

Schottky Barrier Diode**B0520LW/B0530W/B0540W****FEATURES**

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



Lead-free

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CATHODE 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 Working Peak Reverse Voltage DC Reverse 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 @ $T_L = 100^\circ\text{C}$	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			mW
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	244			$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-65 to +125			$^\circ\text{C}$
Voltage Rate of Change	dv/dt	1000			V/ μs

Schottky Barrier Diode**B0520LW/B0530W/B0540W****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

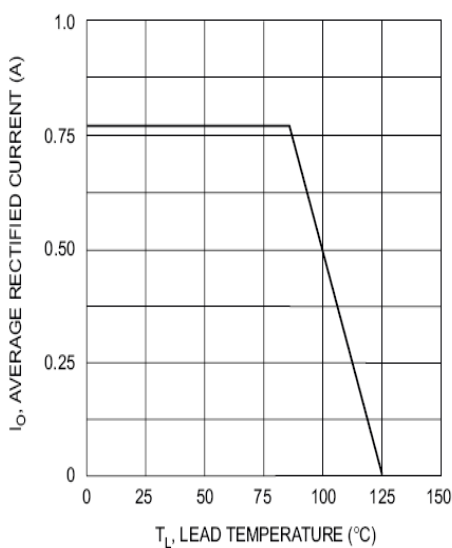
TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Fig. 1 Forward Current Derating Curve

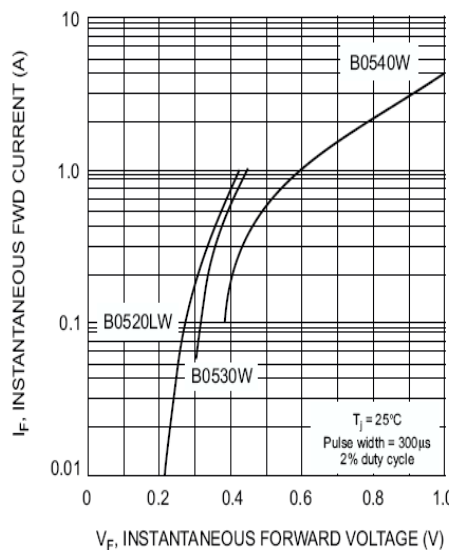


Fig. 2 Typical Forward Characteristics

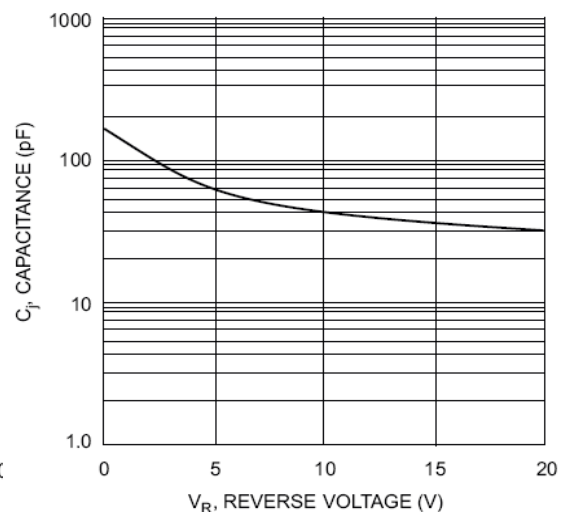


Fig. 3 Typ. Junction Capacitance vs Reverse Voltage

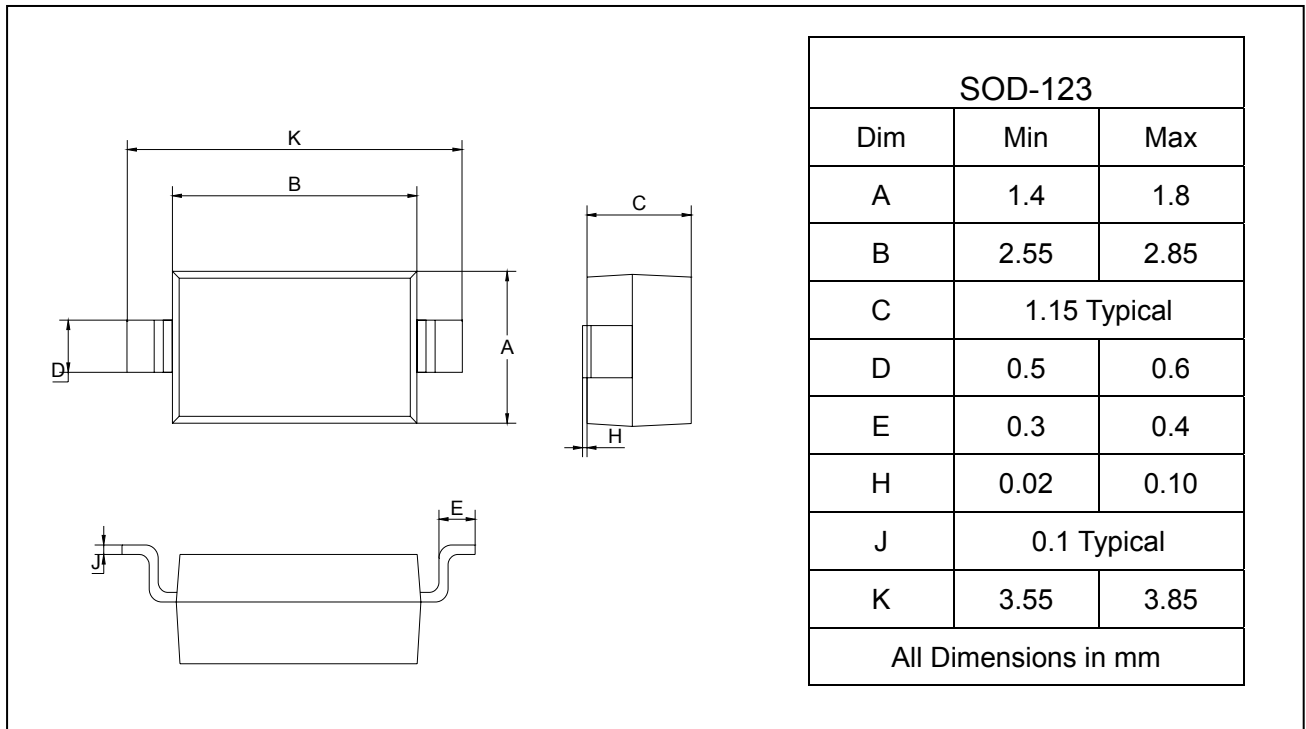
Schottky Barrier Diode

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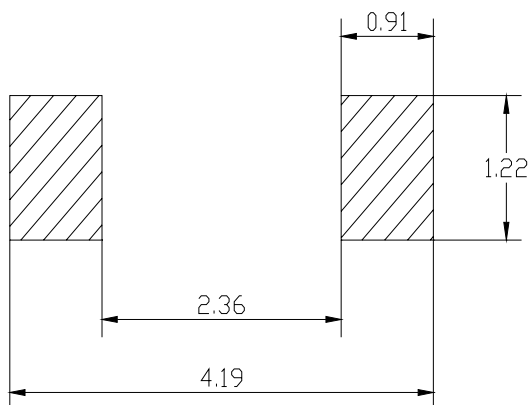
PACKAGE OUTLINE

Plastic surface mounted package

SOD-123



SOLDERING FOOTPRINT



Unit :mm

PACKAGE INFORMATION

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