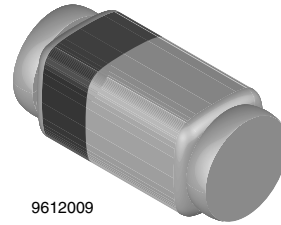


Small Signal Fast Switching Diode

Features

- Silicon epitaxial planar diode
- Low forward voltage drop
- High forward current capability
- QuadroMELF package
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC



Applications

- High speed switch and general purpose
- Use in computer and industrial applications

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	Ordering code	Type marking	Remarks
LS4150	LS4150-GS18 or LS4150-GS08	-	Tape and reel

Absolute Maximum Ratings

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

Parameter	Test condition	Symbol	Value	Unit
Repetitive peak reverse voltage		V_{RRM}	50	V
Reverse voltage		V_R	50	V
Peak forward surge current	$t_p = 1\text{ }\mu\text{s}$	I_{FSM}	4	A
Forward continuous current		I_F	600	mA
Average forward current	$V_R = 0$	I_{FAV}	300	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}	300	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	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	$I_F = 1\text{ mA}$	V_F	540		620	mV
	$I_F = 10\text{ mA}$	V_F	660		740	mV
	$I_F = 50\text{ mA}$	V_F	760		860	mV
	$I_F = 100\text{ mA}$	V_F	820		920	mV
	$I_F = 200\text{ mA}$	V_F	870		1000	mV
Reverse current	$V_R = 50\text{ V}$	I_R			100	nA
	$V_R = 50\text{ V}, T_j = 150\text{ }^{\circ}\text{C}$	I_R			100	μA
Diode capacitance	$V_R = 0, f = 1\text{ MHz}, V_{HF} = 50\text{ mV}$	C_D			2.5	pF
Reverse recovery time	$I_F = I_R = 10\text{ to }100\text{ mA},$ $i_R = 0.1 \times I_R, R_L = 100\text{ }\Omega$	t_{rr}			4	ns

Typical Characteristics

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

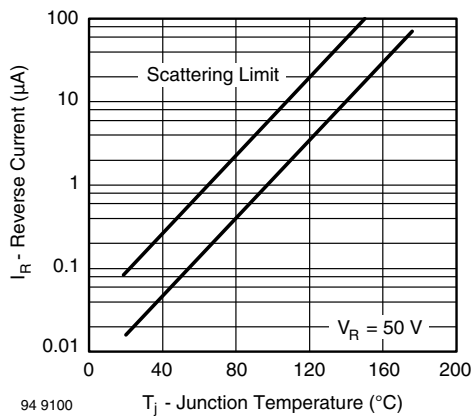


Figure 1. Reverse Current vs. Junction Temperature

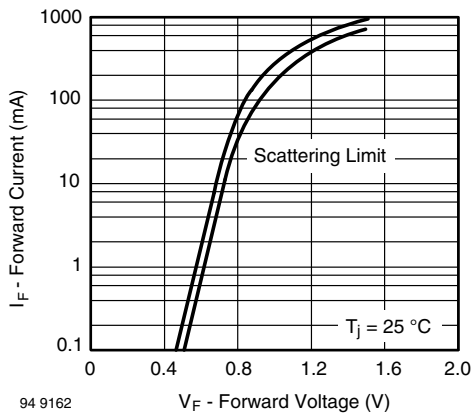
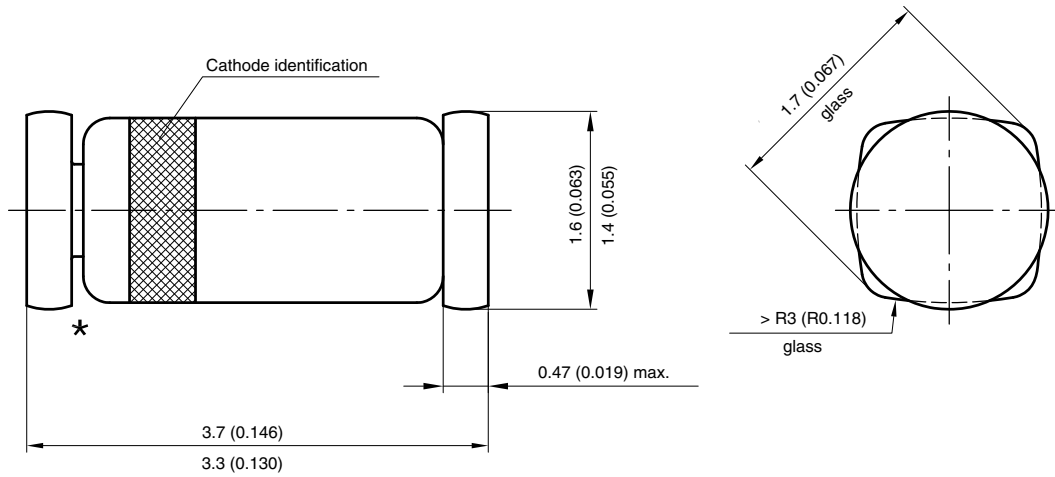
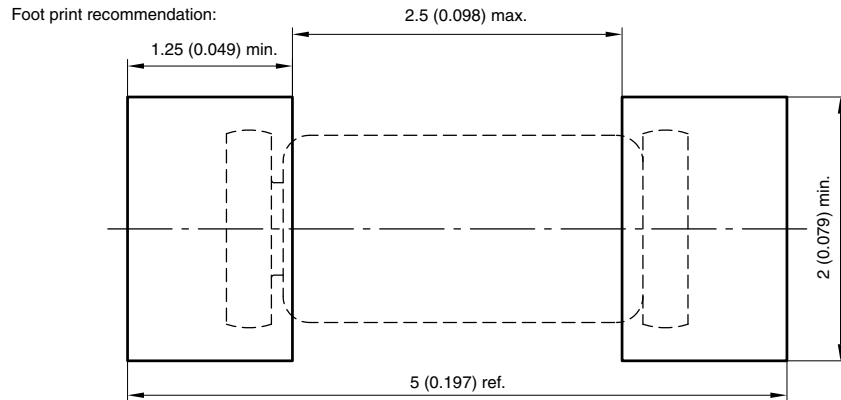


Figure 2. Forward Current vs. Forward Voltage

Package Dimensions in millimeters (inches): QuadroMELF SOD-80



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



Created - Date: 03.November.2003
 Rev. 11 - Date: 07.June 2006
 Document no.: 6.560-5006.01-4
 96 12071



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