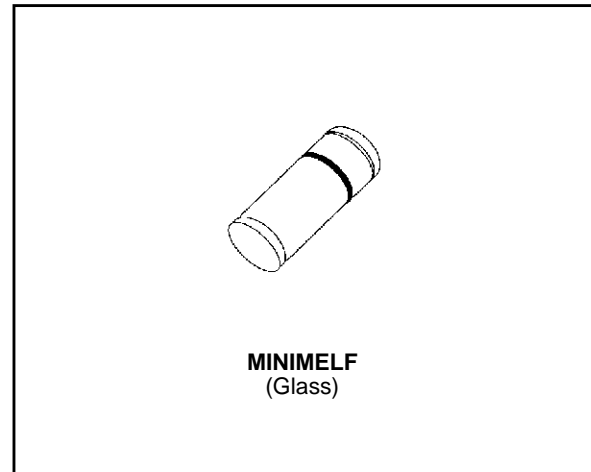


SMALL SIGNAL SCHOTTKY DIODE



DESCRIPTION

Metal to silicon junction diode primarily intended for UHF mixers and ultrafast switching applications.

ABSOLUTE RATINGS (limiting values)

| Symbol | Parameter | | Value | Unit |
|--------------------|--|--------------------------|------------------------------|--------------------------------------|
| V_{RRM} | Repetitive Peak Reverse Voltage | | 15 | V |
| I_F | Forward Continuous Current | $T_1 = 25^\circ\text{C}$ | 30 | mA |
| I_{FSM} | Surge non Repetitive Forward Current | $t_p \leq 1\text{s}$ | 60 | mA |
| T_{stg} T_j | Storage and Junction Temperature Range | | - 65 to +150 - 65 to +125 | $^\circ\text{C}$ $^\circ\text{C}$ |
| T_L | Maximum Temperature for Soldering during 15s | | 260 | $^\circ\text{C}$ |

THERMAL RESISTANCE

| Symbol | Test Conditions | Value | Unit |
|---------------|-----------------|-------|--------------------|
| $R_{th(j-l)}$ | Junction-leads | 400 | $^\circ\text{C/W}$ |

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ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

| Symbol | Test Conditions | | Min. | Typ. | Max. | Unit |
|-----------|-------------------------|-----------------|------|------|------|---------|
| V_{BR} | $T_{amb} = 25^{\circ}C$ | $I_R = 10\mu A$ | 15 | | | V |
| V_F (1) | $T_{amb} = 25^{\circ}C$ | $I_F = 1mA$ | | | 0.38 | V |
| | $T_{amb} = 25^{\circ}C$ | $I_F = 10mA$ | | | 0.5 | |
| | $T_{amb} = 25^{\circ}C$ | $I_F = 30mA$ | | | 1 | |
| I_R (1) | $T_{amb} = 25^{\circ}C$ | $V_R = 6V$ | | | 0.1 | μA |

DYNAMIC CHARACTERISTICS

| Symbol | Test Conditions | | | Min. | Typ. | Max. | Unit |
|--------|-------------------------|--------------|-----------------|------|------|------|------|
| C | $T_{amb} = 25^{\circ}C$ | $V_R = 1V$ | $f = 1MHz$ | | | 1.1 | pF |
| τ | $T_{amb} = 25^{\circ}C$ | $I_F = 20mA$ | Krakauer Method | | | 100 | ps |
| F (2) | $T_{amb} = 25^{\circ}C$ | $f = 1GHz$ | | | 6 | 7 | dB |

(1) Pulse test: $t_p \leq 300\mu s$ $\delta < 2\%$.

(2) Noise figure test :

- diode is inserted in a tuned stripline circuit
- local oscillator frequency 1GHz
- local oscillator power 1mW
- intermediate frequency amplifier, tuned on 30MHz, has a noise figure 1.5dB

Matched batches available on request. Test conditions (forward voltage and/or capacitance) according to customer specification.

Figure 1. Forward current versus forward voltage (typical values).

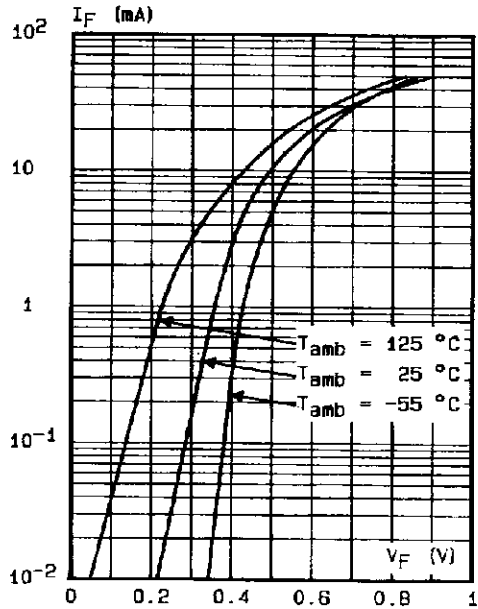


Figure 2. Capacitance C versus reverse applied voltage V_R (typical values).

