

To our customers,

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## Old Company Name in Catalogs and Other Documents

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

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

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

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## 2SJ351, 2SJ352

Silicon P Channel MOS FET

REJ03G0860-0200  
(Previous: ADE-208-1193)  
Rev.2.00  
Sep 07, 2005

### Description

Low frequency power amplifier

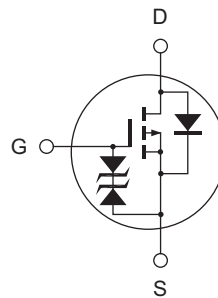
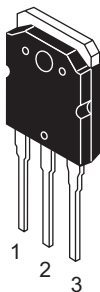
Complementary pair with 2SK2220, 2SK2221

### Features

- High power gain
- Excellent frequency response
- High speed switching
- Wide area of safe operation
- Enhancement-mode
- Good complementary characteristics
- Equipped with gate protection diodes

### Outline

RENESAS Package code: PRSS0004ZE-A  
(Package name: TO-3P)



1. Gate
2. Source (Flange)
3. Drain

## Absolute Maximum Ratings

(Ta = 25°C)

| Item                                      | Symbol                            | Value       | Unit |
|---|-----------------------------------|-------------|------|
| Drain to source voltage                   | 2SJ351                            | -180        | V    |
|   | 2SJ352                            | -200        |      |
| Gate to source voltage                    | V <sub>GSS</sub>                  | ±20         | V    |
| Drain current                             | I <sub>D</sub>                    | -8          | A    |
| Body to drain diode reverse drain current | I <sub>DR</sub>                   | -8          | A    |
| Channel dissipation                       | P <sub>ch</sub> <sup>Note 1</sup> | 100         | W    |
| Channel temperature                       | T <sub>ch</sub>                   | 150         | °C   |
| Storage temperature                       | T <sub>stg</sub>                  | -55 to +150 | °C   |

