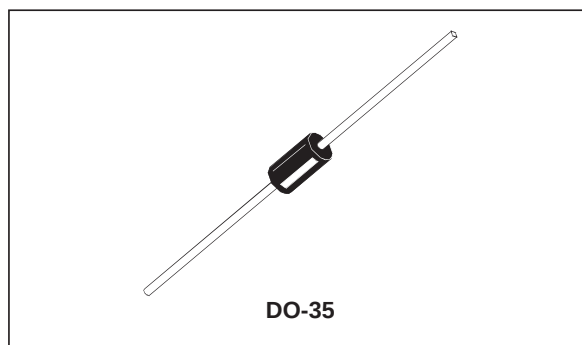


## SMALL SIGNAL SCHOTTKY DIODE

### DESCRIPTION

Metal to silicon junction diode featuring high break-down, low turn-on voltage and ultrafast switching. Primarily intended for high level UHF/VHF detection and pulse application with broad dynamic range.



### ABSOLUTE RATINGS (limiting values)

| Symbol             | Parameter                                                          |                          | Value                      | Unit             |
|--------------------|--------------------------------------------------------------------|--------------------------|----------------------------|------------------|
| $V_{RRM}$          | Repetitive Peak Reverse Voltage                                    |                          | 60                         | V                |
| $I_F$              | Forward Continuous Current*                                        | $T_a = 25^\circ\text{C}$ | 15                         | mA               |
| $I_{FSM}$          | Surge non Repetitive Forward Current*                              | $t_p \leq 1\text{s}$     | 50                         | mA               |
| $T_{stg}$<br>$T_j$ | Storage and Junction Temperature Range                             |                          | - 65 to 200<br>- 65 to 200 | $^\circ\text{C}$ |
| $T_L$              | Maximum Lead Temperature for Soldering during 10s at 4mm from Case |                          | 230                        | $^\circ\text{C}$ |

### THERMAL RESISTANCE

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

### ELECTRICAL CHARACTERISTICS

#### STATIC CHARACTERISTICS

| Symbol     | Test Conditions              |                       | Min. | Typ. | Max. | Unit          |
|------------|------------------------------|-----------------------|------|------|------|---------------|
| $V_{BR}$   | $T_{amb} = 25^\circ\text{C}$ | $I_R = 10\mu\text{A}$ | 60   |      |      | V             |
| $V_F^{**}$ | $T_{amb} = 25^\circ\text{C}$ | $I_F = 1\text{mA}$    |      |      | 0.41 | V             |
|            | $T_{amb} = 25^\circ\text{C}$ | $I_F = 15\text{mA}$   |      |      | 1    |               |
| $I_R^{**}$ | $T_{amb} = 25^\circ\text{C}$ | $V_R = 50\text{V}$    |      |      | 0.2  | $\mu\text{A}$ |

#### DYNAMIC CHARACTERISTICS

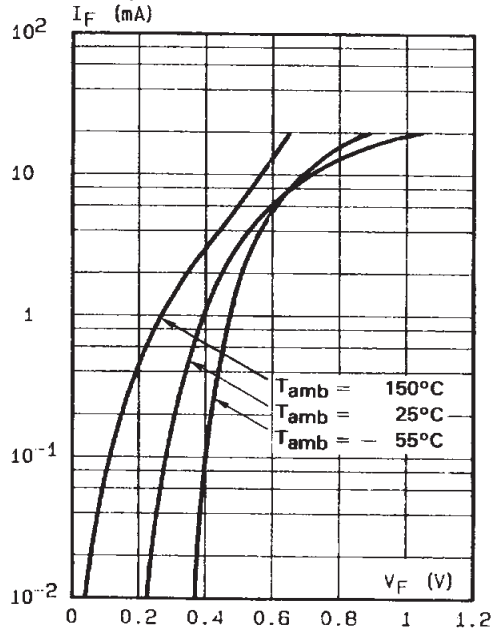
| Symbol | Test Conditions              |                    |                   | Min. | Typ. | Max. | Unit |
|--------|------------------------------|--------------------|-------------------|------|------|------|------|
| C      | $T_{amb} = 25^\circ\text{C}$ | $V_R = 0\text{V}$  | $f = 1\text{MHz}$ |      |      | 2.2  | pF   |
| $\tau$ | $T_{amb} = 25^\circ\text{C}$ | $I_F = 5\text{mA}$ | Krakauer Method   |      |      | 100  | ps   |

