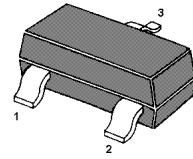
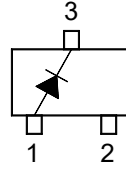


BAS116

Silicon Epitaxial Planar Switching Diode

Features

- Low leakage switching diode
- Plastic SMD package
- Low leakage current



1. Anode 2. NC 3. Cathode
SOT-23 Plastic Package

Application

- Low leakage current applications in surface mounted circuits.

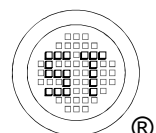
Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	85	V
Continuous Reverse Voltage	V_R	75	V
Continuous Forward Current	I_F	215	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	$t = 1\ \mu\text{s}$ 4	A
		$t = 1\ \text{ms}$ 1	
		$t = 1\ \text{s}$ 0.5	
Power Dissipation	P_{tot}	250	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 ¹⁾	$R_{\theta JA}$	500	$^\circ\text{C/W}$

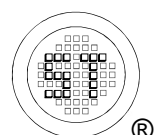
¹⁾ Device mounted on FR-4 PCB with minimum recommended pad layout.



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

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 1\text{ mA}$	V_F	-	0.9	V
at $I_F = 10\text{ mA}$	V_F	-	1	V
at $I_F = 50\text{ mA}$	V_F	-	1.1	V
at $I_F = 150\text{ mA}$	V_F	-	1.25	V
Reverse Current at $V_R = 75\text{ V}$	I_R	-	5	nA
at $V_R = 75\text{ V}$, $T_j = 150\text{ }^\circ\text{C}$		-	80	
Reverse Breakdown Voltage at $I_R = 10\text{ }\mu\text{A}$	$V_{(BR)R}$	75	-	V
Diode Capacitance at $V_R = 0$, $f = 1\text{ MHz}$	C_d	-	2	pF
Reverse Recovery Time at $I_F = I_R = 10\text{ mA}$, $R_L = 100\text{ }\Omega$, $I_{rr} = 0.1 \times I_R$	t_{rr}	-	3	μs



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Electrical Characteristics Curves

