



Small Signal Switching Diodes, High Voltage



FEATURES

- Silicon epitaxial planar diode
- Material categorization:
for definitions of compliance please see www.vishay.com/doc?99912



RoHS COMPLIANT

APPLICATIONS

- General purposes

LINKS TO ADDITIONAL RESOURCES



MECHANICAL DATA

Case: MiniMELF (SOD-80)

Weight: approx. 31 mg

Cathode band color: black

Packaging codes / options:

GS18/10K per 13" reel (8 mm tape), 10K/box

GS08/2.5K per 7" reel (8 mm tape), 12.5K/box

PARTS TABLE					
PART	TYPE DIFFERENTIATION	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS
BAV100	V _{RRM} = 60 V	BAV100-GS18 or BAV100-GS08	-	Single	Tape and reel
BAV101	V _{RRM} = 120 V	BAV101-GS18 or BAV101-GS08	-	Single	Tape and reel
BAV102	V _{RRM} = 200 V	BAV102-GS18 or BAV102-GS08	-	Single	Tape and reel
BAV103	V _{RRM} = 250 V	BAV103-GS18 or BAV103-GS08	-	Single	Tape and reel

ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	PART	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		BAV100	V _{RRM}	60	V
		BAV101	V _{RRM}	120	V
		BAV102	V _{RRM}	200	V
		BAV103	V _{RRM}	250	V
Reverse voltage		BAV100	V _R	50	V
		BAV101	V _R	100	V
		BAV102	V _R	150	V
		BAV103	V _R	200	V
Peak forward surge current	t _p = 1 s		I _{FSM}	1	A
Repetitive peak forward current			I _{FRM}	625	mA
Forward continuous current			I _F	250	mA
Power dissipation			P _{tot}	500	mW



THERMAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to lead		R_{thJL}	350	K/W
Thermal resistance junction to ambient air	On PC board 50 mm x 50 mm x 1.6 mm	R_{thJA}	500	K/W
Junction temperature		T_j	175	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-65 to +175	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 100\text{ mA}$		V_F			1	V
Reverse current	$V_R = 50\text{ V}$	BAV100	I_R			100	nA
	$V_R = 100\text{ V}$	BAV101	I_R			100	nA
	$V_R = 150\text{ V}$	BAV102	I_R			100	nA
	$V_R = 200\text{ V}$	BAV103	I_R			100	nA
	$T_j = 100\text{ }^{\circ}\text{C}$, $V_R = 50\text{ V}$	BAV100	I_R			15	μA
	$T_j = 100\text{ }^{\circ}\text{C}$, $V_R = 100\text{ V}$	BAV101	I_R			15	μA
	$T_j = 100\text{ }^{\circ}\text{C}$, $V_R = 150\text{ V}$	BAV102	I_R			15	μA
	$T_j = 100\text{ }^{\circ}\text{C}$, $V_R = 200\text{ V}$	BAV103	I_R			15	μA
Breakdown voltage	$I_R = 100\text{ }\mu\text{A}$, $t_p/T = 0.01$, $t_p = 0.3\text{ ms}$	BAV100	$V_{(BR)}$	60			V
	$I_R = 100\text{ }\mu\text{A}$, $t_p/T = 0.01$, $t_p = 0.3\text{ ms}$	BAV101	$V_{(BR)}$	120			V
	$I_R = 100\text{ }\mu\text{A}$, $t_p/T = 0.01$, $t_p = 0.3\text{ ms}$	BAV102	$V_{(BR)}$	200			V
		BAV103	$V_{(BR)}$	250			V
Diode capacitance	$V_R = 0\text{ V}$, $f = 1\text{ MHz}$, $V_{HF} = 50\text{ mV}$		C_D		1.5		pF
Differential forward current	$I_F = 10\text{ mA}$		r_f		5		Ω
Reverse recovery time	$I_F = I_R = 30\text{ mA}$, $i_R = 3\text{ mA}$, $R_L = 100\text{ }\Omega$		t_{rr}			50	ns

TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

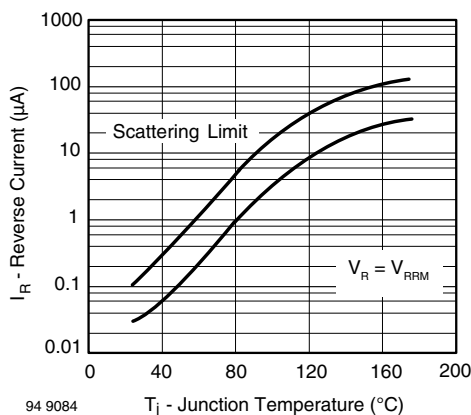


Fig. 1 - Reverse Current vs. Junction Temperature

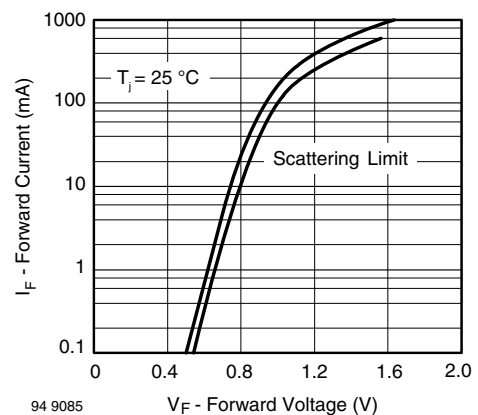


Fig. 2 - Forward Current vs. Forward Voltage

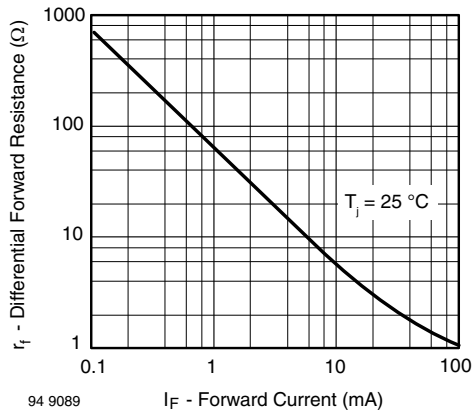
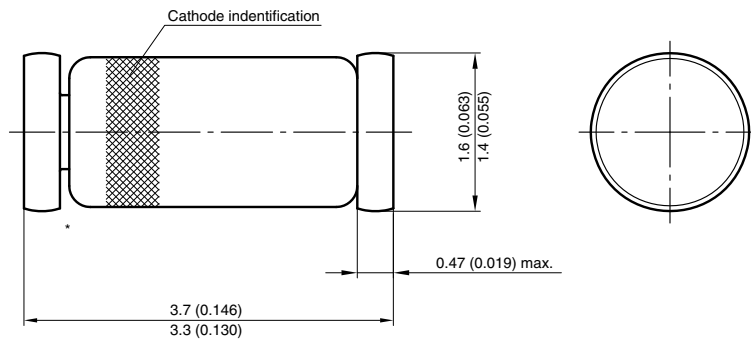
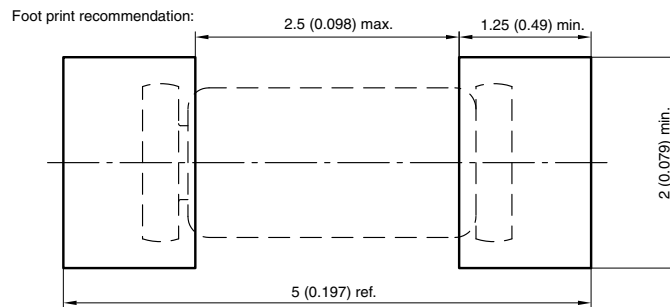


Fig. 3 - Differential Forward Resistance vs. Forward Current

PACKAGE DIMENSIONS in millimeters (inches): **MiniMELF (SOD-80)**



* The gap between plug and glass can be either on cathode or anode side



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