SMD Switching Diodes

Comchip
SMD Diode Specialist

BAS521-HF

Reverse Voltage: 300 Volts
Forward Current: 250 mA
## RoHS Device
Halogen Free
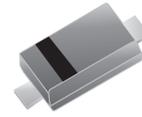
Features

- Ultra small plastic SMD package.

- High voltage switching diode.

- High continuous reverse voltage: 300V

- Repetitive peak forward current: 625mA

- High switching speed: max.50ns, Molded plastic

Mechanical data

- Case: SOD-523 standard package,

- Terminals: Solderable per MIL-STD-750, method 2026

- Mounting position: Any

- Weight: 0.012 grams(approx.)

SOD-523

0.067(1.70)
0.059(1.50)
0.051(1.30)
0.043(1.10)

0.035(0.90)
0.028(0.70)

0.028(0.70)
0.020(0.50)

0.012(0.30)
Typ.

0.010(0.25)
0.006(0.15)

0.004(0.10)
Typical

Dimensions in inches and (millimeter)
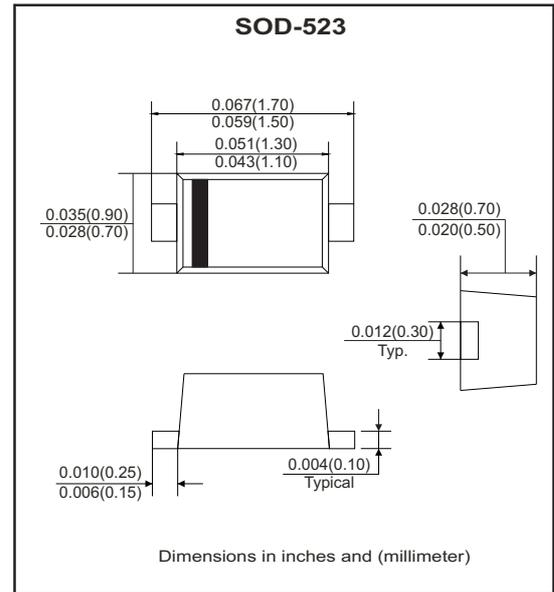
Circuit Diagram

Maximum Ratings (at T_A=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	300	V
Continous reverse voltage	V_R	300	V
Continous forward currnt Ts≤90°C; Note 1	I_F	250	mA
Repetitive forward current tp=1ms	I_{FRM}	1	A
Non-repetitive peak forward surge current tp=1ms;square wave; T_J=25°C prior to surge	I_{FSM}	4.5	A
Total power dissipation Ts≤90°C; Note 1	P_{tot}	500	mW
Junction temperature	T_J	150	°C
Storage and operating ambient temperature	T_{STG}, T_{amb}	-65 ~ +150	°C

Note: Ts is temperature at the soldering point of the cathode tab.

Electrical Characteristics (at T_A=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Breakdown voltage	V_{BR}	I_R=100uA	300	340		V
Forwardvoltage	V_F	I_F=100mA		0.95	1.1	V
Reverse current	I_R	V_R=250V		30	150	nA
	I_R	V_R=250V, T_J=150°C		40	100	μA
Diode capacitance	C_d	V_R=0V, f=1MHz		0.4	5	pF
Reverse recovery time	t_{rr}	When switching from I_F=30mA to I_R=30mA; R_L=100W; measured at I_R=3mA		16	50	nS

RATING AND CHARACTERISTIC CURVES (BAS521-HF)

Fig.1 - Forward current as a function of forward voltage; typical values

- $T_A=150°C$
- $T_A=25°C$
- $T_A=75°C$

Forward Current, (mA)
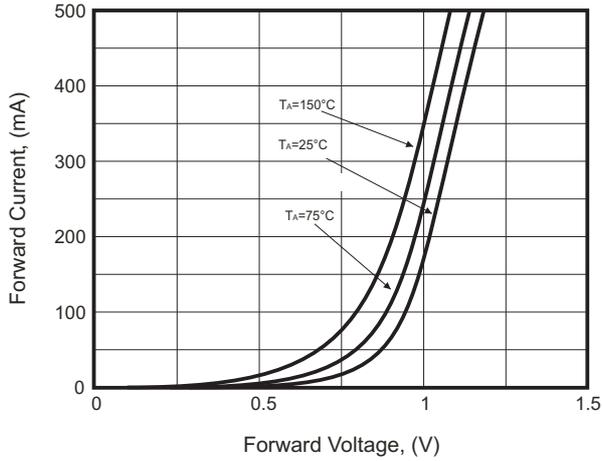
Forward Voltage, (V)

