

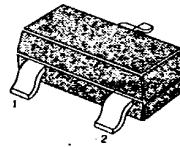
KSK211*Under Development*
SILICON N-CHANNEL JUNCTION FET**FM TUNER
VHF AMPLIFIER**

- NF = 2.5 dB (TYP)
- $|Y_{FS}| = 9.0 \text{ mS}$ (TYP)

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

| Characteristic | Symbol | Rating | Unit |
|----------------------|-----------|---------|------------------|
| Gate-Drain Voltage | V_{GDO} | -18 | V |
| Gate Current | I_G | 10 | mA |
| Power Dissipation | P_D | 200 | mW |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55~150 | $^\circ\text{C}$ |

SOT-23



1. Base 2. Emitter 3. Collector

3

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

| Characteristic | Symbol | Test Condition | Min | Typ | Max | Unit |
|------------------------------|---------------|--|-----|-----|------|------|
| Gate Cut-off Current | I_{GSS} | $V_{GS} = -0.5\text{V}, V_{DS} = 0$ | | | -10 | nA |
| Gate-Drain Breakdown Voltage | $V(BR)_{GDO}$ | $I_G = -100\mu\text{A}$, Drain | -18 | | | V |
| Drain Current | I_{DSS} | $V_{DS} = 10\text{V}, V_{GS} = 0$ | 1.0 | | 10 | mA |
| Gate-Source Cut-off Voltage | $V_{GS(off)}$ | $V_{DS} = 10\text{V}, I_D = 1\mu\text{A}$ | 0.4 | | 4.0 | V |
| Forward Transfer Admittance | $ Y_{FS} $ | $V_{DS} = 10\text{V}, V_{GS} = 0$, $f = 1\text{kHz}$ | | 9 | | mS |
| Reverse Transfer Capacitance | C_{rss} | $V_{GS} = 0, f = 1\text{MHz}$ | | | 0.15 | pF |
| Power Gain | C_{PS} | $V_{DS} = 10\text{V}, f = 100\text{MHz}$ | | 18 | | dB |
| Noise Figure | NF | $V_{DS} = 10\text{V}, f = 100\text{MHz}$ | | 2.5 | 3.5 | dB |

 I_{DSS} CLASSIFICATION

| Classification | O | Y | G |
|----------------|---------|---------|--------|
| I_{DSS} | 1.0-3.0 | 2.5-6.0 | 5.0-10 |



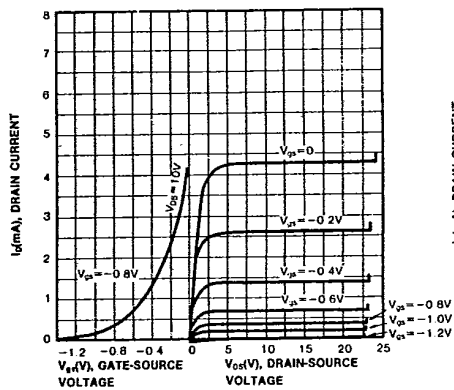
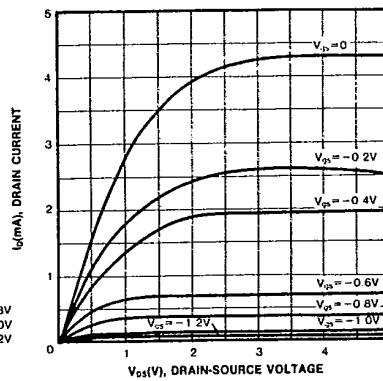
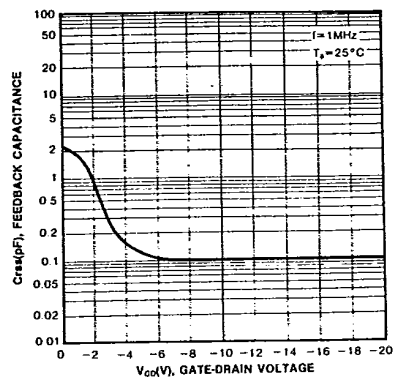
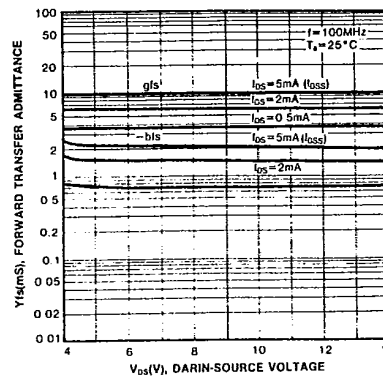
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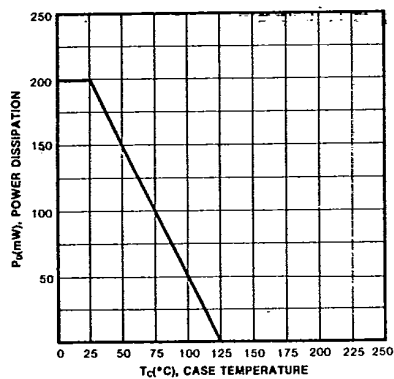
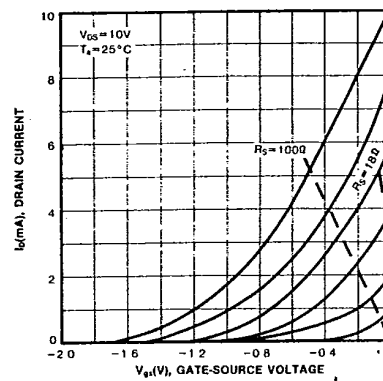
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STATIC CHARACTERISTIC

