



SOT-23 Formed SMD Package

BAV70

SILICON PLANAR EPITAXIAL HIGH-SPEED DIODES

High speed switching diode pair, common cathode

Marking

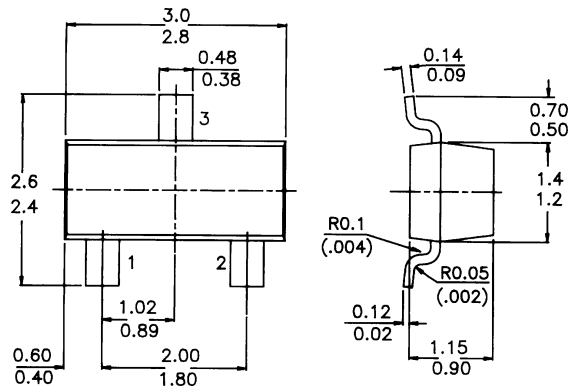
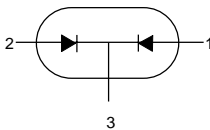
BAV70 = A4

PACKAGE OUTLINE DETAILS

ALL DIMENSIONS IN mm

Pin configuration

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



ABSOLUTE MAXIMUM RATINGS

Continuous reverse voltage	V_R	max.	70 V
Repetitive peak reverse voltage	V_{RRM}	max.	75 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

BAV70

RATINGS (per diode)

Limiting values

Continuous reverse voltage	V_R	max.	70 V
Repetitive peak reverse voltage	V_{RRM}	max.	75 V
Forward current (DC)	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

$$R_{thj-a} = 500 \text{ K/W}$$

$T_j = 25 \text{ °C}$ unless otherwise specified

Forward voltage

$I_F = 1 \text{ mA}$	V_F	<	715 mV
$I_F = 10 \text{ mA}$	V_F	<	855 mV
$I_F = 50 \text{ mA}$	V_F	<	1000 mV
$I_F = 150 \text{ mA}$	V_F	<	1250 mV

Reverse current

$V_R = 25 \text{ V}; T_j = 150 \text{ °C}$	I_R	<	60 μA
$V_R = 70 \text{ V}$	I_R	<	2.5 μA
$V_R = 70 \text{ V}; T_j = 150 \text{ °C}$	I_R	<	100 μA

Diode capacitance

$V_R = 0; f = 1 \text{ MHz}$	C_d	<	1,5 pF
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Forward recovery voltage when switched to

$I_F = 10 \text{ mA}; t_r = 20 \text{ ns}$	V_{fr}	<	1,75 V
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