TOSHIBA

TOSHIBA Discrete Devices
RF Power MOS FET
RFM04U6P
Application Note

Contents

・Bias Current / DC Characteristics
Vds = 3.6V, 4.8V, 6.0V, 7.2V
Vgs = 0.5V ～ 1.7V (0.05V Step)

・Input – Output Characteristics / RF Characteristics
Vds = 3.6V, 4.8V, 6.0V, 7.2V
Ibias= 100mA, 200mA, 300mA, 400mA, 500mA, 600mA, 700mA
f = 470MHz
Pi = 0 ～ 25dBm (1dB step)
ZL = 3.06+j0.60Ω, 2.18-0.45Ω

・A lot of characteristic curves are published in this sheets.

・These are only typical curves and devices are not necessarily guaranteed at these curves.

Date 2019/08/08
Rev 2.0

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Condition 1 (ZL = 3.06 + j0.60Ω)
⇒ "Condition 1" is the load impedance setup which gave priority to "Drain Efficiency".

Condition 2 (ZL = 2.16 – j0.45Ω)
⇒ "Condition 2" is the load impedance setup which gave priority to "Output Power".

Symbol

Characteristics	Symbol
Bias Current	Ibias
frequency	f
Input Power	Pi
Output Power	Po
Drain Efficiency	η d
Power Gain	Gp
Gate-Source Voltage	Vgs
Drain-Source Voltage	Vds
Drain-Source Current	Ids

Selection Guide

Load Impedance	Drain-Source Voltage	Bias Current	Contents (Input-Output Characteristics)	Page No
Priority Performance Drain Efficiency Condition 1 3.06 + j0.60Ω *(Please refer to P5 for details.)*	3.6V	100mA～700mA Step 100mA	Graph	6
			Data	7～13
	4.8V	100mA～700mA Step 100mA	Graph	14
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	6.0V	100mA～700mA Step 100mA	Graph	22
			Data	23～29
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			Data	31～37
Priority Performance Output Power Condition 2 2.16 − j0.45Ω *(Please refer to P38 for details.)*	3.6V	100mA～700mA Step 100mA	Graph	39
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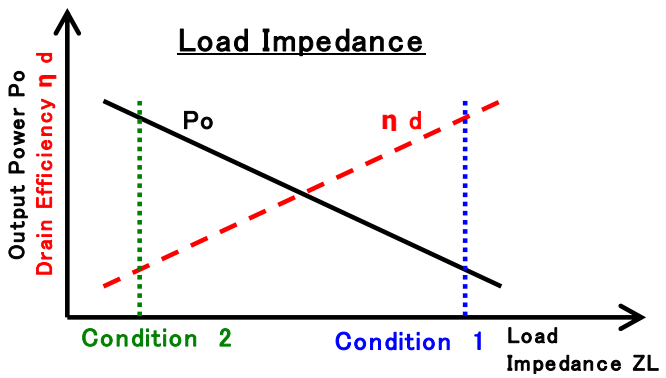
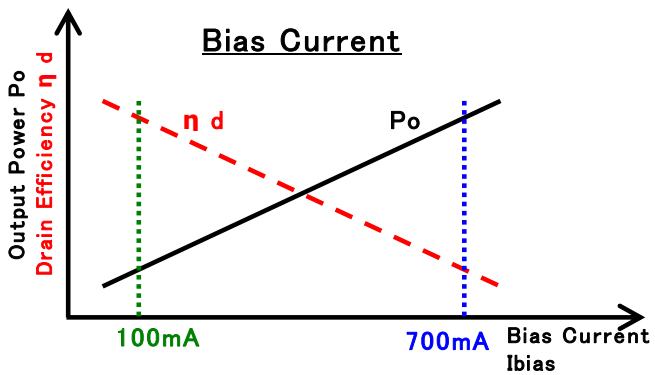
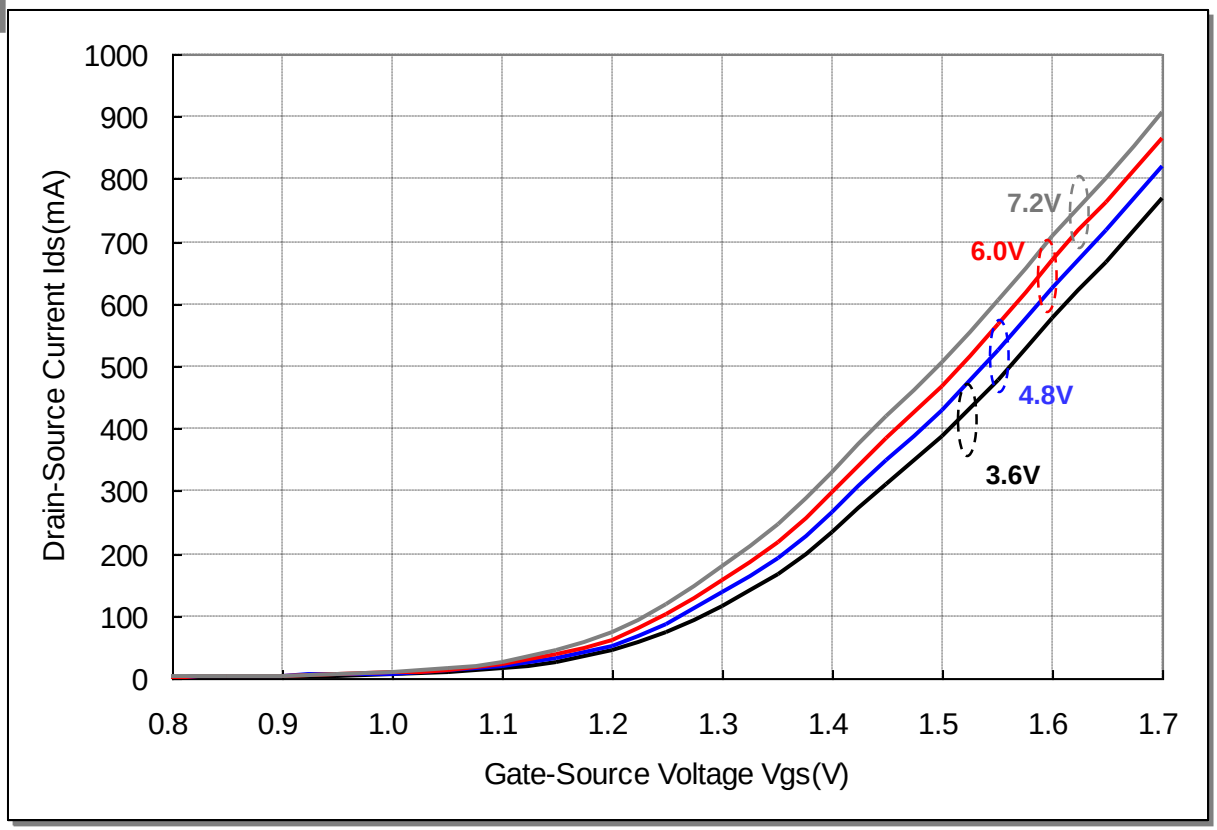
			Data	56～62
	7.2V	100mA～700mA Step 100mA	Graph	63
			Data	64～70





Graph



Data

Vgs (V)	Vds (V)	Ids (mA)
0.50	3.6	0.0
0.55	3.6	0.0
0.60	3.6	0.0
0.65	3.6	0.1
0.70	3.6	0.3
0.75	3.6	0.6
0.80	3.6	1.1
0.85	3.6	1.8
0.90	3.6	3.0
0.95	3.6	4.6
1.00	3.6	6.8
1.05	3.6	10.1
1.10	3.6	16.1
1.15	3.6	26.9
1.20	3.6	43.9
1.25	3.6	73.3
1.30	3.6	116.2
1.35	3.6	166.7
1.40	3.6	233.6
1.45	3.6	310.6
1.50	3.6	387.7
1.55	3.6	479.0
1.60	3.6	576.3
1.65	3.6	666.4
1.70	3.6	769.7

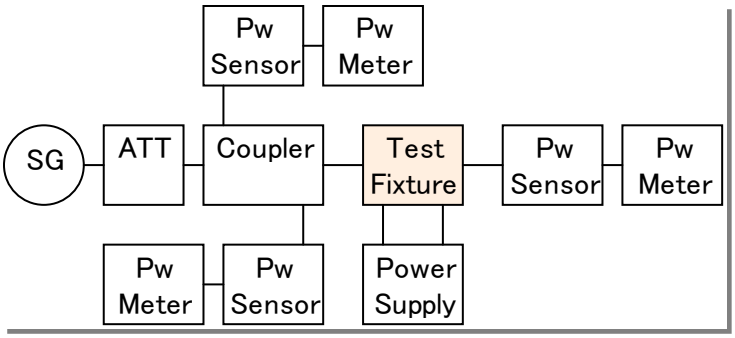
Vgs (V)	Vds (V)	Ids (mA)
0.50	4.8	0.0
0.55	4.8	0.0
0.60	4.8	0.1
0.65	4.8	0.1
0.70	4.8	0.4
0.75	4.8	0.7
0.80	4.8	1.3
0.85	4.8	2.1
0.90	4.8	3.5
0.95	4.8	5.4
1.00	4.8	7.9
1.05	4.8	11.8
1.10	4.8	19.1
1.15	4.8	32.5
1.20	4.8	52.7
1.25	4.8	87.2
1.30	4.8	136.5
1.35	4.8	191.7
1.40	4.8	264.9
1.45	4.8	348.1
1.50	4.8	429.4
1.55	4.8	524.3
1.60	4.8	623.7
1.65	4.8	716.8
1.70	4.8	821.5

Vgs (V)	Vds (V)	Ids (mA)
0.50	6.0	0.0
0.55	6.0	0.0
0.60	6.0	0.1
0.65	6.0	0.2
0.70	6.0	0.4
0.75	6.0	0.9
0.80	6.0	1.6
0.85	6.0	2.5
0.90	6.0	3.9
0.95	6.0	6.1
1.00	6.0	8.9
1.05	6.0	13.5
1.10	6.0	22.3
1.15	6.0	38.4
1.20	6.0	62.3
1.25	6.0	102.4
1.30	6.0	157.0
1.35	6.0	218.9
1.40	6.0	296.5
1.45	6.0	383.8
1.50	6.0	468.9
1.55	6.0	566.6
1.60	6.0	668.7
1.65	6.0	761.7
1.70	6.0	866.0

Vgs (V)	Vds (V)	Ids (mA)
0.50	7.2	0.0
0.55	7.2	0.0
0.60	7.2	0.1
0.65	7.2	0.2
0.70	7.2	0.5
0.75	7.2	1.0
0.80	7.2	1.8
0.85	7.2	2.8
0.90	7.2	4.4
0.95	7.2	6.7
1.00	7.2	10.0
1.05	7.2	15.4
1.10	7.2	25.9
1.15	7.2	44.9
1.20	7.2	73.1
1.25	7.2	118.2
1.30	7.2	179.6
1.35	7.2	245.6
1.40	7.2	328.9
1.45	7.2	420.1
1.50	7.2	506.6
1.55	7.2	606.8
1.60	7.2	709.3
1.65	7.2	802.8
1.70	7.2	907.5

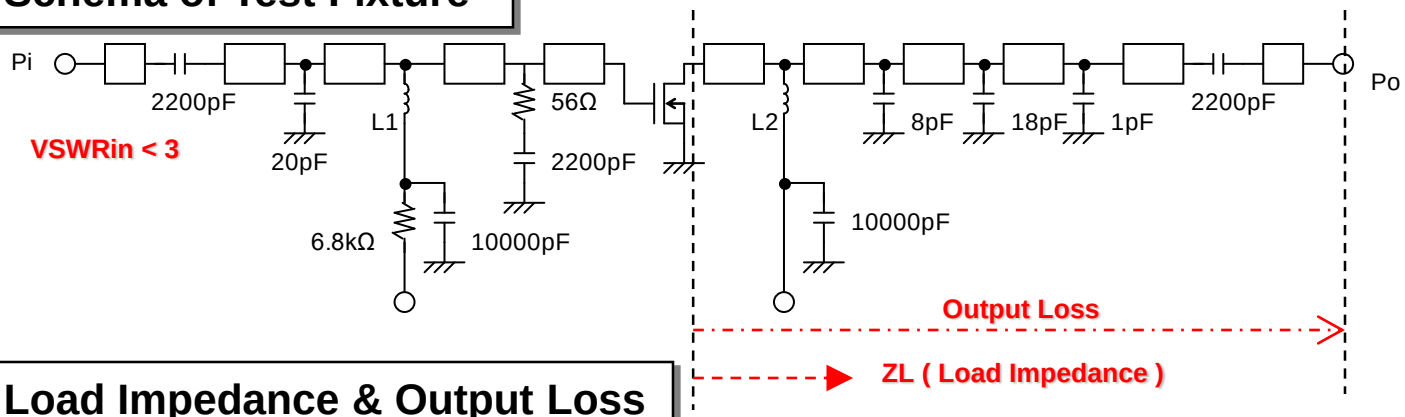
Test System – Condition 1

RF Test Block



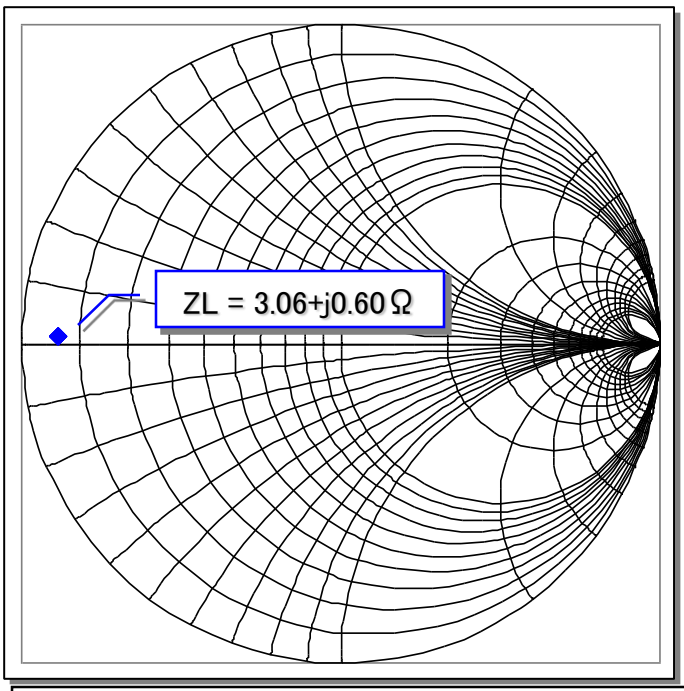
Test Fixture

Schema of Test Fixture

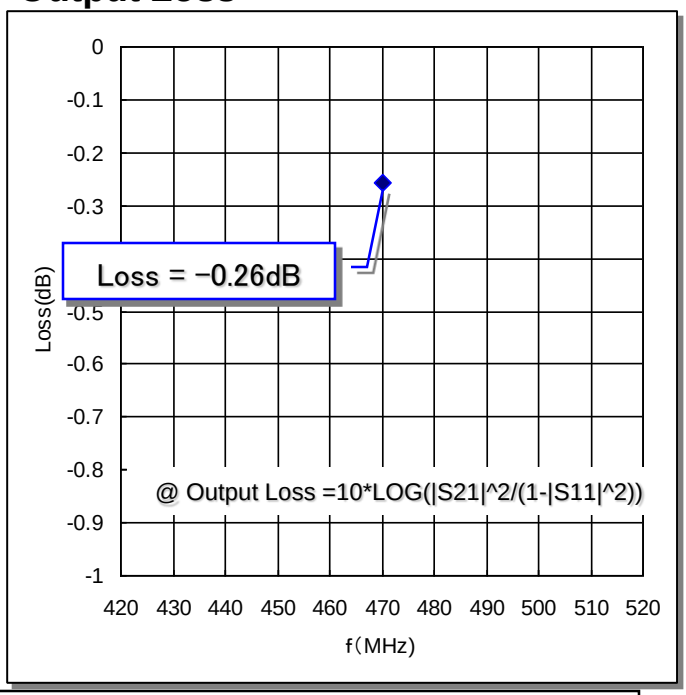


Load Impedance & Output Loss

Smith Chart



Output Loss

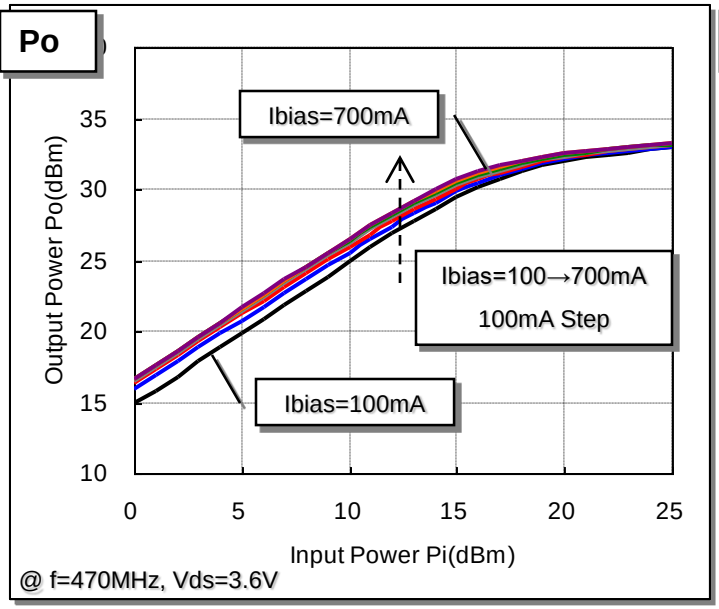


ZL = 3.06 + j 0.60Ω, Output Circuit Loss = −0.26dB (@ f=470MHz)

※ The test value in this application note includes the output loss.

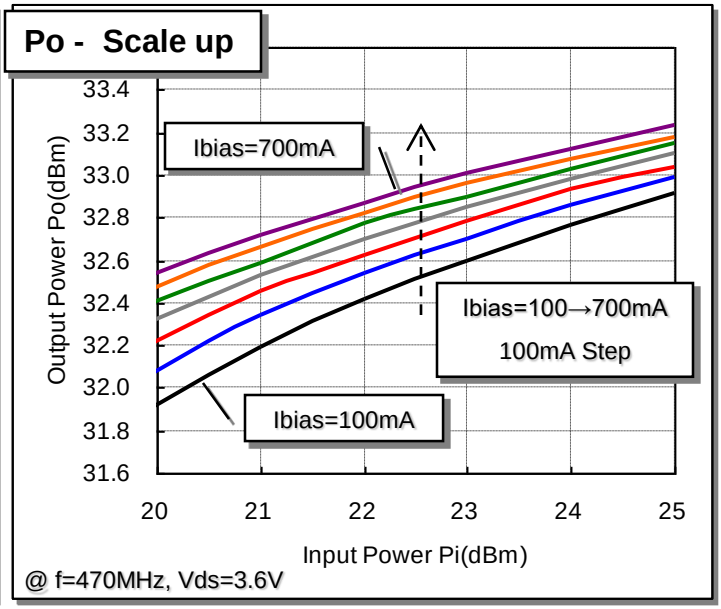
Input - Output Characteristics Vds =3.6V - Condition 1

Po



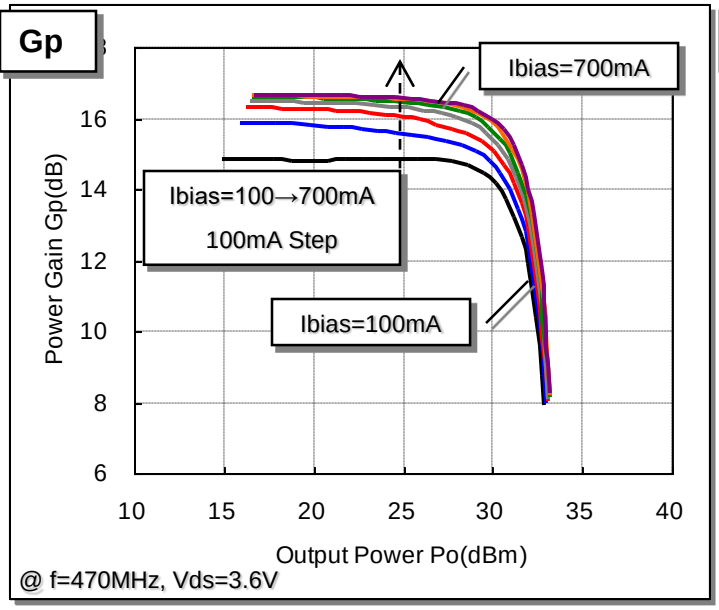
@ f=470MHz, Vds=3.6V

Po - Scale up



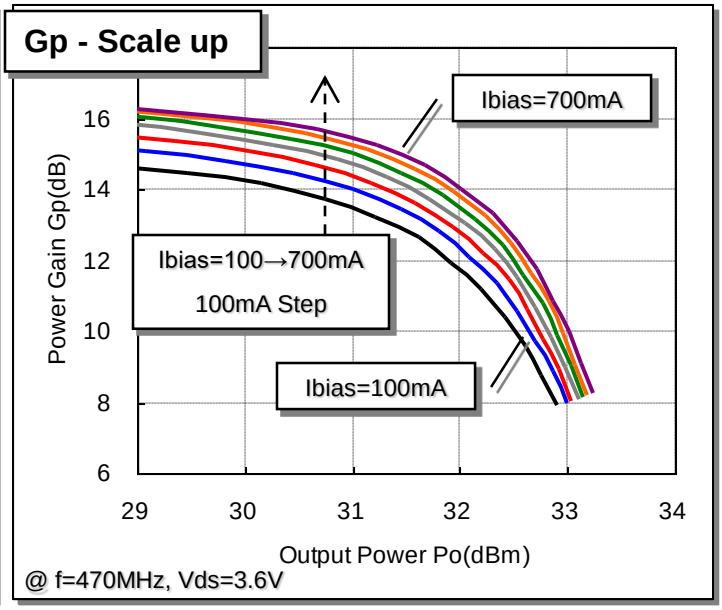
@ f=470MHz, Vds=3.6V

Gp



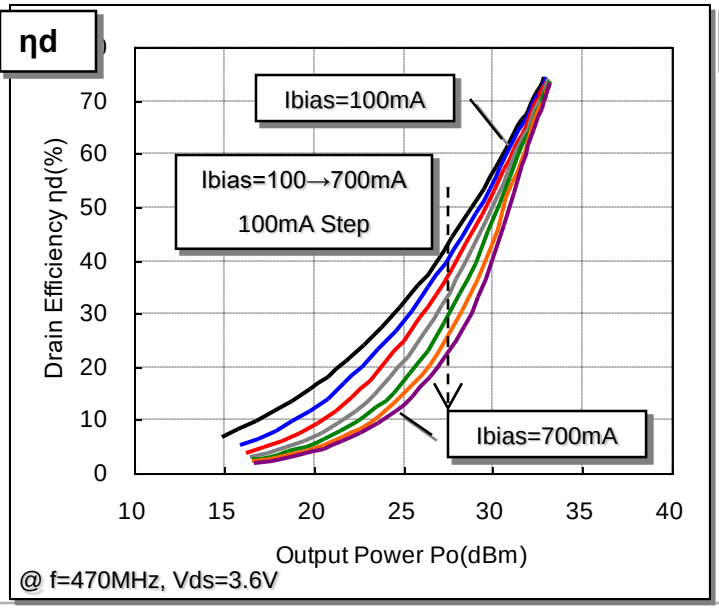
@ f=470MHz, Vds=3.6V

Gp - Scale up



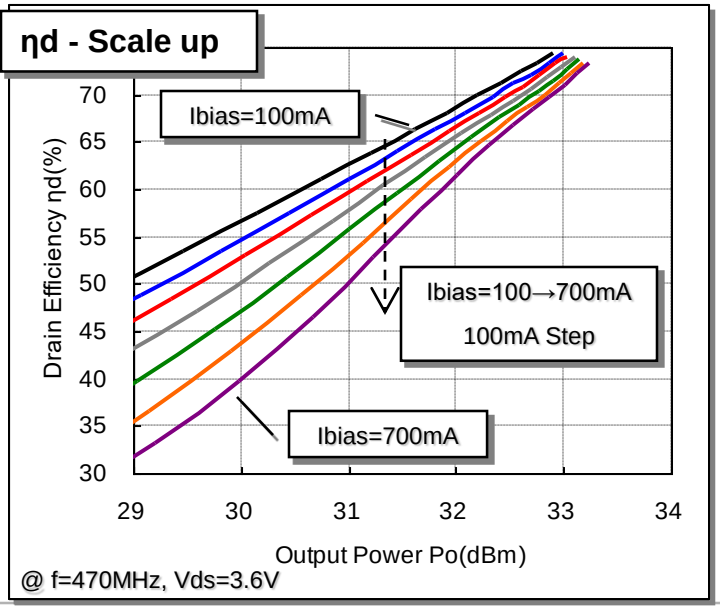
@ f=470MHz, Vds=3.6V

ηd



@ f=470MHz, Vds=3.6V

ηd - Scale up

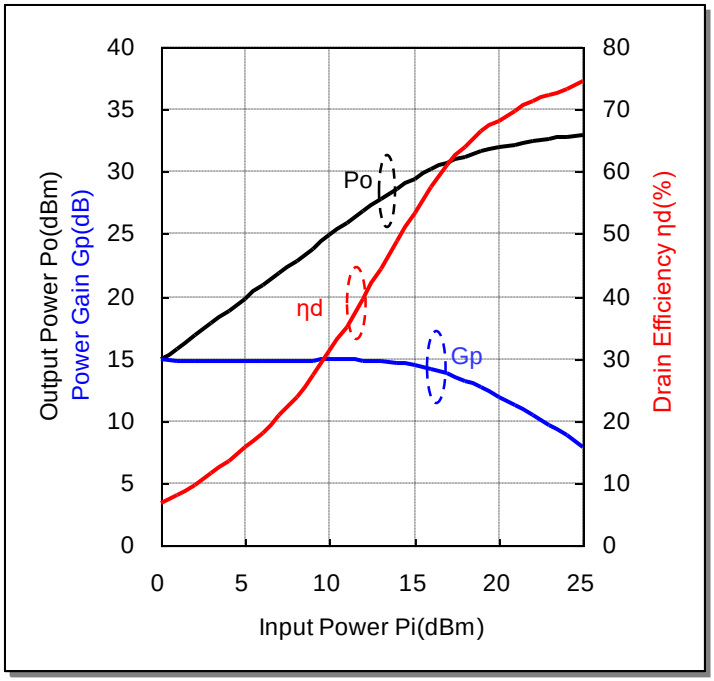


@ f=470MHz, Vds=3.6V

Input-Output Characteristics Vds＝3.6V, Ibias=100mA - Condition 1

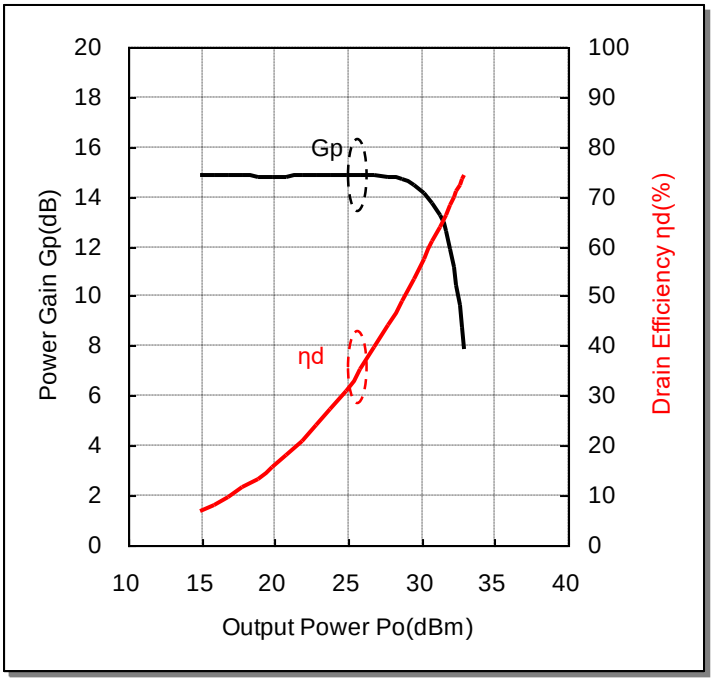
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=102.0mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=3.6V, Ibias=102.0mA

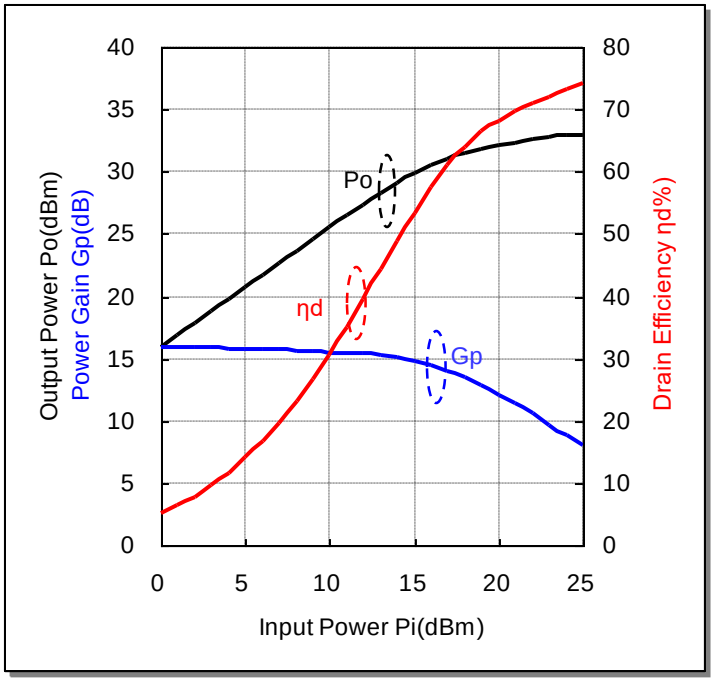
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.28	3.6	102.0	470	0.0	1.0	14.9	0.031	14.9	125	6.8
1.28	3.6	102.0	470	1.0	1.3	15.8	0.038	14.8	130	8.1
1.28	3.6	102.0	470	2.0	1.6	16.8	0.048	14.8	138	9.7
1.28	3.6	102.0	470	3.0	2.0	17.8	0.061	14.8	147	11.5
1.28	3.6	102.0	470	4.0	2.5	18.8	0.076	14.8	157	13.4
1.28	3.6	102.0	470	5.0	3.2	19.8	0.096	14.8	170	15.7
1.28	3.6	102.0	470	6.0	4.0	20.8	0.121	14.8	185	18.1
1.28	3.6	102.0	470	7.0	5.0	21.8	0.152	14.8	202	20.9
1.28	3.6	102.0	470	8.0	6.3	22.8	0.192	14.8	223	23.9
1.28	3.6	102.0	470	9.0	7.9	23.8	0.242	14.8	246	27.3
1.28	3.6	102.0	470	10.0	10.0	24.9	0.306	14.9	274	31.1
1.28	3.6	102.0	470	11.0	12.6	25.9	0.385	14.9	304	35.2
1.28	3.6	102.0	470	12.0	15.8	26.8	0.483	14.8	339	39.6
1.28	3.6	102.0	470	13.0	20.0	27.8	0.600	14.8	377	44.2
1.28	3.6	102.0	470	14.0	25.1	28.7	0.735	14.7	418	48.8
1.28	3.6	102.0	470	15.0	31.6	29.5	0.885	14.5	460	53.4
1.28	3.6	102.0	470	16.0	39.8	30.2	1.038	14.2	501	57.5
1.28	3.6	102.0	470	17.0	50.1	30.7	1.186	13.7	540	61.0
1.28	3.6	102.0	470	18.0	63.1	31.2	1.324	13.2	576	63.9
1.28	3.6	102.0	470	19.0	79.4	31.6	1.452	12.6	607	66.4
1.28	3.6	102.0	470	20.0	100.0	31.9	1.556	11.9	635	68.1
1.28	3.6	102.0	470	21.0	125.9	32.2	1.656	11.2	659	69.8
1.28	3.6	102.0	470	22.0	158.5	32.4	1.746	10.4	680	71.3
1.28	3.6	102.0	470	23.0	199.5	32.6	1.820	9.6	699	72.4
1.28	3.6	102.0	470	24.0	251.2	32.8	1.888	8.8	715	73.4
1.28	3.6	102.0	470	25.0	316.2	32.9	1.954	7.9	729	74.5

Input-Output Characteristics Vds＝3.6V, Ibias=200mA - Condition 1

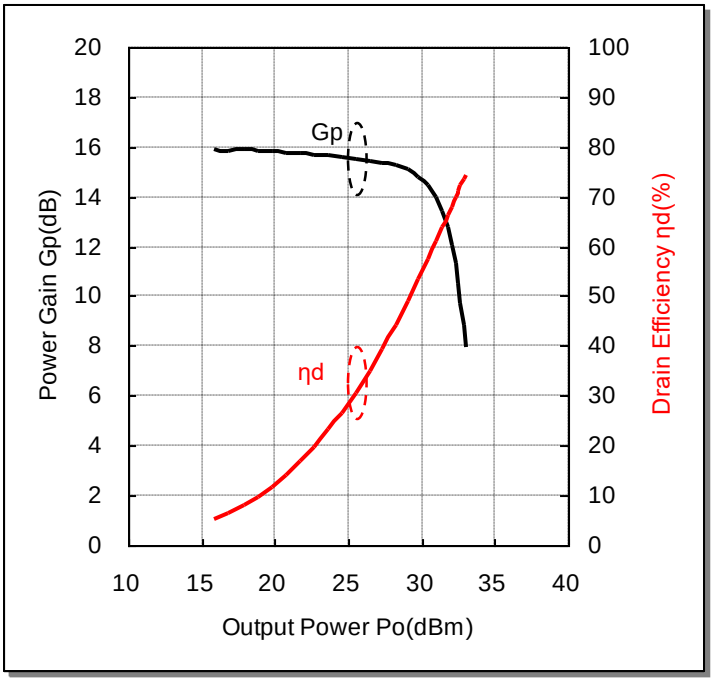
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=198.9mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=3.6V, Ibias=198.9mA