Note: 1. Value at Tc = 25°C

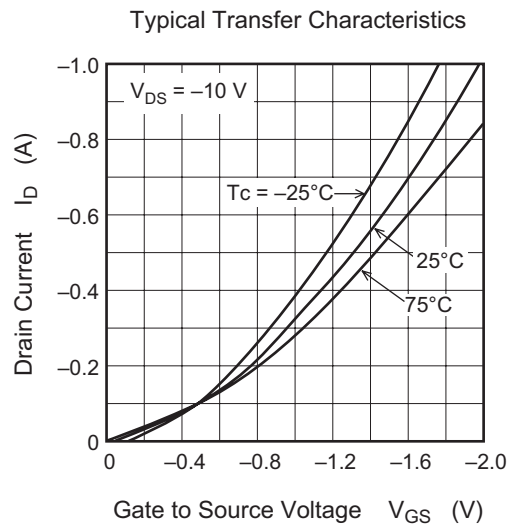
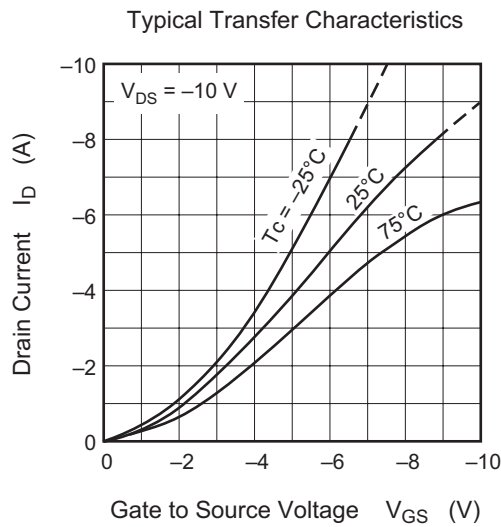
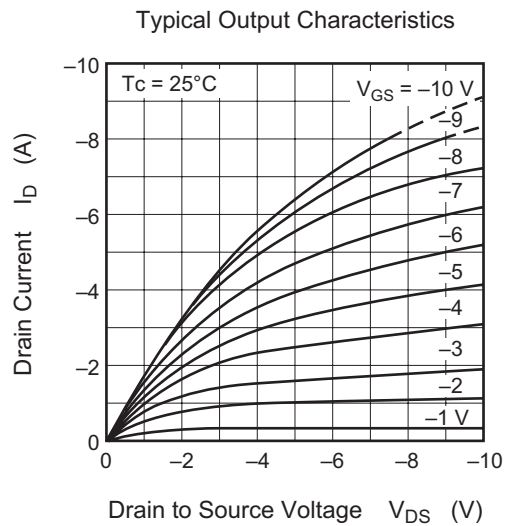
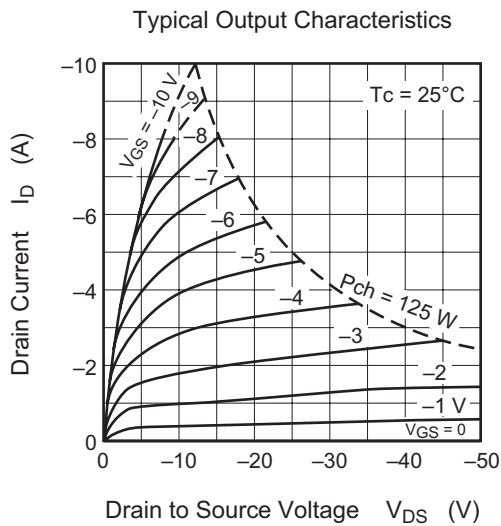
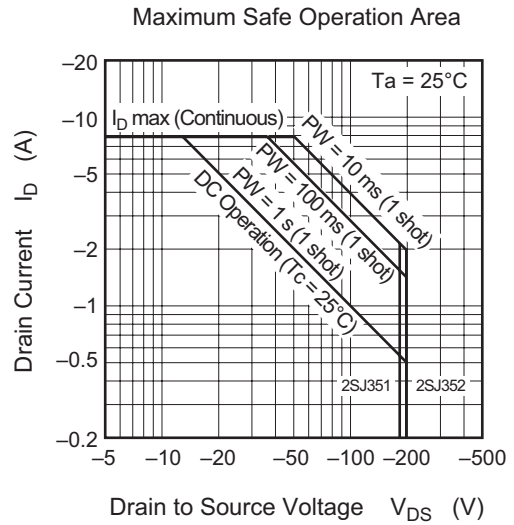
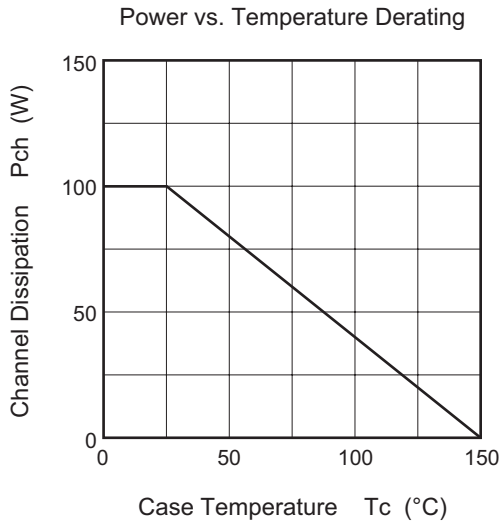
## Electrical Characteristics

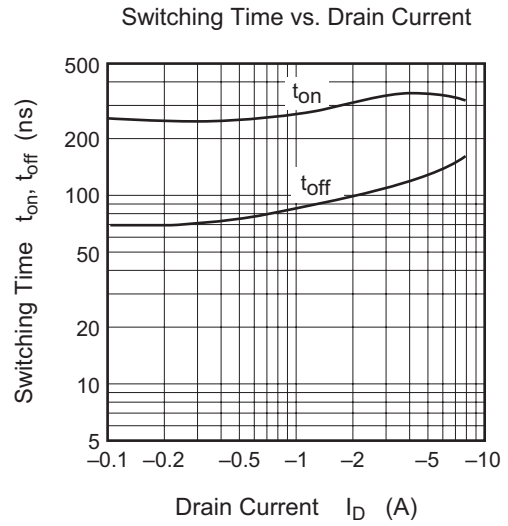
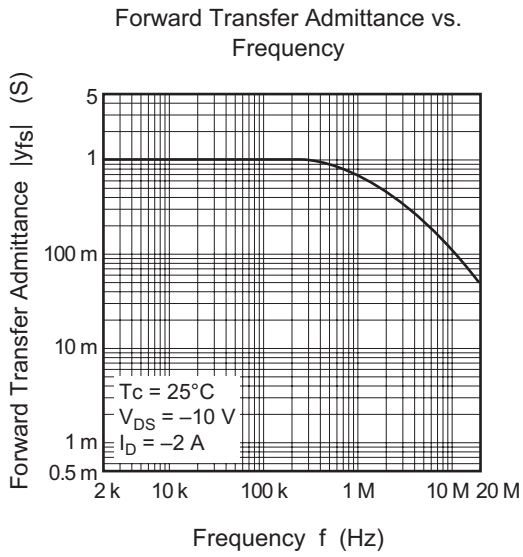
(Ta = 25°C)

