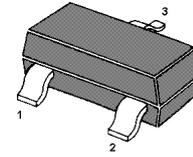
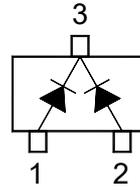


# BAV70-HAF

## 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



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

### Applications

- Ultra high speed switching application

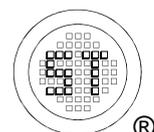
### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Maximum Peak Reverse Voltage	$V_{RM}$	100	V
Reverse Voltage	$V_R$	75	V
Average Forward Current	$I_{F(AV)}$	200	mA
Maximum Peak Forward Current	$I_{FM}$	300	mA
Non-Repetitive Peak Forward Surge Current	$I_{FSM}$	1 2	A
		at $t = 1\text{ s}$ at $t = 1\text{ }\mu\text{s}$	
Power Dissipation	$P_D$	350	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

### Thermal Resistance

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	357	$^\circ\text{C/W}$

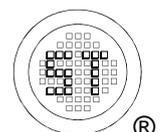
<sup>1)</sup> Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.



# BAV70-HAF

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

Parameter	Symbol	Min.	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 $V_R = 20\text{ V}$	$I_R$	-	25	nA
at $V_R = 75\text{ V}$	$I_R$	-	2.5	$\mu\text{A}$
at $V_R = 25\text{ V}, T_J = 150\text{ }^\circ\text{C}$	$I_R$	-	30	$\mu\text{A}$
at $V_R = 75\text{ V}, T_J = 150\text{ }^\circ\text{C}$	$I_R$	-	50	$\mu\text{A}$
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	75	-	V
Total Capacitance at $V_R = 0\text{ V}, f = 1\text{ MHz}$	$C_T$	-	2	pF
Reverse Recovery Time at $I_F = 10\text{ mA}, V_R = 6\text{ V}, I_{rr} = 0.1 \times I_R, R_L = 100\text{ }\Omega$	$t_{rr}$	-	4	ns



