

TOSHIBA Field Effect Transistor Silicon N-Channel MOS Type

# 2SK1771

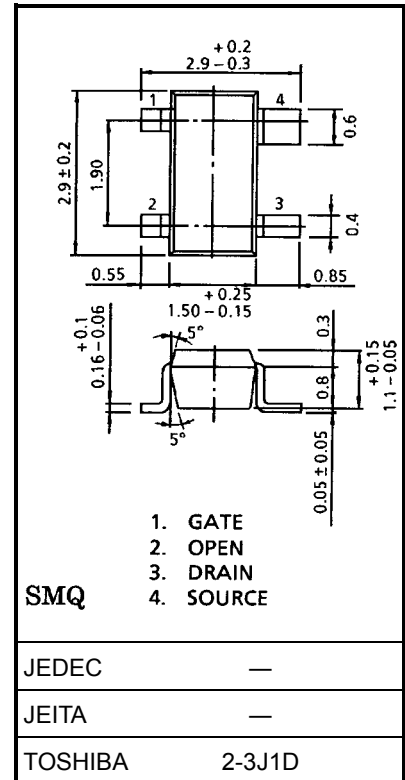
FM Tuner, VHF RF Amplifier Applications

Unit: mm

- Superior inter modulation performance.
- Low noise figure: NF = 1.0dB (typ.)

### Maximum Ratings (Ta = 25°C)

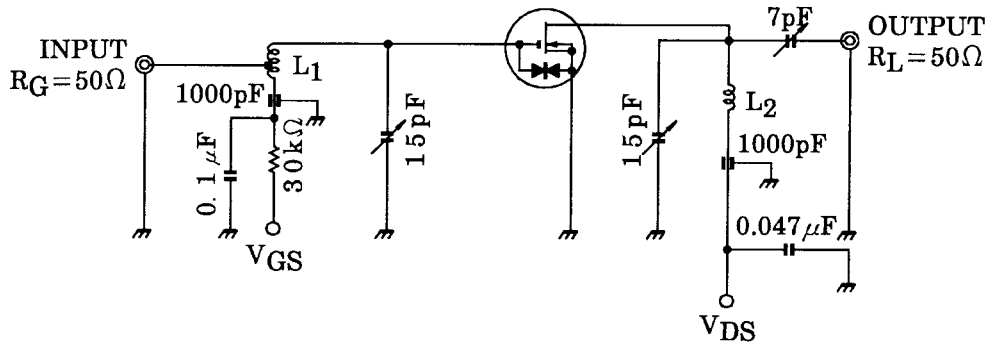
Characteristics	Symbol	Rating	Unit
Drain-source voltage	V <sub>DS</sub>	12.5	V
Gate-source voltage	V <sub>GS</sub>	±8	V
Drain current	I <sub>D</sub>	30	mA
Drain power dissipation	P <sub>D</sub>	150	mW
Channel temperature	T <sub>ch</sub>	125	°C
Storage temperature range	T <sub>stg</sub>	-55~125	°C



Weight: 0.013 g (typ.)

### Electrical Characteristics (Ta = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Gate leakage current	I <sub>GSS</sub>	V <sub>DS</sub> = 0, V <sub>GS</sub> = ±6 V	—	—	±50	nA
Drain-source voltage	V <sub>(BR)DSX</sub>	V <sub>GS</sub> = -4 V, I <sub>D</sub> = 100 μA	12.5	—	—	V
Drain current	I <sub>DSS</sub>	V <sub>DS</sub> = 8 V, V <sub>GS</sub> = 0	0	—	0.1	mA
Gate-source cut-off voltage	V <sub>GS(OFF)</sub>	V <sub>DS</sub> = 8 V, I <sub>D</sub> = 100 μA	0.5	1.0	1.5	V
Forward transfer admittance	Y <sub>fs</sub>	V <sub>DS</sub> = 8 V, I <sub>D</sub> = 10 mA, f = 1 kHz	—	15	20	mS
Input capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 8 V, I <sub>D</sub> = 10 mA, f = 1 MHz	2.9	3.5	4.1	pF
Reverse transfer capacitance	C <sub>rss</sub>		—	0.3	0.8	pF
Power gain	G <sub>ps</sub>	V <sub>DS</sub> = 8 V, I <sub>D</sub> = 10 mA, f = 100 MHz	18	23	28	dB
Noise figure	NF		—	1.0	2.2	dB