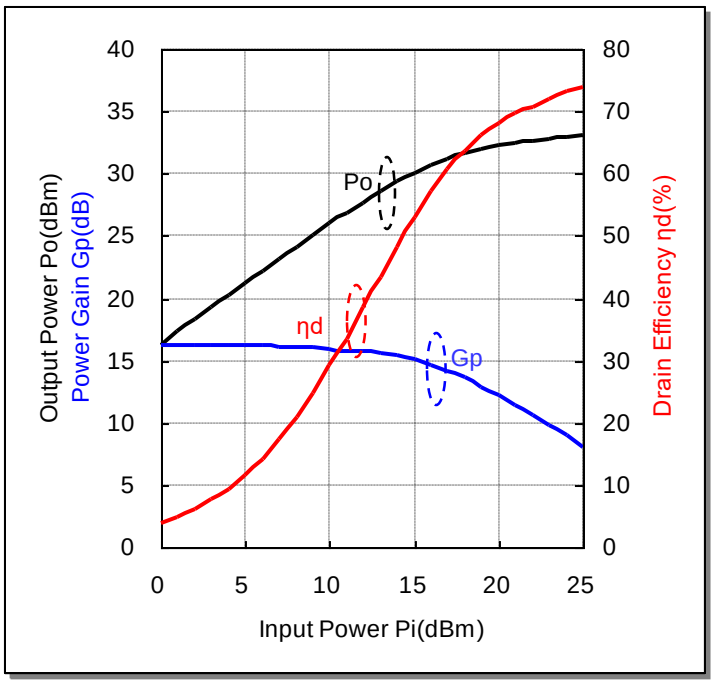
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.37	3.6	198.9	470	0.0	1.0	15.9	0.039	15.9	210	5.1
1.37	3.6	198.9	470	1.0	1.3	16.9	0.049	15.9	213	6.3
1.37	3.6	198.9	470	2.0	1.6	17.9	0.061	15.9	217	7.8
1.37	3.6	198.9	470	3.0	2.0	18.8	0.077	15.8	222	9.6
1.37	3.6	198.9	470	4.0	2.5	19.8	0.096	15.8	228	11.7
1.37	3.6	198.9	470	5.0	3.2	20.8	0.119	15.8	236	14.0
1.37	3.6	198.9	470	6.0	4.0	21.7	0.149	15.7	247	16.7
1.37	3.6	198.9	470	7.0	5.0	22.7	0.185	15.7	261	19.7
1.37	3.6	198.9	470	8.0	6.3	23.6	0.231	15.6	278	23.1
1.37	3.6	198.9	470	9.0	7.9	24.6	0.287	15.6	299	26.7
1.37	3.6	198.9	470	10.0	10.0	25.5	0.355	15.5	322	30.6
1.37	3.6	198.9	470	11.0	12.6	26.4	0.441	15.4	351	34.9
1.37	3.6	198.9	470	12.0	15.8	27.4	0.545	15.4	384	39.4
1.37	3.6	198.9	470	13.0	20.0	28.3	0.668	15.3	420	44.2
1.37	3.6	198.9	470	14.0	25.1	29.1	0.807	15.1	459	48.9
1.37	3.6	198.9	470	15.0	31.6	29.8	0.957	14.8	498	53.4
1.37	3.6	198.9	470	16.0	39.8	30.5	1.109	14.5	536	57.5
1.37	3.6	198.9	470	17.0	50.1	31.0	1.259	14.0	573	61.1
1.37	3.6	198.9	470	18.0	63.1	31.5	1.396	13.5	606	64.0
1.37	3.6	198.9	470	19.0	79.4	31.8	1.517	12.8	635	66.4
1.37	3.6	198.9	470	20.0	100.0	32.1	1.614	12.1	660	68.0
1.37	3.6	198.9	470	21.0	125.9	32.3	1.714	11.3	682	69.8
1.37	3.6	198.9	470	22.0	158.5	32.5	1.795	10.5	701	71.1
1.37	3.6	198.9	470	23.0	199.5	32.7	1.862	9.7	718	72.1
1.37	3.6	198.9	470	24.0	251.2	32.9	1.932	8.9	732	73.4
1.37	3.6	198.9	470	25.0	316.2	33.0	1.991	8.0	745	74.3

Input-Output Characteristics Vds=3.6V, Ibias=300mA - Condition 1

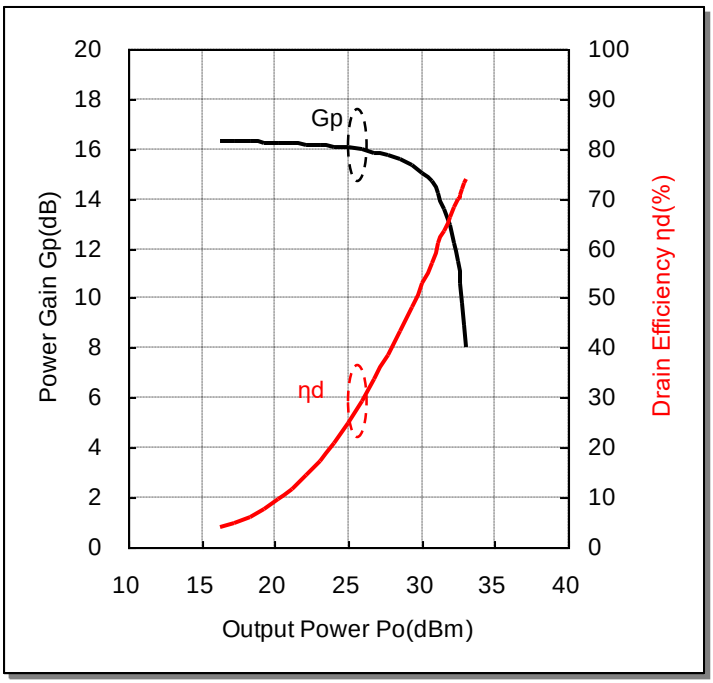
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=294.5mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=3.6V, Ibias=294.5mA

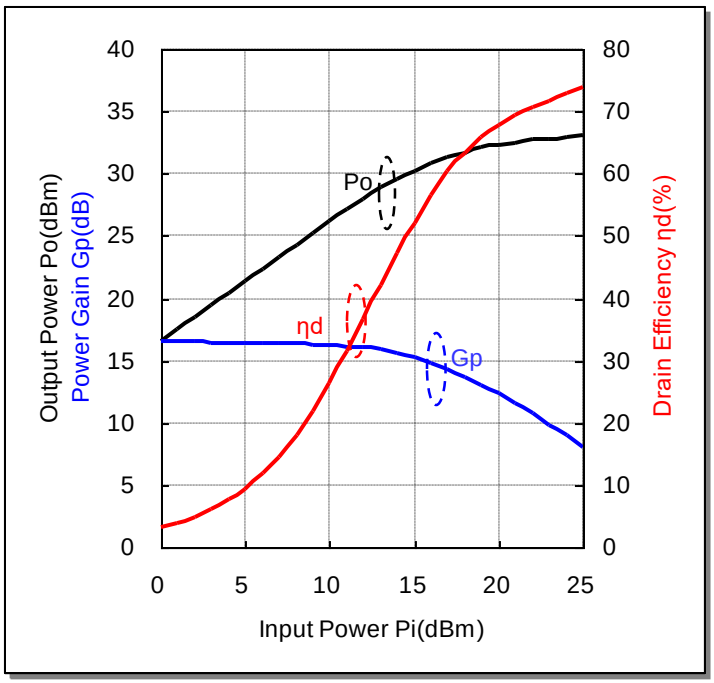
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.44	3.6	294.5	470	0.0	1.0	16.3	0.043	16.3	301	3.9
1.44	3.6	294.5	470	1.0	1.3	17.3	0.054	16.3	303	4.9
1.44	3.6	294.5	470	2.0	1.6	18.3	0.067	16.3	305	6.1
1.44	3.6	294.5	470	3.0	2.0	19.3	0.084	16.3	307	7.6
1.44	3.6	294.5	470	4.0	2.5	20.2	0.106	16.2	311	9.5
1.44	3.6	294.5	470	5.0	3.2	21.2	0.132	16.2	315	11.6
1.44	3.6	294.5	470	6.0	4.0	22.2	0.165	16.2	322	14.3
1.44	3.6	294.5	470	7.0	5.0	23.1	0.206	16.1	330	17.4
1.44	3.6	294.5	470	8.0	6.3	24.1	0.256	16.1	341	20.9
1.44	3.6	294.5	470	9.0	7.9	25.0	0.318	16.0	356	24.9
1.44	3.6	294.5	470	10.0	10.0	26.0	0.394	16.0	375	29.2
1.44	3.6	294.5	470	11.0	12.6	26.8	0.481	15.8	398	33.6
1.44	3.6	294.5	470	12.0	15.8	27.7	0.590	15.7	427	38.4
1.44	3.6	294.5	470	13.0	20.0	28.6	0.718	15.6	460	43.4
1.44	3.6	294.5	470	14.0	25.1	29.4	0.861	15.4	495	48.3
1.44	3.6	294.5	470	15.0	31.6	30.0	1.012	15.0	531	53.0
1.44	3.6	294.5	470	16.0	39.8	30.7	1.164	14.7	566	57.2
1.44	3.6	294.5	470	17.0	50.1	31.2	1.312	14.2	599	60.9
1.44	3.6	294.5	470	18.0	63.1	31.6	1.439	13.6	628	63.7
1.44	3.6	294.5	470	19.0	79.4	31.9	1.560	12.9	655	66.1
1.44	3.6	294.5	470	20.0	100.0	32.2	1.667	12.2	680	68.1
1.44	3.6	294.5	470	21.0	125.9	32.5	1.758	11.5	701	69.7
1.44	3.6	294.5	470	22.0	158.5	32.6	1.828	10.6	717	70.8
1.44	3.6	294.5	470	23.0	199.5	32.8	1.897	9.8	732	72.0
1.44	3.6	294.5	470	24.0	251.2	32.9	1.963	8.9	745	73.2
1.44	3.6	294.5	470	25.0	316.2	33.0	2.014	8.0	756	74.0

Input-Output Characteristics Vds=3.6V, Ibias=400mA - Condition 1

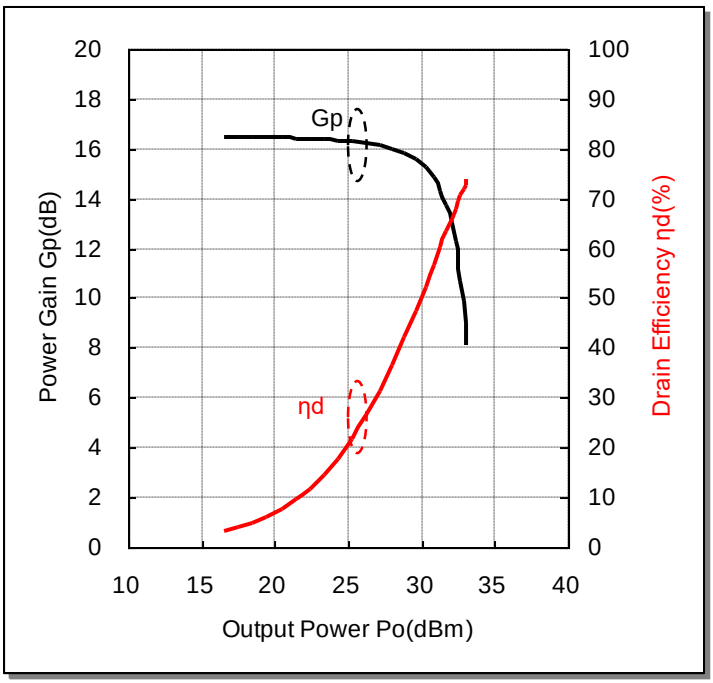
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=396.9mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=3.6V, Ibias=396.9mA

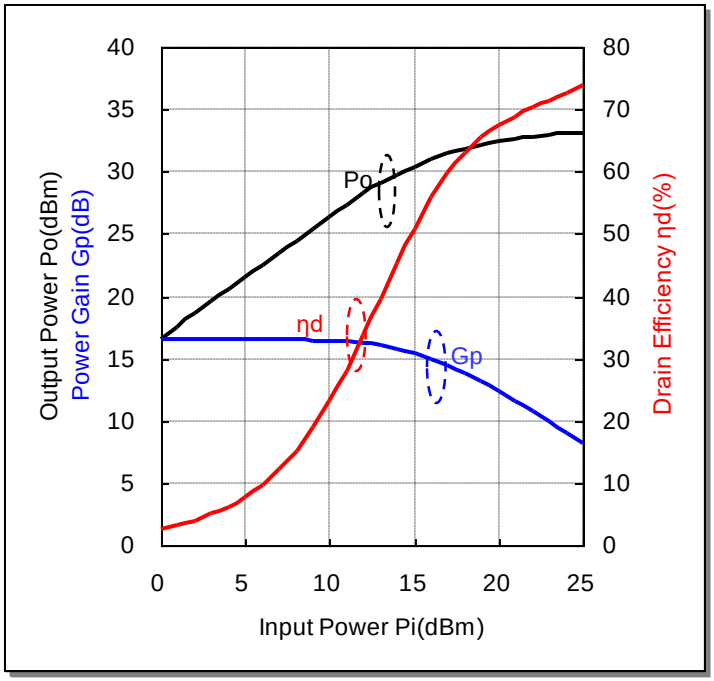
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.50	3.6	396.9	470	0.0	1.0	16.5	0.044	16.5	400	3.1
1.50	3.6	396.9	470	1.0	1.3	17.5	0.056	16.5	401	3.9
1.50	3.6	396.9	470	2.0	1.6	18.5	0.070	16.5	402	4.9
1.50	3.6	396.9	470	3.0	2.0	19.5	0.088	16.5	404	6.1
1.50	3.6	396.9	470	4.0	2.5	20.4	0.111	16.4	405	7.6
1.50	3.6	396.9	470	5.0	3.2	21.4	0.139	16.4	408	9.5
1.50	3.6	396.9	470	6.0	4.0	22.4	0.174	16.4	411	11.7
1.50	3.6	396.9	470	7.0	5.0	23.4	0.217	16.4	416	14.5
1.50	3.6	396.9	470	8.0	6.3	24.3	0.271	16.3	421	17.9
1.50	3.6	396.9	470	9.0	7.9	25.3	0.338	16.3	430	21.8
1.50	3.6	396.9	470	10.0	10.0	26.2	0.419	16.2	442	26.3
1.50	3.6	396.9	470	11.0	12.6	27.1	0.518	16.1	458	31.4
1.50	3.6	396.9	470	12.0	15.8	28.0	0.632	16.0	480	36.6
1.50	3.6	396.9	470	13.0	20.0	28.8	0.766	15.8	506	42.0
1.50	3.6	396.9	470	14.0	25.1	29.6	0.910	15.6	535	47.2
1.50	3.6	396.9	470	15.0	31.6	30.3	1.062	15.3	566	52.1
1.50	3.6	396.9	470	16.0	39.8	30.9	1.216	14.9	597	56.6
1.50	3.6	396.9	470	17.0	50.1	31.3	1.355	14.3	624	60.3
1.50	3.6	396.9	470	18.0	63.1	31.7	1.486	13.7	651	63.4
1.50	3.6	396.9	470	19.0	79.4	32.0	1.603	13.0	676	65.9
1.50	3.6	396.9	470	20.0	100.0	32.3	1.706	12.3	698	67.9
1.50	3.6	396.9	470	21.0	125.9	32.5	1.791	11.5	717	69.4
1.50	3.6	396.9	470	22.0	158.5	32.7	1.862	10.7	733	70.6
1.50	3.6	396.9	470	23.0	199.5	32.8	1.928	9.8	746	71.8
1.50	3.6	396.9	470	24.0	251.2	33.0	1.986	9.0	757	72.9
1.50	3.6	396.9	470	25.0	316.2	33.1	2.042	8.1	768	73.9

Input-Output Characteristics Vds＝3.6V, Ibias=500mA - Condition 1

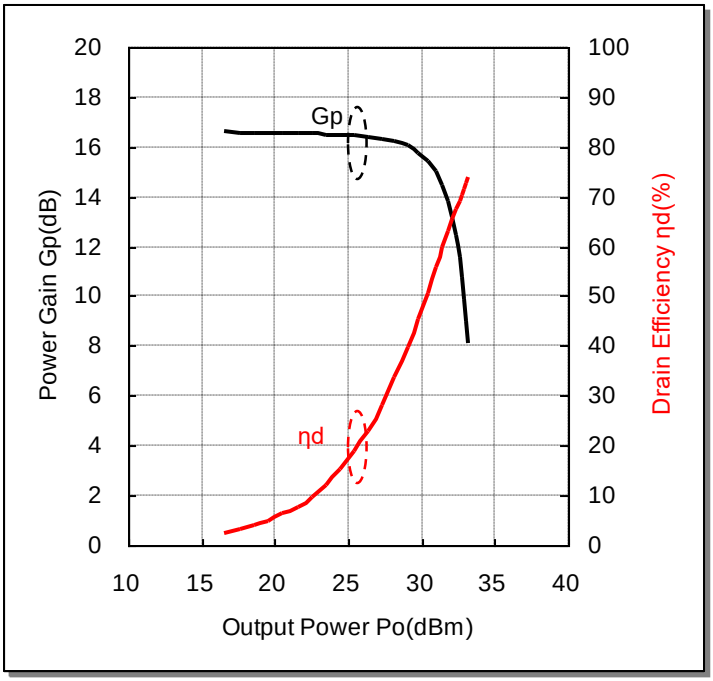
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=498.0mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=3.6V, Ibias=498.0mA

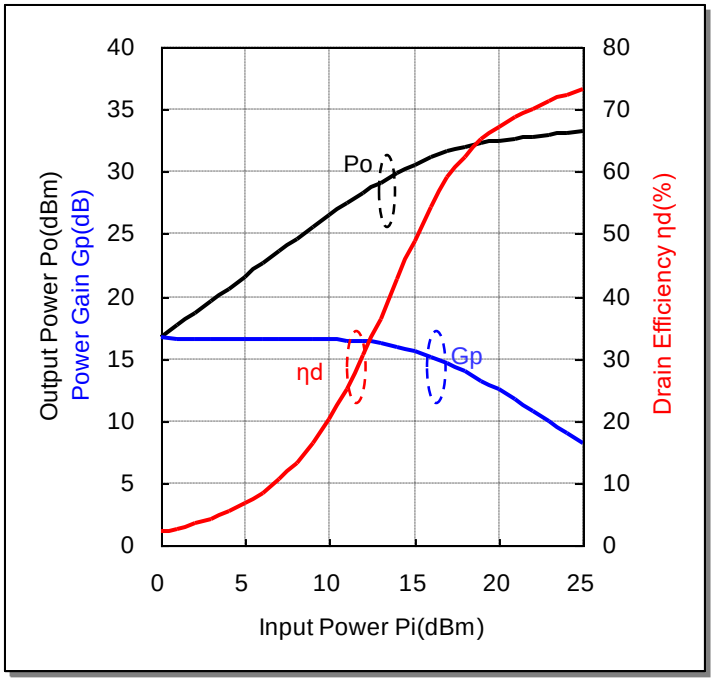
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.56	3.6	498.0	470	0.0	1.0	16.6	0.046	16.6	500	2.5
1.56	3.6	498.0	470	1.0	1.3	17.6	0.057	16.6	500	3.2
1.56	3.6	498.0	470	2.0	1.6	18.6	0.072	16.6	502	4.0
1.56	3.6	498.0	470	3.0	2.0	19.6	0.091	16.6	502	5.0
1.56	3.6	498.0	470	4.0	2.5	20.5	0.114	16.5	503	6.3
1.56	3.6	498.0	470	5.0	3.2	21.5	0.142	16.5	505	7.8
1.56	3.6	498.0	470	6.0	4.0	22.5	0.179	16.5	507	9.8
1.56	3.6	498.0	470	7.0	5.0	23.5	0.224	16.5	509	12.2
1.56	3.6	498.0	470	8.0	6.3	24.5	0.280	16.5	512	15.2
1.56	3.6	498.0	470	9.0	7.9	25.4	0.350	16.4	517	18.8
1.56	3.6	498.0	470	10.0	10.0	26.4	0.435	16.4	523	23.1
1.56	3.6	498.0	470	11.0	12.6	27.3	0.538	16.3	533	28.1
1.56	3.6	498.0	470	12.0	15.8	28.2	0.661	16.2	544	33.7
1.56	3.6	498.0	470	13.0	20.0	29.0	0.800	16.0	561	39.6
1.56	3.6	498.0	470	14.0	25.1	29.8	0.948	15.8	582	45.3
1.56	3.6	498.0	470	15.0	31.6	30.4	1.104	15.4	605	50.7
1.56	3.6	498.0	470	16.0	39.8	31.0	1.262	15.0	629	55.8
1.56	3.6	498.0	470	17.0	50.1	31.5	1.400	14.5	652	59.7
1.56	3.6	498.0	470	18.0	63.1	31.9	1.531	13.9	675	63.0
1.56	3.6	498.0	470	19.0	79.4	32.2	1.641	13.2	696	65.5
1.56	3.6	498.0	470	20.0	100.0	32.4	1.742	12.4	716	67.6
1.56	3.6	498.0	470	21.0	125.9	32.6	1.816	11.6	732	68.9
1.56	3.6	498.0	470	22.0	158.5	32.8	1.892	10.8	747	70.4
1.56	3.6	498.0	470	23.0	199.5	32.9	1.950	9.9	759	71.4
1.56	3.6	498.0	470	24.0	251.2	33.0	2.009	9.0	769	72.6
1.56	3.6	498.0	470	25.0	316.2	33.2	2.065	8.2	778	73.7

Input-Output Characteristics Vds＝3.6V, Ibias=600mA - Condition 1

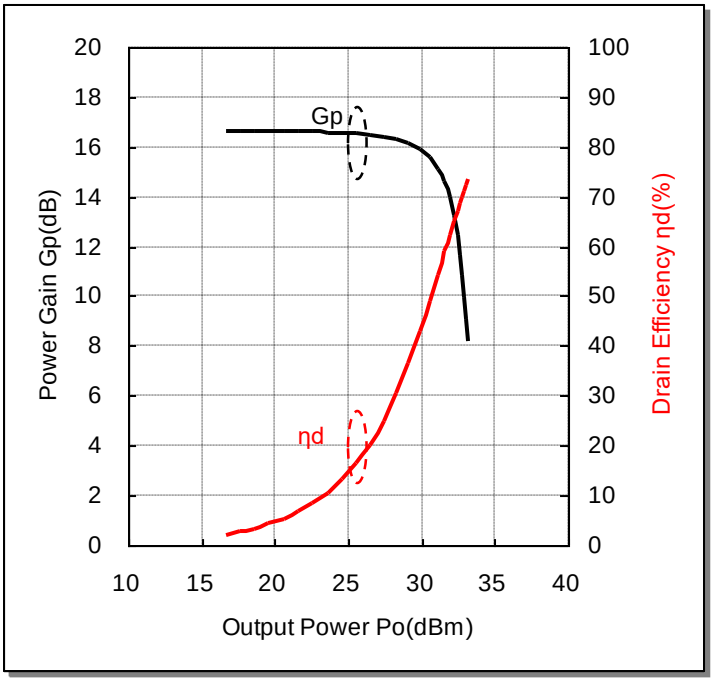
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=595.6mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=3.6V, Ibias=595.6mA

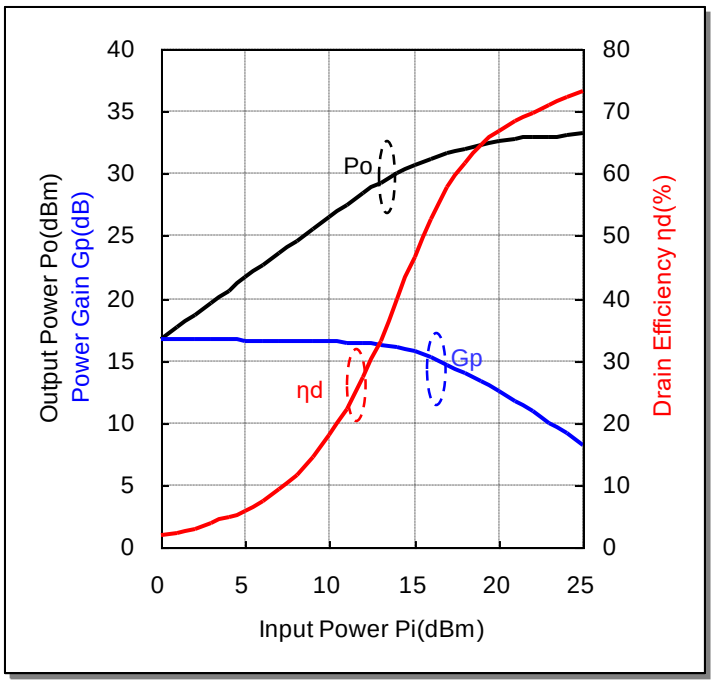
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.61	3.6	595.6	470	0.0	1.0	16.6	0.046	16.6	598	2.1
1.61	3.6	595.6	470	1.0	1.3	17.6	0.058	16.6	597	2.7
1.61	3.6	595.6	470	2.0	1.6	18.6	0.073	16.6	597	3.4
1.61	3.6	595.6	470	3.0	2.0	19.6	0.091	16.6	598	4.2
1.61	3.6	595.6	470	4.0	2.5	20.6	0.115	16.6	599	5.3
1.61	3.6	595.6	470	5.0	3.2	21.6	0.145	16.6	600	6.7
1.61	3.6	595.6	470	6.0	4.0	22.6	0.182	16.6	601	8.4
1.61	3.6	595.6	470	7.0	5.0	23.6	0.228	16.6	602	10.5
1.61	3.6	595.6	470	8.0	6.3	24.5	0.285	16.5	604	13.1
1.61	3.6	595.6	470	9.0	7.9	25.5	0.356	16.5	606	16.3
1.61	3.6	595.6	470	10.0	10.0	26.5	0.445	16.5	609	20.3
1.61	3.6	595.6	470	11.0	12.6	27.4	0.552	16.4	614	25.0
1.61	3.6	595.6	470	12.0	15.8	28.3	0.678	16.3	620	30.4
1.61	3.6	595.6	470	13.0	20.0	29.1	0.822	16.1	627	36.4
1.61	3.6	595.6	470	14.0	25.1	29.9	0.979	15.9	636	42.8
1.61	3.6	595.6	470	15.0	31.6	30.6	1.140	15.6	648	48.9
1.61	3.6	595.6	470	16.0	39.8	31.1	1.297	15.1	663	54.4
1.61	3.6	595.6	470	17.0	50.1	31.6	1.442	14.6	679	59.0
1.61	3.6	595.6	470	18.0	63.1	31.9	1.563	13.9	696	62.4
1.61	3.6	595.6	470	19.0	79.4	32.2	1.675	13.2	715	65.1
1.61	3.6	595.6	470	20.0	100.0	32.5	1.766	12.5	731	67.1
1.61	3.6	595.6	470	21.0	125.9	32.7	1.845	11.7	747	68.6
1.61	3.6	595.6	470	22.0	158.5	32.8	1.914	10.8	760	70.0
1.61	3.6	595.6	470	23.0	199.5	33.0	1.977	10.0	771	71.3
1.61	3.6	595.6	470	24.0	251.2	33.1	2.028	9.1	780	72.2
1.61	3.6	595.6	470	25.0	316.2	33.2	2.080	8.2	788	73.3

Input-Output Characteristics Vds＝3.6V, Ibias=700mA - Condition 1

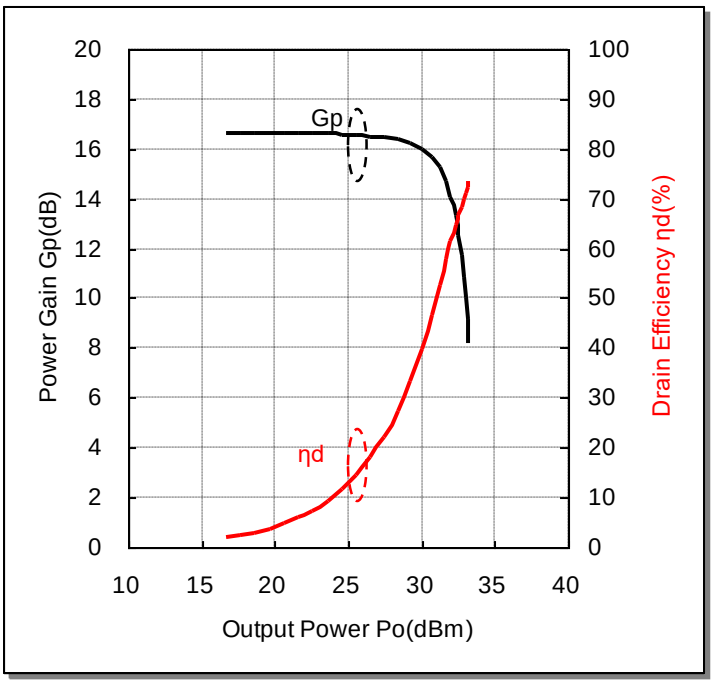
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=687.2mA

Power Gain, Drain Efficiency vs Output Power



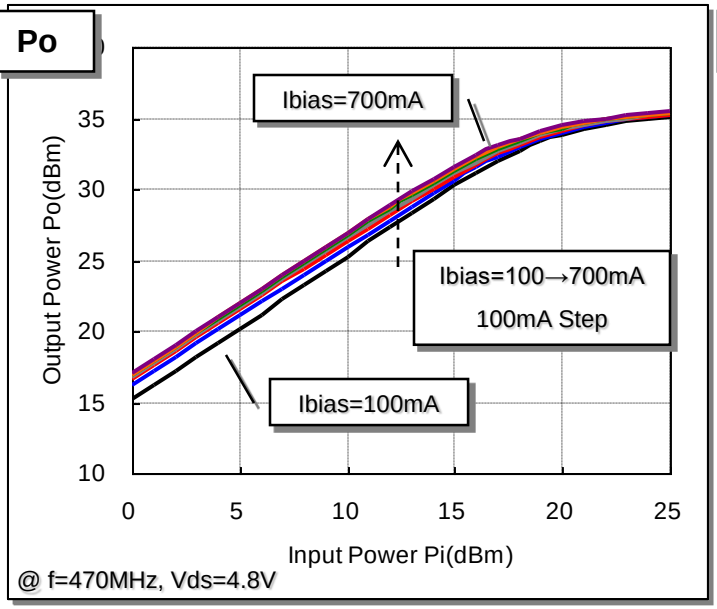
@ f=470MHz, Vds=3.6V, Ibias=687.2mA

Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.66	3.6	687.2	470	0.0	1.0	16.7	0.046	16.7	688	1.9
1.66	3.6	687.2	470	1.0	1.3	17.6	0.058	16.6	688	2.4
1.66	3.6	687.2	470	2.0	1.6	18.6	0.073	16.6	688	3.0
1.66	3.6	687.2	470	3.0	2.0	19.6	0.092	16.6	688	3.7
1.66	3.6	687.2	470	4.0	2.5	20.6	0.116	16.6	689	4.7
1.66	3.6	687.2	470	5.0	3.2	21.6	0.145	16.6	689	5.9
1.66	3.6	687.2	470	6.0	4.0	22.6	0.182	16.6	690	7.3
1.66	3.6	687.2	470	7.0	5.0	23.6	0.229	16.6	690	9.2
1.66	3.6	687.2	470	8.0	6.3	24.6	0.286	16.6	691	11.5
1.66	3.6	687.2	470	9.0	7.9	25.5	0.358	16.5	692	14.4
1.66	3.6	687.2	470	10.0	10.0	26.5	0.447	16.5	693	17.9
1.66	3.6	687.2	470	11.0	12.6	27.4	0.555	16.4	695	22.2
1.66	3.6	687.2	470	12.0	15.8	28.4	0.685	16.4	696	27.4
1.66	3.6	687.2	470	13.0	20.0	29.2	0.834	16.2	698	33.2
1.66	3.6	687.2	470	14.0	25.1	30.0	0.998	16.0	697	39.7
1.66	3.6	687.2	470	15.0	31.6	30.7	1.167	15.7	696	46.5
1.66	3.6	687.2	470	16.0	39.8	31.2	1.327	15.2	699	52.7
1.66	3.6	687.2	470	17.0	50.1	31.7	1.472	14.7	707	57.9
1.66	3.6	687.2	470	18.0	63.1	32.0	1.592	14.0	718	61.6
1.66	3.6	687.2	470	19.0	79.4	32.3	1.702	13.3	732	64.6
1.66	3.6	687.2	470	20.0	100.0	32.5	1.795	12.5	747	66.7
1.66	3.6	687.2	470	21.0	125.9	32.7	1.871	11.7	760	68.3
1.66	3.6	687.2	470	22.0	158.5	32.9	1.936	10.9	772	69.7
1.66	3.6	687.2	470	23.0	199.5	33.0	2.000	10.0	782	71.1
1.66	3.6	687.2	470	24.0	251.2	33.1	2.051	9.1	789	72.2
1.66	3.6	687.2	470	25.0	316.2	33.2	2.104	8.2	796	73.4