Fig.2 - Reverse current as a function of junction temperature

$V_R = V_{Rmax}$
Typical values

Reverse Current, (µA)

Junction Temperature, (°C)
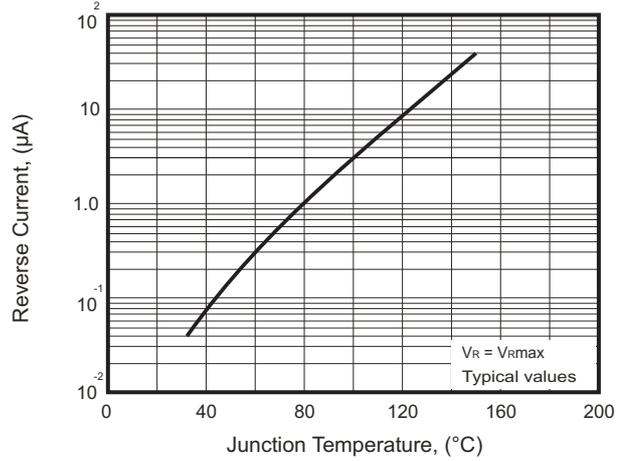
Fig.3 - Maximum permissible continuous forward current as a function of ambient temperature.



Continous Forward Current , (mA)

Ambient Temperature, (°C)
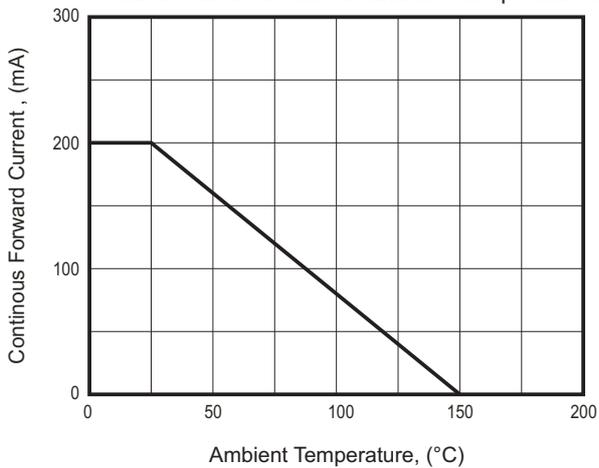
Fig.4 - Diode capacitance as a function of reverse voltage; typical values


Diode Capacitance , (pF)

Reverse Voltage, (V)
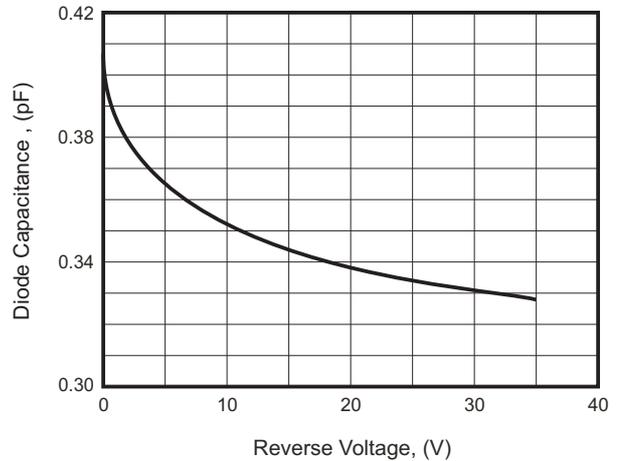
Fig.5 - Maximum permissible non-repetitive peak forward current as a Function of pulse duration

Peak Forward Surge Current, (A)

Pulse Duration, (us)

Company reserves the right to improve product design , functions and reliability without notice.

