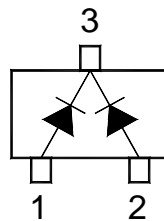


1SS184

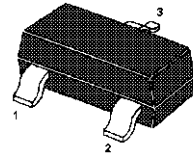
SILICON EPITAXIAL PLANAR DIODE

Features

- Small package
- Low forward voltage
- Fast reverse recovery time
- Small total capacitance



SOT-23



Marking Code: B3

SOT-23 Plastic Package

Applications

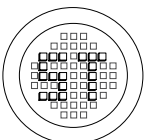
Ultra high speed switching application

Absolute Maximum Ratings ($T_j = 25^\circ\text{C}$)

| Parameter | Symbol | Value | Unit |
|------------------------------|-----------|-------------|------------------|
| Maximum Peak Reverse Voltage | V_{RM} | 85 | V |
| Reverse Voltage | V_R | 80 | V |
| Maximum Peak Forward Current | I_{FM} | 300 | mA |
| Surge Current (10ms) | I_{FSM} | 2 | A |
| Average Forward Current | I_O | 100 | mA |
| Power Dissipation | P_{tot} | 150 | mW |
| Junction Temperature | T_j | 125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_s | -55 to +125 | $^\circ\text{C}$ |

Characteristics at $T_j = 25^\circ\text{C}$

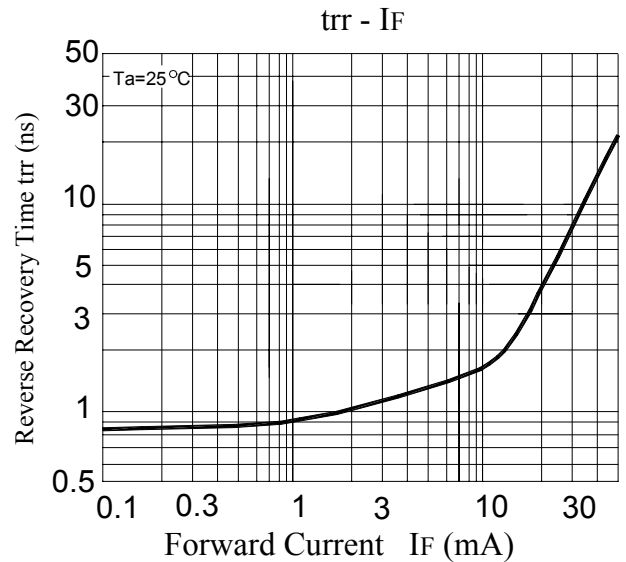
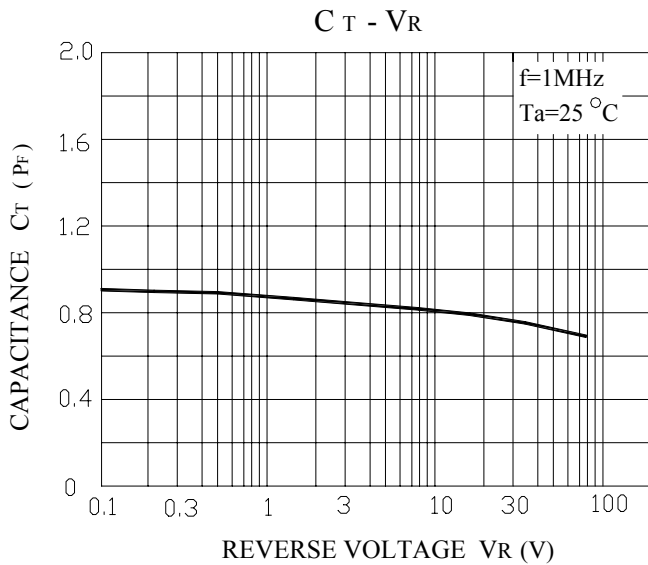
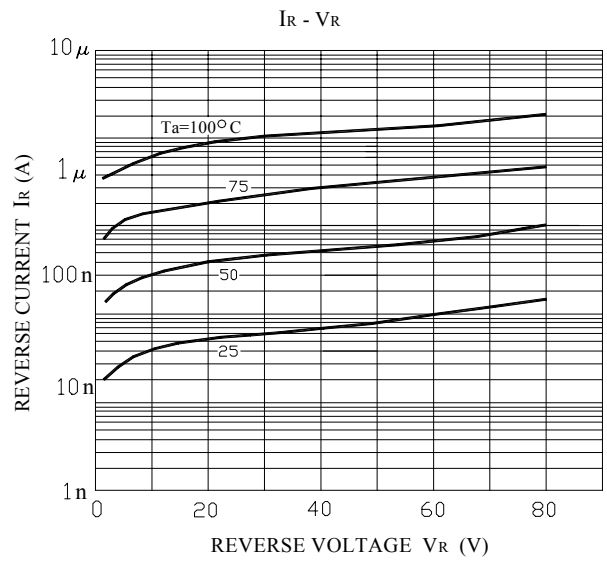
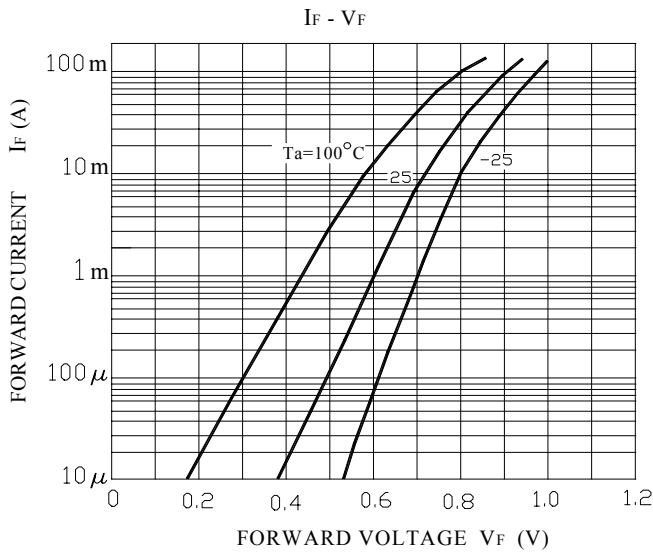
| Parameter | Test Conditions | Symbol | Min | Typ | Max | Unit |
|-----------------------|----------------------------|----------|-----|------|-----|---------------|
| Forward Voltage | $I_F = 1\text{mA}$ | V_F | - | 0.6 | - | V |
| | $I_F = 10\text{mA}$ | V_F | - | 0.72 | - | V |
| | $I_F = 100\text{mA}$ | V_F | - | 0.9 | 1.2 | V |
| Reverse Current | $V_R = 30\text{V}$ | I_R | - | - | 0.1 | μA |
| | $V_R = 80\text{V}$ | I_R | - | - | 0.5 | μA |
| Total Capacitance | $V_R = 0, f = 1\text{MHz}$ | C_T | - | 0.9 | 3 | pF |
| Reverse Recovery Time | $I_F = 10\text{mA}$ | t_{rr} | - | 1.6 | 4 | ns |



