


|   |         |  |
|---|---------|--|
|  | No.2747 | <b>2SK1066</b>   |
|   |         | N-Channel Junction Silicon FET<br>High-Frequency<br>General-Purpose Amp Applications |

### Applications

- High-frequency general-purpose amp
- AM tuner RF amp
- Low-noise amp

### Features

- Large  $|y_{fs}|$
- Small  $c_{rss}$
- Very low noise figure
- Very small-sized package permitting 2SK1066-applied sets to be made smaller and slimmer

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

|                             |           |             | 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               | $I_D$     | 20          | mA               |
| Allowable Power Dissipation | $P_D$     | 150         | mW               |
| Junction Temperature        | $T_j$     | 150         | $^\circ\text{C}$ |
| Storage Temperature         | $T_{stg}$ | -55 to +150 | $^\circ\text{C}$ |

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

|                                 |               |  | min           | typ  | max            | unit |
|---------------------------------|---------------|--|---------------|------|----------------|------|
| Gate to Drain Breakdown Voltage | $V_{(BR)GDS}$ | $I_G = -10\mu\text{A}, V_{DS} = 0$   | -15           |      |                | V    |
| Gate Cutoff Current             | $I_{GSS}$     | $V_{GS} = -10\text{V}, V_{DS} = 0$   |               |      | -1.0           | nA   |
| Cutoff Voltage                  | $V_{GS(off)}$ | $V_{DS} = 5\text{V}, I_D = 100\mu\text{A}$                                     | -0.2          | -0.5 | -1.5           | V    |
| Drain Current                   | $I_{DSS}$     | $V_{DS} = 5\text{V}, V_{GS} = 0$   | $\approx 3.5$ |      | $\approx 12.0$ | mA   |
| Forward Transfer Admittance     | $ y_{fs} $    | $V_{DS} = 5\text{V}, V_{GS} = 0, f = 1\text{kHz}$                              | 10            | 17   |                | mS   |
| Input Capacitance               | $c_{iss}$     | $V_{DS} = 5\text{V}, V_{GS} = 0, f = 1\text{MHz}$                              |               | 7.0  |                | pF   |
| Reverse Transfer Capacitance    | $c_{rss}$     | $V_{DS} = 5\text{V}, V_{GS} = 0, f = 1\text{MHz}$                              |               | 2.0  |                | pF   |
| Noise Figure                    | NF            | $V_{DS} = 5\text{V}, R_g = 1\text{k}\Omega, I_D = 1\text{mA}, f = 1\text{kHz}$ |               | 1.5  |                | dB   |

※: The 2SK1066 is classified by  $I_{DSS}$  as follows (unit: mA):

|     |    |     |     |    |     |     |    |      |
|-----|----|-----|-----|----|-----|-----|----|------|
| 3.5 | 20 | 6.0 | 5.0 | 21 | 8.5 | 7.3 | 22 | 12.0 |
|-----|----|-----|-----|----|-----|-----|----|------|