REV:A

SMD Switching Diodes
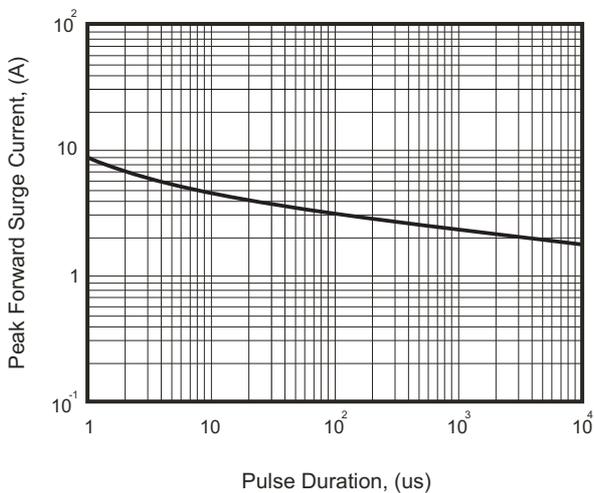
Reel Taping Specification

Trailer | Device | Leader

End | Start

10 pitches (min) | 10 pitches (min)

Direction of Feed
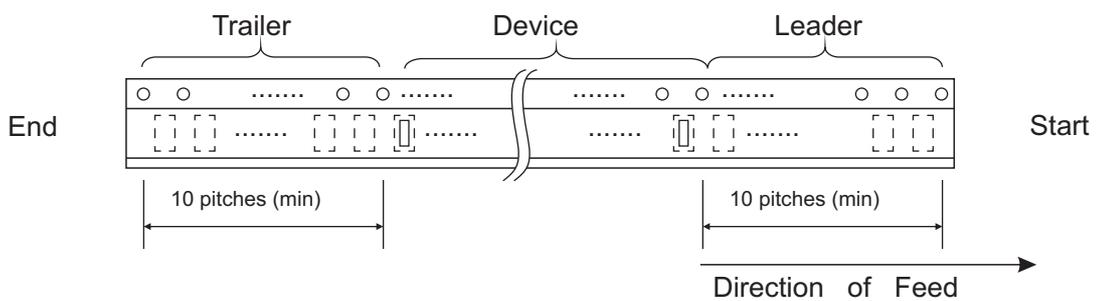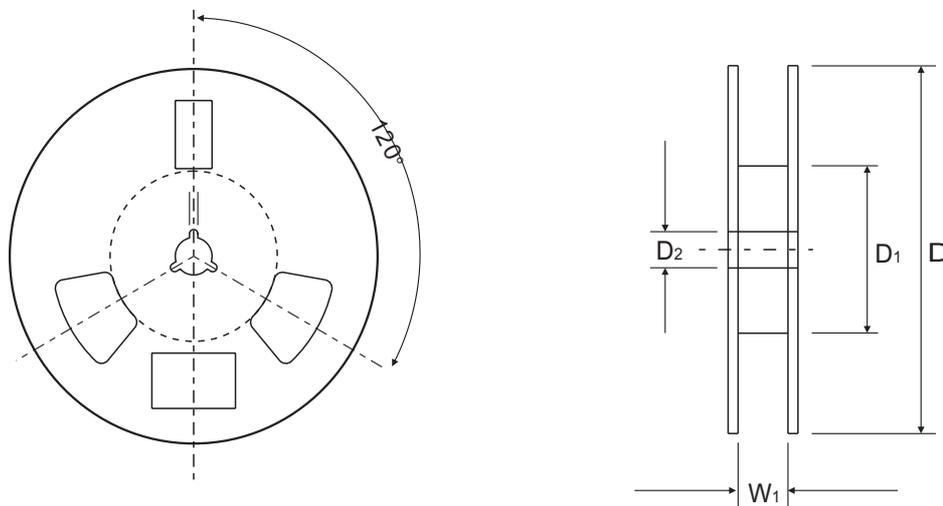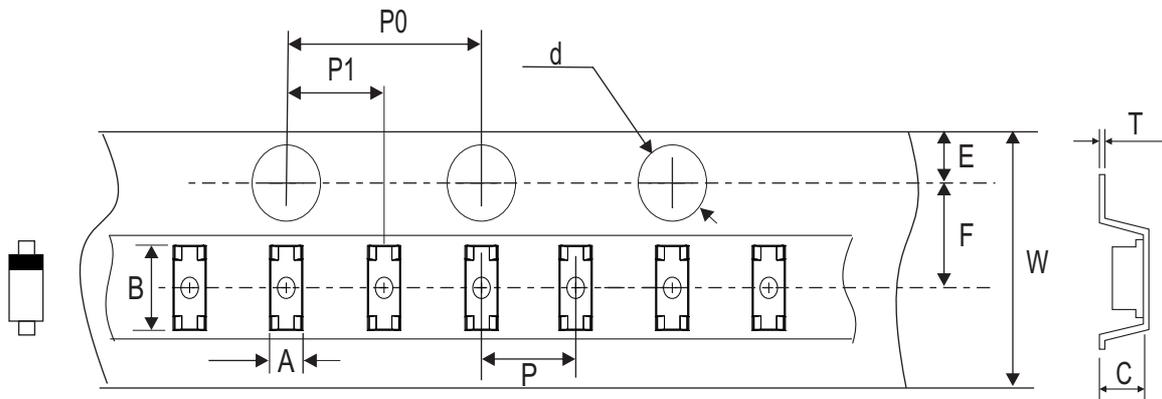
	SYMBOL	A	B	C	d	D	D1	D2
SOD-523	(mm)	0.95 ± 0.05	1.94 ± 0.05	0.73 ± 0.10	1.50 + 0.10	178 ± 1.00	54.00 ± 0.50	13.00 ± 0.50
	(inch)	0.037 ± 0.002	0.076 ± 0.002	0.029 ± 0.004	0.059 + 0.004	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

