

Small Signal Switching Diodes, High Voltage



FEATURES

- Silicon epitaxial planar diodes
- 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: 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	$V_{RRM} = 60\text{ V}$	BAV200-GS18 or BAV200-GS08	-	Single	Tape and reel
BAV201	$V_{RRM} = 120\text{ V}$	BAV201-GS18 or BAV201-GS08	-	Single	Tape and reel
BAV202	$V_{RRM} = 200\text{ V}$	BAV202-GS18 or BAV202-GS08	-	Single	Tape and reel
BAV203	$V_{RRM} = 250\text{ V}$	BAV203-GS18 or BAV203-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		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	$t_p = 1\text{ s}, T_j = 25\text{ }^{\circ}\text{C}$		I_{FSM}	1	A
Repetitive peak forward current	$f = 50\text{ Hz}$		I_{FRM}	625	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 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	$V_R = 50\text{ V}$	BAV200	I_R			100	nA
	$V_R = 100\text{ V}$	BAV201	I_R			100	nA
	$V_R = 150\text{ V}$	BAV202	I_R			100	nA
	$V_R = 200\text{ V}$	BAV203	I_R			100	nA
	$T_J = 100\text{ }^{\circ}\text{C}$, $V_R = 50\text{ V}$	BAV200	I_R			15	μA
	$T_J = 100\text{ }^{\circ}\text{C}$, $V_R = 100\text{ V}$	BAV201	I_R			15	μA
	$T_J = 100\text{ }^{\circ}\text{C}$, $V_R = 150\text{ V}$	BAV202	I_R			15	μA
	$T_J = 100\text{ }^{\circ}\text{C}$, $V_R = 200\text{ V}$	BAV203	I_R			15	μA
Breakdown voltage	$I_R = 100\text{ }\mu\text{A}$, $t_p/T = 0.01$, $t_p = 0.3\text{ ms}$	BAV200	$V_{(BR)}$	60			V
		BAV201	$V_{(BR)}$	120			V
		BAV202	$V_{(BR)}$	200			V
		BAV203	$V_{(BR)}$	250			V
Diode capacitance	$V_R = 0$, $f = 1\text{ MHz}$		C_D		1.5		pF
Differential forward resistance	$I_F = 10\text{ mA}$		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

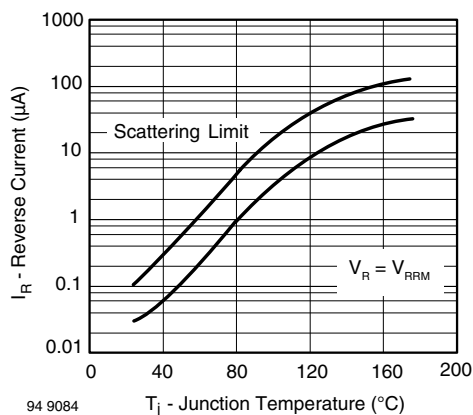
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Reverse Current vs. Junction Temperature

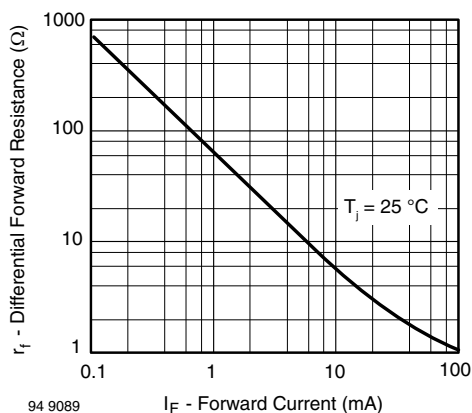
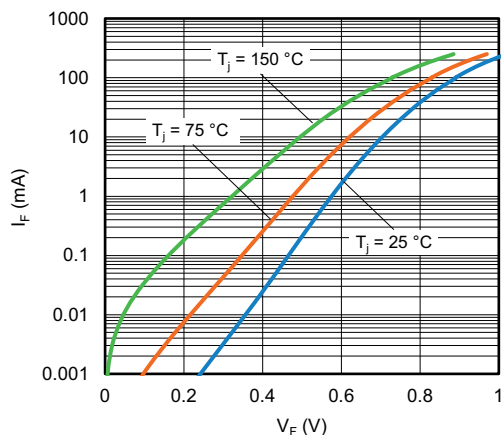
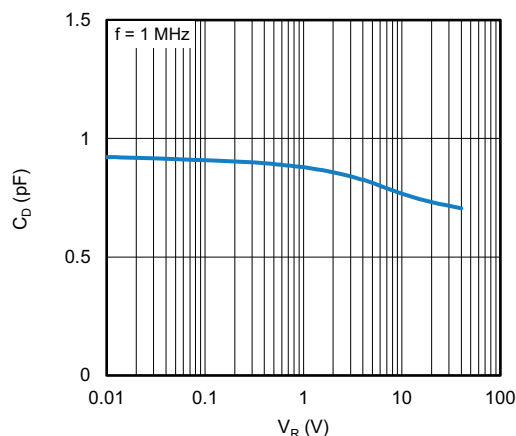
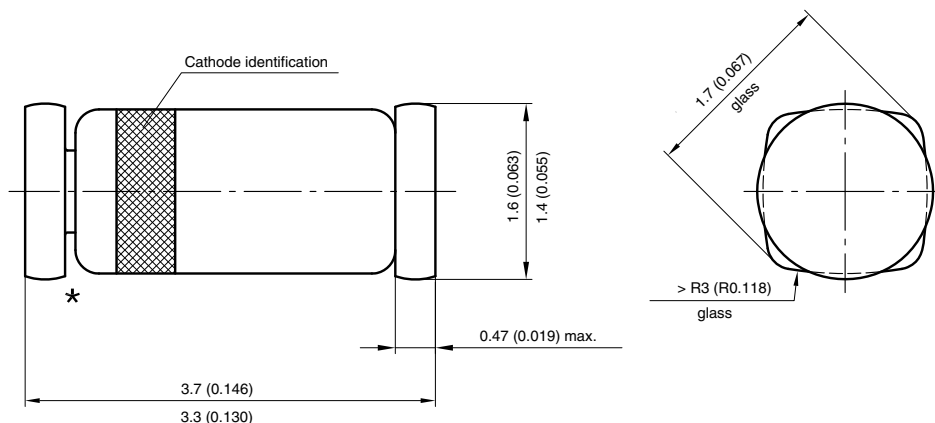


Fig. 3 - Differential Forward Resistance vs. Forward Current


Fig. 2 - Forward Current vs. Forward Voltage, I_F vs. V_F

Fig. 4 - Typical Capacitance vs. Reverse Voltage, C_D vs. V_R

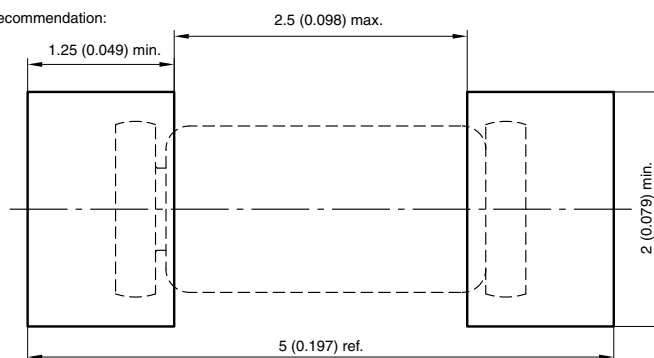


PACKAGE DIMENSIONS in millimeters (inches): QuadroMELF (SOD-80)



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

Foot print recommendation:



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