



**ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25 °C)**

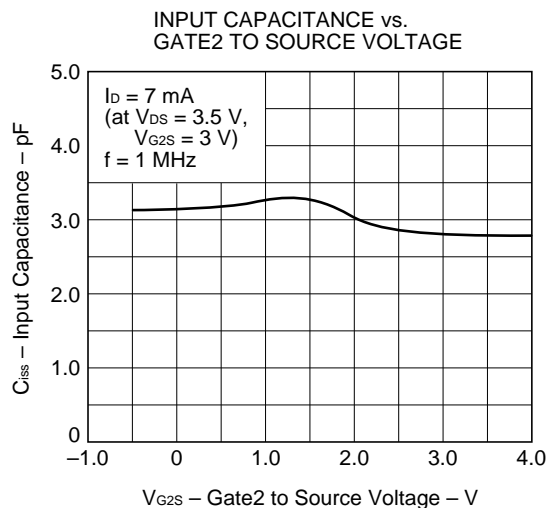
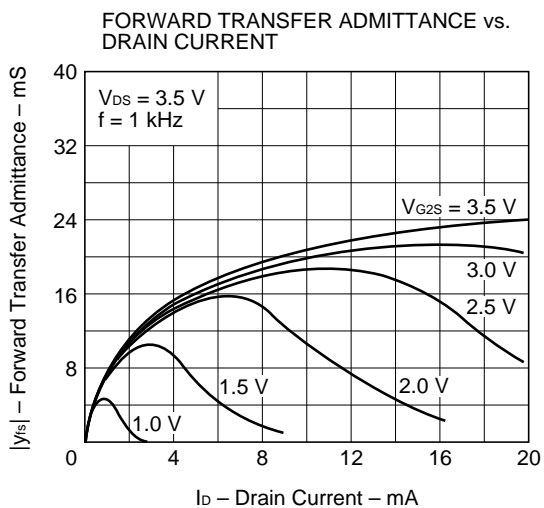
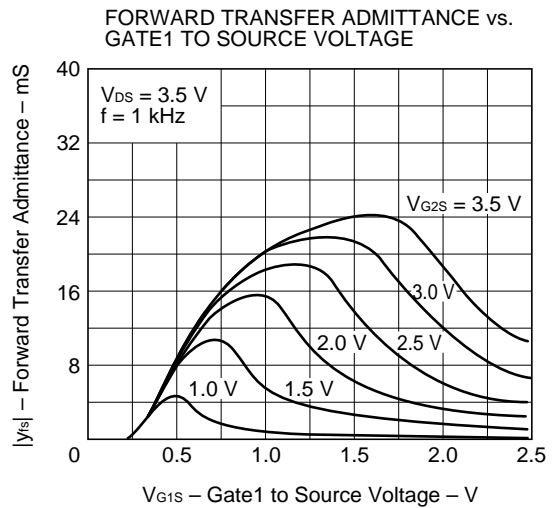
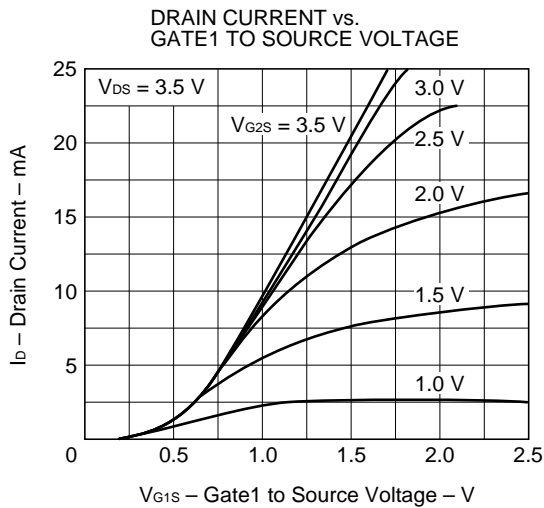
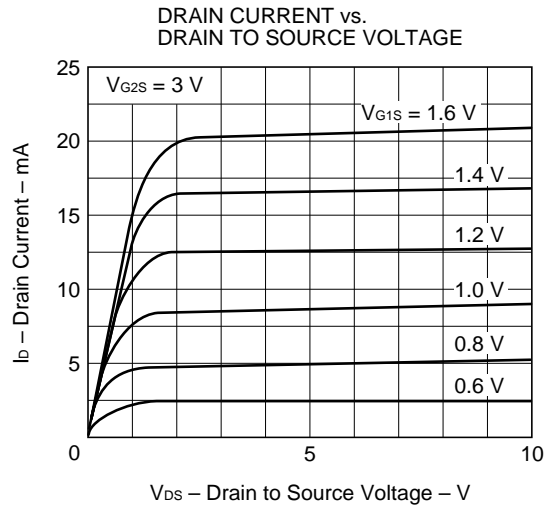
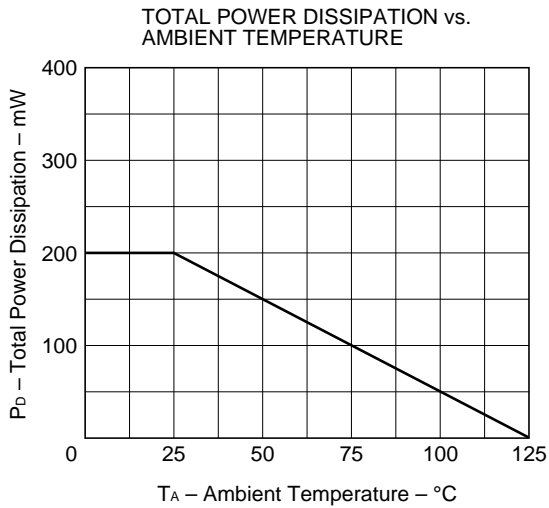
CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Drain to Source Breakdown Voltage	BV <sub>DSX</sub>	18			V	V <sub>G1S</sub> = V <sub>G2S</sub> = -2 V, I <sub>D</sub> = 10 μA
Drain Current	I <sub>DSX</sub>	0.1		5.0	mA	V <sub>DS</sub> = 3.5 V, V <sub>G2S</sub> = 3 V, V <sub>G1S</sub> = 0.75 V
Gate1 to Source Cutoff Voltage	V <sub>G1S(off)</sub>	-1.0	0	+1.0	V	V <sub>DS</sub> = 3.5 V, V <sub>G2S</sub> = 3 V, I <sub>D</sub> = 10 μA
Gate2 to Source Cutoff Voltage	V <sub>G2S(off)</sub>	0	0.5	1.0	V	V <sub>DS</sub> = 3.5 V, V <sub>G1S</sub> = 3 V, I <sub>D</sub> = 10 μA
