# 2SK360

## Silicon N-Channel MOS FET

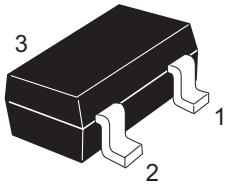
REJ03G0811-0200
(Previous ADE-208-1170)
Rev.2.00
Aug.10.2005

### Application

VHF amplifier

### Outline

RENESAS Package code: PLSP0003ZB-A
(Package name: MPAK)




1. Gate
2. Drain
3. Source

## Absolute Maximum Ratings

(Ta = 25°C)

| Item | Symbol | Ratings | Unit |
|---|---|---|---|
| Drain to source voltage | $V_{DSX}$*[1] | 20 | V |
| Gate to source voltage | $V_{GSS}$ | ±5 | V |
| Drain current | $I_D$ | 30 | mA |
| Gate current | $I_G$ | ±1 | mA |
| Channel power dissipation | Pch | 150 | mW |
| Channel temperature | Tch | 150 | °C |
| Storage temperature | Tstg | –55 to +150 | °C |

Note: 1. $V_{GS}$ = –4 V

## Electrical Characteristics

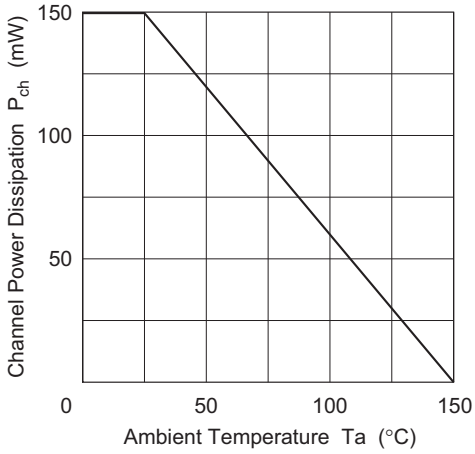
(Ta = 25°C)

| Item | Symbol | Min | Typ | Max | Unit | Test conditions |
|---|---|---|---|---|---|---|
| Drain to source breakdown voltage | $V_{(BR)DSX}$ | 20 | — | — | V | $I_D$ = 100 μ A, $V_{GS}$ = –4 V |
| Gate cutoff current | $I_{GSS}$ | — | — | ±20 | nA | $V_{GS}$ = ±5 V, $V_{DS}$ = 0 |
| Drain current | $I_{DSS}$*[1] | 6 | — | 12 | mA | $V_{DS}$ = 10 V, $V_{GS}$ = 0 |
| Gate to source cutoff voltage | $V_{GS(off)}$ | 0 | — | –2.0 | V | $V_{DS}$ = 10 V, $I_D$ = 10 μA |
| Forward transfer admittance | $\|y_{fs}\|$ | 8 | 14 | — | mS | $V_{DS}$ = 10 V, $V_{GS}$ = 0, f = 1 kHz |
| Input capacitance | Ciss | — | 2.5 | — | pF | $V_{DS}$ = 10 V, $V_{GS}$ = 0, f = 1 MHz |
| Output capacitance | Coss | — | 1.6 | — | pF | |
| Reverse transfer capacitance | Crss | — | 0.03 | — | pF | |
| Power gain | PG | — | 30 | — | dB | $V_{DS}$ = 10 V, $V_{GS}$ = 0, f = 100 MHz |
| Noise figure | NF | — | 2.0 | — | dB | |

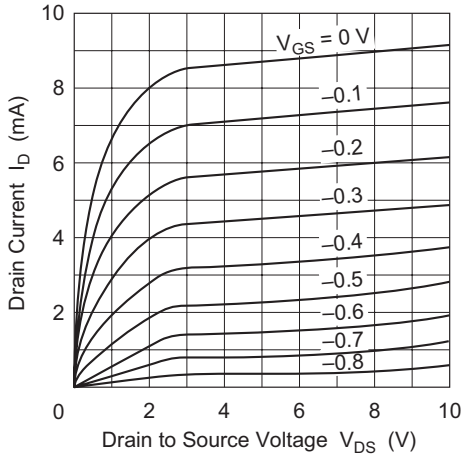
Note: 1. The 2SK360 is grouped by $I_{DSS}$ as follows.

| Grade | E | F |
|---|---|---|
| Mark | IGE | IGF |
| $I_{DSS}$ | 6 to 10 | 8 to 12 |

