

2SK213, 2SK214, 2SK215, 2SK216

Silicon N Channel MOS FET

REJ03G0903-0200
(Previous: ADE-208-1241)
Rev.2.00
Sep 07, 2005

Application

High frequency and low frequency power amplifier, high speed switching.

Complementary pair with 2SJ76, J77, J78, J79

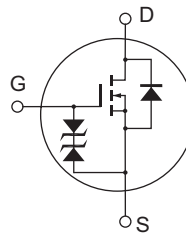
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Features

- Suitable for direct mounting
- High forward transfer admittance
- Excellent frequency response
- Enhancement-mode

Outline

RENESAS Package code: PRSS0004AC-A
(Package name: TO-220AB)



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

Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Ratings | Unit | |
|---|------------|-------------|------|---|
| Drain to source voltage | V_{DSX} | 2SK213 | 140 | V |
| | | 2SK214 | 160 | |
| | | 2SK215 | 180 | |
| | | 2SK216 | 200 | |
| Gate to source voltage | V_{GSS} | ± 15 | V | |
| Drain current | I_D | 500 | mA | |
| Body to drain diode reverse drain current | I_{DR} | 500 | mA | |
| Channel dissipation | Pch | 1.75 | W | |
| | Pch^{*1} | 30 | W | |
| Channel temperature | Tch | 150 | °C | |
| Storage temperature | Tstg | -45 to +150 | °C | |

Note: 1. Value at $T_C = 25^\circ\text{C}$

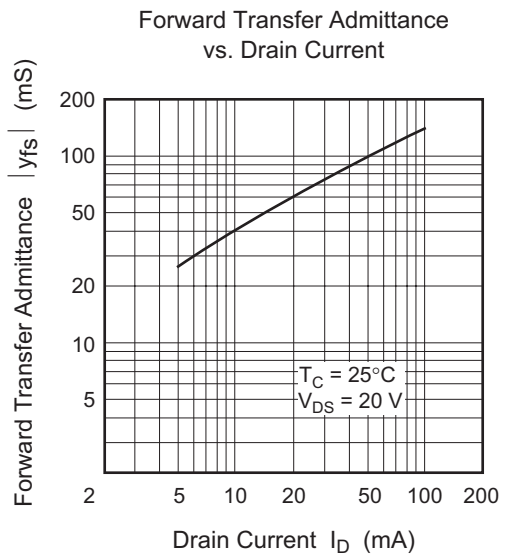
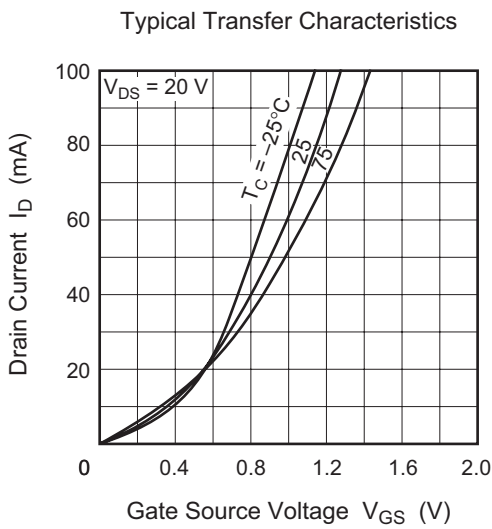
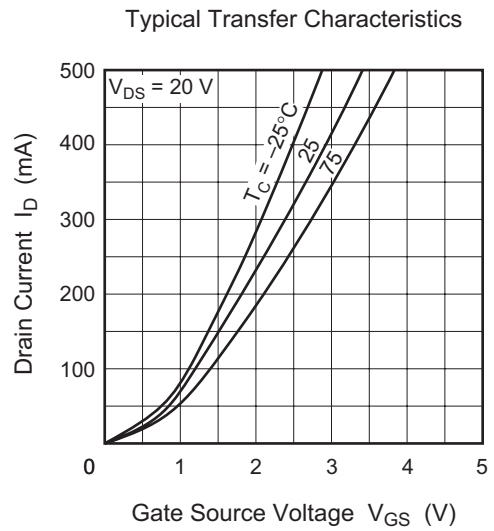
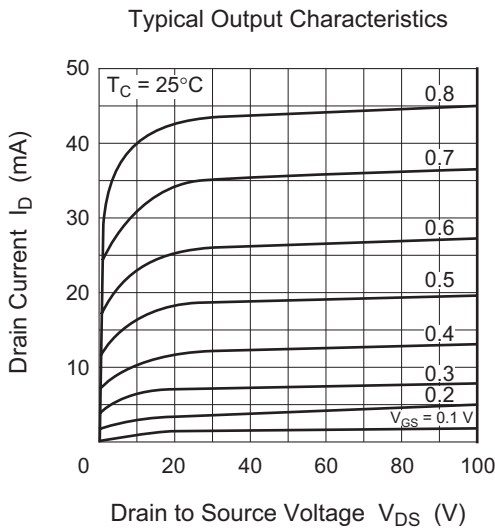
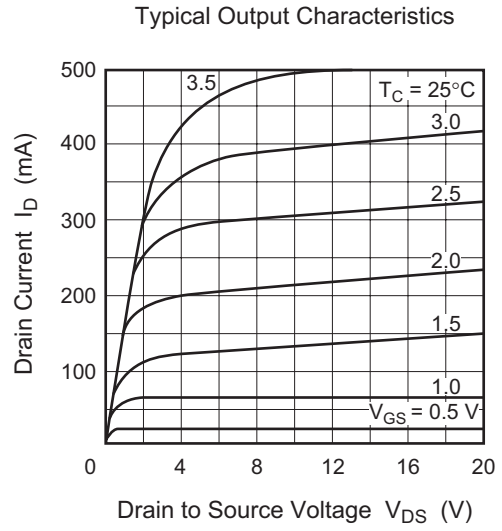
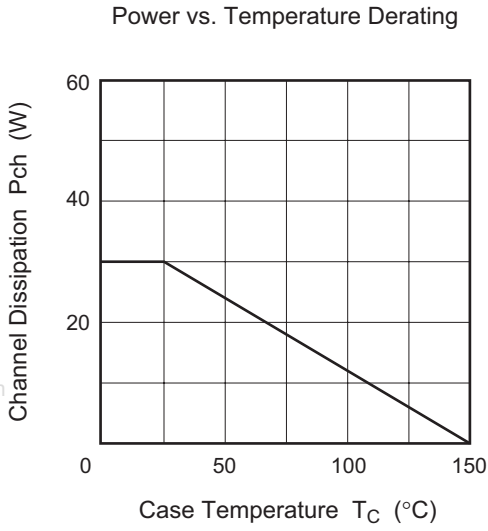
Electrical Characteristics

