



## FM Tuner, VHF-Band Amplifier Applications

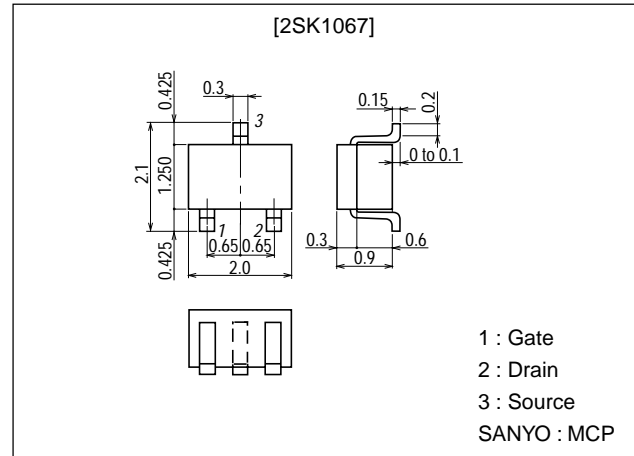
### Features

- Low noise NF=1.8dB typ (f=100MHz).
- High power gain PG=27dB typ (f=100MHz).
- Small reverse transfer capacitance Crss=0.035pF (V<sub>DS</sub>=10V, f=1MHz).
- Ultrasmall-sized package (MCP) permitting 2SK1067-applied sets to be made smaller and slimmer.

### Package Dimensions

unit:mm

2057



### Specifications

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

| Parameter                   | Symbol           | Conditions | Ratings     | Unit |
|-----------------------------|------------------|------------|-------------|------|
| Drain-to-Source Voltage     | V <sub>DS</sub>  |            | 16          | V    |
| Gate-to-Source Voltage      | V <sub>GS</sub>  |            | ±5          | V    |
| Drain Current               | I <sub>D</sub>   |            | 30          | mA   |
| Allowable Power Dissipation | P <sub>D</sub>   |            | 150         | mW   |
| Channel Temperature         | T <sub>ch</sub>  |            | 125         | °C   |
| Storage Temperature         | T <sub>stg</sub> |            | -55 to +125 | °C   |

#### Electrical Characteristics at Ta = 25°C

| Parameter                       | Symbol               | Conditions                                       | Ratings |       |       | Unit |
|---------------------------------|----------------------|--|---------|-------|-------|------|
|                                 |                      |  | min     | typ   | max   |      |
| Drain-to-Source Voltage         | V <sub>DSX</sub>     | V <sub>GS</sub> =-4V, I <sub>D</sub> =100μA      | 16      |       |       | V    |
| Gate-to-Source Leakage Current  | I <sub>GSS</sub>     | V <sub>DS</sub> =0V, V <sub>GS</sub> =±5V        |         |       | 10    | nA   |
| Zero-Gate Voltage Drain Current | I <sub>DSS</sub>     | V <sub>DS</sub> =10V, V <sub>GS</sub> =0         | 1.2*    |       | 12.0* | mA   |
| Cutoff Voltage                  | V <sub>GS(off)</sub> | V <sub>DS</sub> =10V, I <sub>D</sub> =100μA      |         |       | -2.5  | V    |
| Forward Transfer Admittance     | y <sub>fs</sub>      | V <sub>DS</sub> =10V, V <sub>GS</sub> =0, f=1kHz |         | 11    |       | mS   |
| Input Capacitance               | C <sub>iss</sub>     | V <sub>DS</sub> =10V, V <sub>GS</sub> =0, f=1MHz |         | 2.3   |       | pF   |
| Reverse Transfer Capacitance    | C <sub>rss</sub>     | V <sub>DS</sub> =10V, V <sub>GS</sub> =0, f=1MHz |         | 0.035 |       | pF   |

\* : The 2SK1067 is classified by I<sub>DSS</sub> as follows (unit : mA) :

|     |   |     |     |   |     |     |   |      |
|-----|---|-----|-----|---|-----|-----|---|------|
| 1.2 | 3 | 3.0 | 2.5 | 4 | 6.0 | 5.0 | 5 | 12.0 |
|-----|---|-----|-----|---|-----|-----|---|------|

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(Note) Marking : CJ  
I<sub>DSS</sub> rank : 3, 4, 5