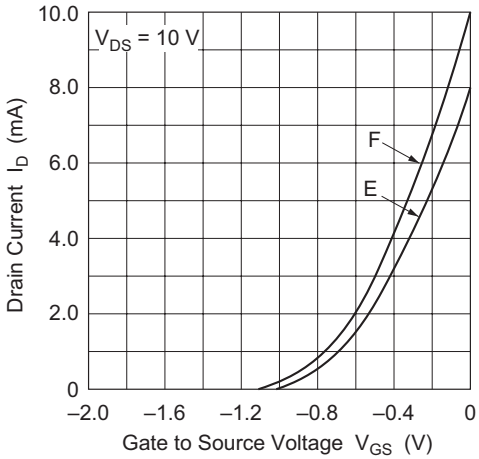
Maximum Channel Dissipation Curve



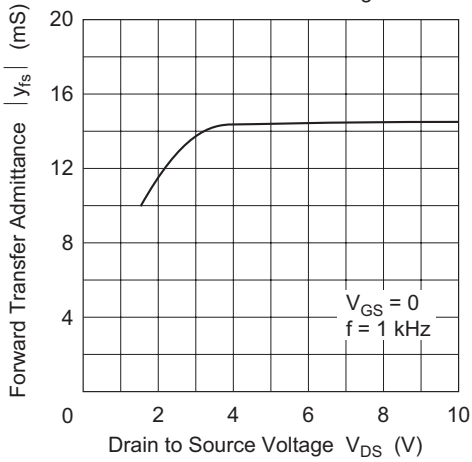

Typical Output Characteristics



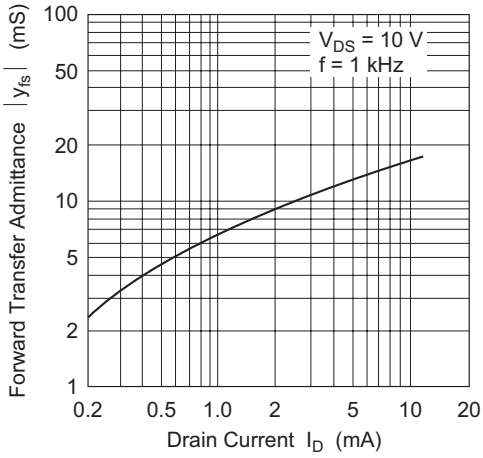

Typical Transfer Characteristics



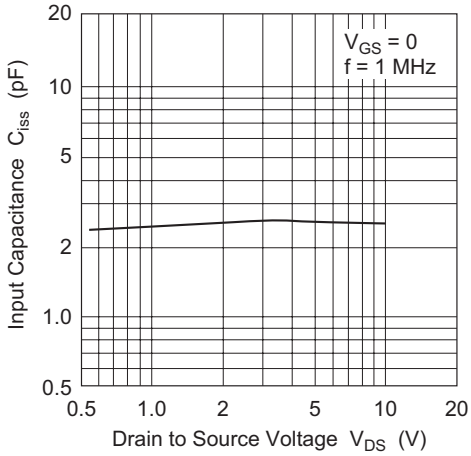

Forward Transfer Admittance vs. Drain to Source Voltage



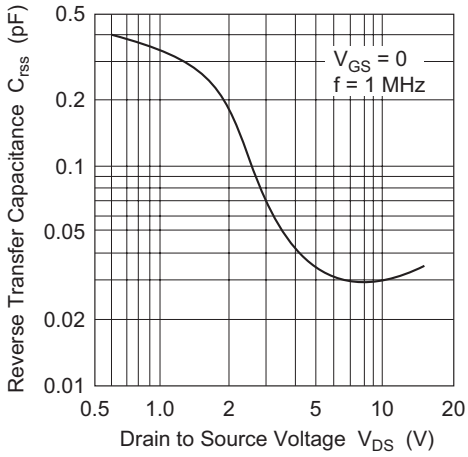

Forward Transfer Admittance vs. Drain Current



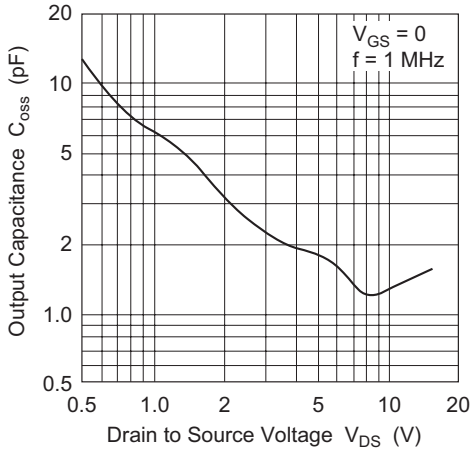

Input Capacitance vs. Drain to Source Voltage



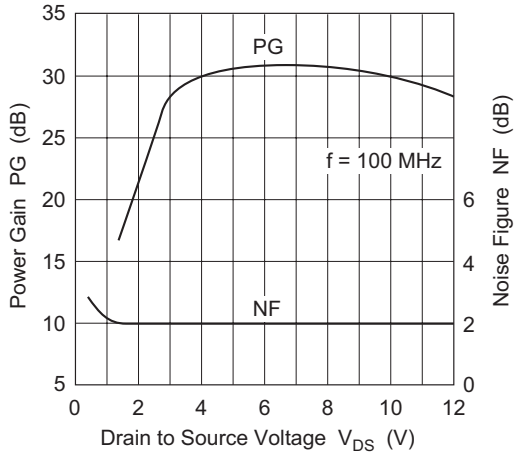
Reverse Transfer Capacitance vs. Drain to Source Voltage