| Item                               | Symbol               | Min   | Typ  | Max   | Unit | Test Conditions  |
|------------------------------------|----------------------|-------|------|-------|------|--|
| Drain to source breakdown voltage  | V <sub>(BR)DSX</sub> | -180  | —    | —     | V    | I <sub>D</sub> = -10 mA, V <sub>GS</sub> = 10 V                  |
|                                    |                      | -200  | —    | —     | V    |  |
| Gate to source breakdown voltage   | V <sub>(BR)GSS</sub> | ±20   | —    | —     | V    | I <sub>G</sub> = ±100 μA, V <sub>DS</sub> = 0                    |
| Gate to source cutoff voltage      | V <sub>GS(off)</sub> | -0.15 | —    | -1.45 | V    | I <sub>D</sub> = -100 mA, V <sub>DS</sub> = -10 V                |
| Drain to source saturation voltage | V <sub>DS(sat)</sub> | —     | —    | -12   | V    | I <sub>D</sub> = -8 A, V <sub>GS</sub> = 0 <sup>Note 2</sup>     |
| Forward transfer admittance        | y <sub>fs</sub>      | 0.7   | 1.0  | 1.4   | S    | I <sub>D</sub> = -3 A, V <sub>DS</sub> = -10 V <sup>Note 2</sup> |
| Input capacitance                  | C <sub>iss</sub>     | —     | 800  | —     | pF   | V <sub>GS</sub> = 5 V, V <sub>DS</sub> = -10 V,<br>f = 1 MHz     |
| Output capacitance                 | C <sub>oss</sub>     | —     | 1000 | —     | pF   |  |
| Reverse transfer capacitance       | C <sub>rss</sub>     | —     | 18   | —     | pF   |  |
| Turn-on time                       | t <sub>on</sub>      | —     | 320  | —     | ns   | V <sub>DD</sub> = -30 V I <sub>D</sub> = -4 A                    |
| Turn-off time                      | t <sub>off</sub>     | —     | 120  | —     | ns   |  |

