

TOSHIBA

3SK127

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL DUAL GATE MOS TYPE

3SK127

TV TUNER, UHF RF AMPLIFIER APPLICATIONS

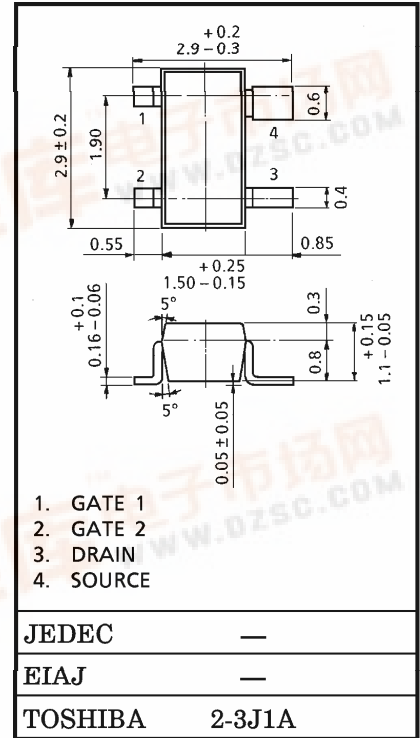
TV TUNER, UHF MIXER APPLICATIONS

Unit in mm

- Superior Cross Modulation Performance.
- Low Reverse Transfer Capacitance : $C_{RSS} = 0.03\text{pF (Max.)}$
- Low Noise Figure : $NF = 3.2\text{dB (Typ.)}$

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DS}	15	V
Gate 1 - Source Voltage	V_{G1S}	± 8	V
Gate 2 - Source Voltage	V_{G2S}	± 8	V
Drain Current	I_D	30	mA
Drain Power Dissipation	P_D	150	mW
Channel Temperature	T_{ch}	125	°C
Storage Temperature Range	T_{stg}	-55~125	°C



Weight : 0.013g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate 1 Leakage Current	I_{G1SS}	$V_{DS} = 0V, V_{G1S} = \pm 6V, V_{G2S} = 0V$	—	—	± 50	nA
Gate 2 Leakage Current	I_{G2SS}	$V_{DS} = 0V, V_{G1S} = 0V, V_{G2S} = \pm 6V$	—	—	± 50	nA
Drain-Source Voltage	$V(BR)_{DSX}$	$V_{G1S} = -4V, V_{G2S} = -4V, I_D = 100\mu A$	15	—	—	V
Drain Current	I_{DSS} (Note)	$V_{DS} = 6V, V_{G1S} = 0V, V_{G2S} = 3V$	0	—	6	mA
Gate 1-Source Cut-off Voltage	$V_{G1S(OFF)}$	$V_{DS} = 6V, V_{G2S} = 3V, I_D = 100\mu A$	-1.5	—	1.0	V
Gate 2-Source Cut-off Voltage	$V_{G2S(OFF)}$	$V_{DS} = 6V, V_{G1S} = 3V, I_D = 100\mu A$	-1.0	—	1.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 6V, V_{G2S} = 3V, I_D = 10mA, f = 1kHz$	—	17	—	mS
Input Capacitance	C_{iss}	$V_{DS} = 6V, V_{G2S} = 3V, I_D = 10mA, f = 1MHz$	—	2.0	—	pF
Reverse Transfer Capacitance	C_{rss}		—	—	0.03	pF
Power Gain	G_{ps}	$V_{DS} = 6V, V_{G2S} = 3V, I_D = 10mA, f = 800MHz$ (Fig.1)	—	16	—	dB
Noise Figure	NF		—	3.2	—	dB

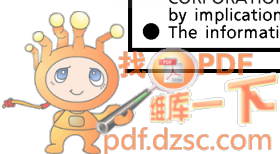
Note : I_{DSS} Classification O : 0~2mA, Y : 1~6mA

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Marking

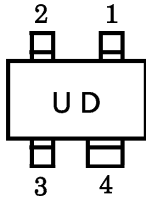
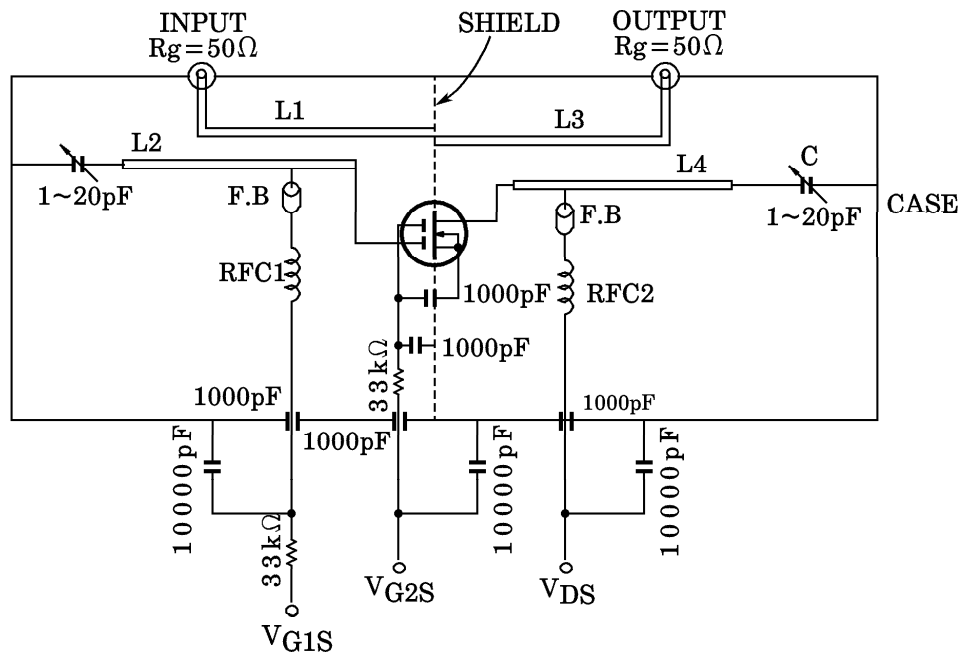


Fig. 1 800MHz Gps, NF TEST CIRCUIT



- L1~L4 : ϕ 0.8mm SILVER PLATED COPPER WIRE
- C : AIR TRIMMER TTA25A200A (MURATA MFG, Co., Ltd.)
- RFC 1 : ϕ 0.35mm COPPER WIRE 3mm ID, 7T
- RFC 2 : ϕ 0.35mm COPPER WIRE 3mm ID, 10T

