

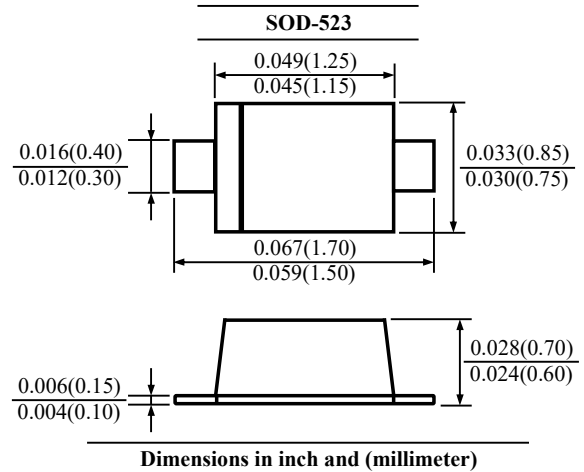


BAS316WTH

SWITCHING DIODE

FEATURES

- Fast Switching Speed
- Suffix "H" indicates Halogen-free parts, ex.BAS316WTH



Maximum Ratings@ $T_A=25\text{ }^\circ\text{C}$

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Reverse Voltage	V_R	100	V
Continuous Forward Current	I_F	250	mA
Non-Repetitive Peak Forward Current	I_{FSM}	at $t=1\text{ s}$	0.5
		at $t=1\text{ ms}$	1.0
		at $t=1\text{ }\mu\text{s}$	4.0
Power Dissipation	P_D	150	mW
Thermal Resistance from Junction to Ambient (Note 1)	$R_{\theta JA}$	833	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Note :

1. Device mounted on FR-4 substrate PCB with minimum recommended pad layout.

Electrical Characteristics@ $T_A=25\text{ }^\circ\text{C}$

Parameter	Conditions	Symbol	Min	Max	Unit
Forward Voltage	$I_F=1\text{ mA}$	V_F	-	715	mV
	$I_F=10\text{ mA}$		-	855	
	$I_F=50\text{ mA}$		-	1000	
	$I_F=150\text{ mA}$		-	1250	
Reverse current	$V_R=25\text{ V}, T_J=25\text{ }^\circ\text{C}$	I_R	-	0.03	μA
	$V_R=75\text{ V}, T_J=25\text{ }^\circ\text{C}$		-	1	
	$V_R=25\text{ V}, T_J=150\text{ }^\circ\text{C}$		-	30	
	$V_R=75\text{ V}, T_J=150\text{ }^\circ\text{C}$		-	50	
Total Capacitance	$V_R=0\text{ V}, f=1\text{ MHz}$	C_T	-	1.5	pF
Reverse Recovery Time	$I_F=10\text{ mA}, V_R=6\text{ V}, I_{rr}=0.1\times I_R,$ $R_L=100\text{ }\Omega$	t_{rr}	-	4	ns



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RATINGS AND CHARACTERISTIC CURVES