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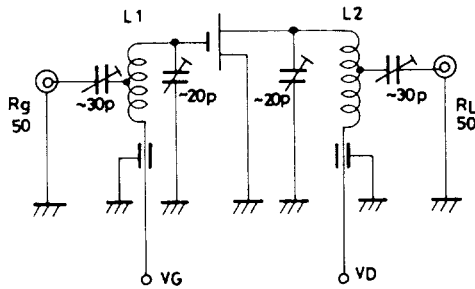
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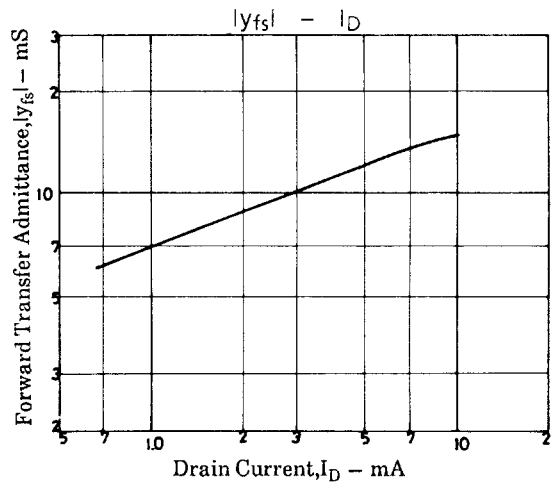
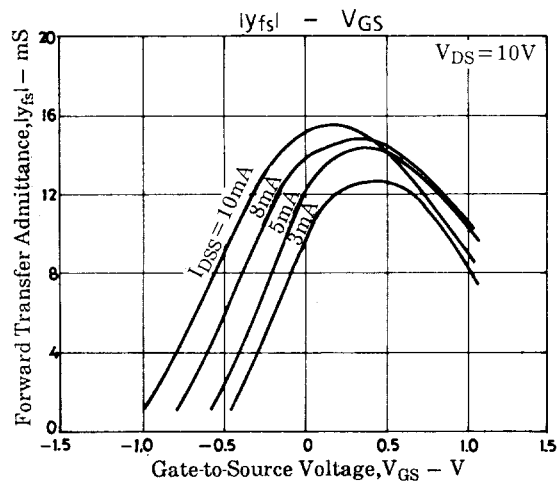
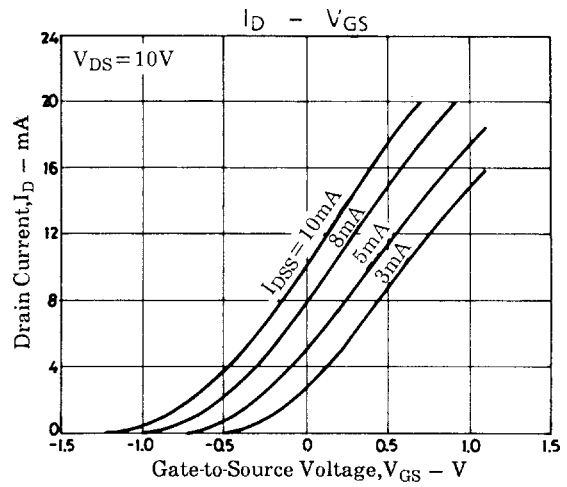
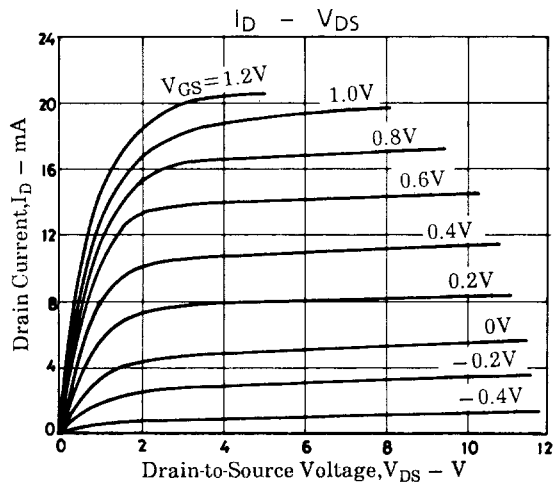
| Parameter    | Symbol | Conditions  | Ratings |     | Unit |
|--------------|--------|---|---------|-----|------|
| Power Gain   | PG     | $V_{DS}=10V, V_{GS}=0, f=100MHz,$<br>See specified Test Circuit | 27      |     | dB   |
| Noise Figure | NF     | $V_{DS}=10V, V_{GS}=0, f=100MHz,$<br>See specified Test Circuit | 1.8     | 3.0 | dB   |

