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Vishay Semiconductors

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

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	ORDERING CODE TYPE 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 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	
		BAV200	V_{RRM}	60	V	
Popotitivo poek roverse veltage		BAV201	V_{RRM}	120	V	
Repetitive peak reverse voltage		BAV202	V_{RRM}	200	V	
		BAV203	V_{RRM}	250	V	
		BAV200	V_{R}	50	V	
Reverse voltage		BAV201	V_{R}	100	V	
neverse voltage		BAV202	V_{R}	150	V	
		BAV203	V_{R}	200	V	
Forward continuous current			I _F	250	mA	
Peak forward surge current	$t_p = 1 \text{ s, } T_j = 25 \text{ °C}$		I _{FSM}	1	Α	
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		Tj	175	°C			
Storage temperature range		T _{stg}	-65 to +175	°C			

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PARAMETER	TEST CONDITION	PART	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	I _F = 100 mA		V _F			1	V
	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
Deverage everyont	V _R = 200 V	BAV203	I _R			100	nA
Reverse current	T _j = 100 °C, V _R = 50 V	BAV200	I _R			15	μΑ
	T _j = 100 °C, V _R = 100 V	BAV201	I _R			15	μΑ
	T _j = 100 °C, V _R = 150 V	BAV202	I _R			15	μΑ
	$T_j = 100 ^{\circ}\text{C}, V_R = 200 \text{V}$	BAV203	I _R			15	μΑ
	$I_R = 100 \mu A, t_p/T = 0.01,$ $t_p = 0.3 \text{ ms}$	BAV200	V _(BR)	60			V
Breakdown voltage		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	$I_F = I_R = 30 \text{ mA}, i_R = 3 \text{ mA},$ $R_L = 100 \Omega$		t _{rr}			50	ns

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

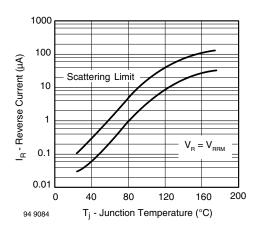


Fig. 1 - Reverse Current vs. Junction Temperature

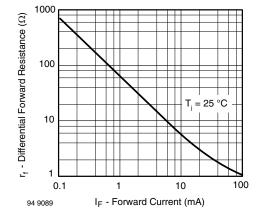


Fig. 3 - Differential Forward Resistance vs. Forward Current

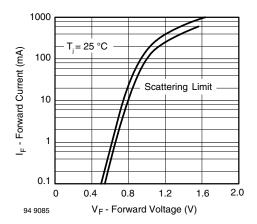
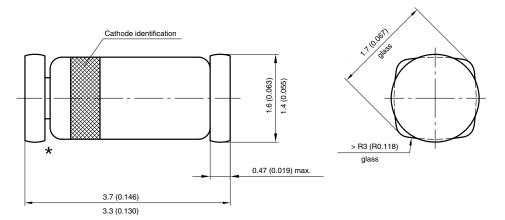


Fig. 2 - Forward Current vs. Forward Voltage

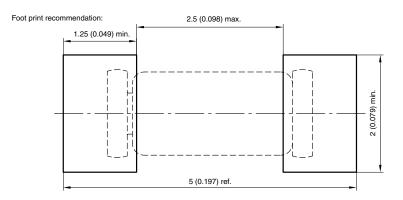
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PACKAGE DIMENSIONS in millimeters (inches): QuadroMELF (SOD-80)



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



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