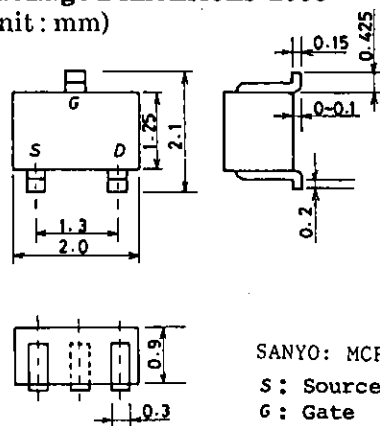
(Note) Marking: A

$I_{DSS}$  rank: 20, 21, 22

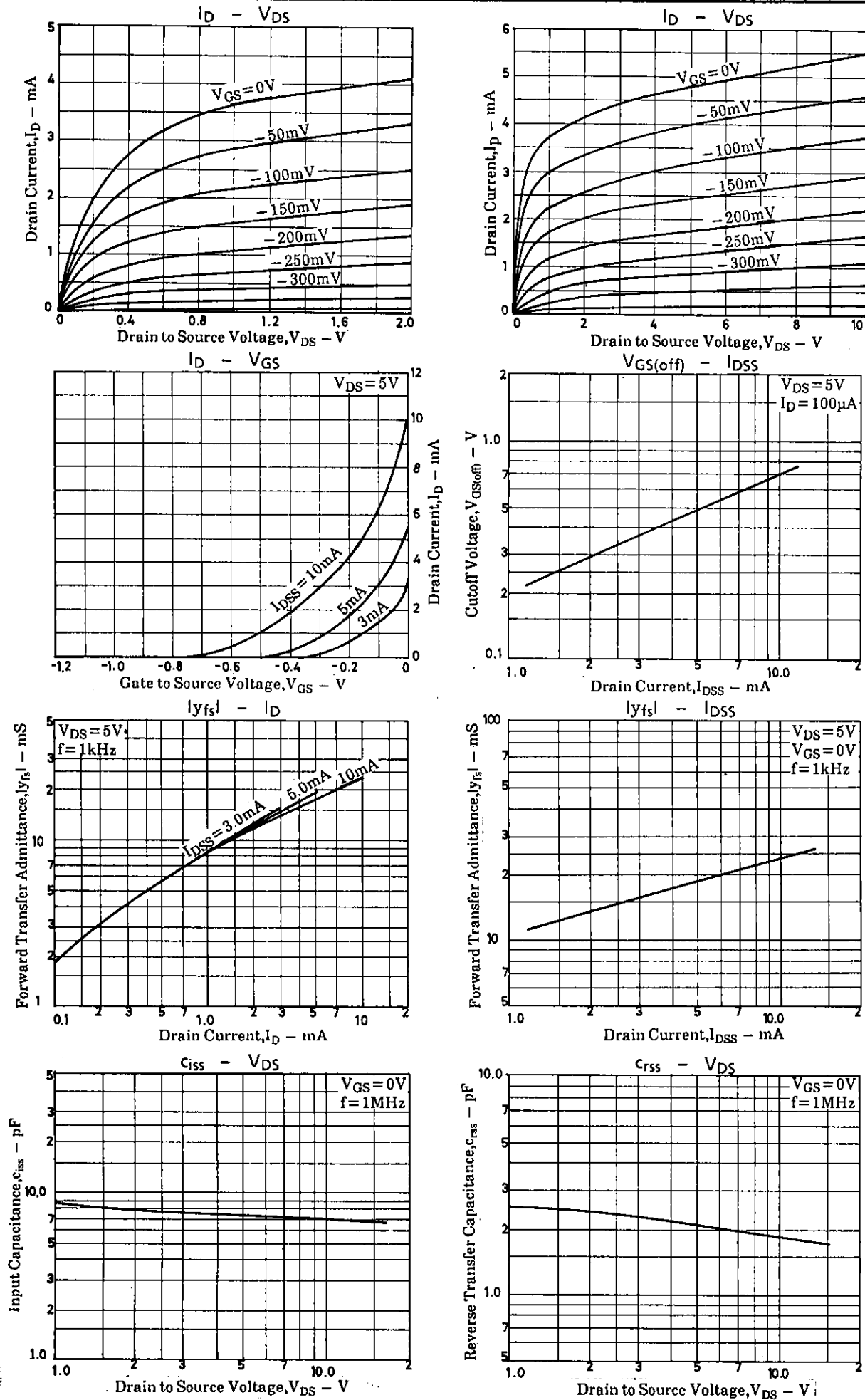
• For CP package version, use the 2SK436.

