



No.661E

2SK212

N-Channel Junction Silicon FET

FM Tuner Applications

Features

- Ideal for FM tuners in low-voltage radios, car radios, etc.
- Small-sized package permitting 2SK212-applied sets to be made small and slim.
- Small C_{res} ($C_{res} = 0.04\text{pF}$ typ).
- High $|Y_{fs}|$ ($|Y_{fs}| = 6.0\text{mS}$ typ).

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

| | | | unit |
|-----------------------------|-----------|-------------|------------------|
| Gate-to-Drain Voltage | V_{GD0} | -20 | V |
| Gate Current | I_G | 10 | mA |
| Drain Current | I_D | 20 | mA |
| Allowable Power Dissipation | P_D | 200 | mW |
| Junction Temperature | T_j | 125 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55 to +125 | $^\circ\text{C}$ |

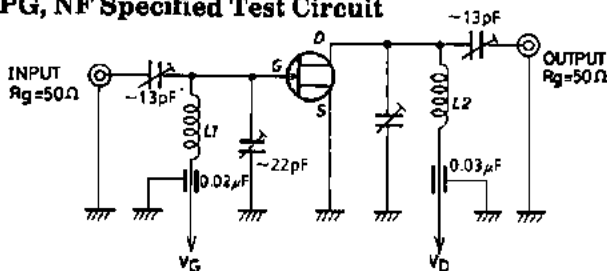
Electrical Characteristics at $T_a = 25^\circ\text{C}$

| | | min | typ | max | unit |
|------------------------------|--|------|------|-------|------|
| G-D Breakdown Voltage | $V_{(BR)GDO}$ $I_G = -10\mu\text{A}$ | -20 | | | V |
| Gate Cutoff Current | I_{GSS} $V_{GS} = -0.5\text{V}, V_{DS} = 0$ | | | -10 | nA |
| Drain Current | I_{DSS} $V_{DS} = 5\text{V}, V_{GS} = 0$ | 0.6* | | 12.0* | mA |
| Cutoff Voltage | $V_{GS(off)}$ $V_{DS} = 5\text{V}, I_D = 10\mu\text{A}$ | | | -2.5 | V |
| Forward Transfer Admittance | $ Y_{fs} $ (1) $V_{DS} = 5\text{V}, V_{GS} = 0, f = 1\text{kHz}$ | 2.0 | 6.0 | | mS |
| | $ Y_{fs} $ (2) $V_{DS} = 5\text{V}, V_{GS} = 0, f = 100\text{MHz}$ | 2.0 | 6.0 | | mS |
| Input Capacitance | C_{iss} $V_{DS} = 5\text{V}, V_{GS} = 0, f = 1\text{MHz}$ | | 4.0 | | pF |
| Reverse Transfer Capacitance | C_{res} $V_{DS} = 5\text{V}, V_{GS} = 0, f = 1\text{MHz}$ | | 0.04 | 0.15 | pF |
| Output Capacitance | C_{oss} $V_{DS} = 5\text{V}, V_{GS} = 0, f = 1\text{MHz}$ | | 4.0 | | pF |
| Power Gain | PG $V_{DS} = 5\text{V}, V_{GS} = 0, f = 100\text{MHz}$ | | 21 | | dB |
| Noise Figure | NF | | 3.5 | 6.0 | dB |

* : The 2SK212 is classified by I_{DSS} as follows : (unit : mA)

| | | | | | | | |
|-------|-----|-------|-----|-------|-----|-------|------|
| 0.6 C | 1.5 | 1.2 D | 3.0 | 2.5 E | 6.0 | 5.0 F | 12.0 |
|-------|-----|-------|-----|-------|-----|-------|------|

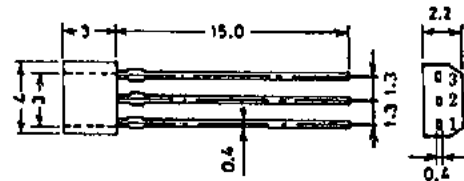
PG, NF Specified Test Circuit



L1 : 1mmφ tin-plated wire, air core 10mmφ 4.5T
 L2 : 1mmφ tin-plated wire, air core 10mmφ 3.5T

Package Dimensions 2040A

(unit : mm)



- 1: Drain
- 2: Source
- 3: Gate

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