

**2SK932**

## High-Frequency Low-Noise Amplifier Applications

### Applications

- AM tuner RF amplifier, low-noise amplifier.

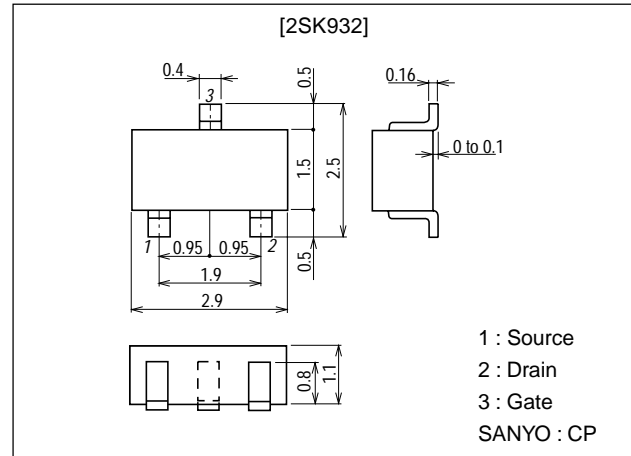
### Features

- Adoption of FBET process.
- Large  $|y_{fs}|$ .
- Small Ciss.
- Ultralow noise figure.
- Ultrasmall-sized package permitting 2SK932-applied sets to be made smaller and slimmer.

### Package Dimensions

unit:mm

2050A



### Specifications

#### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

| Parameter                   | Symbol    | Conditions | Ratings     | Unit             |
|-----------------------------|-----------|------------|-------------|------------------|
| Drain-to-Source Voltage     | $V_{DSX}$ |            | 15          | V                |
| Gate-to-Drain Voltage       | $V_{GDS}$ |            | -15         | V                |
| Gate Current                | $I_G$     |            | 10          | mA               |
| Drain Current               | $I_D$     |            | 50          | mA               |
| Allowable Power Dissipation | $P_D$     |            | 200         | mW               |
| Junction Temperature        | $T_J$     |            | 150         | $^\circ\text{C}$ |
| Storage Temperature         | $T_{stg}$ |            | -55 to +150 | $^\circ\text{C}$ |

#### Electrical Characteristics at $T_a = 25^\circ\text{C}$

| Parameter                       | Symbol        | Conditions  | Ratings |      |       | Unit |
|---------------------------------|---------------|---|---------|------|-------|------|
|                                 |               |   | min     | typ  | max   |      |
| Gate-to-Drain Breakdown Voltage | $V_{(BR)GDS}$ | $I_G = -10\mu\text{A}$ , $V_{DS} = 0\text{V}$                   | -15     |      |       | V    |
| Gate-to-Source Leakage Current  | $I_{GSS}$     | $V_{GS} = -10\text{V}$ , $V_{DS} = 0\text{V}$                   |         |      | -1.0  | nA   |
| Zero-Gate Voltage Drain Current | $I_{DSS}$     | $V_{DS} = 5\text{V}$ , $V_{GS} = 0\text{V}$                     | 5.0*    |      | 24.0* | mA   |
| Cutoff Voltage                  | $V_{GS(off)}$ | $V_{DS} = 5\text{V}$ , $I_D = 100\mu\text{A}$                   | -0.2    | -0.6 | -1.4  | V    |
| Forward Transfer Admittance     | $ y_{fs} $    | $V_{DS} = 5\text{V}$ , $V_{GS} = 0\text{V}$ , $f = 1\text{kHz}$ | 25      | 50   |       | mS   |

\* : The 2SK932 is classified by  $I_{DSS}$  as follows (unit : mA) :

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|     |    |     |     |    |      |      |    |      |      |    |      |
|-----|----|-----|-----|----|------|------|----|------|------|----|------|
| 5.0 | 21 | 8.5 | 7.3 | 22 | 12.0 | 10.0 | 23 | 17.0 | 14.5 | 24 | 24.0 |
|-----|----|-----|-----|----|------|------|----|------|------|----|------|