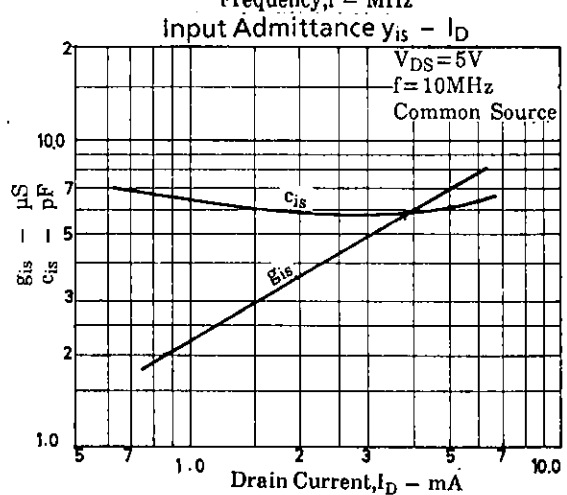
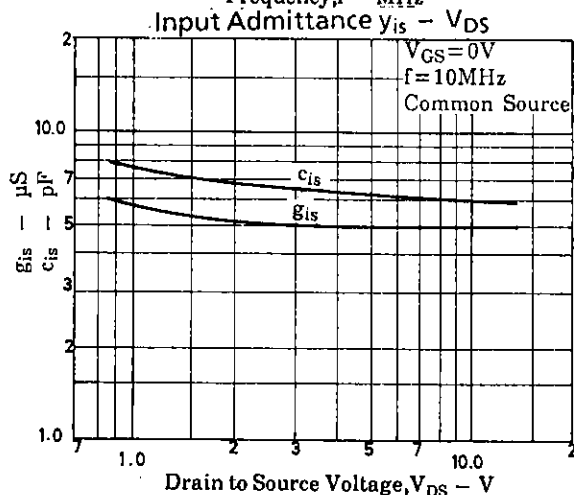
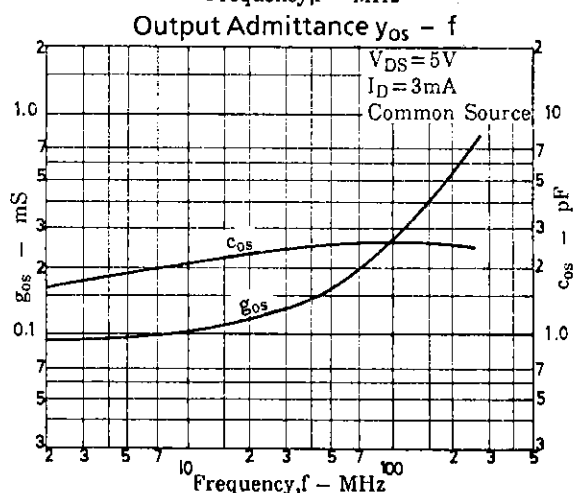
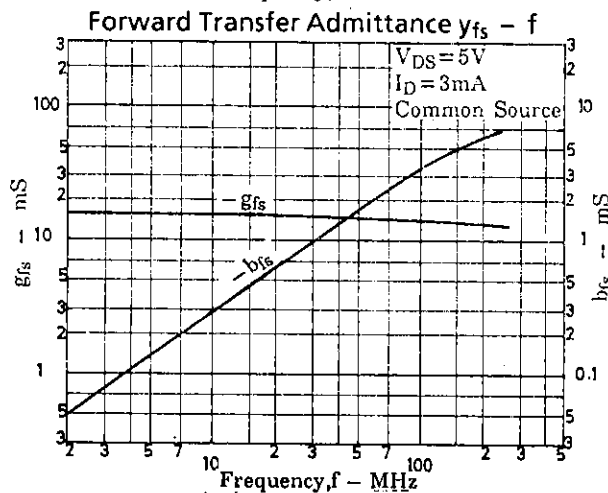
