

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<sub>A</sub> = 25°C unless otherwise specified.

Characteristic	Symbol	Value	Unit
Peak repetitive reverse voltage Working peak reverse voltage DC reverse voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	20	V
RMS reverse voltage	V <sub>R(RMS)</sub>	14	V
Average rectified output current at T <sub>L</sub> = 100°C	I <sub>o</sub>	0.5	A
Non-Repetitive peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	5.5	A
Power dissipation	P <sub>D</sub>	410	mW
Thermal resistance junction to ambient	R <sub>θJA</sub>	244	°C/W
Operating and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +125	°C
Voltage rate of change	dv/dt	1,000	V/μs

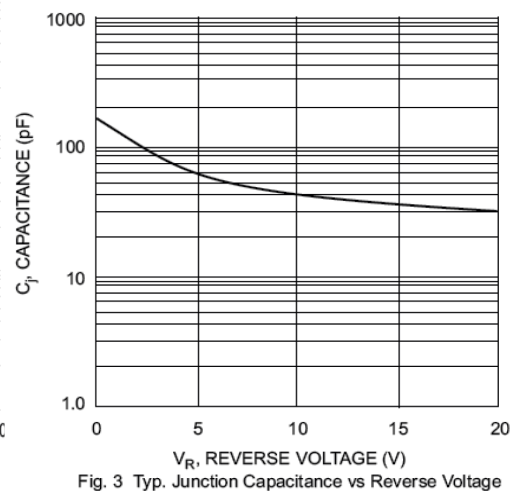
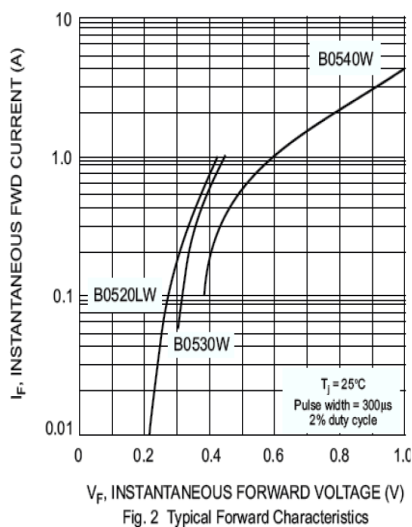
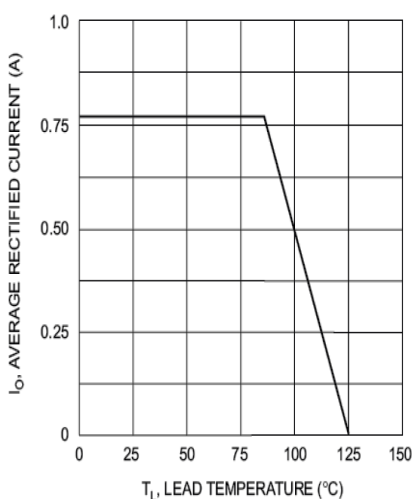
## Electrical Characteristics:

T<sub>a</sub>=25°C unless otherwise specified.

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

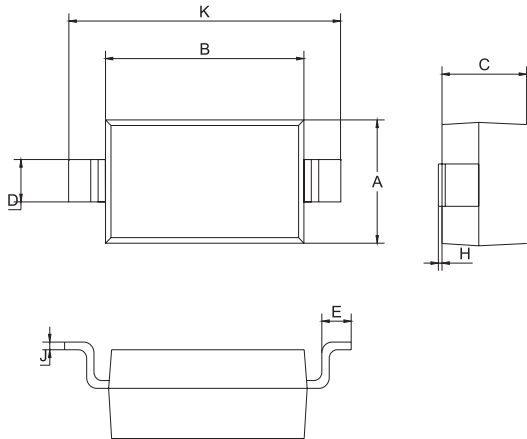
## Typical Characteristics:

T<sub>A</sub> = 25°C unless otherwise specified.



## Package Outline:

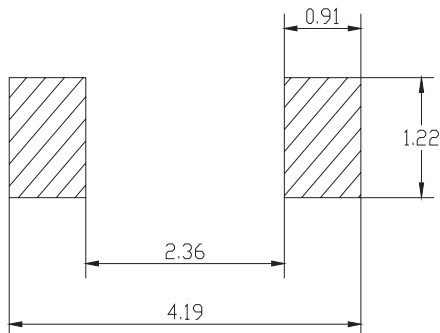
Plastic surface mounted package



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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