Ordering number : ENN5075

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DATA SHEET

N-Channel Junction Silicon FET

# 2SK2539 — High-Frequency Amplifier, Analog Switch Applications

## Features

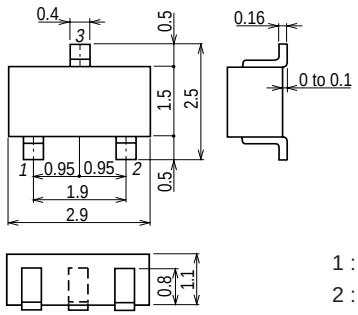
- Large | $y_{fs}$ |.
- Small Ciss.
- Small-sized package permitting 2SK2539-applied sets to be made small and slim.
- Adoption of FBET process.

## Package Dimensions

unit:mm

2050A

[2SK2539]




1 : Source
2 : Drain
3 : Gate
SANYO : CP

## Specifications

### Absolute Maximum Ratings at Ta = 25˚C

| Parameter | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Drain-to-Source Voltage | $V_{DSX}$ | | 15 | V |
| Gate-to-Drain Voltage | $V_{GDS}$ | | –15 | V |
| Gate Current | $I_G$ | | 5 | mA |
| Drain Current | $I_D$ | | 50 | mA |
| Allowable Power Dissipation | $P_D$ | | 200 | mW |
| Junction Temperature | Tj | | 150 | ˚C |
| Storage Temperature | Tstg | | –55 to +150 | ˚C |

### Electrical Characteristics at Ta = 25˚C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | min | typ | max | |
| Gate-to-Drain Breakdown Voltage | $V_{(BR)GDS}$ | $I_G$=–10μA, $V_{DS}$=0 | –15 | | | V |
| Gate-to-Source Leakage Current | $I_{GSS}$ | $V_{GS}$=–10V, $V_{DS}$=0 | | | –1.0 | nA |
| Zero-Gate Voltage Drain Current | $I_{DSS}$ | $V_{DS}$=5V, $V_{GS}$=0 | 10.0* | | 50.0* | mA |
| Cutoff Voltage | $V_{GS(off)}$ | $V_{DS}$=5V, $I_D$=10μA | –0.6 | –1.4 | –3.0 | V |
| Forward Transfer Admittance | \| yfs \|1 | $V_{DS}$=5V, $I_D$=10mA, f=1kHz | 14 | 21 | | mS |
| | \| yfs \|2 | $V_{DS}$=5V, $V_{GS}$=0, f=1kHz | 14 | 29 | | mS |

* : The 2SK2539 is classified by $I_{DSS}$ as follows : (unit : mA)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 10.0 | 6 | 20.0 | 16.0 | 7 | 32.0 | 25.0 | 8 | 50.0 |

Marking : AK
$I_{DSS}$ rank : 6, 7, 8

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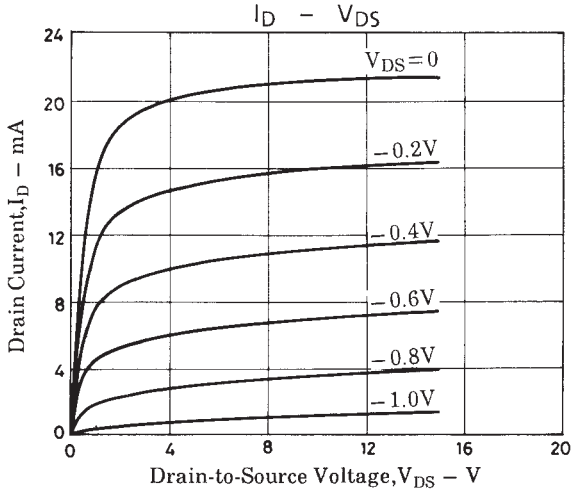
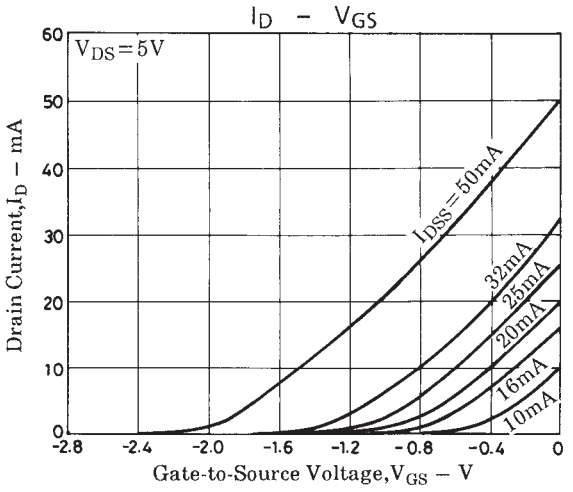
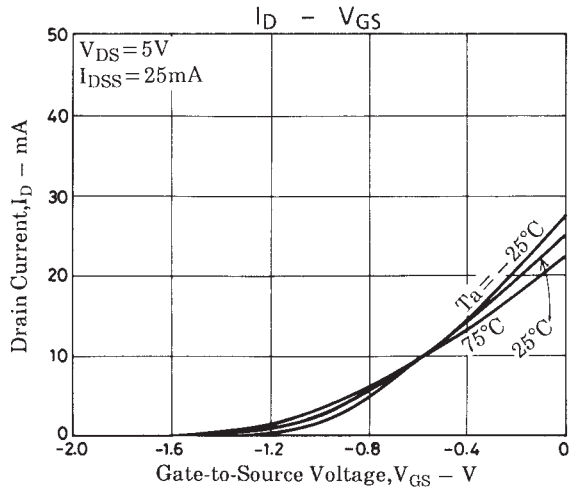
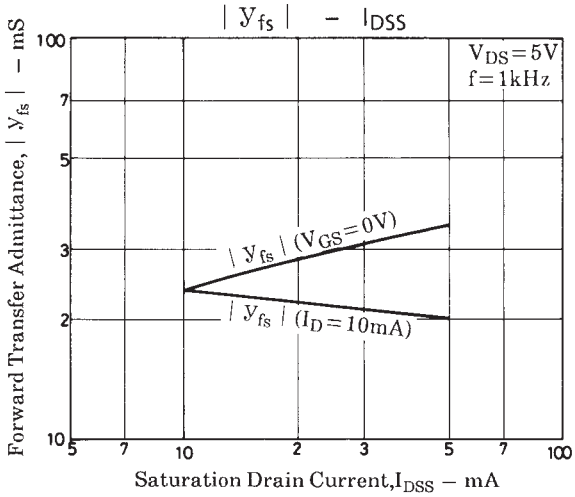
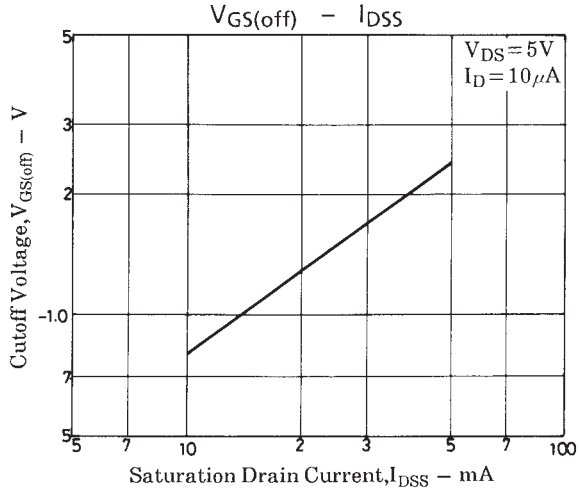
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | min | typ | max | |
| Input Capacitance | Ciss | $V_{DS}$=5V, $V_{GS}$=0, f=1MHz | | 4.9 | | pF |
| Reverse Transfer Capacitance | Crss | $V_{DS}$=5V, $V_{GS}$=0, f=1MHz | | 1.4 | | pF |