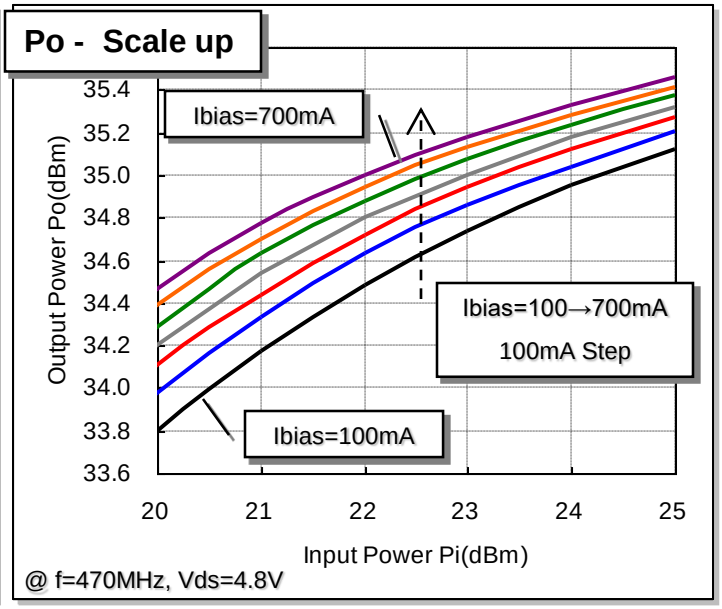
Input - Output Characteristics Vds =4.8V - Condition 1

Po



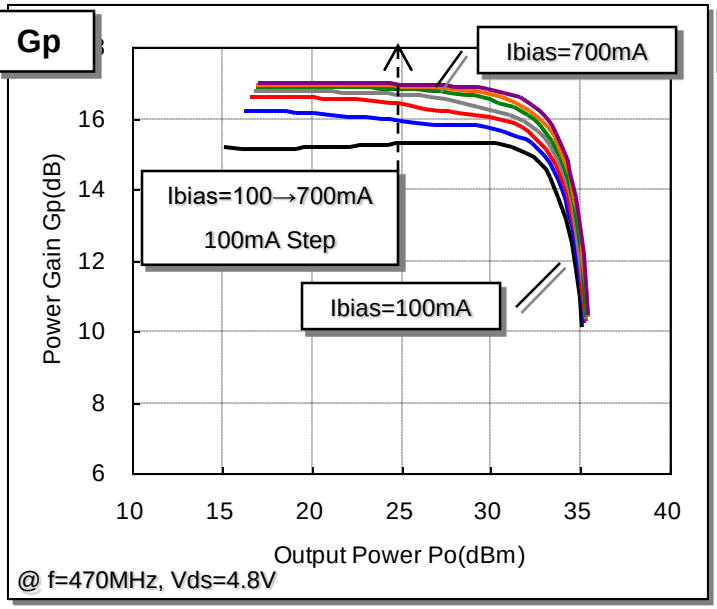
@ f=470MHz, Vds=4.8V

Po - Scale up



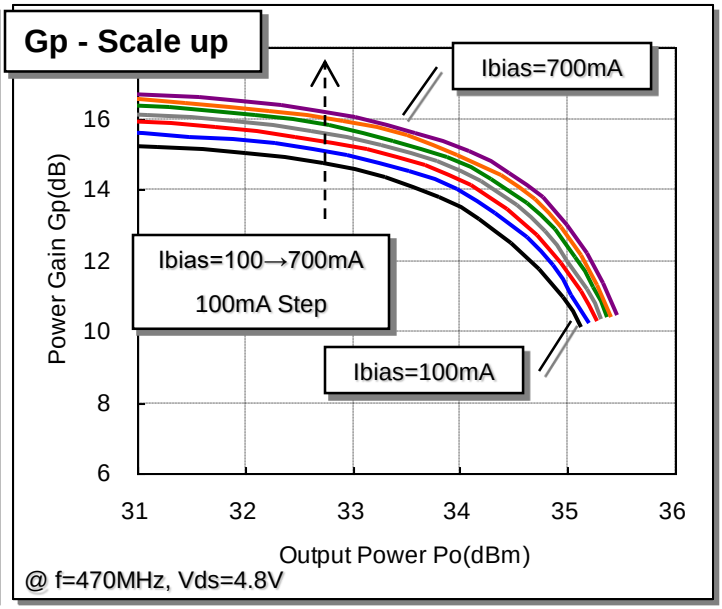
@ f=470MHz, Vds=4.8V

Gp



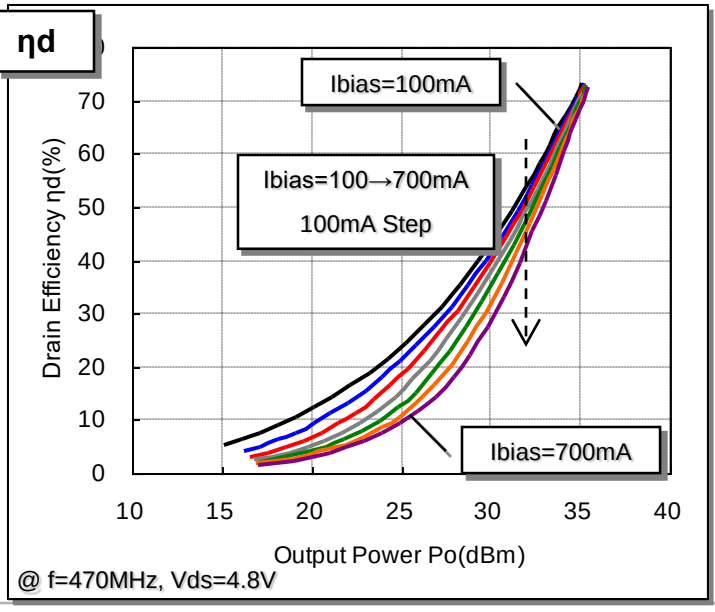
@ f=470MHz, Vds=4.8V

Gp - Scale up



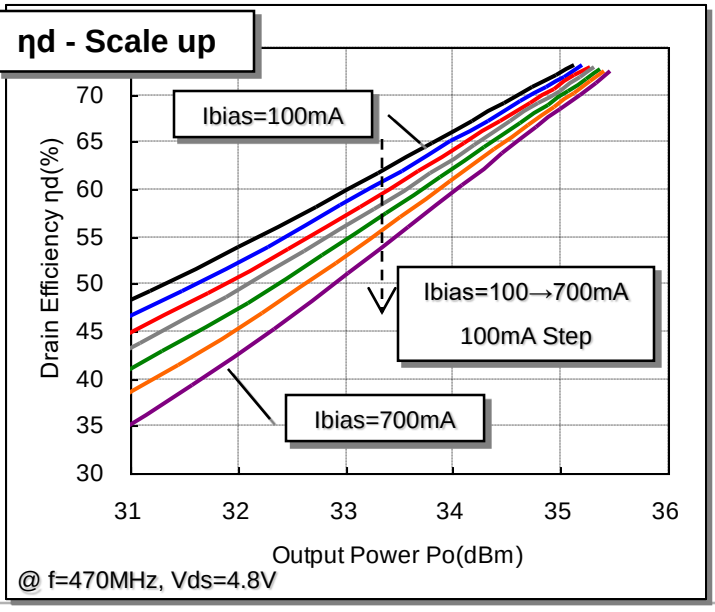
@ f=470MHz, Vds=4.8V

ηd



@ f=470MHz, Vds=4.8V

ηd - Scale up

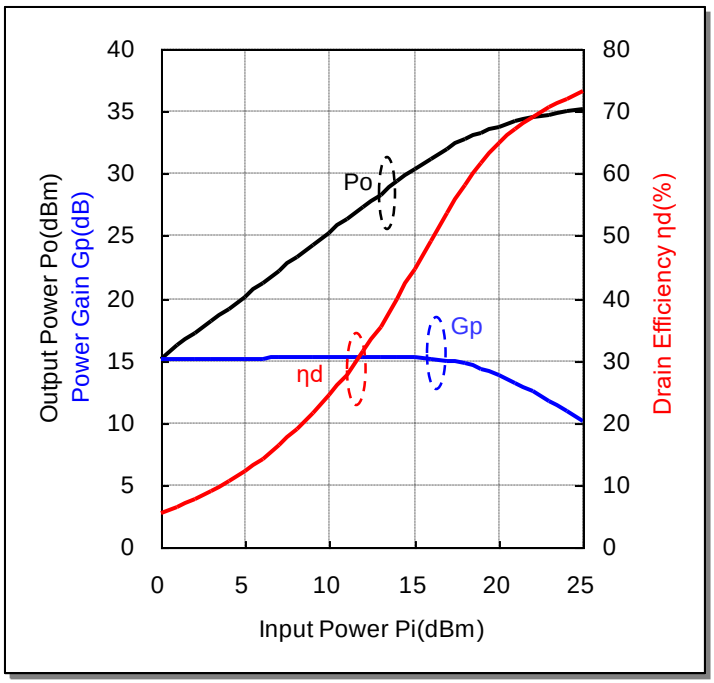


@ f=470MHz, Vds=4.8V

Input-Output Characteristics Vds＝4.8V, Ibias=100mA - Condition 1

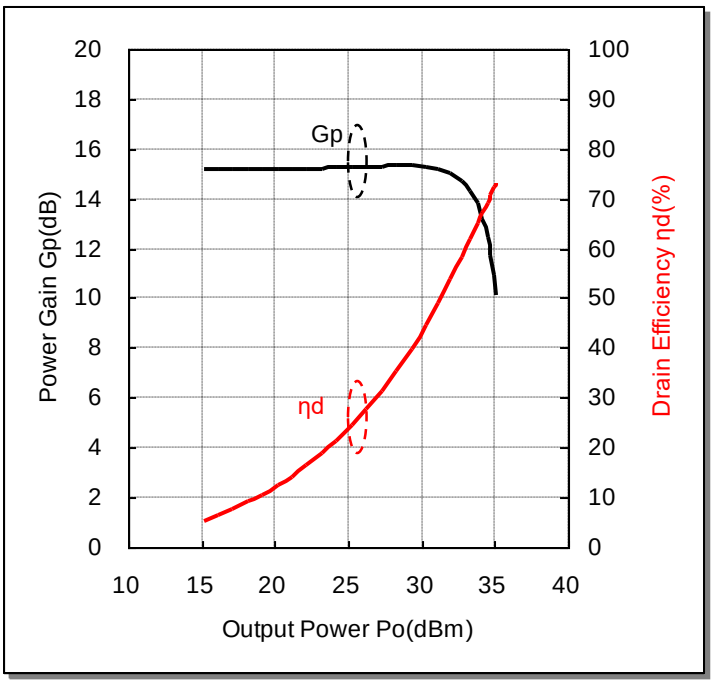
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=101.4mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=4.8V, Ibias=101.4mA

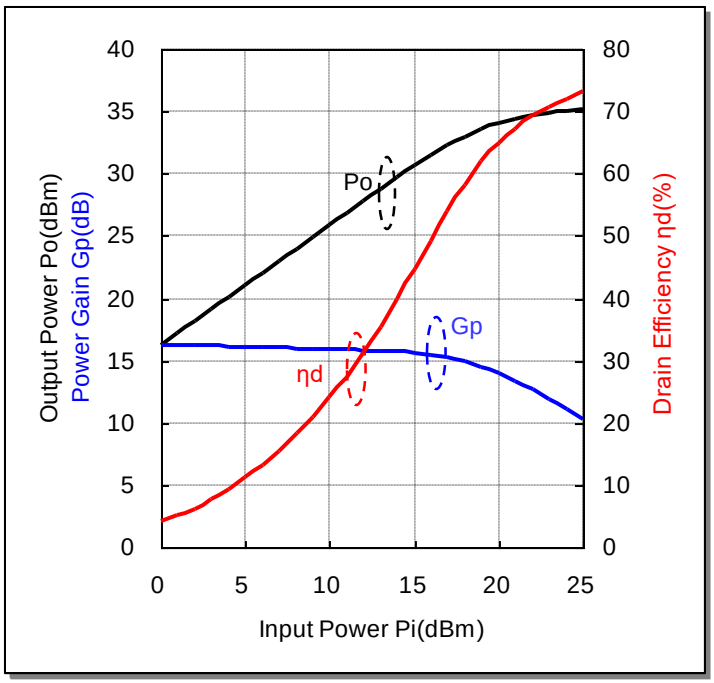
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.26	4.8	101.4	470	0.0	1.0	15.2	0.033	15.2	127	5.4
1.26	4.8	101.4	470	1.0	1.3	16.1	0.041	15.1	133	6.5
1.26	4.8	101.4	470	2.0	1.6	17.1	0.052	15.1	141	7.7
1.26	4.8	101.4	470	3.0	2.0	18.1	0.065	15.1	150	9.1
1.26	4.8	101.4	470	4.0	2.5	19.1	0.082	15.1	162	10.6
1.26	4.8	101.4	470	5.0	3.2	20.2	0.104	15.2	176	12.3
1.26	4.8	101.4	470	6.0	4.0	21.2	0.131	15.2	192	14.2
1.26	4.8	101.4	470	7.0	5.0	22.2	0.166	15.2	211	16.4
1.26	4.8	101.4	470	8.0	6.3	23.2	0.210	15.2	232	18.8
1.26	4.8	101.4	470	9.0	7.9	24.2	0.265	15.2	258	21.5
1.26	4.8	101.4	470	10.0	10.0	25.3	0.337	15.3	286	24.5
1.26	4.8	101.4	470	11.0	12.6	26.3	0.425	15.3	319	27.7
1.26	4.8	101.4	470	12.0	15.8	27.3	0.537	15.3	357	31.3
1.26	4.8	101.4	470	13.0	20.0	28.3	0.678	15.3	399	35.3
1.26	4.8	101.4	470	14.0	25.1	29.3	0.855	15.3	448	39.8
1.26	4.8	101.4	470	15.0	31.6	30.3	1.072	15.3	501	44.6
1.26	4.8	101.4	470	16.0	39.8	31.2	1.312	15.2	556	49.2
1.26	4.8	101.4	470	17.0	50.1	32.0	1.585	15.0	614	53.8
1.26	4.8	101.4	470	18.0	63.1	32.7	1.871	14.7	671	58.1
1.26	4.8	101.4	470	19.0	79.4	33.3	2.143	14.3	723	61.8
1.26	4.8	101.4	470	20.0	100.0	33.8	2.399	13.8	770	64.9
1.26	4.8	101.4	470	21.0	125.9	34.2	2.612	13.2	811	67.1
1.26	4.8	101.4	470	22.0	158.5	34.5	2.805	12.5	846	69.1
1.26	4.8	101.4	470	23.0	199.5	34.7	2.979	11.7	878	70.7
1.26	4.8	101.4	470	24.0	251.2	35.0	3.126	11.0	903	72.1
1.26	4.8	101.4	470	25.0	316.2	35.1	3.251	10.1	926	73.2

Input-Output Characteristics Vds＝4.8V, Ibias=200mA - Condition 1

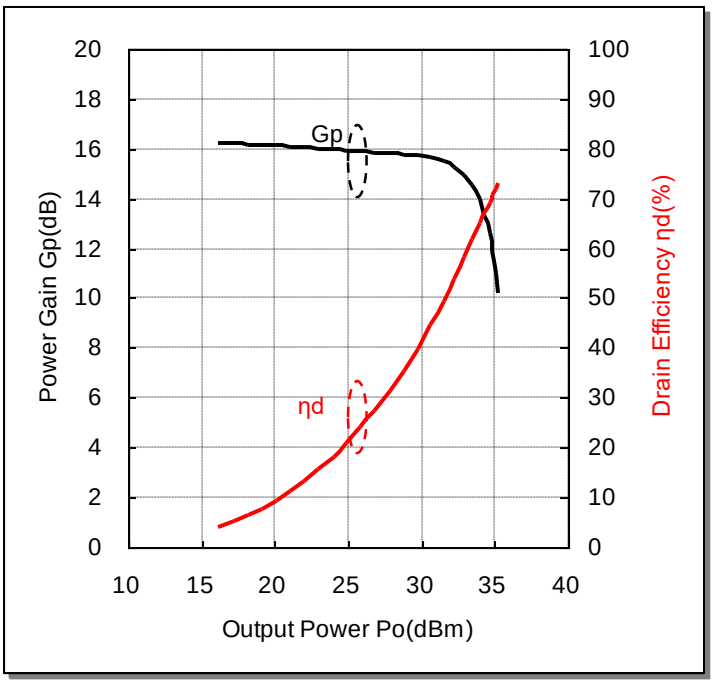
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=199.3mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=4.8V, Ibias=199.3mA

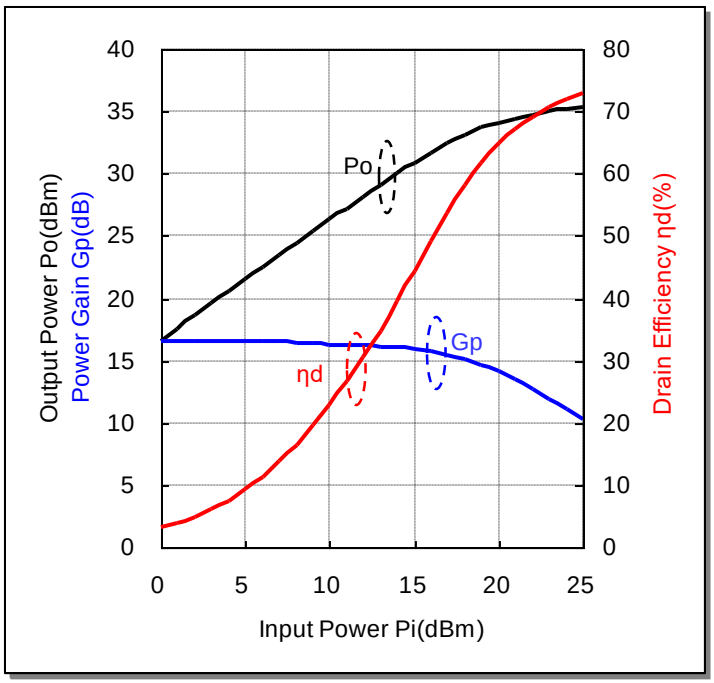
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.35	4.8	199.3	470	0.0	1.0	16.2	0.042	16.2	212	4.1
1.35	4.8	199.3	470	1.0	1.3	17.2	0.052	16.2	215	5.1
1.35	4.8	199.3	470	2.0	1.6	18.2	0.066	16.2	220	6.2
1.35	4.8	199.3	470	3.0	2.0	19.1	0.082	16.1	225	7.6
1.35	4.8	199.3	470	4.0	2.5	20.1	0.103	16.1	232	9.2
1.35	4.8	199.3	470	5.0	3.2	21.1	0.129	16.1	241	11.1
1.35	4.8	199.3	470	6.0	4.0	22.0	0.160	16.0	253	13.2
1.35	4.8	199.3	470	7.0	5.0	23.0	0.200	16.0	268	15.6
1.35	4.8	199.3	470	8.0	6.3	24.0	0.250	16.0	287	18.2
1.35	4.8	199.3	470	9.0	7.9	24.9	0.309	15.9	308	20.9
1.35	4.8	199.3	470	10.0	10.0	25.9	0.386	15.9	335	24.0
1.35	4.8	199.3	470	11.0	12.6	26.8	0.482	15.8	366	27.4
1.35	4.8	199.3	470	12.0	15.8	27.8	0.603	15.8	402	31.2
1.35	4.8	199.3	470	13.0	20.0	28.8	0.755	15.8	444	35.4
1.35	4.8	199.3	470	14.0	25.1	29.7	0.938	15.7	490	39.8
1.35	4.8	199.3	470	15.0	31.6	30.6	1.156	15.6	541	44.5
1.35	4.8	199.3	470	16.0	39.8	31.5	1.409	15.5	596	49.3
1.35	4.8	199.3	470	17.0	50.1	32.3	1.690	15.3	653	53.9
1.35	4.8	199.3	470	18.0	63.1	33.0	1.977	15.0	707	58.3
1.35	4.8	199.3	470	19.0	79.4	33.5	2.249	14.5	757	61.9
1.35	4.8	199.3	470	20.0	100.0	34.0	2.500	14.0	802	65.0
1.35	4.8	199.3	470	21.0	125.9	34.3	2.710	13.3	840	67.2
1.35	4.8	199.3	470	22.0	158.5	34.6	2.904	12.6	874	69.2
1.35	4.8	199.3	470	23.0	199.5	34.9	3.062	11.9	901	70.8
1.35	4.8	199.3	470	24.0	251.2	35.0	3.192	11.0	925	71.9
1.35	4.8	199.3	470	25.0	316.2	35.2	3.319	10.2	945	73.2

Input-Output Characteristics Vds=4.8V, Ibias=300mA - Condition 1

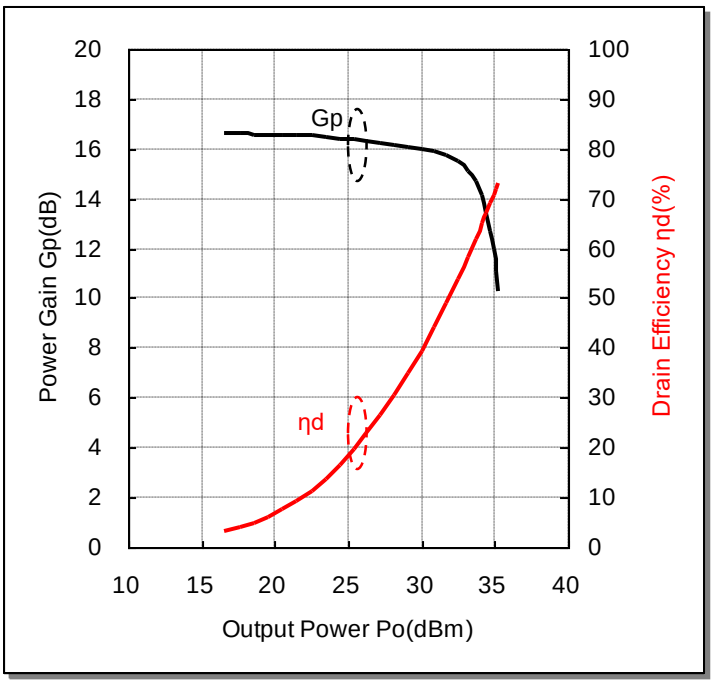
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=297.1mA,

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=4.8V, Ibias=297.1mA

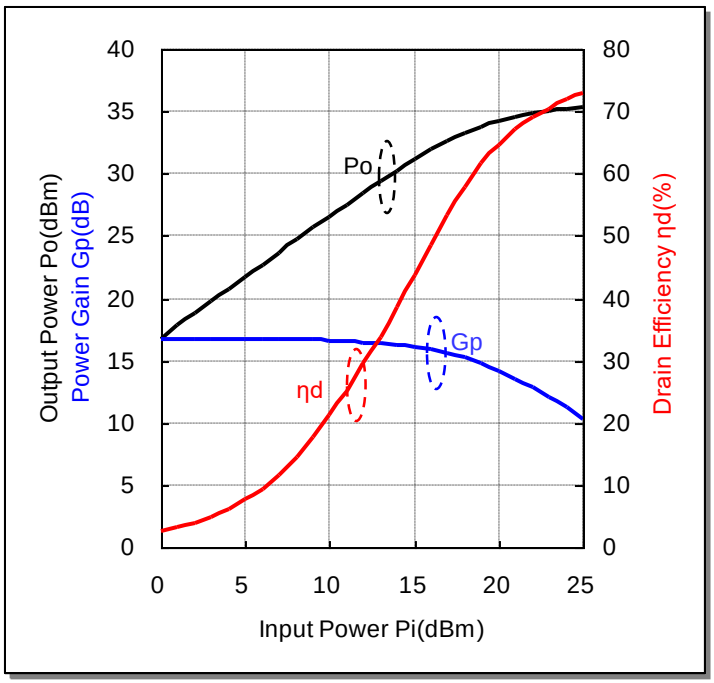
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.42	4.8	297.1	470	0.0	1.0	16.6	0.046	16.6	304	3.1
1.42	4.8	297.1	470	1.0	1.3	17.6	0.057	16.6	306	3.9
1.42	4.8	297.1	470	2.0	1.6	18.6	0.072	16.6	309	4.9
1.42	4.8	297.1	470	3.0	2.0	19.6	0.091	16.6	312	6.1
1.42	4.8	297.1	470	4.0	2.5	20.5	0.114	16.5	315	7.5
1.42	4.8	297.1	470	5.0	3.2	21.5	0.142	16.5	321	9.2
1.42	4.8	297.1	470	6.0	4.0	22.5	0.178	16.5	328	11.3
1.42	4.8	297.1	470	7.0	5.0	23.5	0.222	16.5	338	13.7
1.42	4.8	297.1	470	8.0	6.3	24.4	0.277	16.4	350	16.5
1.42	4.8	297.1	470	9.0	7.9	25.4	0.345	16.4	366	19.6
1.42	4.8	297.1	470	10.0	10.0	26.3	0.424	16.3	387	22.8
1.42	4.8	297.1	470	11.0	12.6	27.2	0.526	16.2	413	26.5
1.42	4.8	297.1	470	12.0	15.8	28.1	0.653	16.1	446	30.5
1.42	4.8	297.1	470	13.0	20.0	29.1	0.811	16.1	485	34.8
1.42	4.8	297.1	470	14.0	25.1	30.0	1.002	16.0	529	39.5
1.42	4.8	297.1	470	15.0	31.6	30.9	1.227	15.9	578	44.3
1.42	4.8	297.1	470	16.0	39.8	31.7	1.486	15.7	631	49.1
1.42	4.8	297.1	470	17.0	50.1	32.5	1.766	15.5	685	53.7
1.42	4.8	297.1	470	18.0	63.1	33.1	2.056	15.1	737	58.1
1.42	4.8	297.1	470	19.0	79.4	33.7	2.328	14.7	785	61.8
1.42	4.8	297.1	470	20.0	100.0	34.1	2.576	14.1	827	64.9
1.42	4.8	297.1	470	21.0	125.9	34.4	2.780	13.4	863	67.1
1.42	4.8	297.1	470	22.0	158.5	34.7	2.965	12.7	895	69.0
1.42	4.8	297.1	470	23.0	199.5	34.9	3.119	11.9	920	70.7
1.42	4.8	297.1	470	24.0	251.2	35.1	3.251	11.1	941	71.9
1.42	4.8	297.1	470	25.0	316.2	35.3	3.365	10.3	961	73.0

Input-Output Characteristics Vds=4.8V, Ibias=400mA - Condition 1

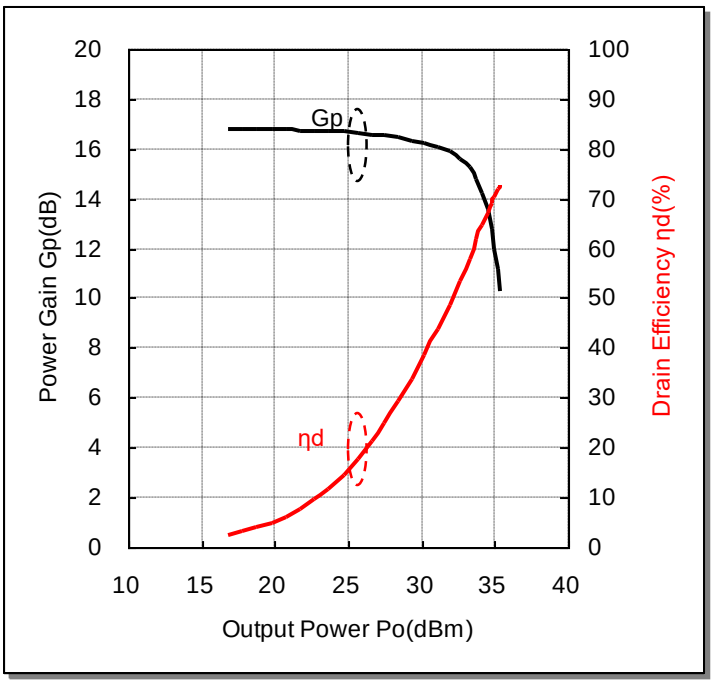
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=392.2mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=4.8V, Ibias=392.2mA

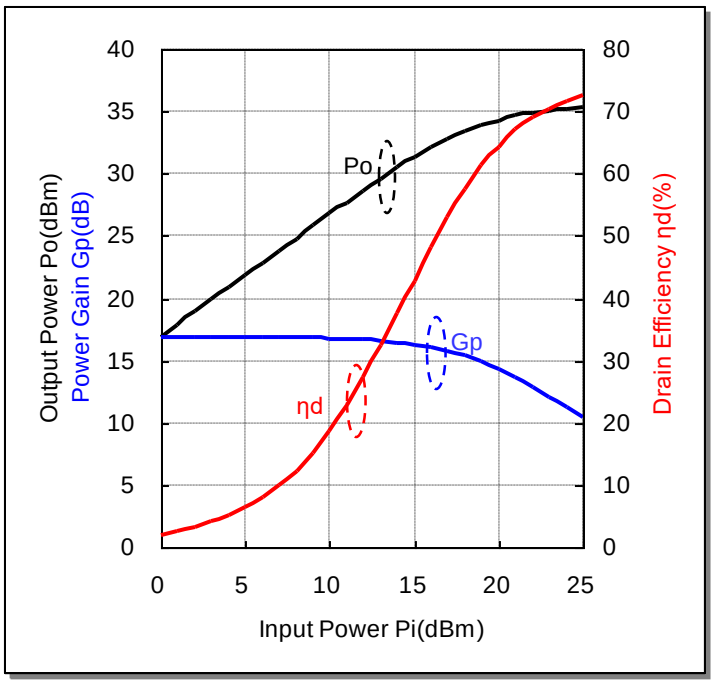
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.48	4.8	392.2	470	0.0	1.0	16.8	0.048	16.8	397	2.5
1.48	4.8	392.2	470	1.0	1.3	17.8	0.060	16.8	397	3.1
1.48	4.8	392.2	470	2.0	1.6	18.8	0.075	16.8	400	3.9
1.48	4.8	392.2	470	3.0	2.0	19.8	0.095	16.8	401	4.9
1.48	4.8	392.2	470	4.0	2.5	20.8	0.119	16.8	403	6.1
1.48	4.8	392.2	470	5.0	3.2	21.7	0.149	16.7	407	7.6
1.48	4.8	392.2	470	6.0	4.0	22.7	0.187	16.7	410	9.5
1.48	4.8	392.2	470	7.0	5.0	23.7	0.234	16.7	417	11.7
1.48	4.8	392.2	470	8.0	6.3	24.7	0.293	16.7	424	14.4
1.48	4.8	392.2	470	9.0	7.9	25.6	0.366	16.6	435	17.5
1.48	4.8	392.2	470	10.0	10.0	26.6	0.455	16.6	449	21.1
1.48	4.8	392.2	470	11.0	12.6	27.5	0.565	16.5	469	25.1
1.48	4.8	392.2	470	12.0	15.8	28.5	0.700	16.5	495	29.4
1.48	4.8	392.2	470	13.0	20.0	29.3	0.855	16.3	527	33.8
1.48	4.8	392.2	470	14.0	25.1	30.2	1.052	16.2	567	38.6
1.48	4.8	392.2	470	15.0	31.6	31.1	1.285	16.1	613	43.7
1.48	4.8	392.2	470	16.0	39.8	31.9	1.549	15.9	663	48.7
1.48	4.8	392.2	470	17.0	50.1	32.6	1.828	15.6	714	53.4
1.48	4.8	392.2	470	18.0	63.1	33.3	2.118	15.3	763	57.9
1.48	4.8	392.2	470	19.0	79.4	33.8	2.393	14.8	808	61.7
1.48	4.8	392.2	470	20.0	100.0	34.2	2.630	14.2	847	64.7
1.48	4.8	392.2	470	21.0	125.9	34.5	2.844	13.5	882	67.2
1.48	4.8	392.2	470	22.0	158.5	34.8	3.020	12.8	911	69.0
1.48	4.8	392.2	470	23.0	199.5	35.0	3.162	12.0	935	70.4
1.48	4.8	392.2	470	24.0	251.2	35.2	3.296	11.2	956	71.8
1.48	4.8	392.2	470	25.0	316.2	35.3	3.404	10.3	973	72.9

Input-Output Characteristics Vds=4.8V, Ibias=500mA - Condition 1

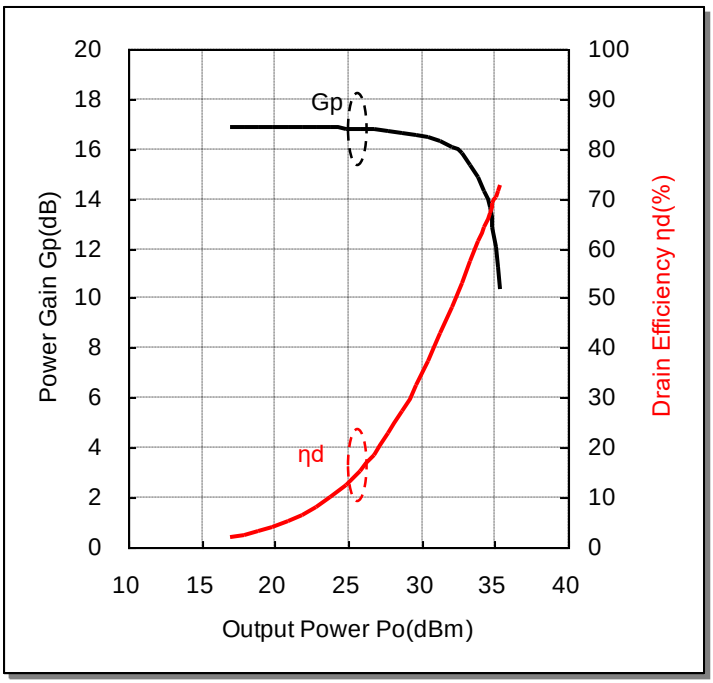
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=495.5mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=4.8V, Ibias=495.5mA