 I_D - V_{DS}  C_{rss} - V_{GS}  Y_{fs} - V_{DS} 

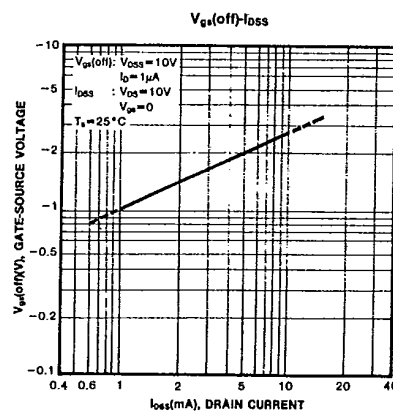
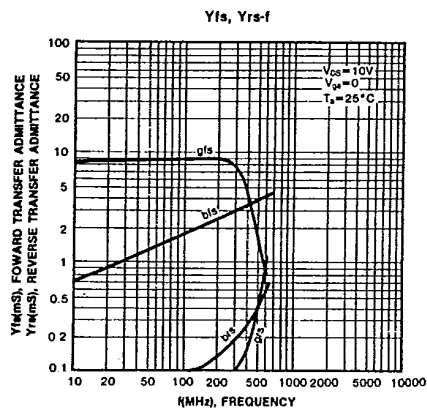
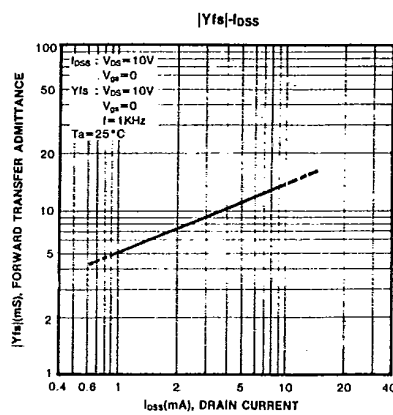
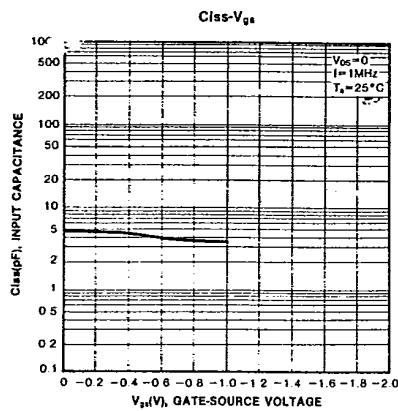
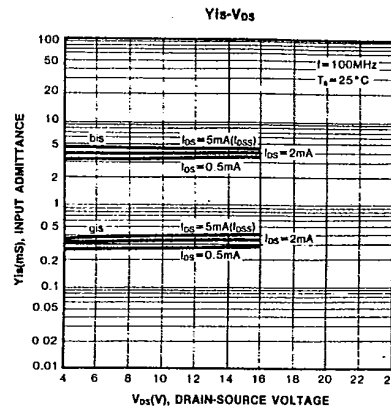
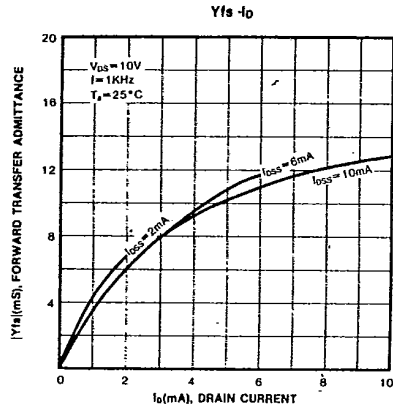
POWER DERATING

 I_D - V_{GS} 

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