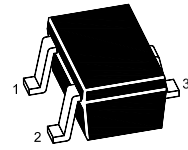
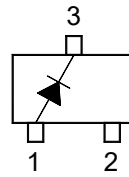


# BAS16SW

## Silicon Epitaxial Planar Switching Diode



### Applications

- For high speed switching applications

SOT-323 Plastic Package

1. Anode 2. NC 3.Cathode

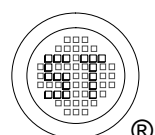
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Continuous Reverse Voltage	$V_R$	100	V
Continuous Forward Current	$I_F$	175	mA
Repetitive Peak Forward Current	$I_{FRM}$	500	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	0.5 1 4.5	A
Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

### Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	625	$^\circ\text{C/W}$

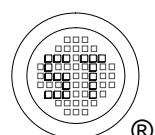
<sup>1)</sup> Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.



# BAS16SW

## Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 10\ \mu\text{A}$	$V_{(BR)R}$	100	-	V
Forward Voltage at $I_F = 1\ \text{mA}$	$V_F$	-	715	mV
at $I_F = 10\ \text{mA}$	$V_F$	-	855	mV
at $I_F = 50\ \text{mA}$	$V_F$	-	1000	mV
at $I_F = 150\ \text{mA}$	$V_F$	-	1250	mV
Reverse Current at $V_R = 25\ \text{V}$	$I_R$	-	30	nA
at $V_R = 80\ \text{V}$	$I_R$	-	0.5	$\mu\text{A}$
at $V_R = 25\ \text{V}$ , $T_J = 150^\circ\text{C}$	$I_R$	-	30	$\mu\text{A}$
at $V_R = 80\ \text{V}$ , $T_J = 150^\circ\text{C}$	$I_R$	-	50	$\mu\text{A}$
Diode Capacitance at $V_R = 0\ \text{V}$ , $f = 1\ \text{MHz}$	$C_D$	-	1.5	pF
Reverse Recovery Time at $I_F = 10\ \text{mA}$ , $V_R = 6\ \text{V}$ , $I_{rr} = 0.1 \times I_R$ , $R_L = 100\ \Omega$	$t_{rr}$	-	4	ns



