

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N-CHANNEL MOS TYPE

2SK1771

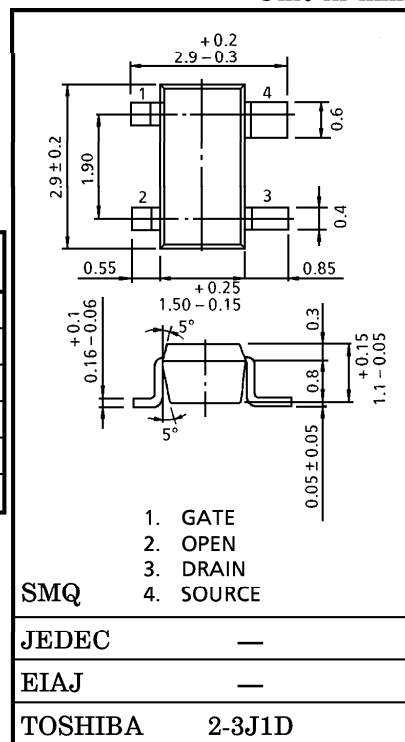
FM TUNER, VHF RF AMPLIFIER APPLICATIONS

Unit in mm

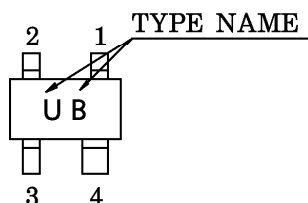
- Superior Inter Modulation Performance.
- Low Noise Figure : NF=1.0dB (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---------------------------|------------------|---------|------|
| Drain-Source Voltage | V _{DS} | 12.5 | V |
| Gate-Source Voltage | V _{GS} | ±8 | V |
| Drain Current | I _D | 30 | mA |
| Drain Power Dissipation | P _D | 150 | mW |
| Chanel Temperature | T _{ch} | 125 | °C |
| Storage Temperature Range | T _{stg} | -55~125 | °C |



Marking



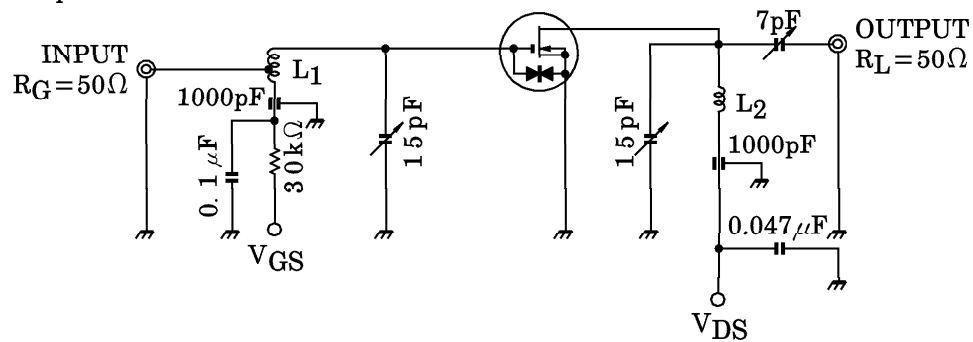
ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|------------------------------|----------------------|---|------|------|------|------|
| Gate Leakage Current | I _{GSS} | V _{DS} =0, V _{GS} =±6V | — | — | ±50 | nA |
| Drain-Source Voltage | V(BR)DSX | V _{GS} =-4V, I _D =100μA | 12.5 | — | — | V |
| Drain Current | I _{DSS} | V _{DS} =8V, V _{GS} =0 | 0 | — | 0.1 | mA |
| Gate-Source Cut-off Voltage | V _{GS(OFF)} | V _{DS} =8V, I _D =100μA | 0.5 | 1.0 | 1.5 | V |
| Forward Transfer Admittance | Y _{fs} | V _{DS} =8V, I _D =10mA, f=1kHz | — | 15 | 20 | mS |
| Input Capacitance | C _{iss} | V _{DS} =8V, I _D =10mA, f=1MHz | 2.9 | 3.5 | 4.1 | pF |
| Reverse Transfer Capacitance | C _{rss} | | — | 0.3 | 0.8 | |
| Power Gain | G _{ps} | V _{DS} =8V, I _D =10mA, f=100MHz | 18 | 23 | 28 | dB |
| Noise Figure | NF | | — | 1.0 | 2.2 | |

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Fig.1 100MHz G_{ps} , NF Test Circuit



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