## PG, NF Specified Test Circuit

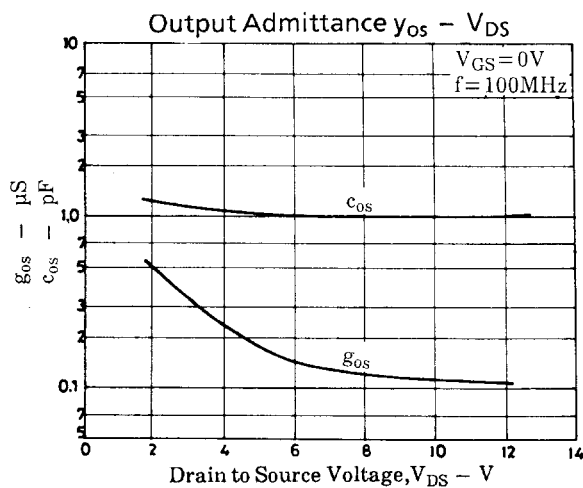
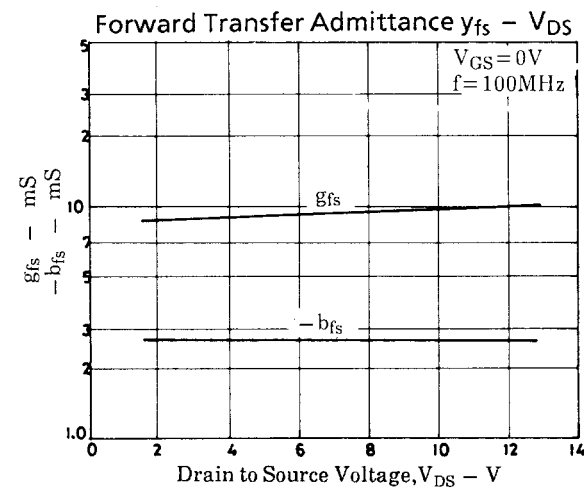
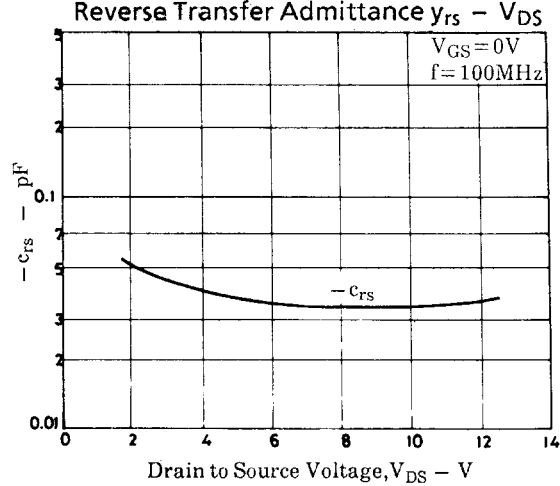
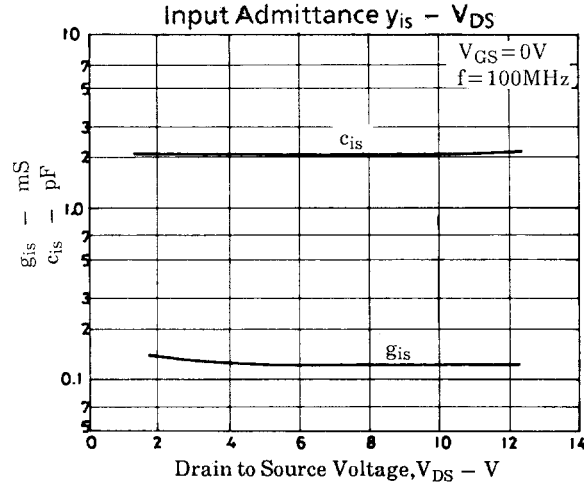
