

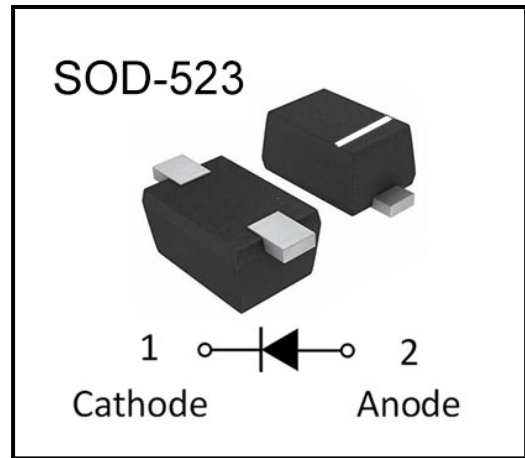
BAS521

Fast Switching Diode

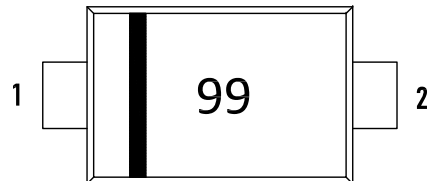
Features

- Fast Switching Speed
- High Reverse Breakdown Voltage: 300V
- Low Leakage Current: 100nA at Room Temperature.
- For General Purpose Switching Applications
- Surface Mount Package Ideally Suited for Automatic Insertion

Package



Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
BAS521	SOD-523	99	3K	Tape and reel

Maximum Ratings @T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Unit
V _{RM}	Peak Reverse Voltage	300	V
V _{RWM}	Working Peak Reverse Voltage	300	V
V _R	DC Blocking Voltage		
I _{FM}	Forward Continuous Current ¹	250	mA
I _{FSM}	Non-repetitive Peak Forward Surge Current@8.3mS	4.5	A
I _{FRM}	Repetitive Peak Forward Current ¹	1.0	A
P _d	Power Dissipation ¹	325	mW
R _{ΘJA}	Thermal Resistance From Junction To Ambient ¹	385	°C /W
T _J	Operating junction temperature	-55 to +150	°C
T _{STG}	Storage temperature range	-55 to +150	°C



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Electrical Characteristics @T_A=25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Limits			Unit
			Min.	Typ.	Max.	
V _{BR}	Reverse breakdown voltage ²	I _R =100uA	300	—	—	V
I _R	Reverse Leakage Current ²	V _R =5V	—	—	50	nA
		V _R =250V	—	—	150	nA
		V _R =250V, T _j =150°C	—	—	100	uA
V _F	Forward Voltage	I _F =100mA	—	—	1.1	V
C _T	Capacitance Between Terminals	V _R =0V, f=1MHZ	—	5	—	pF
T _{RR}	Reverse Recovery Time	I _F =I _R =30mA, I _{rr} =0.1X I _R , R _L =100Ω	—	—	50	nS

Notes: 1. Part mounted on FR-4 board with recommended pad layout.

2. Short duration pulse test used to minimize self-heating effect.



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Typical Performance Characteristics ($T_J = 25^\circ\text{C}$, unless otherwise noted)