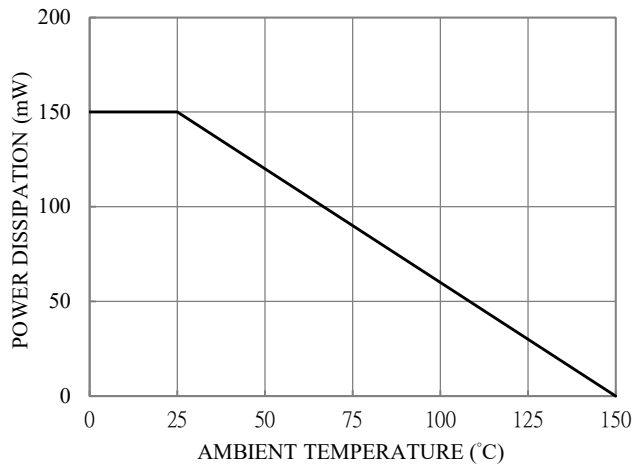


Fig.1-POWER DERATING CURVE

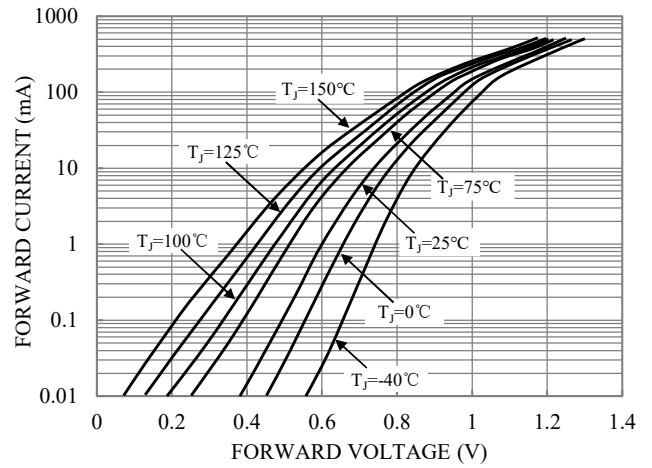


Fig.2-TYPICAL FORWARD CHARACTERISTICS

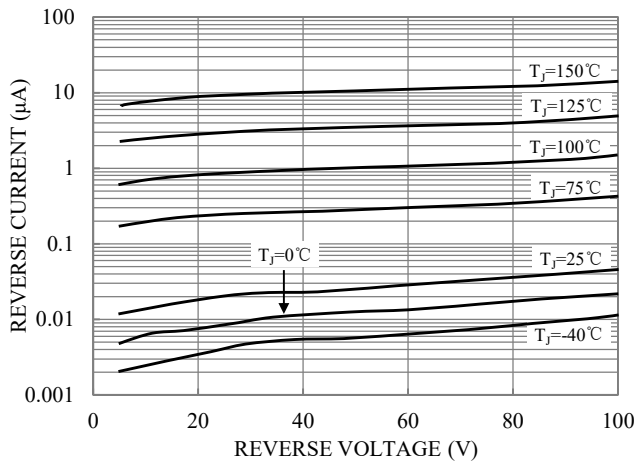


Fig.3-TYPICAL REVERSE CHARACTERISTICS

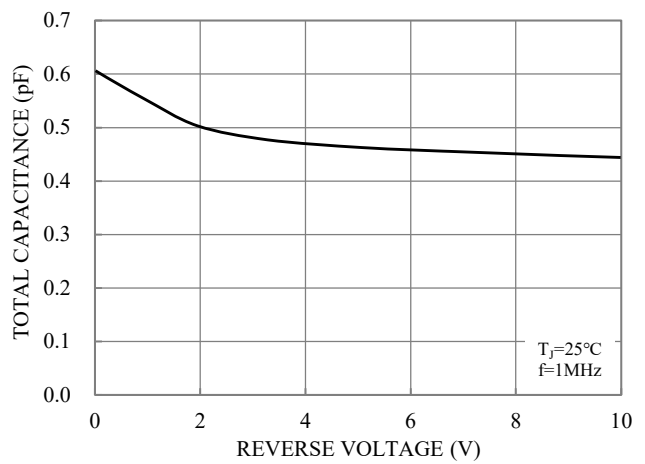


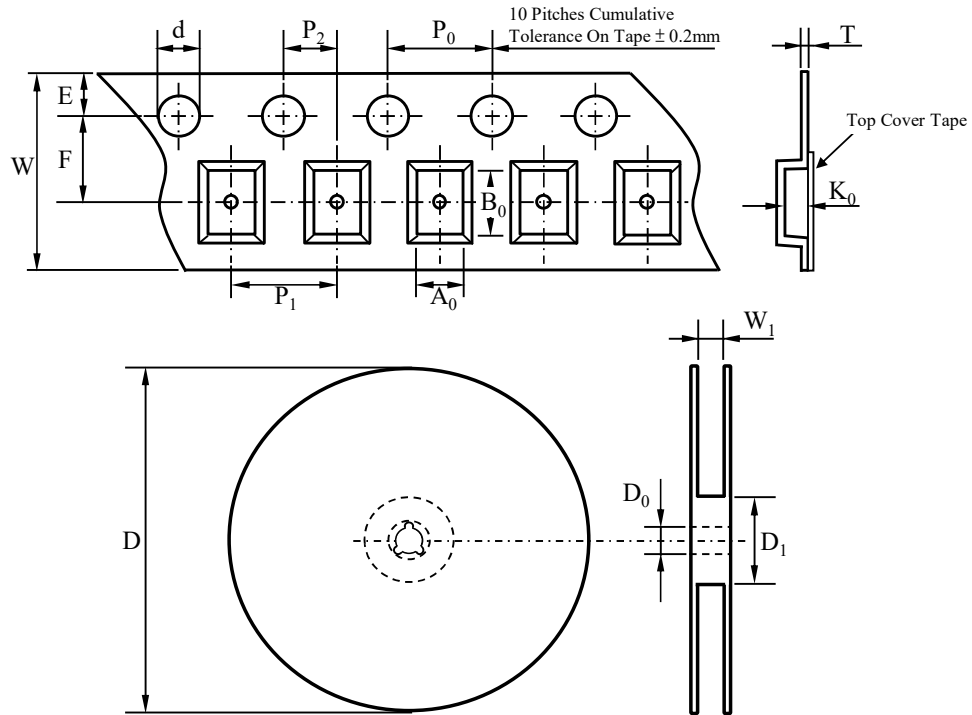
Fig.4-TOTAL CAPACITANCE VS REVERSE VOLTAGE



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TAPE & REEL SPECIFICATION



Item	Symbol	SOD-523
Carrier width	A ₀	*
Carrier length	B ₀	
Carrier depth	K ₀	
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178.00 ± 2.00
Feed hole width	D ₀	13.00 ± 0.50
Reel inner diameter	D ₁	MIN. 50.00
Sprocket hole position	E	1.75 ± 0.10
Punch hole position	F	3.50 ± 0.10
Sprocket hole pitch	P ₀	4.00 ± 0.10
Punch hole pitch	P ₁	4.00 ± 0.10
Embossment center	P ₂	2.00 ± 0.10
Overall tape thickness	T	0.20 ± 0.05
Tape width	W	8.00 ± 0.20
Reel width	W ₁	MAX. 14.50

Note *: A₀, B₀, and K₀ are determined by component size. The clearance between the components and the cavity must be within 0.05 mm min. to 0.5 mm max.

ORDER INFORMATION

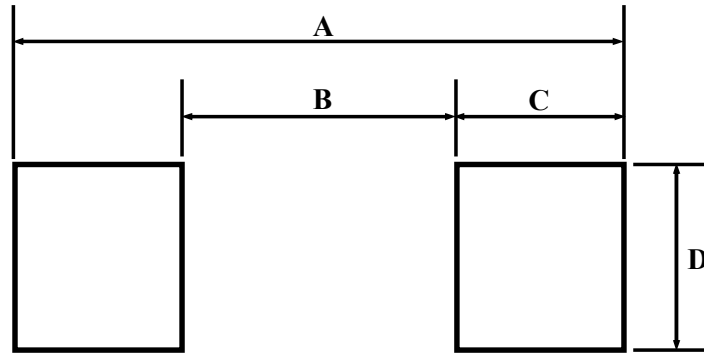
Part Number	Marking Code	Reel Size	Quantity
BAS316WTH	A	7"	4,000



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SUGGESTED SOLDER PAD LAYOUT



PACKAGE	A	B	C	D
SOD-523	2.30	1.10	0.60	0.80