

LL4150GS18 Datasheet

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DiGi Electronics Part Number	LL4150GS18-DG
Manufacturer	Vishay General Semiconductor - Diodes Division
Manufacturer Product Number	LL4150GS18
Description	DIODE GEN PURP 50V 600MA SOD80
Detailed Description	Diode 50 V 600mA Surface Mount SOD-80 MiniMELF

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Purchase and inquiry

Manufacturer Product Number:

LL4150GS18

Series:

-

Technology:

Standard

Current - Average Rectified (Io):

600mA

Speed:

Fast Recovery =< 500ns, > 200mA (Io)

Current - Reverse Leakage @ Vr:

100 nA @ 50 V

Mounting Type:

Surface Mount

Supplier Device Package:

SOD-80 MiniMELF

Base Product Number:

LL4150

Manufacturer:

Vishay General Semiconductor - Diodes Division

Product Status:

Active

Voltage - DC Reverse (Vr) (Max):

50 V

Voltage - Forward (Vf) (Max) @ If:

1 V @ 200 mA

Reverse Recovery Time (trr):

4 ns

Capacitance @ Vr, F:

2.5pF @ 0V, 1MHz

Package / Case:

DO-213AC, MINI-MELF, SOD-80

Operating Temperature - Junction:

-55°C ~ 175°C

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.10.0080

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99


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LL4150

Vishay Semiconductors

Small Signal Fast Switching Diode



FEATURES

- Silicon epitaxial planar diodes
- Low forward voltage drop
- High forward current capability
- 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: MiniMELF (SOD-80)

Weight: approx. 31 mg

Cathode band color: black

Packaging codes / options:

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

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

PARTS TABLE				
PART	ORDERING CODE	TYPE MARKING	CIRCUIT CONFIGURATION	REMARKS
LL4150	LL4150GS08 or LL4150GS18	-	Single	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	$V_R = 0$	$I_{F(AV)}$	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	$^{\circ}\text{C}$
Operating temperature range		T_{op}	-55 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	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)

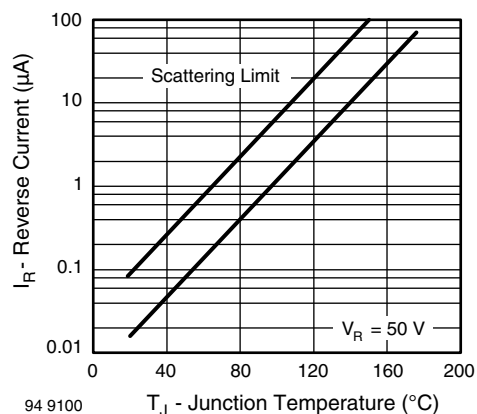


Fig. 1 - Reverse Current vs. Junction Temperature

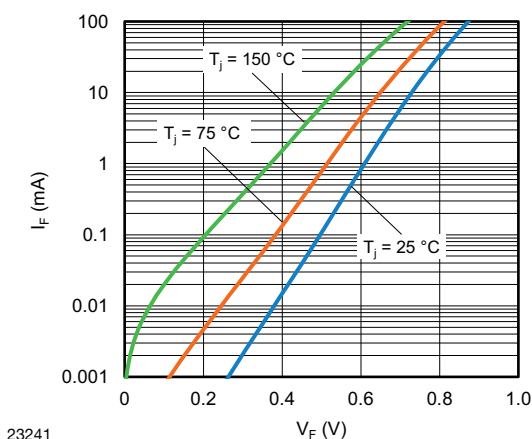
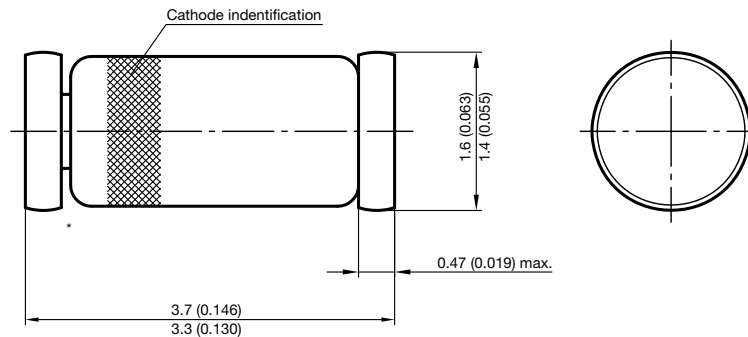


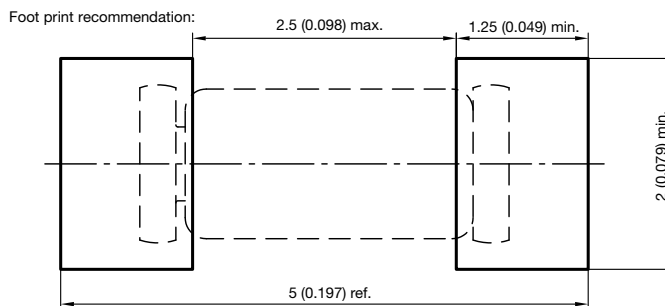
Fig. 2 - Forward Current vs. Forward Voltage



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



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



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