

BAW56-HAF

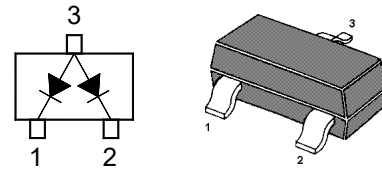
Silicon Epitaxial Planar Switching Diode

Features

- Small package
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance
- Halogen and Antimony Free(HAF), RoHS compliant

Applications

- Ultra high speed switching application



Marking Code: **A1**
TO-236 Plastic Package

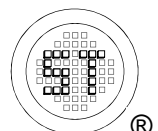
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	100	V
Continuous Reverse Voltage	V_R	75	V
Forward Current (DC)	I_F	215	mA
Repetitive Peak Forward Current	I_{FRM}	450	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	0.5 1 4	A
Power Dissipation	P_{tot}	350	mW
Operating 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⁾	$R_{\theta JA}$	357	$^\circ\text{C/W}$

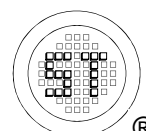
¹⁾ Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.



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

Parameter	Symbol	Max.	Unit
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	1	V
at $I_F = 150\text{ mA}$	V_F	1.25	V
Reverse Current			
at $V_R = 25\text{ V}$	I_R	30	nA
at $V_R = 75\text{ V}$	I_R	1	μA
at $V_R = 25\text{ V}$, $T_J = 150^\circ\text{C}$	I_R	30	μA
at $V_R = 75\text{ V}$, $T_J = 150^\circ\text{C}$	I_R	50	μA
Diode Capacitance			
at $V_R = 0$, $f = 1\text{ MHz}$	C_d	2	pF
Reverse Recovery Time			
at $I_F = 10\text{ mA}$, $I_{rr} = 0.1 \times I_R$, $V_R = 6\text{ V}$, $R_L = 100\ \Omega$	t_{rr}	4	ns