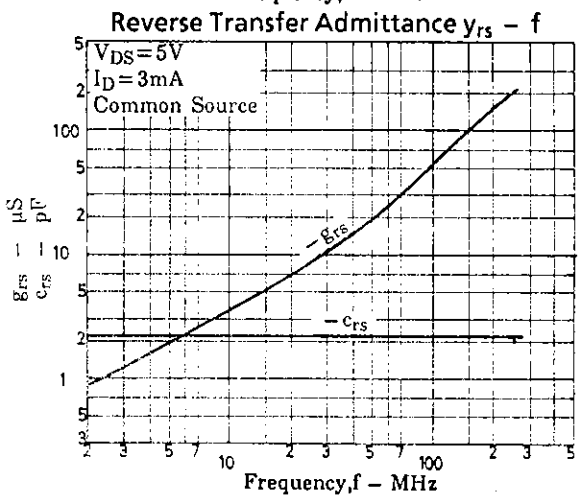
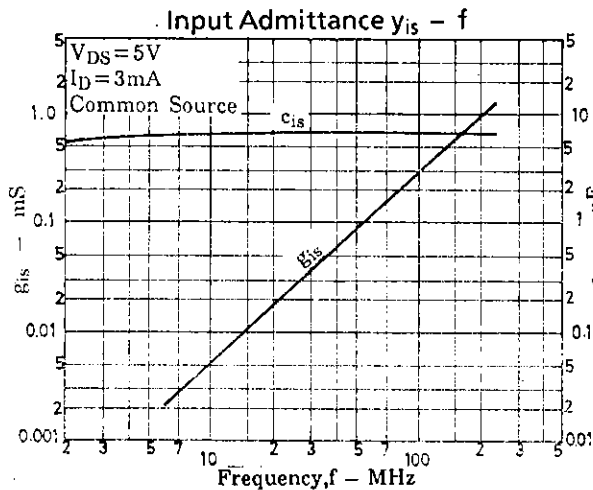
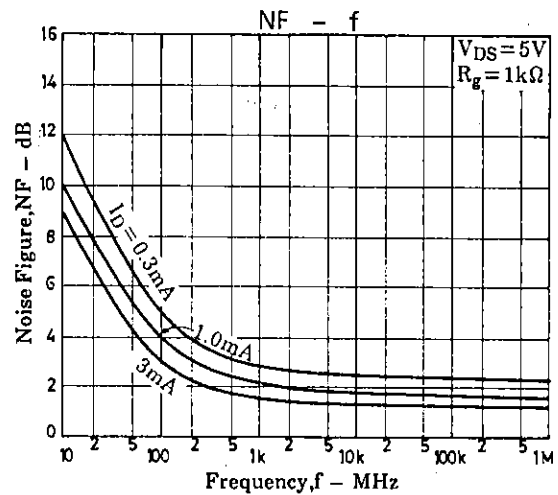
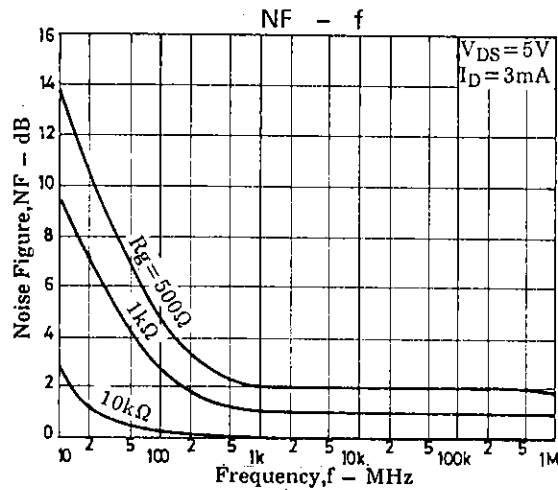
### Package Dimensions 2058

