

RJU6052SDPD

Single Diode
Ultra Fast Recovery Diode

R07DS0379EJ0100

Rev.1.00

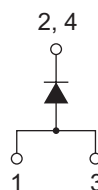
Apr 26, 2011

Features

- Ultra fast reverse recovery time: $t_{rr} = 25$ ns typ. (at $I_F = 10$ A, $di/dt = -100$ A/ μ s)
- Low forward voltage: $V_F = 2.5$ V typ. (at $I_F = 10$ A)
- Low reverse current: $I_R = 1$ μ A max. (at $V_R = 600$ V)

Outline

RENESAS Package code: PRSS0004ZJ-A
(Package name : TO-252)



1. Anode
2. Cathode
3. Anode
4. Cathode

Absolute Maximum Ratings

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

| Item | Symbol | Ratings | Unit |
|-------------------------------------|---------------------------|-------------|---------------------------|
| Maximum reverse voltage | V_{RM} | 600 | V |
| Continuous forward current | $T_c = 25^\circ\text{C}$ | I_F | 10 |
| | $T_c = 100^\circ\text{C}$ | I_F | 5 |
| Peak surge forward current | I_{FSM} | 30 | A |
| Junction to case thermal resistance | θ_{j-cd} | 2.45 | $^\circ\text{C}/\text{W}$ |
| Junction temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

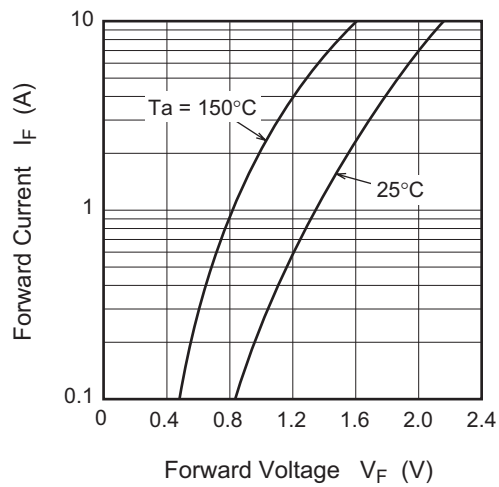
Electrical Characteristics

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

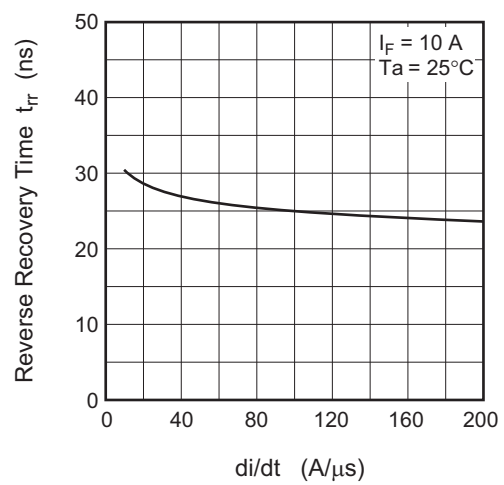
| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|-----------------------|----------|-----|-----|-----|---------------|---|
| Forward Voltage | V_F | — | 2.5 | 3.0 | V | $I_F = 10$ A |
| Reverse current | I_R | — | — | 1 | μA | $V_R = 600$ V |
| Reverse Recovery Time | t_{rr} | — | 25 | — | ns | $I_F = 10$ A, $di/dt = -100$ A/ μ s |

Main Characteristics

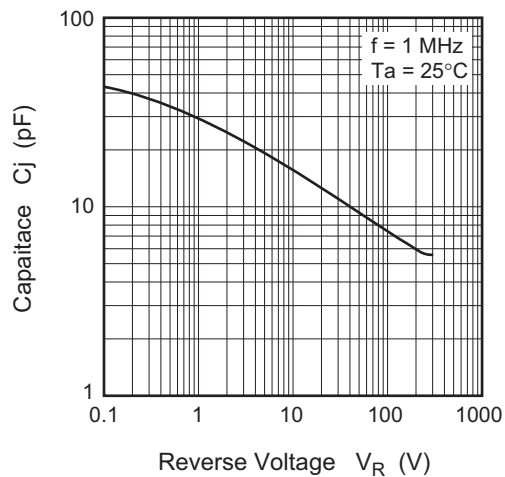
Forward Current vs. Forward Voltage (Typical)



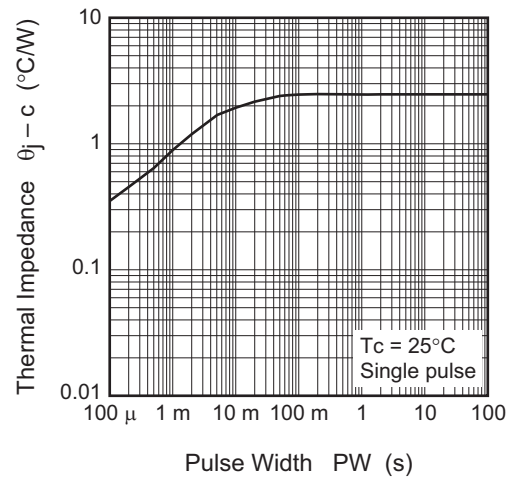
Reverse Recovery Time vs. di/dt



Capacitance vs. Reverse Voltage (Typical)



Thermal Impedance vs. Pulse Width



Package Dimension

| Package Name | JEITA Package Code | RENESAS Code | Previous Code | MASS[Typ.] | Unit: mm |
|--------------|--------------------|--------------|---------------|------------|----------|
| TO-252 | — | PRSS0004ZJ-A | — | 0.319g | |

The drawing shows the mechanical dimensions of the RJU6052SDPD package in millimeters. The top view shows a square body with a width of 6.5 ± 0.3 mm and a height of 5.5 ± 0.5 mm. The distance between the mounting pins is 2.29 ± 0.5 mm. The side view shows a maximum height of 1.2 mm for the mounting pins and a maximum width of 0.25 mm for the base. The bottom view shows a square body with a width of 5.1 mm and a height of 5.1 mm. The distance between the mounting pins is 2.29 ± 0.5 mm. The package is marked with a circled plus sign.

Ordering Information

| Orderable Part Number | Quantity | Shipping Container |
|-----------------------|----------|--------------------|
| RJU6052SDPD-E0-J2 | 3000 pcs | Taping |

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