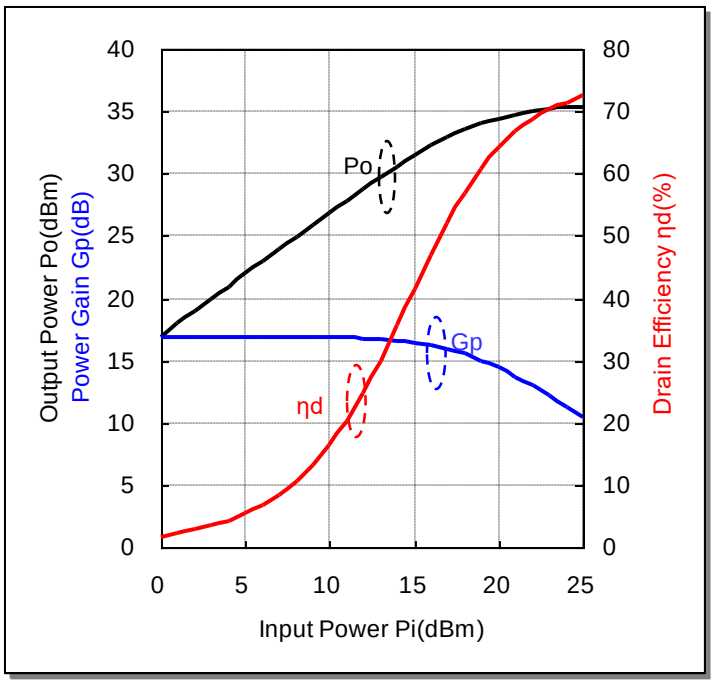
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.53	4.8	495.5	470	0.0	1.0	16.9	0.049	16.9	498	2.0
1.53	4.8	495.5	470	1.0	1.3	17.9	0.062	16.9	499	2.6
1.53	4.8	495.5	470	2.0	1.6	18.9	0.077	16.9	500	3.2
1.53	4.8	495.5	470	3.0	2.0	19.9	0.097	16.9	501	4.0
1.53	4.8	495.5	470	4.0	2.5	20.9	0.122	16.9	502	5.1
1.53	4.8	495.5	470	5.0	3.2	21.9	0.153	16.9	504	6.3
1.53	4.8	495.5	470	6.0	4.0	22.9	0.193	16.9	507	7.9
1.53	4.8	495.5	470	7.0	5.0	23.8	0.242	16.8	510	9.9
1.53	4.8	495.5	470	8.0	6.3	24.8	0.303	16.8	515	12.3
1.53	4.8	495.5	470	9.0	7.9	25.8	0.379	16.8	521	15.2
1.53	4.8	495.5	470	10.0	10.0	26.8	0.473	16.8	530	18.6
1.53	4.8	495.5	470	11.0	12.6	27.7	0.590	16.7	541	22.7
1.53	4.8	495.5	470	12.0	15.8	28.6	0.731	16.6	559	27.3
1.53	4.8	495.5	470	13.0	20.0	29.6	0.906	16.6	583	32.3
1.53	4.8	495.5	470	14.0	25.1	30.5	1.109	16.5	617	37.5
1.53	4.8	495.5	470	15.0	31.6	31.3	1.349	16.3	657	42.8
1.53	4.8	495.5	470	16.0	39.8	32.1	1.618	16.1	702	48.0
1.53	4.8	495.5	470	17.0	50.1	32.8	1.901	15.8	748	52.9
1.53	4.8	495.5	470	18.0	63.1	33.4	2.178	15.4	791	57.4
1.53	4.8	495.5	470	19.0	79.4	33.9	2.449	14.9	833	61.3
1.53	4.8	495.5	470	20.0	100.0	34.3	2.685	14.3	870	64.3
1.53	4.8	495.5	470	21.0	125.9	34.6	2.904	13.6	902	67.1
1.53	4.8	495.5	470	22.0	158.5	34.9	3.076	12.9	929	69.0
1.53	4.8	495.5	470	23.0	199.5	35.1	3.214	12.1	952	70.4
1.53	4.8	495.5	470	24.0	251.2	35.2	3.334	11.2	970	71.6
1.53	4.8	495.5	470	25.0	316.2	35.4	3.443	10.4	986	72.7

Input-Output Characteristics Vds=4.8V, Ibias=600mA - Condition 1

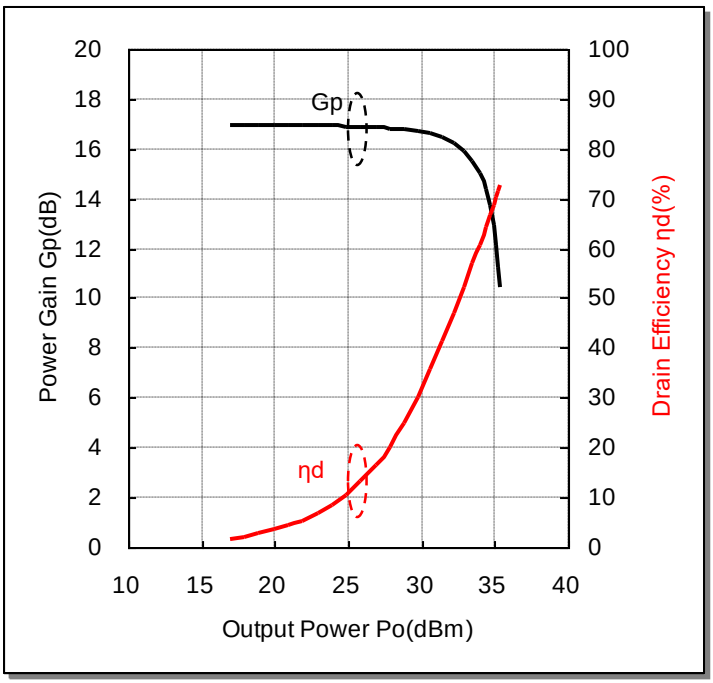
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=593.7mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=4.8V, Ibias=593.7mA

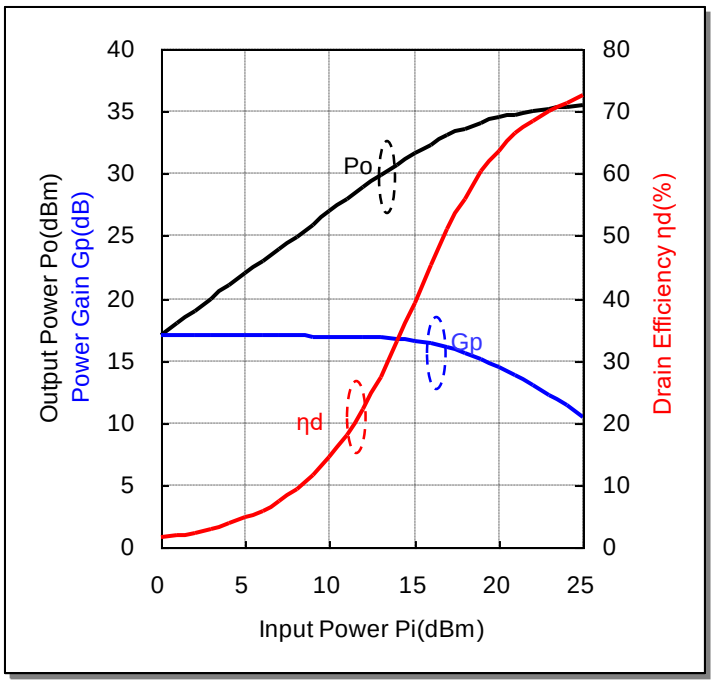
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.59	4.8	593.7	470	0.0	1.0	16.9	0.049	16.9	596	1.7
1.59	4.8	593.7	470	1.0	1.3	17.9	0.062	16.9	596	2.2
1.59	4.8	593.7	470	2.0	1.6	18.9	0.078	16.9	596	2.7
1.59	4.8	593.7	470	3.0	2.0	19.9	0.098	16.9	597	3.4
1.59	4.8	593.7	470	4.0	2.5	20.9	0.124	16.9	598	4.3
1.59	4.8	593.7	470	5.0	3.2	21.9	0.156	16.9	600	5.4
1.59	4.8	593.7	470	6.0	4.0	22.9	0.195	16.9	602	6.8
1.59	4.8	593.7	470	7.0	5.0	23.9	0.246	16.9	603	8.5
1.59	4.8	593.7	470	8.0	6.3	24.9	0.308	16.9	607	10.6
1.59	4.8	593.7	470	9.0	7.9	25.9	0.386	16.9	610	13.2
1.59	4.8	593.7	470	10.0	10.0	26.9	0.484	16.9	615	16.4
1.59	4.8	593.7	470	11.0	12.6	27.8	0.605	16.8	623	20.3
1.59	4.8	593.7	470	12.0	15.8	28.8	0.753	16.8	633	24.8
1.59	4.8	593.7	470	13.0	20.0	29.7	0.935	16.7	649	30.0
1.59	4.8	593.7	470	14.0	25.1	30.6	1.148	16.6	672	35.6
1.59	4.8	593.7	470	15.0	31.6	31.5	1.396	16.5	703	41.4
1.59	4.8	593.7	470	16.0	39.8	32.2	1.667	16.2	741	46.9
1.59	4.8	593.7	470	17.0	50.1	32.9	1.954	15.9	781	52.1
1.59	4.8	593.7	470	18.0	63.1	33.5	2.244	15.5	821	57.0
1.59	4.8	593.7	470	19.0	79.4	34.0	2.500	15.0	857	60.8
1.59	4.8	593.7	470	20.0	100.0	34.4	2.748	14.4	891	64.2
1.59	4.8	593.7	470	21.0	125.9	34.7	2.951	13.7	921	66.7
1.59	4.8	593.7	470	22.0	158.5	34.9	3.119	12.9	946	68.7
1.59	4.8	593.7	470	23.0	199.5	35.1	3.258	12.1	967	70.2
1.59	4.8	593.7	470	24.0	251.2	35.3	3.373	11.3	984	71.4
1.59	4.8	593.7	470	25.0	316.2	35.4	3.475	10.4	998	72.5

Input-Output Characteristics Vds=4.8V, Ibias=700mA - Condition 1

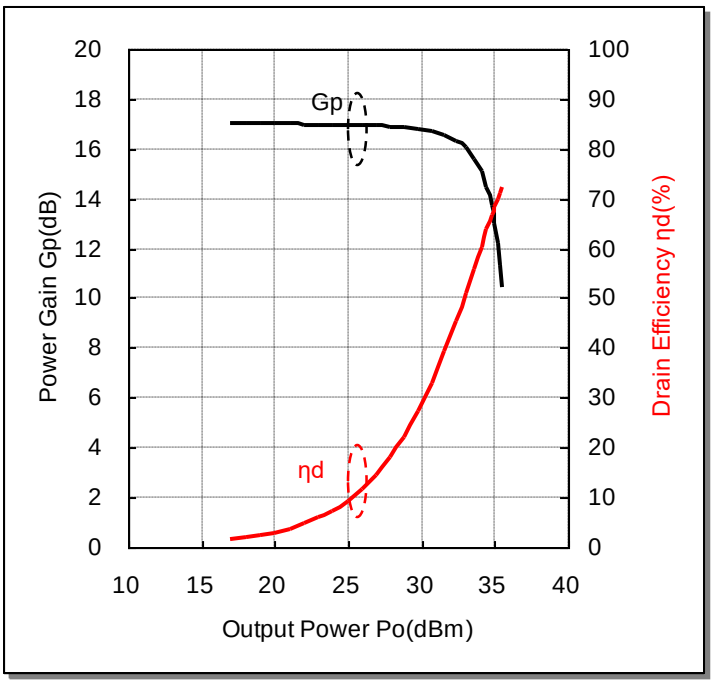
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=695.2mA

Power Gain, Drain Efficiency vs Output Power



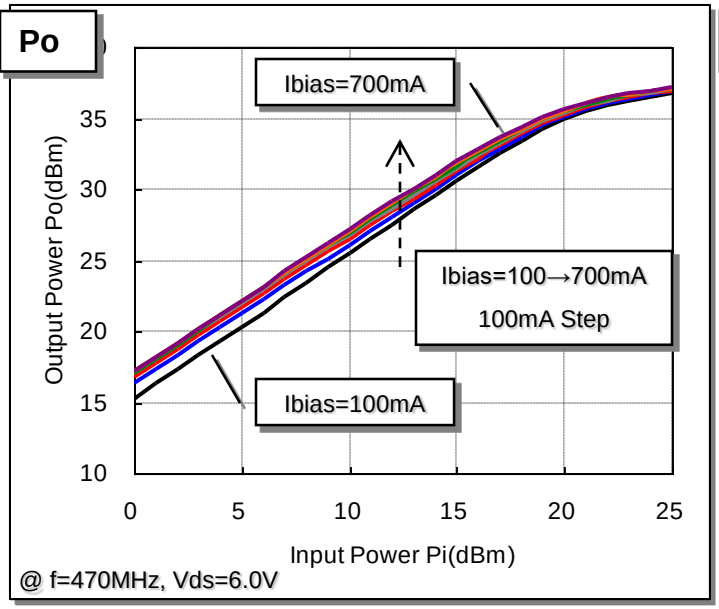
@ f=470MHz, Vds=4.8V, Ibias=695.2mA

Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.64	4.8	695.2	470	0.0	1.0	17.0	0.050	17.0	697	1.5
1.64	4.8	695.2	470	1.0	1.3	18.0	0.063	17.0	697	1.9
1.64	4.8	695.2	470	2.0	1.6	19.0	0.079	17.0	697	2.4
1.64	4.8	695.2	470	3.0	2.0	20.0	0.100	17.0	698	3.0
1.64	4.8	695.2	470	4.0	2.5	21.0	0.126	17.0	698	3.7
1.64	4.8	695.2	470	5.0	3.2	22.0	0.158	17.0	699	4.7
1.64	4.8	695.2	470	6.0	4.0	23.0	0.198	17.0	700	5.9
1.64	4.8	695.2	470	7.0	5.0	24.0	0.249	17.0	702	7.4
1.64	4.8	695.2	470	8.0	6.3	25.0	0.313	17.0	704	9.3
1.64	4.8	695.2	470	9.0	7.9	25.9	0.393	16.9	706	11.6
1.64	4.8	695.2	470	10.0	10.0	26.9	0.492	16.9	710	14.4
1.64	4.8	695.2	470	11.0	12.6	27.9	0.617	16.9	714	18.0
1.64	4.8	695.2	470	12.0	15.8	28.9	0.769	16.9	720	22.2
1.64	4.8	695.2	470	13.0	20.0	29.8	0.957	16.8	728	27.4
1.64	4.8	695.2	470	14.0	25.1	30.7	1.180	16.7	742	33.1
1.64	4.8	695.2	470	15.0	31.6	31.6	1.439	16.6	762	39.4
1.64	4.8	695.2	470	16.0	39.8	32.3	1.714	16.3	789	45.3
1.64	4.8	695.2	470	17.0	50.1	33.0	2.009	16.0	820	51.1
1.64	4.8	695.2	470	18.0	63.1	33.6	2.286	15.6	851	56.0
1.64	4.8	695.2	470	19.0	79.4	34.1	2.559	15.1	884	60.3
1.64	4.8	695.2	470	20.0	100.0	34.5	2.793	14.5	913	63.8
1.64	4.8	695.2	470	21.0	125.9	34.8	2.999	13.8	940	66.5
1.64	4.8	695.2	470	22.0	158.5	35.0	3.162	13.0	963	68.4
1.64	4.8	695.2	470	23.0	199.5	35.2	3.296	12.2	982	70.0
1.64	4.8	695.2	470	24.0	251.2	35.3	3.412	11.3	997	71.3
1.64	4.8	695.2	470	25.0	316.2	35.5	3.516	10.5	1010	72.5

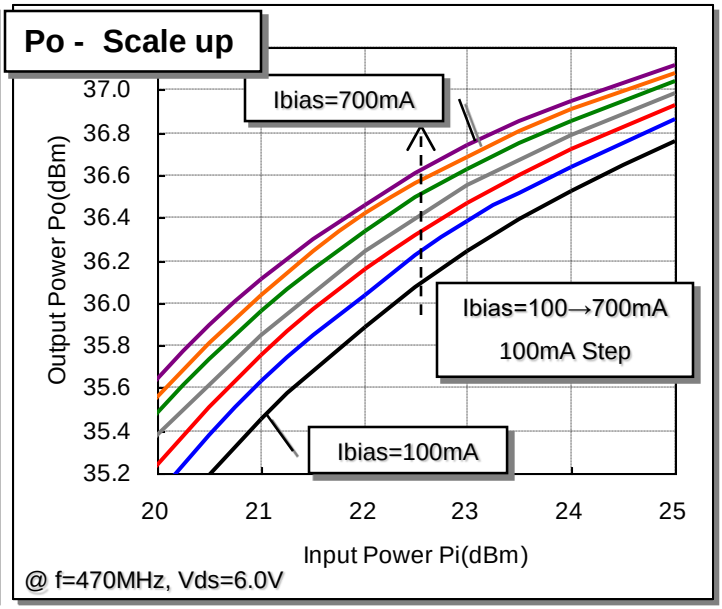
Input - Output Characteristics Vds＝6.0V - Condition 1

Po



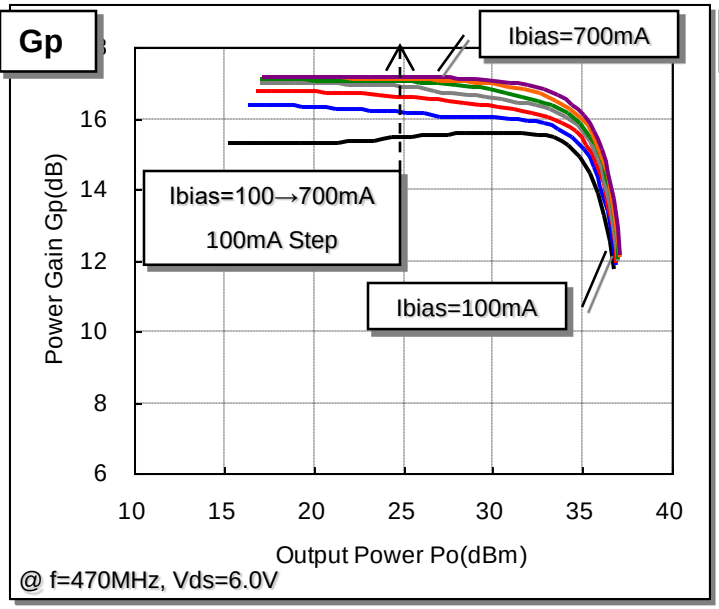
@ f=470MHz, Vds=6.0V

Po - Scale up



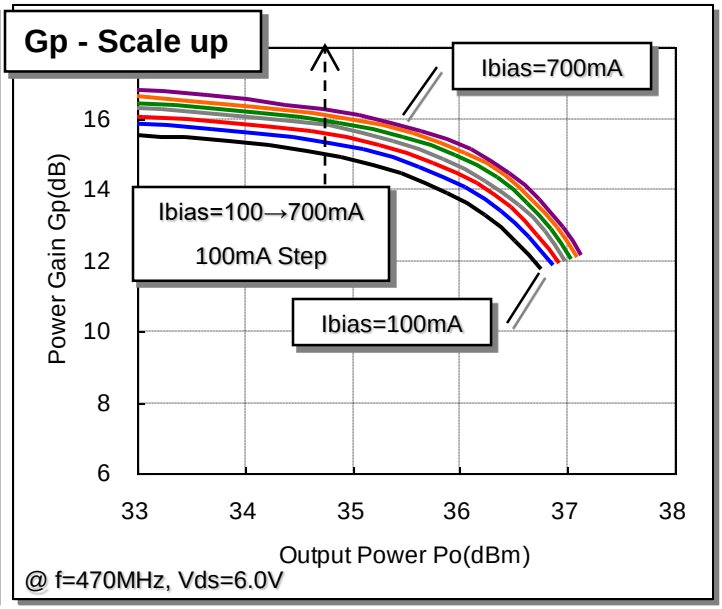
@ f=470MHz, Vds=6.0V

Gp



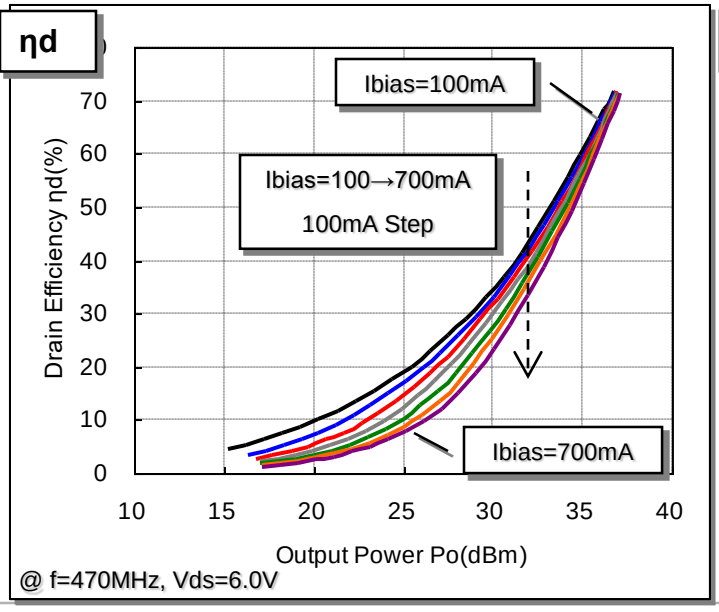
@ f=470MHz, Vds=6.0V

Gp - Scale up



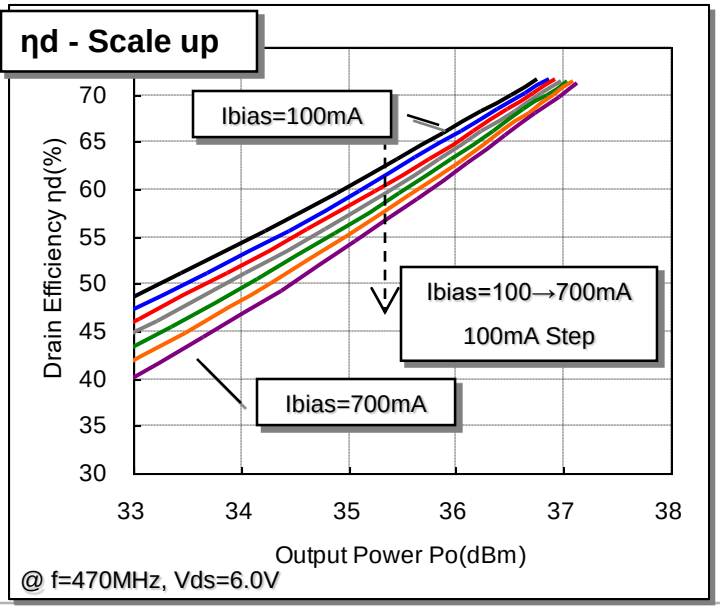
@ f=470MHz, Vds=6.0V

ηd



@ f=470MHz, Vds=6.0V

ηd - Scale up

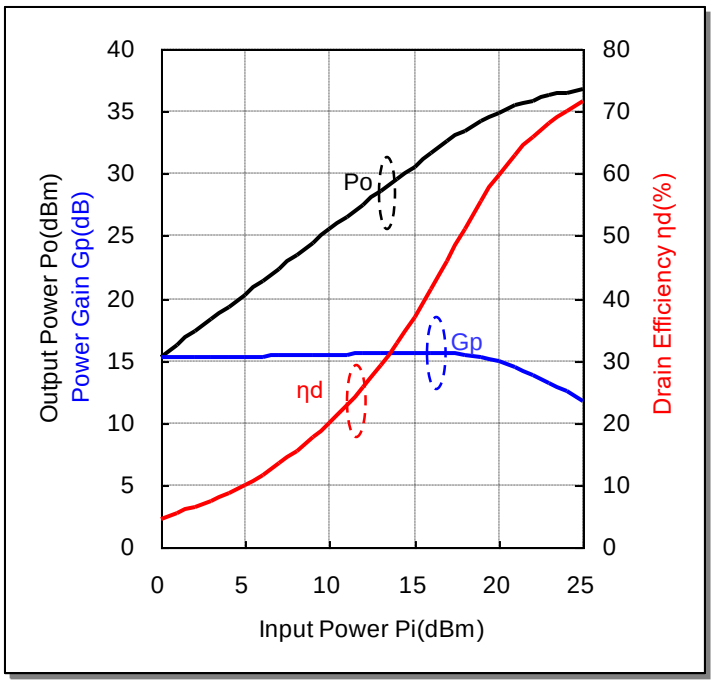


@ f=470MHz, Vds=6.0V

Input-Output Characteristics Vds=6.0V, Ibias=100mA - Condition 1

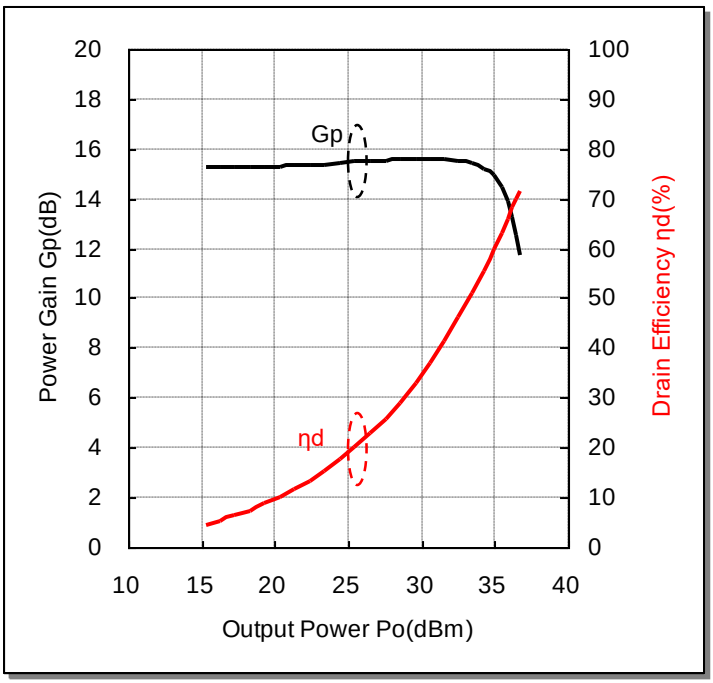
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=98.8mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=6.0V, Ibias=98.8mA

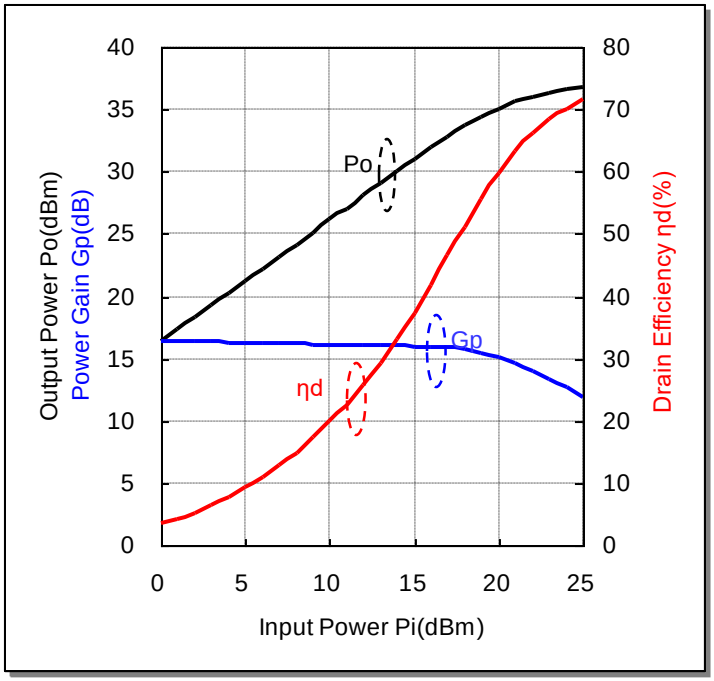
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.24	6.0	98.8	470	0.0	1.0	15.3	0.034	15.3	126	4.4
1.24	6.0	98.8	470	1.0	1.3	16.3	0.042	15.3	133	5.3
1.24	6.0	98.8	470	2.0	1.6	17.3	0.053	15.3	141	6.3
1.24	6.0	98.8	470	3.0	2.0	18.3	0.067	15.3	151	7.4
1.24	6.0	98.8	470	4.0	2.5	19.3	0.085	15.3	163	8.7
1.24	6.0	98.8	470	5.0	3.2	20.3	0.107	15.3	177	10.1
1.24	6.0	98.8	470	6.0	4.0	21.3	0.136	15.3	194	11.6
1.24	6.0	98.8	470	7.0	5.0	22.4	0.172	15.4	214	13.4
1.24	6.0	98.8	470	8.0	6.3	23.4	0.218	15.4	236	15.4
1.24	6.0	98.8	470	9.0	7.9	24.4	0.278	15.4	263	17.6
1.24	6.0	98.8	470	10.0	10.0	25.5	0.352	15.5	293	20.0
1.24	6.0	98.8	470	11.0	12.6	26.5	0.447	15.5	328	22.7
1.24	6.0	98.8	470	12.0	15.8	27.5	0.566	15.5	367	25.7
1.24	6.0	98.8	470	13.0	20.0	28.6	0.718	15.6	411	29.1
1.24	6.0	98.8	470	14.0	25.1	29.6	0.912	15.6	462	32.9
1.24	6.0	98.8	470	15.0	31.6	30.6	1.146	15.6	518	36.9
1.24	6.0	98.8	470	16.0	39.8	31.6	1.442	15.6	580	41.4
1.24	6.0	98.8	470	17.0	50.1	32.5	1.795	15.5	649	46.1
1.24	6.0	98.8	470	18.0	63.1	33.4	2.208	15.4	721	51.0
1.24	6.0	98.8	470	19.0	79.4	34.2	2.642	15.2	794	55.5
1.24	6.0	98.8	470	20.0	100.0	34.9	3.090	14.9	864	59.6
1.24	6.0	98.8	470	21.0	125.9	35.5	3.508	14.5	926	63.1
1.24	6.0	98.8	470	22.0	158.5	35.9	3.882	13.9	981	65.9
1.24	6.0	98.8	470	23.0	199.5	36.2	4.207	13.2	1028	68.2
1.24	6.0	98.8	470	24.0	251.2	36.5	4.487	12.5	1068	70.0
1.24	6.0	98.8	470	25.0	316.2	36.8	4.742	11.8	1104	71.6

Input-Output Characteristics Vds=6.0V, Ibias=200mA - Condition 1

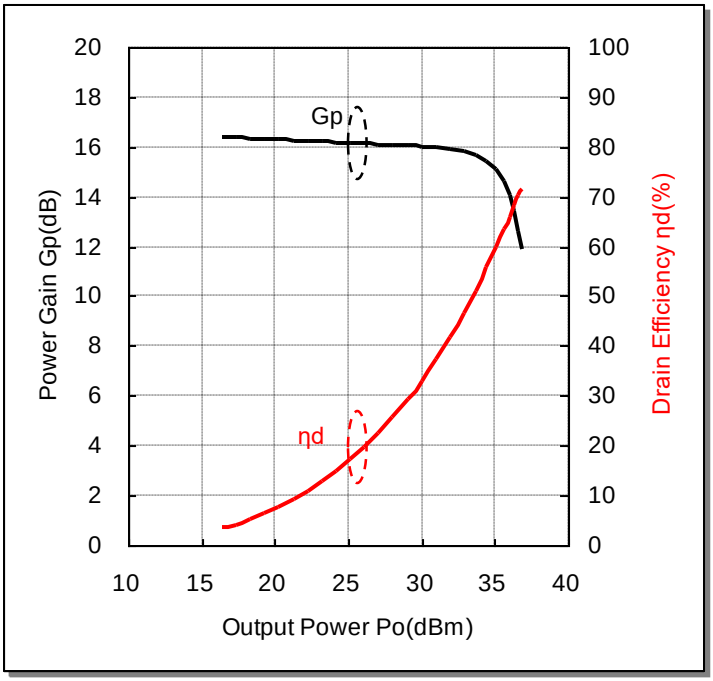
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=197.5mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=6.0V, Ibias=197.5mA

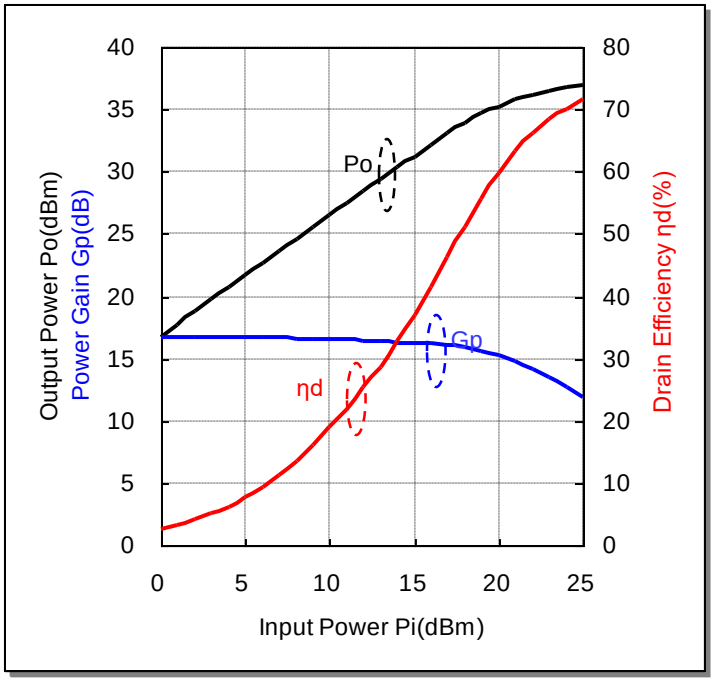
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.33	6.0	197.5	470	0.0	1.0	16.4	0.043	16.4	211	3.4
1.33	6.0	197.5	470	1.0	1.3	17.4	0.054	16.4	215	4.2
1.33	6.0	197.5	470	2.0	1.6	18.3	0.068	16.3	220	5.2
1.33	6.0	197.5	470	3.0	2.0	19.3	0.086	16.3	226	6.3
1.33	6.0	197.5	470	4.0	2.5	20.3	0.107	16.3	233	7.6
1.33	6.0	197.5	470	5.0	3.2	21.3	0.134	16.3	243	9.2
1.33	6.0	197.5	470	6.0	4.0	22.2	0.167	16.2	256	10.9
1.33	6.0	197.5	470	7.0	5.0	23.2	0.209	16.2	272	12.8
1.33	6.0	197.5	470	8.0	6.3	24.2	0.261	16.2	292	14.9
1.33	6.0	197.5	470	9.0	7.9	25.1	0.327	16.1	315	17.3
1.33	6.0	197.5	470	10.0	10.0	26.1	0.409	16.1	343	19.9
1.33	6.0	197.5	470	11.0	12.6	27.0	0.507	16.0	375	22.6
1.33	6.0	197.5	470	12.0	15.8	28.0	0.638	16.0	413	25.7
1.33	6.0	197.5	470	13.0	20.0	29.0	0.802	16.0	457	29.2
1.33	6.0	197.5	470	14.0	25.1	30.0	1.005	16.0	507	33.1
1.33	6.0	197.5	470	15.0	31.6	31.0	1.253	16.0	562	37.1
1.33	6.0	197.5	470	16.0	39.8	31.9	1.560	15.9	624	41.7
1.33	6.0	197.5	470	17.0	50.1	32.8	1.928	15.8	692	46.5
1.33	6.0	197.5	470	18.0	63.1	33.7	2.339	15.7	762	51.1
1.33	6.0	197.5	470	19.0	79.4	34.5	2.786	15.5	834	55.7
1.33	6.0	197.5	470	20.0	100.0	35.1	3.236	15.1	902	59.8
1.33	6.0	197.5	470	21.0	125.9	35.6	3.656	14.6	963	63.3
1.33	6.0	197.5	470	22.0	158.5	36.0	4.018	14.0	1014	66.1
1.33	6.0	197.5	470	23.0	199.5	36.4	4.345	13.4	1058	68.4
1.33	6.0	197.5	470	24.0	251.2	36.6	4.613	12.6	1097	70.1
1.33	6.0	197.5	470	25.0	316.2	36.9	4.853	11.9	1128	71.7