Electrical Characteristics Curves

Fig 1. Power Derating Curve

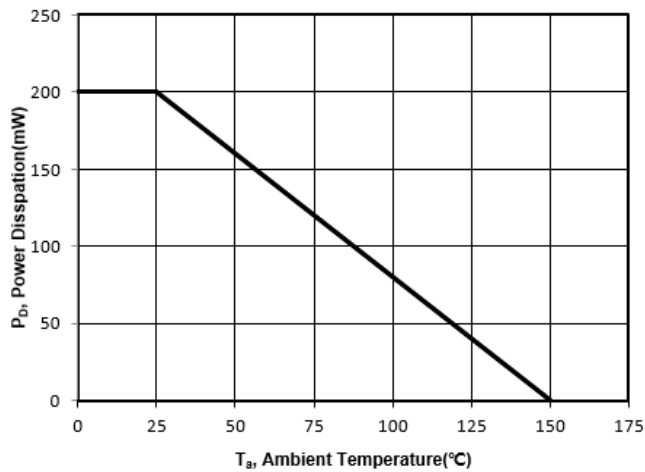


Fig 2. Capacitance Characteristics

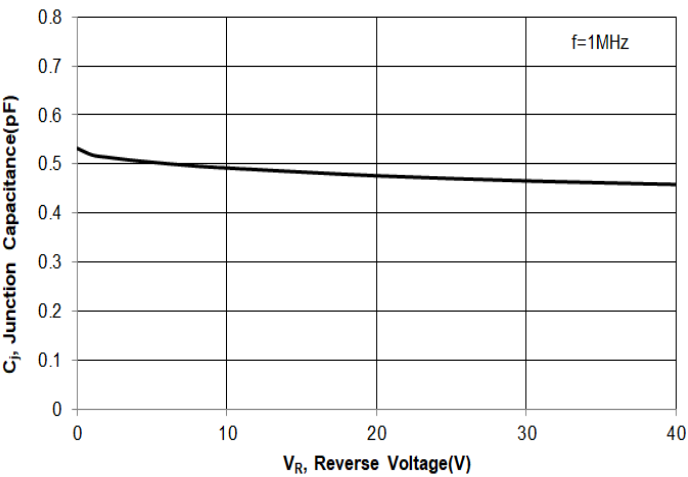


Fig 3. Reverse Characteristics

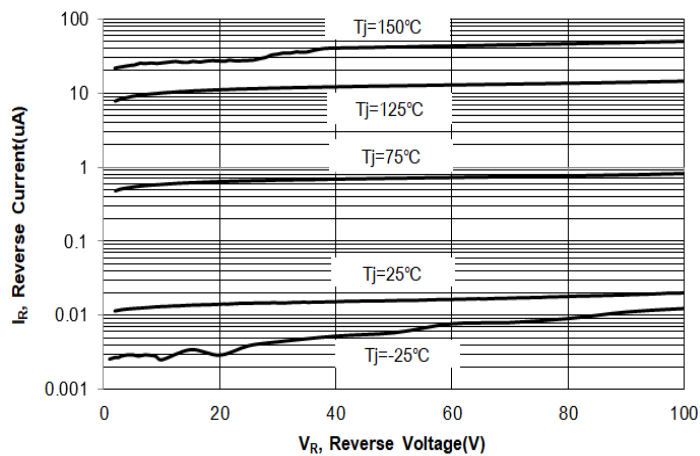
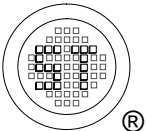
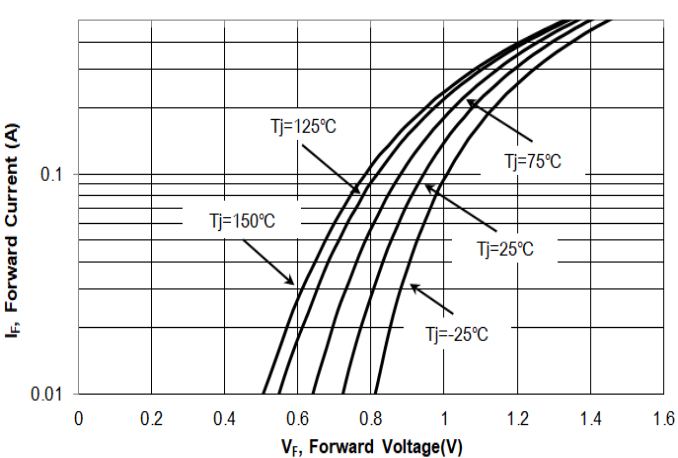


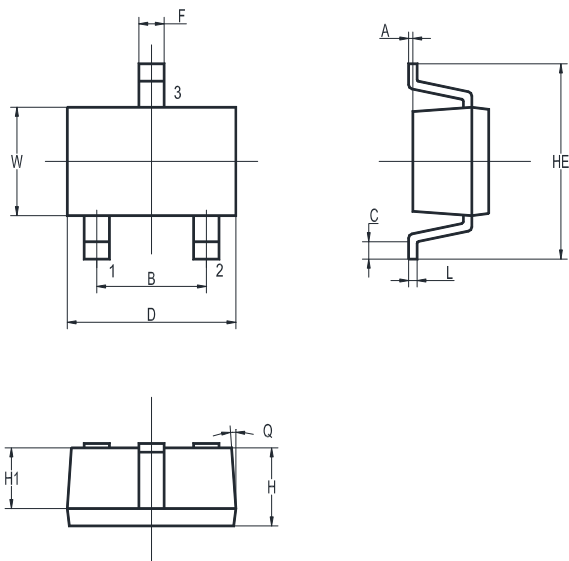
Fig 4. Forward Characteristics



# BAS16SW

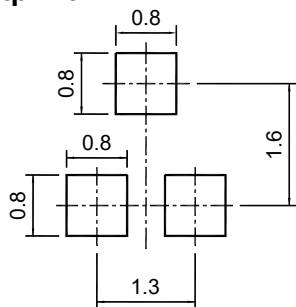
## Package Outline Dimensions (Units: mm)

SOT-323



UNIT	A	B	C	D	H	H1	HE	F	L	W	Q
mm	0.1 MAX.	1.4 1.2	0.2 MIN.	2.1 1.9	1.0 0.8	0.7 TYP.	2.4 2.0	0.35 0.25	0.15 0.05	1.35 1.15	5° MAX.

## Recommended Soldering Footprint

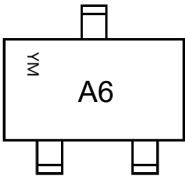


## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

## Marking information

" A6 " = Part No.  
" YM " = Date Code Marking  
" Y " = Year  
" M " = Month  
Font type: Arial



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