

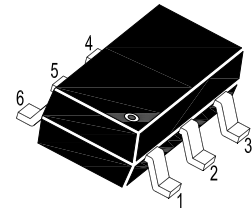
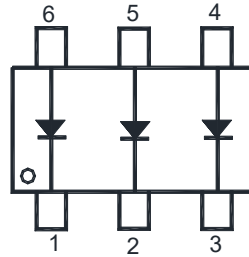
# BAS21SDW-CH

## Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes

### Features

- AEC-Q101 Qualified
- Halogen and Antimony Free(HAF), RoHS compliant



1. Cathode 2. Cathode 3. Cathode  
4. Anode 5. Anode 6. Anode  
SOT-363 Plastic package

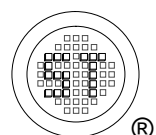
### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Reverse Voltage	$V_R$	250	V
Continuous Forward Current	$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current	$I_{FRM}$	625	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	0.5 2.5	A
			at $t = 1\text{ s}$ at $t = 1\ \mu\text{s}$
Power Dissipation	$P_D$	300	mW
Operating Junction and Storage Temperature Range	$T_j, T_{stg}$	- 55 to + 150	$^\circ\text{C}$

### Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	417	$^\circ\text{C/W}$

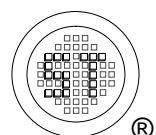
<sup>1)</sup> Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.



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

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



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## Electrical Characteristic Curve