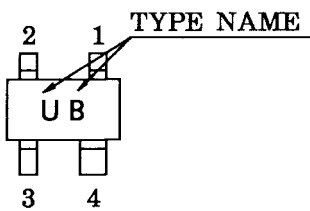


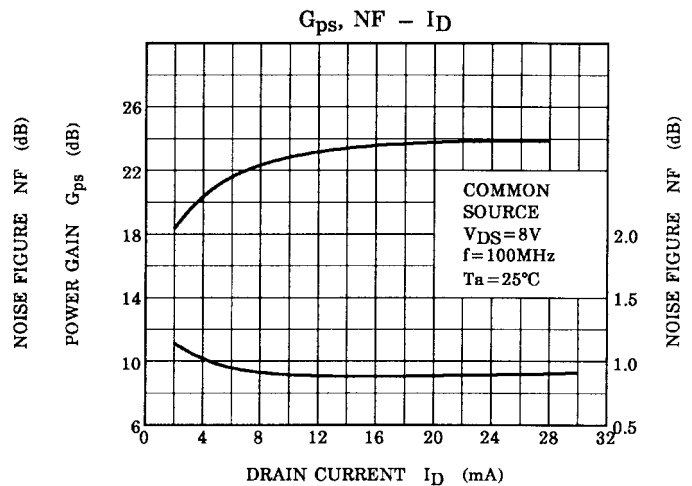
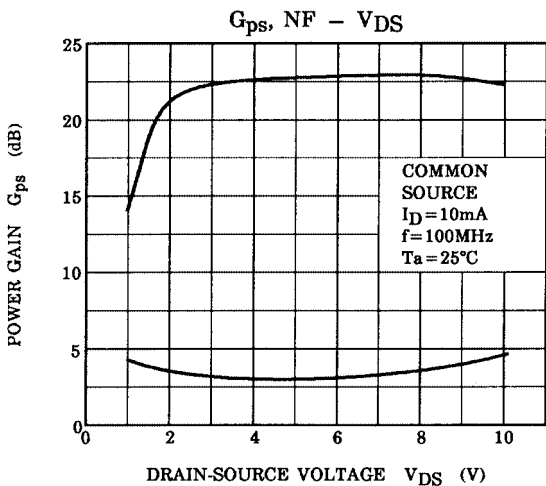
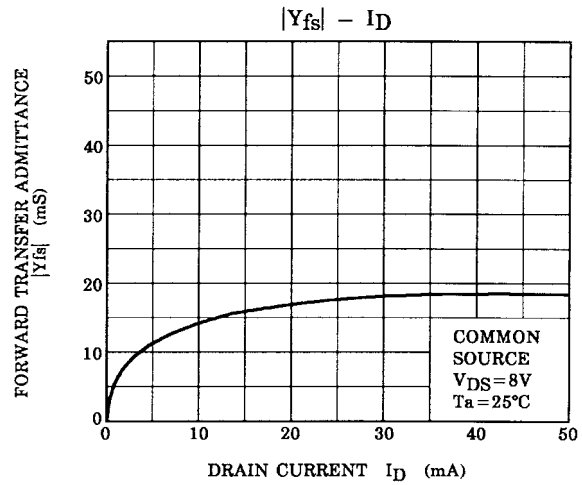
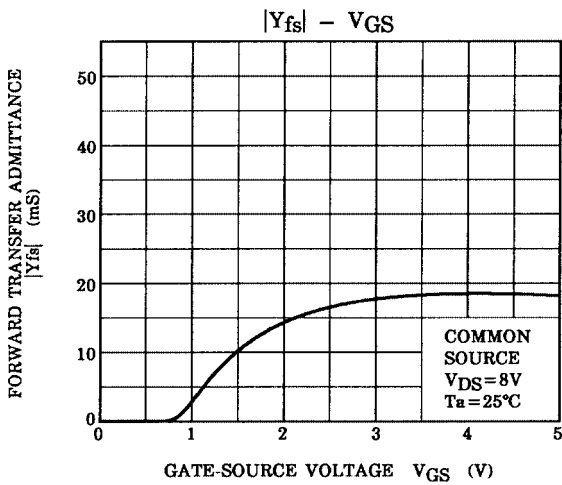
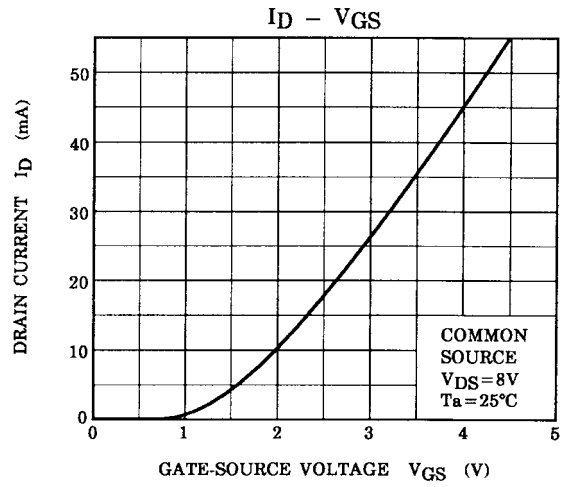
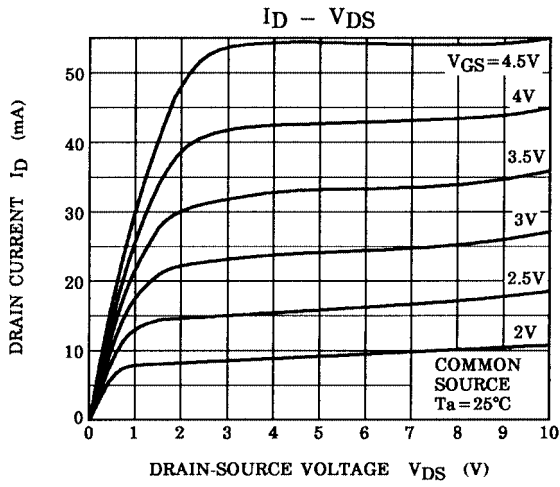
L1: 1.0 mmφ silver plated copper wire 4.0 T, 8 mmφ ID TAP at 1.0 T from coil end

