

Fast Switch Diodes

SOT-23 Package

BAV70

MERITEK

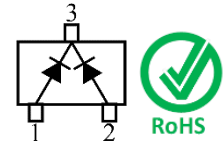
FEATURE

- Power Dissipation: 350mW
- Low Forward Voltage
- 200mA Average Rectified Current
- Very High Switching Speed



MECHANICAL DATA

- Case: SOT-23, Molded Plastic
- Terminals: Solderable per MIL-STD, Method 2026



MAXIMUM RATINGS

Parameter	Symbol	Value	Units
Non-Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Reverse Voltage	V_R	75	V
Average Forward Current	$I_{F(AV)}$	200	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	$t = 1\mu s$	2
		$t = 1s$	1
Power Dissipation	P_{TOT}	350	mW
Typical Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}C/W$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Symbol	Min	Max	Unit
Reverse Breakdown Voltage	$I_R = 100\mu A$	$V_{(BR)R}$	75	-	V
Forward Voltage	$I_F = 1mA$	V_F	-	715	mV
	$I_F = 10mA$		-	855	
	$I_F = 50mA$		-	1000	
	$I_F = 150mA$		-	1250	
Reverse Leakage Current	$V_R = 20V$	I_R	-	25	nA
	$V_R = 75V$		-	2.5	μA
	$V_R = 25V, T_J = 150^{\circ}C$		-	30	
	$V_R = 75V, T_J = 150^{\circ}C$		-	50	
Total Capacitance	$V_R = 0V, f = 1MHz$	C_d	-	2	pF
Reverse Recovery Time	$I_F = 10mA, V_R = 6V, I_{rr} = 0.1I_R, R_L = 100\Omega$	t_{rr}	-	4	nS

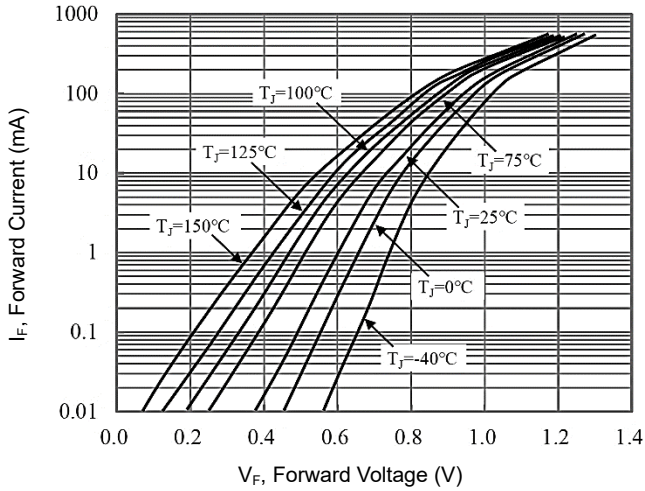
Note:

1. $T_A = 25^{\circ}C$ unless otherwise specified.

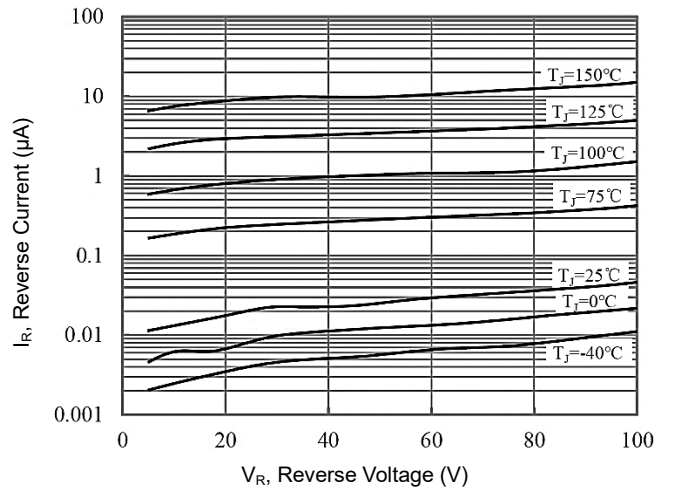
2. Device mounted on FR-4 substrate PC board, with minimum recommended pad layout.

CHARACTERISTIC CURVES

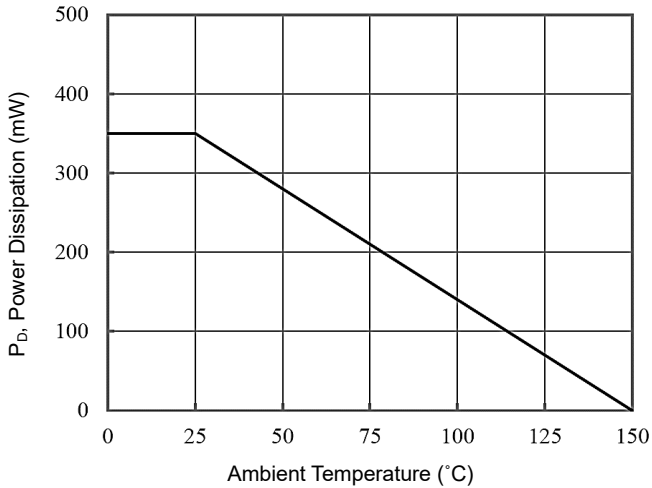
Typical Forward Characteristics



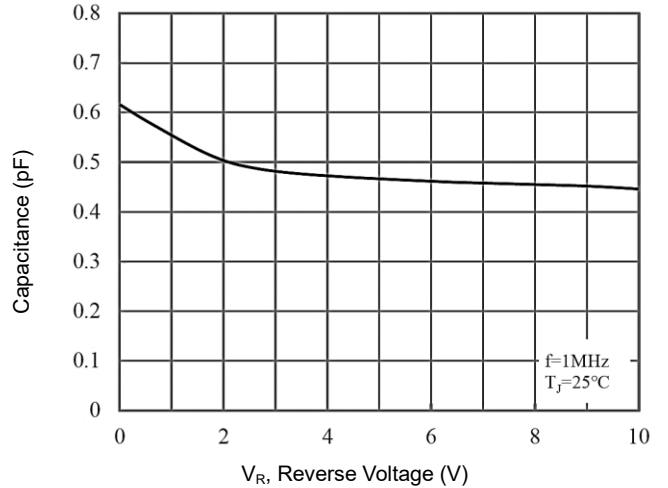
Typical Reverse Characteristics



Power Derating Curve



Capacitance



Fast Switch Diodes SOT-23 Package

BAV70

MERITEK

DIMENSIONS AND RECOMMENDED LAND PATTERN

SOT-23	Min (mm)	Max (mm)
A1	0.00	0.10
A2	0.79	1.40
b	0.30	0.50
C	0.08	0.20
D	2.70	3.10
e	0.89	1.02
e1	1.78	2.04
E	2.10	2.80
E1	1.20	1.60
L	0.15	-
X	0.80	
X1	0.95	
Y	1.00	
Y1	1.00	
Y2	3.00	