Fig. 1 Power Derating Curve

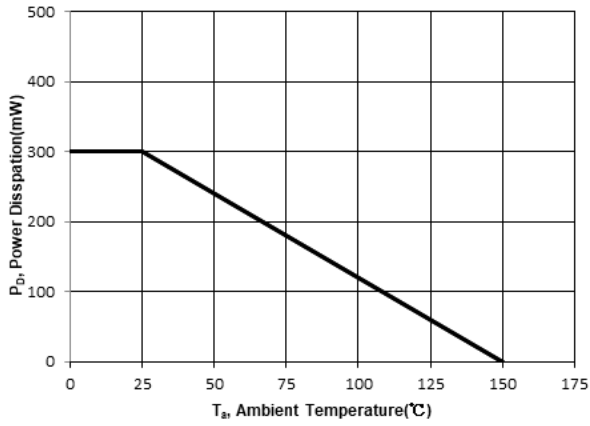


Fig. 2 Forward Characteristic Curve

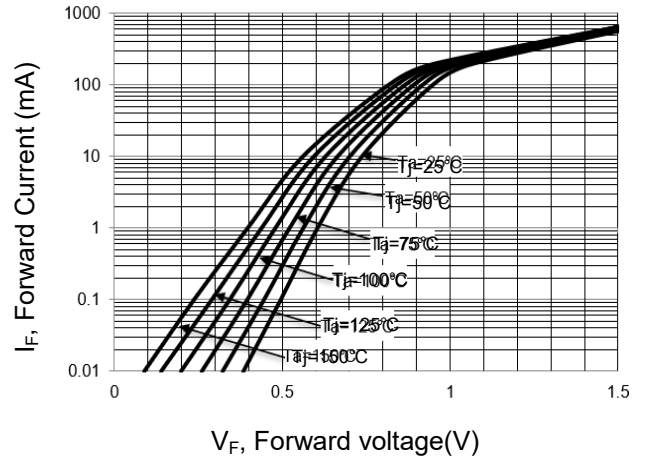


Fig. 3 Reverse Characteristic Curve

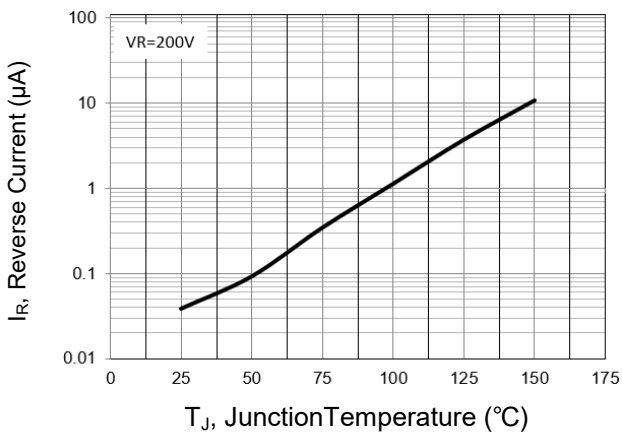
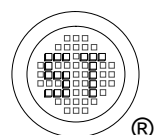
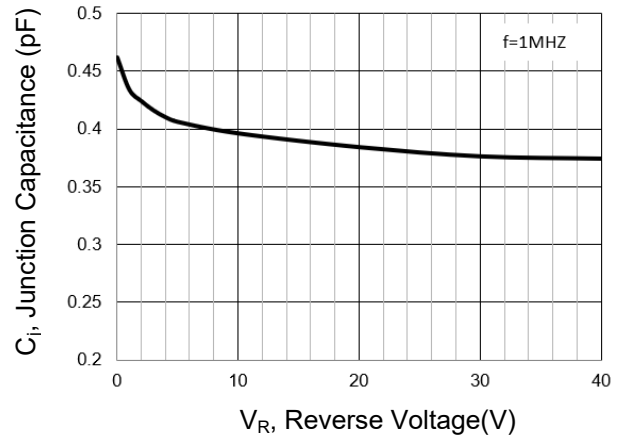


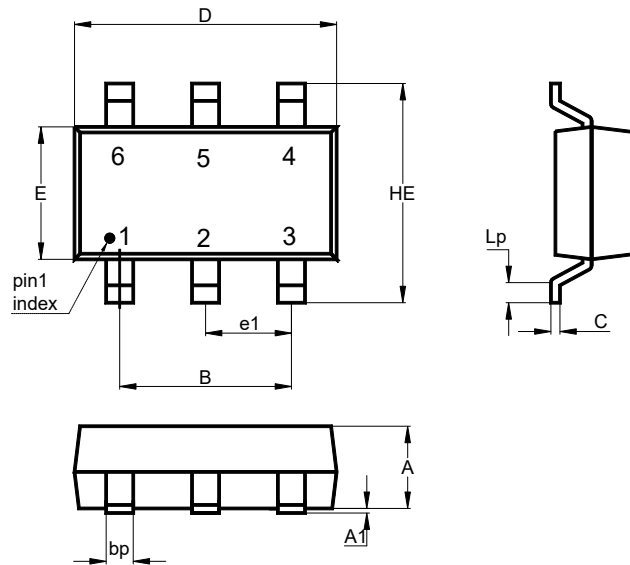
Fig. 4 Junction Capacitance



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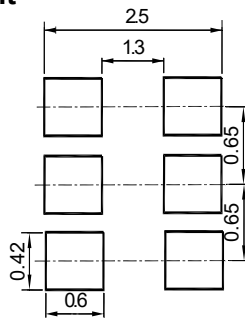
## Package Outline (Dimensions in mm)

SOT-363



Unit	A	A1	B	C	D	E	e1	HE	Lp	bp
mm	1.0 0.9	0.1 0	1.3 typ.	0.25 0.1	2.2 1.8	1.35 1.15	0.65 typ.	2.2 2.0	0.4 0.15	0.3 0.1

## Recommended Soldering Footprint



## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-363	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

## Marking information

" SC " = Part No.

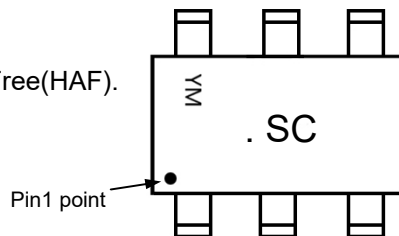
" • " = HAF (Halogen and Antimony Free(HAF)).

"YM" = Date Code Marking

"Y" = Year

"M" = Month

Font type: Arial



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