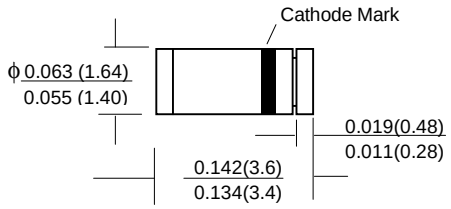
SYNSEMI SEMICONDUCTOR

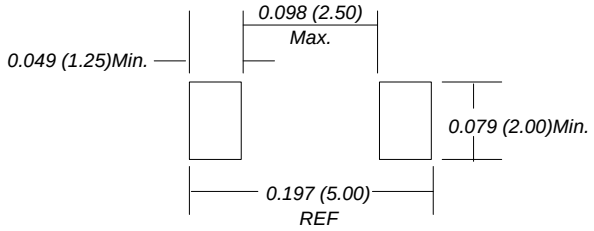
BAV100 ~ BAV103

HIGH SPEED SWITCHING DIODES

MiniMELF (SOD-80C)



Mounting Pad Layout



Dimensions in inches and (millimeters)

FEATURES :

- Switching speed: max. 50 ns
- General application
- Continuous reverse voltage:
  max. 50 V, 100 V, 150 V and 200 V respectively
- Repetitive peak reverse voltage:
  max. 60 V, 120 V, 200 V and 250 V respectively
- Repetitive peak forward current: max. 625 mA.
- Pb / RoHS Free

MECHANICAL DATA :

Case: MiniMELF Glass Case (SOD-80)
Weight: approx. 0.05g

Maximum Ratings and Thermal Characteristics (Rating at 25 °C ambient temperature unless otherwise specified.)

Parameter		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	BAV100 BAV101 BAV102 BAV103	V_{RRM}	60 120 200 250	V
Maximum Continuous Reverse Voltage	BAV100 BAV101 BAV102 BAV103	V_R	50 100 150 200	V
Maximum Repetitive Peak Forward Current		I_{FRM}	625	mA
Maximum Continuous Forward Current		I_F	250	mA
Maximum Surge Forward Current	at t = 100μs , Tj = 25°C at t = 1s , Tj = 25°C	I_{FSM}	3.0 1.0	A
Maximum Power Dissipation		P_D	400	mW
Maximum Junction Temperature		T_J	175	°C
Storage Temperature Range		T_S	-65 to + 175	°C

Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Current	I_R	V_R = 50 V V_R = 100 V V_R = 150 V V_R = 200 V	- - - -	- - - -	100 100 100 100	nA
Forward Voltage	V_F	I_F = 100 mA I_F = 200 mA	- -	- -	1.0 1.25	V
Diode Capacitance	Cd	f = 1MHz ; V_R = 0	-	-	5.0	pF
Reverse Recovery Time	Trr	I_F = 30 mA to I_R = 30mA R_L = 100 Ω ; measured at I_R = 3mA	-	-	50	ns

RATING AND CHARACTERISTIC CURVES (BAV100 ~ BAV103)

FIG. 1 MAXIMUM FORWARD CURRENT VERSUS AMBIENT TEMPERATURE

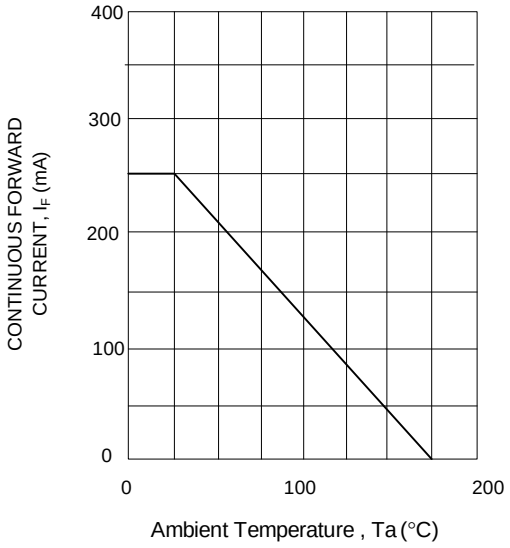


FIG. 2 TYPICAL FORWARD VOLTAGE

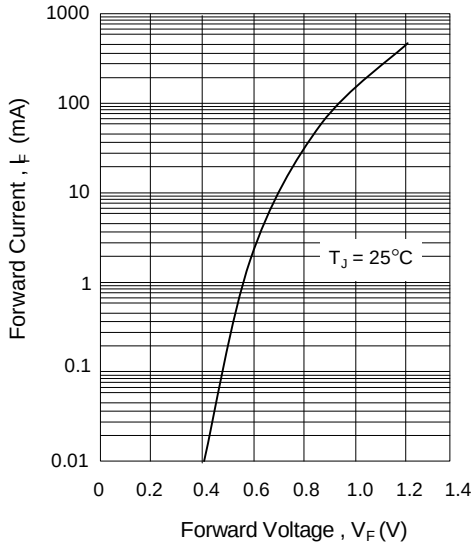


FIG. 3 TYPICAL DIODE CAPACITANCE AS A FUNCTION OF REVERSE VOLTAGE

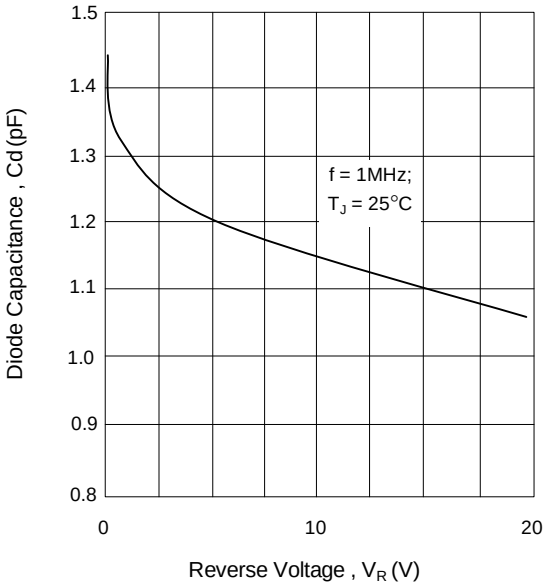


FIG. 4 TYPICAL REVERSE CURRENT VERSUS JUNCTION TEMPERATURE