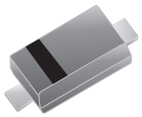
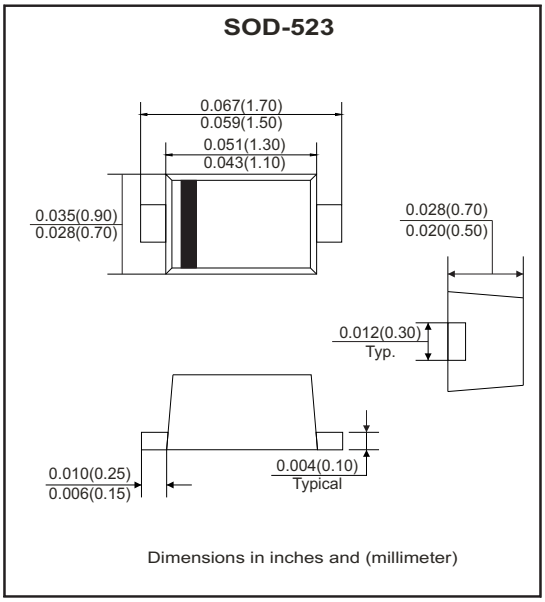
BAS521-HF

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.)

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

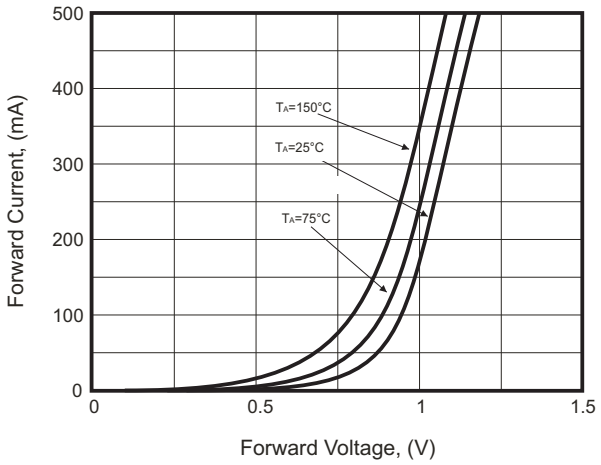


Fig.2 - Reverse current as a function of junction temperature

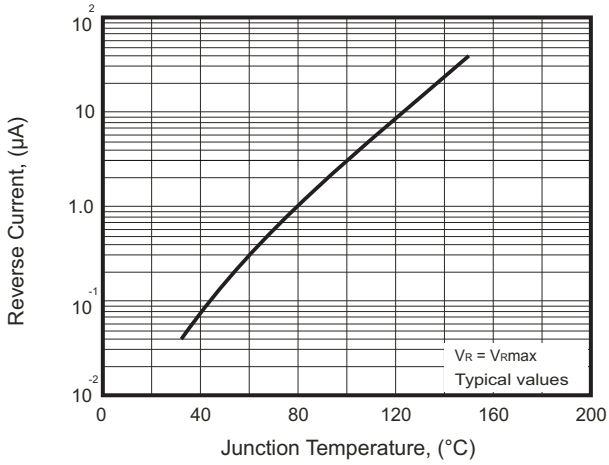


Fig.3 - Maximum permissible continuous forward current as a function of ambient temperature.