(Note) Marking : E

 $I_{DSS}$  rank : 21, 22, 23, 24

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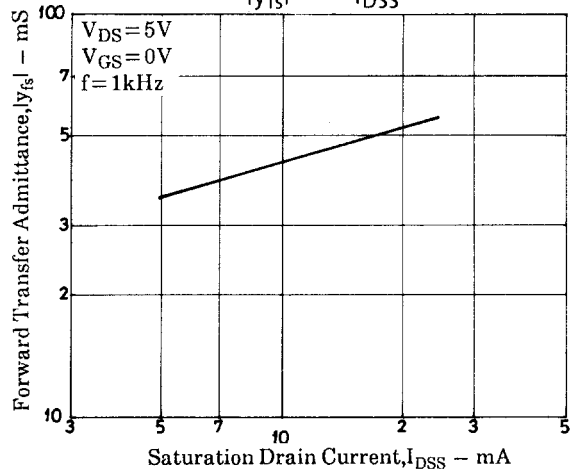
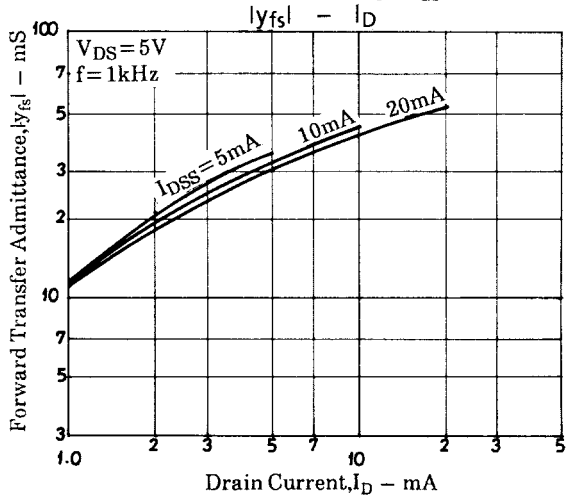
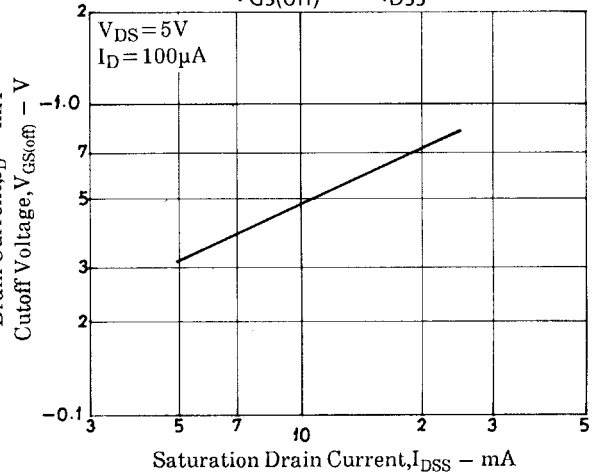
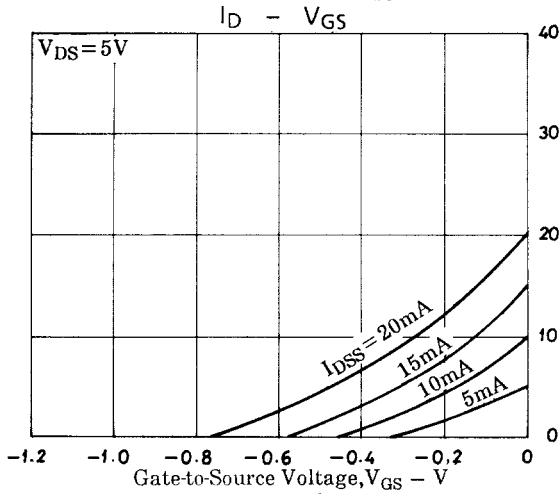
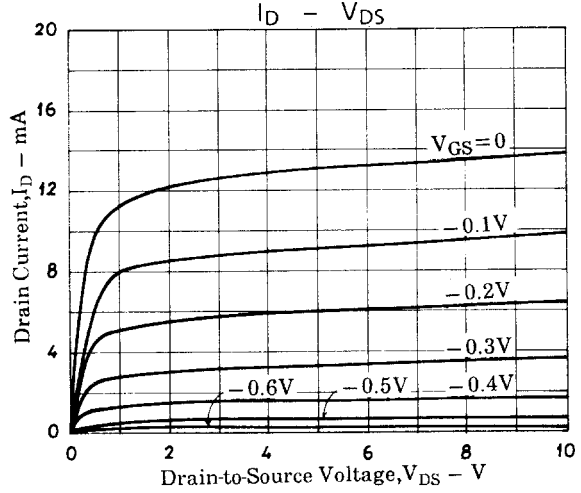
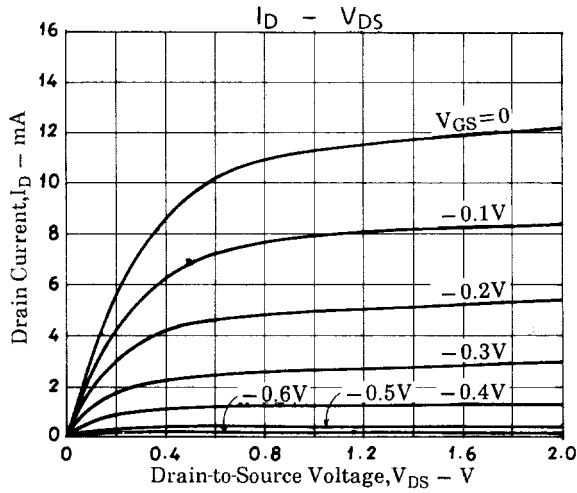
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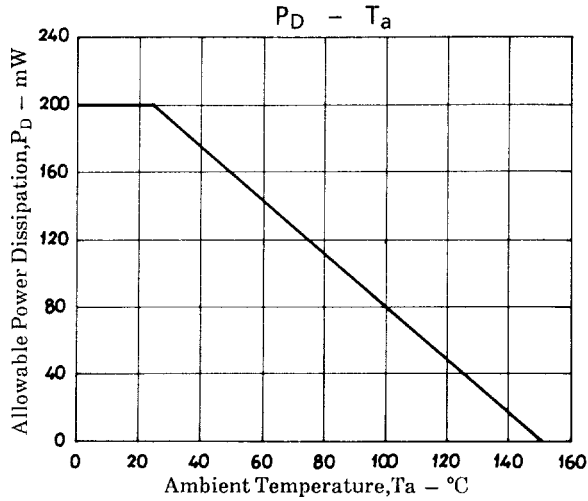
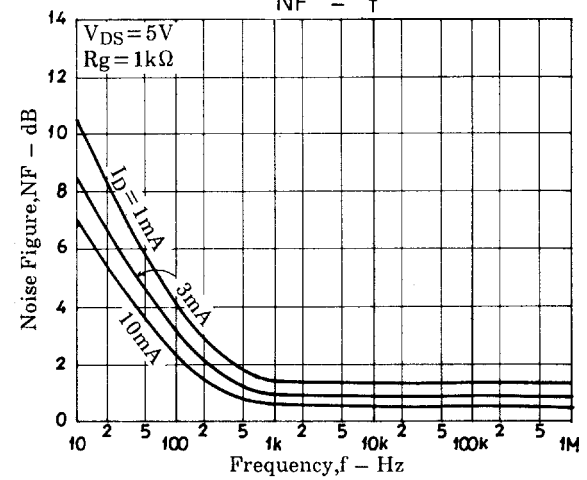
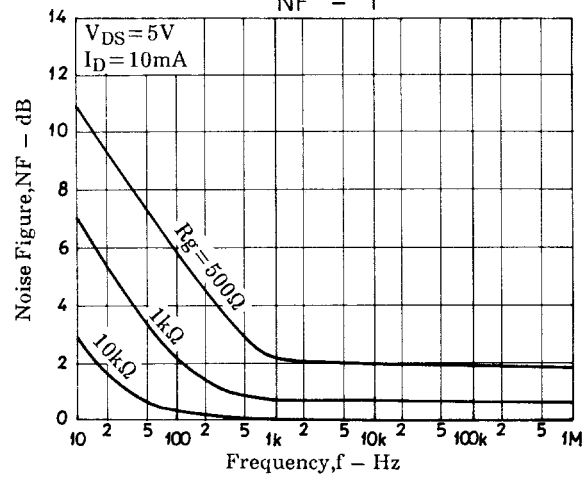
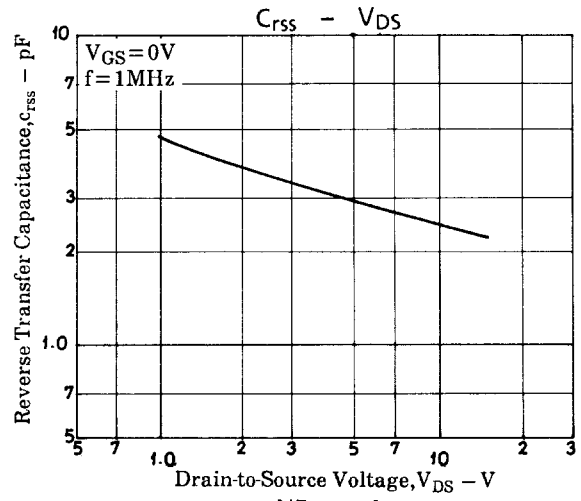
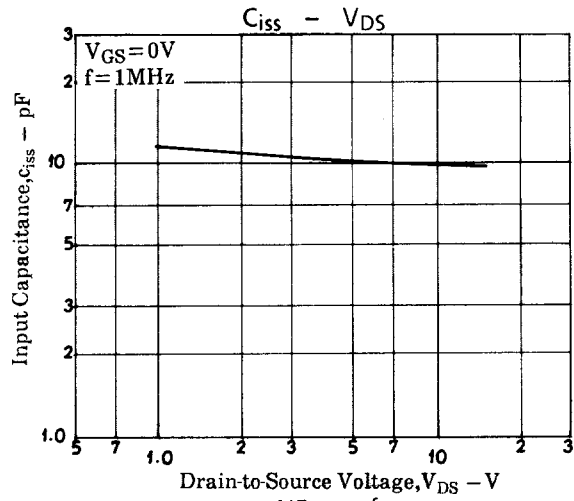
# 2SK932

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| Parameter                    | Symbol | Conditions  | Ratings | Unit |
|------------------------------|--------|---|---------|------|
| Input Capacitance            | Ciss   | V <sub>DS</sub> =5V, V <sub>GS</sub> =0V, f=1MHz                      | 10      | pF   |
| Reverse Transfer Capacitance | Crss   | V <sub>DS</sub> =5V, V <sub>GS</sub> =0V, f=1MHz                      | 3.0     | pF   |
| Noise Figure                 | NF     | V <sub>DS</sub> =5V, R <sub>g</sub> =1kΩ, I <sub>D</sub> =1mA, f=1kHz | 1.5     | dB   |



# 2SK932



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