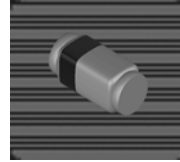


Features

- Silicon Epitaxial Planar Diode
- Electrical data identical with the device 1N4151
- Quadro Melf package

Applications

- Extreme fast switches



Mechanical Data

- Case:QuadroMELF Glass Case (SOD-80)
- Weight: approx. 34 mg
- Cathode Band Color: Black

Absolute Maximum Ratings

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

| Parameter | Test Condition | Symbol | Value | Unit |
|---------------------------------|----------------------|-----------|-------|------|
| Repetitive peak reverse voltage | | V_{RRM} | 75 | V |
| Reverse voltage | | V_R | 50 | V |
| Peak forward surge current | $t_p = 1 \text{ us}$ | I_{FSM} | 2 | A |
| Repetitive peak forward current | | I_{FRM} | 500 | mA |
| Forward current | | I_F | 300 | mA |
| Average forward current | $V_R=0$ | I_{FAV} | 150 | mA |
| Power dissipation | | P_V | 500 | mW |

Thermal Characteristics

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

| Parameter | Test Condition | Symbol | Value | Unit |
|---------------------------|-------------------------------------|------------|-------------|--------------------|
| Junction ambient | on PC board 50 mm X 50mm X 1.6mm | R_{thJA} | 500 | K/W |
| Junction temperature | | T_J | 175 | $^{\circ}\text{C}$ |
| Storage temperature range | | T_{stg} | -65 to +175 | $^{\circ}\text{C}$ |

Electrical Characteristics

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

| Parameter | Test Condition | Symbol | Min. | Typ. | Max. | Unit |
|-----------------------|---|------------|------|------|------|---------------|
| Forward voltage | $I_F=50\text{mA}$ | V_F | | 0.88 | 1.0 | V |
| Reverse current | $V_R=50\text{V}$ | I_R | | | 50 | nA |
| | $V_R=50\text{V}, T_J=150^{\circ}\text{C}$ | | | | 50 | μA |
| Breakdown voltage | $I_R=5\mu\text{A}, t_p/T=0.01, t_p=0.3\text{ms}$ | $V_{(BR)}$ | 75 | | | V |
| Diode capacitance | $V_R=0, f=1\text{MHz}, V_{RF}=50\text{mV}$ | C_D | | | 2 | pF |
| Reverse recovery time | $I_F=I_R=10\text{mA}, i_R=1\text{mA}$ | t_{rr} | | | 4 | ns |
| | $I_F=10\text{mA}, V_R=6\text{V}, i_R=0.1 \times I_R, R_L=100\Omega$ | | | | 2 | |
| | | | | | | |

Typical characteristics

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

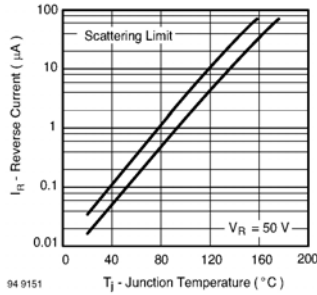


Fig. 1 Reverse Current vs. Junction Temperature

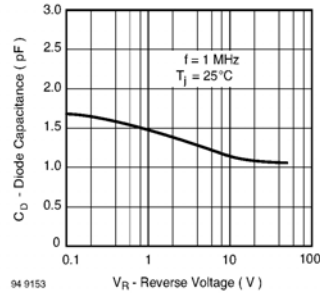


Fig. 3 Diode Capacitance vs. Reverse Voltage

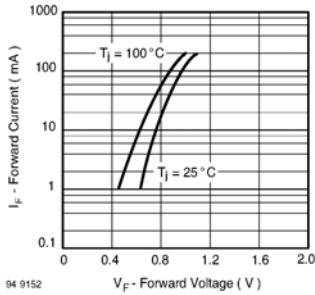


Fig. 2 Forward Current vs. Forward Voltage

Package Dimensions in mm (inches)

