductance.
- MSL 1

HF

1 CATHODE 2 ANODE



SOD-123

APPLICATIONS

- 0.5A surface mount schottky barrier rectifier.

ORDERING INFORMATION

Type No.	Marking	Package Code
B0520LW	SD	SOD-123
B0530W	SE	SOD-123
B0540W	SF	SOD-123

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Characteristic	Symbol	B0520LW	B0530W	B0540W	Unit
Peak Repetitive Reverse Voltage	V_{RRM}				
Working Peak Reverse Voltage	V_{RWM}	20	30	40	V
DC Reverse Voltage	V_R				
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectified Output Current @ $T_L = 100^{\circ}C$	I_O	0.5			A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	5.5			A
Power Dissipation	P_d	410	410		mW
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	182	244		$^{\circ}C/W$
Operating and Storage Temperature Range	T_j, T_{stg}	-65 to +100	-65 to +125		$^{\circ}C$
Voltage Rate of Change	dv/dt	1000			V/ μs

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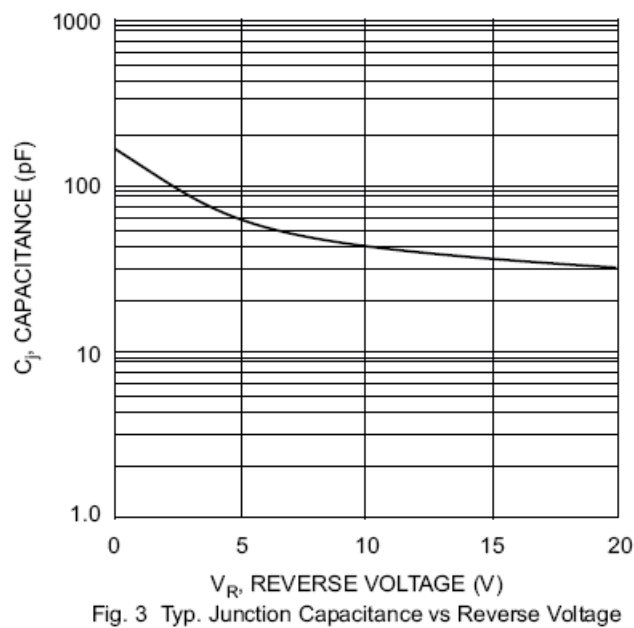
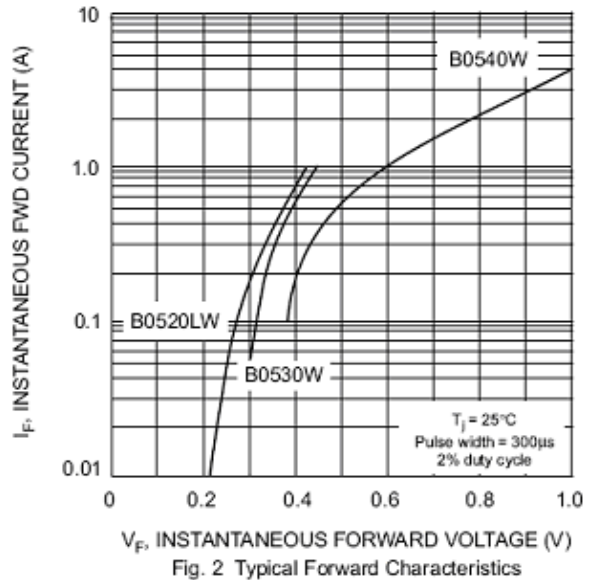
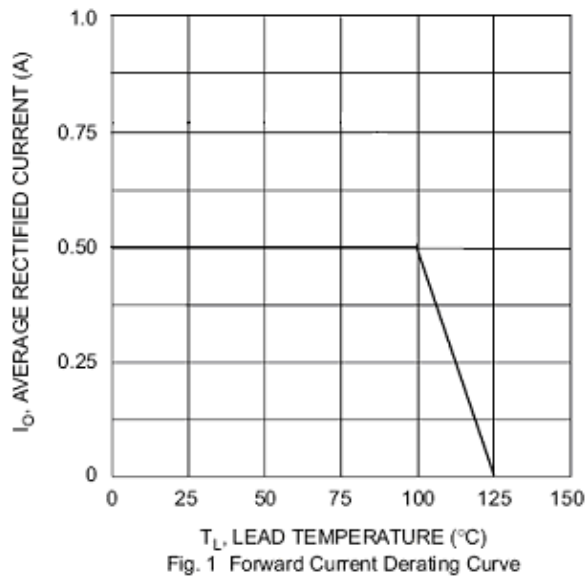
ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Characteristic	Symbol	B0520LW	B0530W	B0540W	Unit	Test Conditions
Minimum Reverse Breakdown Voltage	$V_{(BR)R}$	20 - -	- 30 -	- - 40	V	$I_R = 250\mu A$ $I_R = 130\mu A$ $I_R = 20\mu A$
Maximum Forward Voltage Drop	V_{FM}	0.300 0.385 - 0.220 0.330 -	0.375 0.430 - - - -	- 0.510 0.620 - 0.460 0.610	V	$I_F = 0.1A, T_j = 25^\circ C$ $I_F = 0.5A, T_j = 25^\circ C$ $I_F = 1.0A, T_j = 25^\circ C$ $I_F = 0.1A, T_j = 100^\circ C$ $I_F = 0.5A, T_j = 100^\circ C$ $I_F = 1.0A, T_j = 100^\circ C$
Maximum Leakage Current	I_{RM}	75 - 250 - -	- 20 - 130 -	- - 10 - 20	μA	$V_R = 10V, T_j = 25^\circ C$ $V_R = 15V, T_j = 25^\circ C$ $V_R = 20V, T_j = 25^\circ C$ $V_R = 30V, T_j = 25^\circ C$ $V_R = 40V, T_j = 25^\circ C$
		5.0 8.0 -	- - -	- 5.0 13	mA	$V_R = 10V, T_j = 100^\circ C$ $V_R = 20V, T_j = 100^\circ C$ $V_R = 40V, T_j = 100^\circ C$
Junction Capacitance	C_J	170			pF	$f = 1MHz, V_R = 0V DC$

