

TOSHIBA FIELD EFFECT TRANSISTOR SILICON N CHANNEL DUAL GATE MOS TYPE

3SK259

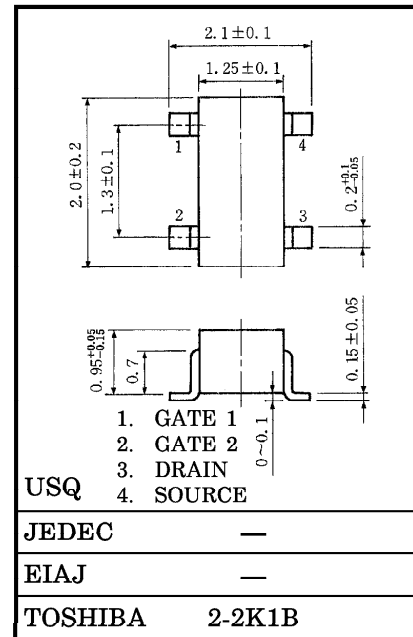
TV TUNER, UHF RF AMPLIFIER APPLICATIONS.
TV TUNER VHF WIDE BAND RF AMPLIFIER APPLICATIONS.

Unit in mm

- Superior Cross Modulation Performance.
- Low Reverse Transfer Capacitance : $C_{RSS}=0.025\text{pF}$ (Typ.)
- Low Noise Figure : $NF=2.6\text{dB}$ (Typ.)

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DS}	13.5	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	100	mW
Chanel Temperature	T_{ch}	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	$-55\sim 125$	$^\circ\text{C}$

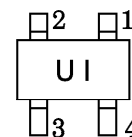


Weight : 0.006g

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

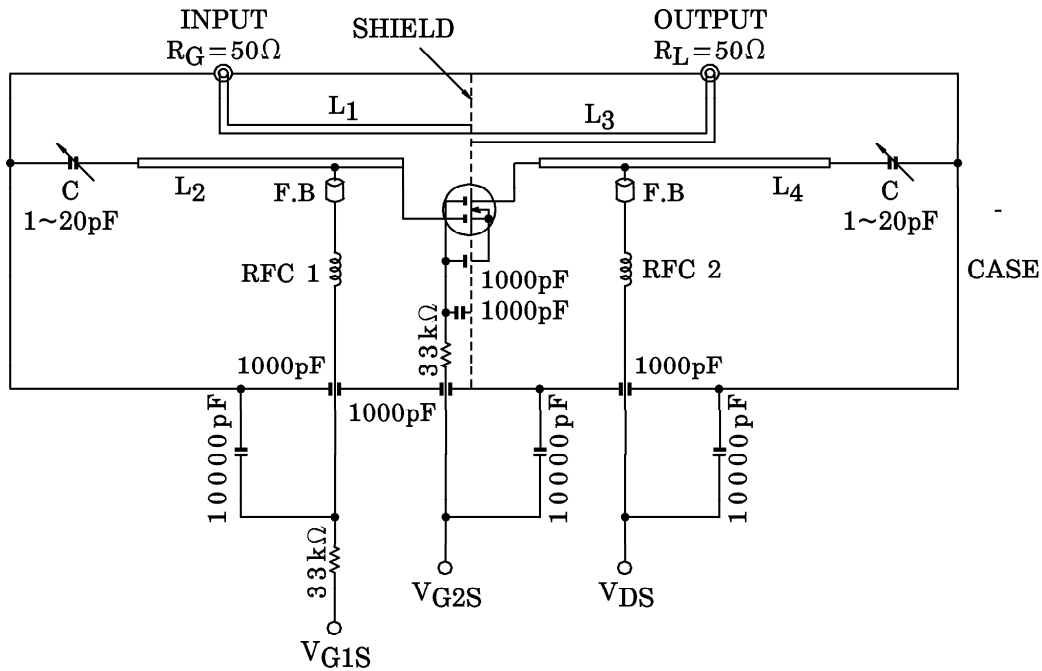
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate 1 Leakage Current	I_{G1SS}	$V_{DS}=0, V_{G1S}=\pm 6V, V_{G2S}=0$	—	—	± 50	nA
Gate 2 Leakage Current	I_{G2SS}	$V_{DS}=0, V_{G1S}=0, V_{G2S}=\pm 6V$	—	—	± 50	nA
Drain-Source Voltage	$V_{(BR)DSX}$	$V_{G1S}=-4V, V_{G2S}=-4V$ $I_D=100\mu A$	13.5	—	—	V
Drain Current	I_{DSS}	$V_{DS}=6V, V_{G1S}=0, V_{G2S}=3V$	0	—	2	mA
Gate 1-Source Cut-off Voltage	$V_{G1S(OFF)}$	$V_{DS}=6V, V_{G2S}=3V, I_D=100\mu A$	-1.5	—	1	V
Gate 2-Source Cut-off Voltage	$V_{G2S(OFF)}$	$V_{DS}=6V, V_{G1S}=3V, I_D=100\mu A$	-1.0	—	1	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS}=6V, V_{G2S}=3V$ $I_D=10\text{mA}, f=1\text{kHz}$	—	21	—	mS
Input Capacitance	C_{iss}	$V_{DS}=6V, V_{G2S}=3V$	1.9	2.7	3.5	pF
Reverse Transfer Capacitance	C_{rss}	$I_D=10\text{mA}, f=1\text{MHz}$	—	0.025	0.04	pF
Power Gain	G_{ps}	$V_{DS}=6V, V_{G2S}=3V$	15	19	—	dB
Noise Figure	NF	$I_D=10\text{mA}, f=800\text{MHz}$ (Fig.1)	—	2.6	4.0	dB

