

BAV101PF~BAV103PF

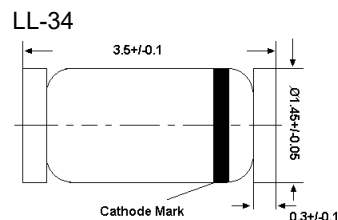
Silicon Epitaxial Planar Diodes

Features

- Lead Free

Applications

- High Voltage switching



Glass case MiniMELF
Dimensions in mm

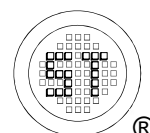
Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	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	A
		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	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance Junction to Ambient Air ¹⁾	$R_{\theta JA}$	375	$^\circ\text{C/W}$

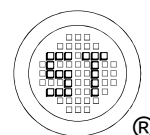
¹⁾ Valid provided that electrodes are kept at ambient temperature.



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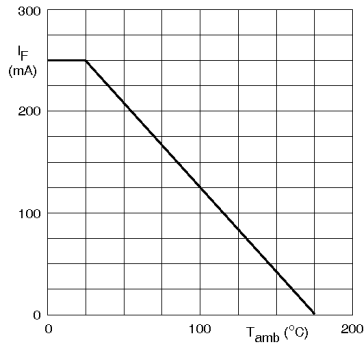
Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Max.	Unit
Forward Voltage at $I_F = 100\text{ mA}$ at $I_F = 200\text{ mA}$	V_F	1 1.25	V
Reverse Current at $V_R = 100\text{ V}$ at $V_R = 150\text{ V}$ at $V_R = 200\text{ V}$ at $V_R = 100\text{ V}, T_j = 150\text{ }^\circ\text{C}$ at $V_R = 150\text{ V}, T_j = 150\text{ }^\circ\text{C}$ at $V_R = 200\text{ V}, T_j = 150\text{ }^\circ\text{C}$	I_R	100 100 100 100 100 100	nA nA nA μA μA μA
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



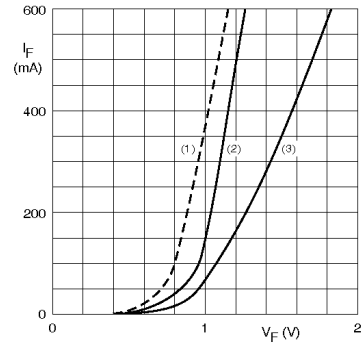
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Electrical Characteristic Curves



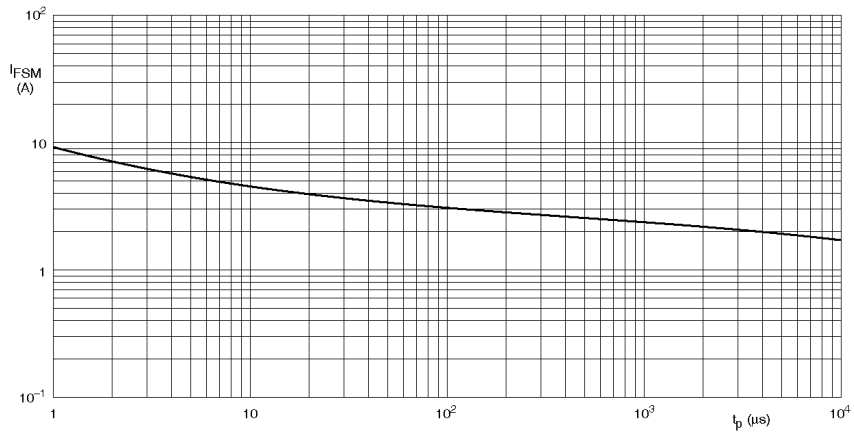
Device mounted on an FR4 printed-circuit board.

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



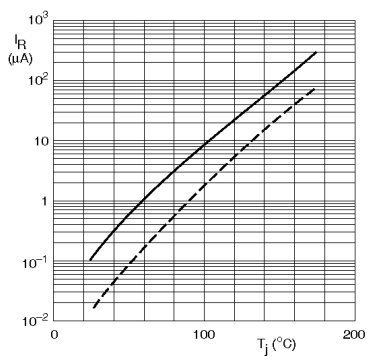
- (1) $T_j = 150$ °C; typical values.
- (2) $T_a = 25$ °C; typical values.
- (3) $T_a = 25$ °C; maximum values.

Forward current as a function of forward voltage.



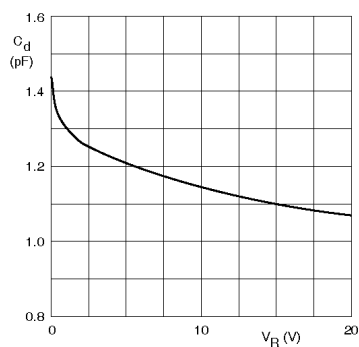
Based on square wave currents.
 $T_a = 25$ °C prior to surge.

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



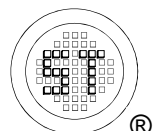
$V_R = V_{Rmax}$.
 Solid line; maximum values.
 Dotted line; typical values.

Reverse current as a function of junction temperature.



$f = 1$ MHz; $T_j = 25$ °C.

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



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