

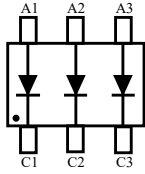


# BAS21TDWH

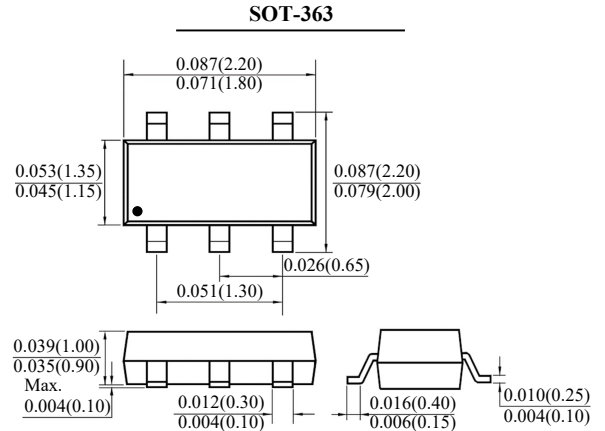
## SWITCHING DIODES

### FEATURES

- High Voltage Switching Diodes
- Suffix "H" indicates Halogen-free parts, ex. BAS21TDWH.



Top view  
Internal Schematic



Dimensions in inch and (millimeter)

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

Parameter	Symbol	Value	Unit
Reverse Voltage	$V_R$	250	V
Average Rectified Output Current	$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current	$I_{FRM}$	625	mA
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	at $t=1\mu\text{s}$	2.5
		at $t=1\text{s}$	0.5
Power Dissipation	$P_D$	300	mW
Thermal Resistance from Junction to Ambient (Note 1)	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

Note:

1. Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.

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

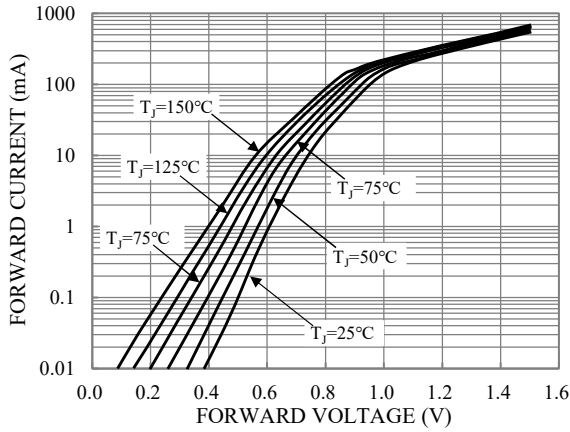
Parameter	Conditions	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage	$I_R=100\mu\text{A}$	$V_{(BR)R}$	250	-	V
Forward Voltage	$I_F=100\text{mA}$	$V_F$	-	1.00	V
	$I_F=200\text{mA}$		-	1.25	
Reverse Current	$V_R=200\text{V}, T_J=25^\circ\text{C}$	$I_R$	-	100	nA
	$V_R=200\text{V}, T_J=150^\circ\text{C}$		-	100	$\mu\text{A}$
Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$	$C_T$	-	5	pF
Reverse Recovery Time	$I_F=I_R=30\text{mA}, I_{R(REC)}=3\text{mA}, R_L=100\Omega$	$t_{rr}$	-	50	ns