®

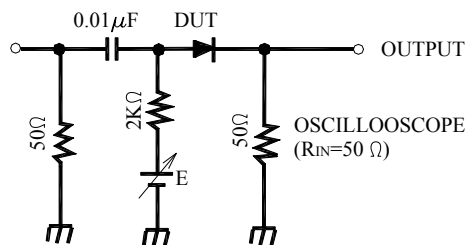
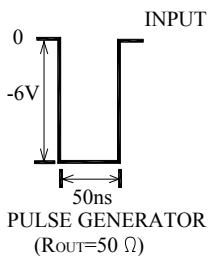
РАДИОТЕХ

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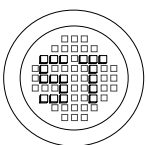
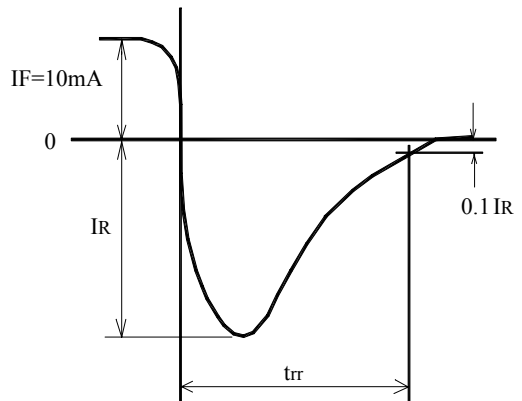


Reverse Recovery Time (t_{rr}) Test Circuit

INPUT WAVEFORM



OUTPUT WAVEFORM



SEMTECH ELECTRONICS LTD.

(Subsidiary of Semtech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

