

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	$V_{RRM} = 60\text{ V}$	BAV100-GS18 or BAV100-GS08	-	Single	Tape and reel
BAV101	$V_{RRM} = 120\text{ V}$	BAV101-GS18 or BAV101-GS08	-	Single	Tape and reel
BAV102	$V_{RRM} = 200\text{ V}$	BAV102-GS18 or BAV102-GS08	-	Single	Tape and reel
BAV103	$V_{RRM} = 250\text{ V}$	BAV103-GS18 or BAV103-GS08	-	Single	Tape and reel

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, 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	$t_p = 1\text{ s}$		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 °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	°C
Storage temperature range		T _{stg}	-65 to +175	°C

ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)							
PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I _F = 100 mA		V _F			1	V
Reverse current	V _R = 50 V	BAV100	I _R			100	nA
	V _R = 100 V	BAV101	I _R			100	nA
	V _R = 150 V	BAV102	I _R			100	nA
	V _R = 200 V	BAV103	I _R			100	nA
	T _j = 100 °C, V _R = 50 V	BAV100	I _R			15	μA
	T _j = 100 °C, V _R = 100 V	BAV101	I _R			15	μA
	T _j = 100 °C, V _R = 150 V	BAV102	I _R			15	μA
	T _j = 100 °C, V _R = 200 V	BAV103	I _R			15	μA
Breakdown voltage	I _R = 100 μA, t _p /T = 0.01, t _p = 0.3 ms	BAV100	V _(BR)	60			V
	I _R = 100 μA, t _p /T = 0.01, t _p = 0.3 ms	BAV101	V _(BR)	120			V
	I _R = 100 μA, t _p /T = 0.01, t _p = 0.3 ms	BAV102	V _(BR)	200			V
		BAV103	V _(BR)	250			V
Diode capacitance	V _R = 0 V, f = 1 MHz, V _{HF} = 50 mV		C _D		1.5		pF
Differential forward current	I _F = 10 mA		r _f		5		Ω
Reverse recovery time	I _F = I _R = 30 mA, i _R = 3 mA, R _L = 100 Ω		t _{rr}			50	ns

TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

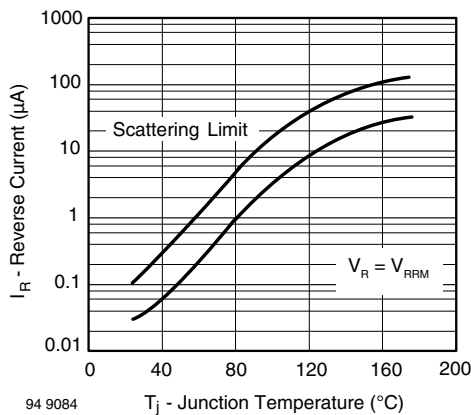


Fig. 1 - Reverse Current vs. Junction Temperature

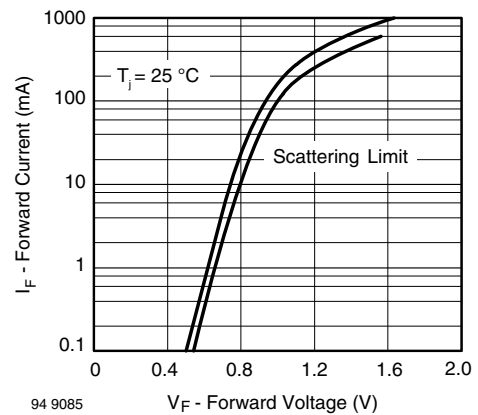


Fig. 2 - Forward Current vs. Forward Voltage

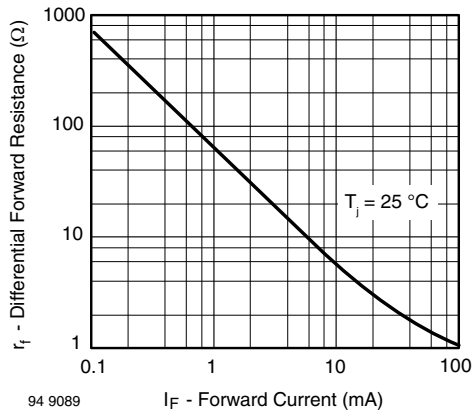
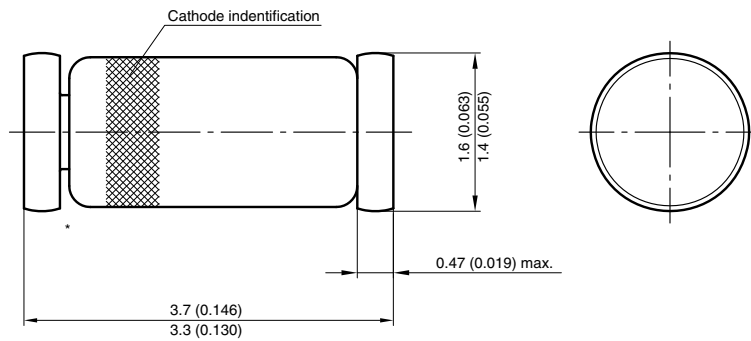
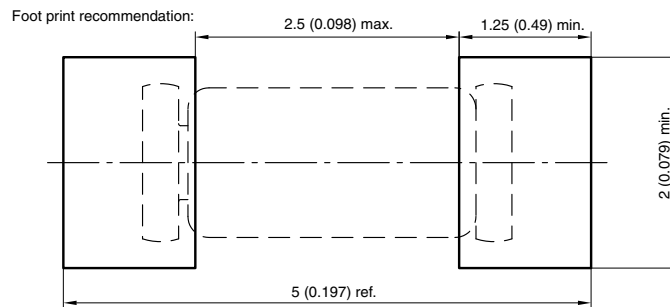


Fig. 3 - Differential Forward Resistance vs. Forward Current

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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