Input-Output Characteristics Vds＝6.0V, Ibias=300mA - Condition 1

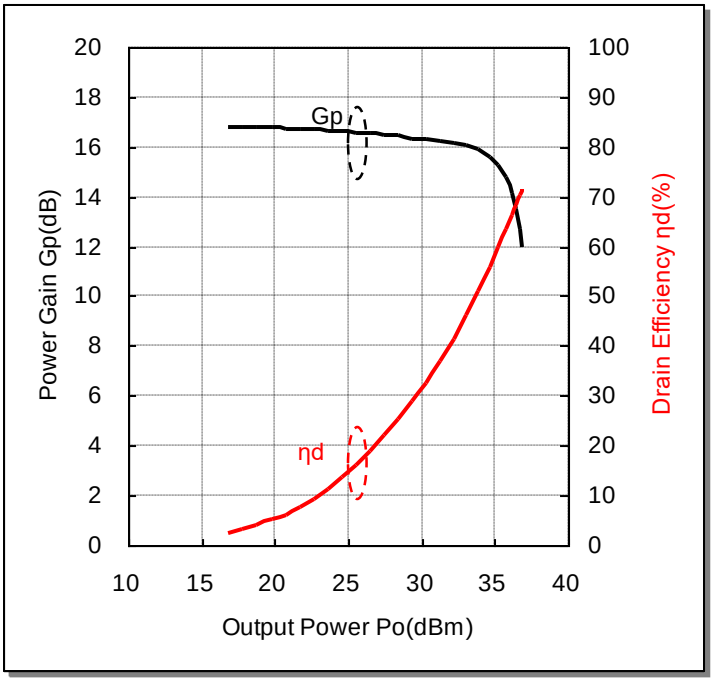
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=297.4mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=6.0V, Ibias=297.4mA

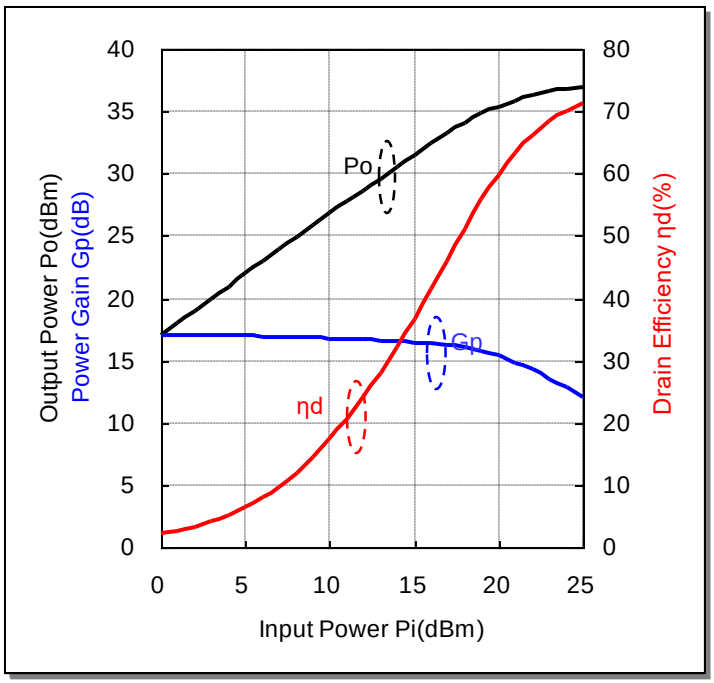
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.40	6.0	297.4	470	0.0	1.0	16.8	0.047	16.8	305	2.6
1.40	6.0	297.4	470	1.0	1.3	17.8	0.060	16.8	307	3.2
1.40	6.0	297.4	470	2.0	1.6	18.8	0.075	16.8	309	4.1
1.40	6.0	297.4	470	3.0	2.0	19.8	0.094	16.8	313	5.0
1.40	6.0	297.4	470	4.0	2.5	20.7	0.118	16.7	317	6.2
1.40	6.0	297.4	470	5.0	3.2	21.7	0.148	16.7	323	7.6
1.40	6.0	297.4	470	6.0	4.0	22.7	0.185	16.7	331	9.3
1.40	6.0	297.4	470	7.0	5.0	23.6	0.232	16.6	341	11.3
1.40	6.0	297.4	470	8.0	6.3	24.6	0.289	16.6	355	13.6
1.40	6.0	297.4	470	9.0	7.9	25.6	0.361	16.6	372	16.1
1.40	6.0	297.4	470	10.0	10.0	26.5	0.449	16.5	395	18.9
1.40	6.0	297.4	470	11.0	12.6	27.5	0.558	16.5	424	22.0
1.40	6.0	297.4	470	12.0	15.8	28.4	0.697	16.4	459	25.3
1.40	6.0	297.4	470	13.0	20.0	29.3	0.859	16.3	498	28.8
1.40	6.0	297.4	470	14.0	25.1	30.3	1.069	16.3	545	32.7
1.40	6.0	297.4	470	15.0	31.6	31.2	1.327	16.2	599	36.9
1.40	6.0	297.4	470	16.0	39.8	32.2	1.644	16.2	660	41.5
1.40	6.0	297.4	470	17.0	50.1	33.0	2.018	16.0	727	46.3
1.40	6.0	297.4	470	18.0	63.1	33.9	2.443	15.9	797	51.1
1.40	6.0	297.4	470	19.0	79.4	34.6	2.897	15.6	867	55.7
1.40	6.0	297.4	470	20.0	100.0	35.2	3.342	15.2	932	59.8
1.40	6.0	297.4	470	21.0	125.9	35.8	3.758	14.8	990	63.3
1.40	6.0	297.4	470	22.0	158.5	36.2	4.130	14.2	1040	66.2
1.40	6.0	297.4	470	23.0	199.5	36.5	4.436	13.5	1082	68.4
1.40	6.0	297.4	470	24.0	251.2	36.7	4.699	12.7	1118	70.1
1.40	6.0	297.4	470	25.0	316.2	36.9	4.932	11.9	1147	71.7

Input-Output Characteristics Vds=6.0V, Ibias=400mA - Condition 1

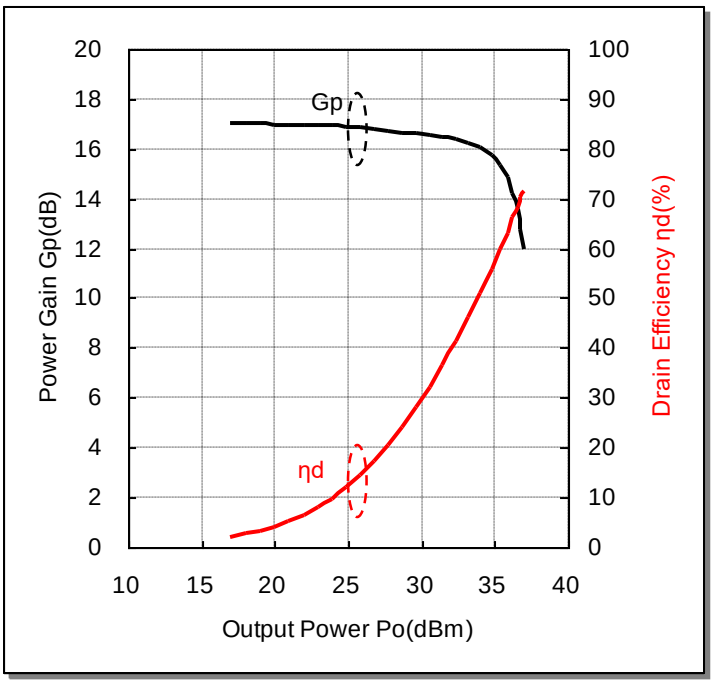
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=393.6mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=6.0V, Ibias=393.6mA

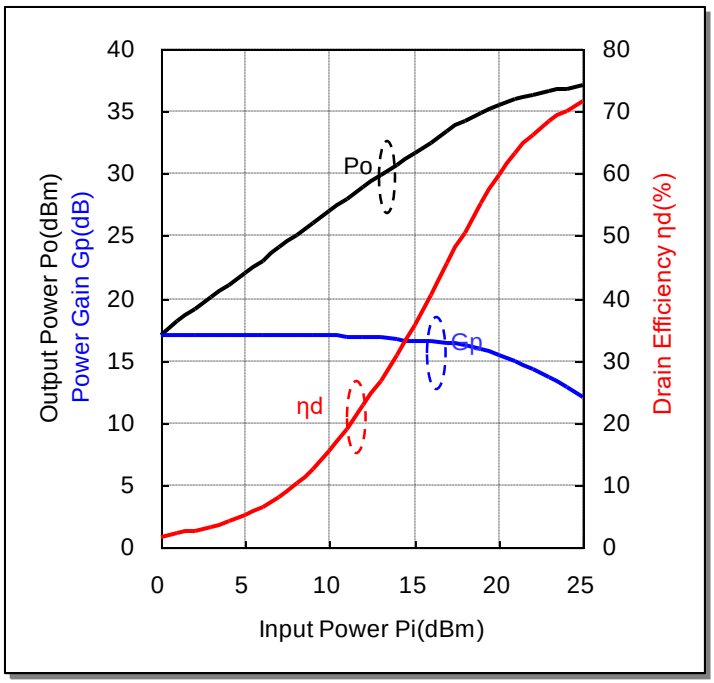
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.46	6.0	393.6	470	0.0	1.0	17.0	0.050	17.0	398	2.1
1.46	6.0	393.6	470	1.0	1.3	18.0	0.063	17.0	400	2.6
1.46	6.0	393.6	470	2.0	1.6	19.0	0.079	17.0	402	3.3
1.46	6.0	393.6	470	3.0	2.0	20.0	0.099	17.0	403	4.1
1.46	6.0	393.6	470	4.0	2.5	21.0	0.125	17.0	406	5.1
1.46	6.0	393.6	470	5.0	3.2	22.0	0.157	17.0	409	6.4
1.46	6.0	393.6	470	6.0	4.0	22.9	0.196	16.9	414	7.9
1.46	6.0	393.6	470	7.0	5.0	23.9	0.247	16.9	420	9.8
1.46	6.0	393.6	470	8.0	6.3	24.9	0.309	16.9	429	12.0
1.46	6.0	393.6	470	9.0	7.9	25.9	0.385	16.9	441	14.6
1.46	6.0	393.6	470	10.0	10.0	26.8	0.475	16.8	456	17.4
1.46	6.0	393.6	470	11.0	12.6	27.7	0.592	16.7	477	20.7
1.46	6.0	393.6	470	12.0	15.8	28.7	0.735	16.7	505	24.2
1.46	6.0	393.6	470	13.0	20.0	29.6	0.912	16.6	542	28.0
1.46	6.0	393.6	470	14.0	25.1	30.5	1.130	16.5	586	32.2
1.46	6.0	393.6	470	15.0	31.6	31.5	1.396	16.5	637	36.6
1.46	6.0	393.6	470	16.0	39.8	32.4	1.726	16.4	696	41.3
1.46	6.0	393.6	470	17.0	50.1	33.2	2.104	16.2	761	46.1
1.46	6.0	393.6	470	18.0	63.1	34.0	2.541	16.0	829	51.1
1.46	6.0	393.6	470	19.0	79.4	34.8	3.006	15.8	897	55.8
1.46	6.0	393.6	470	20.0	100.0	35.4	3.451	15.4	961	59.9
1.46	6.0	393.6	470	21.0	125.9	35.8	3.846	14.8	1014	63.2
1.46	6.0	393.6	470	22.0	158.5	36.2	4.207	14.2	1061	66.1
1.46	6.0	393.6	470	23.0	199.5	36.5	4.519	13.5	1102	68.3
1.46	6.0	393.6	470	24.0	251.2	36.8	4.775	12.8	1136	70.1
1.46	6.0	393.6	470	25.0	316.2	37.0	4.989	12.0	1163	71.5

Input-Output Characteristics Vds=6.0V, Ibias=500mA - Condition 1

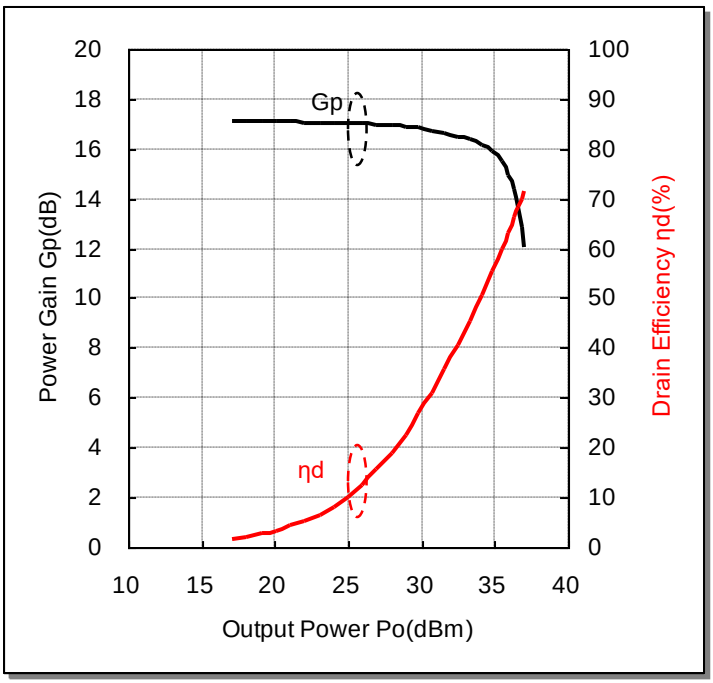
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=498.1mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=6.0V, Ibias=498.1mA

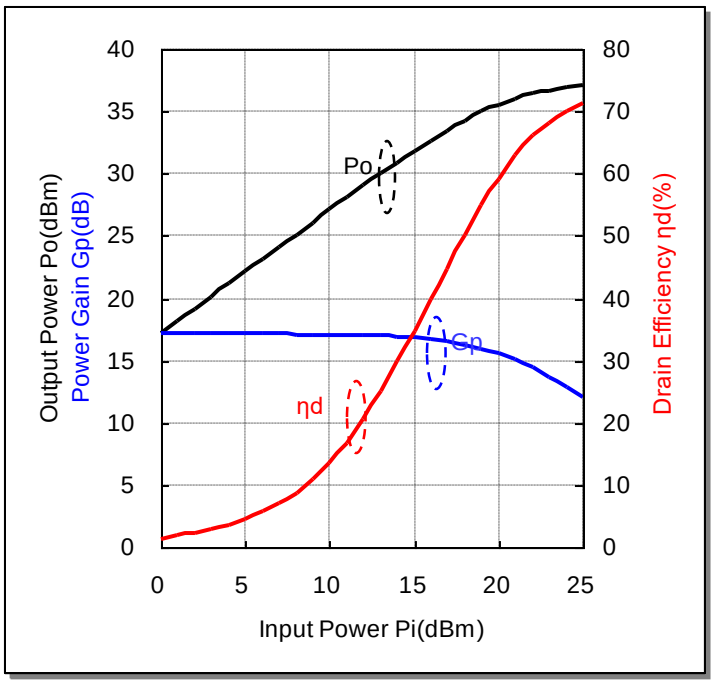
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.51	6.0	498.1	470	0.0	1.0	17.1	0.051	17.1	500	1.7
1.51	6.0	498.1	470	1.0	1.3	18.1	0.064	17.1	502	2.1
1.51	6.0	498.1	470	2.0	1.6	19.1	0.081	17.1	503	2.7
1.51	6.0	498.1	470	3.0	2.0	20.1	0.102	17.1	504	3.4
1.51	6.0	498.1	470	4.0	2.5	21.1	0.128	17.1	506	4.2
1.51	6.0	498.1	470	5.0	3.2	22.1	0.161	17.1	508	5.3
1.51	6.0	498.1	470	6.0	4.0	23.0	0.201	17.0	511	6.6
1.51	6.0	498.1	470	7.0	5.0	24.0	0.253	17.0	515	8.2
1.51	6.0	498.1	470	8.0	6.3	25.0	0.318	17.0	520	10.2
1.51	6.0	498.1	470	9.0	7.9	26.0	0.398	17.0	527	12.6
1.51	6.0	498.1	470	10.0	10.0	27.0	0.498	17.0	536	15.5
1.51	6.0	498.1	470	11.0	12.6	27.9	0.622	16.9	550	18.9
1.51	6.0	498.1	470	12.0	15.8	28.9	0.774	16.9	570	22.7
1.51	6.0	498.1	470	13.0	20.0	29.8	0.962	16.8	598	26.8
1.51	6.0	498.1	470	14.0	25.1	30.7	1.175	16.7	633	31.0
1.51	6.0	498.1	470	15.0	31.6	31.6	1.449	16.6	679	35.6
1.51	6.0	498.1	470	16.0	39.8	32.5	1.778	16.5	733	40.4
1.51	6.0	498.1	470	17.0	50.1	33.4	2.168	16.4	794	45.5
1.51	6.0	498.1	470	18.0	63.1	34.2	2.606	16.2	860	50.5
1.51	6.0	498.1	470	19.0	79.4	34.9	3.069	15.9	926	55.3
1.51	6.0	498.1	470	20.0	100.0	35.5	3.532	15.5	986	59.7
1.51	6.0	498.1	470	21.0	125.9	36.0	3.945	15.0	1040	63.2
1.51	6.0	498.1	470	22.0	158.5	36.3	4.305	14.3	1086	66.1
1.51	6.0	498.1	470	23.0	199.5	36.6	4.603	13.6	1122	68.4
1.51	6.0	498.1	470	24.0	251.2	36.8	4.842	12.8	1153	70.0
1.51	6.0	498.1	470	25.0	316.2	37.0	5.058	12.0	1179	71.5

Input-Output Characteristics Vds=6.0V, Ibias=600mA - Condition 1

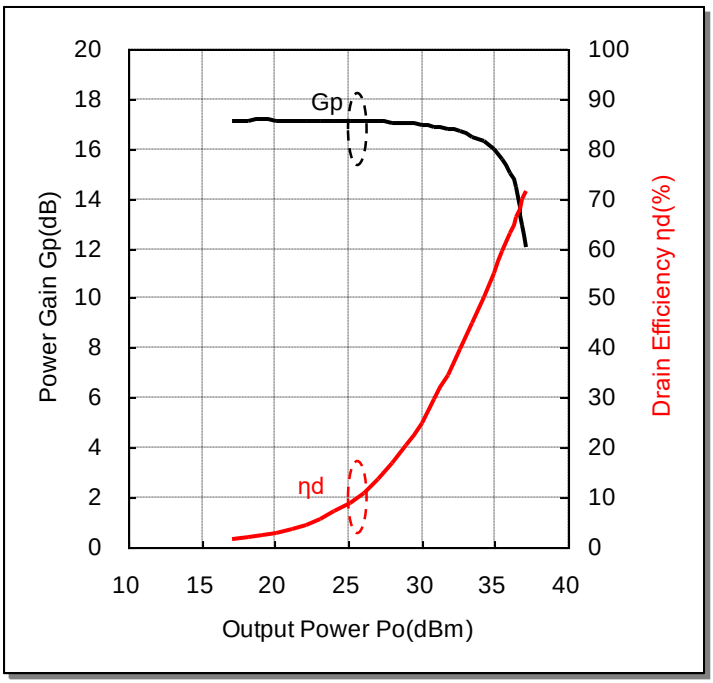
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=596.5mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=6.0V, Ibias=596.5mA

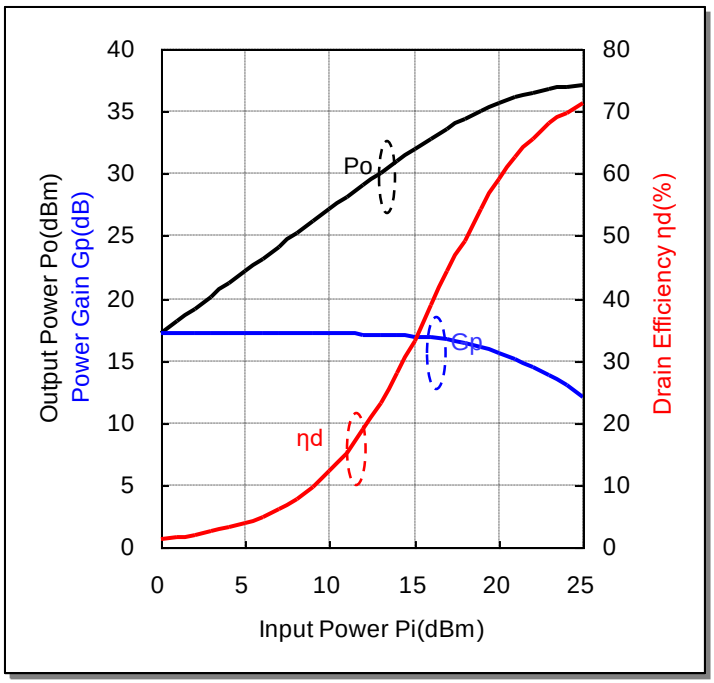
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.57	6.0	596.5	470	0.0	1.0	17.1	0.052	17.1	599	1.4
1.57	6.0	596.5	470	1.0	1.3	18.1	0.065	17.1	599	1.8
1.57	6.0	596.5	470	2.0	1.6	19.1	0.082	17.1	600	2.3
1.57	6.0	596.5	470	3.0	2.0	20.1	0.103	17.1	601	2.9
1.57	6.0	596.5	470	4.0	2.5	21.1	0.130	17.1	602	3.6
1.57	6.0	596.5	470	5.0	3.2	22.1	0.163	17.1	604	4.5
1.57	6.0	596.5	470	6.0	4.0	23.1	0.205	17.1	606	5.6
1.57	6.0	596.5	470	7.0	5.0	24.1	0.258	17.1	608	7.1
1.57	6.0	596.5	470	8.0	6.3	25.1	0.324	17.1	612	8.8
1.57	6.0	596.5	470	9.0	7.9	26.1	0.406	17.1	616	11.0
1.57	6.0	596.5	470	10.0	10.0	27.1	0.509	17.1	622	13.7
1.57	6.0	596.5	470	11.0	12.6	28.0	0.638	17.0	631	16.9
1.57	6.0	596.5	470	12.0	15.8	29.0	0.796	17.0	644	20.6
1.57	6.0	596.5	470	13.0	20.0	30.0	0.995	17.0	662	25.0
1.57	6.0	596.5	470	14.0	25.1	30.9	1.230	16.9	690	29.7
1.57	6.0	596.5	470	15.0	31.6	31.8	1.514	16.8	728	34.7
1.57	6.0	596.5	470	16.0	39.8	32.7	1.858	16.7	777	39.9
1.57	6.0	596.5	470	17.0	50.1	33.5	2.234	16.5	831	44.8
1.57	6.0	596.5	470	18.0	63.1	34.3	2.679	16.3	892	50.0
1.57	6.0	596.5	470	19.0	79.4	35.0	3.141	16.0	954	54.9
1.57	6.0	596.5	470	20.0	100.0	35.6	3.597	15.6	1012	59.3
1.57	6.0	596.5	470	21.0	125.9	36.0	4.018	15.0	1063	63.0
1.57	6.0	596.5	470	22.0	158.5	36.4	4.385	14.4	1106	66.1
1.57	6.0	596.5	470	23.0	199.5	36.7	4.656	13.7	1140	68.0
1.57	6.0	596.5	470	24.0	251.2	36.9	4.909	12.9	1169	70.0
1.57	6.0	596.5	470	25.0	316.2	37.1	5.105	12.1	1193	71.3

Input-Output Characteristics Vds=6.0V, Ibias=700mA - Condition 1

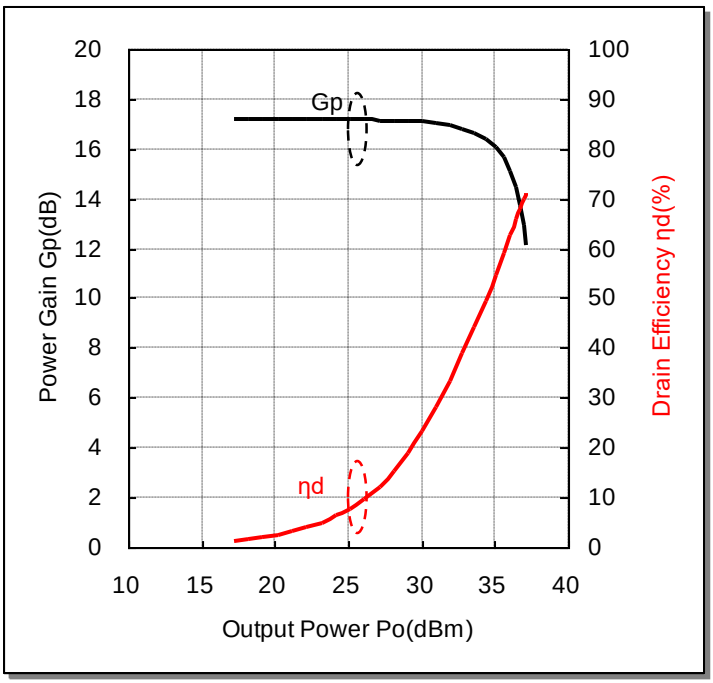
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=688.6mA

Power Gain, Drain Efficiency vs Output Power

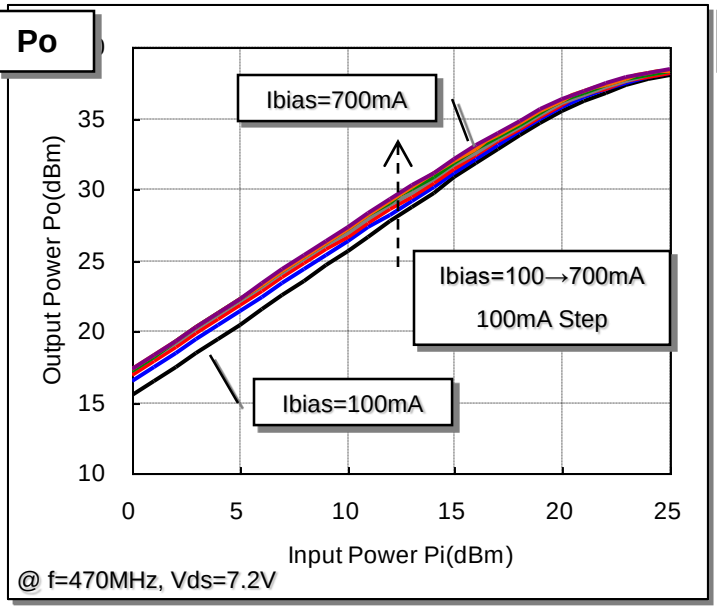


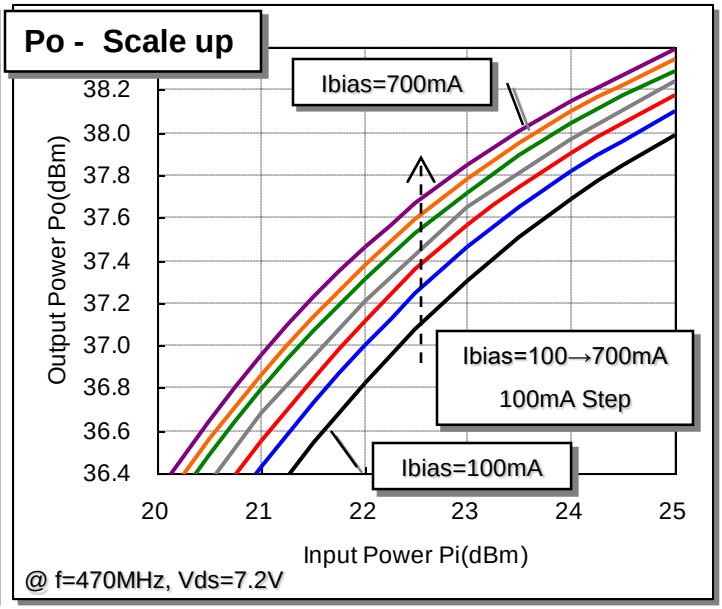
@ f=470MHz, Vds=6.0V, Ibias=688.6mA

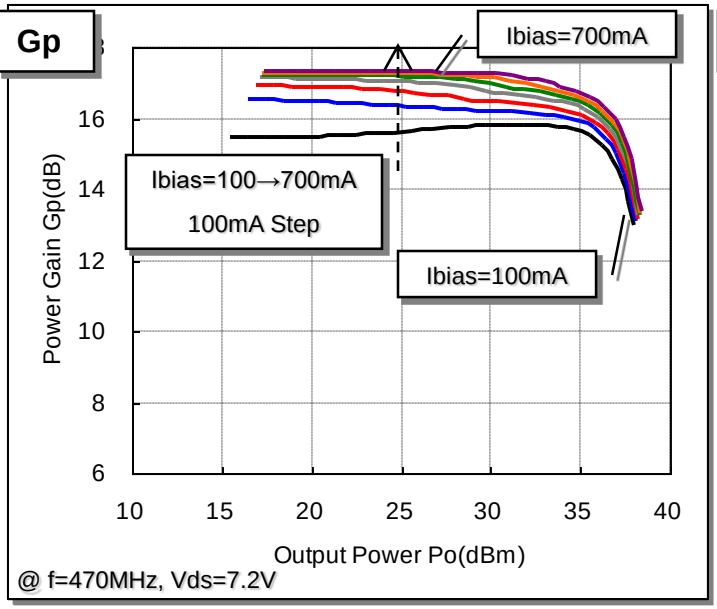
Data

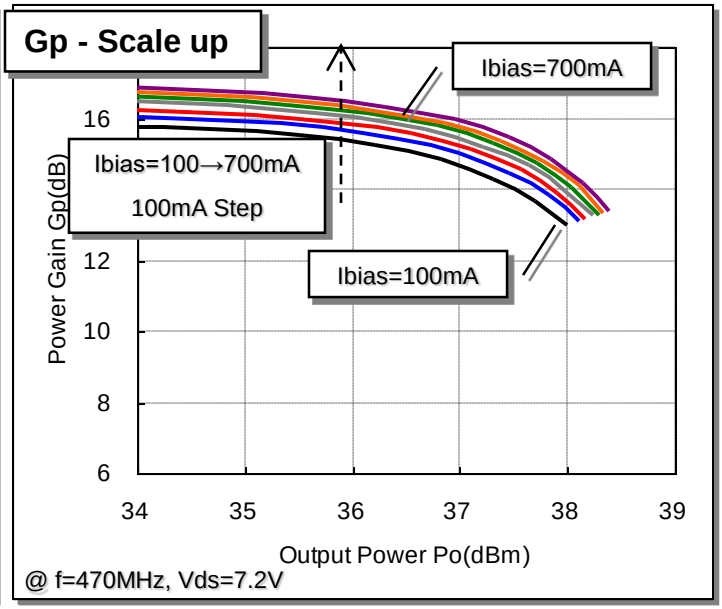
Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.61	6.0	688.6	470	0.0	1.0	17.2	0.052	17.2	690	1.3
1.61	6.0	688.6	470	1.0	1.3	18.2	0.066	17.2	690	1.6
1.61	6.0	688.6	470	2.0	1.6	19.2	0.083	17.2	691	2.0
1.61	6.0	688.6	470	3.0	2.0	20.2	0.104	17.2	692	2.5
1.61	6.0	688.6	470	4.0	2.5	21.2	0.131	17.2	693	3.2
1.61	6.0	688.6	470	5.0	3.2	22.2	0.165	17.2	694	4.0
1.61	6.0	688.6	470	6.0	4.0	23.2	0.207	17.2	695	5.0
1.61	6.0	688.6	470	7.0	5.0	24.2	0.261	17.2	696	6.2
1.61	6.0	688.6	470	8.0	6.3	25.1	0.327	17.1	699	7.8
1.61	6.0	688.6	470	9.0	7.9	26.1	0.412	17.1	703	9.8
1.61	6.0	688.6	470	10.0	10.0	27.1	0.516	17.1	706	12.2
1.61	6.0	688.6	470	11.0	12.6	28.1	0.649	17.1	713	15.2
1.61	6.0	688.6	470	12.0	15.8	29.1	0.813	17.1	720	18.8
1.61	6.0	688.6	470	13.0	20.0	30.1	1.016	17.1	733	23.1
1.61	6.0	688.6	470	14.0	25.1	31.0	1.262	17.0	752	28.0
1.61	6.0	688.6	470	15.0	31.6	31.9	1.556	16.9	780	33.3
1.61	6.0	688.6	470	16.0	39.8	32.8	1.910	16.8	821	38.8
1.61	6.0	688.6	470	17.0	50.1	33.7	2.317	16.7	872	44.3
1.61	6.0	688.6	470	18.0	63.1	34.4	2.735	16.4	925	49.3
1.61	6.0	688.6	470	19.0	79.4	35.1	3.206	16.1	982	54.4
1.61	6.0	688.6	470	20.0	100.0	35.6	3.664	15.6	1036	59.0
1.61	6.0	688.6	470	21.0	125.9	36.1	4.083	15.1	1084	62.8
1.61	6.0	688.6	470	22.0	158.5	36.5	4.426	14.5	1123	65.7
1.61	6.0	688.6	470	23.0	199.5	36.7	4.721	13.7	1157	68.0
1.61	6.0	688.6	470	24.0	251.2	37.0	4.955	13.0	1184	69.8
1.61	6.0	688.6	470	25.0	316.2	37.1	5.152	12.1	1206	71.2

