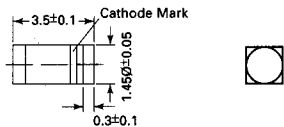


Silicon Expitaxial Planar Diode

fast switching diode in MiniMELF case especially suited for automatic surface mounting.  
Identical electrically to standard JEDEC 1N4148

These diodes are delivered taped.  
Details see "Taping".

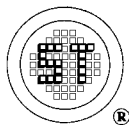


Glass case MiniMELF

Weight approx. 0.05g  
Dimensions in mm

Absolute Maximum Ratings (T<sub>a</sub> = 25 °C)

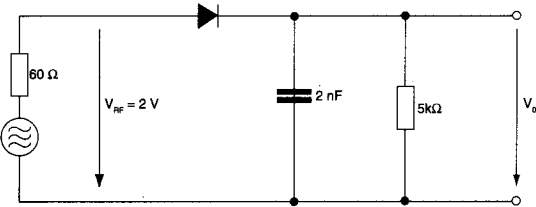
|                                                                                                                       | Symbol           | Value             | Unit |
|-----------------------------------------------------------------------------------------------------------------------|------------------|-------------------|------|
| Reverse Voltage                                                                                                       | V <sub>R</sub>   | 75                | V    |
| Peak Reverse Voltage                                                                                                  | V <sub>RM</sub>  | 100               | V    |
| Rectified Current (Average)<br>Half Wave Rectification with Resist. Load<br>at T <sub>amb</sub> = 25 °C and f ≥ 50 Hz | I <sub>o</sub>   | 150 <sup>1)</sup> | mA   |
| Surge Forward Current at t < 1 s and T <sub>j</sub> = 25 °C                                                           | I <sub>FSM</sub> | 500               | mA   |
| Power Dissipation at T <sub>amb</sub> = 25 °C                                                                         | P <sub>tot</sub> | 500 <sup>1)</sup> | mW   |
| Junction Temperature                                                                                                  | T <sub>j</sub>   | 175               | °C   |
| Storage Temperature Range                                                                                             | T <sub>s</sub>   | -65 to + 175      | °C   |
| <sup>1)</sup> Valid provided that electrodes are kept at ambient temperature                                          |                  |                   |      |



Characteristics at T<sub>j</sub> = 25 °C

|                                                                                                                              | Symbol                                             | Min.        | Typ.        | Max.               | Unit           |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------|-------------|--------------------|----------------|
| Forward Voltage<br>at I <sub>F</sub> = 10 mA                                                                                 | V <sub>F</sub>                                     | -           | -           | 1                  | V              |
| Leakage Current<br>at V <sub>R</sub> = 20 V<br>at V <sub>R</sub> = 75 V<br>at V <sub>R</sub> = 20 V, T <sub>j</sub> = 150 °C | I <sub>R</sub><br>I <sub>R</sub><br>I <sub>R</sub> | -<br>-<br>- | -<br>-<br>- | 25<br>5<br>50      | nA<br>μA<br>μA |
| Reverse Breakdown Voltage<br>tested with 100 μA Pulses                                                                       | V <sub>(BR)R</sub>                                 | 100         | -           | -                  | V              |
| Capacitance<br>at V <sub>F</sub> = V <sub>R</sub> = 0                                                                        | C <sub>tot</sub>                                   | -           | -           | 4                  | pF             |
| Voltage Rise when Switching ON<br>tested with 50 mA Forward Pulses<br>tp = 0.1 s, Rise Time < 30ns, fp = 5 to 100 kHz        | V <sub>fr</sub>                                    | -           | -           | 2.5                | V              |
| Reverse Recovery Time<br>from I <sub>F</sub> = 10 mA to I <sub>R</sub> = 1 mA, V <sub>R</sub> = 6 V, R <sub>L</sub> = 100 Ω, | t <sub>rr</sub>                                    | -           | -           | 4                  | ns             |
| Thermal Resistance<br>Junction to Ambient Air                                                                                | R <sub>thA</sub>                                   | -           | -           | 0.35 <sup>1)</sup> | K/mW           |
| Rectification Efficiency<br>at f = 100 MHz, V <sub>RF</sub> = 2 V                                                            | η <sub>V</sub>                                     | 0.45        | -           | -                  | -              |

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature



Rectification Efficiency Measurement Circuit

