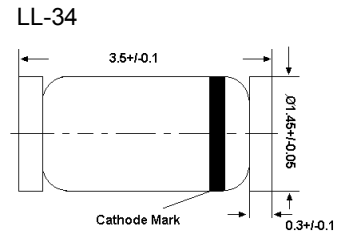


# BAV101~BAV103

## Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes



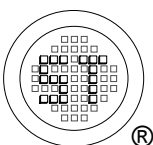
Glass case MiniMELF  
Dimensions in mm

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	120	V
		200	
		250	
Reverse Voltage	$V_R$	100	V
		150	
		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 $t = 100\ \mu\text{s}$	3
		at $t = 1\ \mu\text{s}$	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 $T_a = 25^\circ\text{C}$

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 at $V_R = 100\text{ V}$ at $V_R = 150\text{ V}$ at $V_R = 200\text{ V}$ at $V_R = 100\text{ V}, T_j = 150^\circ\text{C}$ at $V_R = 150\text{ V}, T_j = 150^\circ\text{C}$ at $V_R = 200\text{ V}, T_j = 150^\circ\text{C}$	$I_R$	BAV101	100
		BAV102	100
		BAV103	100
		BAV101	100
		BAV102	100
		BAV103	100
Diode Capacitance at $V_R = 0, f = 1\text{ MHz}$	$C_d$	5	pF
Reverse Recovery Time at $I_F = I_R = 30\text{ mA}, I_{rr} = 3\text{ mA}, R_L = 100\ \Omega$	$t_{rr}$	50	ns

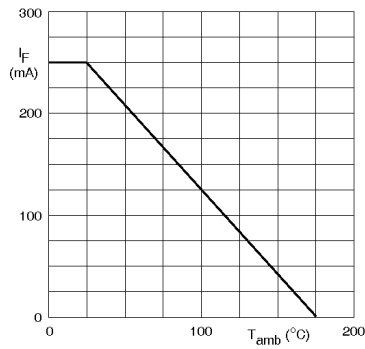


**SEMTECH ELECTRONICS LTD.**  
Subsidiary of Sino-Tech International (BVI) Limited



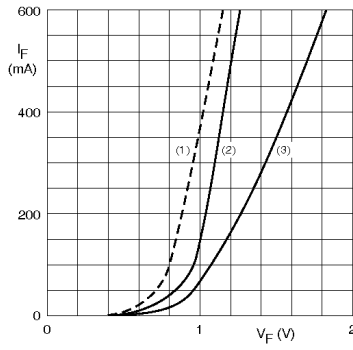
Dated : 15/06/2009

# BAV101~BAV103



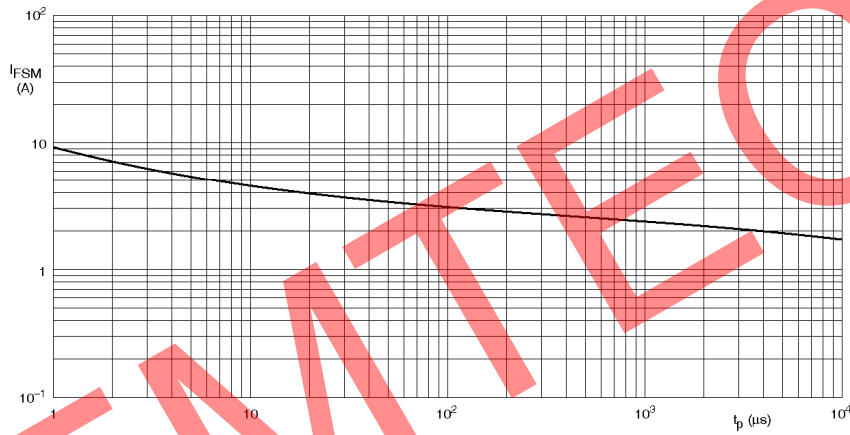
Device mounted on an FR4 printed-circuit board.

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



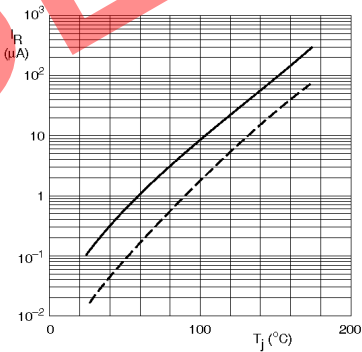
- (1)  $T_j = 150^\circ\text{C}$ ; typical values.
- (2)  $T_a = 25^\circ\text{C}$ ; typical values.
- (3)  $T_a = 25^\circ\text{C}$ ; maximum values.

Forward current as a function of forward voltage.



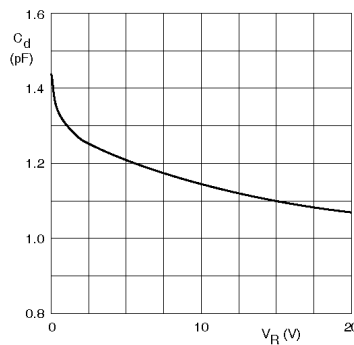
Based on square wave currents.  
 $T_a = 25^\circ\text{C}$  prior to surge.

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



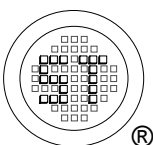
$V_R = V_{Rmax}$   
Solid line; maximum values.  
Dotted line; typical values.

Reverse current as a function of junction temperature.



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

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



**SEMTECH ELECTRONICS LTD.**  
Subsidiary of Sino-Tech International (BVI) Limited



Dated : 15/06/2009