

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL MOS TYPE

2SK882

FM TUNER, VHF RF AMPLIFIER APPLICATIONS

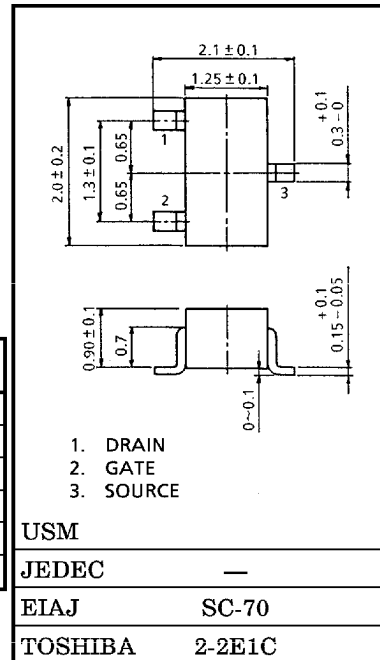
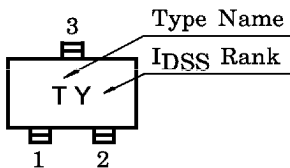
Unit in mm

- 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}	$-55\sim 125$	$^\circ\text{C}$

Marking

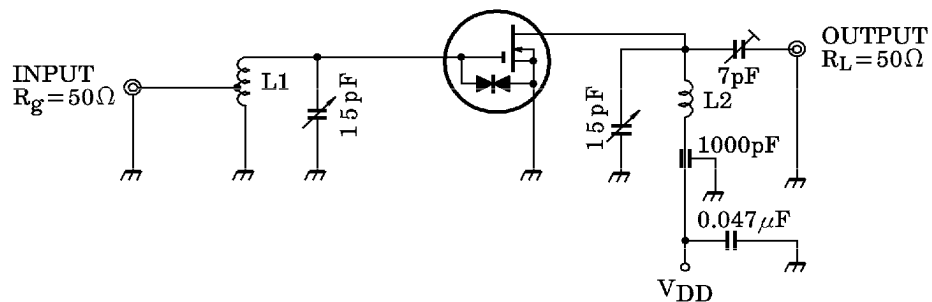
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

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	$I_{DSS}(\text{Note})$	$V_{DS}=10\text{V}, V_{GS}=0$	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 : $3.0\sim 7.0\text{mA}$ GR : $6.0\sim 14.0\text{mA}$

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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