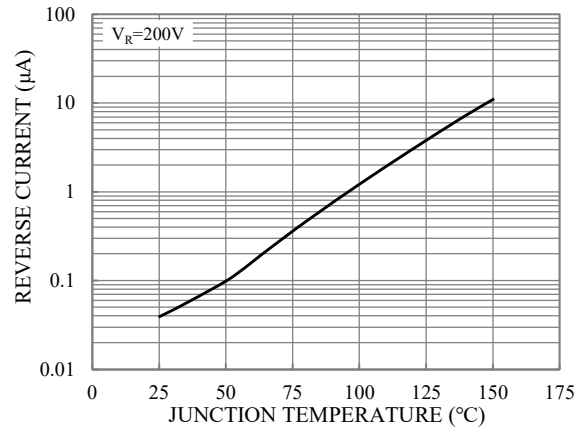
# BAS21TDWH

## SWITCHING DIODES

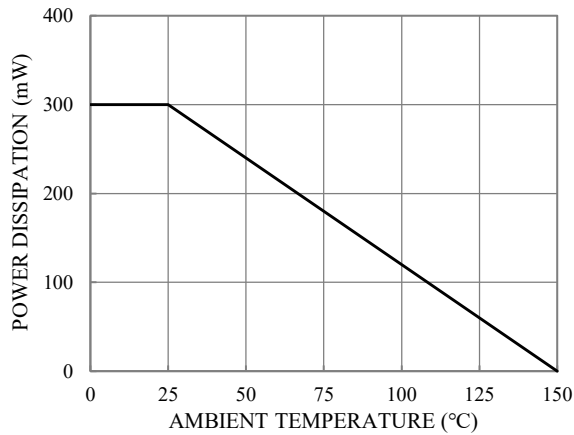
### RATINGS AND CHARACTERISTIC CURVES



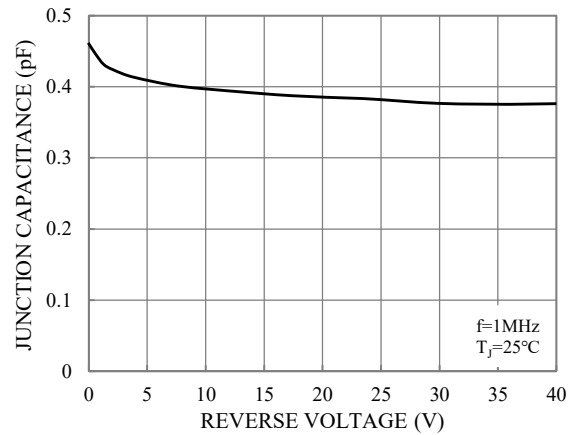
**Fig.1-FORWARD CHARACTERISTICS CURVE**



**Fig.2-REVERSE CHARACTERISTICS CURVE**



**Fig.3-POWER DERATING CURVE**



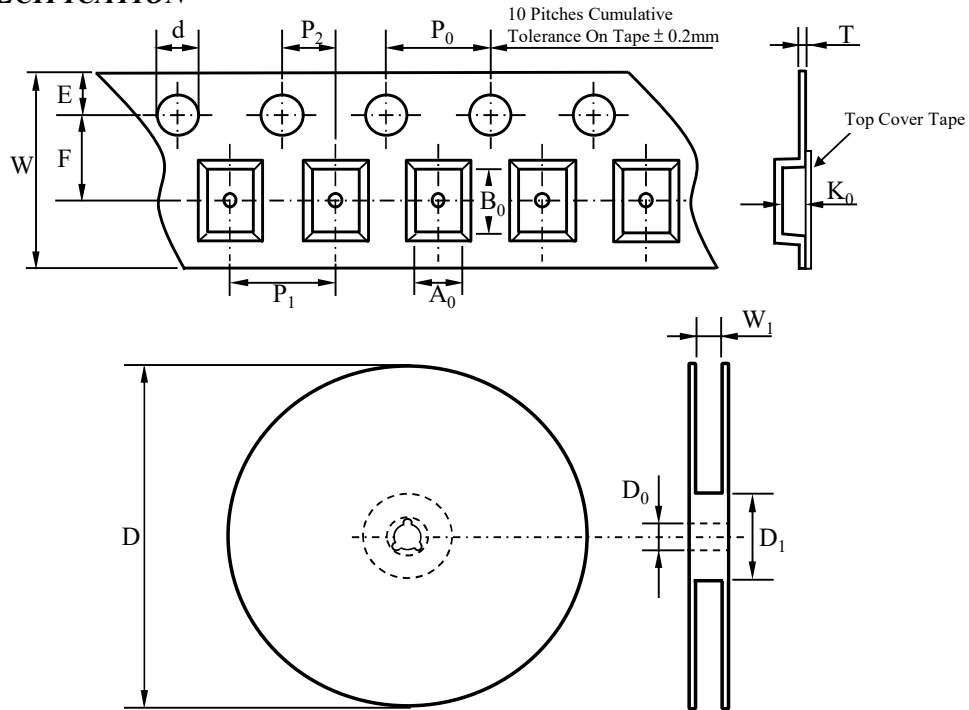
**Fig.4-JUNCTION CAPACITANCE**



# BAS21TDWH

## SWITCHING DIODES

### TAPE & REEL SPECIFICATION



Item	Symbol	SOT-363
Carrier width	$A_0$	*
Carrier length	$B_0$	
Carrier depth	$K_0$	
Sprocket hole	$d$	$1.50 \pm 0.10$
Reel outside diameter	$D$	$178.00 \pm 2.00$
Feed hole width	$D_0$	$13.00 \pm 0.50$
Reel inner diameter	$D_1$	MIN. 50.00
Sprocket hole position	$E$	$1.75 \pm 0.10$
Punch hole position	$F$	$3.50 \pm 0.10$
Sprocket hole pitch	$P_0$	$4.00 \pm 0.10$
Punch hole pitch	$P_1$	$4.00 \pm 0.10$
Embossment center	$P_2$	$2.00 \pm 0.10$
Overall tape thickness	$T$	MAX. 0.60
Tape width	$W$	$8.00 \pm 0.30$
Reel width	$W_1$	MAX. 10.00

Note \*:  $A_0$ ,  $B_0$ , and  $K_0$  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

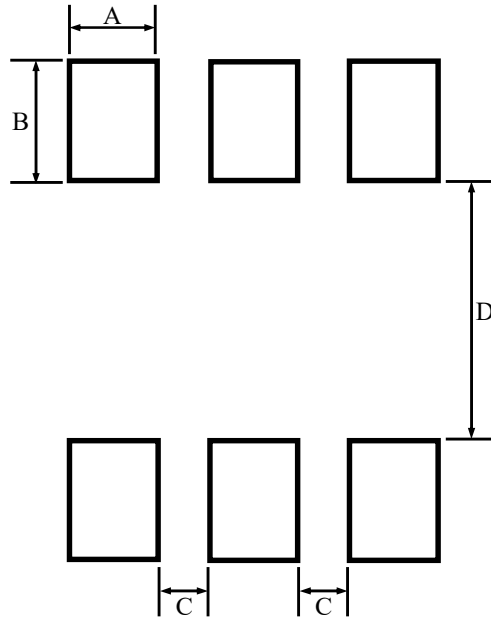
Part Number	Marking Code	Reel Size	Quantity
BAS21TDWH	SC	7"	3,000



# BAS21TDWH

## SWITCHING DIODES

### SUGGESTED SOLDER PAD LAYOUT



Unit :mm

PACKAGE	A	B	C	D
SOT-363	0.42	0.60	0.23	1.30