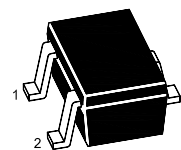
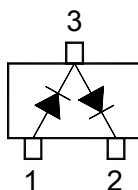


BAV99W

HIGH-SPEED DOUBLE SWITCHING DIODE



SOT-323 Plastic Package

Marking Code: **A7**

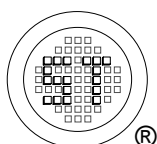
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	85	V
Continuous Reverse Voltage	V_R	75	V
Continuous Forward Current	I_F	150	mA
Single Diode Load ¹⁾ Double Diode Load ¹⁾		130	
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-repetitive Peak Forward Current	I_{FSM}	4	A
Square Wave; $T_j = 25^\circ\text{C}$ Prior to Surge		1	
at $t = 1\ \mu\text{s}$ at $t = 1\ \text{ms}$ at $t = 1\ \text{s}$		0.5	
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-65 to +150	$^\circ\text{C}$
Thermal Resistance from Junction to Ambient ¹⁾	$R_{th\ j-a}$	625	K/W

¹⁾ Device mounted on an FR4 printed-circuit board.

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

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	
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
Diode Capacitance	C_d	1.5	pF
at $f = 1\ \text{MHz}$; $V_R = 0$			
Reverse Recovery Time	t_{rr}	4	ns
at $I_F = 10\ \text{mA}$ to $I_R = 10\ \text{mA}$, $R_L = 100\ \Omega$; measured at $I_R = 1\ \text{mA}$			
Forward Recovery Voltage	V_{fr}	1.75	V
at $I_F = 10\ \text{mA}$, $t_r = 20\ \text{ns}$			



SEMTECH ELECTRONICS LTD.

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ISO/TS 16949:2002
Certificate No. 05103

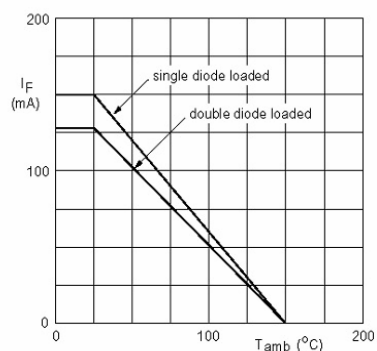


ISO 14001:2004
Certificate No. 7116



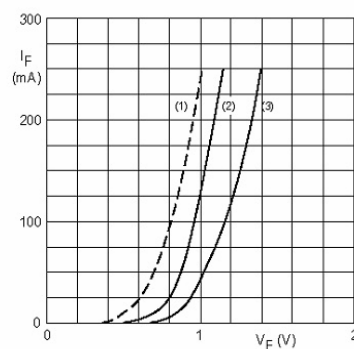
ISO 9001:2000
Certificate No. 0506098

Dated : 12/01/2006



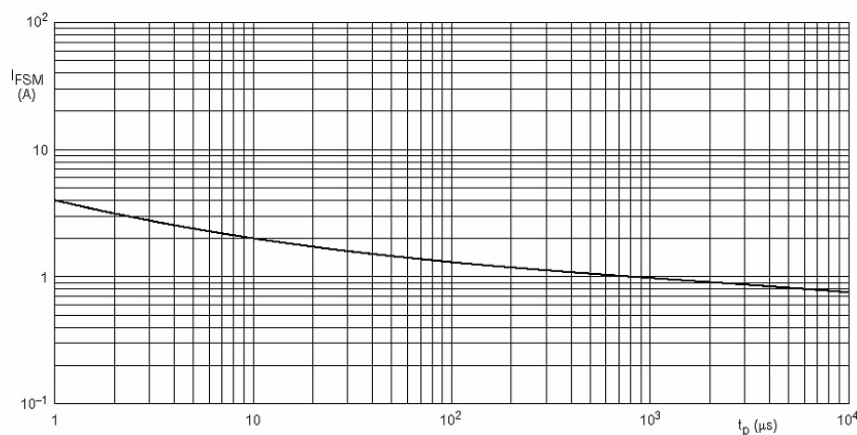
Device mounted on an FR4 printed-circuit board.

Fig.2 Maximum permissible continuous forward current as a function of ambient temperature.



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

Fig.3 Forward current as a function of forward voltage.



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

Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

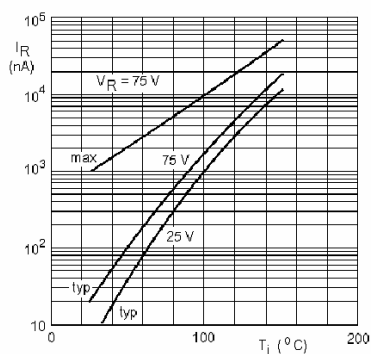
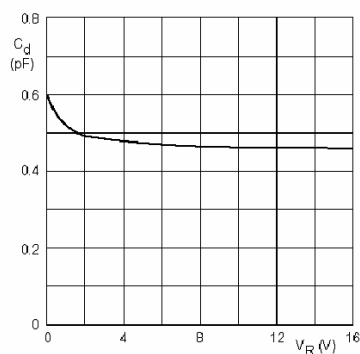
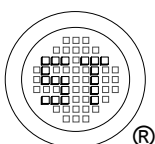


Fig.5 Reverse current as a function of junction temperature.



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

Fig.6 Diode capacitance as a function of reverse voltage; typical values.



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