

RF AMP. FOR UHF TV TUNER
N-CHANNEL SILICON DUAL GATE MOS FIELD-EFFECT TRANSISTOR
4 PINS MINI MOLD

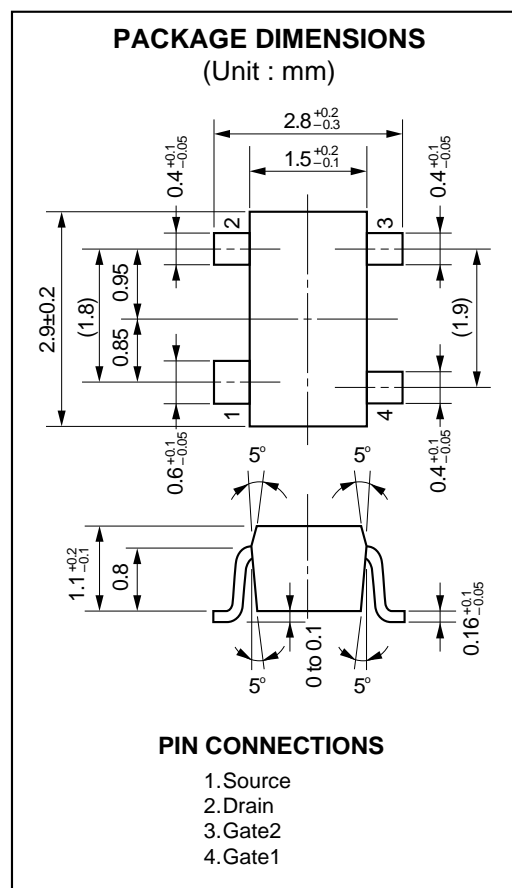
FEATURES

- High Power Gain : $G_{ps} = 23.0$ dB TYP. (@ = 900 MHz)
- Low Noise Figure : $NF = 2.4$ dB TYP. (@ = 900 MHz)
- Suitable for use as RF amplifier in UHF TV tuner.
- Automatically Mounting : Embossed Type Taping
- Surface Mount Package : 4 Pins Mini Mold (EIAJ: SC-61)

ABSOLUTE MAXIMUM RATINGS (TA = 25 °C)

Drain to Source Voltage	V_{DSX}	18	V
Gate1 to Source Voltage	V_{G1S}	± 8 (± 10)*1	V
Gate2 to Source Voltage	V_{G2S}	± 8 (± 10)*1	V
Gate1 to Drain Voltage	V_{G1D}	18	V
Gate2 to Drain Voltage	V_{G2D}	18	V
Drain Current	I_D	25	mA
Total Power Dissipation	P_D	200	mW
Channel Temperature	T_{ch}	125	°C
Storage Temperature	T_{stg}	-55 to +125	°C

*1 : $R_L \geq 10$ k Ω

**PRECAUTION:**

Avoid high static voltages or electric fields so that this device would not suffer from any damage due to those voltage fields.

