

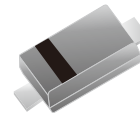
## ABAS521-HF

Reverse Voltage: 300 V

Forward Current: 250 mA

RoHS Device

Halogen Free



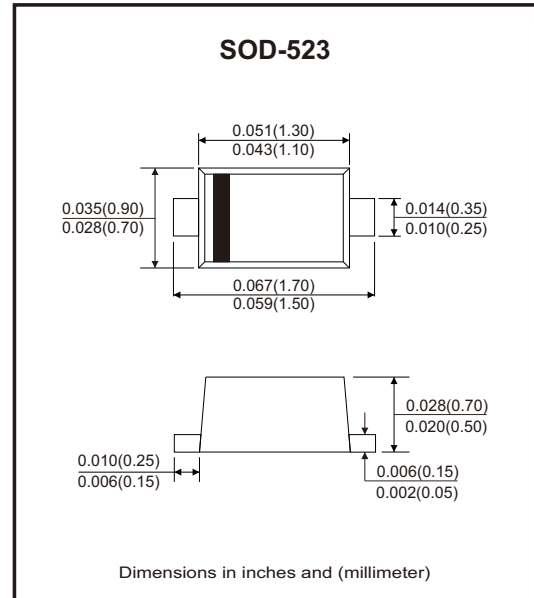
### Features

- Ultra small plastic SMD package.
- High continuous reverse voltage: 300V
- Repetitive peak forward current: 250mA
- High switching speed: max.50ns.
- AEC-Q101 Qualified.

### Mechanical data

- Case: SOD-523 package, molded plastic.
- Polarity: Color band denotes cathode end.
- Mounting position: Any.

### Circuit Diagram



### Maximum Ratings (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	$V_{RRM}$	300	V
Continuous reverse voltage	$V_R$	300	V
Continuous forward current $T_s \leq 90^{\circ}\text{C}$ ; (Note 1)	$I_F$	250	mA
Repetitive forward current $t_p = 1\text{ms}$	$I_{FRM}$	1	A
Non-repetitive peak forward surge current @ $t = 8.3\text{ms}$	$I_{FSM}$	2	A
Total power dissipation $T_s \leq 90^{\circ}\text{C}$ ; (Note 1)	$P_D$	500	mW
Junction temperature	$T_J$	150	$^{\circ}\text{C}$
Storage and operating ambient temperature	$T_{STG}$	-65 ~ +150	$^{\circ}\text{C}$

Note: 1.  $T_s$  is temperature at the soldering point of the cathode tab.

### Electrical Characteristics (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

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

## Typical Rating and Characteristic Curves (ABAS521-HF)

Fig.1 - Forward Current as a Function of Forward Voltage; Typical Values

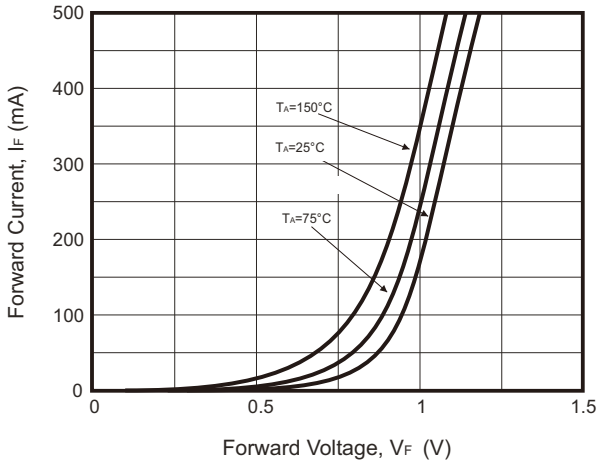


Fig.2 - Reverse Current as a Function of Junction Temperature

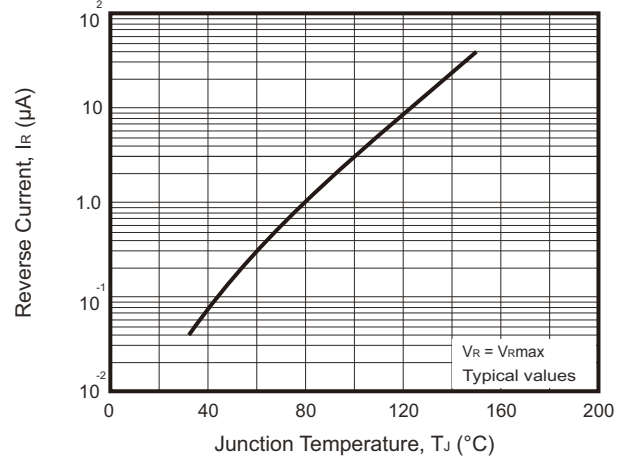


Fig.3 - Maximum Permissible Continuous Forward Current as a Function of Ambient Temperature