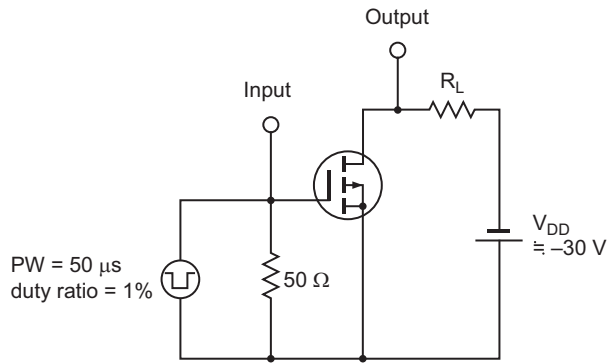
Note: 2. Pulse test

Main Characteristics

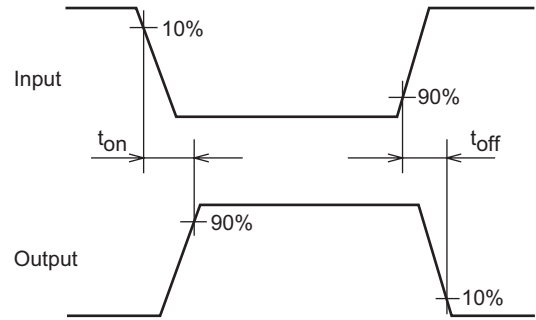




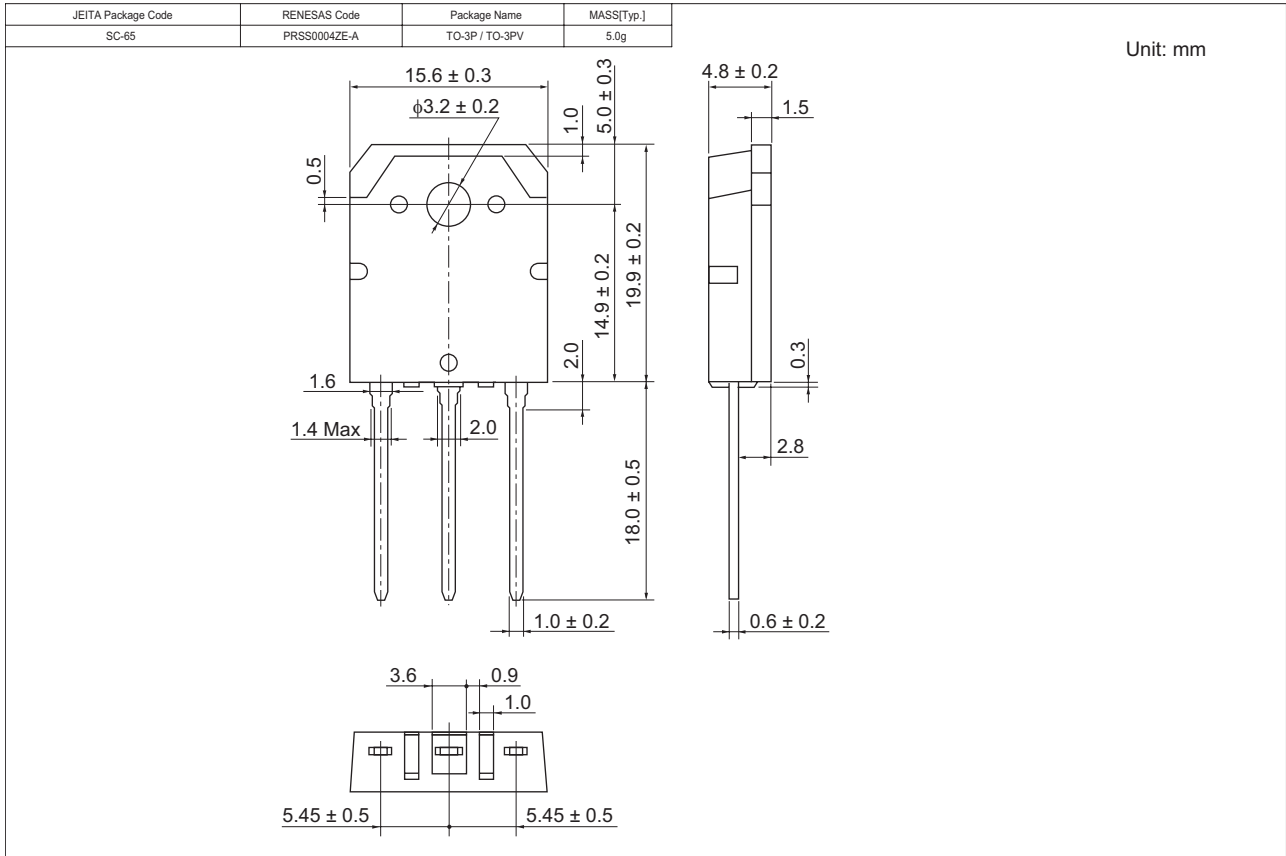
Switching Time Test Circuit



Waveform



### Package Dimensions



### Ordering Information

| Part Name | Quantity | Shipping Container |
|-----------|----------|--------------------|
| 2SJ351-E  | 360 pcs  | Box (Tube)         |
| 2SJ352-E  | 360 pcs  | Box (Tube)         |

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