

To our customers,

Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1st, 2010
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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The Renesas logo, consisting of a stylized 'R' followed by the word 'RENESAS' in a bold, sans-serif font.

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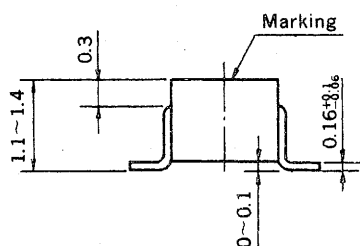
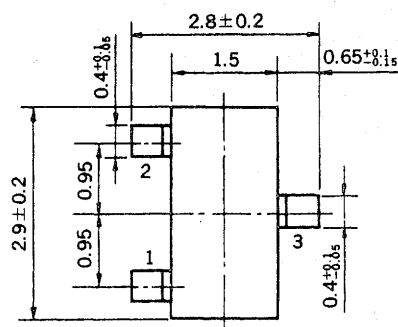
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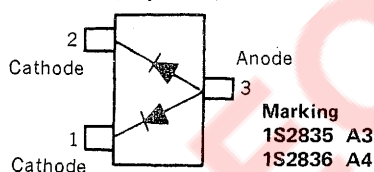
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HIGH SPEED SWITCHING SILICON EPITAXIAL DOUBLE DIODES : COMMON ANODE MINI MOLD

PACKAGE DIMENSIONS in millimeters



Connection Diagram (Top View)



FEATURES

- Low capacitance: $C_t = 2.5$ pF TYP.
- High speed switching: $t_{rr} = 4.0$ ns MAX.
- Wide applications including switching, limiter, clipper.
- Double diode configuration assures economical use.

ABSOLUTE MAXIMUM RATINGS

Maximum Voltages and Currents ($T_a = 25^\circ\text{C}$)

| | | 1S2835 | 1S2836 | |
|------------------------------------|-----------|--------|--------|----|
| Peak Reverse Voltage | V_{RM} | 35 | 75 | V |
| DC Reverse Voltage | V_R | 30 | 50 | V |
| Surge Current ($1 \mu\text{s}$)* | I_{FSM} | 6.0 | 6.0 | A |
| Surge Current ($1 \mu\text{s}$) | I_{FSM} | 4.0 | 4.0 | A |
| Peak Forward Current* | I_{FM} | 450 | 450 | mA |
| Peak Forward Current | I_{FM} | 300 | 300 | mA |
| Average Rectified Current* | I_O | 150 | 150 | mA |
| Average Rectified Current | I_O | 100 | 100 | mA |

Maximum Temperatures

| | | | | |
|---------------------------|-----------|-------------|-------------|------------------|
| Junction Temperature | T_j | 125 | 125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -55 to +125 | -55 to +125 | $^\circ\text{C}$ |

Thermal Resistance

| | | | | |
|----------------------|---------------|------|------|---------------------------|
| Junction to Ambient* | $R_{th(j-a)}$ | 1.0 | 1.0 | $^\circ\text{C}/\text{W}$ |
| Junction to Ambient | $R_{th(j-a)}$ | 0.67 | 0.67 | $^\circ\text{C}/\text{W}$ |