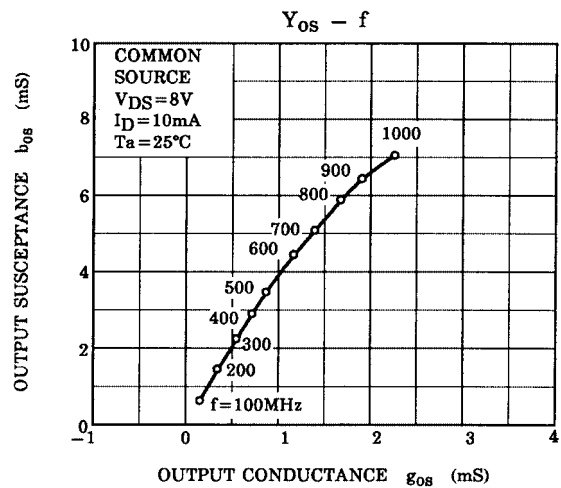
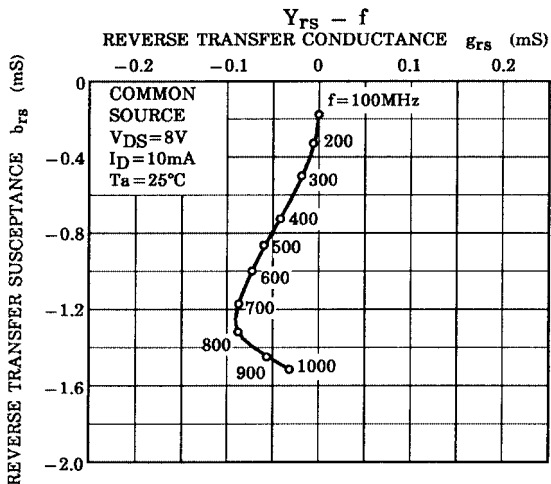
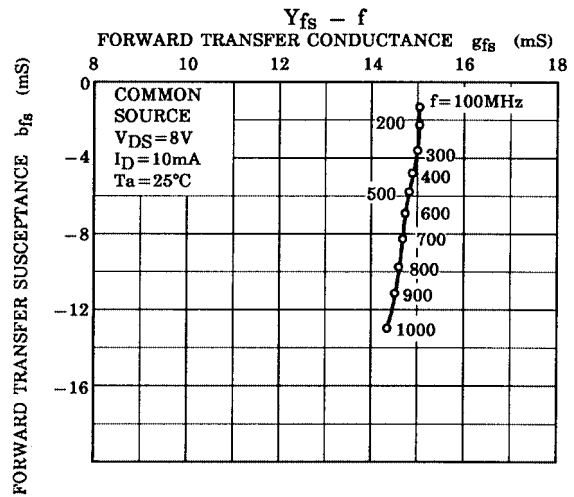
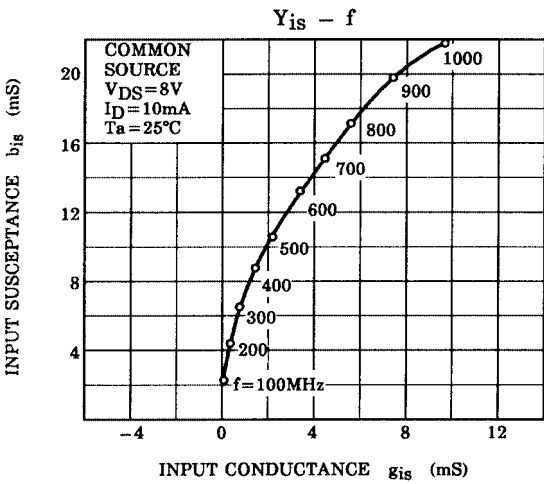
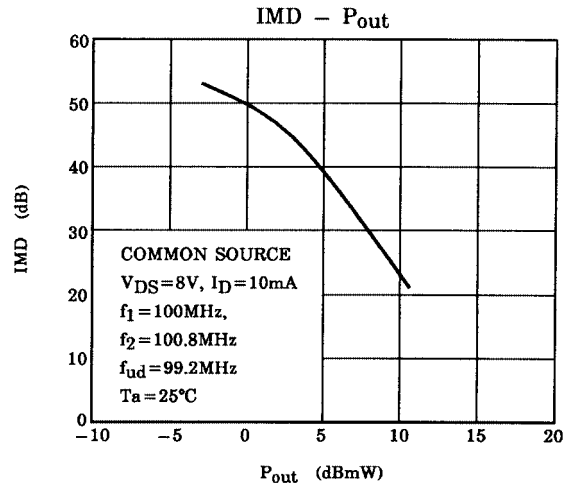
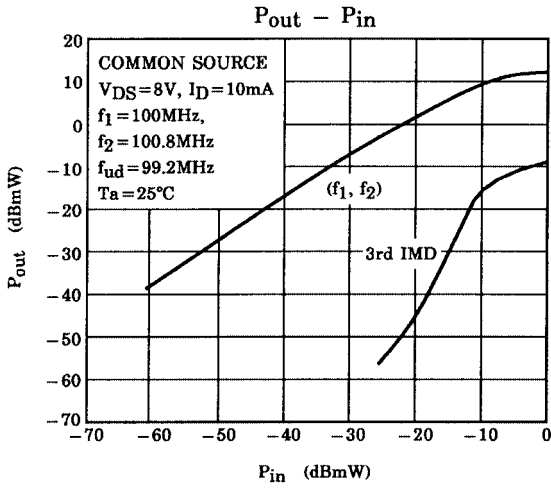
L2: 1.0 mmφ silver plated copper wire 3.0 T, 8 mmφ ID, 10 mm length

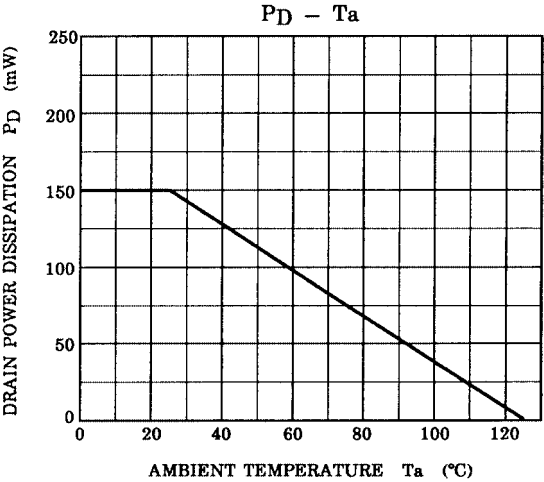
**Figure 1 100 MHz G<sub>ps</sub>, NF Test Circuit**

**Marking**









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