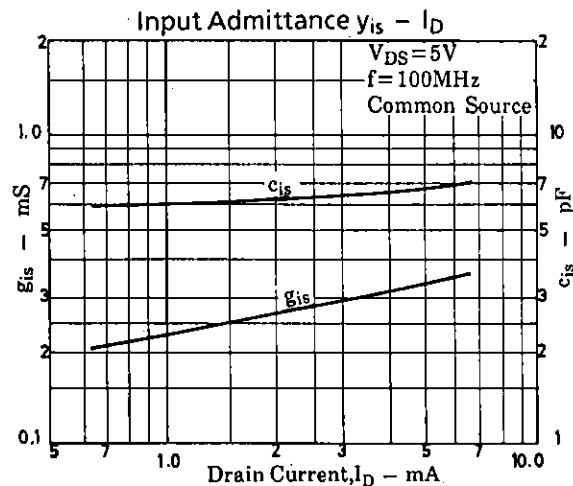
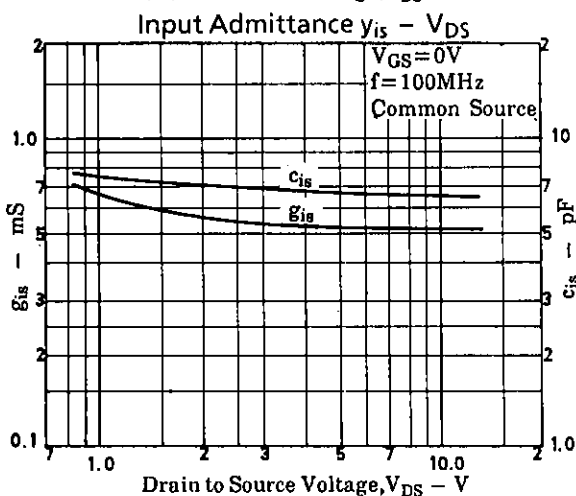
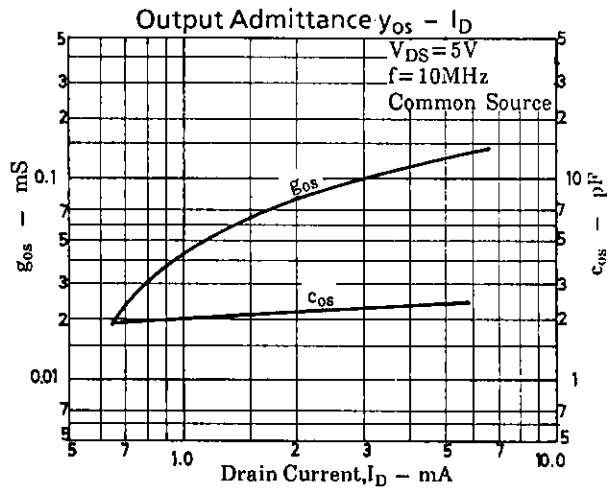
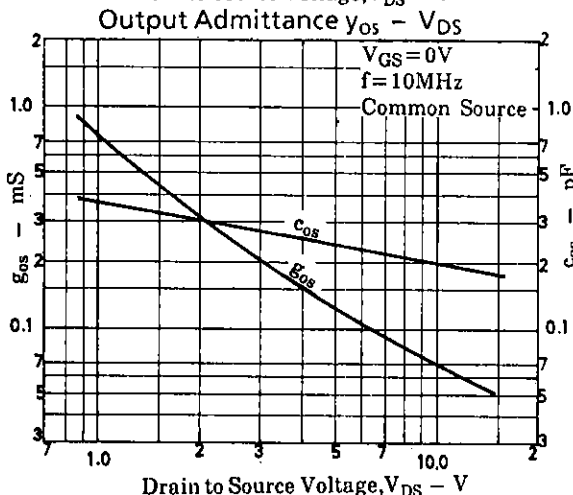
