

SOD-123

Features:

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

Applications:

- 0.5A surface mount schottky barrier rectifier

Maximum Ratings:

$T_A = 25^\circ\text{C}$ unless otherwise specified.

Characteristic	Symbol	Value	Unit
Peak repetitive reverse voltage Working peak reverse voltage DC reverse voltage	V_{RRM} V_{RWM} V_R	20	V
RMS reverse voltage	$V_{R(RMS)}$	14	V
Average rectified output current at $T_L = 100^\circ\text{C}$	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
Thermal resistance junction to ambient	$R_{\theta JA}$	244	$^\circ\text{C/W}$
Operating and storage temperature range	T_J, T_{STG}	-65 to +125	$^\circ\text{C}$
Voltage rate of change	dv/dt	1,000	V/ μs

Electrical Characteristics:

T_a=25°C unless otherwise specified.

Characteristic	Symbol	B0520LW-7-F	Unit	Test Conditions
Minimum reverse Breakdown voltage	V _{(BR)R}	20 - -	V	I _R = 250μA I _R = 130μA I _R = 20μA
Maximum forward voltage drop	V _{FM}	0.3 0.385 - 0.22 0.33 -	V	I _F =0.1A, T _j =25°C I _F =0.5A, T _j =25°C I _F =1.0A, T _j =25°C I _F =0.1A, T _j =100°C I _F =0.5A, T _j =100°C I _F =1.0A, T _j =100°C
Maximum leakage current	I _{RM}	75 - 250 - -	μA	V _R =10V, T _j =25°C V _R =15V, T _j =25°C V _R =20V, T _j =25°C V _R =30V, T _j =25°C V _R =40V, T _j =25°C
		5 8 -	mA	V _R =10V, T _j =100°C V _R =20V, T _j =100°C V _R =40V, T _j =100°C
Junction capacitance	C _J	170	pF	f=1MHz, V _R =0V DC

Typical Characteristics:

T_A = 25°C unless otherwise specified.

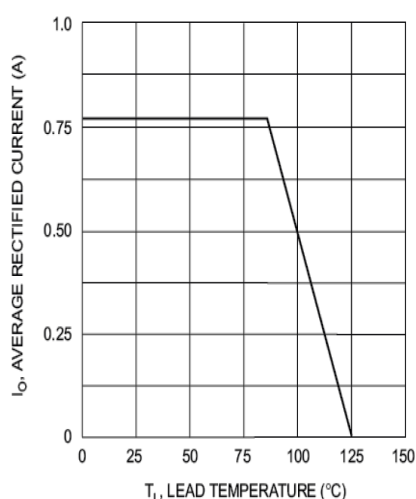


Fig. 1 Forward Current Derating Curve

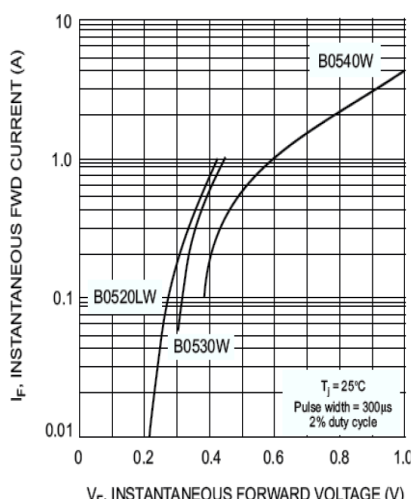


Fig. 2 Typical Forward Characteristics

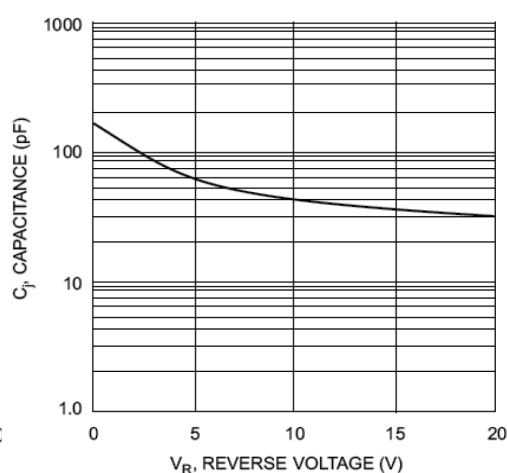
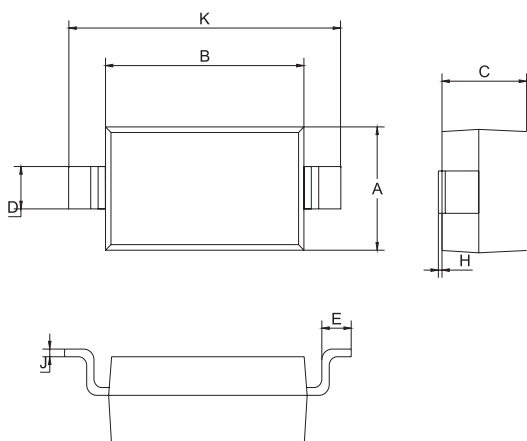


Fig. 3 Typ. Junction Capacitance vs Reverse Voltage

Package Outline:

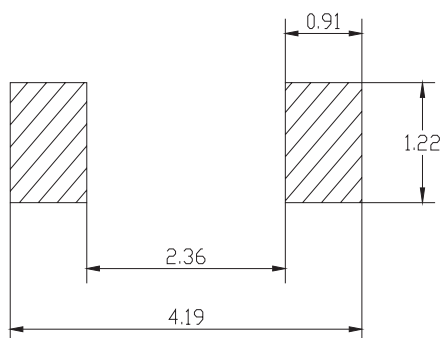
Plastic surface mounted package



SOD-123		
Dim.	Min.	Max.
A	1.4	1.8
B	2.55	2.85
C	1.15 Typ.	
D	0.5	0.6
E	0.3	0.4
H	0.02	0.1
J	0.1 Typ.	
K	3.55	3.85

Dimensions : Millimetres

Soldering Footprint:



Dimensions : Millimetres

Package Information:

Device	Package	Shipping
B0520LW-7-F	SOD-123	3,000 / Tape & Reel

Part Number Table

Description	Part Number
Schottky Barrier Diode	B0520LW-7-F

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