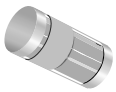
GENERAL SEMICONDUCTOR®

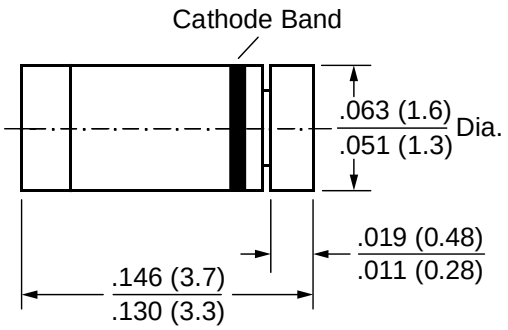
LL4151

Small-Signal Diode

Reverse Voltage 75V
Forward Current 150V



MiniMELF (SOD-80C)



Dimensions in inches and (millimeters)

Features

- Silicon Epitaxial Planar Diode
- Fast switching diode in MiniMELF case especially suited for automatic insertion.
- This diode is also available in other case styles including the DO-35 case with the type designation 1N4151 and the SOD-123 case with the type designation 1N4151W.

Mechanical Data

Case: MiniMELF Glass Case (SOD-80C)
Weight: approx. 0.05g
Cathode Band Color: Black
Packaging Codes/Options:
D1/10K per 13" reel (8mm tape), 20K/box
D2/2.5K per 7" reel (8mm tape), 20K/box
F4/10K per 13" reel (8mm tape), 50K/box

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Limit	Unit
Reverse Voltage	V_R	50	V
Peak Reverse Voltage	V_{RM}	75	V
Forward DC Current at T_{amb} = 25°C	I_F	200(1)	mA
Average Rectified Current (Half Wave Rectification with Resist. Load at Tamb = 25°C f ≥ 50Hz)	$I_{F(AV)}$	150(1)	mA
Surge Forward Current at t < 1s and Tj = 25°C	I_{FSM}	500	mA
Power Dissipation at T_{amb} = 25°C	P_{tot}	500(1)	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	350(1)	°C/W
Junction Temperature	T_j	175	°C
Storage Temperature	T_S	–65 to +175	°C

Electrical Characteristics (T_J = 25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage	V_F	I_F = mA	—	—	1	V
Leakage Current	I_R	V_R = 50V	—	—	50	nA
		V_R = 50V, T_J = 150°C	—	—	50	µA
Capacitance	C_{tot}	V_F = V_R = 0	—	—	2	pF
Reverse Recovery Time	t_{rr}	I_F = 10mA, I_R = 10mA I_{rr} = 1mA, R_L = 100Ω	—	—	4	ns
		I_F = 10mA, I_R = 1mA V_R = 6V, R_L = 100Ω	—	—	2	ns
Rectification Efficiency (See third page)	η_v	f = 100MHz, V_{RF} = 2V	0.45	—	—	—

Note: (1) Valid provided that electrodes are kept at ambient temperature.

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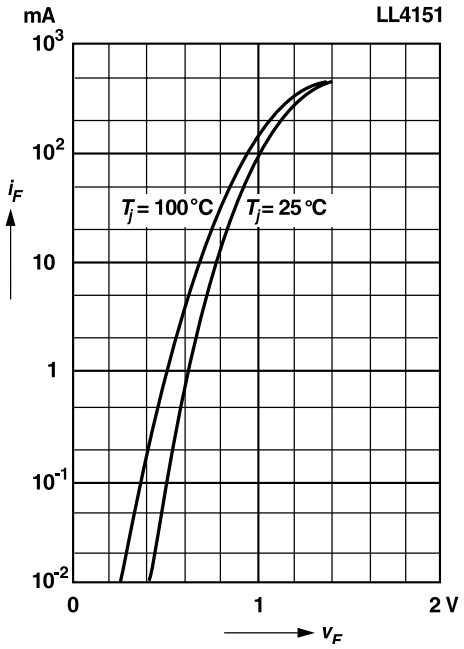
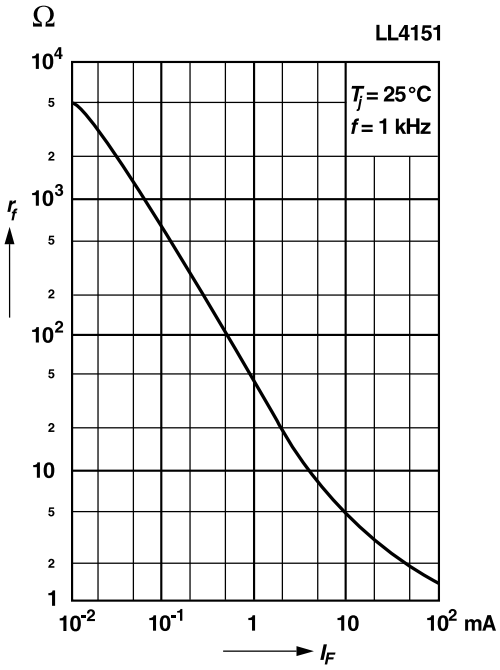
Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Forward characteristics