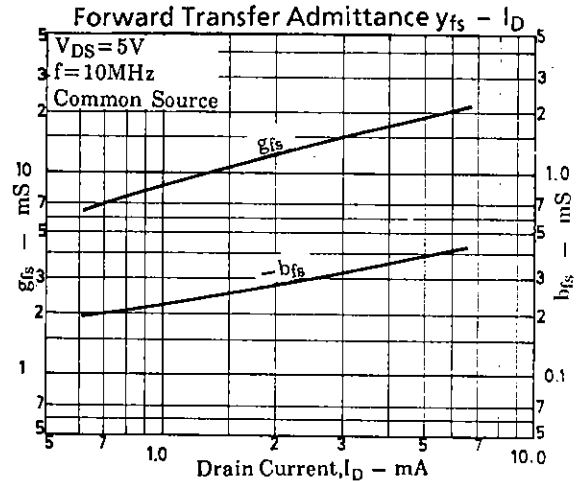
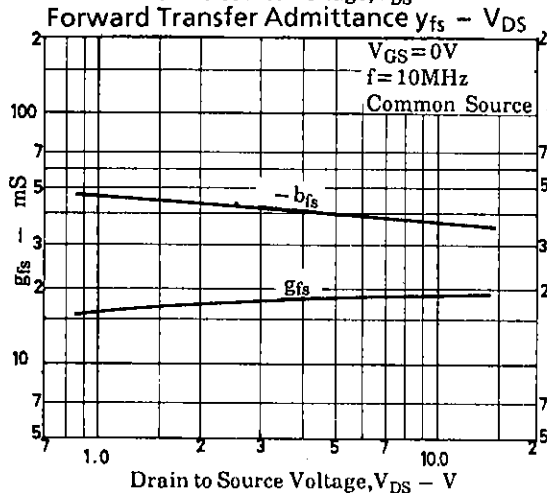
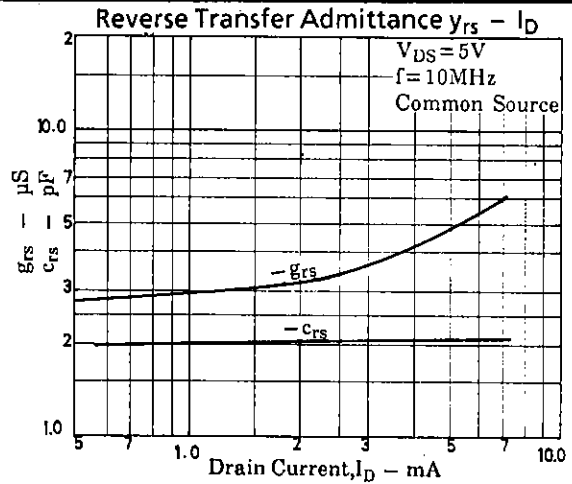
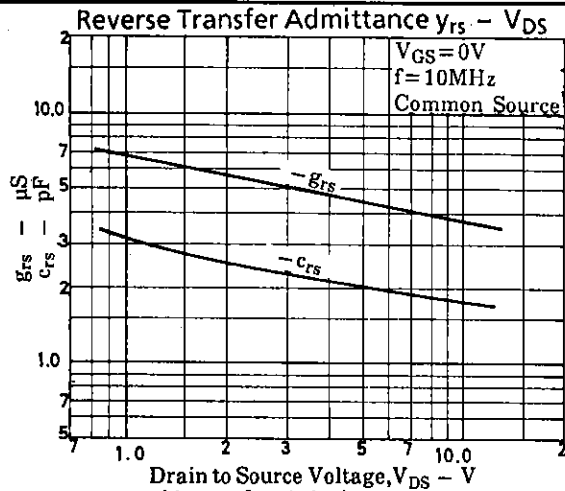
(unit: mm)

