

# Switching diode

## RLS4148 / RLS4150 / RLS4448

\*This product is available only outside of Japan.

### ●Applications

High-speed switching

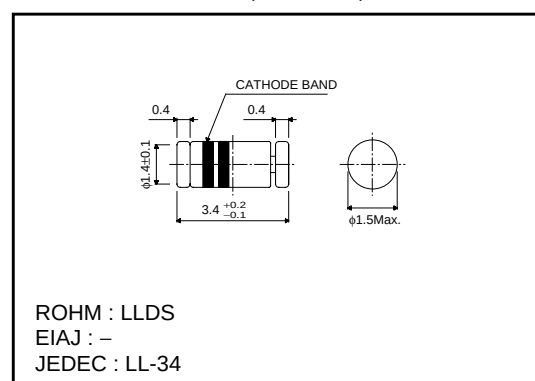
### ●Features

- 1) Small surface mounting type. (LLDS)
- 2) High speed.
- 3) For surface mounting.
- 4) High reliability.

### ●Construction

Silicon epitaxial planar

### ●External dimensions (Units : mm)



### ●Absolute maximum ratings (Ta = 25°C)

| Type    | V <sub>RM</sub><br>(V) | V <sub>R</sub><br>(V) | I <sub>FM</sub><br>(mA) | I <sub>O</sub><br>(mA) | I <sub>F</sub><br>(mA) | I <sub>FSM</sub><br>1μs<br>(A) | P<br>(mW) | T <sub>j</sub><br>(°C) | T <sub>opr</sub><br>(°C) | T <sub>stg</sub><br>(°C) |
|---------|------------------------|-----------------------|-------------------------|------------------------|------------------------|--------------------------------|-----------|------------------------|--------------------------|--------------------------|
| RLS4148 | 100                    | 75                    | 450                     | 150                    | 200                    | 2                              | 500       | 200                    | -65~+200                 | -65~+200                 |
| RLS4150 | 50                     | 50                    | 600                     | 200                    | 250                    | 4                              | 500       | 200                    | -65~+200                 | -65~+200                 |
| RLS4448 | 100                    | 75                    | 450                     | 150                    | 200                    | 2                              | 500       | 200                    | -65~+200                 | -65~+200                 |

### ●Electrical characteristics (Ta = 25°C)

| Type    | V <sub>F</sub> (V) |              |              |              |              |             | B <sub>V</sub> (V)Min. |       | I <sub>R</sub> (μA)Max. |          |                    |    | Cr (pF)                     | t <sub>rr</sub> (ns)                                               |
|---------|--------------------|--------------|--------------|--------------|--------------|-------------|------------------------|-------|-------------------------|----------|--------------------|----|-----------------------------|--------------------------------------------------------------------|
|         | @                  | @            | @            | @            | @            | @           | @                      | @     | @25°C                   |          | @150°C             |    | V <sub>R</sub> =0<br>f=1MHz | V <sub>R</sub> =6V<br>I <sub>F</sub> =10mA<br>R <sub>L</sub> =100Ω |
|         | 1mA                | 5mA          | 10mA         | 50mA         | 100mA        | 200mA       | 5μA                    | 100μA |                         |          |                    |    |                             |                                                                    |
|         |                    |              |              |              |              |             |                        |       | V <sub>R</sub> (V)      |          | V <sub>R</sub> (V) |    |                             |                                                                    |
| RLS4148 |                    |              | 1.0          |              |              |             | 75                     | 100   | 0.025<br>5.0            | 20<br>75 | 50.0               | 20 | 4                           | 4                                                                  |
| RLS4150 | 0.54<br>0.62       |              | 0.66<br>0.74 | 0.76<br>0.86 | 0.82<br>0.92 | 0.87<br>1.0 | –                      | 50    | 0.1<br>5.0              | 50<br>75 | 100.0              | 50 | 2.5                         | 4                                                                  |
| RLS4448 |                    | 0.62<br>0.72 |              |              |              | 1.0         | –                      | 100   | 0.025<br>5.0            | 20<br>75 | 50.0               | 20 | 4                           | 4                                                                  |

The upper figure is the minimum V<sub>F</sub> and the lower figure is the maximum V<sub>F</sub> value.

# Diodes

## ●Electrical characteristic curves (Ta = 25°C)

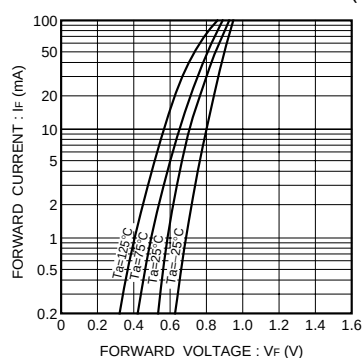


Fig.1 Forward characteristics

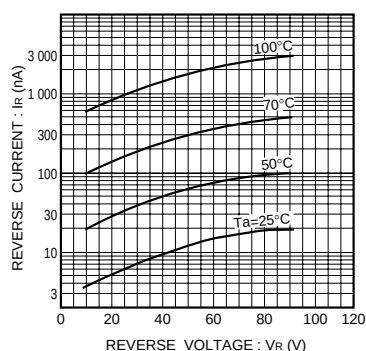


Fig.2 Reverse characteristics

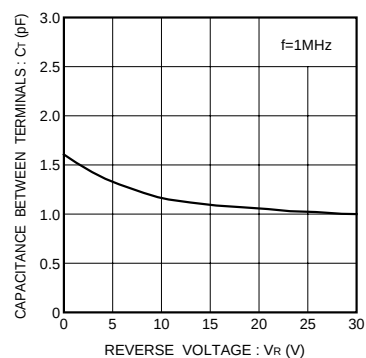


Fig.3 Capacitance between terminals characteristics

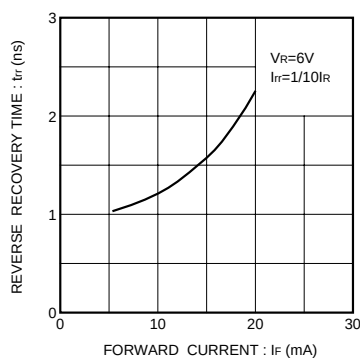


Fig.4 Reverse recovery time characteristics

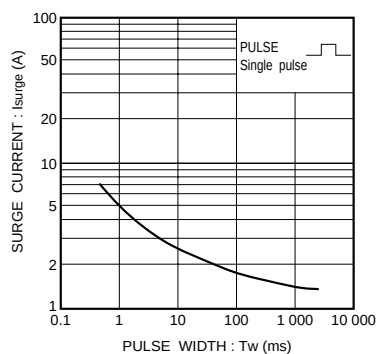


Fig.5 Surge current characteristics

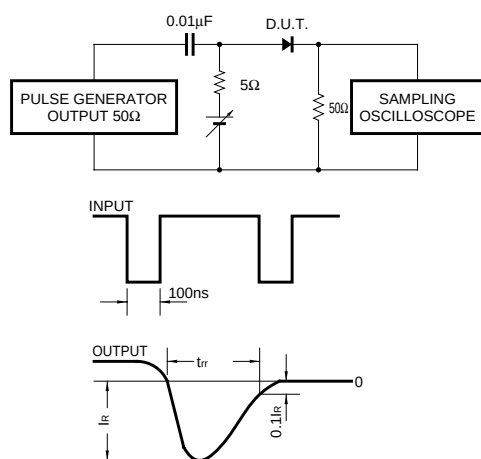


Fig.6 Reverse recovery time ( $t_{rr}$ ) measurement circuit