

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N-CHANNEL MOS TYPE

2SK1771

FM TUNER, VHF RF AMPLIFIER APPLICATIONS

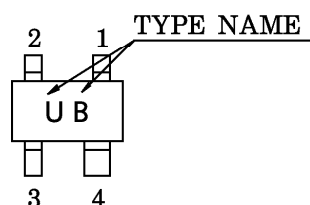
Unit in mm

- 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



1. GATE	
2. OPEN	
3. DRAIN	
4. SOURCE	
SMQ	
JEDEC	—
EIAJ	—
TOSHIBA	2-3J1D

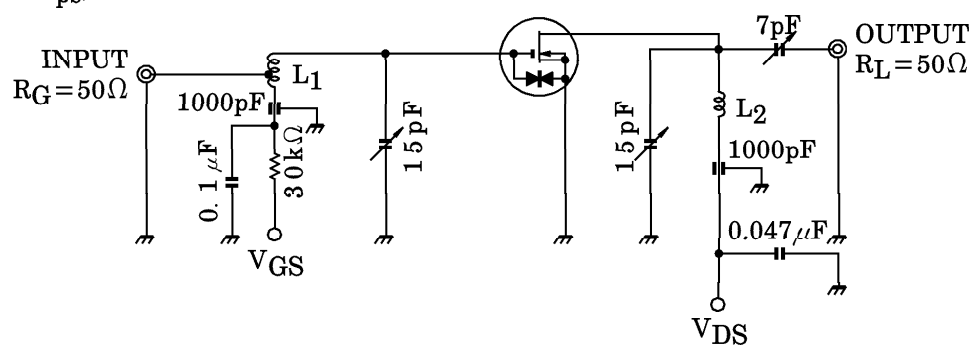
Weight : 0.013g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I_{GSS}	$V_{DS}=0, V_{GS}=\pm 6V$	—	—	± 50	nA
Drain-Source Voltage	$V_{(BR)DSX}$	$V_{GS}=-4V, I_D=100\mu A$	12.5	—	—	V
Drain Current	I_{DSS}	$V_{DS}=8V, V_{GS}=0$	0	—	0.1	mA
Gate-Source Cut-off Voltage	$V_{GS(OFF)}$	$V_{DS}=8V, I_D=100\mu A$	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 : 1.0mm 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