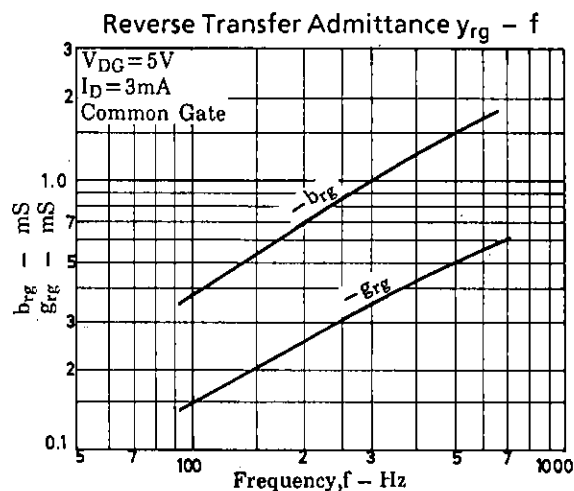
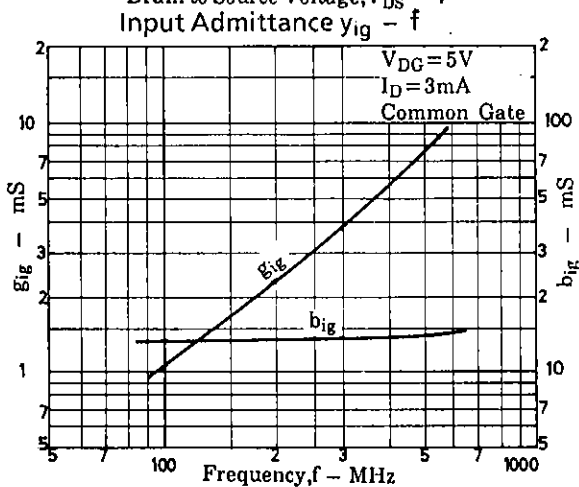
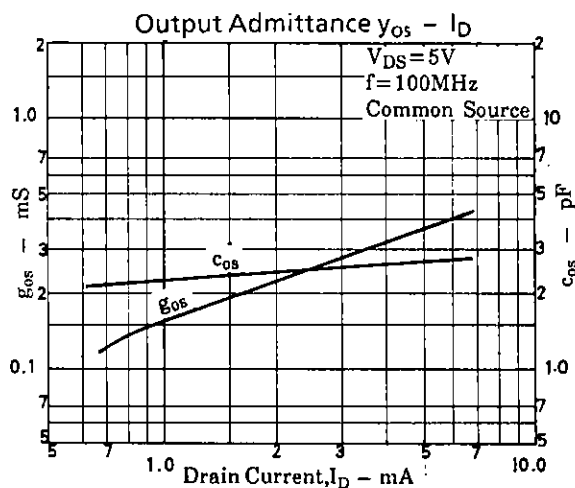
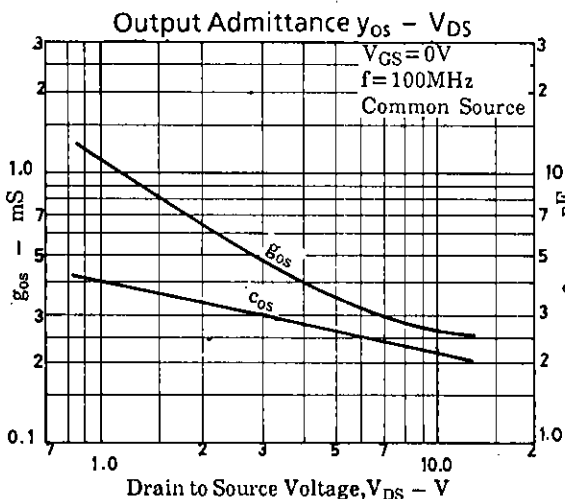
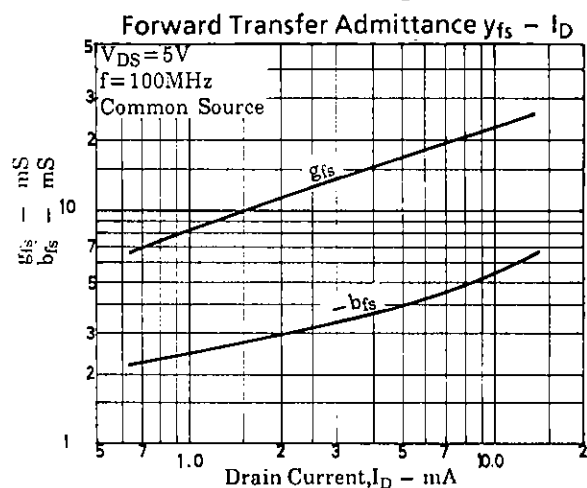
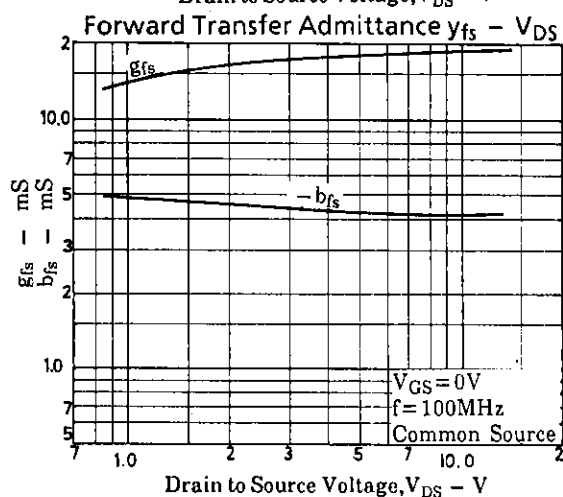
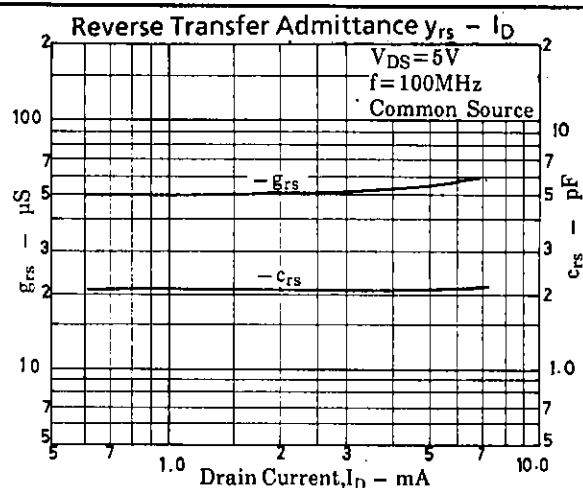
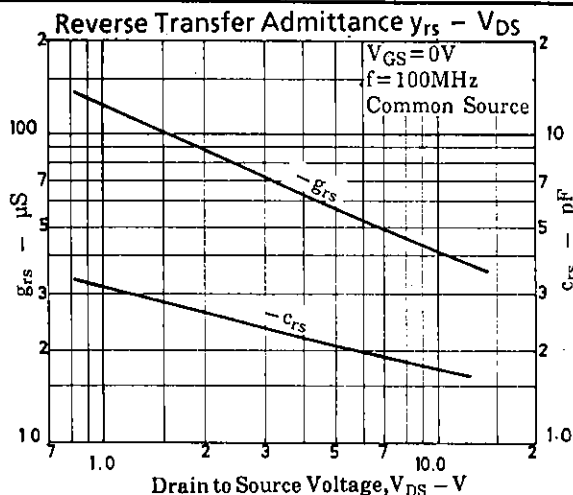


