Small Signal Switching Diodes, High Voltage

FEATURES

- Silicon epitaxial planar diodes
- AEC-Q101 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

APPLICATIONS

- General purposes

DESIGN SUPPORT TOOLS click logo to get started

3D Models Available

MECHANICAL DATA

Case: QuadroMELF (SOD-80)
Weight: approx. 34 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
BAV200	V_{RRM} = 60 V	BAV200-GS18 or BAV200-GS08	-	Single	Tape and reel
BAV201	V_{RRM} = 120 V	BAV201-GS18 or BAV201-GS08	-	Single	Tape and reel
BAV202	V_{RRM} = 200 V	BAV202-GS18 or BAV202-GS08	-	Single	Tape and reel
BAV203	V_{RRM} = 250 V	BAV203-GS18 or BAV203-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		BAV200	V_{RRM}	60	V
		BAV201	V_{RRM}	120	V
		BAV202	V_{RRM}	200	V
		BAV203	V_{RRM}	250	V
Reverse voltage		BAV200	V_R	50	V
		BAV201	V_R	100	V
		BAV202	V_R	150	V
		BAV203	V_R	200	V
Forward continuous current			I_F	250	mA
Peak forward surge current	t_p = 1 s, T_j = 25 °C		I_{FSM}	1	A
Repetitive peak forward current	f = 50 Hz		I_{FRM}	625	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 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	BAV200	I_R			100	nA
	V_R = 100 V	BAV201	I_R			100	nA
	V_R = 150 V	BAV202	I_R			100	nA
	V_R = 200 V	BAV203	I_R			100	nA
	T_j = 100 °C, V_R = 50 V	BAV200	I_R			15	µA
	T_j = 100 °C, V_R = 100 V	BAV201	I_R			15	µA
	T_j = 100 °C, V_R = 150 V	BAV202	I_R			15	µA
	T_j = 100 °C, V_R = 200 V	BAV203	I_R			15	µA
Breakdown voltage	I_R = 100 µA, t_p/T = 0.01, t_p = 0.3 ms	BAV200	$V_{(BR)}$	60			V
		BAV201	$V_{(BR)}$	120			V
		BAV202	$V_{(BR)}$	200			V
		BAV203	$V_{(BR)}$	250			V
Diode capacitance	V_R = 0, f = 1 MHz		C_D		1.5		pF
Differential forward resistance	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)

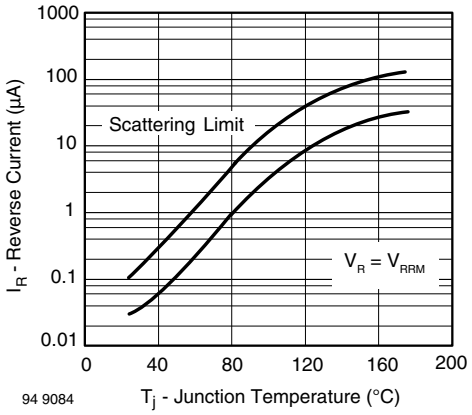


Fig. 1 - Reverse Current vs. Junction Temperature

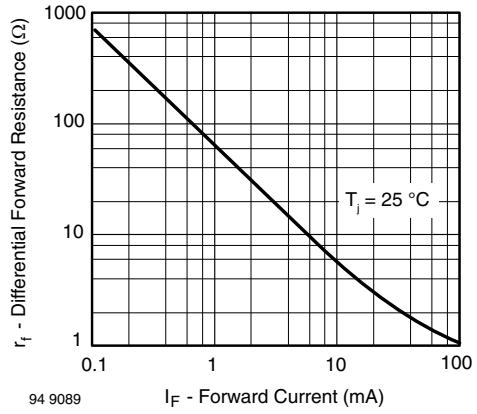


Fig. 3 - Differential Forward Resistance vs. Forward Current

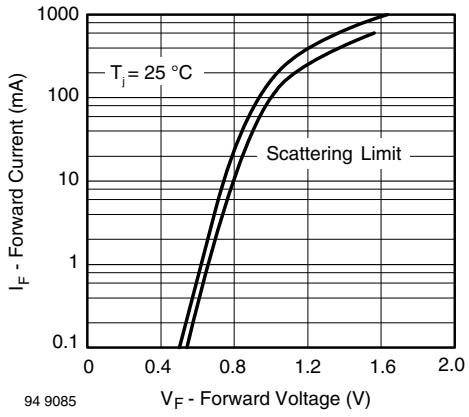
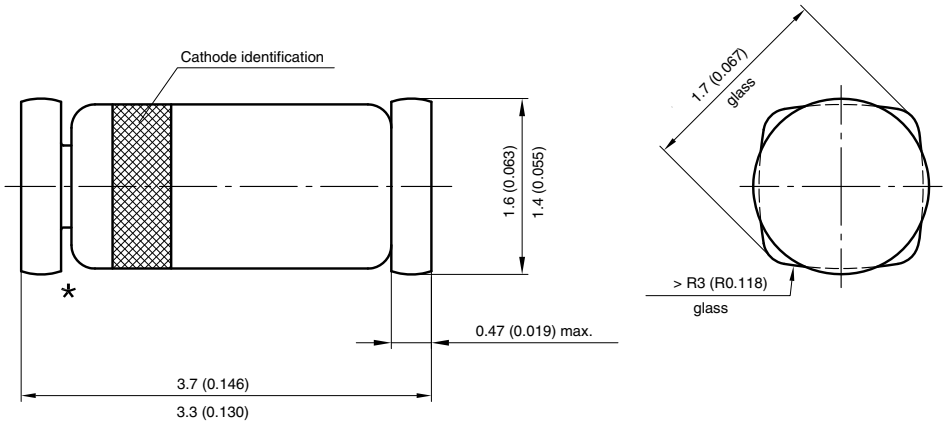


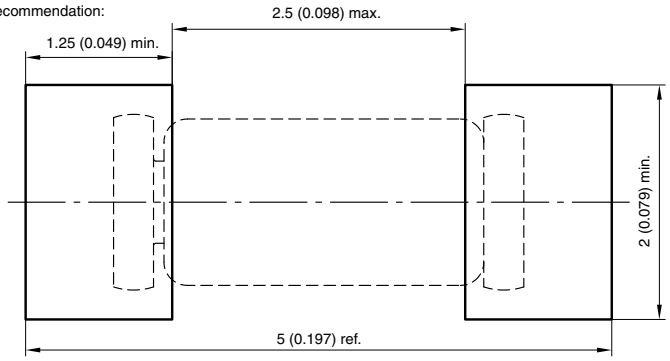
Fig. 2 - Forward Current vs. Forward Voltage

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



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

Foot print recommendation:



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