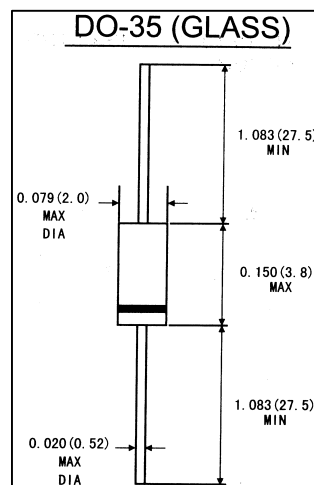


## FEATURES

- Silicon epitaxial planar diode
- Fast swithching diodes
- 500mW power dissipation
- The diode is also available in the Mini-MELF case with the type designation LL4151

## MECHANICAL DATA

- **Case:** DO-35 glass case
- **Polarity:** Color brand denotes cathode end
- **Weight:** Approx. 0.13gram



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified)

|                                                                                                                           | Symbol    | Value             | Units |
|---------------------------------------------------------------------------------------------------------------------------|-----------|-------------------|-------|
| Reverse voltage                                                                                                           | $V_R$     | 50                | Volts |
| Peak reverse voltage                                                                                                      | $V_{RM}$  | 75                | Volts |
| Average rectified current, Half wave rectification with Resistive load at $T_A=25^\circ\text{C}$ and $F \geq 50\text{Hz}$ | $I_{AV}$  | 150 <sup>1)</sup> | mA    |
| Surge forward current at $t < 1\text{S}$ and $T_J=25^\circ\text{C}$                                                       | $I_{FSM}$ | 500               | Ma    |
| Power dissipation at $T_A=25^\circ\text{C}$                                                                               | $P_{tot}$ | 500 <sup>1)</sup> | Mw    |
| Junction temperature                                                                                                      | $T_J$     | 175               | °C    |
| Storage temperature range                                                                                                 | $T_{STG}$ | -65 to + 175      | °C    |

1)Valid provided that at a distance of 8mm from case are kept at ambient temperature(DO-35)

## ELECTRICAL CHARACTERISTICS

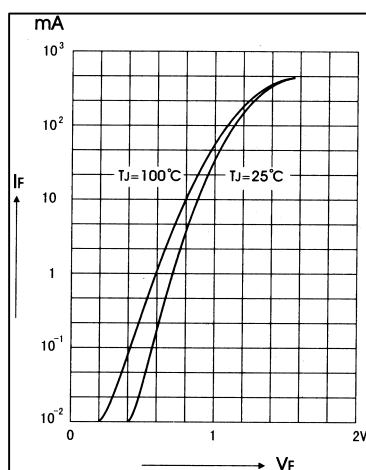
(Ratings at 25°C ambient temperature unless otherwise specified)

|                                                                                                                                                                                                 | Symbols              | Min. | Typ. | Max.              | Units         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------|------|-------------------|---------------|
| Forward voltage                                                                                                                                                                                 | $V_F$                |      |      | 1                 | Volts         |
| Leakage current at $V_R=50\text{V}$                                                                                                                                                             | $I_R$                |      |      | 50                | nA            |
| at $V_R=20\text{V}$ , $T_J=150^\circ\text{C}$                                                                                                                                                   | $I_R$                |      |      | 50                | $\mu\text{A}$ |
| Junction capacitance at $V_R=V_F=0\text{V}$                                                                                                                                                     | $C_J$                | 75   |      | 2                 | pF            |
| Reverse breakdown voltage tested with 5 $\mu\text{A}$ pulse                                                                                                                                     | $V_{(BR)R}$          |      |      |                   |               |
| Reverse recovery time from $I_F=10\text{mA}$ to $I_R=10\text{mA}$ to $I_R=1\text{mA}$ ,<br>from $I_F=10\text{mA}$ to $I_R=1\text{mA}$ to $I_R=1\text{mA}$ , $V_R=6\text{V}$ , $R_L=100\ \Omega$ | $t_{rr}$<br>$t_{rr}$ |      |      | 4<br>4.000        | ns<br>ns      |
| Thermal resistance junction to ambient                                                                                                                                                          | $R_{\theta JA}$      |      |      | 350 <sup>1)</sup> | K/W           |
| Rectification efficeint at $f=100\text{MHz}$ , $V_{RF}=2\text{V}$                                                                                                                               | $\eta$               | 0.45 |      |                   |               |