# BAV70-HAF

## Electrical Characteristics Curves

Fig 1. Power Dissipation vs. Temperature

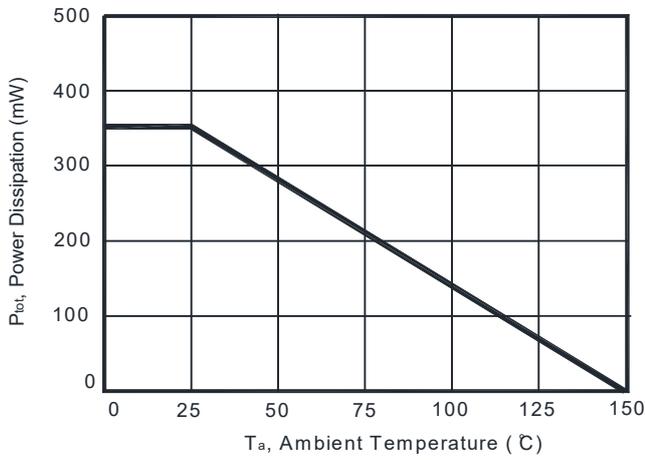


Fig 2. Total Capacitance vs. Reverse Voltage

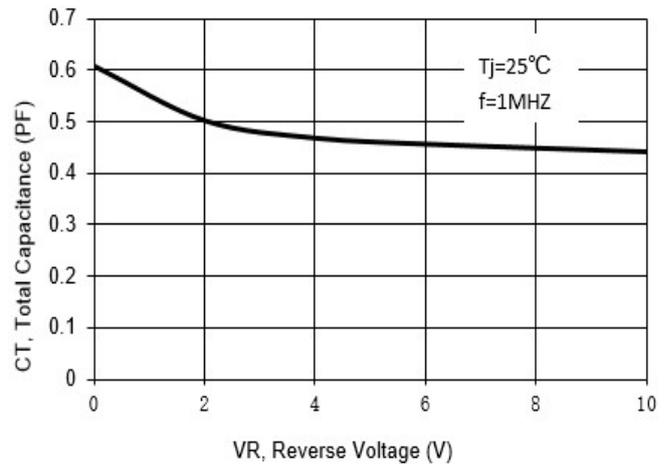


Fig 3. Reverse Current vs. Reverse Voltage

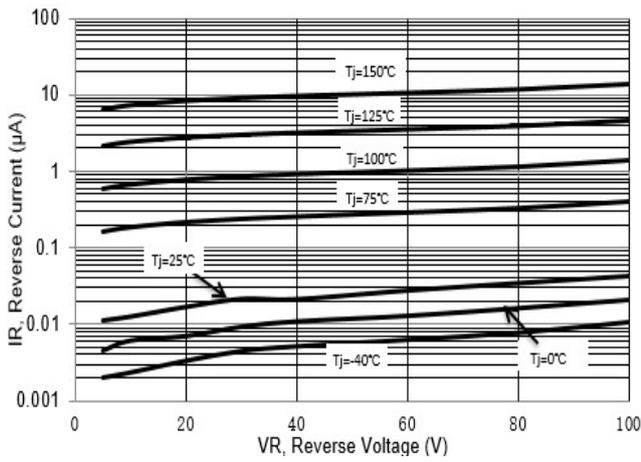
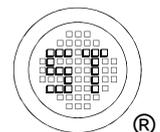
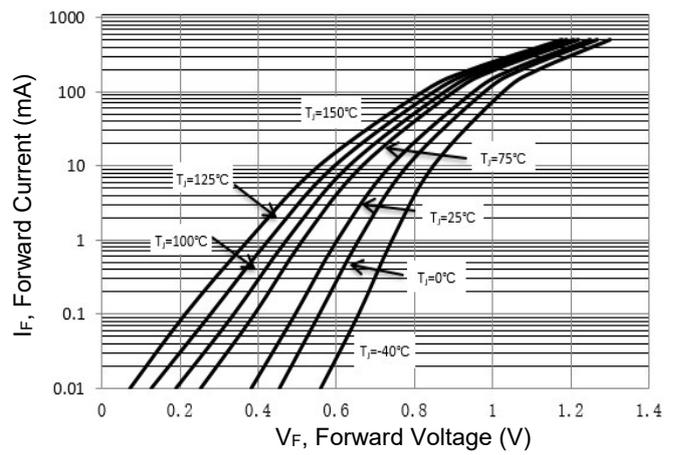


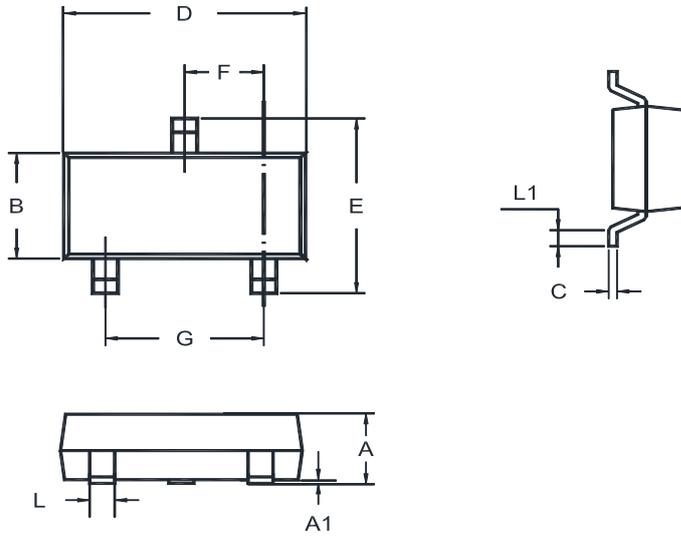
Fig 4. Forward Characteristics



# BAV70-HAF

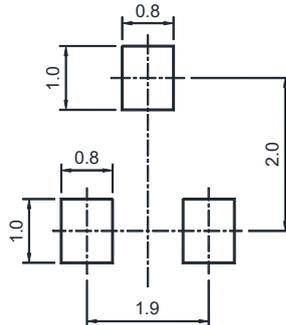
## Package Outline (Dimensions in mm)

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

"A4" = Part No.

"•" = HAF (Halogen and Antimony Free)

"YM" = Date Code Marking

"Y" = Year

"M" = Month

Font type: Arial

