

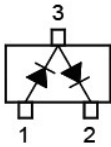


BAV99W

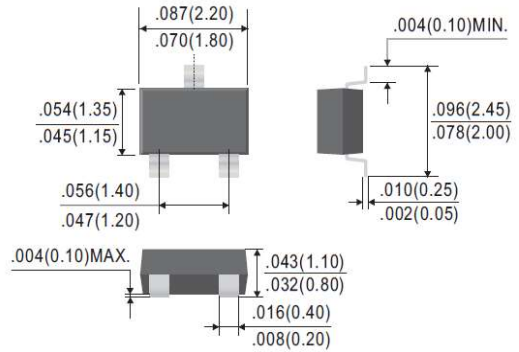
SWITCHING DIODE

FEATURES

- For high-speed switching applications
- Suffix "H" indicates Halogen-free parts, ex. BAV99WH.



SOT-323



Dimensions in inch and (millimeter)

Maximum Ratings ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	85	V
Reverse voltage	V_R	75	V
Continuous Forward Current	Single Diode Load	150	mA
	Double Diode Load	130	
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current	$t = 1\ \mu\text{s}$	4.0	A
	$t = 1\ \text{ms}$	1.0	
	$t = 1\ \text{s}$	0.5	
Total Power Dissipation	P_{tot}	200	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C}/\text{W}$
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

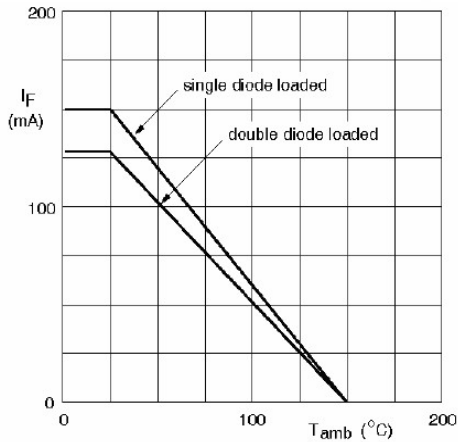
Electrical Characteristics ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

Parameter	Conditions	Symbol	Max	Unit
Forward voltage	$I_F = 1\ \text{mA}$	V_F	715	mV
	$I_F = 10\ \text{mA}$		855	
	$I_F = 50\ \text{mA}$		1000	
	$I_F = 150\ \text{mA}$		1250	
Reverse Current	$V_R = 25\ \text{V}$	I_R	30	nA
	$V_R = 75\ \text{V}$		1	μA
	$V_R = 25\ \text{V}, T_j = 150\text{ }^\circ\text{C}$		30	μA
	$V_R = 75\ \text{V}, T_j = 150\text{ }^\circ\text{C}$		50	μA
Diode Capacitance	$V_R = 0\ \text{V}, f = 1\ \text{MHz}$	C_d	1.5	pF
Reverse recovery time	$I_F = I_R = 10\ \text{mA}, I_{tr} = 0.1 \times I_R, R_L = 100\ \Omega$	T_{rr}	4	nS



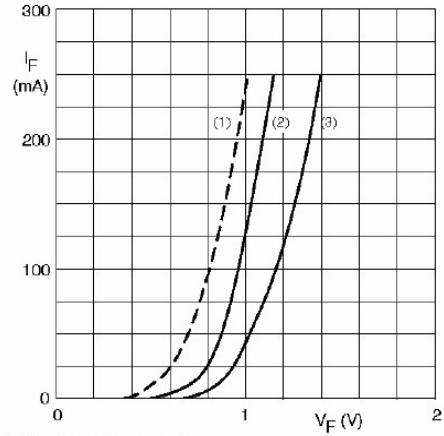
BAV99W SWITCHING DIODE

RATINGS AND CHARACTERISTIC CURVES



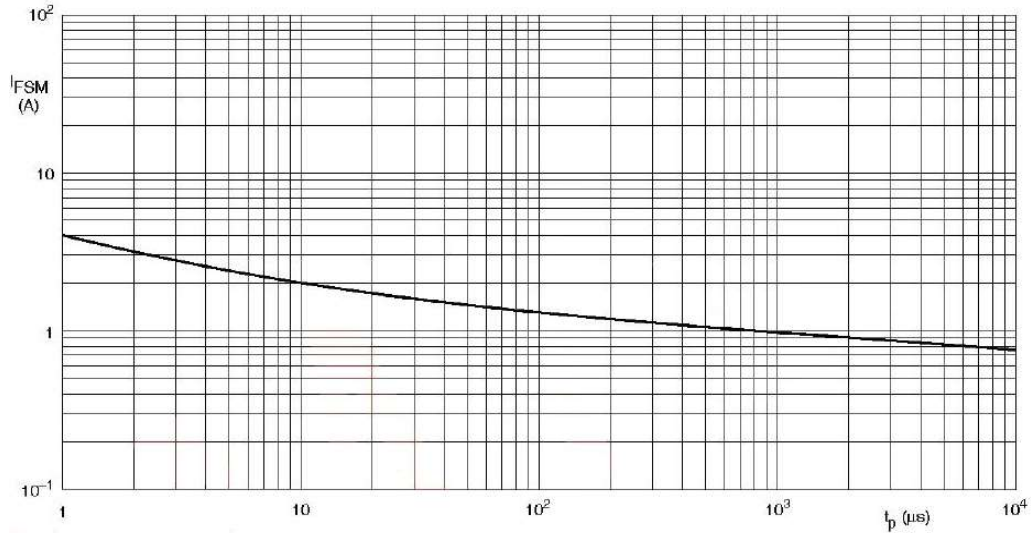
Device mounted on an FR4 printed-circuit board.

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



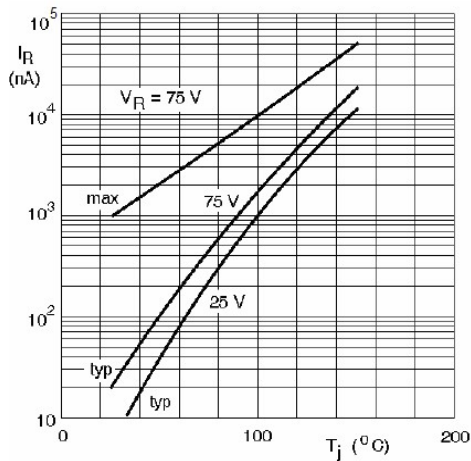
- (1) $T_j = 150^{\circ}C$; typical values.
- (2) $T_j = 25^{\circ}C$; typical values.
- (3) $T_j = 25^{\circ}C$; maximum values.

Forward current as a function of forward voltage.

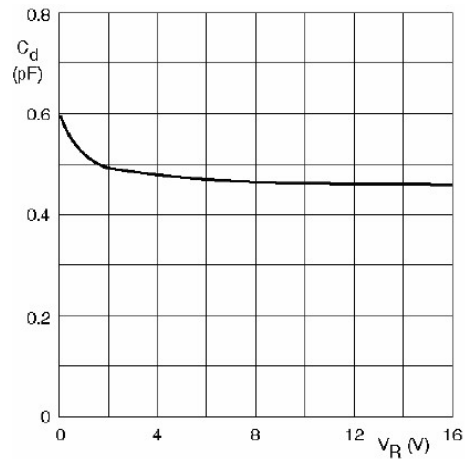


Based on square wave currents.
 $T_j = 25^{\circ}C$ prior to surge.

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



Reverse current as a function of junction temperature.



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

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