Description

The BAS521 is a high-voltage switching diode designed for fast switching applications. It offers high reverse voltage capability and low reverse recovery time, packaged in a compact SOD-523 surface-mount package. Compliant with standard industry requirements, it ensures reliable performance in high-speed and high-voltage switching scenarios.

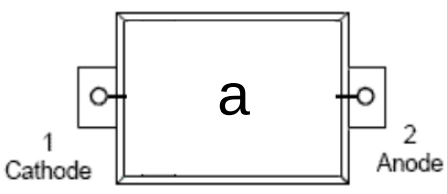
Features

- High Repetitive Peak Reverse Voltage (300 V)
- Fast Reverse Recovery Time (max. 50 ns)
- Low Total Capacitance (max. 5 pF @ 1 MHz)
- Compact SOD-523 Surface-Mount Package
- High Continuous Forward Current(225 mA)

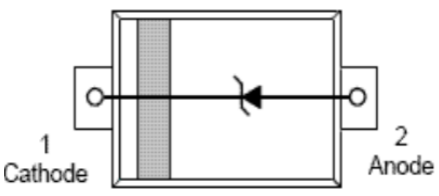
Applications

- High-Speed Switching Circuits
- High-Voltage Switching Systems
- General-Purpose Electronic Equipment
- Signal Processing Circuits

Marking Diagram



Circuit Diagram



Ordering Information

DEVICE	PACKAGE
BAS521	3000/Tape & Reel

WPMtek

Maximum Ratings (T_A = 25°C)

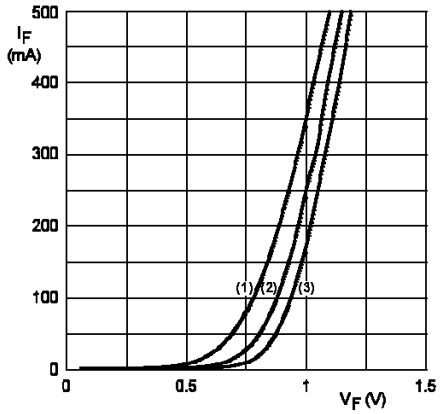
Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	250	V
Reverse Voltage	V_R	250	V
Continuous Forward Current	I_F	225	mA
Repetitive Peak Forward Current	I_{FRM}	625	mA
Non-Repetitive Peak Forward Current (1 μs)	I_{FSM}	4	A
Power Dissipation	P_{tot}	250	mW
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{stg}	- 65 to + 150	°C

Electrical Characteristics (T_A = 25°C)

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at I_F = 100 mA	V_F	-	1.1	V
Reverse Breakdown Voltage at I_R = 100 μA	$V_{(BR)R}$	250	-	V
Reverse Current at V_R = 200 V	I_R	-	150	nA
Reverse Recovery Time at I_F = I_R = 30 mA, R_L = 100 Ω, i_{rr} = 0.1 I_R	t_{rr}	-	50	ns
Total Capacitance at V_R = 0 V, f = 1 MHz	C_T	-	5	pF

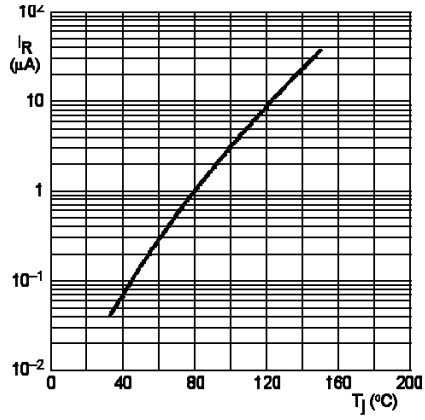
WPMtek

Typical Performance Characteristics (T_A = 25°C unless otherwise Specified)



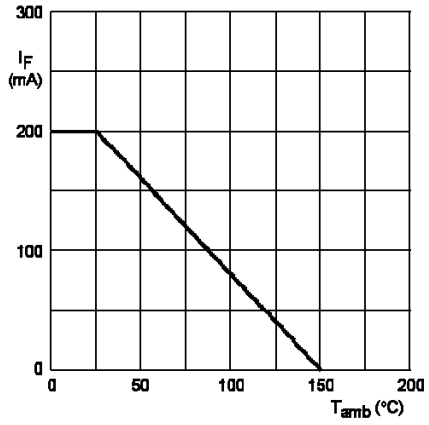
(1) T_{amb} = 150 °C.
(2) T_{amb} = 75 °C.
(3) T_{amb} =25 °C.

Forward current as a function of forward voltage; typical values.

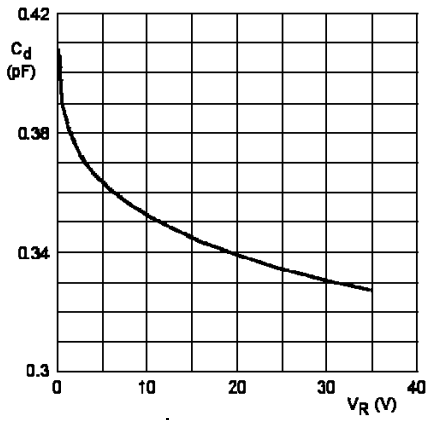


$V_R = V_{Rmax}$; typical values.

Reverse current as a function of junction temperature.



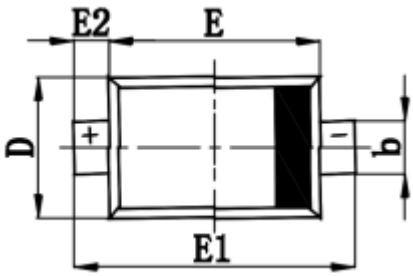
Maximum permissible continuous forward current as a function of ambient temperature.

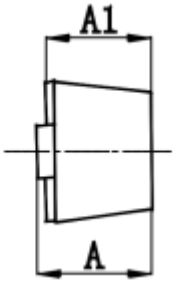


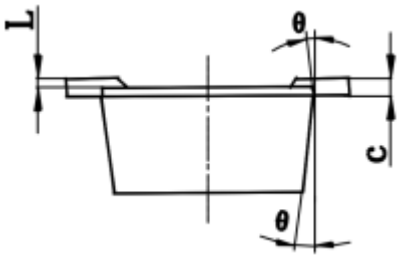
Diode capacitance as a function of reverse voltage; typical values.

WPMtek

SOD-523 Package Outline Dimensions

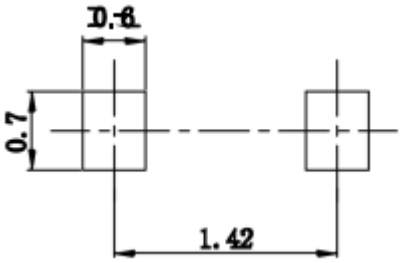






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

SOD-523 Suggested Pad Layou



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

WPMtek reserves the right to make changes to the product specification and data in this document without notice. WPMtek makes no warranty, representation or guarantee regarding the suitability of its products for any particu lar purpose, nor does WPMtek assume any liability arising from the application or use of any products or circuits, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.Any enquiry ,please write to sales@wpmtek.com for futher information.

WPMtek