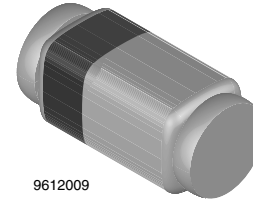
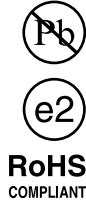




## Small Signal Switching Diodes, High Voltage

### Features

- Silicon epitaxial planar diodes
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



### Applications

- General purposes

### Mechanical Data

**Case:** QuadroMELF SOD-80

**Weight:** approx. 34 mg

**Cathode band color:** black

#### Packaging codes/options:

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

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

### Parts Table

Part	Type differentiation	Ordering code	Type marking	Remarks
BAV200	$V_{RRM} = 60\text{ V}$	BAV200-GS18 or BAV200-GS08	-	Tape and reel
BAV201	$V_{RRM} = 120\text{ V}$	BAV201-GS18 or BAV201-GS08	-	Tape and reel
BAV202	$V_{RRM} = 200\text{ V}$	BAV202-GS18 or BAV202-GS08	-	Tape and reel
BAV203	$V_{RRM} = 250\text{ V}$	BAV203-GS18 or BAV203-GS08	-	Tape and reel

### Absolute Maximum Ratings

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

Parameter	Test condition	Part	Symbol	Value	Unit
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
Forward peak current	$f = 50\text{ Hz}$		$I_{FM}$	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	$I_F = 100\text{ mA}$		$V_F$			1000	mV
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	$\mu\text{A}$
	$T_j = 100\text{ }^{\circ}\text{C}$ , $V_R = 100\text{ V}$	BAV201	$I_R$			15	$\mu\text{A}$
	$T_j = 100\text{ }^{\circ}\text{C}$ , $V_R = 150\text{ V}$	BAV202	$I_R$			15	$\mu\text{A}$
	$T_j = 100\text{ }^{\circ}\text{C}$ , $V_R = 200\text{ V}$	BAV203	$I_R$			15	$\mu\text{A}$
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		$\Omega$
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

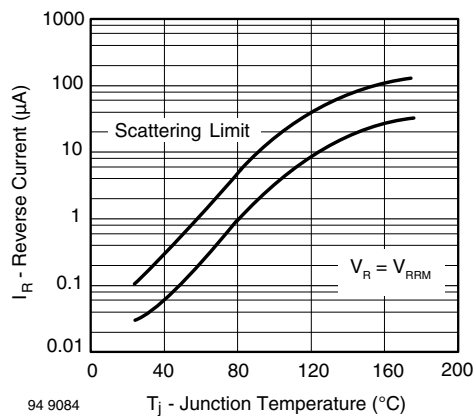


Figure 1. Reverse Current vs. Junction Temperature

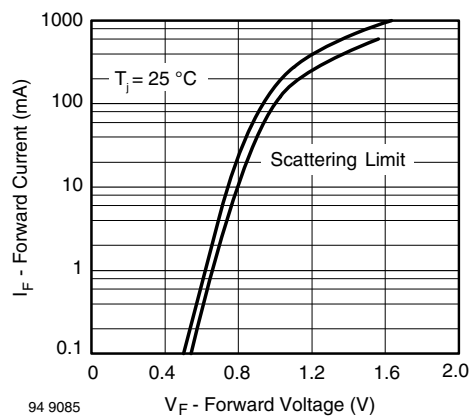


Figure 2. Forward Current vs. Forward Voltage

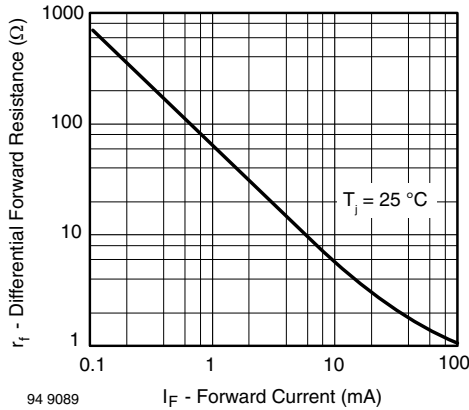
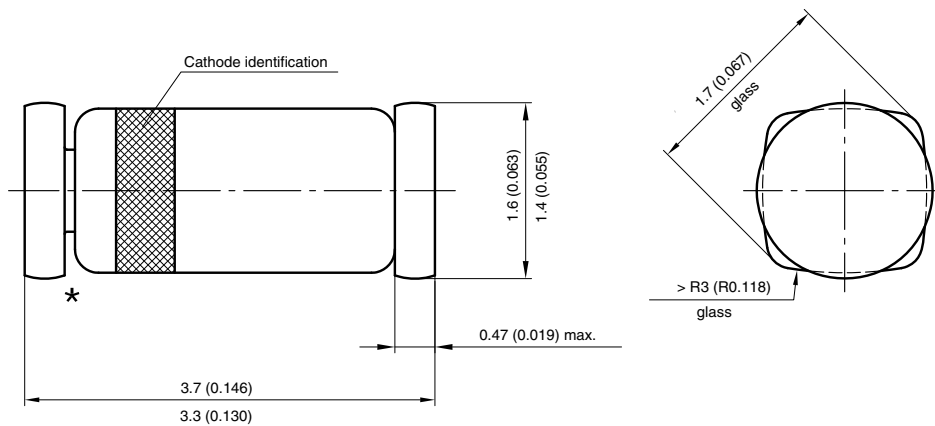
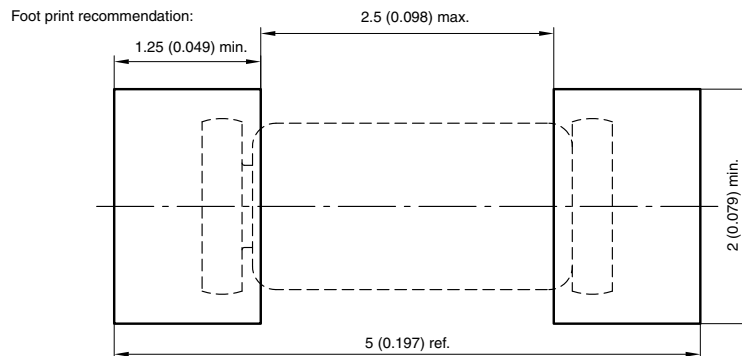


Figure 3. Differential Forward Resistance vs. Forward Current

## 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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 96 12071



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