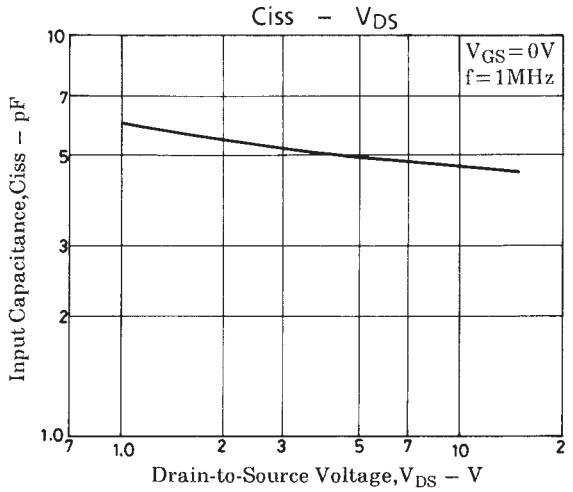


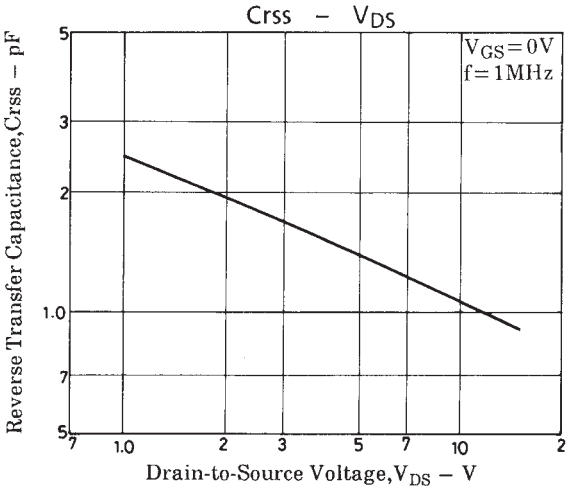



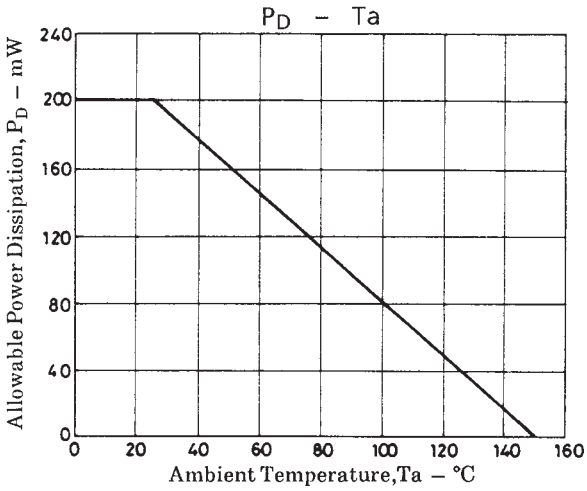





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