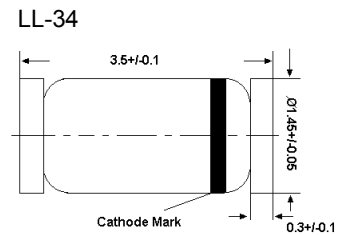


BAV101~BAV103

Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes



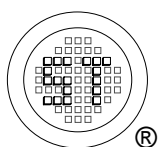
Glass case MiniMELF
Dimensions in mm

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	BAV101	120
		BAV102	200
		BAV103	250
Reverse Voltage	V_R	BAV101	100
		BAV102	150
		BAV103	200
Continuous Forward Current	I_F	250	mA
Repetitive Peak Forward Current	I_{FRM}	625	mA
Non-repetitive Peak Forward Surge Current	I_{FSM}	at $t = 1\text{ s}$	1
		at $t = 100\text{ }\mu\text{s}$	3
		at $t = 1\text{ }\mu\text{s}$	9
Total Power Dissipation	P_{tot}	400	mW
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 175	$^\circ\text{C}$

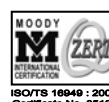
Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 100\text{ mA}$ at $I_F = 200\text{ mA}$	V_F	1	V
		1.25	
Reverse Current	I_R	BAV101	100
		at $V_R = 100\text{ V}$	nA
		BAV102	100
		at $V_R = 150\text{ V}$	nA
		BAV103	100
		at $V_R = 200\text{ V}$	nA
Diode Capacitance at $V_R = 0$, $f = 1\text{ MHz}$	C_d	BAV101	100
		at $V_R = 100\text{ V}$, $T_j = 150\text{ }^\circ\text{C}$	μA
		BAV102	100
Reverse Recovery Time at $I_F = I_R = 30\text{ mA}$, $I_{rr} = 3\text{ mA}$, $R_L = 100\text{ }\Omega$	t_{rr}	BAV101	100
		at $V_R = 150\text{ V}$, $T_j = 150\text{ }^\circ\text{C}$	μA
		BAV103	100
Diode Capacitance at $V_R = 0$, $f = 1\text{ MHz}$	C_d	BAV101	5
		at $V_R = 100\text{ V}$, $T_j = 150\text{ }^\circ\text{C}$	pF
		BAV102	5
Reverse Recovery Time at $I_F = I_R = 30\text{ mA}$, $I_{rr} = 3\text{ mA}$, $R_L = 100\text{ }\Omega$	t_{rr}	BAV101	50
		at $V_R = 150\text{ V}$, $T_j = 150\text{ }^\circ\text{C}$	ns
		BAV103	50



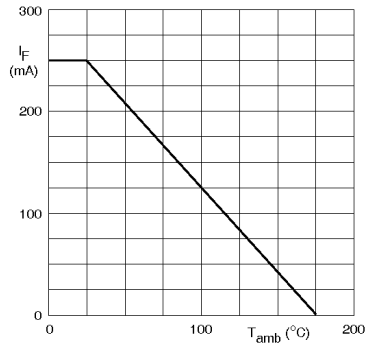
SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



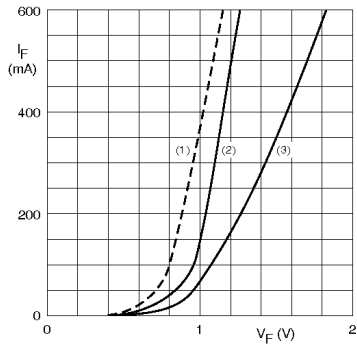
Dated : 15/06/2009

BAV101~BAV103



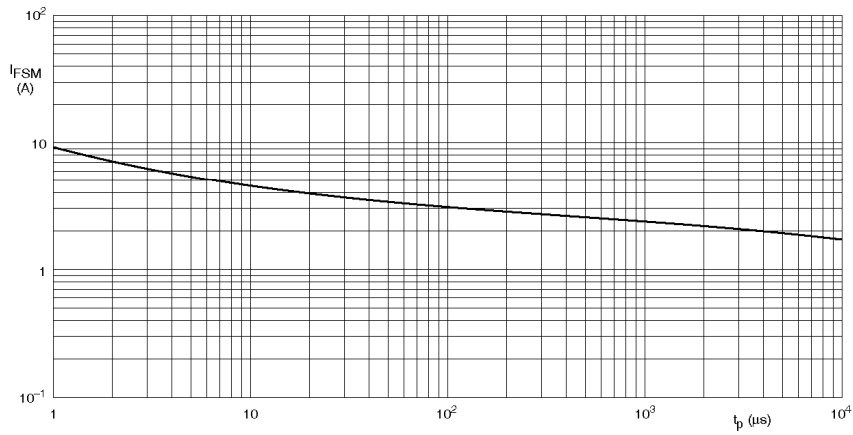
Device mounted on an FR4 printed-circuit board.

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



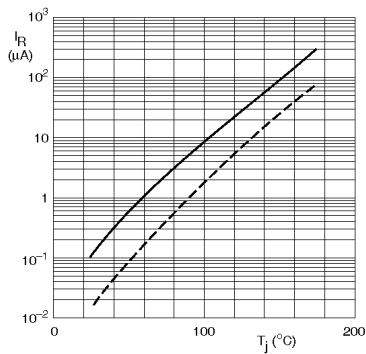
- (1) $T_j = 150\text{ }^\circ\text{C}$; typical values.
- (2) $T_a = 25\text{ }^\circ\text{C}$; typical values.
- (3) $T_a = 25\text{ }^\circ\text{C}$; maximum values.

Forward current as a function of forward voltage.



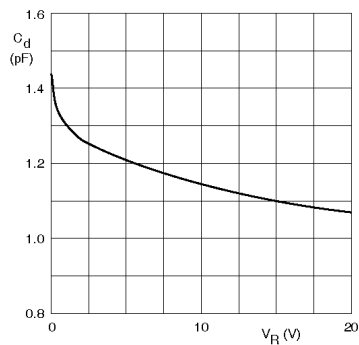
Based on square wave currents.
 $T_a = 25\text{ }^\circ\text{C}$ prior to surge.

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



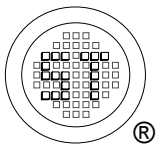
$V_R = V_{Rmax}$
Solid line; maximum values.
Dotted line; typical values.

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.



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