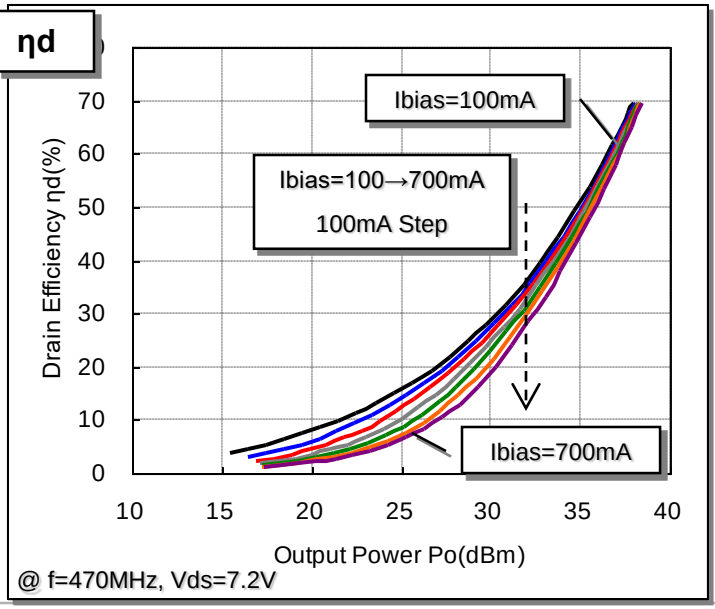
Input - Output Characteristics Vds =7.2V - Condition 1

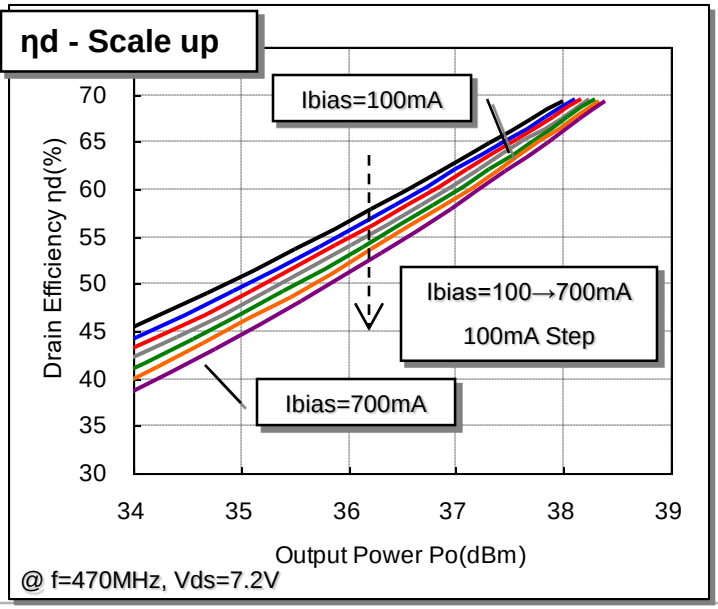








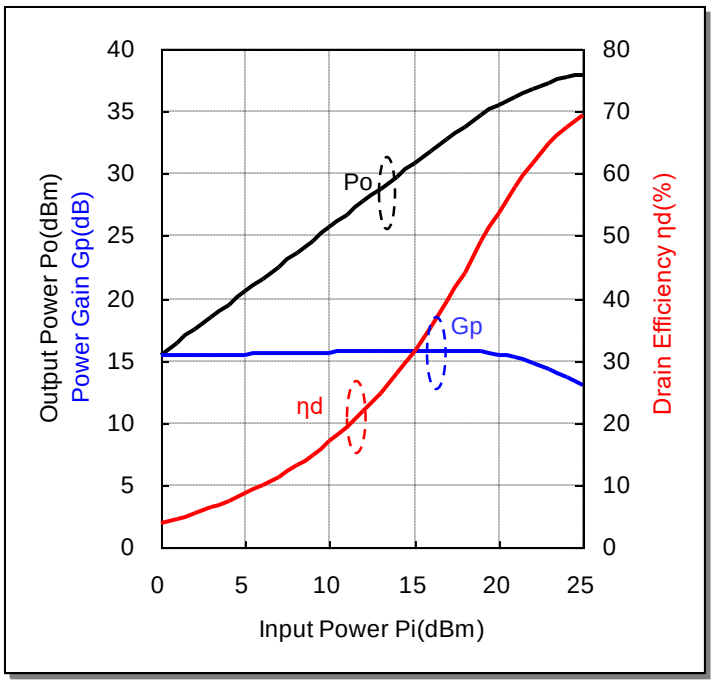




Input-Output Characteristics Vds＝7.2V, Ibias=100mA - Condition 1

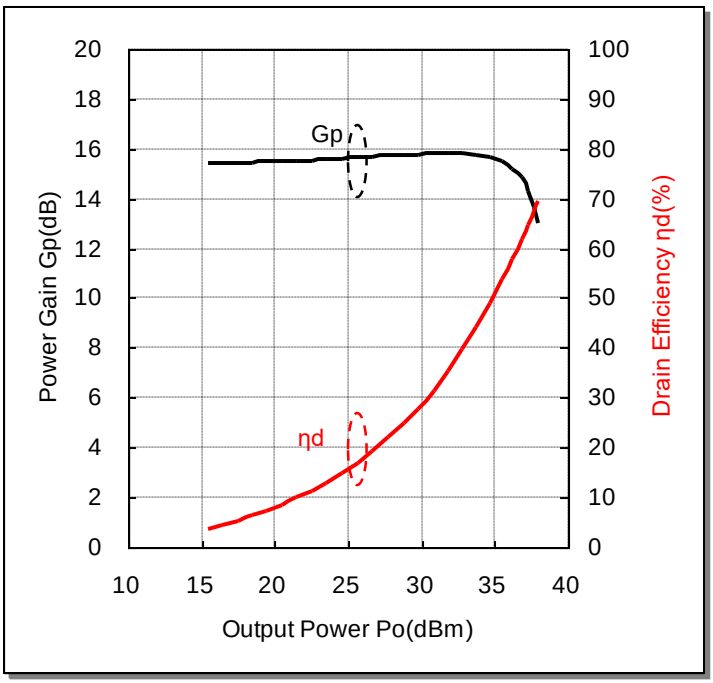
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=99.9mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=7.2V, Ibias=99.9mA

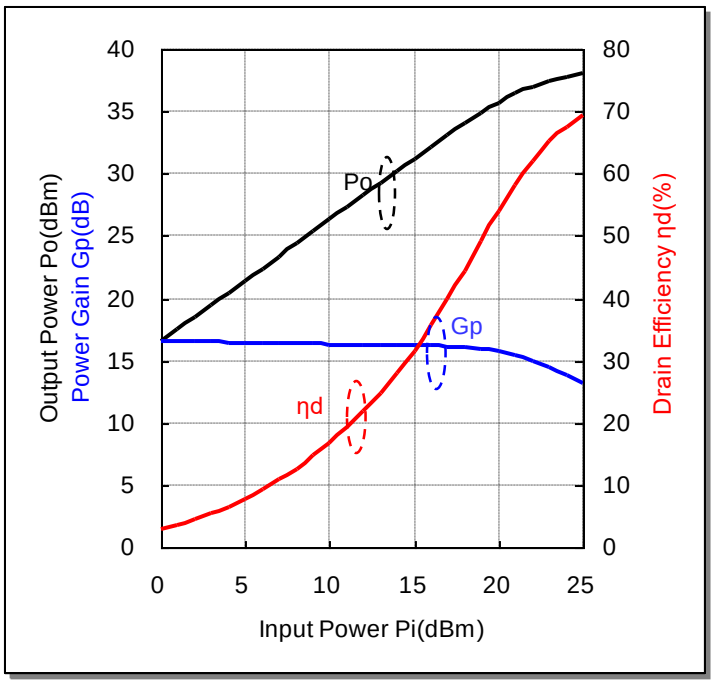
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.23	7.2	99.9	470	0.0	1.0	15.4	0.035	15.4	128	3.8
1.23	7.2	99.9	470	1.0	1.3	16.5	0.044	15.5	135	4.5
1.23	7.2	99.9	470	2.0	1.6	17.5	0.056	15.5	144	5.4
1.23	7.2	99.9	470	3.0	2.0	18.5	0.070	15.5	154	6.3
1.23	7.2	99.9	470	4.0	2.5	19.5	0.089	15.5	166	7.4
1.23	7.2	99.9	470	5.0	3.2	20.5	0.112	15.5	181	8.6
1.23	7.2	99.9	470	6.0	4.0	21.5	0.142	15.5	198	9.9
1.23	7.2	99.9	470	7.0	5.0	22.5	0.179	15.5	219	11.4
1.23	7.2	99.9	470	8.0	6.3	23.6	0.227	15.6	242	13.0
1.23	7.2	99.9	470	9.0	7.9	24.6	0.288	15.6	269	14.9
1.23	7.2	99.9	470	10.0	10.0	25.6	0.366	15.6	300	16.9
1.23	7.2	99.9	470	11.0	12.6	26.7	0.467	15.7	336	19.3
1.23	7.2	99.9	470	12.0	15.8	27.7	0.593	15.7	376	21.9
1.23	7.2	99.9	470	13.0	20.0	28.8	0.752	15.8	422	24.7
1.23	7.2	99.9	470	14.0	25.1	29.8	0.951	15.8	473	27.9
1.23	7.2	99.9	470	15.0	31.6	30.8	1.205	15.8	532	31.5
1.23	7.2	99.9	470	16.0	39.8	31.8	1.517	15.8	596	35.4
1.23	7.2	99.9	470	17.0	50.1	32.8	1.905	15.8	669	39.6
1.23	7.2	99.9	470	18.0	63.1	33.8	2.377	15.8	748	44.2
1.23	7.2	99.9	470	19.0	79.4	34.7	2.938	15.7	832	49.0
1.23	7.2	99.9	470	20.0	100.0	35.5	3.548	15.5	919	53.6
1.23	7.2	99.9	470	21.0	125.9	36.2	4.188	15.2	1004	57.9
1.23	7.2	99.9	470	22.0	158.5	36.8	4.808	14.8	1081	61.8
1.23	7.2	99.9	470	23.0	199.5	37.3	5.370	14.3	1151	64.8
1.23	7.2	99.9	470	24.0	251.2	37.7	5.875	13.7	1210	67.5
1.23	7.2	99.9	470	25.0	316.2	38.0	6.295	13.0	1260	69.4

Input-Output Characteristics Vds=7.2V, Ibias=200mA - Condition 1

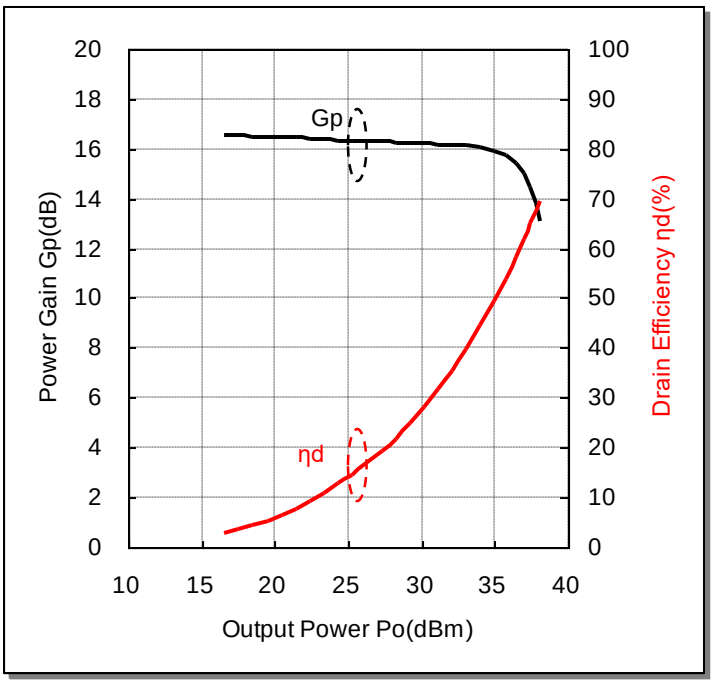
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=201.1mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=7.2V, Ibias=201.1mA

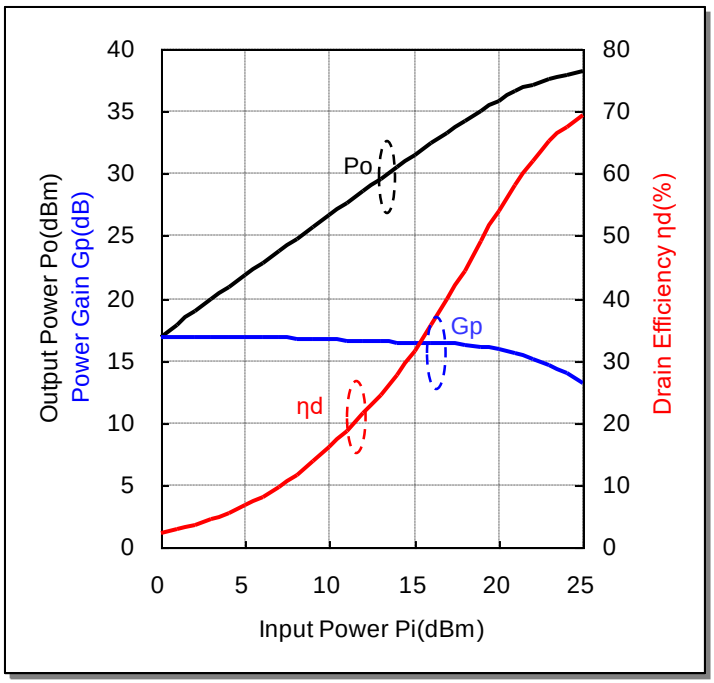
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.32	7.2	201.1	470	0.0	1.0	16.5	0.045	16.5	215	2.9
1.32	7.2	201.1	470	1.0	1.3	17.5	0.056	16.5	219	3.6
1.32	7.2	201.1	470	2.0	1.6	18.5	0.071	16.5	224	4.4
1.32	7.2	201.1	470	3.0	2.0	19.5	0.089	16.5	230	5.4
1.32	7.2	201.1	470	4.0	2.5	20.5	0.111	16.5	238	6.5
1.32	7.2	201.1	470	5.0	3.2	21.4	0.139	16.4	248	7.8
1.32	7.2	201.1	470	6.0	4.0	22.4	0.174	16.4	261	9.2
1.32	7.2	201.1	470	7.0	5.0	23.4	0.217	16.4	278	10.8
1.32	7.2	201.1	470	8.0	6.3	24.3	0.272	16.3	298	12.7
1.32	7.2	201.1	470	9.0	7.9	25.3	0.340	16.3	322	14.6
1.32	7.2	201.1	470	10.0	10.0	26.3	0.426	16.3	351	16.8
1.32	7.2	201.1	470	11.0	12.6	27.3	0.533	16.3	385	19.2
1.32	7.2	201.1	470	12.0	15.8	28.2	0.665	16.2	423	21.8
1.32	7.2	201.1	470	13.0	20.0	29.2	0.836	16.2	468	24.8
1.32	7.2	201.1	470	14.0	25.1	30.2	1.047	16.2	519	28.0
1.32	7.2	201.1	470	15.0	31.6	31.2	1.309	16.2	577	31.5
1.32	7.2	201.1	470	16.0	39.8	32.2	1.641	16.2	641	35.5
1.32	7.2	201.1	470	17.0	50.1	33.1	2.046	16.1	713	39.8
1.32	7.2	201.1	470	18.0	63.1	34.0	2.535	16.0	792	44.5
1.32	7.2	201.1	470	19.0	79.4	34.9	3.112	15.9	878	49.3
1.32	7.2	201.1	470	20.0	100.0	35.7	3.741	15.7	964	53.9
1.32	7.2	201.1	470	21.0	125.9	36.4	4.395	15.4	1047	58.3
1.32	7.2	201.1	470	22.0	158.5	37.0	5.012	15.0	1123	62.0
1.32	7.2	201.1	470	23.0	199.5	37.5	5.572	14.5	1188	65.2
1.32	7.2	201.1	470	24.0	251.2	37.8	6.053	13.8	1243	67.6
1.32	7.2	201.1	470	25.0	316.2	38.1	6.457	13.1	1290	69.5

Input-Output Characteristics Vds=7.2V, Ibias=300mA - Condition 1

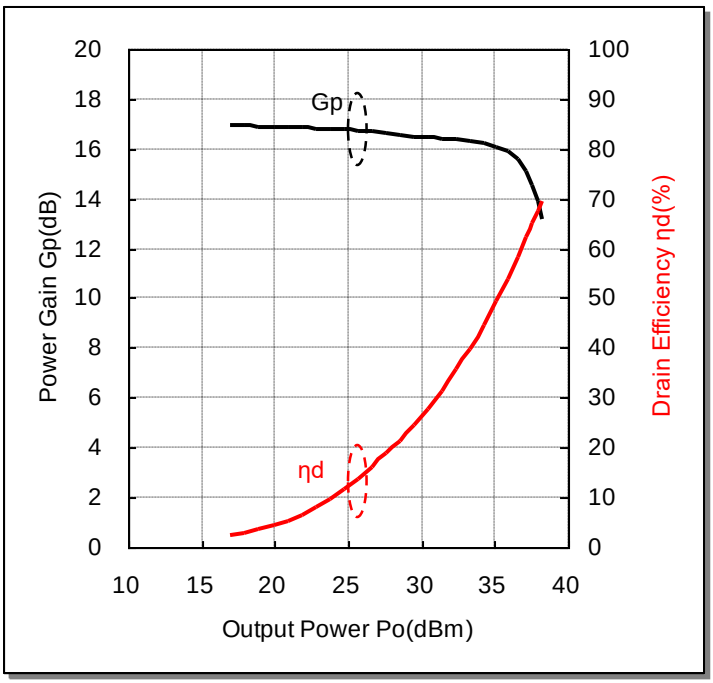
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=294.8mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=7.2V, Ibias=294.8mA

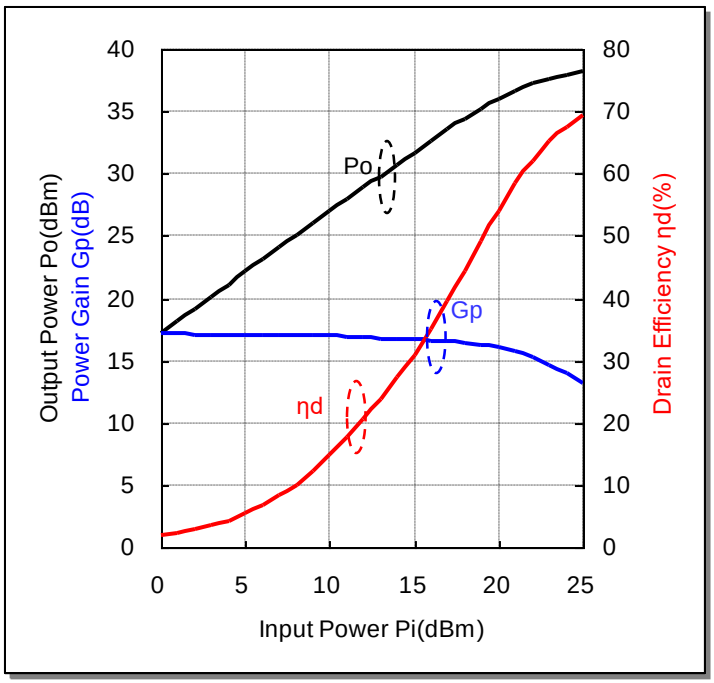
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.38	7.2	294.8	470	0.0	1.0	16.9	0.049	16.9	303	2.3
1.38	7.2	294.8	470	1.0	1.3	17.9	0.062	16.9	305	2.8
1.38	7.2	294.8	470	2.0	1.6	18.9	0.078	16.9	308	3.5
1.38	7.2	294.8	470	3.0	2.0	19.9	0.097	16.9	311	4.4
1.38	7.2	294.8	470	4.0	2.5	20.9	0.122	16.9	316	5.4
1.38	7.2	294.8	470	5.0	3.2	21.9	0.153	16.9	322	6.6
1.38	7.2	294.8	470	6.0	4.0	22.8	0.191	16.8	330	8.0
1.38	7.2	294.8	470	7.0	5.0	23.8	0.239	16.8	342	9.7
1.38	7.2	294.8	470	8.0	6.3	24.8	0.299	16.8	356	11.7
1.38	7.2	294.8	470	9.0	7.9	25.7	0.372	16.7	375	13.8
1.38	7.2	294.8	470	10.0	10.0	26.7	0.465	16.7	399	16.2
1.38	7.2	294.8	470	11.0	12.6	27.6	0.578	16.6	430	18.7
1.38	7.2	294.8	470	12.0	15.8	28.5	0.714	16.5	464	21.4
1.38	7.2	294.8	470	13.0	20.0	29.5	0.891	16.5	507	24.4
1.38	7.2	294.8	470	14.0	25.1	30.5	1.112	16.5	556	27.8
1.38	7.2	294.8	470	15.0	31.6	31.4	1.387	16.4	612	31.5
1.38	7.2	294.8	470	16.0	39.8	32.4	1.730	16.4	676	35.6
1.38	7.2	294.8	470	17.0	50.1	33.3	2.143	16.3	747	39.8
1.38	7.2	294.8	470	18.0	63.1	34.2	2.642	16.2	826	44.4
1.38	7.2	294.8	470	19.0	79.4	35.1	3.228	16.1	910	49.3
1.38	7.2	294.8	470	20.0	100.0	35.9	3.873	15.9	996	54.0
1.38	7.2	294.8	470	21.0	125.9	36.5	4.519	15.5	1076	58.3
1.38	7.2	294.8	470	22.0	158.5	37.1	5.140	15.1	1151	62.1
1.38	7.2	294.8	470	23.0	199.5	37.6	5.702	14.6	1214	65.3
1.38	7.2	294.8	470	24.0	251.2	37.9	6.166	13.9	1267	67.6
1.38	7.2	294.8	470	25.0	316.2	38.2	6.561	13.2	1311	69.5

Input-Output Characteristics Vds=7.2V, Ibias=400mA - Condition 1

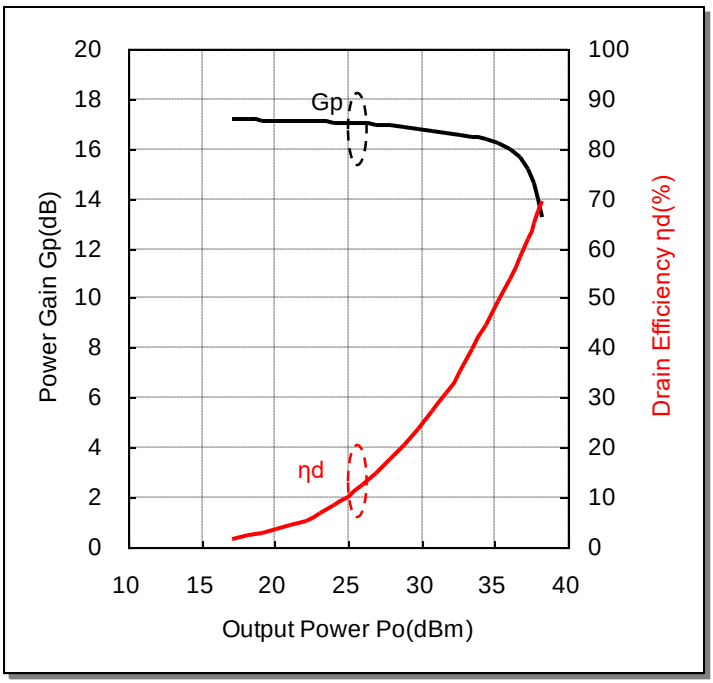
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=400.1mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=7.2V, Ibias=400.1mA

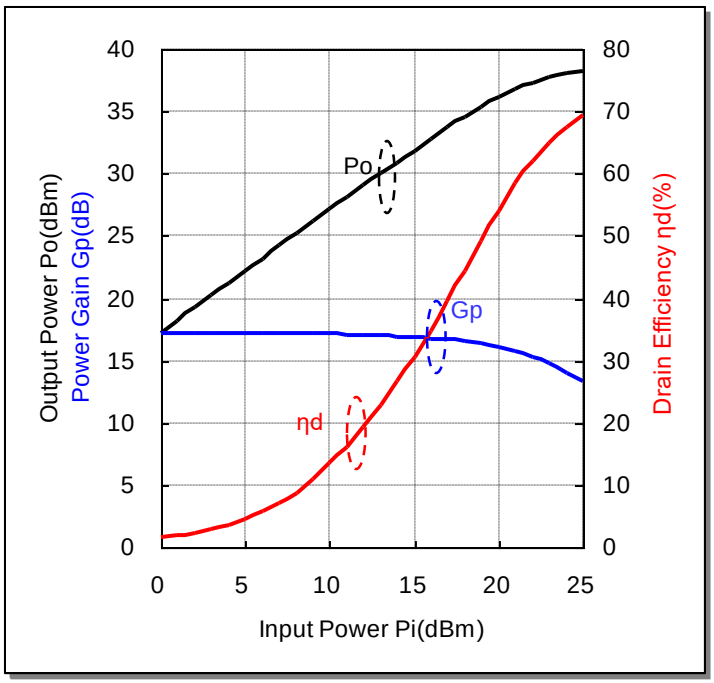
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.44	7.2	400.1	470	0.0	1.0	17.1	0.052	17.1	405	1.8
1.44	7.2	400.1	470	1.0	1.3	18.2	0.065	17.2	407	2.2
1.44	7.2	400.1	470	2.0	1.6	19.1	0.081	17.1	409	2.8
1.44	7.2	400.1	470	3.0	2.0	20.1	0.102	17.1	410	3.5
1.44	7.2	400.1	470	4.0	2.5	21.1	0.129	17.1	413	4.3
1.44	7.2	400.1	470	5.0	3.2	22.1	0.162	17.1	417	5.4
1.44	7.2	400.1	470	6.0	4.0	23.1	0.203	17.1	422	6.7
1.44	7.2	400.1	470	7.0	5.0	24.1	0.255	17.1	428	8.3
1.44	7.2	400.1	470	8.0	6.3	25.0	0.318	17.0	437	10.1
1.44	7.2	400.1	470	9.0	7.9	26.0	0.398	17.0	450	12.3
1.44	7.2	400.1	470	10.0	10.0	27.0	0.497	17.0	465	14.8
1.44	7.2	400.1	470	11.0	12.6	27.9	0.619	16.9	488	17.6
1.44	7.2	400.1	470	12.0	15.8	28.9	0.769	16.9	518	20.6
1.44	7.2	400.1	470	13.0	20.0	29.8	0.946	16.8	554	23.7
1.44	7.2	400.1	470	14.0	25.1	30.7	1.175	16.7	599	27.2
1.44	7.2	400.1	470	15.0	31.6	31.6	1.455	16.6	653	31.0
1.44	7.2	400.1	470	16.0	39.8	32.6	1.807	16.6	714	35.1
1.44	7.2	400.1	470	17.0	50.1	33.5	2.239	16.5	784	39.7
1.44	7.2	400.1	470	18.0	63.1	34.4	2.754	16.4	862	44.4
1.44	7.2	400.1	470	19.0	79.4	35.3	3.350	16.3	945	49.2
1.44	7.2	400.1	470	20.0	100.0	36.0	3.999	16.0	1029	54.0
1.44	7.2	400.1	470	21.0	125.9	36.7	4.656	15.7	1108	58.4
1.44	7.2	400.1	470	22.0	158.5	37.2	5.260	15.2	1178	62.0
1.44	7.2	400.1	470	23.0	199.5	37.7	5.821	14.7	1239	65.2
1.44	7.2	400.1	470	24.0	251.2	38.0	6.266	14.0	1290	67.5
1.44	7.2	400.1	470	25.0	316.2	38.2	6.668	13.2	1332	69.5

Input-Output Characteristics Vds=7.2V, Ibias=500mA - Condition 1

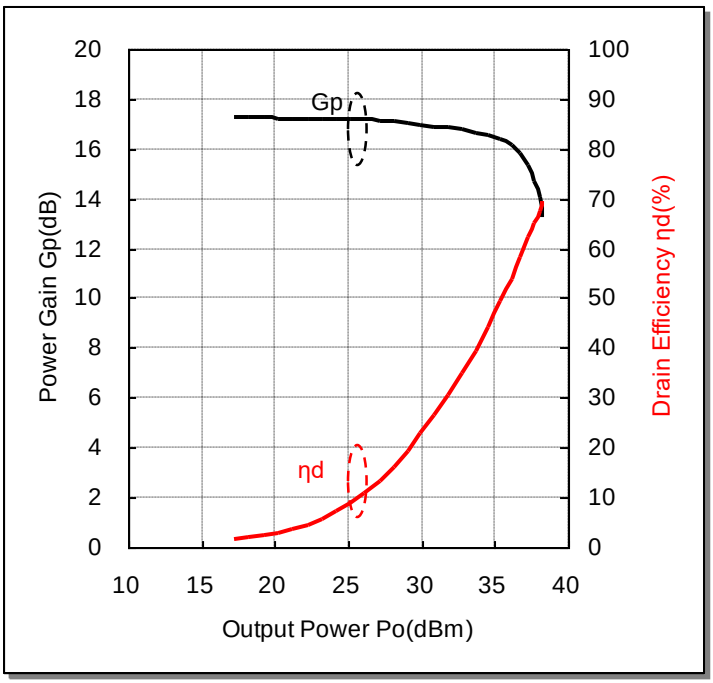
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=495.7mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=7.2V, Ibias=495.7mA

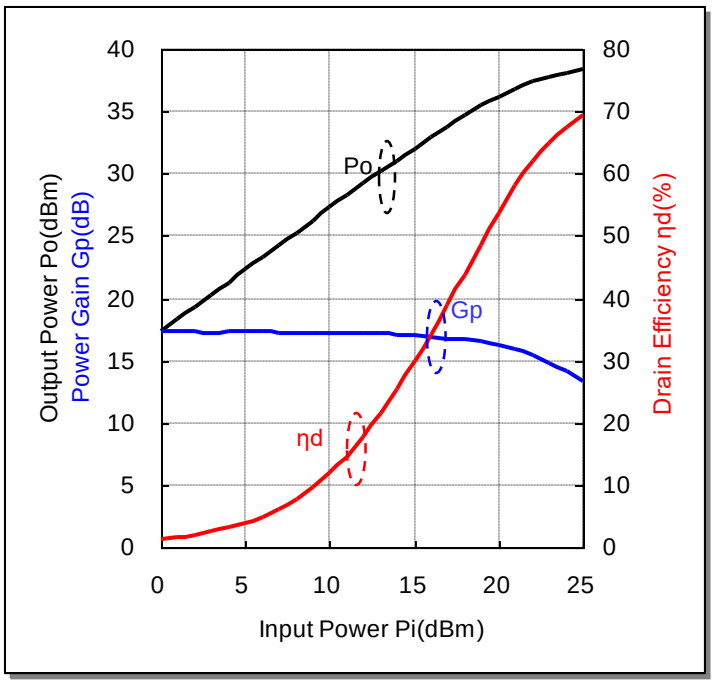
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.49	7.2	495.7	470	0.0	1.0	17.2	0.053	17.2	498	1.5
1.49	7.2	495.7	470	1.0	1.3	18.2	0.067	17.2	500	1.8
1.49	7.2	495.7	470	2.0	1.6	19.2	0.084	17.2	501	2.3
1.49	7.2	495.7	470	3.0	2.0	20.2	0.105	17.2	502	2.9
1.49	7.2	495.7	470	4.0	2.5	21.2	0.132	17.2	505	3.6
1.49	7.2	495.7	470	5.0	3.2	22.2	0.166	17.2	507	4.6
1.49	7.2	495.7	470	6.0	4.0	23.2	0.209	17.2	509	5.7
1.49	7.2	495.7	470	7.0	5.0	24.2	0.262	17.2	514	7.1
1.49	7.2	495.7	470	8.0	6.3	25.2	0.329	17.2	520	8.8
1.49	7.2	495.7	470	9.0	7.9	26.1	0.412	17.1	528	10.8
1.49	7.2	495.7	470	10.0	10.0	27.1	0.516	17.1	538	13.3
1.49	7.2	495.7	470	11.0	12.6	28.1	0.646	17.1	553	16.2
1.49	7.2	495.7	470	12.0	15.8	29.0	0.804	17.0	575	19.4
1.49	7.2	495.7	470	13.0	20.0	30.0	0.993	17.0	604	22.8
1.49	7.2	495.7	470	14.0	25.1	30.9	1.230	16.9	644	26.5
1.49	7.2	495.7	470	15.0	31.6	31.8	1.524	16.8	693	30.6
1.49	7.2	495.7	470	16.0	39.8	32.8	1.884	16.8	751	34.8
1.49	7.2	495.7	470	17.0	50.1	33.7	2.323	16.7	819	39.4
1.49	7.2	495.7	470	18.0	63.1	34.5	2.851	16.5	895	44.2
1.49	7.2	495.7	470	19.0	79.4	35.4	3.459	16.4	977	49.2
1.49	7.2	495.7	470	20.0	100.0	36.1	4.111	16.1	1058	54.0
1.49	7.2	495.7	470	21.0	125.9	36.8	4.775	15.8	1136	58.4
1.49	7.2	495.7	470	22.0	158.5	37.3	5.383	15.3	1204	62.1
1.49	7.2	495.7	470	23.0	199.5	37.7	5.902	14.7	1260	65.1
1.49	7.2	495.7	470	24.0	251.2	38.0	6.368	14.0	1310	67.5
1.49	7.2	495.7	470	25.0	316.2	38.3	6.745	13.3	1349	69.4

