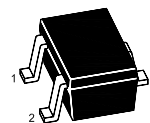
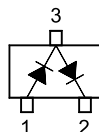


BAV99W

Silicon Epitaxial Planar Switching Diode



SOT-323 Plastic Package

Marking Code: **A7**

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

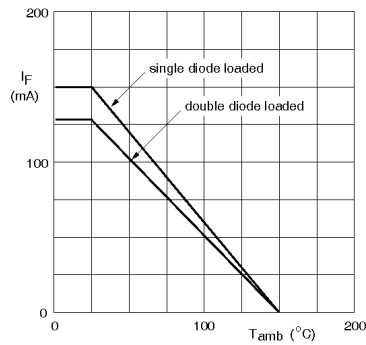
Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	85	V
Reverse Voltage	V_R	75	V
Continuous Forward Current	I_F	150	mA
Single Diode Load		130	
Double Diode Load			
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current	I_{FSM}	4	A
at $t = 1\ \mu\text{s}$		1	
at $t = 1\ \text{ms}$		0.5	
at $t = 1\ \text{s}$			
Total Power Dissipation	P_{tot}	200	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Forward Voltage	V_F	0.715	V
at $I_F = 1\ \text{mA}$		0.855	
at $I_F = 10\ \text{mA}$		1	
at $I_F = 50\ \text{mA}$		1.25	
at $I_F = 150\ \text{mA}$			
Reverse Current	I_R	30	nA
at $V_R = 25\ \text{V}$		1	μA
at $V_R = 75\ \text{V}$		30	μA
at $V_R = 25\ \text{V}, T_j = 150^\circ\text{C}$		50	μA
at $V_R = 75\ \text{V}, T_j = 150^\circ\text{C}$			
Diode Capacitance	C_d	1.5	pF
at $V_R = 0, f = 1\ \text{MHz}$			
Reverse Recovery Time	t_{rr}	4	ns
at $I_F = I_R = 10\ \text{mA}, I_{rr} = 0.1 \times I_R, R_L = 100\ \Omega$			

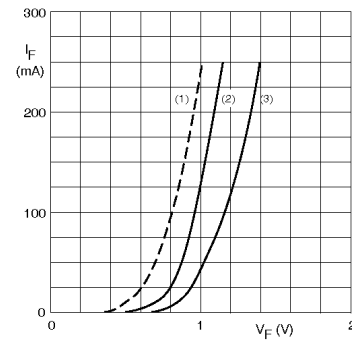
BAV99W

Typical Characteristics



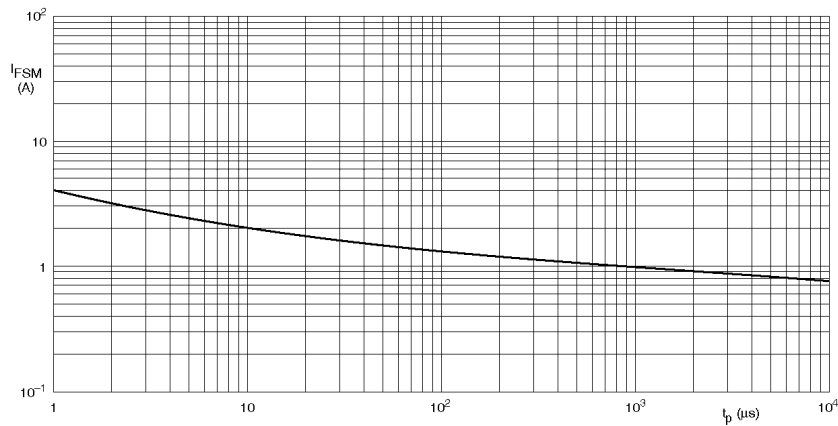
Device mounted on an FR4 printed-circuit board.

Maximum permissible continuous forward current as a function of ambient temperature.