Fig 1. Power Derating Curve

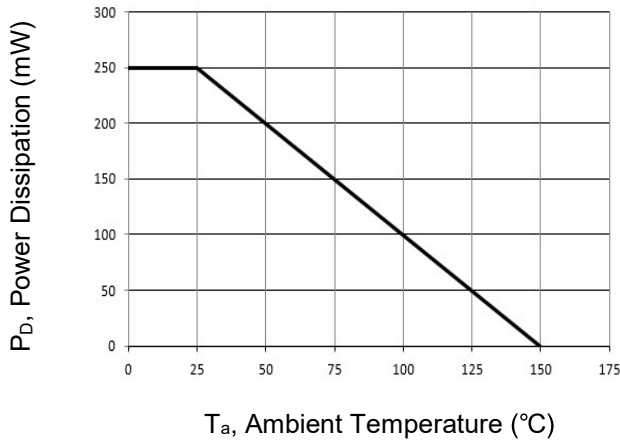


Fig 2. Capacitance Characteristics Curve

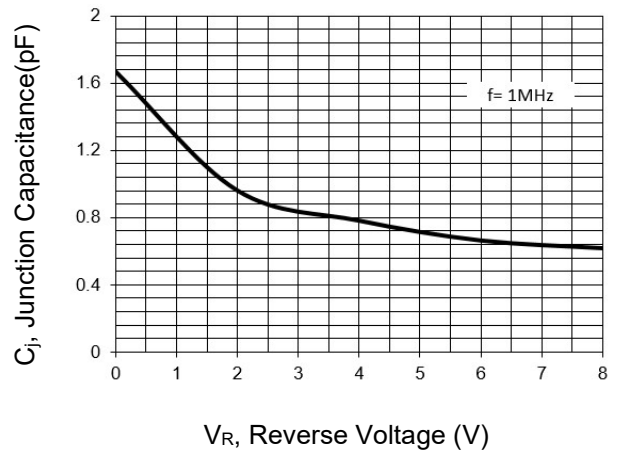


Fig 3. Reverse Characteristics Curve

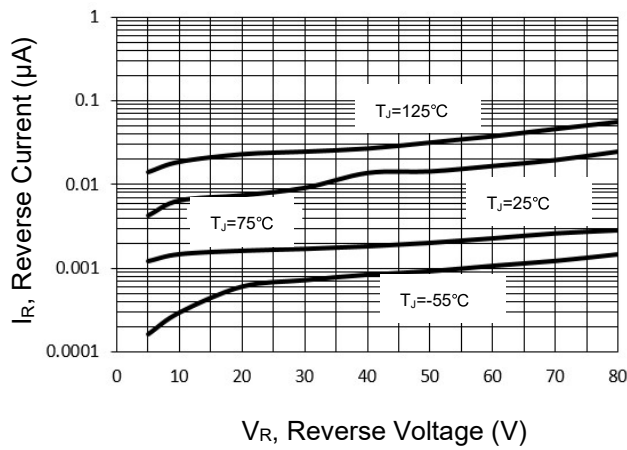
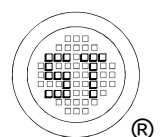
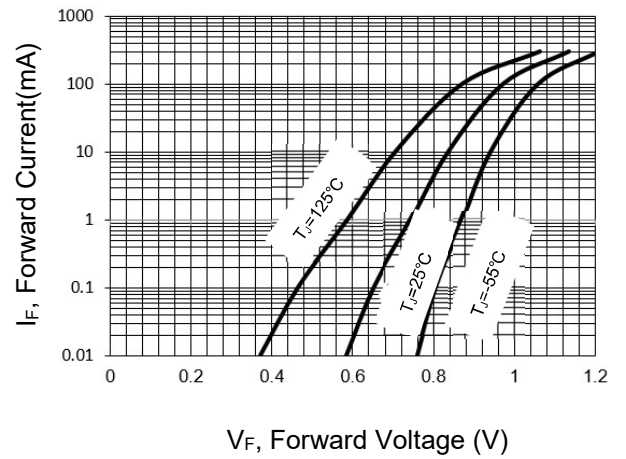


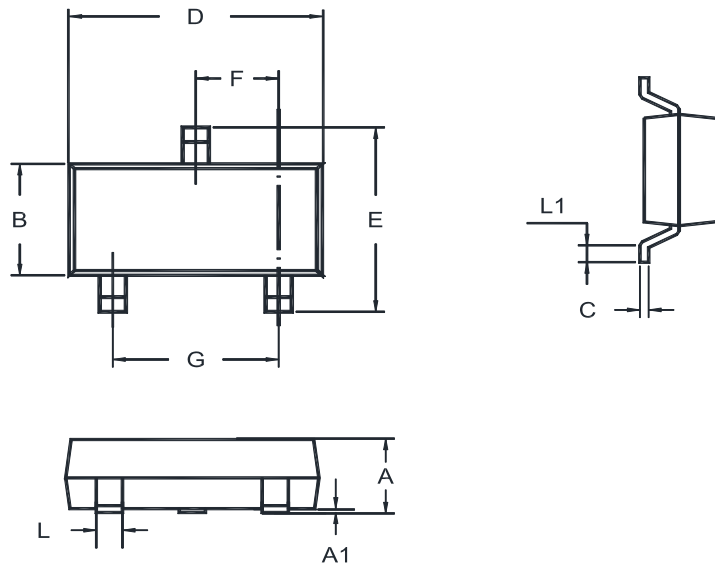
Fig 4. Forward Characteristics Curve



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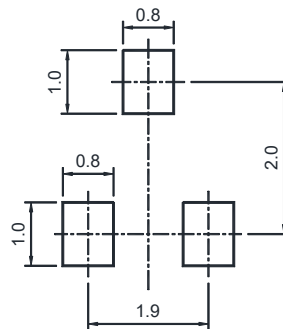
Package Outline (Dimensions in mm)

SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20	0.100	1.40	0.19	3.04	2.6	1.02	2.04	0.51	0.2
	0.89	0.013	1.20	0.08	2.80	2.2	0.89	1.78	0.37	MIN

Recommended Soldering Footprint



Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

"JV" = Part No.

"YM" = Date Code Marking

"Y" = Year

"M" = Month

Font type: Arial

