

Small Signal Fast Switching Diode



FEATURES

- Silicon epitaxial planar diode
- Low forward voltage drop
- High forward current capability
- QuadroMELF package
- Material categorization:
for definitions of compliance please see
www.vishay.com/doc?99912


RoHS
COMPLIANT

APPLICATIONS

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

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	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS
LS4150	LS4150GS18 or LS4150GS08	-	Single	Tape and reel

ABSOLUTE MAXIMUM RATINGS (T_{amb} = 25 °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 μs	I _{FSM}	4	A
Forward continuous current		I _F	600	mA
Average forward current	V _R = 0	I _{F(AV)}	300	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}	300	K/W
Junction temperature		T _j	175	°C
Storage temperature range		T _{stg}	-65 to +175	°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	0.540		0.620	V
	$I_F = 10\text{ mA}$	V_F	0.660		0.740	V
	$I_F = 50\text{ mA}$	V_F	0.760		0.860	V
	$I_F = 100\text{ mA}$	V_F	0.820		0.920	V
	$I_F = 200\text{ mA}$	V_F	0.870		1	V
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	$I_F = I_R = 10\text{ mA to } 100\text{ mA}$, $i_R = 0.1 \times I_R$, $R_L = 100\text{ }\Omega$	t_{rr}			4	ns

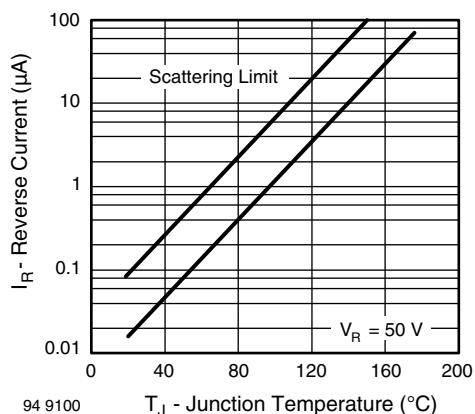
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Reverse Current vs. Junction Temperature

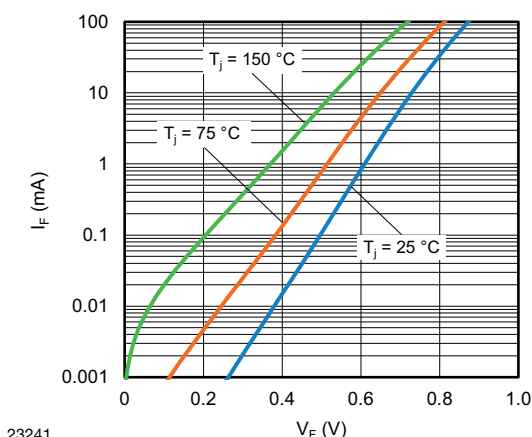
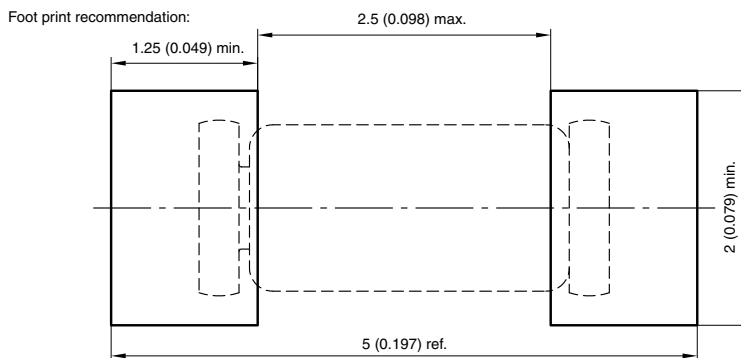
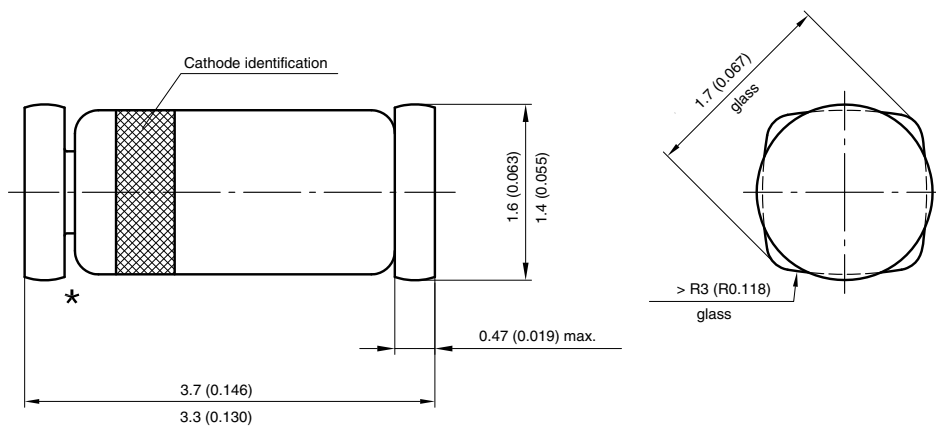


Fig. 2 - Forward Current vs. Forward Voltage

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


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