Marking



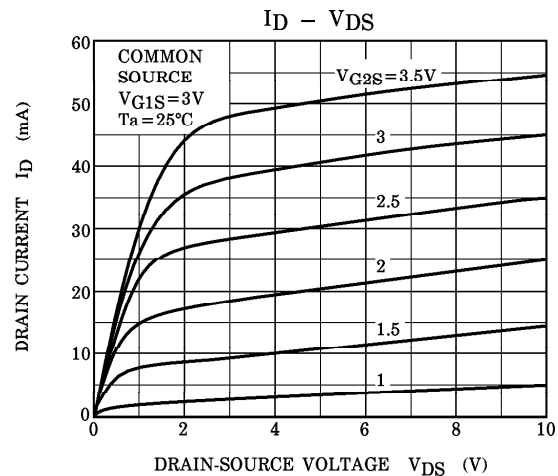
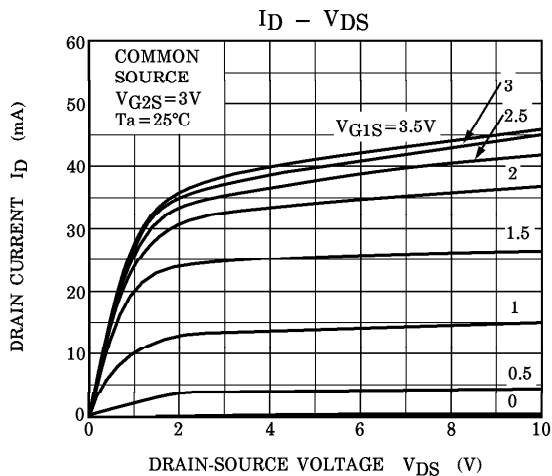
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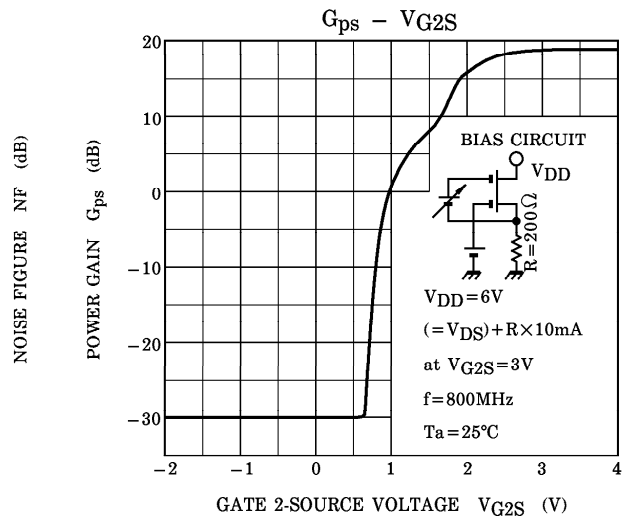
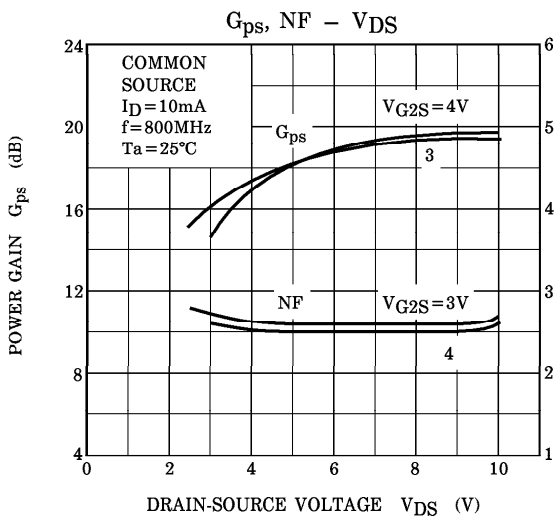
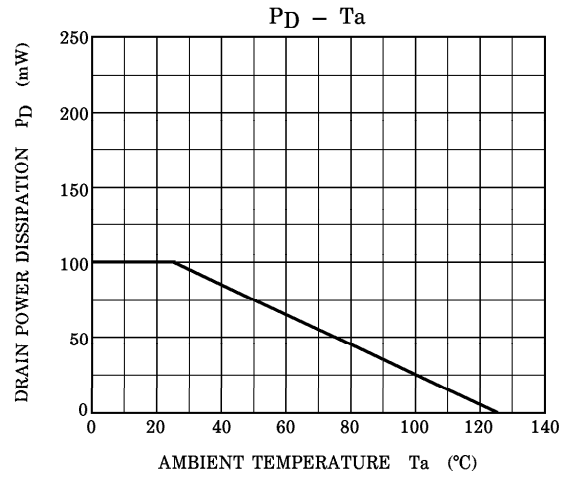
