# Switching diode

# RLS4148 / RLS4150 / RLS4448

\*This product is available only outside of Japan.

## Applications

High-speed switching

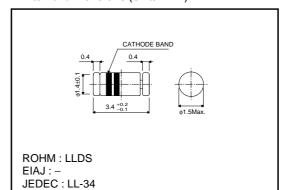
#### Features

- 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)

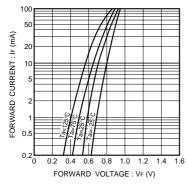
| Туре    | V <sub>RM</sub><br>(V) | V <sub>R</sub><br>(V) | I <sub>FM</sub> (mA) | lo<br>(mA) | I <sub>F</sub><br>(mA) | I <sub>FSM</sub><br>1μs<br>(A) | P<br>(mW) | Tj<br>(°C) | Topr<br>(°C)    | Tstg<br>(°C) |  |
|---------|------------------------|-----------------------|----------------------|------------|------------------------|--------------------------------|-----------|------------|-----------------|--------------|--|
| RLS4148 | 100                    | 75                    | 450                  | 150        | 200                    | 2                              | 500       | 200        | <b>−65~+200</b> | −65~+200     |  |
| RLS4150 | 50                     | 50                    | 600                  | 200        | 250                    | 4                              | 500       | 200        | <b>−65~+200</b> | -65~+200     |  |
| RLS4448 | 100                    | 75                    | 450                  | 150        | 200                    | 2                              | 500       | 200        | <b>−65~+200</b> | −65~+200     |  |

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

|         | VF (V) |      |      |      |       |       | Bv (V)Min. |       | Ir (μA)Max. |        |       |        | Cr (pF)          | trr (ns) |
|---------|--------|------|------|------|-------|-------|------------|-------|-------------|--------|-------|--------|------------------|----------|
| Type    | @ @ @  |      | @ @  |      | @     | @     | @          | @25°C |             | @150°C |       | VR=0   | VR=6V<br>IF=10mA |          |
|         | 1mA    | 5mA  | 10mA | 50mA | 100mA | 200mA | 5μΑ        | 100μΑ |             | VR (V) |       | VR (V) | f=1MHz           | RL=100Ω  |
| RLS4148 |        |      | / /  |      |       | 75    | 100        | 0.025 | 20          | 50.0   | 20    | 4      | 4                |          |
|         |        | 1.0  |      |      |       |       |            | 5.0   | 75          |        |       |        |                  |          |
| RLS4150 | 0.54   |      | 0.66 | 0.76 | 0.82  | 0.87  | -          | 50    | 0.1         | 50 10  | 100.0 | 50     | 2.5              | 4        |
|         | 0.62   |      | 0.74 | 0.86 | 0.92  | 1.0   |            |       |             |        | 100.0 | 30     |                  |          |
| RLS4448 |        | 0.62 | 1 /  |      | 1 7   |       | -          | 100   | 0.025       | 20     | 50.0  | 20     | 4                | 4        |
|         |        | 0.72 |      |      | 1.0   |       |            |       | 5.0         | 75     |       |        |                  |          |

The upper figure is the minimum  $\ensuremath{V_F}$  and the lower figure is the maximum  $\ensuremath{V_F}$  value.

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



3 000 (YU) 1 000 20 40 60 80 100 120 REVERSE VOLTAGE: VR (V)

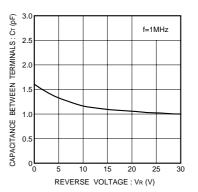
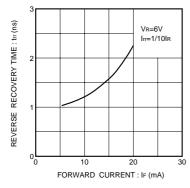


Fig.1 Forward characteristics

Fig.2 Reverse characteristics

100

Fig.3 Capacitance between terminals characteristics



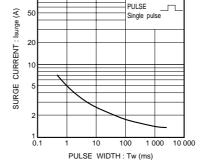


Fig.4 Reverse recovery time characteristics

Fig.5 Surge current characteristics

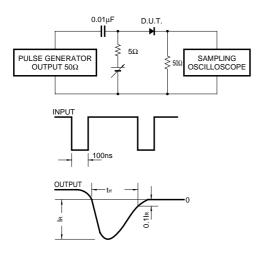


Fig.6 Reverse recovery time (trr) measurement circuit

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