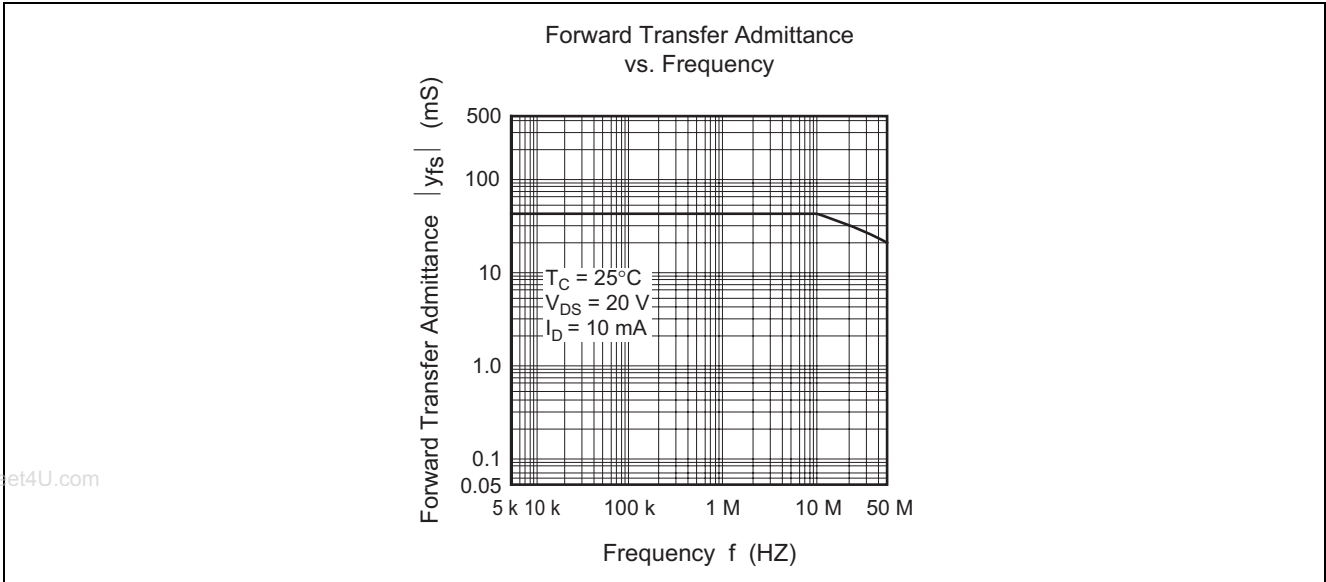
(Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test conditions | |
|------------------------------------|---------------|----------|-----|-----|------|--|---|
| Drain to source breakdown voltage | $V_{(BR)DSX}$ | 2SK213 | 140 | — | — | V | $I_D = 1 \text{ mA}, V_{GS} = -2 \text{ V}$ |
| | | 2SK214 | 160 | — | — | V | |
| | | 2SK215 | 180 | — | — | V | |
| | | 2SK216 | 200 | — | — | V | |
| Gate to source breakdown voltage | $V_{(BR)GSS}$ | ± 15 | — | — | V | $I_G = \pm 10 \mu\text{A}, V_{DS} = 0$ | |
| Gate to source voltage | $V_{GS(on)}$ | 0.2 | — | 1.5 | V | $I_D = 10 \text{ mA}, V_{DS} = 10 \text{ V}^{*2}$ | |
| Drain to source saturation voltage | $V_{DS(sat)}$ | — | — | 2.0 | V | $I_D = 10 \text{ mA}, V_{GD} = 0^{*2}$ | |
| Forward transfer admittance | $ y_{fs} $ | 20 | 40 | — | mS | $I_D = 10 \text{ mA}, V_{DS} = 20 \text{ V}^{*2}$ | |
| Input capacitance | C_{iss} | — | 90 | — | pF | $I_D = 10 \text{ mA}, V_{DS} = 10 \text{ V},$ $f = 1 \text{ MHz}$ | |
| Reverse transfer capacitance | C_{rss} | — | 2.2 | — | pF | | |