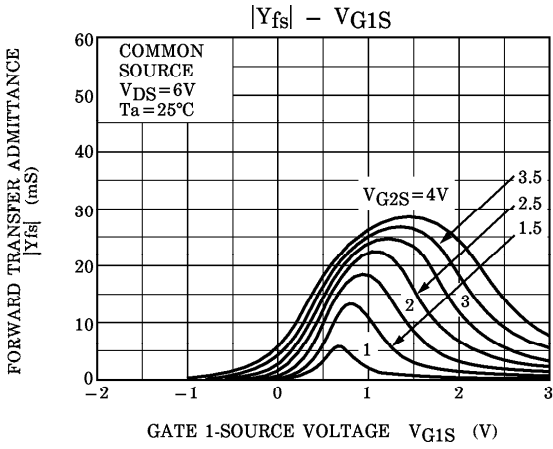
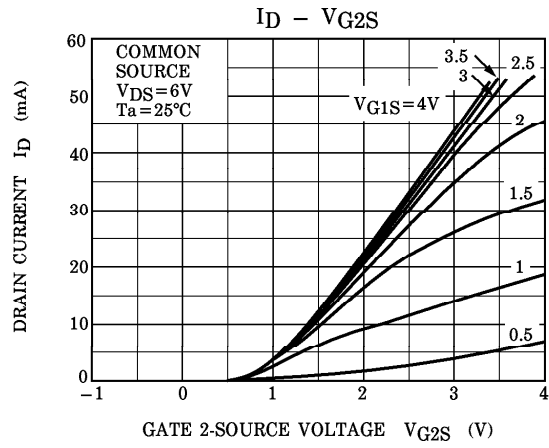
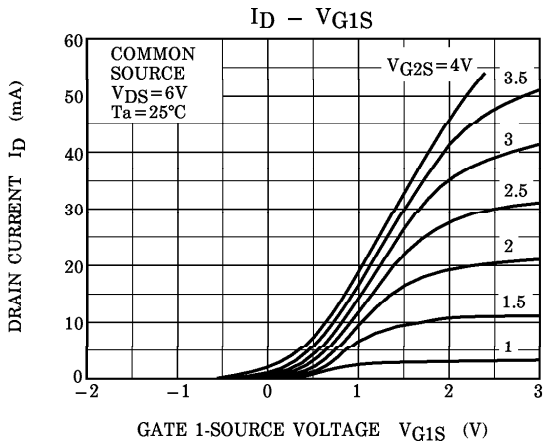
L₁~L₄ : φ0.8mm SILVER PLATED COPPER WIRE
 C : AIR TRIMMER TTA25A200A (MURATA MFG. Co., LTD.)
 RFC 1 : φ0.35mm COPPER WIRE 3mm ID, 7T
 RFC 2 : φ0.35mm COPPER WIRE 3mm ID, 10T