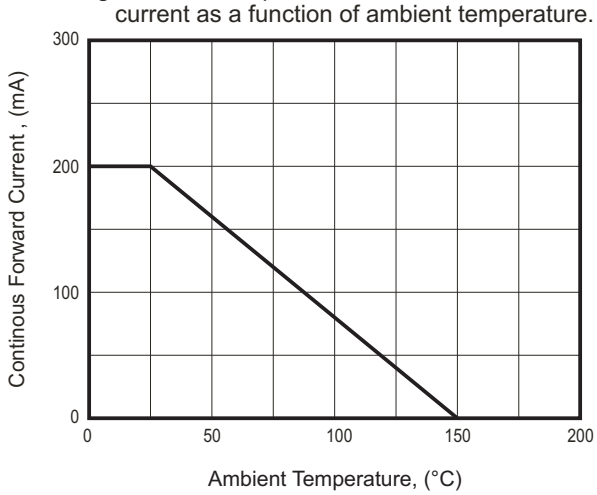


Fig.4 - Diode capacitance as a function of reverse voltage; typical values

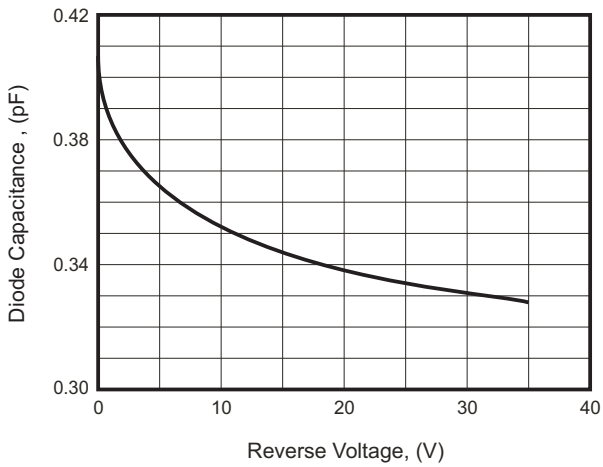
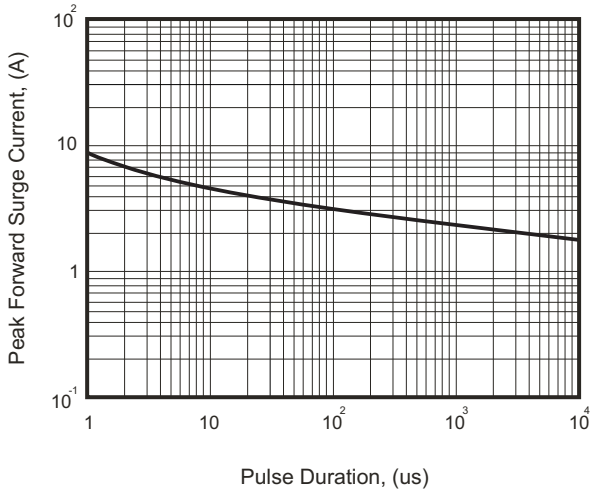
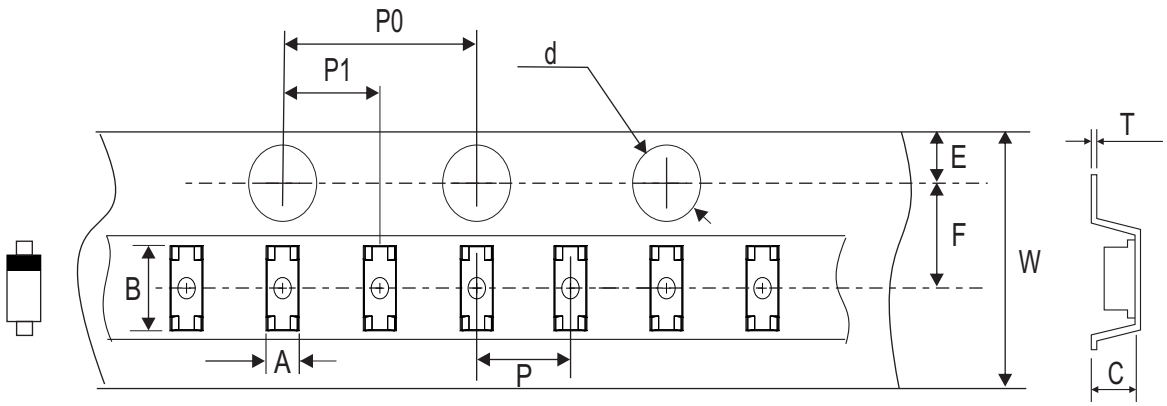
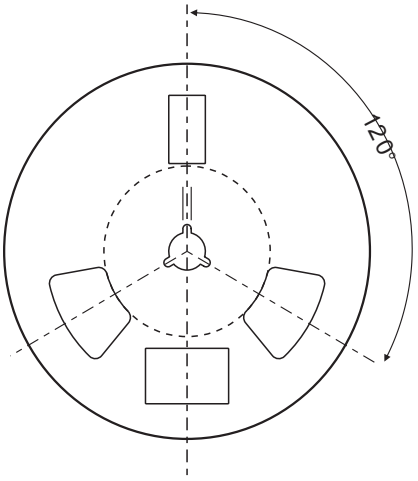


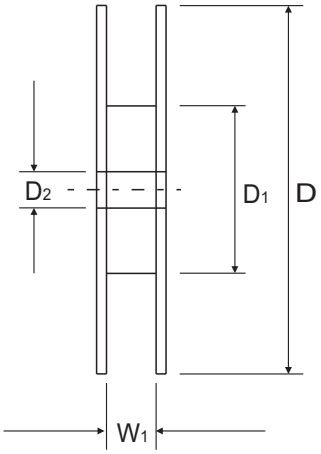
Fig.5 - Maximum permissible non-repetitive peak forward current as a Function of pulse duration

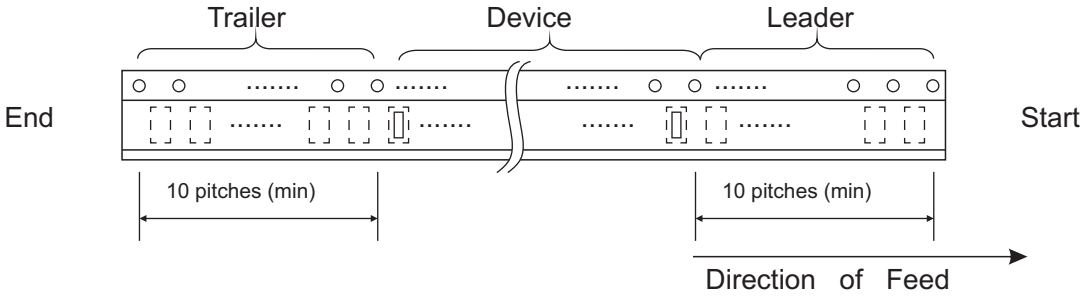


Reel Taping Specification









	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

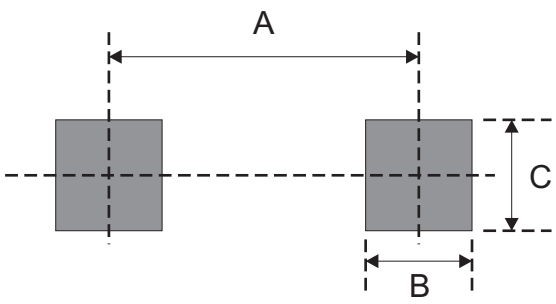
	SYMBOL	E	F	P	P0	P1	W	W1
SOD-523	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	8.00 + 0.30 / - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.315 + 0.012 / - 0.004	0.374 ± 0.039

Marking Code

Part Number	Marking Code
BAS521-HF	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