Note: 2. Pulse test

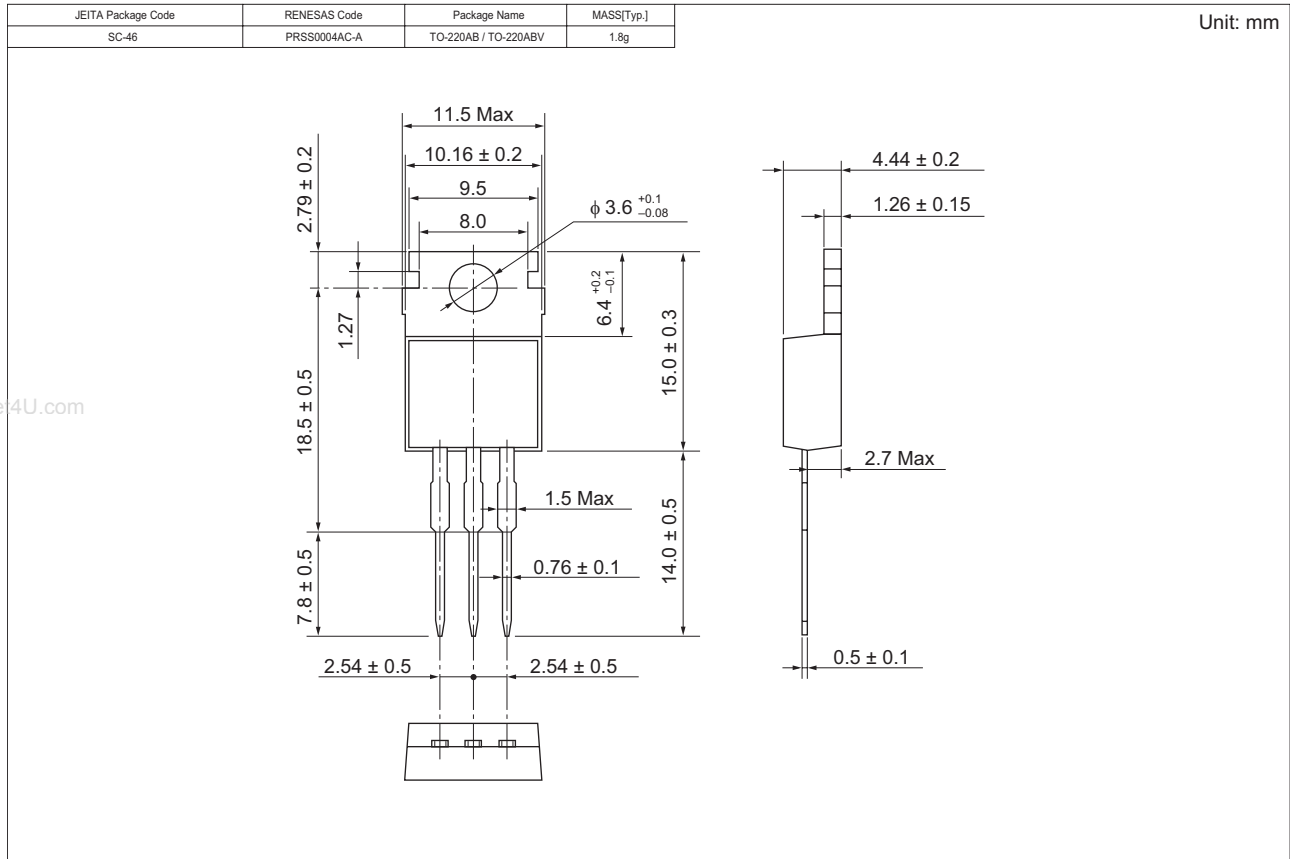
Main Characteristics





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Package Dimensions



Ordering Information

| Part Name | Quantity | Shipping Container |
|-----------|----------|--------------------|
| 2SK213-E | 500 pcs | Box (Sack) |
| 2SK214-E | 500 pcs | Box (Sack) |
| 2SK215-E | 500 pcs | Box (Sack) |
| 2SK216-E | 500 pcs | Box (Sack) |

Note: For some grades, production may be terminated. Please contact the Renesas sales office to check the state of production before ordering the product.

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