Output Capacitance vs. Drain to Source Voltage



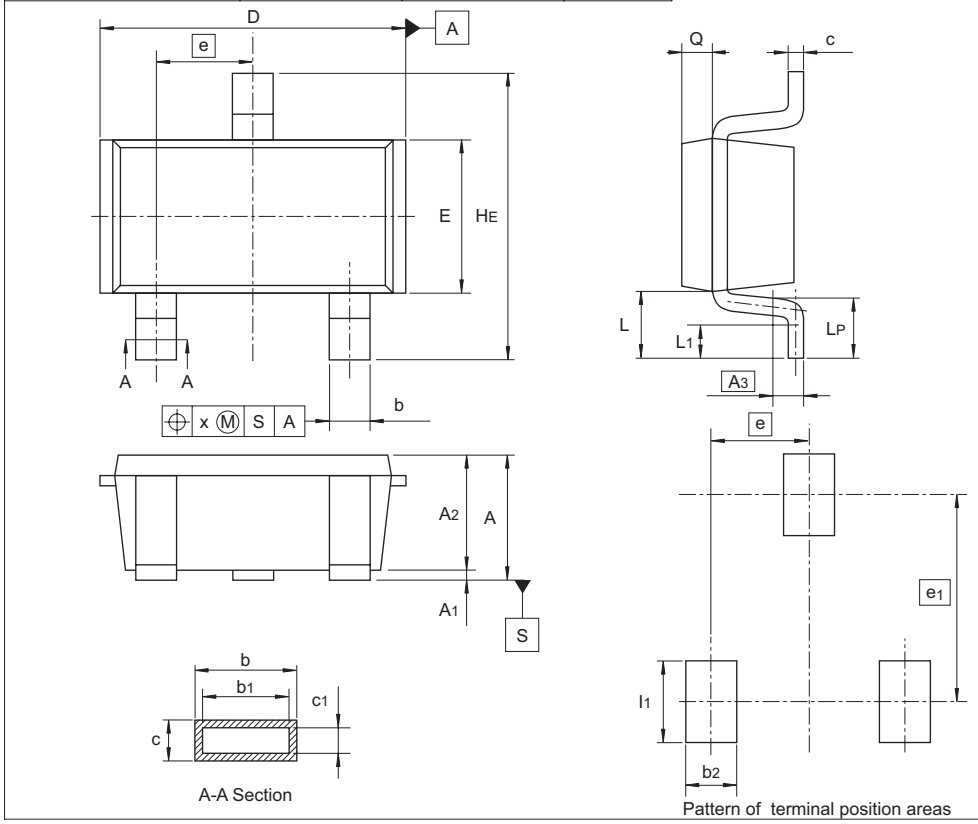

Power Gain, Noise Figure vs. Drain to Source Voltage



## Package Dimensions



| JEITA Package Code | RENESAS Code | Package Name | MASS[Typ.] |
|---|---|---|---|
| SC-59A | PLSP0003ZB-A | MPAK(T) / MPAK(T)V, MPAK / MPAKV | 0.011g |




| Reference Symbol | Dimension in Millimeters | | |
|---|---|---|---|
| | Min | Nom | Max |
| A | 1.0 | – | 1.3 |
| $A_1$ | 0 | – | 0.1 |
| $A_2$ | 1.0 | 1.1 | 1.2 |
| $A_3$ | – | 0.25 | – |
| b | 0.35 | 0.42 | 0.5 |
| $b_1$ | – | 0.4 | – |
| c | 0.1 | 0.13 | 0.15 |
| $c_1$ | – | 0.11 | – |
| D | 2.7 | – | 3.1 |
| E | 1.35 | 1.5 | 1.65 |
| e | – | 0.95 | – |
| $H_E$ | 2.2 | 2.8 | 3.0 |
| L | 0.35 | – | 0.75 |
| $L_1$ | 0.15 | – | 0.55 |
| $L_P$ | 0.25 | – | 0.65 |
| x | – | – | 0.05 |
| $b_2$ | – | – | 0.55 |
| $e_1$ | – | 1.95 | – |
| $l_1$ | – | – | 1.05 |
| Q | – | 0.3 | – |

## Ordering Information

| Part Name | Quantity | Shipping Container |
|---|---|---|
| 2SK360IGETL | 3000 | ϕ178mm Reel , 8mm Emboss Taping |
| 2SK360IGFTL | 3000 | ϕ178mm Reel , 8mm Emboss Taping |

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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http://www.renesas.com

Refer to "**http://www.renesas.com/en/network**" for the latest and detailed information.

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