Gate1 Reverse Current	I <sub>G1SS</sub>			±20	nA	V <sub>DS</sub> = 0, V <sub>G2S</sub> = 0, V <sub>G1S</sub> = ±6 V
Gate2 Reverse Current	I <sub>G2SS</sub>			±20	nA	V <sub>DS</sub> = 0, V <sub>G1S</sub> = 0, V <sub>G2S</sub> = ±6 V
Forward Transfer Admittance	y <sub>fs</sub>	14	18	23	mS	V <sub>DS</sub> = 3.5 V, V <sub>G2S</sub> = 3 V, I <sub>D</sub> = 7 mA f = 1 kHz
Input Capacitance	C <sub>iss</sub>	2.4	2.9	3.4	pF	V <sub>DS</sub> = 3.5 V, V <sub>G2S</sub> = 3 V, I <sub>D</sub> = 7 mA f = 1 MHz
Output Capacitance	C <sub>oss</sub>	0.9	1.2	1.5	pF	
Reverse Transfer Capacitance	C <sub>rss</sub>		0.01	0.03	pF	
Power Gain	G <sub>ps</sub>	16	19	22	dB	V <sub>DS</sub> = 3.5 V, V <sub>G2S</sub> = 3 V, I <sub>D</sub> = 7 mA f = 470 MHz
Noise Figure 1	NF1		2.0	3.0	dB	V <sub>DS</sub> = 3.5 V, V <sub>G2S</sub> = 3 V, I <sub>D</sub> = 7 mA f = 55 MHz
Noise Figure 2	NF2		0.8	2.3	dB	