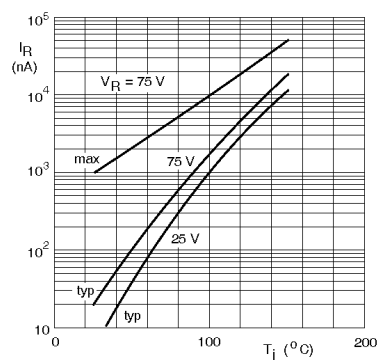
- (1) $T_j = 150\text{ }^{\circ}\text{C}$; typical values.
- (2) $T_j = 25\text{ }^{\circ}\text{C}$; typical values.
- (3) $T_j = 25\text{ }^{\circ}\text{C}$; maximum values.

Forward current as a function of forward voltage.

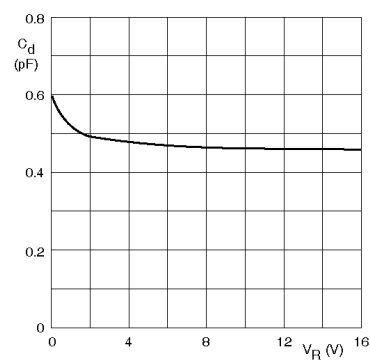


Based on square wave currents.
 $T_j = 25\text{ }^{\circ}\text{C}$ prior to surge.

Maximum permissible non-repetitive peak forward current as a function of pulse duration.



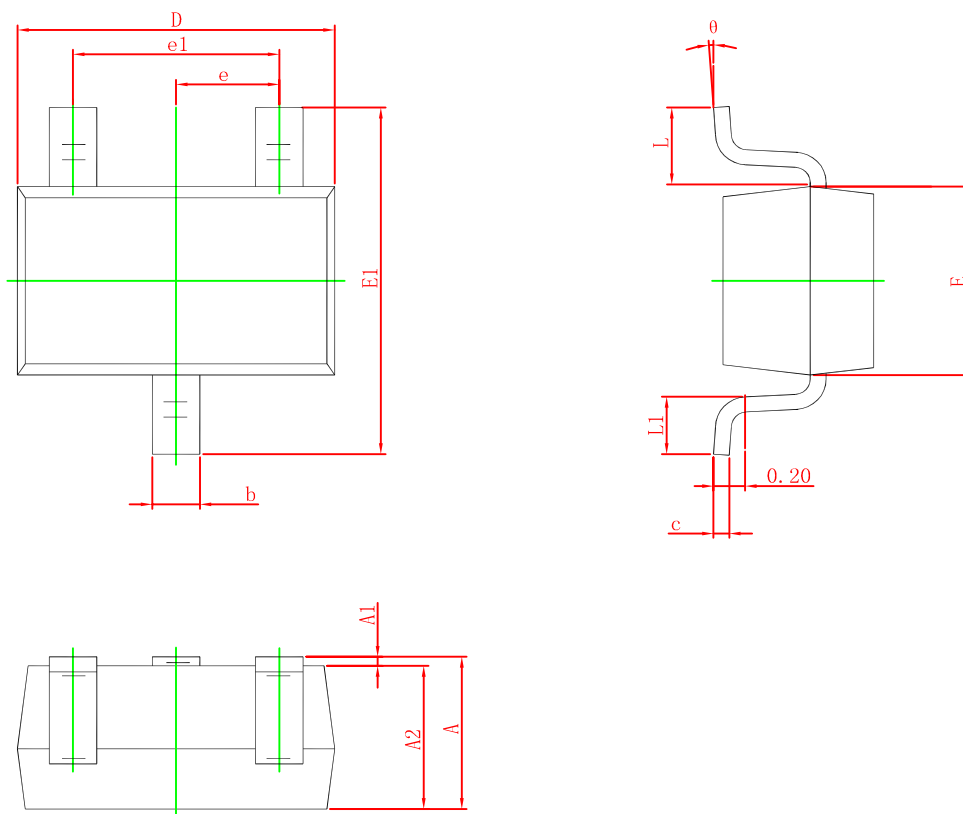
Reverse current as a function of junction temperature.



$f = 1\text{ MHz}$; $T_j = 25\text{ }^{\circ}\text{C}$.

Diode capacitance as a function of reverse voltage; typical values.

SOT-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°