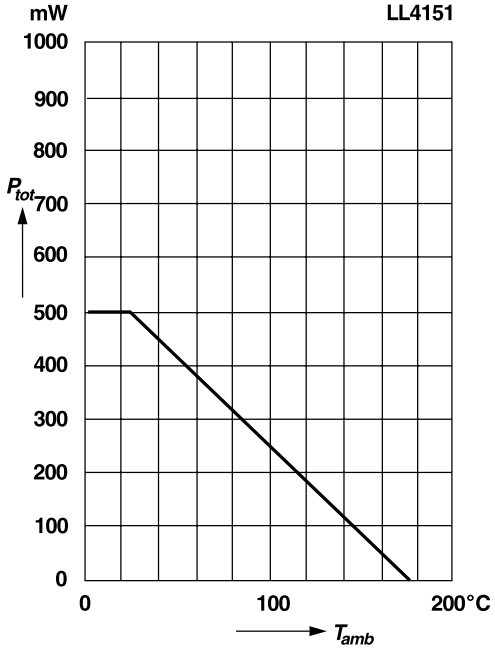


Dynamic forward resistance versus forward current

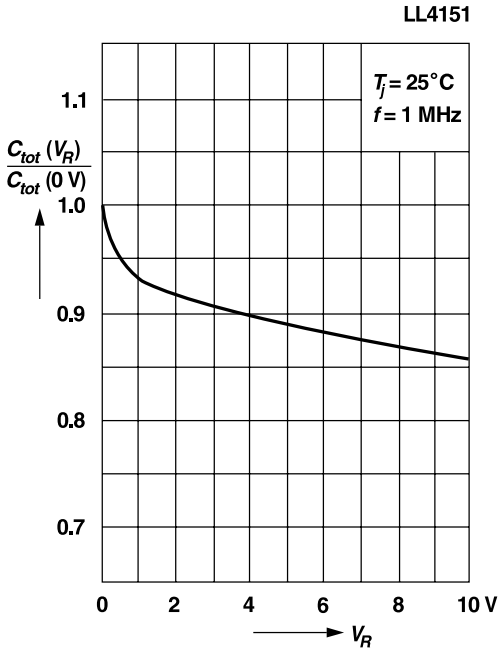


Admissible power dissipation versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

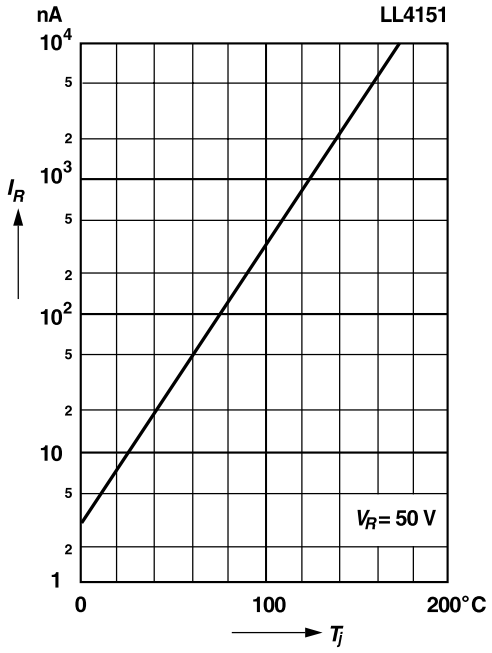


Relative capacitance versus reverse voltage

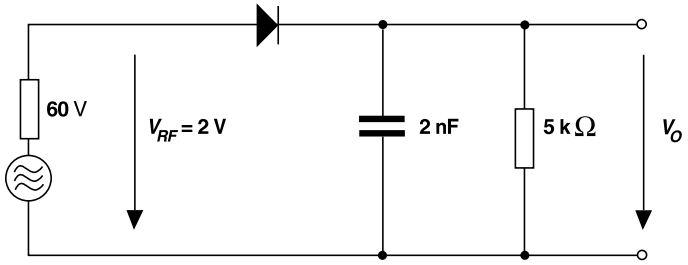


Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Leakage current versus junction temperature



Rectification Efficiency Measurement Circuit



Admissible repetitive peak forward current versus pulse duration

Valid provided that electrodes are kept at ambient temperature