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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



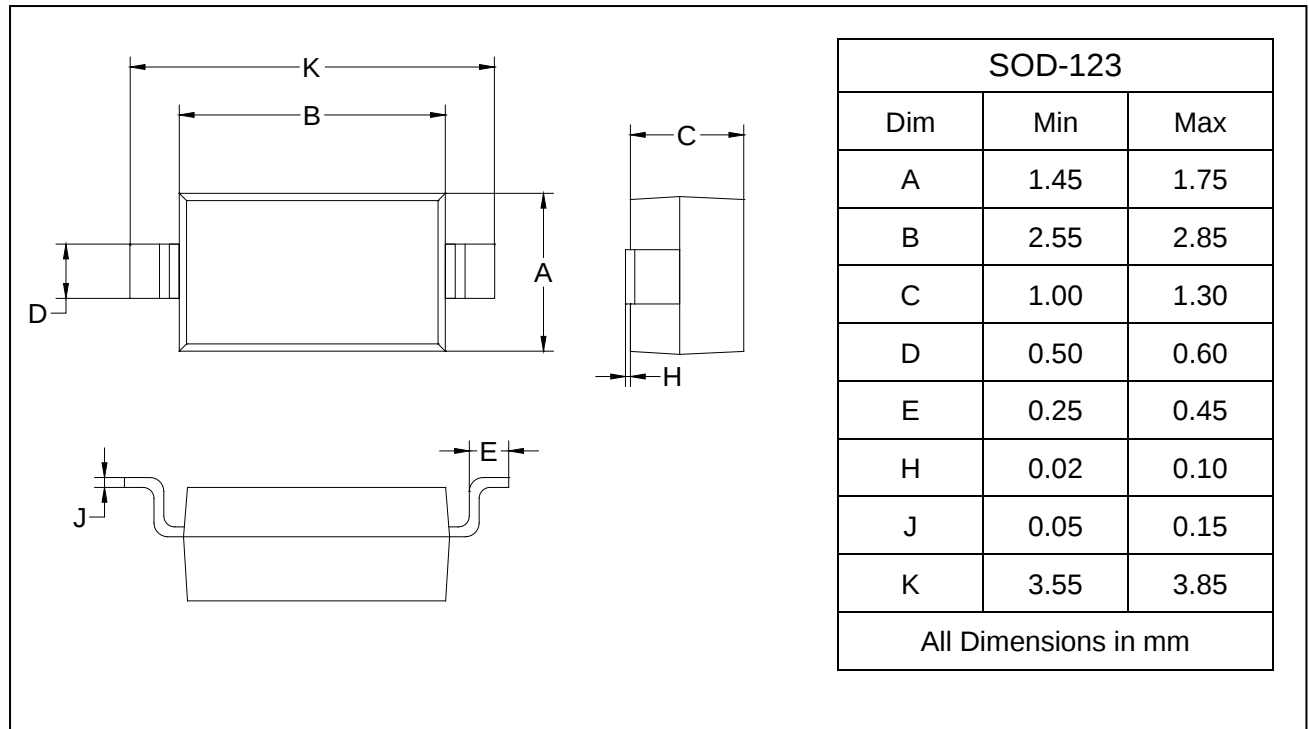
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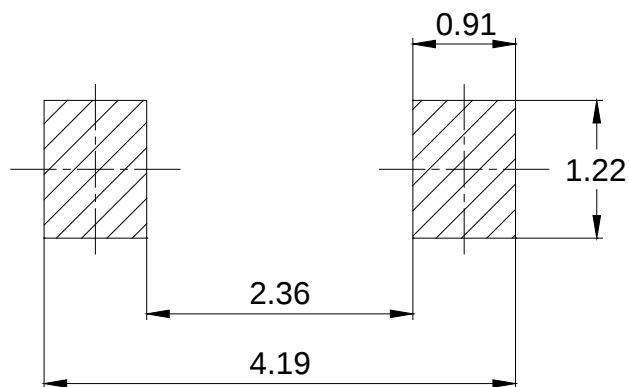
PACKAGE OUTLINE

Plastic surface mounted package

SOD-123



SOLDERING FOOTPRINT



Unit: mm

PACKAGE INFORMATION

Device	Package	Shipping
B0520LW/B0530W/B0540W	SOD-123	3000pcs / Tape & Reel