Input-Output Characteristics Vds=7.2V, Ibias=600mA - Condition 1

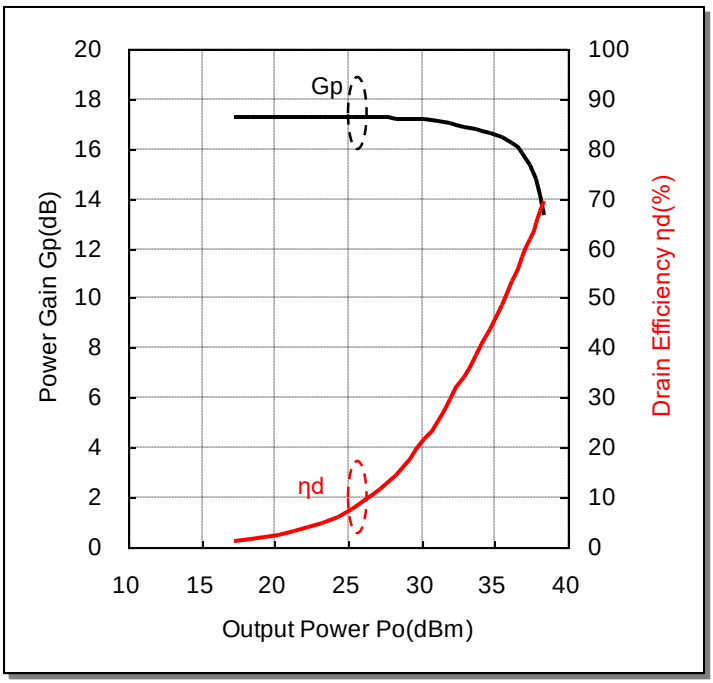
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=593.9mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=7.2V, Ibias=593.9mA

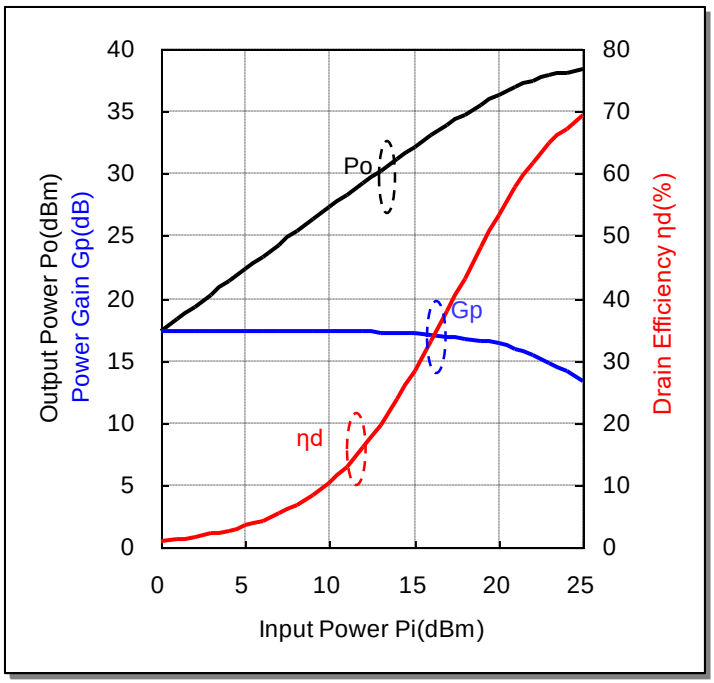
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.54	7.2	593.9	470	0.0	1.0	17.3	0.053	17.3	596	1.2
1.54	7.2	593.9	470	1.0	1.3	18.3	0.067	17.3	597	1.6
1.54	7.2	593.9	470	2.0	1.6	19.3	0.085	17.3	598	2.0
1.54	7.2	593.9	470	3.0	2.0	20.3	0.106	17.3	598	2.5
1.54	7.2	593.9	470	4.0	2.5	21.3	0.134	17.3	600	3.1
1.54	7.2	593.9	470	5.0	3.2	22.3	0.169	17.3	602	3.9
1.54	7.2	593.9	470	6.0	4.0	23.3	0.212	17.3	604	4.9
1.54	7.2	593.9	470	7.0	5.0	24.3	0.267	17.3	607	6.1
1.54	7.2	593.9	470	8.0	6.3	25.3	0.336	17.3	611	7.6
1.54	7.2	593.9	470	9.0	7.9	26.3	0.422	17.3	616	9.5
1.54	7.2	593.9	470	10.0	10.0	27.2	0.528	17.2	623	11.8
1.54	7.2	593.9	470	11.0	12.6	28.2	0.662	17.2	633	14.5
1.54	7.2	593.9	470	12.0	15.8	29.2	0.828	17.2	648	17.8
1.54	7.2	593.9	470	13.0	20.0	30.1	1.035	17.1	668	21.5
1.54	7.2	593.9	470	14.0	25.1	31.1	1.279	17.1	698	25.4
1.54	7.2	593.9	470	15.0	31.6	32.0	1.585	17.0	740	29.7
1.54	7.2	593.9	470	16.0	39.8	32.9	1.936	16.9	790	34.0
1.54	7.2	593.9	470	17.0	50.1	33.8	2.382	16.8	854	38.7
1.54	7.2	593.9	470	18.0	63.1	34.7	2.917	16.7	927	43.7
1.54	7.2	593.9	470	19.0	79.4	35.5	3.524	16.5	1006	48.7
1.54	7.2	593.9	470	20.0	100.0	36.2	4.188	16.2	1086	53.6
1.54	7.2	593.9	470	21.0	125.9	36.9	4.853	15.9	1161	58.0
1.54	7.2	593.9	470	22.0	158.5	37.4	5.470	15.4	1227	61.9
1.54	7.2	593.9	470	23.0	199.5	37.8	5.998	14.8	1282	65.0
1.54	7.2	593.9	470	24.0	251.2	38.1	6.457	14.1	1328	67.5
1.54	7.2	593.9	470	25.0	316.2	38.3	6.823	13.3	1366	69.4

Input-Output Characteristics Vds=7.2V, Ibias=700mA - Condition 1

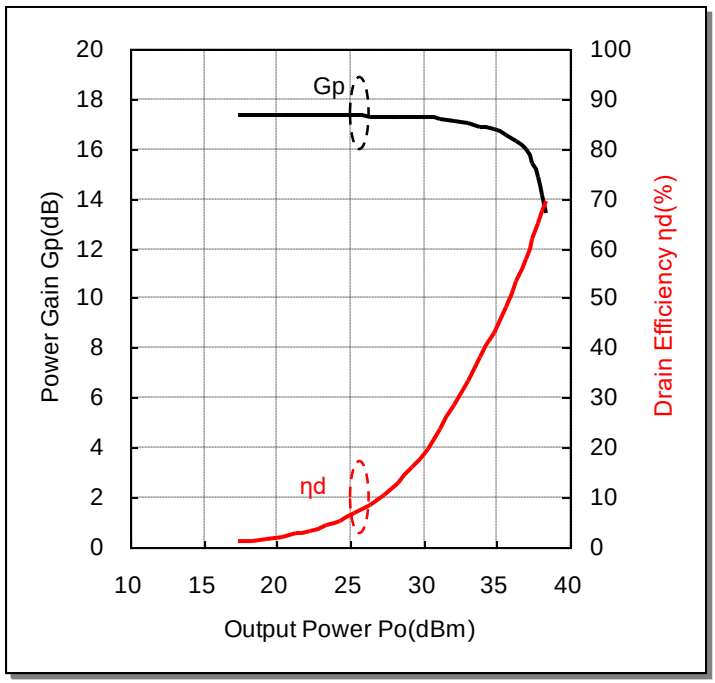
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=695.7mA

Power Gain, Drain Efficiency vs Output Power



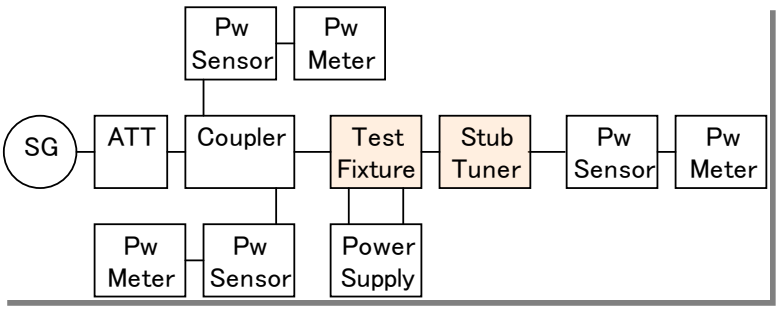
@ f=470MHz, Vds=7.2V, Ibias=695.7mA

Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηd (%)
1.60	7.2	695.7	470	0.0	1.0	17.3	0.054	17.3	697	1.1
1.60	7.2	695.7	470	1.0	1.3	18.3	0.068	17.3	698	1.3
1.60	7.2	695.7	470	2.0	1.6	19.3	0.085	17.3	698	1.7
1.60	7.2	695.7	470	3.0	2.0	20.3	0.107	17.3	699	2.1
1.60	7.2	695.7	470	4.0	2.5	21.3	0.136	17.3	700	2.7
1.60	7.2	695.7	470	5.0	3.2	22.3	0.171	17.3	702	3.4
1.60	7.2	695.7	470	6.0	4.0	23.3	0.214	17.3	702	4.2
1.60	7.2	695.7	470	7.0	5.0	24.3	0.270	17.3	705	5.3
1.60	7.2	695.7	470	8.0	6.3	25.3	0.340	17.3	708	6.7
1.60	7.2	695.7	470	9.0	7.9	26.3	0.427	17.3	711	8.3
1.60	7.2	695.7	470	10.0	10.0	27.3	0.536	17.3	716	10.4
1.60	7.2	695.7	470	11.0	12.6	28.3	0.673	17.3	723	12.9
1.60	7.2	695.7	470	12.0	15.8	29.3	0.845	17.3	732	16.0
1.60	7.2	695.7	470	13.0	20.0	30.3	1.059	17.3	746	19.7
1.60	7.2	695.7	470	14.0	25.1	31.2	1.315	17.2	766	23.9
1.60	7.2	695.7	470	15.0	31.6	32.1	1.629	17.1	797	28.4
1.60	7.2	695.7	470	16.0	39.8	33.0	2.014	17.0	842	33.2
1.60	7.2	695.7	470	17.0	50.1	33.9	2.449	16.9	896	38.0
1.60	7.2	695.7	470	18.0	63.1	34.8	2.992	16.8	964	43.1
1.60	7.2	695.7	470	19.0	79.4	35.6	3.606	16.6	1039	48.2
1.60	7.2	695.7	470	20.0	100.0	36.3	4.276	16.3	1116	53.2
1.60	7.2	695.7	470	21.0	125.9	37.0	4.955	16.0	1188	57.9
1.60	7.2	695.7	470	22.0	158.5	37.5	5.572	15.5	1251	61.8
1.60	7.2	695.7	470	23.0	199.5	37.8	6.095	14.8	1304	64.9
1.60	7.2	695.7	470	24.0	251.2	38.2	6.531	14.2	1348	67.3
1.60	7.2	695.7	470	25.0	316.2	38.4	6.902	13.4	1383	69.3

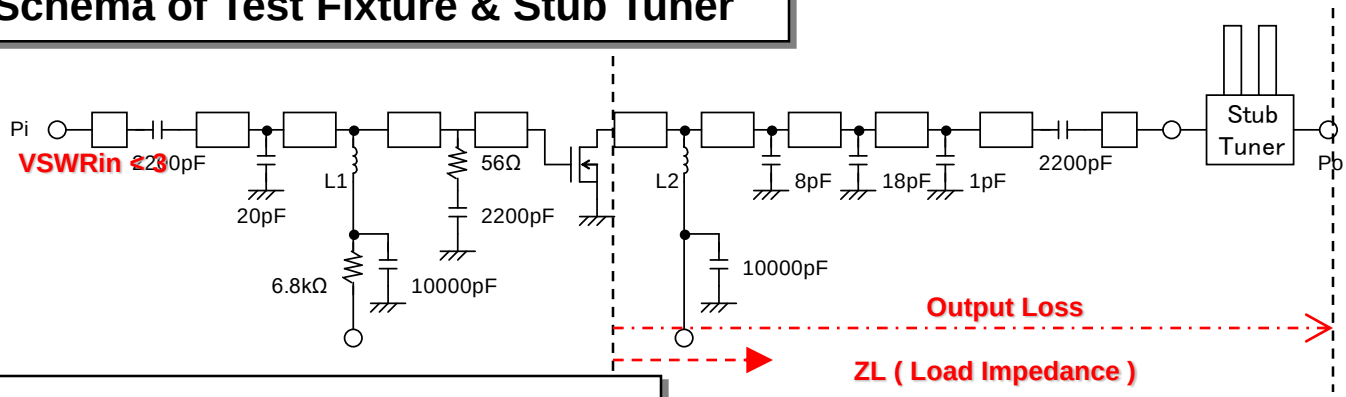
Test System – Condition 2

RF Test Block



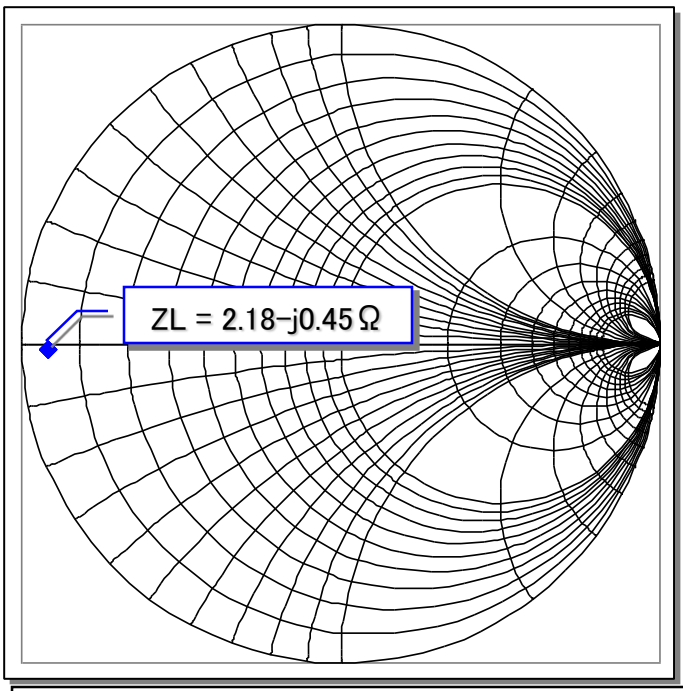
Test Fixture

Schema of Test Fixture & Stub Tuner

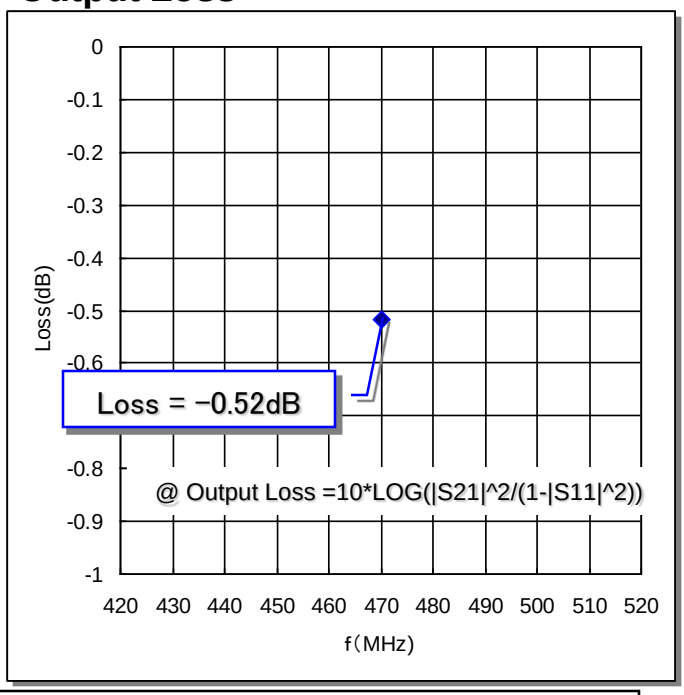


Load Impedance & Output Loss

Smith Chart



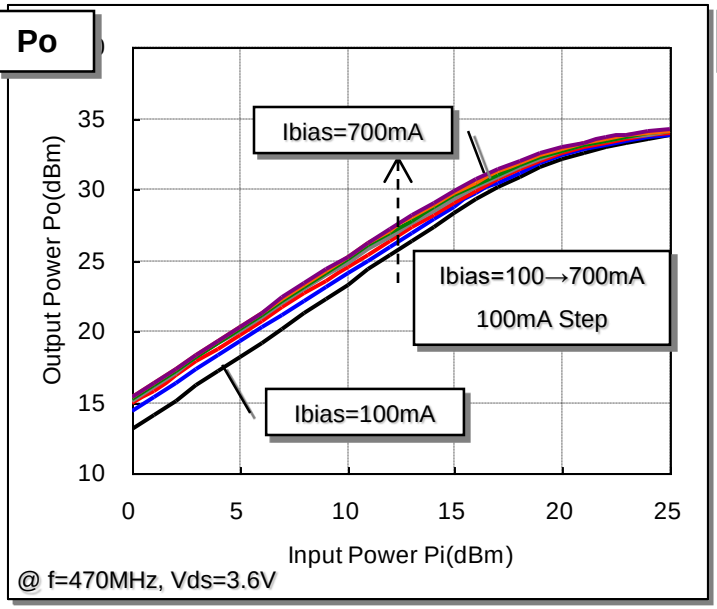
Output Loss

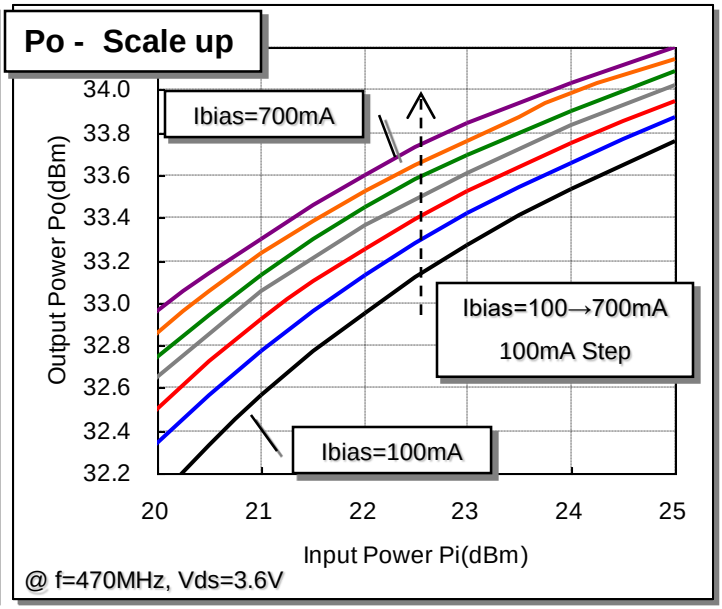


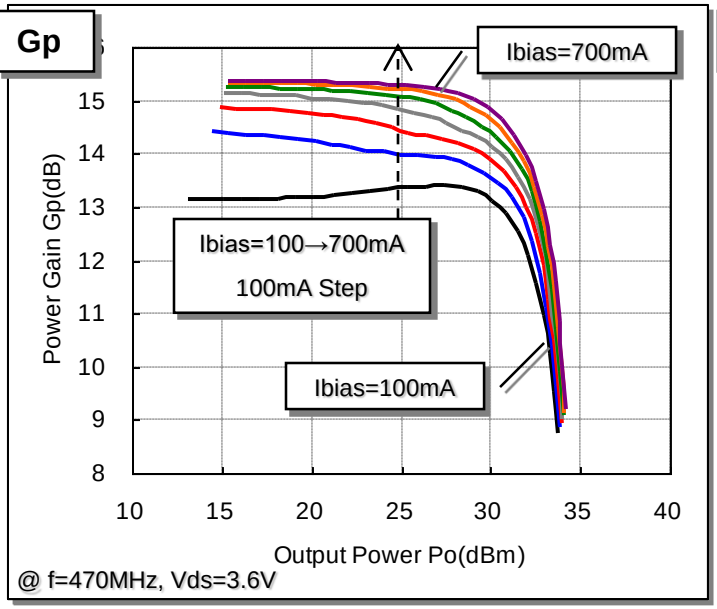
ZL = 2.18 − j 0.45 Ω , Output Circuit Loss = −0.52dB (@ f=470MHz)

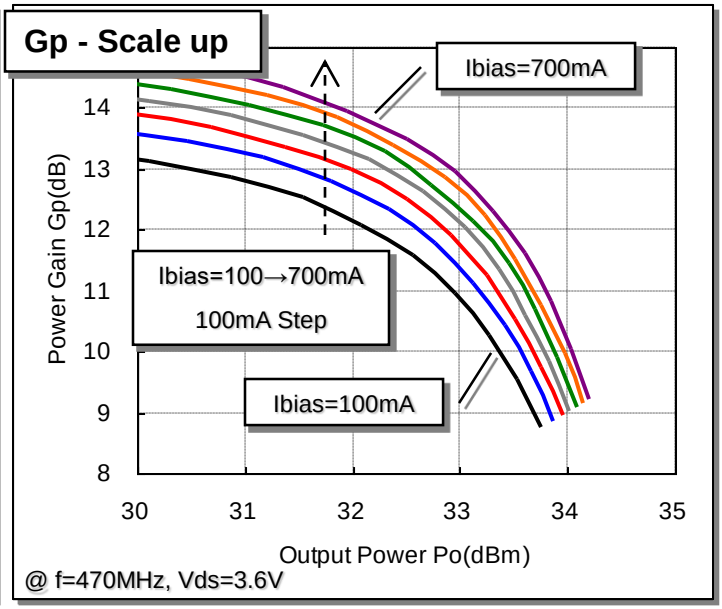
※ The test value in this application note includes the output loss.

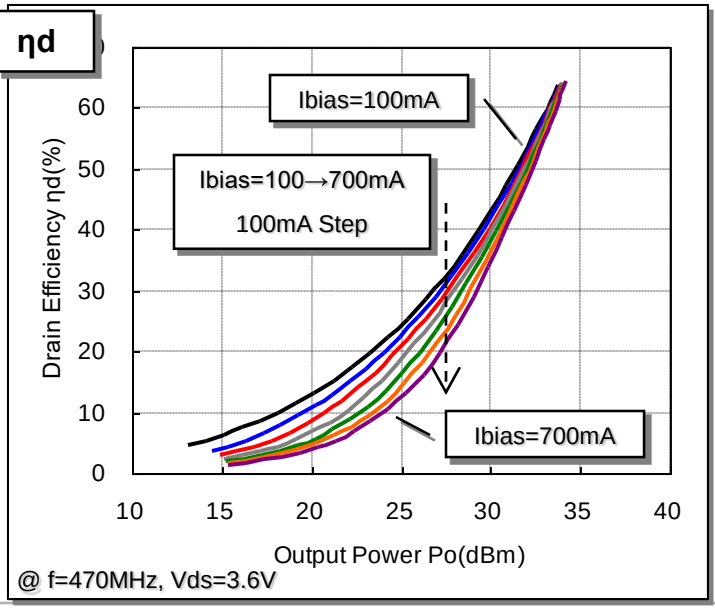
Input - Output Characteristics Vds＝3.6V - Condition 2

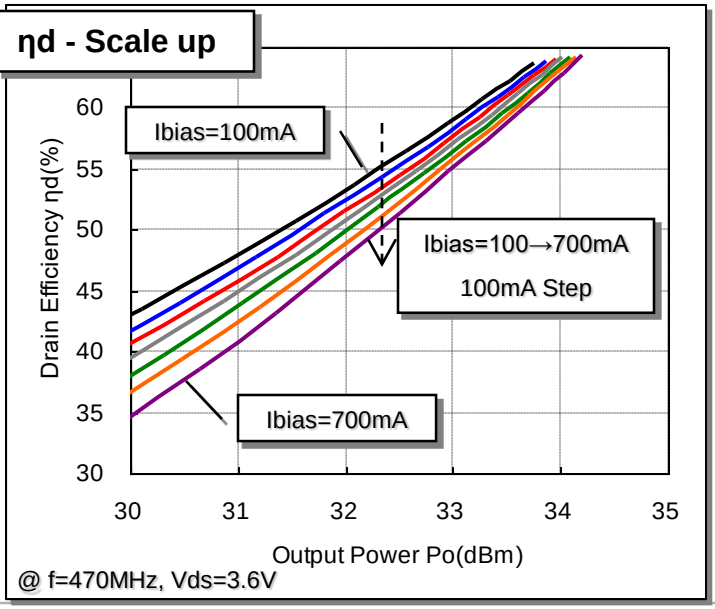








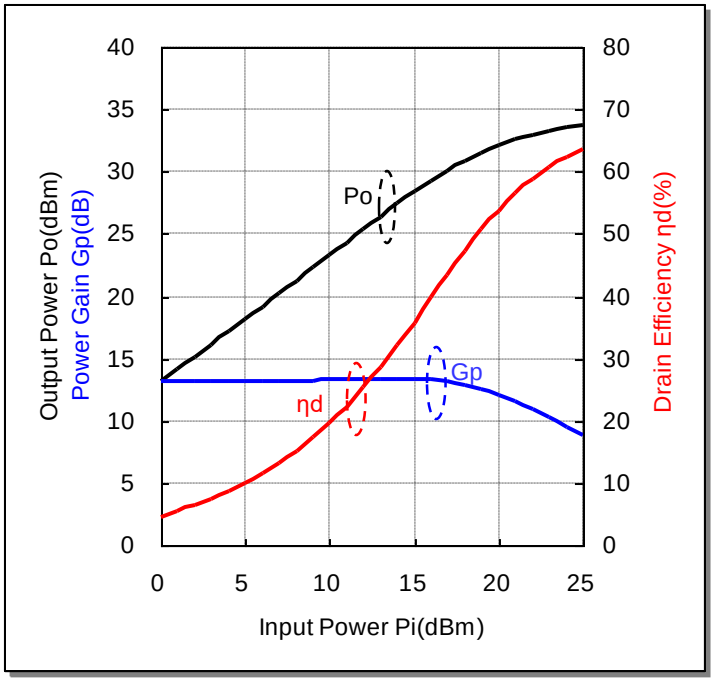




Input-Output Characteristics Vds＝3.6V, Ibias=100mA - Condition 2

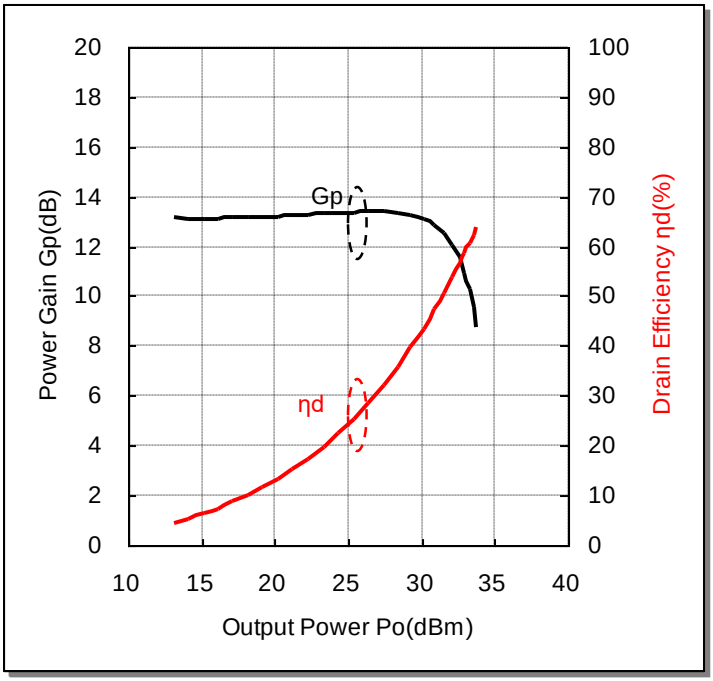
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=98.4mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=3.6V, Ibias=98.4mA

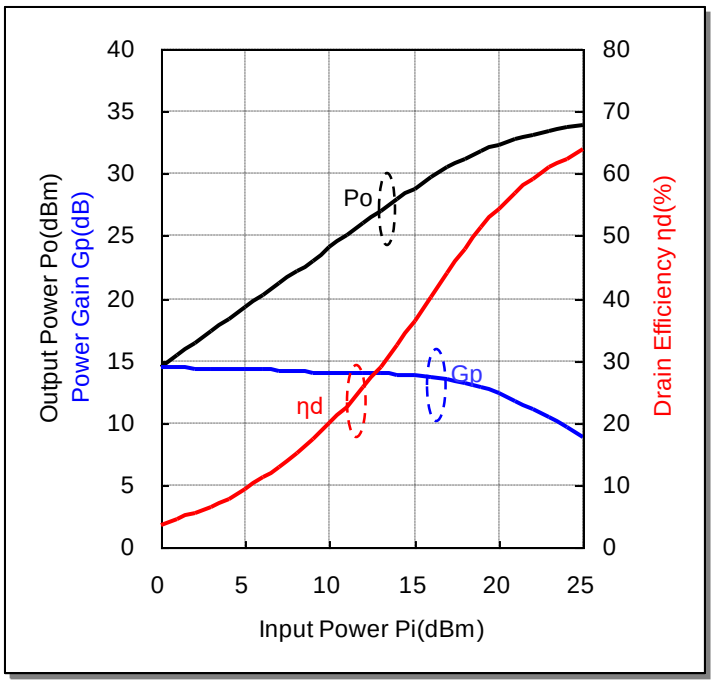
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.28	3.6	98.4	470	0.0	1.0	13.1	0.021	13.1	127	4.5
1.28	3.6	98.4	470	1.0	1.3	14.1	0.026	13.1	135	5.3
1.28	3.6	98.4	470	2.0	1.6	15.1	0.033	13.1	143	6.3
1.28	3.6	98.4	470	3.0	2.0	16.1	0.041	13.1	154	7.4
1.28	3.6	98.4	470	4.0	2.5	17.1	0.052	13.1	167	8.6
1.28	3.6	98.4	470	5.0	3.2	18.1	0.065	13.1	181	10.0
1.28	3.6	98.4	470	6.0	4.0	19.2	0.083	13.2	199	11.5
1.28	3.6	98.4	470	7.0	5.0	20.2	0.104	13.2	219	13.2
1.28	3.6	98.4	470	8.0	6.3	21.2	0.132	13.2	243	15.1
1.28	3.6	98.4	470	9.0	7.9	22.3	0.168	13.3	270	17.3
1.28	3.6	98.4	470	10.0	10.0	23.3	0.214	13.3	302	19.7
1.28	3.6	98.4	470	11.0	12.6	24.3	0.271	13.3	338	22.3
1.28	3.6	98.4	470	12.0	15.8	25.4	0.344	13.4	378	25.2
1.28	3.6	98.4	470	13.0	20.0	26.4	0.435	13.4	424	28.5
1.28	3.6	98.4	470	14.0	25.1	27.4	0.548	13.4	476	32.0
1.28	3.6	98.4	470	15.0	31.6	28.4	0.685	13.4	533	35.8
1.28	3.6	98.4	470	16.0	39.8	29.3	0.847	13.3	593	39.7
1.28	3.6	98.4	470	17.0	50.1	30.1	1.028	13.1	656	43.5
1.28	3.6	98.4	470	18.0	63.1	30.9	1.222	12.9	719	47.2
1.28	3.6	98.4	470	19.0	79.4	31.5	1.426	12.5	780	50.8
1.28	3.6	98.4	470	20.0	100.0	32.1	1.614	12.1	836	53.6
1.28	3.6	98.4	470	21.0	125.9	32.6	1.807	11.6	888	56.5
1.28	3.6	98.4	470	22.0	158.5	33.0	1.972	11.0	933	58.7
1.28	3.6	98.4	470	23.0	199.5	33.3	2.123	10.3	972	60.7
1.28	3.6	98.4	470	24.0	251.2	33.5	2.254	9.5	1006	62.2
1.28	3.6	98.4	470	25.0	316.2	33.8	2.377	8.8	1036	63.7

Input-Output Characteristics Vds=3.6V, Ibias=200mA - Condition 2

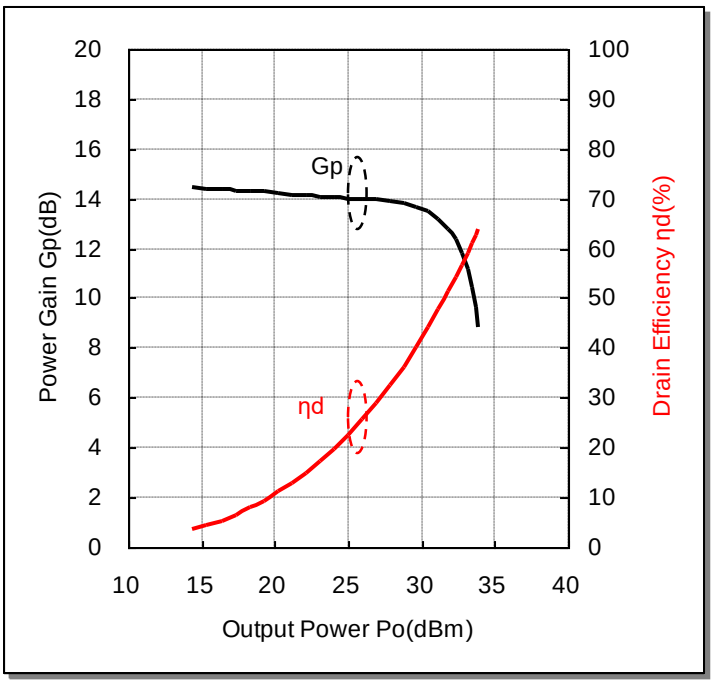
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=199.9mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=3.6V, Ibias=199.9mA

