

SILICON PLANAR EPITAXIAL HIGH-SPEED DIODES

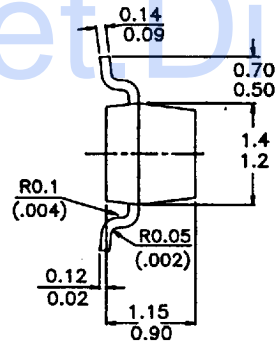
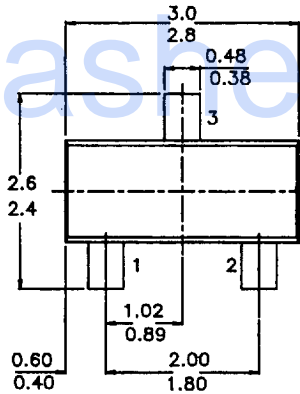
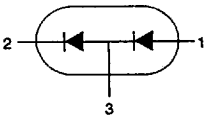
Silicon planar high-speed switching series diode pair

Marking
BAV99 = A7

PACKAGE OUTLINE DETAILS
ALL DIMENSIONS IN mm

Pin configuration

- 1 = ANODE
- 2 = CATHODE
- 3 = CATHODE/ANODE



ABSOLUTE MAXIMUM RATINGS

Continuous reverse voltage	V_R	max.	75 V
Repetitive peak reverse voltage	V_{RRM}	max.	85 V
Repetitive peak forward current	I_{FRM}	max.	450 mA
Junction temperature	T_j	max.	150 °C
Forward voltage at $I_F = 50$ mA	V_F	<	1,0 V
Reverse recovery time when switched from $I_F = 10$ mA to $I_R = 10$ mA; $R_L = 100 \Omega$; measured at $I_R = 1$ mA	t_{rr}	<	4 ns
Recovery charge when switched from $I_F = 10$ mA to $V_R = 5$ V; $R_L = 100 \Omega$	Q_s	<	45 pC

RATINGS (per diode) (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Limiting values

Continuous reverse voltage	V_R	max.	75 V
Repetitive peak reverse voltage	V_{RRM}	max.	85 V

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Forward current (d.c.)	I_F	max.	215 mA
Repetitive peak forward current	I_{FRM}	max.	450 mA
Non-repetitive peak forward current (per crystal)			
$t = 1\mu s$	I_{FSM}	max.	4 A
$t = 1 ms$	I_{FSM}	max.	1 A
$t = 1 s$	I_{FSM}	max.	0,5 A
Storage temperature range	T_{stg}		-55 to +150 °C
Junction temperature	T_j	max.	150 °C
THERMAL RESISTANCE			
From junction to ambient	R_{thj-a}	=	500 K/W
CHARACTERISTICS (per diode) (at $T_A = 25^\circ C$ unless otherwise specified)			
$T_j = 25^\circ C$ unless otherwise specified			
Forward voltage			
$I_F = 1 mA$	V_F	<	715 mV
$I_F = 10 mA$	V_F	<	855 mV
$I_F = 50 mA$	V_F	<	1000 mV
$I_F = 150 mA$	V_F	<	1250 mV
Reverse current			
$V_R = 25V; T_j = 150^\circ C$	I_R	<	30 μA
$V_R = 75 V$	I_R	<	1,0 μA
$V_R = 75V; T_j = 150^\circ C$	I_R	<	50 μA
Diode capacitance			
$V_R = 0; f = 1 MHz$	C_d	<	1,5 pF
Forward recovery voltage when switched to			
$I_F = 10mA; t_r = 20ns$	V_{fr}	<	1,75 V

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