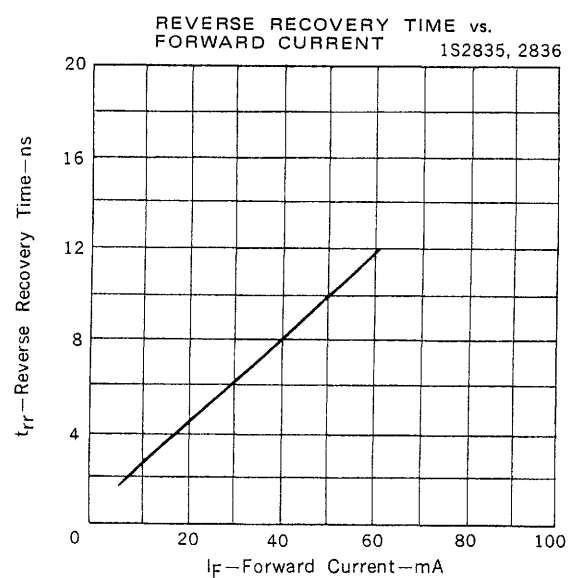
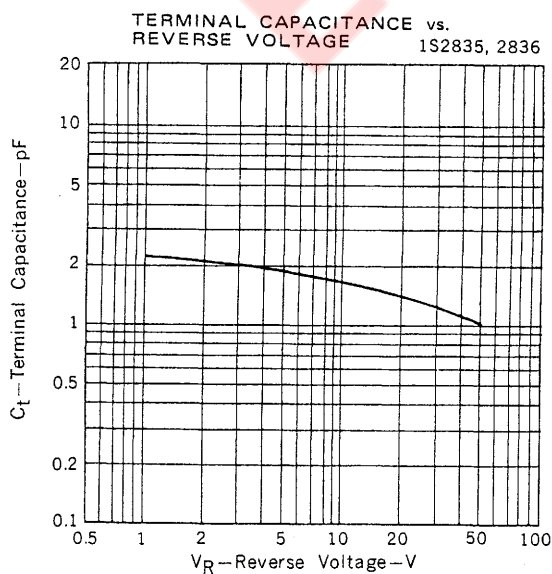
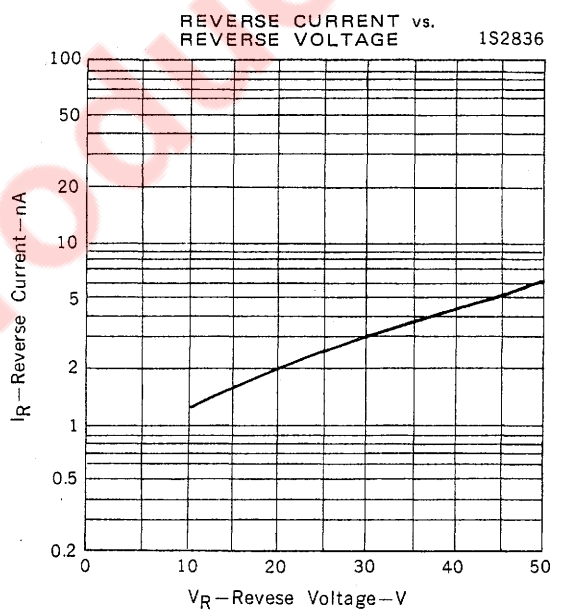
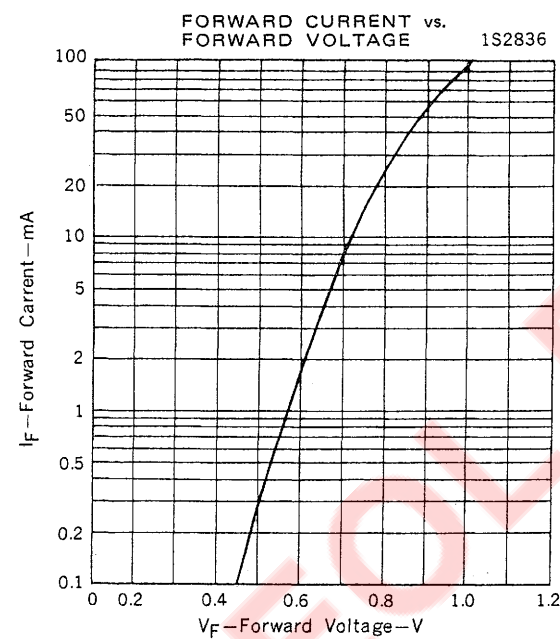
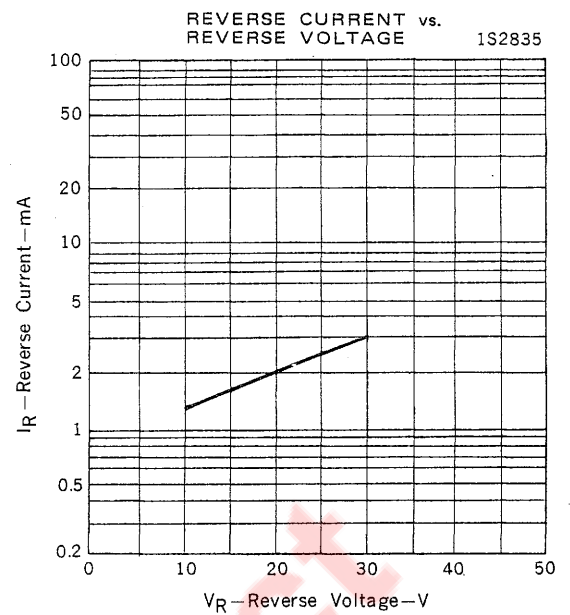
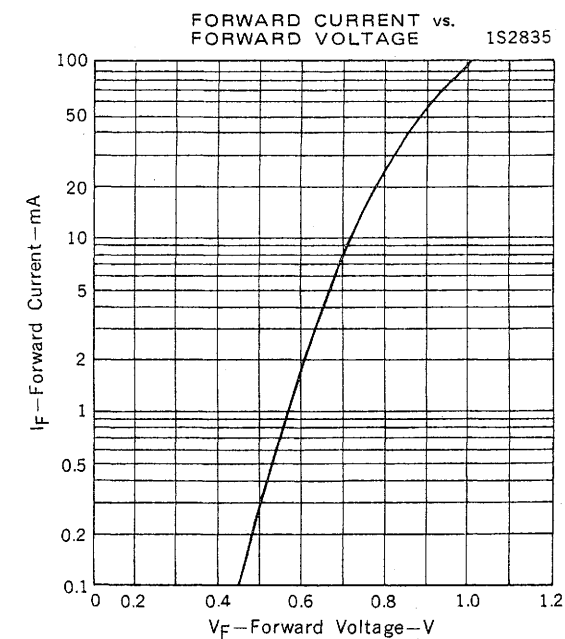
* Both diodes loaded simultaneously

