

High-speed switching diode

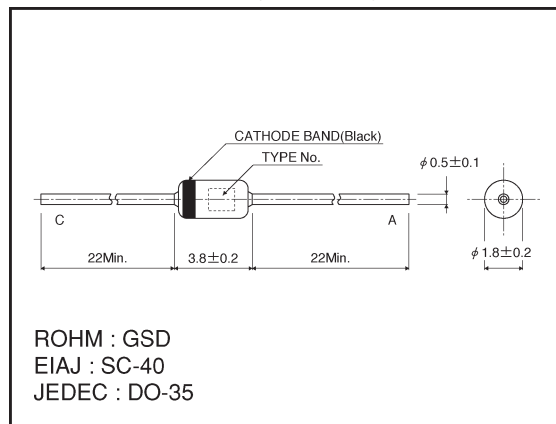
1N4148 / 1N4150 / 1N4448 / 1N914B

*This product is available only outside of Japan.

●JEDEC Standard Product

The following 1N series diodes are available to support the JEDEC standard.

●External dimensions (Units: mm)



●Absolute maximum ratings (Ta = 25°C)

| Type | V _{RM} (V) | V _R (V) | I _{FM} (mA) | I _O (mA) | I _F (mA) | I _{FSM} 1 μs (A) | P (mW) | T _j (°C) | Topr (°C) | Tstg (°C) |
|--------|------------------------|-----------------------|-------------------------|------------------------|------------------------|---------------------------------|-----------|------------------------|--------------|--------------|
| 1N4148 | 100 | 75 | 450 | 150 | 200 | 2 | 500 | 200 | -65~+200 | -65~+200 |
| 1N4150 | 50 | 50 | 600 | 200 | 250 | 4 | 500 | 200 | -65~+200 | -65~+200 |
| 1N4448 | 100 | 75 | 450 | 150 | 200 | 2 | 500 | 200 | -65~+200 | -65~+200 |

●Electrical characteristics (Ta = 25°C)

| Type | V _F (V) | | | | | | | | | | | BV (V) Min. | | I _R (μA) Max. | | | | C _r (pF) | t _{rr} (ns) V _R =6V I _F =10mA R _L =100Ω |
|--------------------|--------------------|--------|------|-----|------|------|------|------|------|-------|-------|-------------|------|--------------------------|--------------------|--------------------|-------------------|---------------------|--|
| | @ | @ | @ | @ | @ | @ | @ | @ | @ | @ | @ | @ | @ | @25°C | | @150°C | | | |
| | 0.1mA | 0.25mA | 1mA | 2mA | 5mA | 10mA | 20mA | 30mA | 50mA | 100mA | 200mA | 250mA | 5 μA | 100 μA | V _R (V) | V _R (V) | V _R =0 | f=1MHz | |
| 1N4148 | / | / | / | / | / | / | / | / | / | / | / | 75 | 100 | 0.025 5.0 | 20 75 | 50.0 | 20 | 4 | 4 |
| 1N4150 | / | / | 0.54 | / | / | 0.66 | / | / | 0.76 | 0.82 | 0.87 | - | 50 | 0.1 | 50 | 100.0 | 50 | 2.5 | 4 |
| 1N4448 (1N914B) | / | / | 0.62 | / | 0.62 | / | / | / | 0.86 | 0.92 | 1.0 | - | 100 | 0.025 5.0 | 20 75 | 50.0 | 20 | 4 | 4 |

The upper figure is the minimum V_F and the lower figure is the maximum V_F value.

●Electrical characteristic curves ($T_a = 25^\circ\text{C}$ unless specified otherwise)

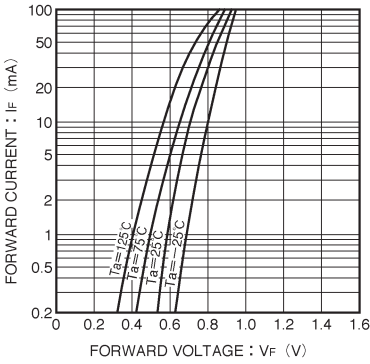


Fig. 1 Forward characteristics

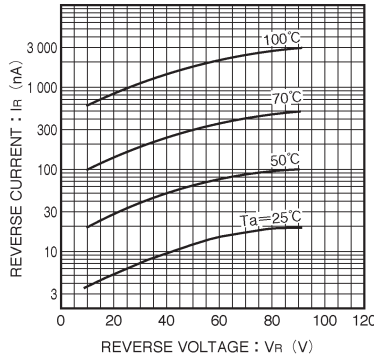


Fig. 2 Reverse characteristics

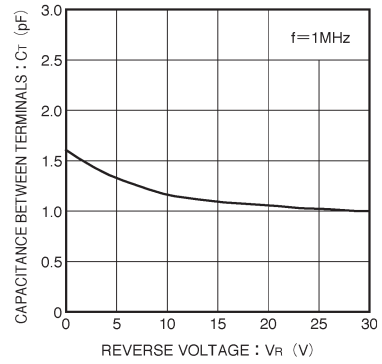


Fig. 3 Capacitance between terminals characteristics

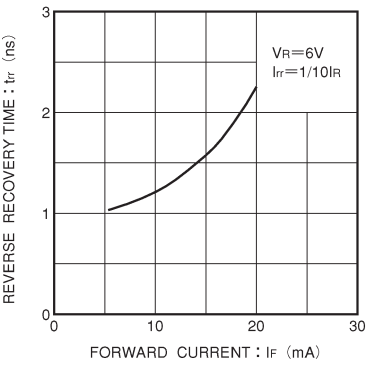


Fig. 4 Reverse recovery time characteristics

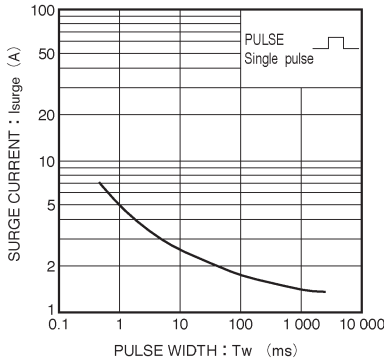


Fig. 5 Surge current characteristics

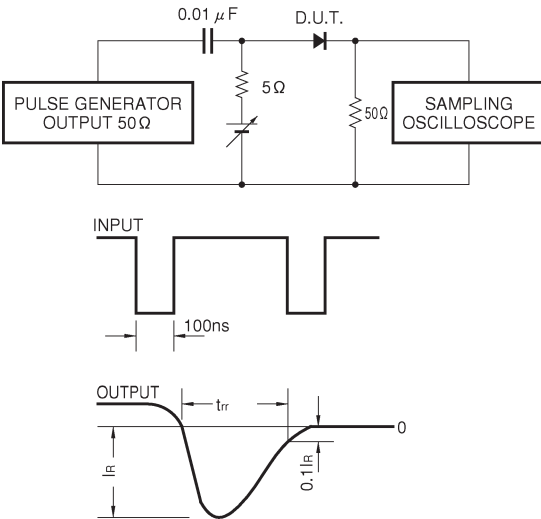


Fig. 6 Reverse recovery time (t_{rr}) measurement circuit