

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK882

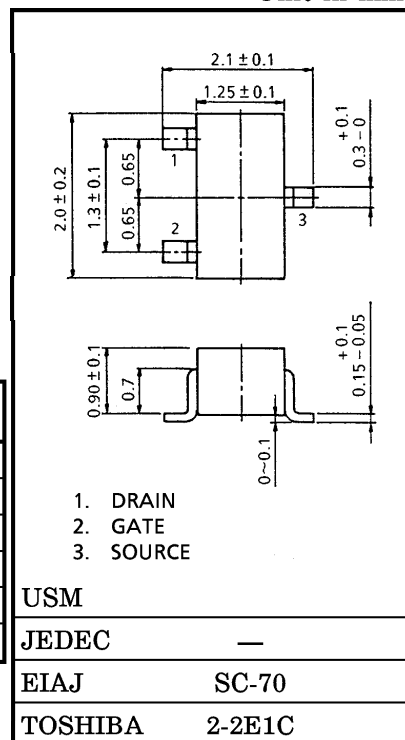
FM TUNER, VHF RF AMPLIFIER APPLICATIONS

Unit in mm

- Low Reverse Transfer Capacitance : $C_{rss}=0.025\text{pF}$ (Typ.)
- Low Noise Figure : $NF=1.7\text{dB}$ (Typ.)
- High Power Gain : $G_{ps}=28\text{dB}$ (Typ.)
- Recommend Operation Voltage : $5\sim 15\text{V}$

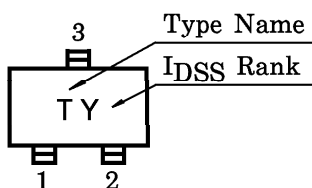
MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|-------------------------|-----------|---------------|------------------|
| Drain-Source Voltage | V_{DS} | 20 | V |
| Gate-Source Voltage | V_{GS} | ± 5 | V |
| Drain Current | I_D | 30 | mA |
| Drain Power Dissipation | P_D | 100 | mW |
| Channel Temperature | T_{ch} | 125 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | $-55\sim 125$ | $^\circ\text{C}$ |



Weight : 0.006g

Marking



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

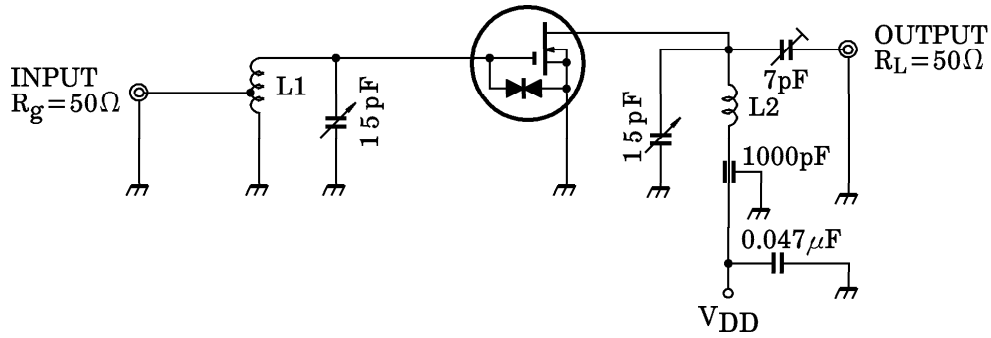
| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|------------------------------|----------------------|--|------|-------|----------|------|
| Gate Leakage Current | I_{GSS} | $V_{DS}=0, V_{GS}=\pm 5\text{V}$ | — | — | ± 50 | nA |
| Drain-Source Voltage | V_{DSX} | $V_{GS}=-4\text{V}, I_D=100\mu\text{A}$ | 20 | — | — | V |
| Drain Current | I_{DSS} (Note) | $V_{DS}=10\text{V}, V_{GS}=0$ | 3 | — | 14 | mA |
| Gate-Source Cut-off Voltage | $V_{GS}(\text{OFF})$ | $V_{DS}=10\text{V}, I_D=100\mu\text{A}$ | — | — | -2.5 | V |
| Forward Transfer Admittance | $ Y_{fs} $ | $V_{DS}=10\text{V}, V_{GS}=0, f=1\text{kHz}$ | — | 10 | — | mS |
| Input Capacitance | C_{iss} | $V_{DS}=10\text{V}, V_{GS}=0, f=1\text{MHz}$ | — | 3.0 | 4.3 | pF |
| Reverse Transfer Capacitance | C_{rss} | | — | 0.025 | 0.04 | pF |
| Power Gain | G_{ps} | $V_{DD}=10\text{V}, f=100\text{MHz}$ (Fig.1) | 20 | 28 | — | dB |
| Noise Figure | NF | | — | 1.7 | 3.0 | dB |

Note : I_{DSS} Classification Y : 3.0~7.0mA GR : 6.0~14.0mA

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Fig.1. G_{ps} , NF TEST CIRCUIT



- L1 : 1.0mm ϕ SILVER PLATED COPPER WIRE
4.0T, 8mm ϕ ID
TAP at 1.0T FROM COIL END
- L2 : 1.0mm ϕ SILVER PLATED COPPER WIRE
3.0T, 8mm ϕ ID, 10mm LENGTH