Figure 1: Power Derating Curve

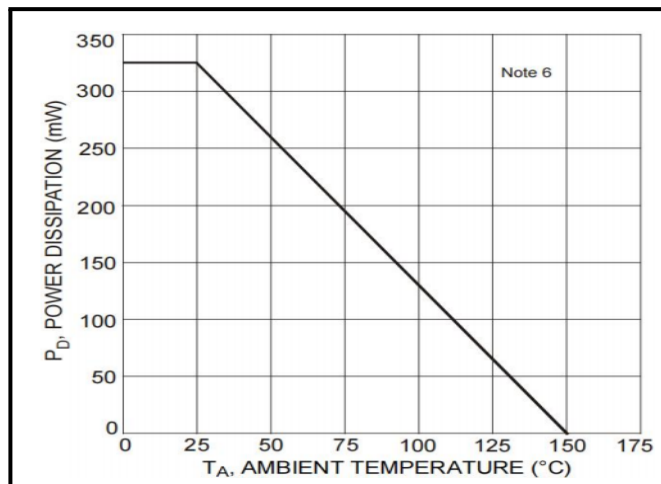


Figure 2: Forward Capacitance

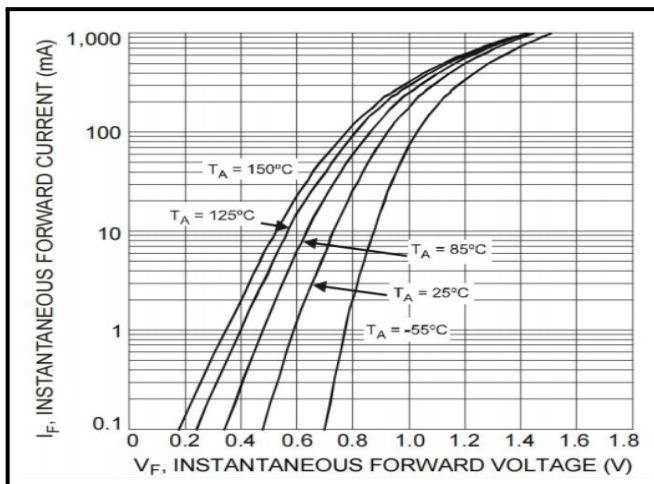


Figure 3: Typical Reverse Characteristics

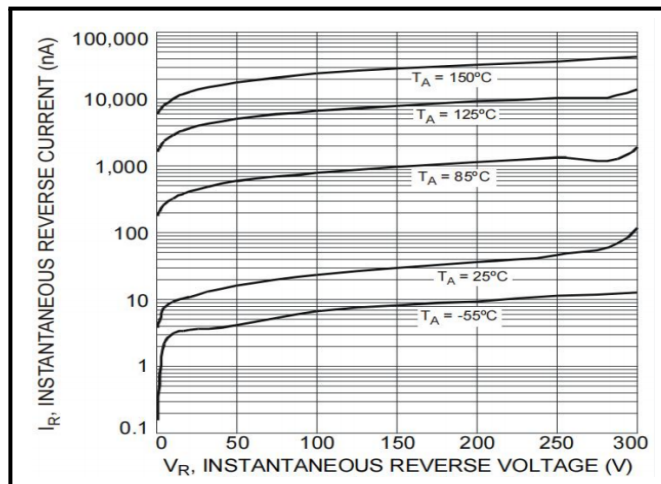
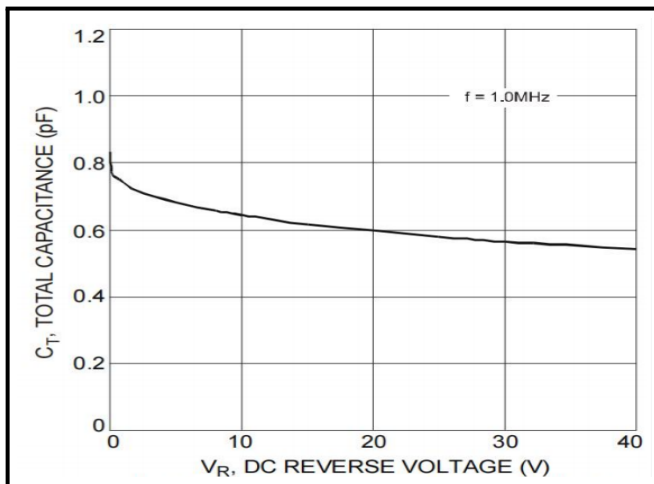