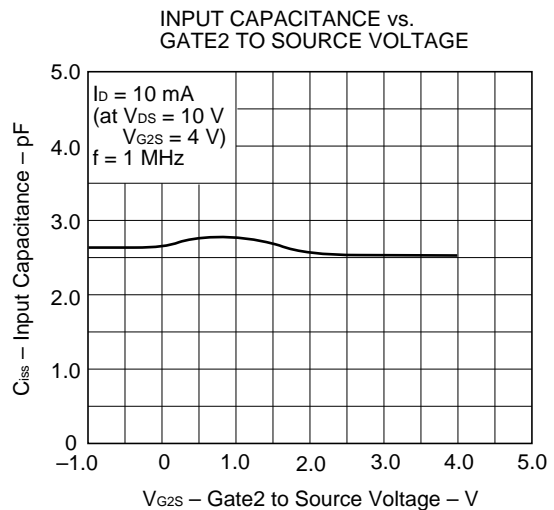
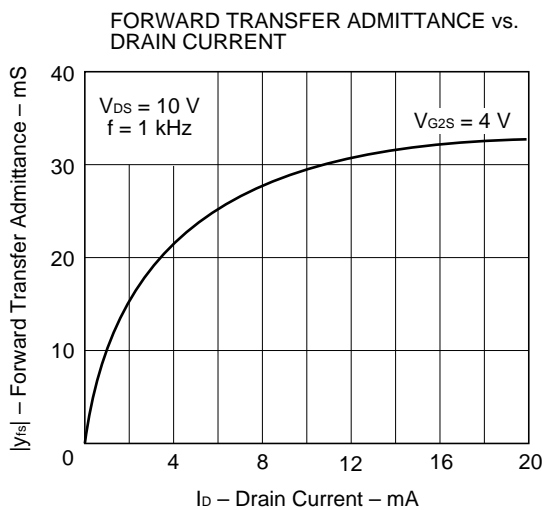
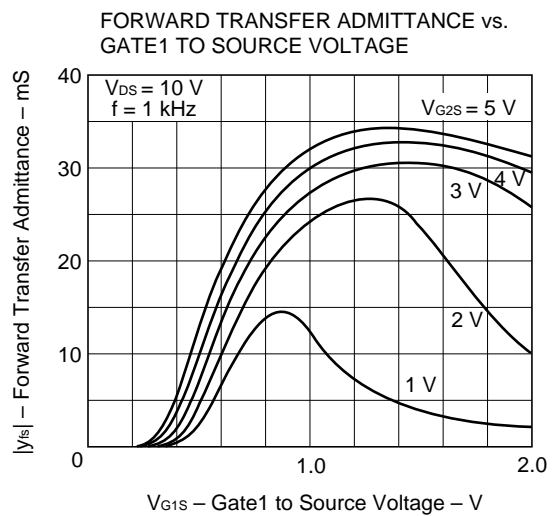
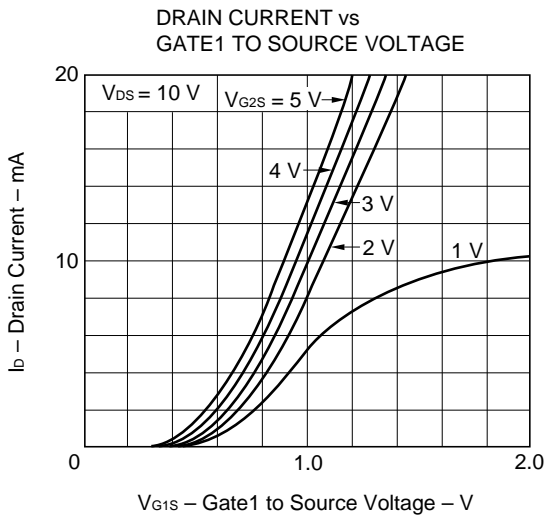
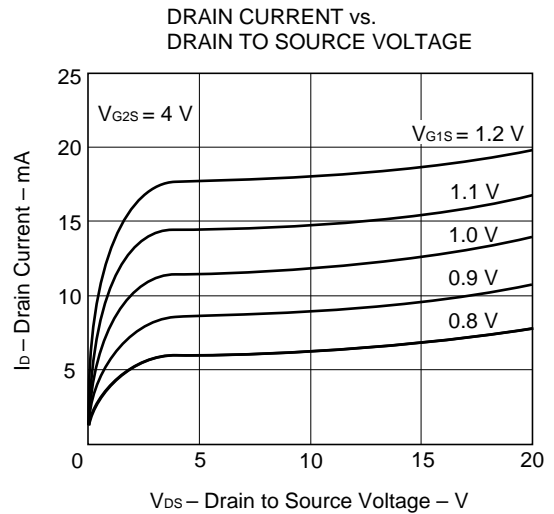
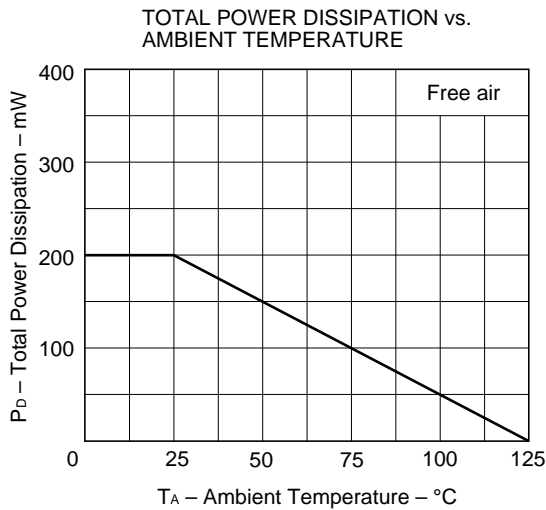
ELECTRICAL CHARACTERISTICS (T_A = 25 °C)