Electrical Characteristics Curves

Fig 1. Power Derating Curve

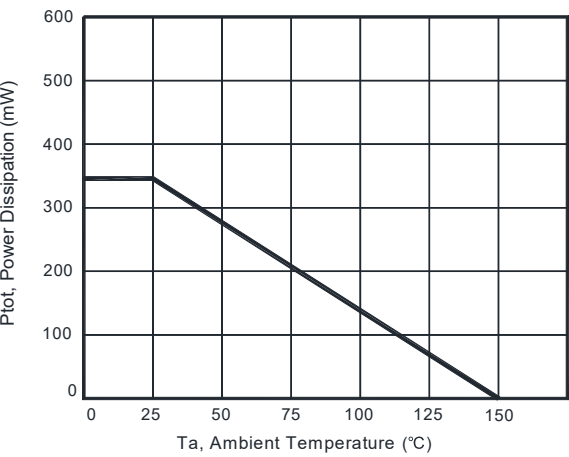


Fig 2. Capacitance characteristics

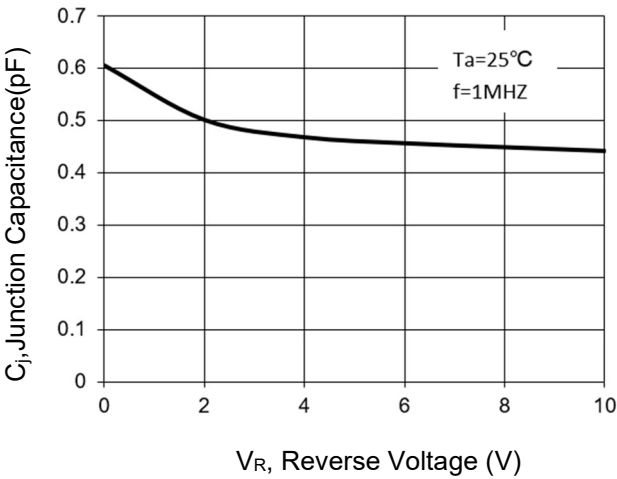


Fig 3. Reverse Characteristics

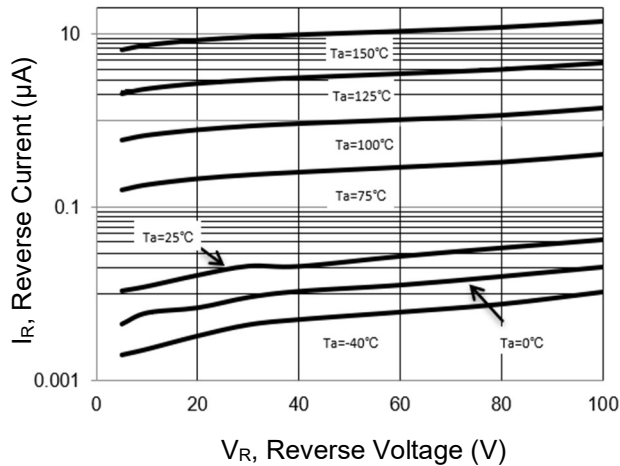
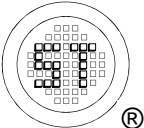
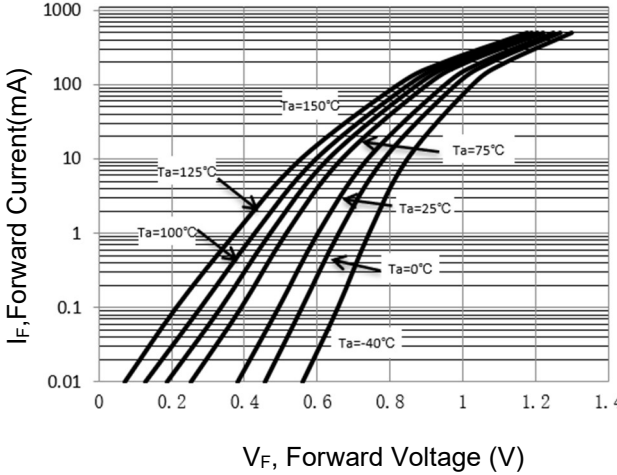
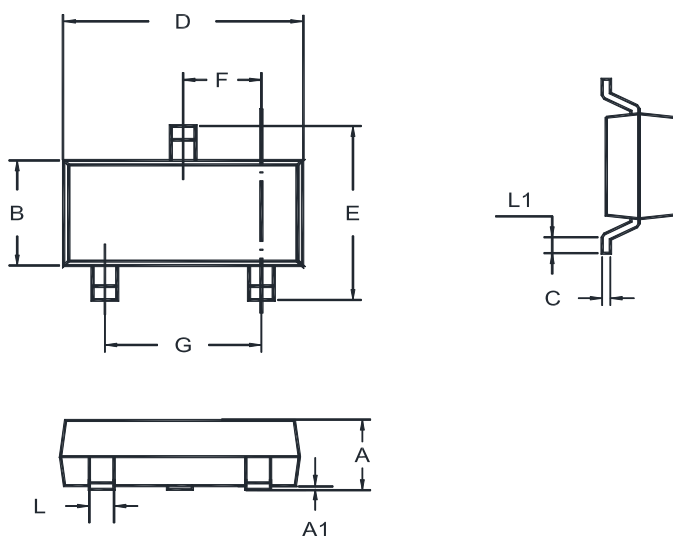


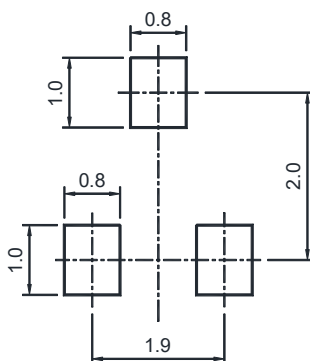
Fig 4. Forward Characteristics





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	
TO-236	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" A1 " = Part No.

" • " = HAF (Halogen and Antimony Free)

" YM " = Date Code Marking

" Y " = Year

" M " = Month

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