\* On infinite heatsink with 4mm lead length

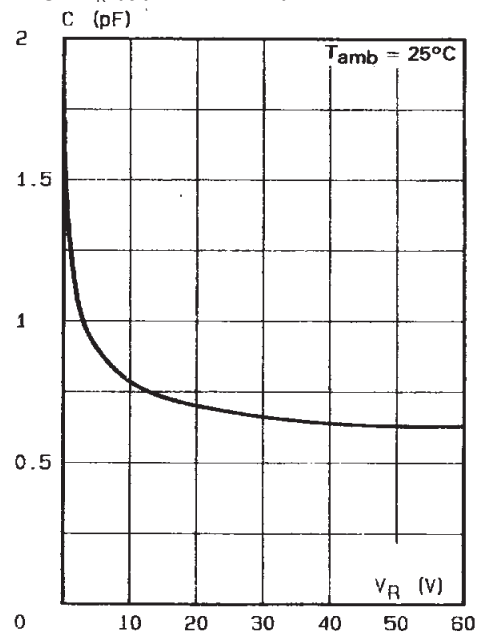
\*\* Pulse test:  $t_p \leq 300\mu\text{s}$   $\delta < 2\%$ .

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

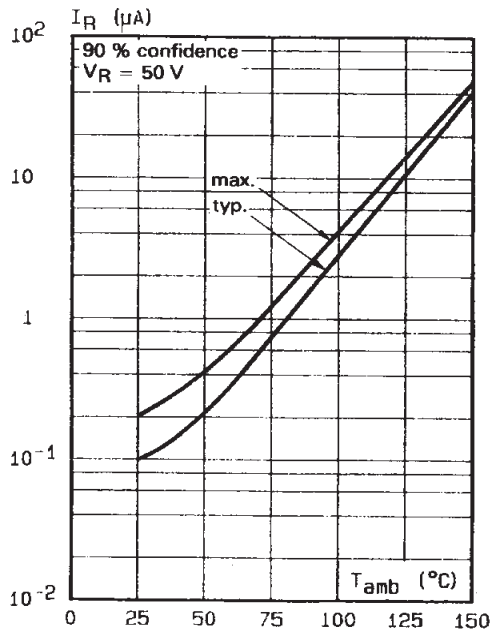
**Fig. 1:** Forward current versus forward voltage (typical values).



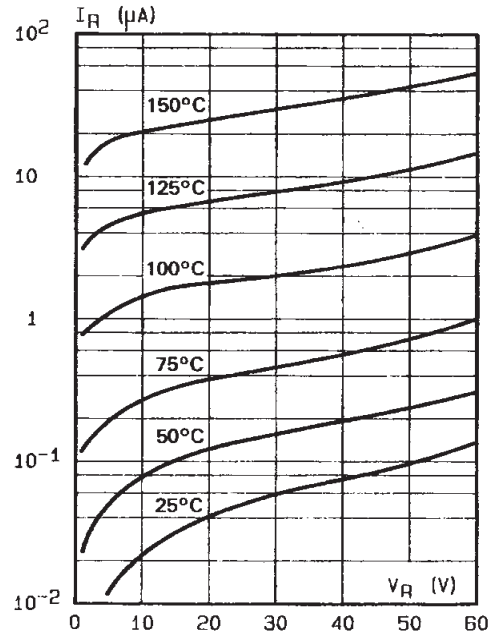
**Fig. 2:** Capacitance  $C$  versus reverse applied voltage  $V_R$  (typical values).



**Fig. 3:** Reverse current versus ambient temperature.

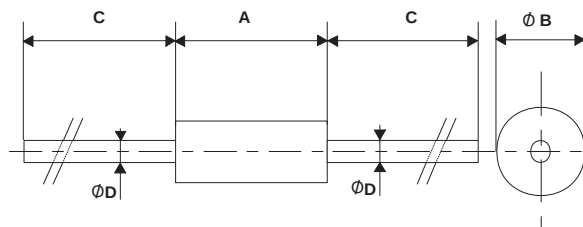


**Fig. 4:** Reverse current versus continuous reverse voltage (typical values).



**PACKAGE MECHANICAL DATA**

DO-35



| REF. | DIMENSIONS  |       |        |       |
|------|-------------|-------|--------|-------|
|      | Millimeters |       | Inches |       |
|      | Min.        | Max.  | Min.   | Max.  |
| A    | 3.05        | 4.50  | 0.120  | 0.177 |
| B    | 1.53        | 2.00  | 0.060  | 0.079 |
| C    | 28.00       |       | 1.102  |       |
| D    | 0.458       | 0.558 | 0.018  | 0.022 |

Cooling method : by convection and conduction

Marking: clear, ring at cathode end.

Weight: 0.15g

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