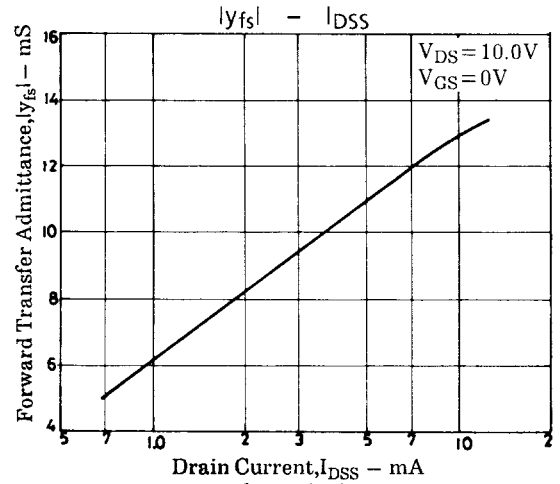
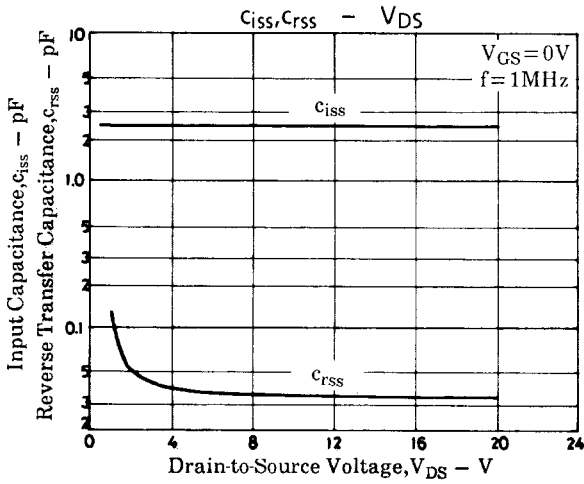
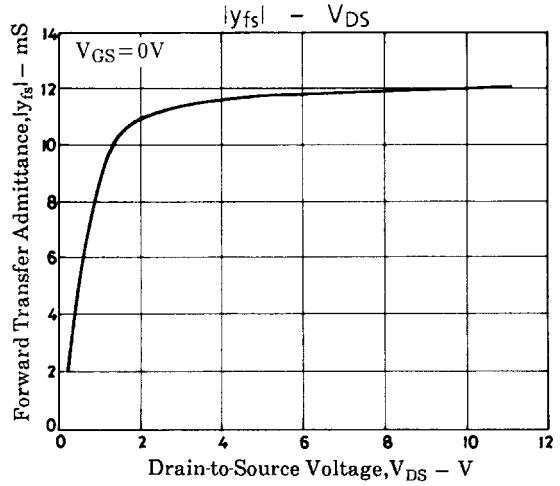
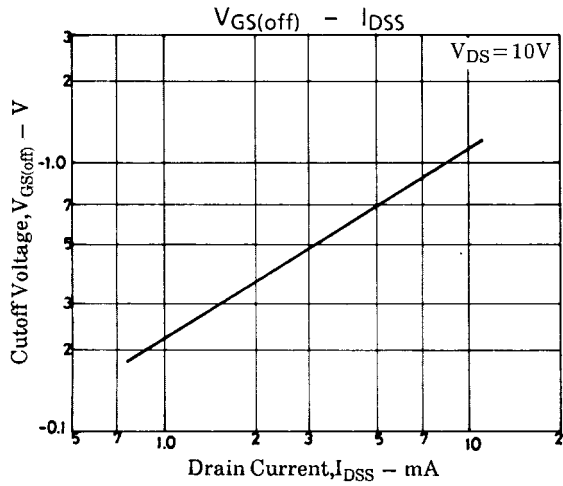