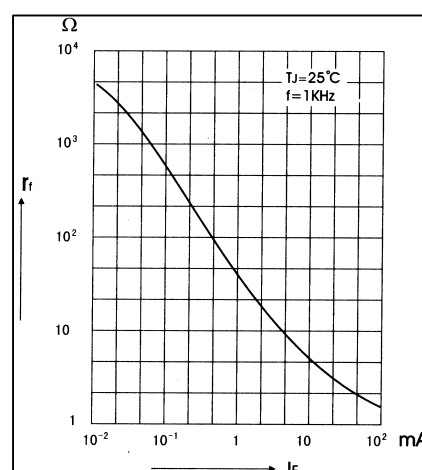
1)Valid provided that leads at a distance of 8mm from case are kept at ambient temperature(DO-35)

## RATINGS AND CHATACTERISTIC CURVES 1N4151

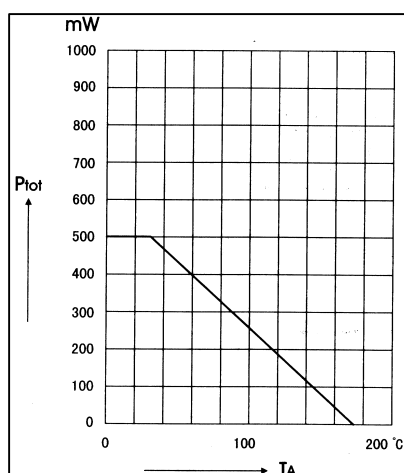
**FLG.1-FORWARD CHARACTERISTICS**



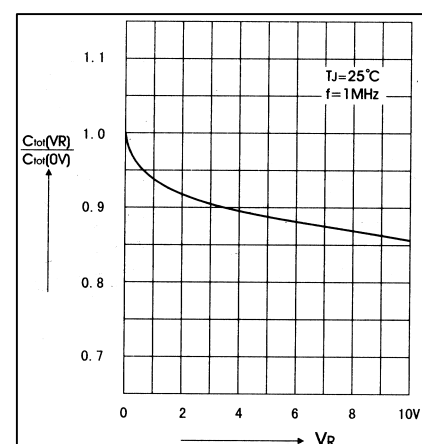
**FIG.2-DYNAMIC FORWARD RESISTANCE VERSUS FORWARD CURRENT**



**FIG.3-ADMISSIBLE POWER DISSIPATION VERSUS AMBIENT TEMPERATURE**

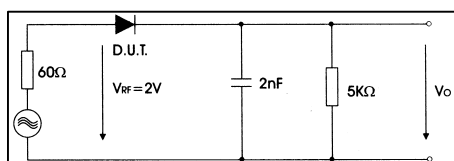


**FIG.4-RELATIVE CAPACITANCE VERSUS VOLTAGE**



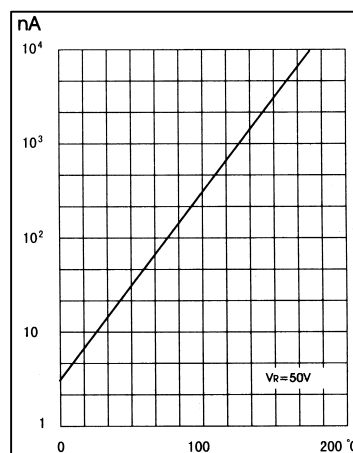
**FIG.5-RECTIFICATION EFFICIENCY MEASUREMENT**

**CIRCUIT**



**FIG.6-LEAKAGE CURRENT VERSUS JUNCTION**

**TEMPERATURE**



**FIG.7-ADMISSIBLE REPETITIVE PEAK FORWARD CURRENT VERSUS PULSE DURATION**

