

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N-CHANNEL MOS TYPE

2SK1771

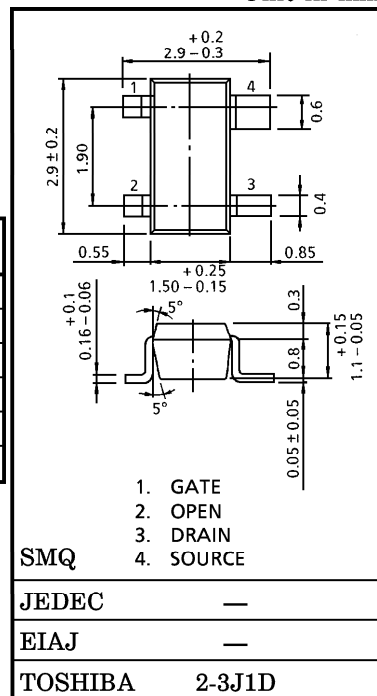
FM TUNER, VHF RF AMPLIFIER APPLICATIONS

Unit in mm

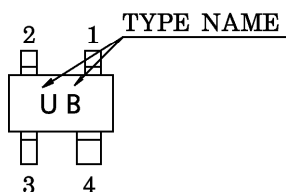
- Superior Inter Modulation Performance.
- Low Noise Figure : NF=1.0dB (Typ.)

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



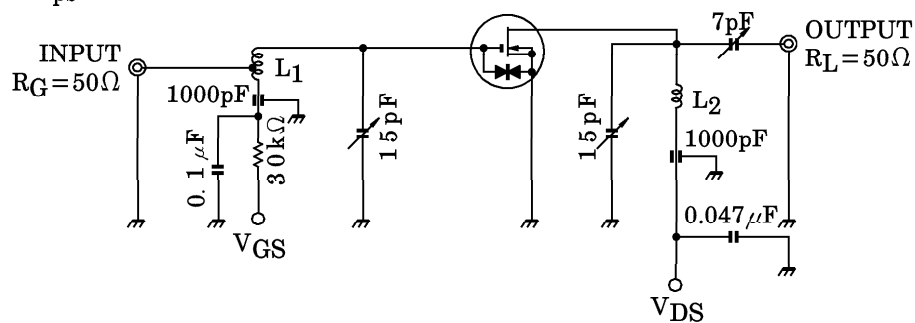
Weight : 0.013g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	I _{GSS}	V _{DS} =0, V _{GS} =±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,	18	23	28	dB
Noise Figure	NF	f=100MHz	—	1.0	2.2	

961001EAA2

- TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.
- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.
- The information contained herein is subject to change without notice.

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

- L_1 : 1.0mm ϕ SILVER PLATED COPPER WIRE
 4.0T, 8mm ϕ ID
 TAP at 1.0T FROM COIL END
 L_2 : 1.0mm ϕ SILVER PLATED COPPER WIRE
 3.0T, 8mm ϕ ID, 10mm LENGTH