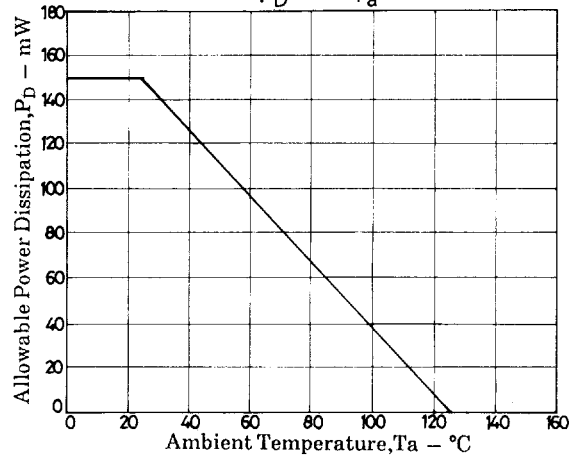
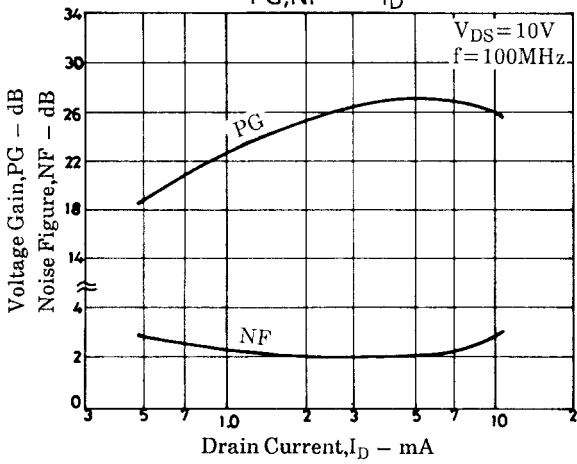
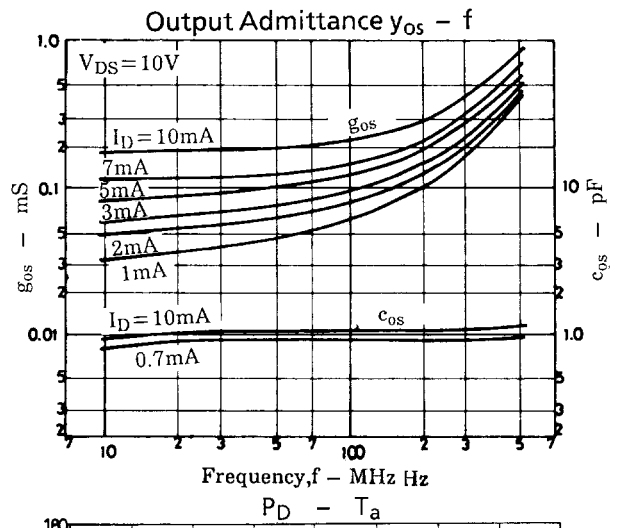
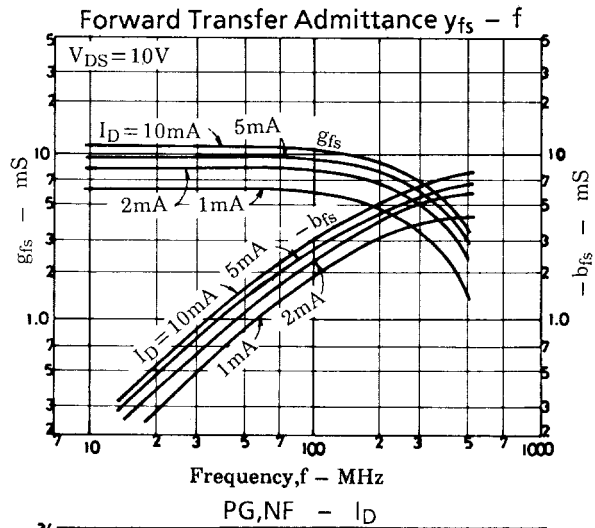
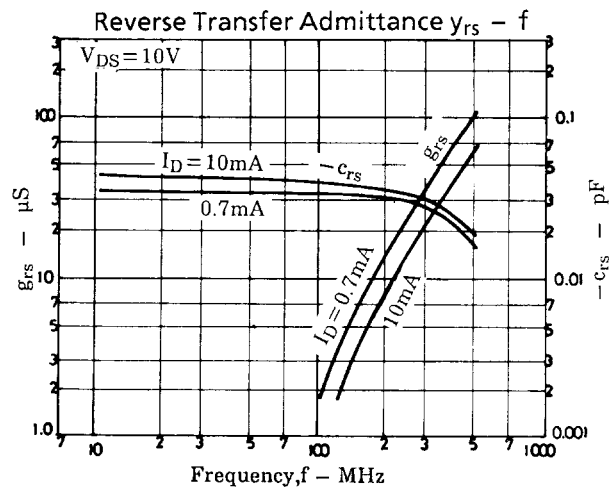
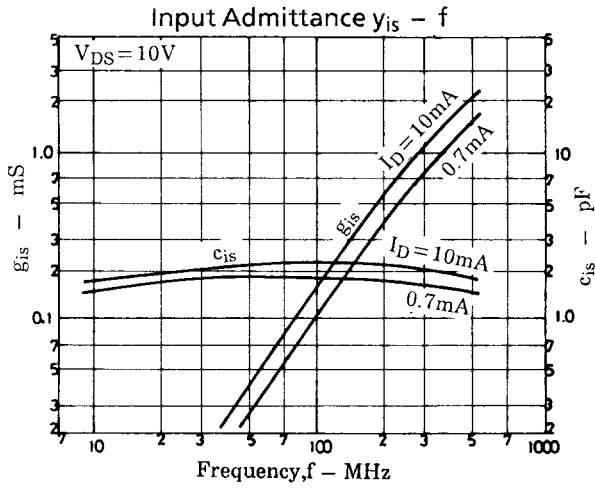
- L1 : 1.0mm $\varnothing$  plated wire, 10mm $\varnothing$  6T, tap : 3T from H side
- L2 : 1.0mm $\varnothing$  plated wire, 10mm $\varnothing$  7T, tap : 4T from H side

Unit (resistance :  $\Omega$ , capacitance : F)



# 2SK1067





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