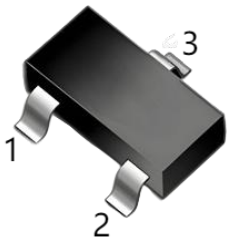
Fast Switching Diode

Parameter	Value	Unit
V_{RRM}	250	V
I_F	400	mA

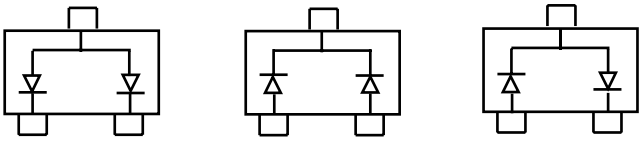


SOT-23

Features

- Fast Switching Speed
- For General Purpose Switching
- High Conductance

Equivalent Circuit



BAV23A BAV23C BAV23S

Absolute Maximum Ratings (Ta=25℃unless otherwise noted)

Parameter		Symbol	Value	Unit
Reverse Voltage		V_{RRM}	250	V
Working Peak Reverse Voltage		V_{RWM}	200	
DC Blocking Voltage		V_R	200	
RMS Reverse Voltage		$V_{R(RMS)}$	141	
Forward Continuous Current (Notes 1)		I_F	400	mA
Non-Repetitive Peak Forward Surge Current	t=1us	I_{FSM}	9	A
	t=100us		3	
	t=10ms		1.7	
Repetitive Peak Forward Surge Current		I_{FRM}	625	mA
Power Dissipation		P_D	350	mW
Thermal Resistance Junction to Ambient		$R_{\theta JA}$	357	℃/W
Junction Temperature		T_J	150	℃
Storage Temperature range		T_{stg}	-65 to 150	

Electrical Characteristics (Ta=25℃unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V_R	I_R=100uA	250			V
Forward voltage	V_F	I_F=100mA			1	
		I_F=200mA			1.25	
Reverse voltage leakage current	I_R	V_R=200V , T_J=25℃			100	nA
		V_R=200V , T_J=150℃			100	uA
Junction capacitance	C_j	V_R=0V, f=1MHz			5	pF
Reverse recovery time	t_{rr}	I_F=I_R=30mA,Irr=0.1xI_R, R_L=100Ω			50	ns

Typical Characteristics

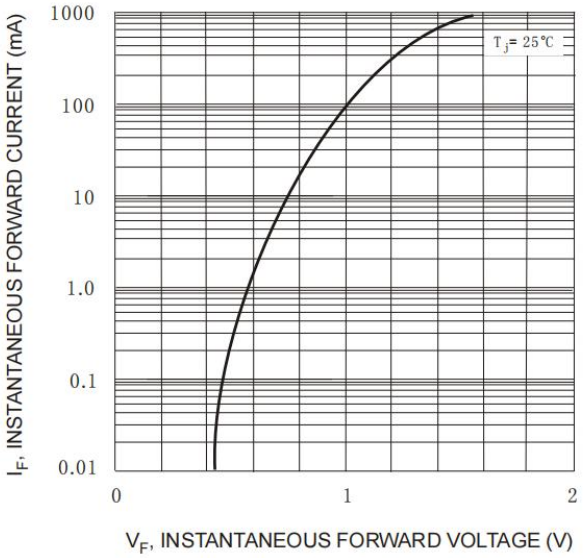


Fig. 1 Forward Characteristics

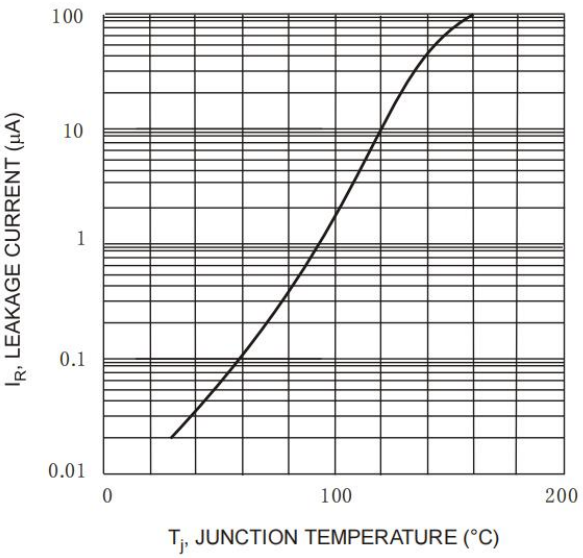
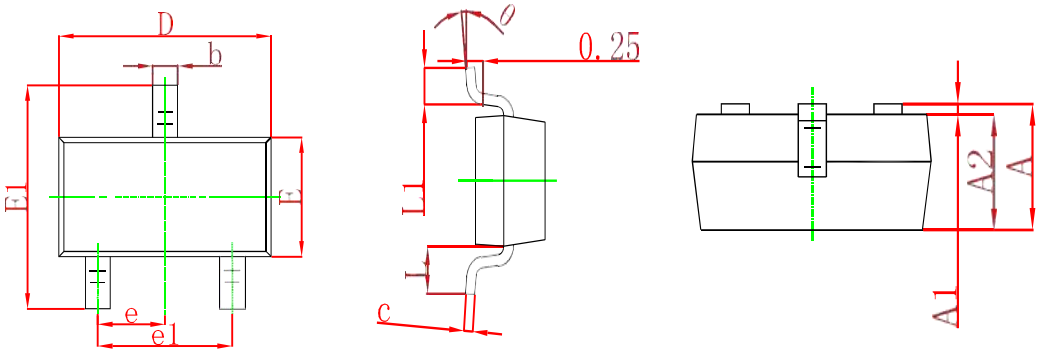


Fig. 2 Leakage Current vs Junction Temperature

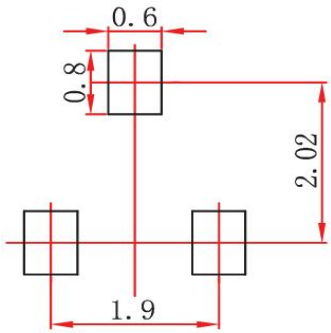
Package Outlines (Units: mm)

SOT-23



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters
2. General tolerance: ±0.05mm
3. The pad layout is for reference purposes only

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