**I<sub>DSX</sub> Classification**

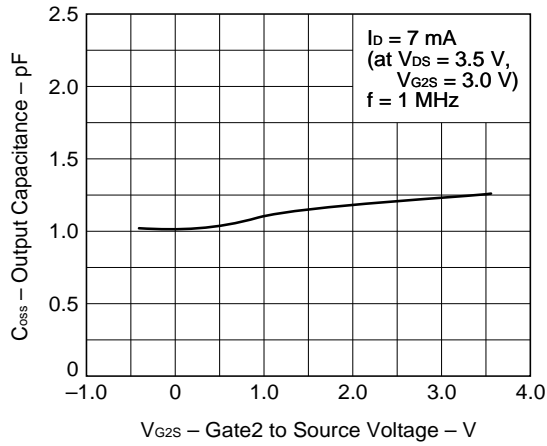
Rank	U1E/UAE*
Marking	U1E
I <sub>DSX</sub> (mA)	0.1 to 5.0

\* Old Specification / New Specification

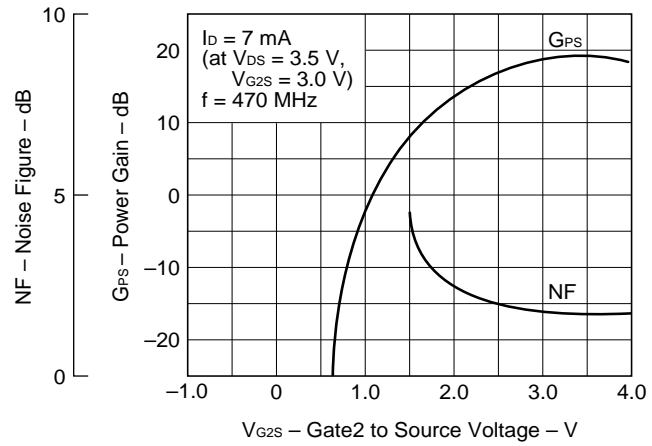
TYPICAL CHARACTERISTICS (T<sub>A</sub> = 25 °C)



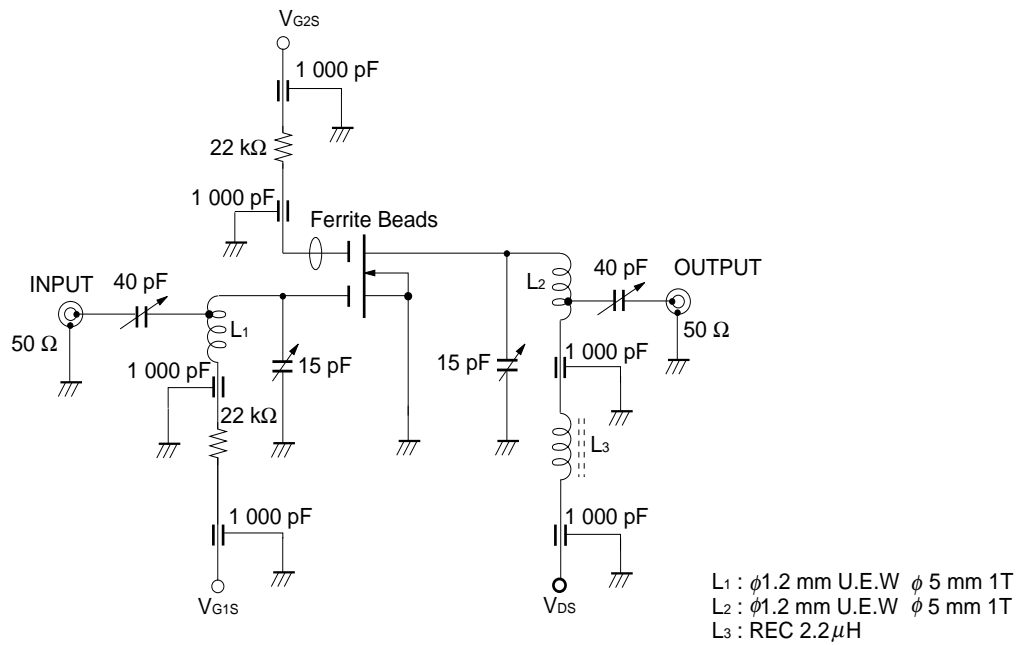
OUTPUT CAPACITANCE vs.  
GATE2 TO SOURCE VOLTAGE



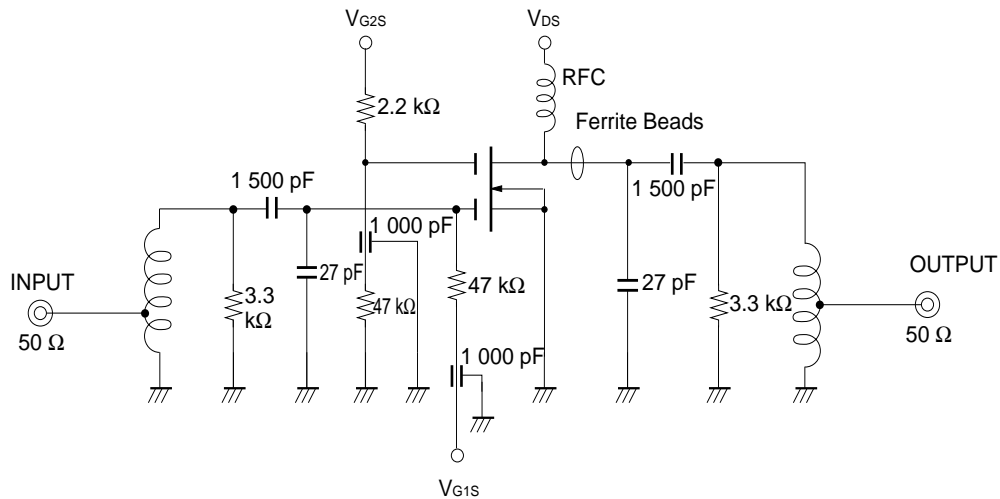
POWER GAIN AND NOISE FIGURE vs.  
GATE2 TO SOURCE VOLTAGE



**GPS AND NF TEST CIRCUIT AT f = 470 MHz**



**NF TEST CIRCUIT AT f = 55 MHz**



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Anti-radioactive design is not implemented in this product.