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

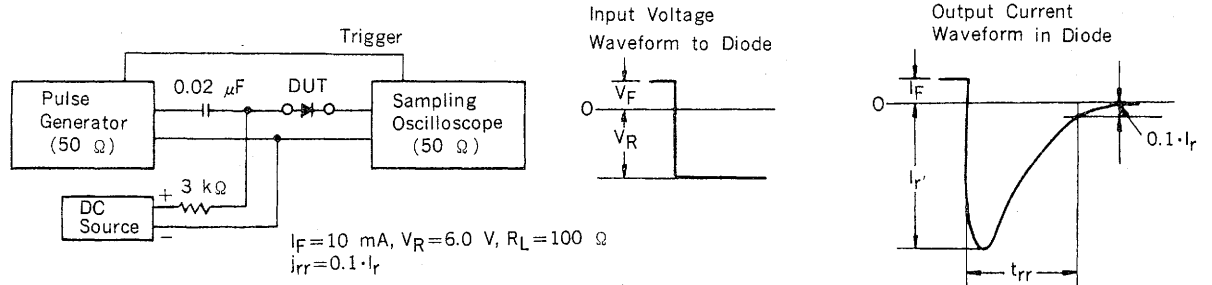
| CHARACTERISTIC | SYMBOL | 1S2835 (A3) | | | 1S2836 (A4) | | | UNIT | TEST CONDITIONS |
|-----------------------|----------|-------------|------|------|-------------|------|------|---------------|---------------------------|
| | | MIN. | TYP. | MAX. | MIN. | TYP. | MAX. | | |
| Forward Voltage | V_{F1} | | 0.72 | 1.0 | | 0.72 | 1.0 | V | $I_F = 10$ mA |
| | V_{F2} | | 0.88 | 1.1 | | 0.88 | 1.1 | V | $I_F = 50$ mA |
| | V_{F3} | | 1.0 | 1.2 | | 1.0 | 1.2 | V | $I_F = 100$ mA |
| Reverse Current | I_R | | | 0.1 | | | | μA | $V_R = 30$ V |
| | I_R | | | | | | 0.1 | μA | $V_R = 50$ V |
| Capacitance | C_t | | 2.5 | 4.0 | | 2.5 | 4.0 | pF | $V_R = 0$, $f = 1.0$ MHz |
| Reverse Recovery Time | t_{rr} | | | 4.0 | | | 4.0 | ns | See Test Circuit. |

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TYPICAL ELECTRICAL CURVES ($T_a = 25^\circ\text{C}$)



REVERSE RECOVERY TIME (t_{rr}) TEST CIRCUIT



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