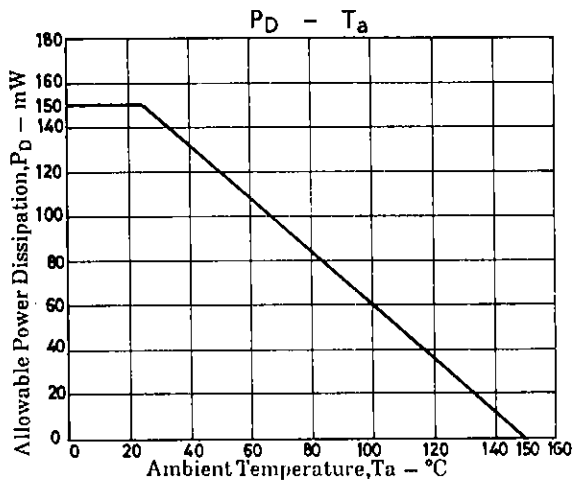
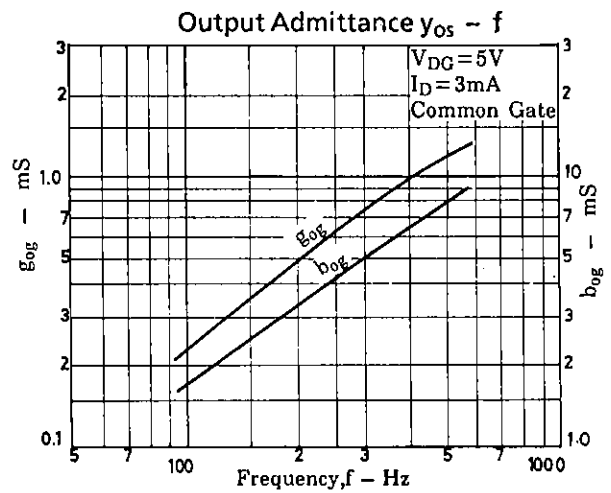
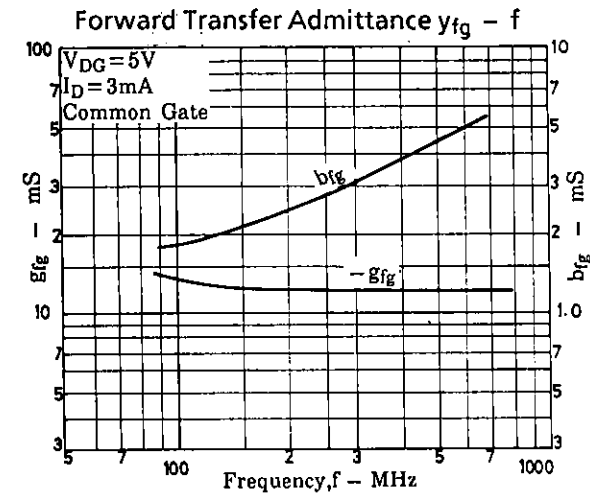
SANYO: MCP  
 S: Source  
 G: Gate  
 D: Drain











- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
  - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use;
  - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.