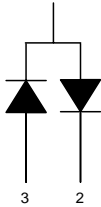


# SOT23 SILICON PLANAR HIGH SPEED SWITCHING SERIES DIODE PAIR

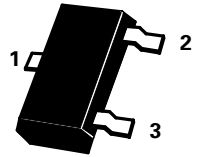
ISSUE 2 - MAY 1995

## BAV99

### PIN CONFIGURATIONS



PARTMARKING DETAILS  
BAV99.....A7



SOT23

### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Continuous Reverse Voltage	$V_R$	70	V
Repetitive Peak Reverse Voltage	$V_{RRM}$	70	V
Average Rectified Forward Current ( over any 20mS Period)	$I_{F(AV)}$	100	mA
Repetitive Peak Forward Current	$I_{FRM}$	200	mA
Peak Forward Surge Current	$I_{FM(SURGE)}$	500	mA (dc)
Power Dissipation at $T_{amb}=25^{\circ}C$	$P_{tot}$	330	mW
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^{\circ}C$

### CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$ unless otherwise stated).

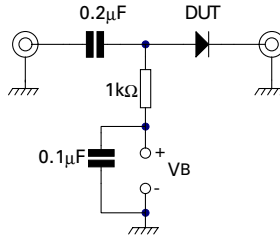
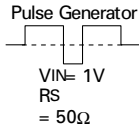
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Forward Voltage	$V_F$			715 855 1.1 1.3	mV mV V V	$I_F=1mA$ $I_F=10mA$ $I_F=50mA$ $I_F=100mA$
Reverse Current	$I_R$			30 2.5 50	$\mu A$ $\mu A$ $\mu A$	$V_R=25V, T_{amb}=150^{\circ}C$ $V_R=70V$ $V_R=70V, T_{amb}=150^{\circ}C$
Diode Capacitance	$C_D$			1.5	pF	$f=1MHz$
Forward Recovery Voltage	$V_{fr}$			1.75	V	Switched to $I_F=10mA, t_r=20ns$
Reverse Recovery Time	$t_{rr}$			6	ns	Switched from $I_F=10mA, V_R=1V$ $R_L=100\Omega, I_R=1mA$

Spice parameter data is available upon request for this device

# BAV99

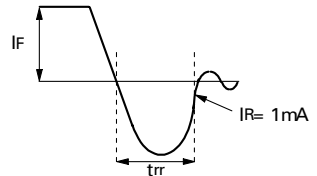
## SWITCHING CIRCUIT

### Recovery Time Equivalent Test Circuit



Sampling Oscilloscope  
C < 1.0pF  
RIN = 50Ω

Pulse rise time ≤ 0.5ns  
Pulse width = 100ns  
Oscilloscope rise time < 0.35ns  
Adjust VB for IF = 10mA



Output Waveform

† Above switching diagram also applies to device types

- BAL99
- BAR99
- BAW56
- BAV70