	SYMBOL	E	F	P	P0	P1	W	W1
SOD-523	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	8.00 + 0.30 / − 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.315 + 0.012 / − 0.004	0.374 ± 0.039

REV:A

SMD Switching Diodes

Comchip
SMD Diode Specialist

Marking Code

Part Number	Marking Code
BAS521-HF	L4

L4

Suggested PAD Layout

SIZE	SOD-523	
	(mm)	(inch)
A	1.40	0.055
B	0.40	0.016
C	0.40	0.016
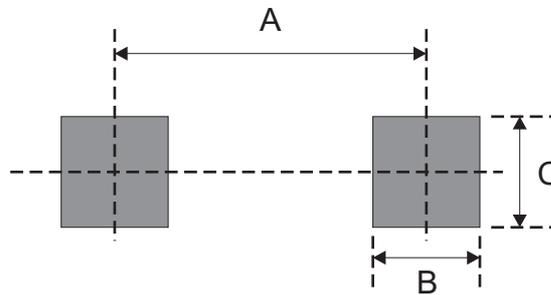
Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-523	3,000	7

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Diodes - General Purpose, Power, Switching *category:*

Click to view products by Comchip *manufacturer:*

Other Similar products are found below :

RD0306T-H BAV17-TR BAV19-TR 1N3611 NTE156A NTE525 NTE571 NTE5804 NTE5806 NTE6244 1SS181-TP 1SS193,LF 1SS400CST2RA SDAA13 SHN2D02FUTW1T1G LS4151GS08 1N4449 1N456A 1N4934-E3/73 1N914B 1N914BTR RFUH20TB3S BAS 28 E6327 BAV199-TP BAW56DWQ-7-F BAW75-TAP MM230L-CAA IDW40E65D1 JAN1N3600 LL4151-GS18 053684A SMMSD4148T3G 707803H NSVDAN222T1G SP000010217 CDSZC01100-HF BAV199E6433HTMA1 BAV70M3T5G SMBT2001T1G NTE5801 NTE5800 NTE5808 NTE6240 NTE6248 BAS28-7 BAW56HDW-13 BAS28 TR VS-HFA04SD60STR-M3 NSVM1MA152WKT1G BAV99TQ-13-F