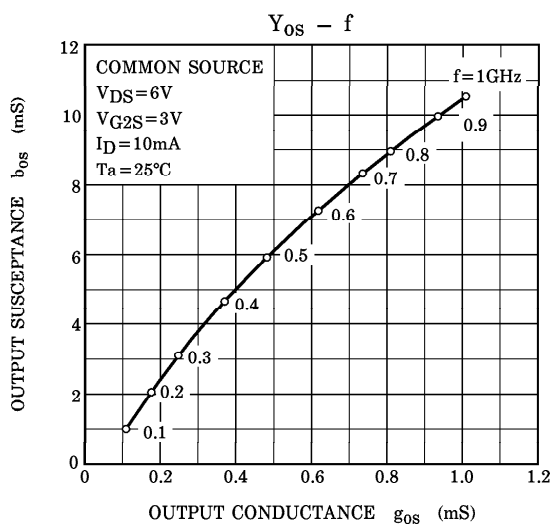
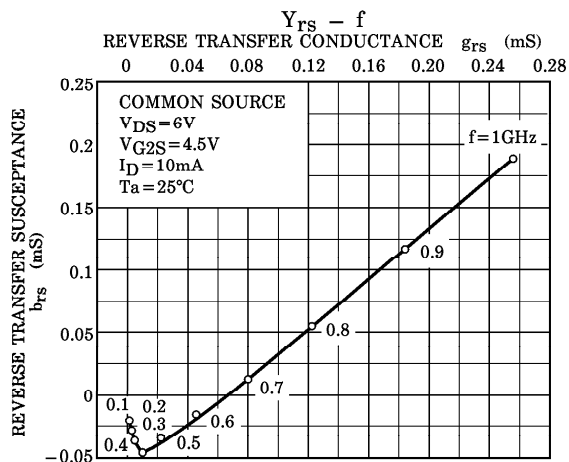
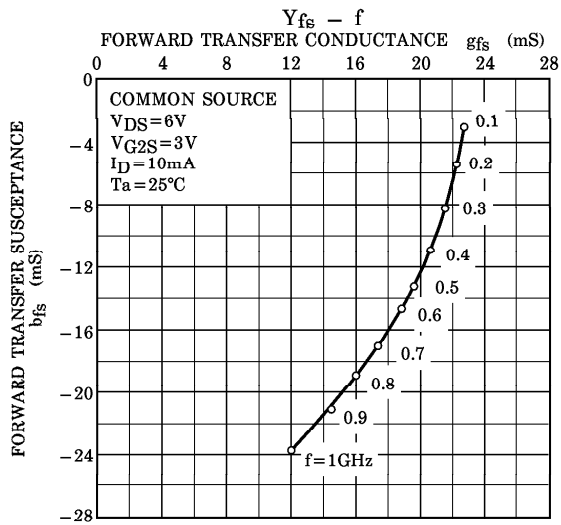
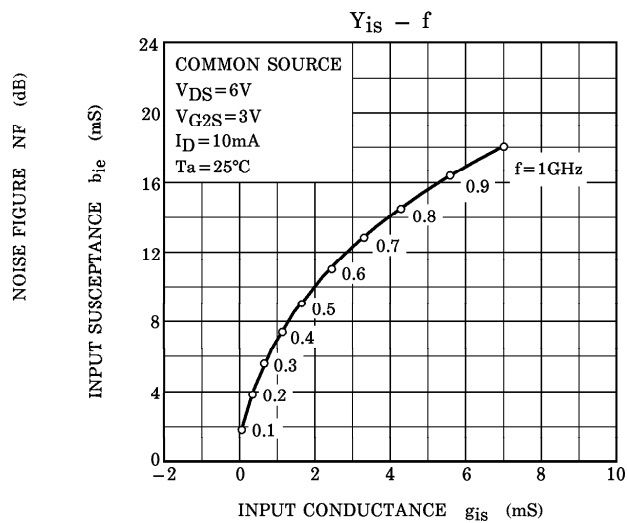
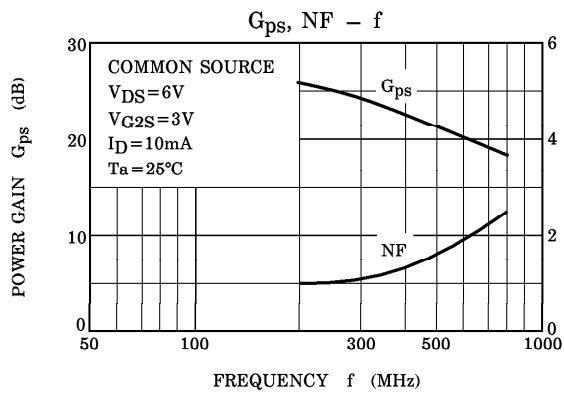
Fig.1 800MHz G_{ps}, NF TEST CIRCUIT



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