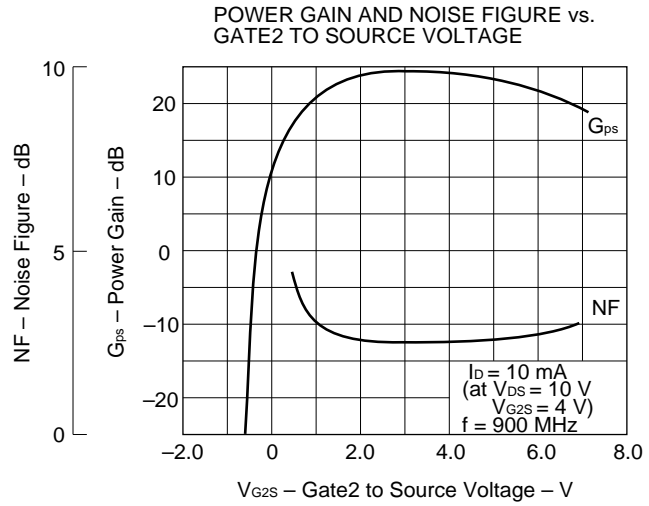
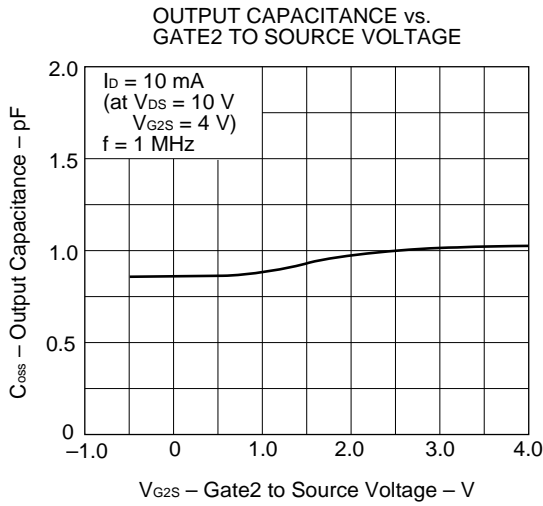
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Drain to Source Breakdown Voltage	BV _{DSX}	18			V	V _{G1S} = V _{G2S} = -2 V, I _D = 10 μA
Drain Current	I _{DSX}	0.4		8.0	mA	V _{DS} = 10 V, V _{G2S} = 4 V, V _{G1S} = 0.5 V
Gate1 to Source Cutoff Voltage	V _{G1S(off)}			-2.0	V	V _{DS} = 10 V, V _{G2S} = 4 V, I _D = 10 μA
Gate2 to Source Cutoff Voltage	V _{G2S(off)}			-0.7	V	V _{DS} = 10 V, V _{G1S} = 4 V, I _D = 10 μA
Gate1 Reverse Current	I _{G1SS}			±20	nA	V _{DS} = V _{G2S} = 0, V _{G1S} = ±8 V
Gate2 Reverse Current	I _{G2SS}			±20	nA	V _{DS} = V _{G1S} = 0, V _{G2S} = ±8 V
Forward Transfer Admittance	y _{fs}	25.0	29.0	35.0	mS	V _{DS} = 10 V, V _{G2S} = 4 V, I _D = 10 mA f = 1 kHz
Input Capacitance	C _{iss}	1.5	2.5	3.5	pF	V _{DS} = 10 V, V _{G2S} = 4 V, I _D = 10 mA f = 1 MHz
Output Capacitance	C _{oss}	0.6	1.1	1.6	pF	
Reverse Transfer Capacitance	C _{rss}		0.02	0.03	pF	
Power Gain	G _{ps}	20.0	23.0		dB	V _{DS} = 10 V, V _{G2S} = 4 V, I _D = 10 mA
Noise Figure	NF		2.4	3.5	dB	f = 900 MHz

I_{DSX} Classification

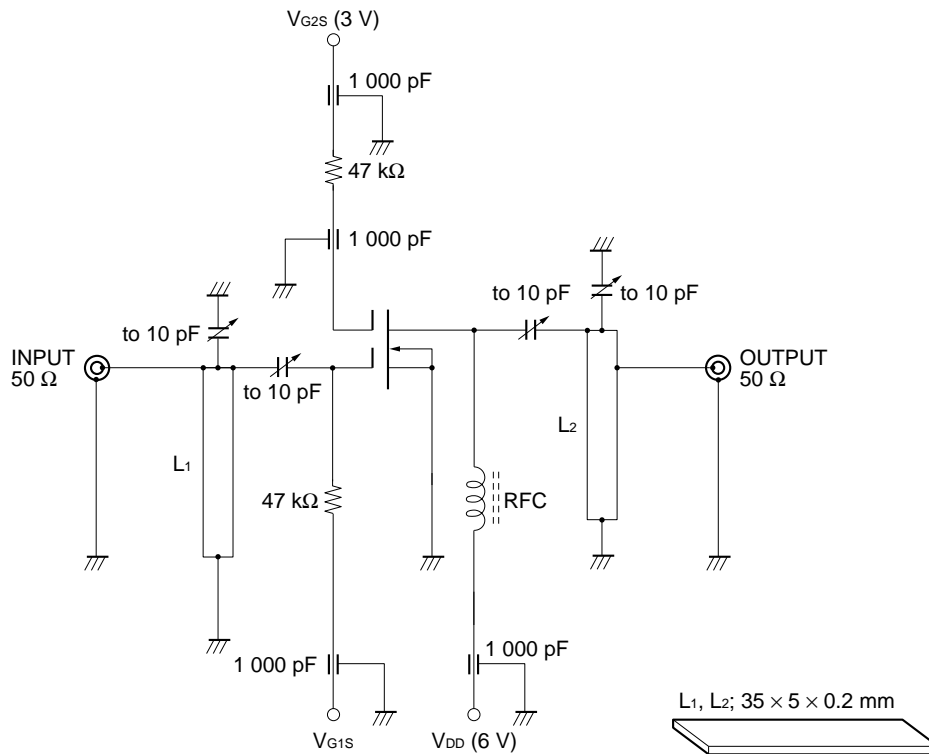
Rank	U55/UEE	U56/UEF
Marking	U55	U56
I _{DSX} (mA)	0.4 to 5.0	3.0 to 8.0

TYPICAL CHARACTERISTICS (T_A = 25 °C)





900 MHz G_{ps} AND NF TEST CIRCUIT



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Anti-radioactive design is not implemented in this product.