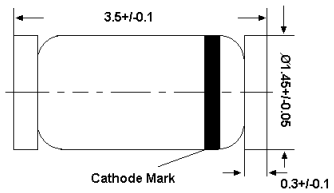
BAV101PF~BAV103PF

Silicon Epitaxial Planar Diodes

LL-34



Glass case MiniMELF
Dimensions in mm

Features

• Lead Free

Applications

• High Voltage switching

Absolute Maximum Ratings (T_a = 25 °C)

Parameter		Symbol	Value	Unit
Repetitive Peak Reverse Voltage	BAV101PF BAV102PF BAV103PF	V_{RRM}	120 200 250	V
Reverse Voltage	BAV101PF BAV102PF BAV103PF	V_R	100 150 200	V
Continuous Forward Current		I_F	250	mA
Repetitive Peak Forward Current		I_{FRM}	625	mA
Non-repetitive Peak Forward Surge Current	at t = 1 s at t = 100 µs at t = 1 µs	I_{FSM}	1 3 9	A
Total Power Dissipation		P_{tot}	400	mW
Junction Temperature		T_j	175	°C
Storage Temperature Range		T_{stg}	- 65 to + 175	°C

Thermal Characteristics

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

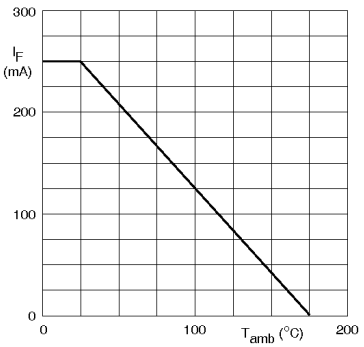
[1)] Valid provided that electrodes are kept at ambient temperature.

Dated: 04/11/2021 Rev: 01

Characteristics at T_a = 25 ◦C

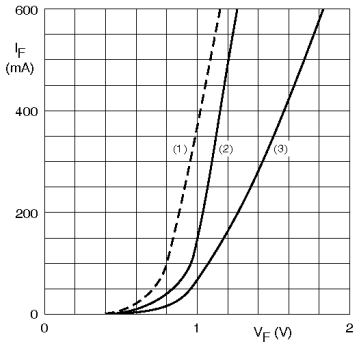
Parameter		Symbol	Max.	Unit
Forward Voltage at I_F = 100 mA at I_F = 200 mA		V_F	 1 1.25	 V
Reverse Current at V_R = 100 V at V_R = 150 V at V_R = 200 V at V_R = 100 V, T_j = 150 ◦C at V_R = 150 V, T_j = 150 ◦C at V_R = 200 V, T_j = 150 ◦C	 BAV101PF BAV102PF BAV103PF BAV101PF BAV102PF BAV103PF	I_R	 100 100 100 100 100 100	 nA nA nA µA µA µA
Diode Capacitance at V_R = 0, f = 1 MHz		C_d	5	pF
Reverse Recovery Time at I_F = I_R = 30 mA, I_{rr} = 3 mA, R_L = 100 Ω		t_{rr}	50	ns

Electrical Characteristic Curves



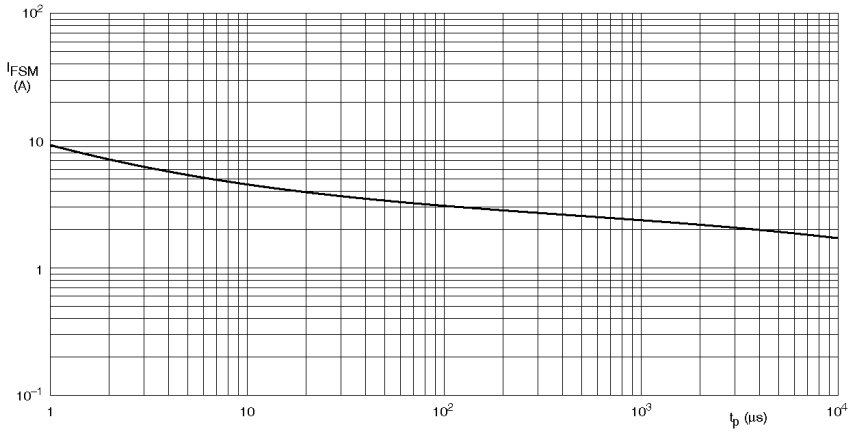
Device mounted on an FR4 printed-circuit board.

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



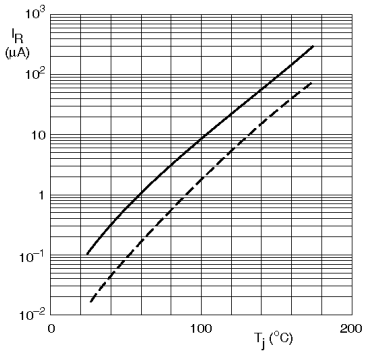
(1) T_j = 150 °C; typical values.
(2) T_a = 25 °C; typical values.
(3) T_a = 25 °C; maximum values.

Forward current as a function of forward voltage.



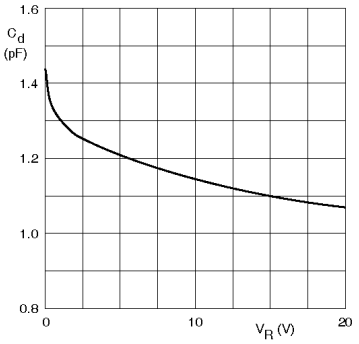
Based on square wave currents.
T_a = 25 °C prior to surge.

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.