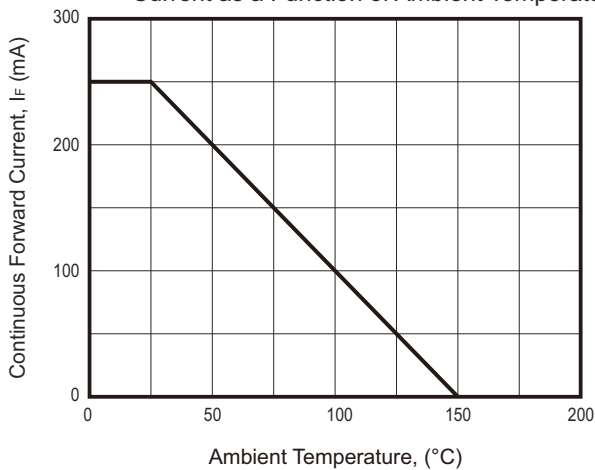


Fig.4 - Diode Capacitance as a Function of Reverse Voltage; Typical Values

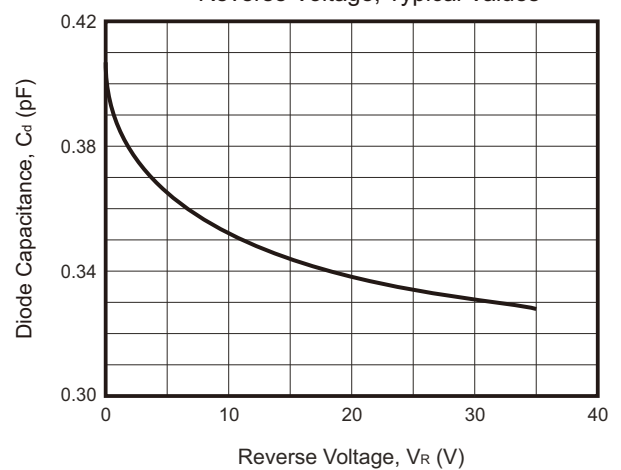
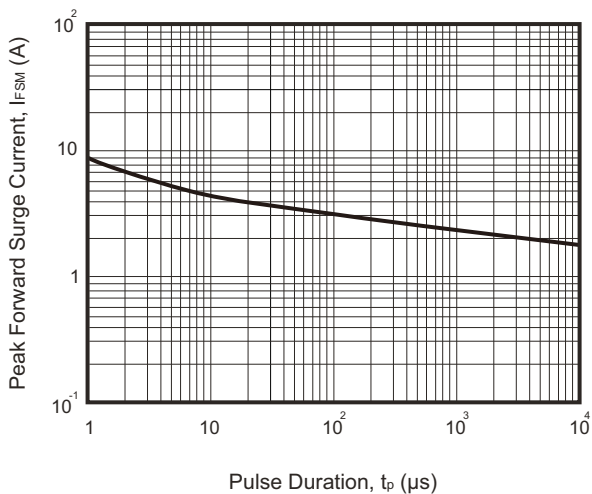
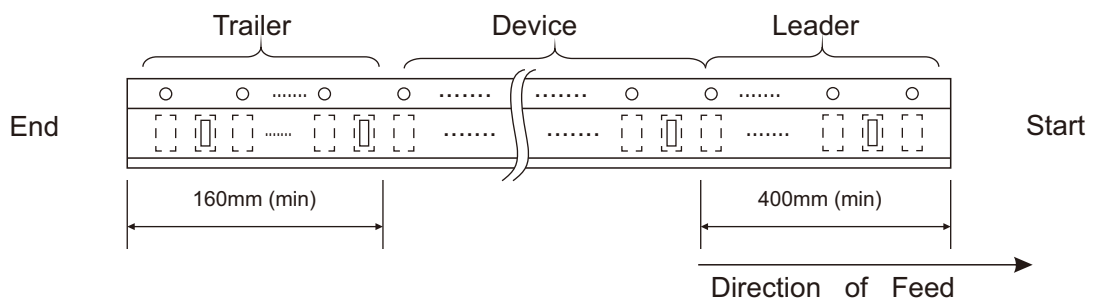
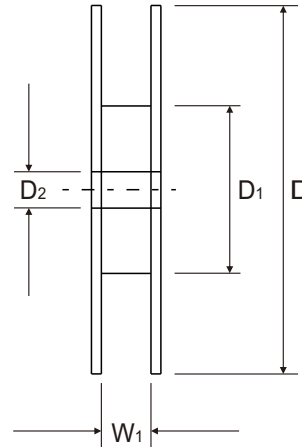
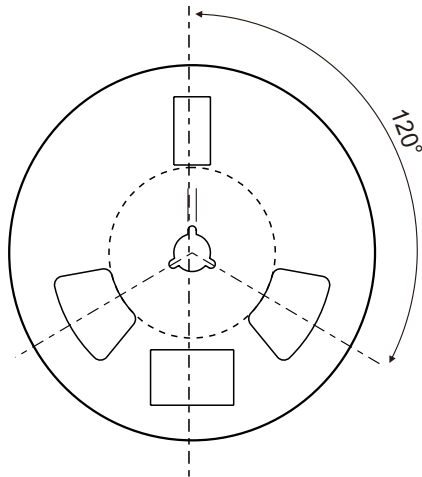
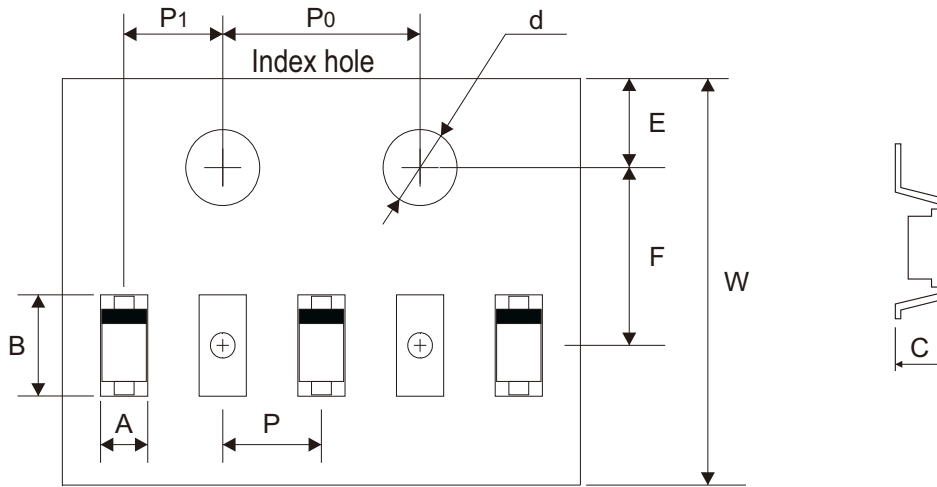


Fig.5 - Maximum Permissible Non-Repetitive Peak Forward Current as a Function of Pulse Duration



## Reel Taping Specification



SOD-523	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.96 ± 0.05	1.94 ± 0.05	0.73 ± 0.05	1.50 ± 0.10	178 ± 1.00	54.00 ± 0.50	13.00 ± 0.50
	(inch)	0.038 ± 0.002	0.076 ± 0.002	0.029 ± 0.002	0.059 ± 0.004	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

SOD-523	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.02	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	0.008 ± 0.001	0.315 + 0.012 - 0.004	0.374 ± 0.039

## Marking Code

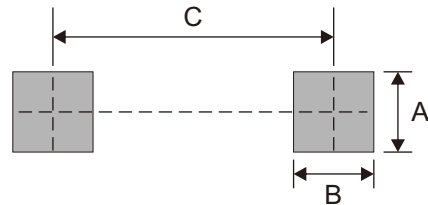
Part Number	Marking Code
ABAS521-HF	L4



= Cathode band

## Suggested P.C.B. PAD Layout

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



## Standard Packaging

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