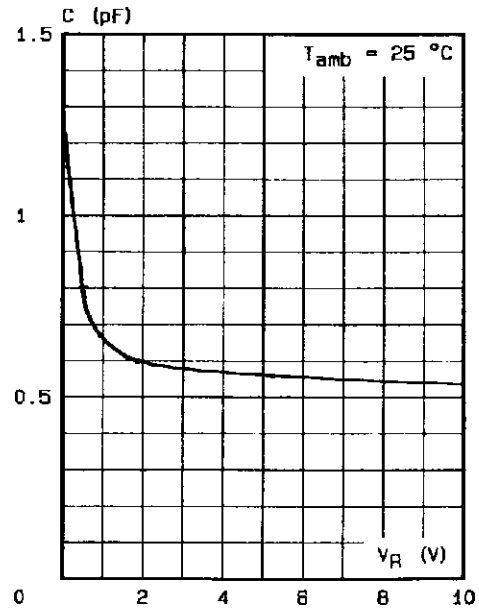


Figure 3. Reverse current versus ambient temperature.

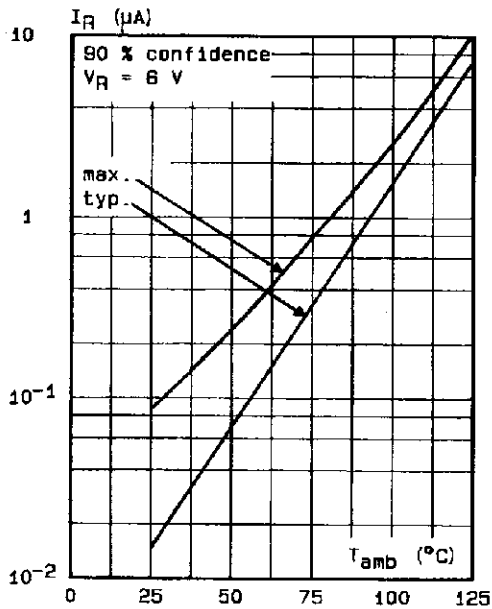
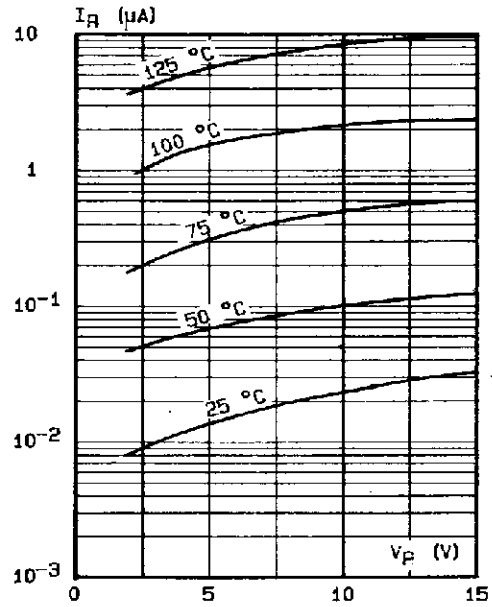


Figure 4. Reverse current versus continuous reverse voltage (typical values).

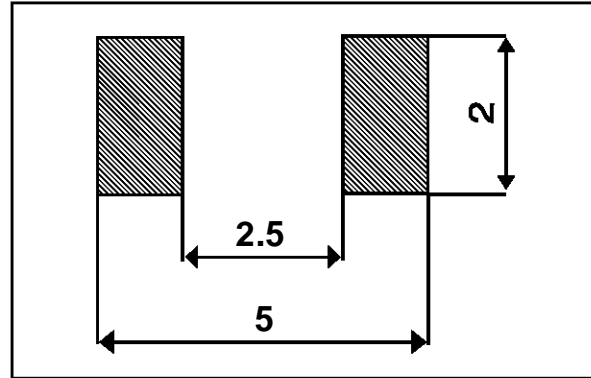
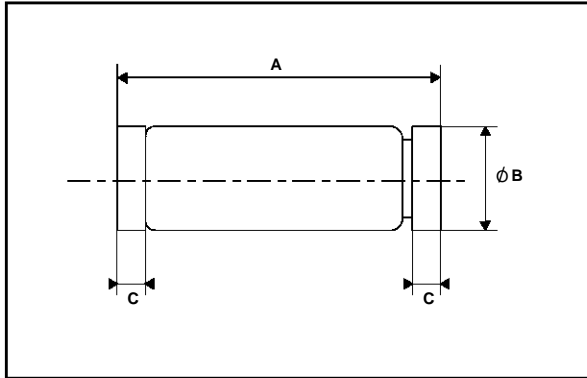


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PACKAGE MECHANICAL DATA

FOOT PRINT DIMENSIONS (Millimeter)

MINIMELF Glass



| REF. | DIMENSIONS | | | |
|------|-------------|------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| A | 3.3 | 3.6 | 0.130 | 0.142 |
| B | 1.59 | 1.62 | 0.063 | 0.064 |
| C | 0.4 | 0.5 | 0.016 | 0.020 |

Marking: ring at cathode end.
Weight: 0.05g

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