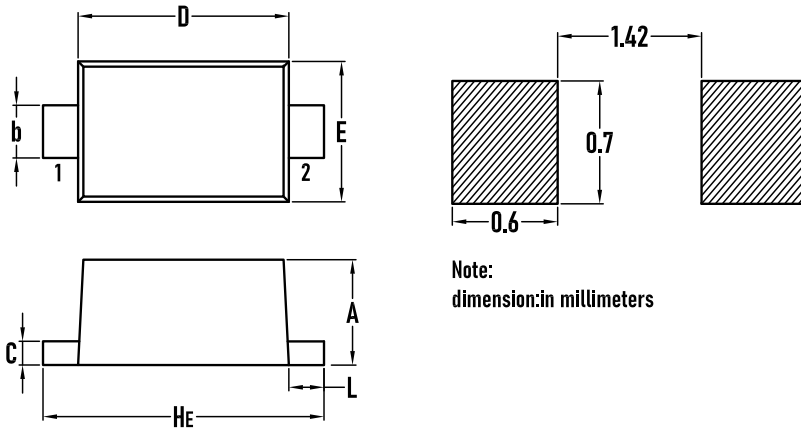
Figure 4: Total Capacitance vs. Reverse Voltage



BAS521

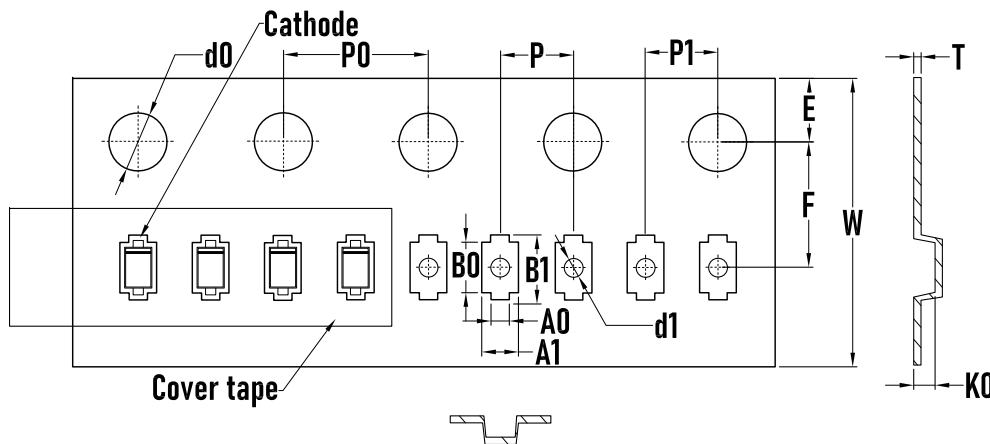
Fast Switching Diode

Outline Drawing - SOD-523



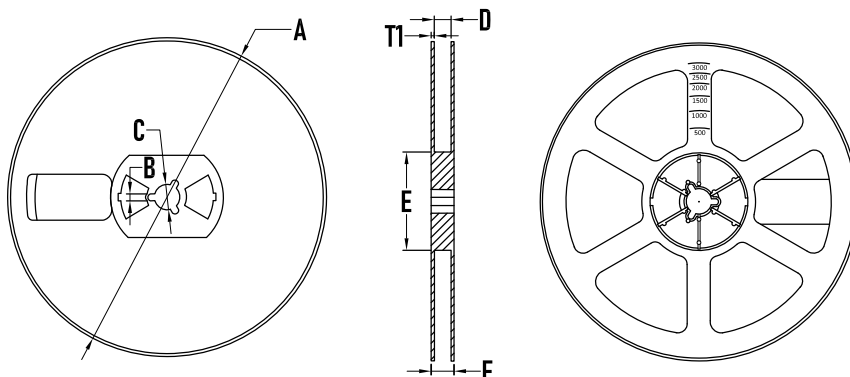
SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H _E	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

Packaging Tape - SOD-523



SYMBOL	MILLIMETER
A0	0.50±0.10
A1	1.00±0.10
B0	1.30±0.10
B1	1.80±0.10
d0	1.55±0.10
d1	0.50±0.05
E	1.75±0.10
F	3.50±0.10
K0	0.65±0.10
P	2.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.2 ±0.05

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	5000PCS

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Specifications are subject to change without notice.

Please refer to <http://www.born-tw.com> for current information.

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