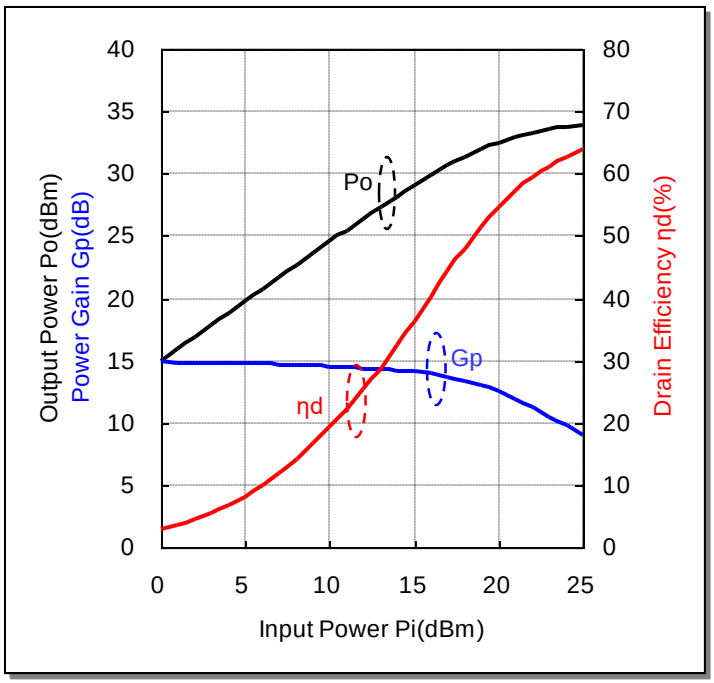
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.37	3.6	199.9	470	0.0	1.0	14.4	0.028	14.4	214	3.6
1.37	3.6	199.9	470	1.0	1.3	15.4	0.035	14.4	218	4.4
1.37	3.6	199.9	470	2.0	1.6	16.4	0.043	14.4	223	5.4
1.37	3.6	199.9	470	3.0	2.0	17.3	0.054	14.3	230	6.5
1.37	3.6	199.9	470	4.0	2.5	18.3	0.068	14.3	239	7.9
1.37	3.6	199.9	470	5.0	3.2	19.3	0.084	14.3	249	9.4
1.37	3.6	199.9	470	6.0	4.0	20.2	0.105	14.2	263	11.1
1.37	3.6	199.9	470	7.0	5.0	21.2	0.131	14.2	280	12.9
1.37	3.6	199.9	470	8.0	6.3	22.1	0.163	14.1	301	15.0
1.37	3.6	199.9	470	9.0	7.9	23.0	0.201	14.0	325	17.2
1.37	3.6	199.9	470	10.0	10.0	24.0	0.253	14.0	355	19.8
1.37	3.6	199.9	470	11.0	12.6	25.0	0.316	14.0	390	22.5
1.37	3.6	199.9	470	12.0	15.8	26.0	0.395	14.0	429	25.6
1.37	3.6	199.9	470	13.0	20.0	26.9	0.494	13.9	475	28.9
1.37	3.6	199.9	470	14.0	25.1	27.9	0.614	13.9	526	32.4
1.37	3.6	199.9	470	15.0	31.6	28.8	0.757	13.8	581	36.2
1.37	3.6	199.9	470	16.0	39.8	29.6	0.923	13.6	640	40.1
1.37	3.6	199.9	470	17.0	50.1	30.5	1.112	13.5	701	44.0
1.37	3.6	199.9	470	18.0	63.1	31.2	1.312	13.2	763	47.8
1.37	3.6	199.9	470	19.0	79.4	31.8	1.517	12.8	822	51.3
1.37	3.6	199.9	470	20.0	100.0	32.3	1.714	12.3	877	54.3
1.37	3.6	199.9	470	21.0	125.9	32.8	1.892	11.8	925	56.8
1.37	3.6	199.9	470	22.0	158.5	33.1	2.056	11.1	967	59.1
1.37	3.6	199.9	470	23.0	199.5	33.4	2.198	10.4	1002	60.9
1.37	3.6	199.9	470	24.0	251.2	33.7	2.323	9.7	1033	62.5
1.37	3.6	199.9	470	25.0	316.2	33.9	2.438	8.9	1060	63.9

Input-Output Characteristics Vds＝3.6V, Ibias=300mA - Condition 2

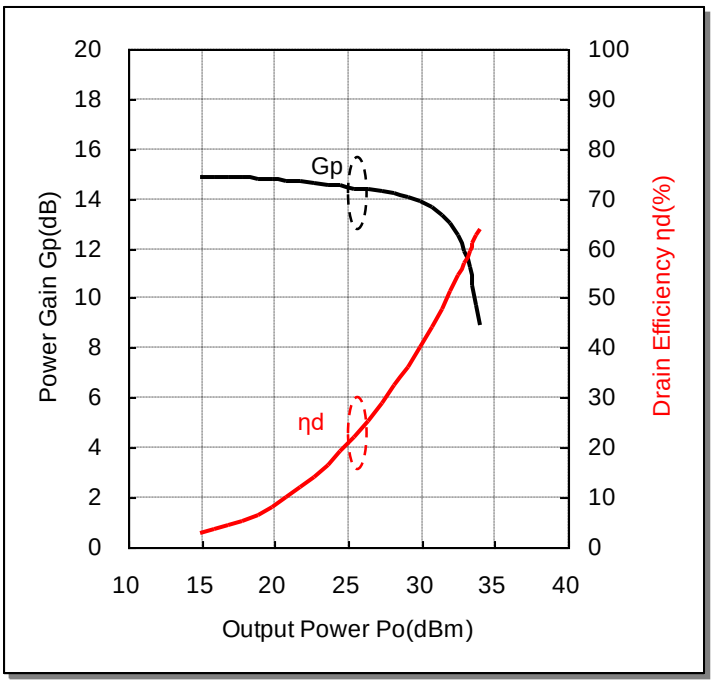
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=295.3mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=3.6V, Ibias=295.3mA

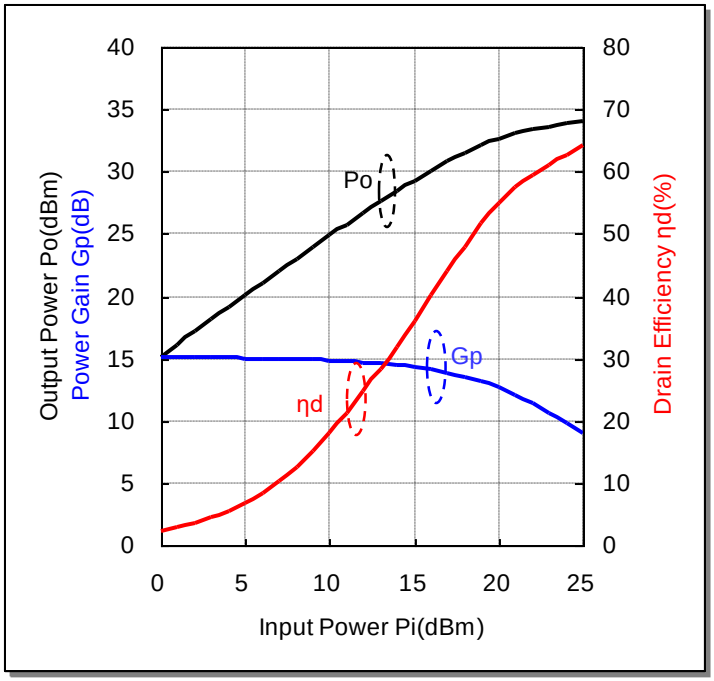
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.44	3.6	295.3	470	0.0	1.0	14.9	0.031	14.9	304	2.8
1.44	3.6	295.3	470	1.0	1.3	15.8	0.038	14.8	306	3.5
1.44	3.6	295.3	470	2.0	1.6	16.8	0.048	14.8	309	4.3
1.44	3.6	295.3	470	3.0	2.0	17.8	0.061	14.8	313	5.4
1.44	3.6	295.3	470	4.0	2.5	18.8	0.076	14.8	318	6.6
1.44	3.6	295.3	470	5.0	3.2	19.8	0.095	14.8	325	8.1
1.44	3.6	295.3	470	6.0	4.0	20.7	0.118	14.7	334	9.8
1.44	3.6	295.3	470	7.0	5.0	21.7	0.148	14.7	345	11.9
1.44	3.6	295.3	470	8.0	6.3	22.6	0.183	14.6	361	14.1
1.44	3.6	295.3	470	9.0	7.9	23.6	0.228	14.6	381	16.6
1.44	3.6	295.3	470	10.0	10.0	24.5	0.282	14.5	407	19.3
1.44	3.6	295.3	470	11.0	12.6	25.4	0.347	14.4	436	22.1
1.44	3.6	295.3	470	12.0	15.8	26.3	0.431	14.3	473	25.3
1.44	3.6	295.3	470	13.0	20.0	27.3	0.535	14.3	517	28.7
1.44	3.6	295.3	470	14.0	25.1	28.2	0.659	14.2	565	32.4
1.44	3.6	295.3	470	15.0	31.6	29.1	0.807	14.1	619	36.2
1.44	3.6	295.3	470	16.0	39.8	29.9	0.979	13.9	677	40.2
1.44	3.6	295.3	470	17.0	50.1	30.7	1.172	13.7	737	44.2
1.44	3.6	295.3	470	18.0	63.1	31.4	1.371	13.4	796	47.8
1.44	3.6	295.3	470	19.0	79.4	32.0	1.581	13.0	853	51.5
1.44	3.6	295.3	470	20.0	100.0	32.5	1.778	12.5	906	54.5
1.44	3.6	295.3	470	21.0	125.9	32.9	1.959	11.9	952	57.2
1.44	3.6	295.3	470	22.0	158.5	33.3	2.113	11.3	990	59.3
1.44	3.6	295.3	470	23.0	199.5	33.5	2.249	10.5	1023	61.0
1.44	3.6	295.3	470	24.0	251.2	33.8	2.371	9.8	1052	62.6
1.44	3.6	295.3	470	25.0	316.2	34.0	2.483	9.0	1077	64.0

Input-Output Characteristics Vds=3.6V, Ibias=400mA - Condition 2

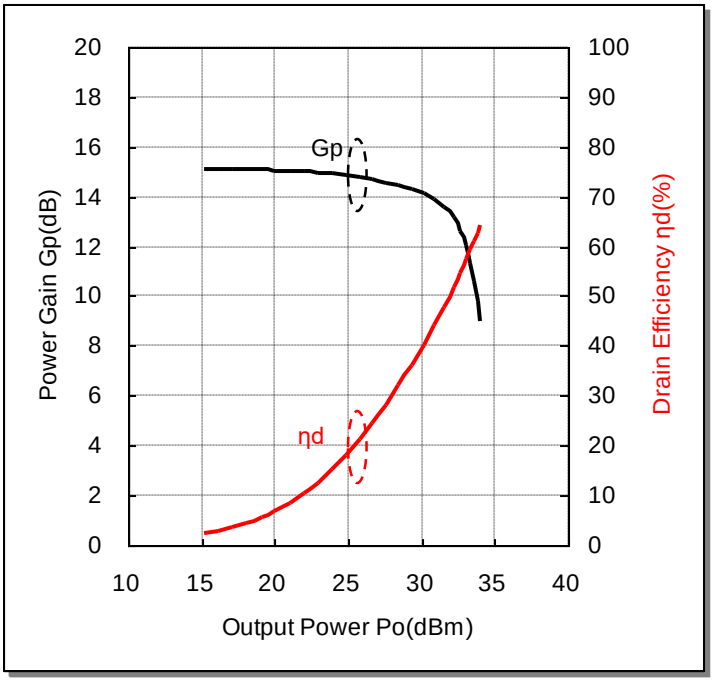
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=395.6mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=3.6V, Ibias=395.6mA

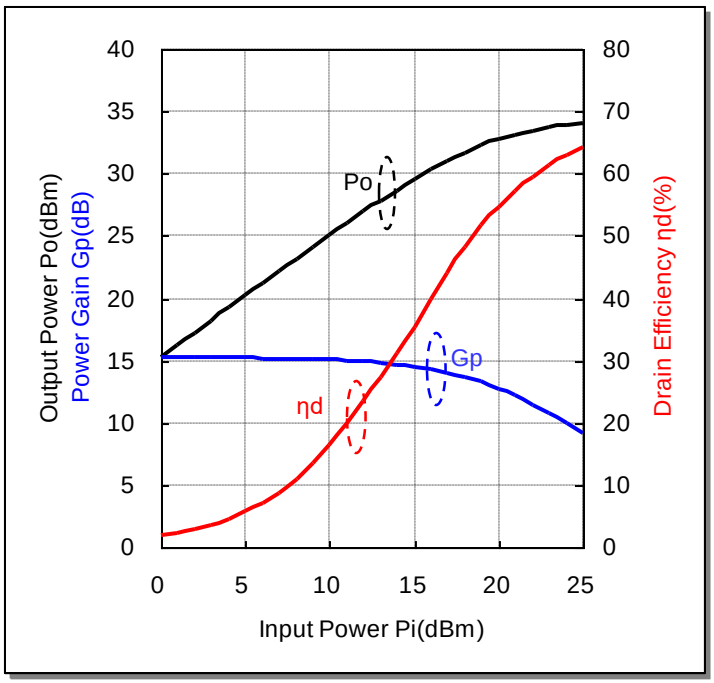
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.50	3.6	395.6	470	0.0	1.0	15.1	0.033	15.1	402	2.3
1.50	3.6	395.6	470	1.0	1.3	16.1	0.041	15.1	403	2.8
1.50	3.6	395.6	470	2.0	1.6	17.1	0.051	15.1	405	3.5
1.50	3.6	395.6	470	3.0	2.0	18.1	0.065	15.1	408	4.4
1.50	3.6	395.6	470	4.0	2.5	19.1	0.081	15.1	411	5.5
1.50	3.6	395.6	470	5.0	3.2	20.0	0.100	15.0	414	6.7
1.50	3.6	395.6	470	6.0	4.0	21.0	0.126	15.0	420	8.4
1.50	3.6	395.6	470	7.0	5.0	22.0	0.158	15.0	427	10.3
1.50	3.6	395.6	470	8.0	6.3	23.0	0.197	15.0	437	12.5
1.50	3.6	395.6	470	9.0	7.9	23.9	0.246	14.9	450	15.2
1.50	3.6	395.6	470	10.0	10.0	24.8	0.305	14.8	469	18.1
1.50	3.6	395.6	470	11.0	12.6	25.8	0.378	14.8	493	21.3
1.50	3.6	395.6	470	12.0	15.8	26.7	0.467	14.7	525	24.7
1.50	3.6	395.6	470	13.0	20.0	27.6	0.570	14.6	562	28.2
1.50	3.6	395.6	470	14.0	25.1	28.4	0.698	14.4	607	32.0
1.50	3.6	395.6	470	15.0	31.6	29.3	0.851	14.3	658	36.0
1.50	3.6	395.6	470	16.0	39.8	30.1	1.028	14.1	713	40.0
1.50	3.6	395.6	470	17.0	50.1	30.9	1.225	13.9	771	44.1
1.50	3.6	395.6	470	18.0	63.1	31.5	1.429	13.5	828	47.9
1.50	3.6	395.6	470	19.0	79.4	32.2	1.644	13.2	884	51.7
1.50	3.6	395.6	470	20.0	100.0	32.7	1.841	12.7	933	54.8
1.50	3.6	395.6	470	21.0	125.9	33.0	2.018	12.0	976	57.4
1.50	3.6	395.6	470	22.0	158.5	33.4	2.168	11.4	1013	59.5
1.50	3.6	395.6	470	23.0	199.5	33.6	2.296	10.6	1043	61.2
1.50	3.6	395.6	470	24.0	251.2	33.8	2.415	9.8	1070	62.7
1.50	3.6	395.6	470	25.0	316.2	34.0	2.523	9.0	1093	64.2

Input-Output Characteristics Vds=3.6V, Ibias=500mA - Condition 2

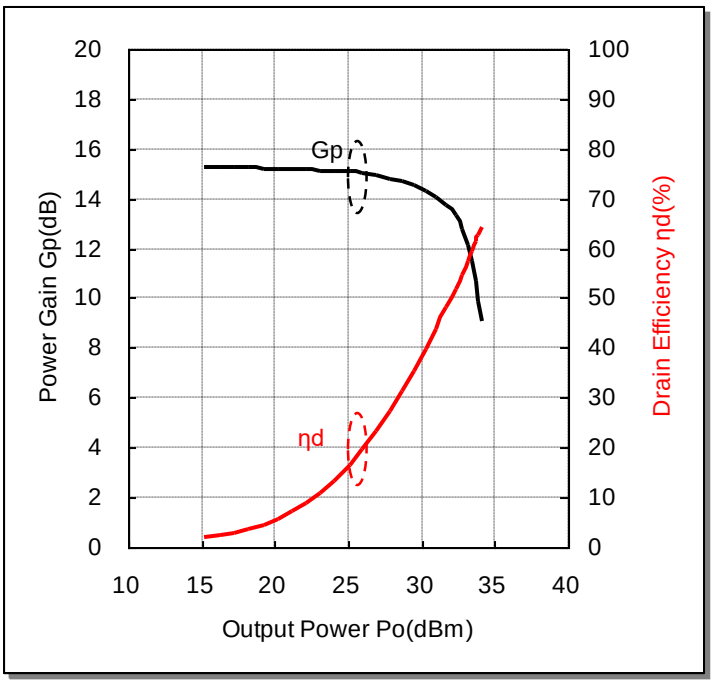
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=497.3mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=3.6V, Ibias=497.3mA

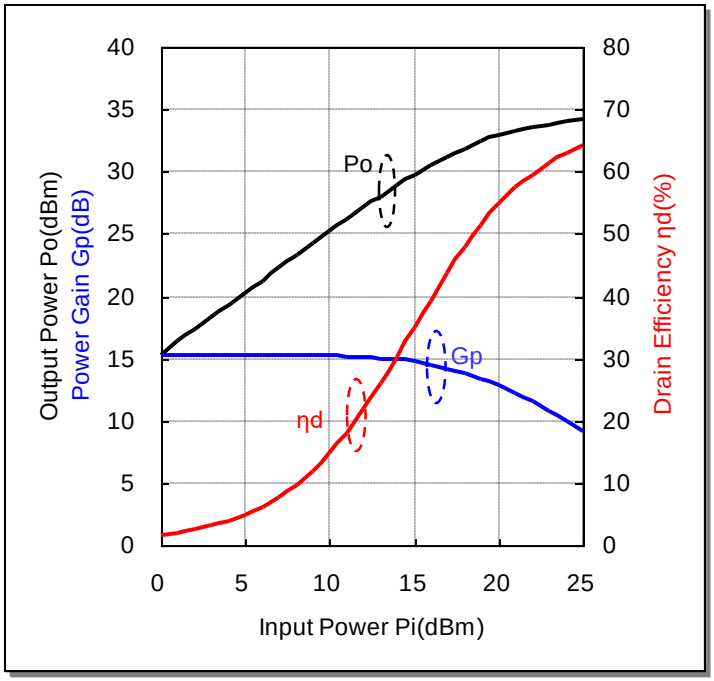
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.56	3.6	497.3	470	0.0	1.0	15.2	0.033	15.2	501	1.9
1.56	3.6	497.3	470	1.0	1.3	16.2	0.042	15.2	502	2.3
1.56	3.6	497.3	470	2.0	1.6	17.2	0.053	15.2	503	2.9
1.56	3.6	497.3	470	3.0	2.0	18.2	0.067	15.2	505	3.7
1.56	3.6	497.3	470	4.0	2.5	19.2	0.084	15.2	506	4.6
1.56	3.6	497.3	470	5.0	3.2	20.2	0.105	15.2	509	5.7
1.56	3.6	497.3	470	6.0	4.0	21.2	0.131	15.2	513	7.1
1.56	3.6	497.3	470	7.0	5.0	22.2	0.164	15.2	518	8.8
1.56	3.6	497.3	470	8.0	6.3	23.1	0.206	15.1	524	10.9
1.56	3.6	497.3	470	9.0	7.9	24.1	0.258	15.1	533	13.4
1.56	3.6	497.3	470	10.0	10.0	25.1	0.321	15.1	544	16.4
1.56	3.6	497.3	470	11.0	12.6	26.0	0.399	15.0	560	19.8
1.56	3.6	497.3	470	12.0	15.8	26.9	0.493	14.9	584	23.5
1.56	3.6	497.3	470	13.0	20.0	27.8	0.603	14.8	614	27.3
1.56	3.6	497.3	470	14.0	25.1	28.7	0.736	14.7	653	31.3
1.56	3.6	497.3	470	15.0	31.6	29.5	0.893	14.5	699	35.5
1.56	3.6	497.3	470	16.0	39.8	30.3	1.074	14.3	751	39.7
1.56	3.6	497.3	470	17.0	50.1	31.0	1.274	14.0	805	44.0
1.56	3.6	497.3	470	18.0	63.1	31.7	1.486	13.7	859	48.1
1.56	3.6	497.3	470	19.0	79.4	32.3	1.698	13.3	911	51.8
1.56	3.6	497.3	470	20.0	100.0	32.7	1.879	12.7	956	54.6
1.56	3.6	497.3	470	21.0	125.9	33.1	2.056	12.1	997	57.3
1.56	3.6	497.3	470	22.0	158.5	33.5	2.213	11.5	1032	59.6
1.56	3.6	497.3	470	23.0	199.5	33.7	2.339	10.7	1061	61.3
1.56	3.6	497.3	470	24.0	251.2	33.9	2.455	9.9	1086	62.8
1.56	3.6	497.3	470	25.0	316.2	34.1	2.564	9.1	1109	64.2

Input-Output Characteristics Vds＝3.6V, Ibias=600mA - Condition 2

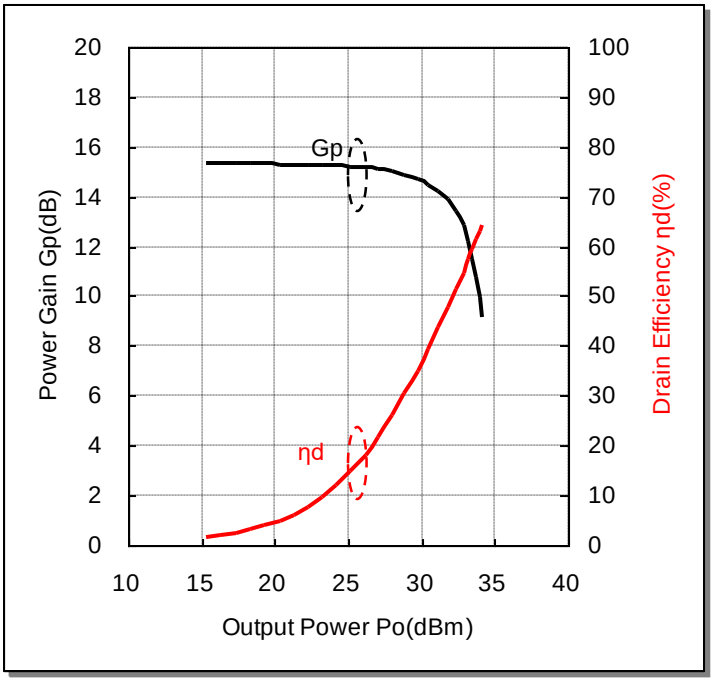
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=593.7mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=3.6V, Ibias=593.7mA

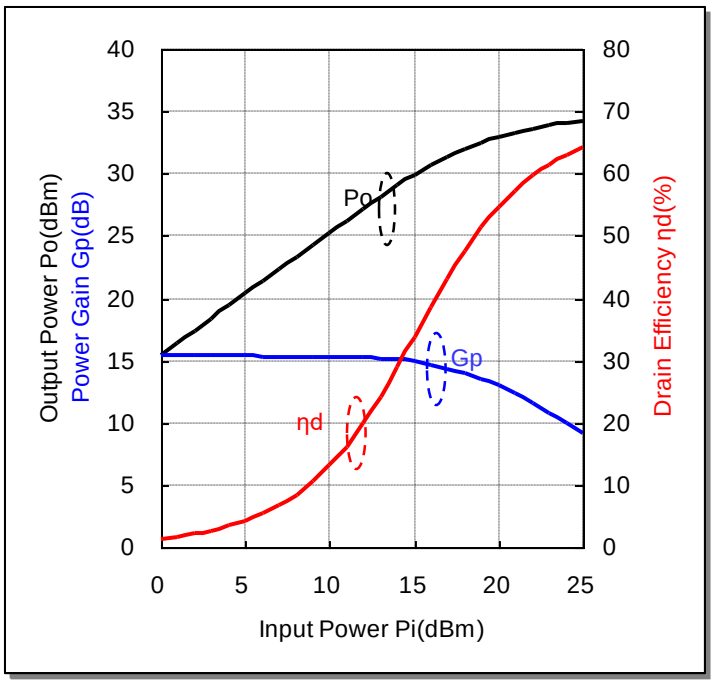
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.61	3.6	593.7	470	0.0	1.0	15.3	0.034	15.3	596	1.6
1.61	3.6	593.7	470	1.0	1.3	16.3	0.043	15.3	597	2.0
1.61	3.6	593.7	470	2.0	1.6	17.3	0.054	15.3	599	2.5
1.61	3.6	593.7	470	3.0	2.0	18.3	0.068	15.3	600	3.1
1.61	3.6	593.7	470	4.0	2.5	19.3	0.085	15.3	600	3.9
1.61	3.6	593.7	470	5.0	3.2	20.3	0.107	15.3	603	4.9
1.61	3.6	593.7	470	6.0	4.0	21.3	0.134	15.3	605	6.2
1.61	3.6	593.7	470	7.0	5.0	22.3	0.169	15.3	608	7.7
1.61	3.6	593.7	470	8.0	6.3	23.3	0.211	15.3	612	9.6
1.61	3.6	593.7	470	9.0	7.9	24.2	0.265	15.2	618	11.9
1.61	3.6	593.7	470	10.0	10.0	25.2	0.331	15.2	626	14.7
1.61	3.6	593.7	470	11.0	12.6	26.2	0.413	15.2	637	18.0
1.61	3.6	593.7	470	12.0	15.8	27.1	0.513	15.1	652	21.9
1.61	3.6	593.7	470	13.0	20.0	28.0	0.634	15.0	675	26.1
1.61	3.6	593.7	470	14.0	25.1	28.9	0.771	14.9	705	30.4
1.61	3.6	593.7	470	15.0	31.6	29.7	0.935	14.7	745	34.9
1.61	3.6	593.7	470	16.0	39.8	30.5	1.119	14.5	790	39.3
1.61	3.6	593.7	470	17.0	50.1	31.2	1.318	14.2	839	43.6
1.61	3.6	593.7	470	18.0	63.1	31.9	1.535	13.9	890	47.9
1.61	3.6	593.7	470	19.0	79.4	32.4	1.730	13.4	935	51.4
1.61	3.6	593.7	470	20.0	100.0	32.9	1.932	12.9	979	54.8
1.61	3.6	593.7	470	21.0	125.9	33.2	2.104	12.2	1018	57.4
1.61	3.6	593.7	470	22.0	158.5	33.5	2.249	11.5	1050	59.5
1.61	3.6	593.7	470	23.0	199.5	33.8	2.377	10.8	1077	61.3
1.61	3.6	593.7	470	24.0	251.2	34.0	2.500	10.0	1102	63.0
1.61	3.6	593.7	470	25.0	316.2	34.1	2.594	9.1	1122	64.2

Input-Output Characteristics Vds=3.6V, Ibias=700mA - Condition 2

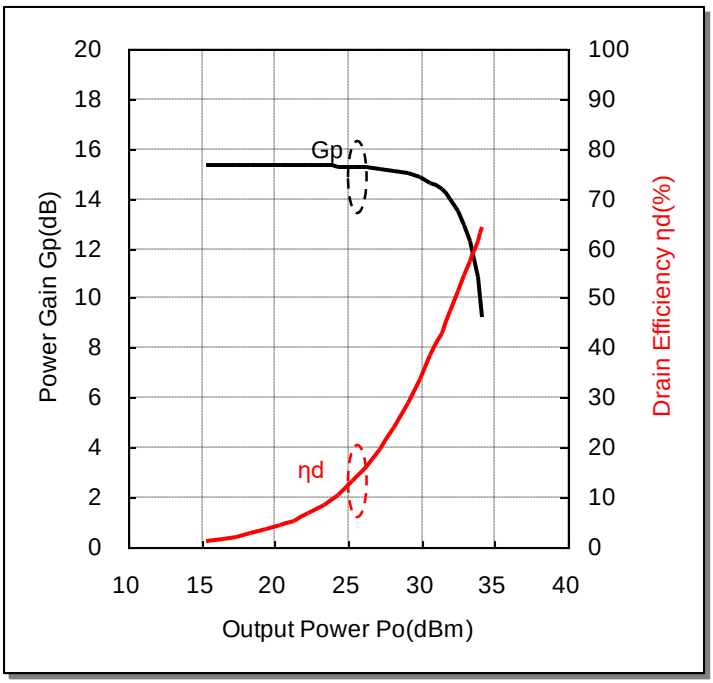
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=3.6V, Ibias=694.7mA

Power Gain, Drain Efficiency vs Output Power

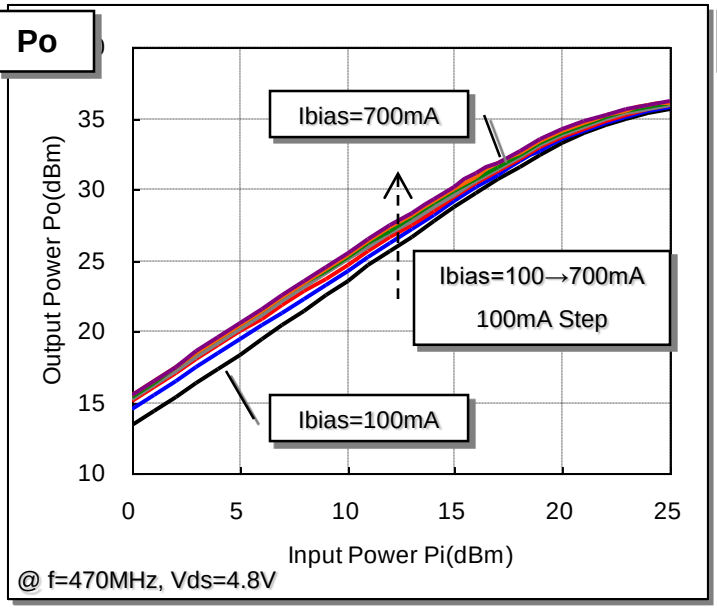


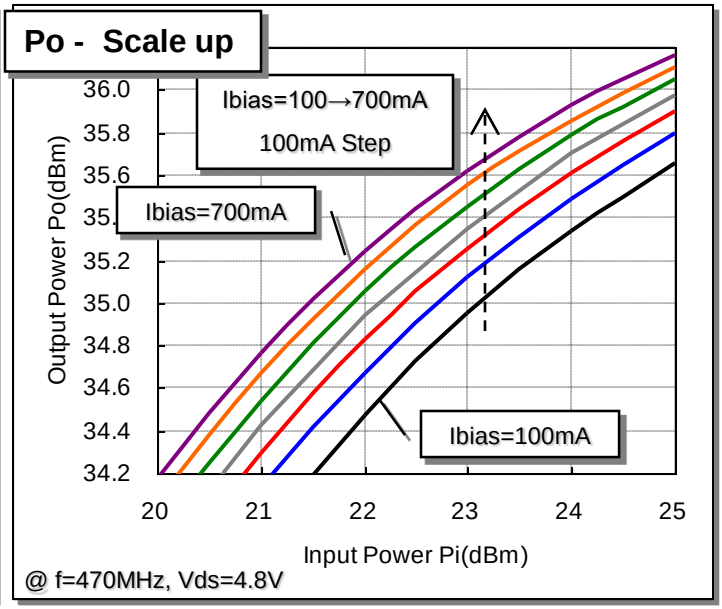
@ f=470MHz, Vds=3.6V, Ibias=694.7mA

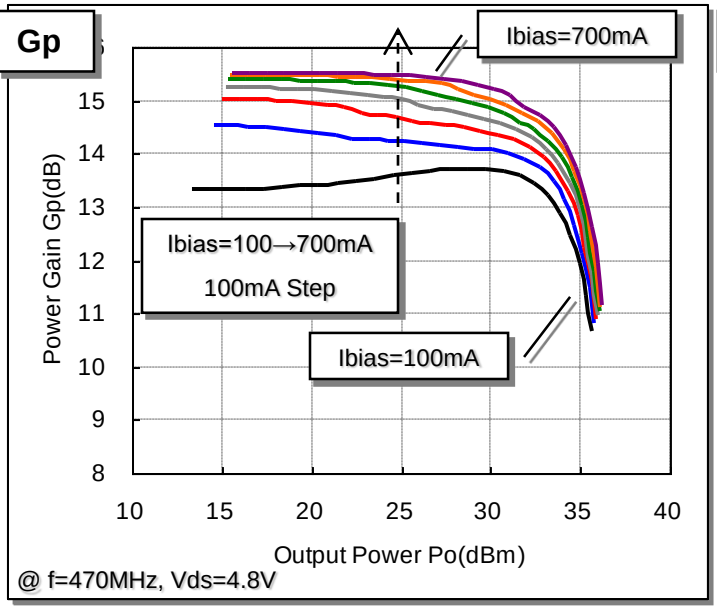
Data

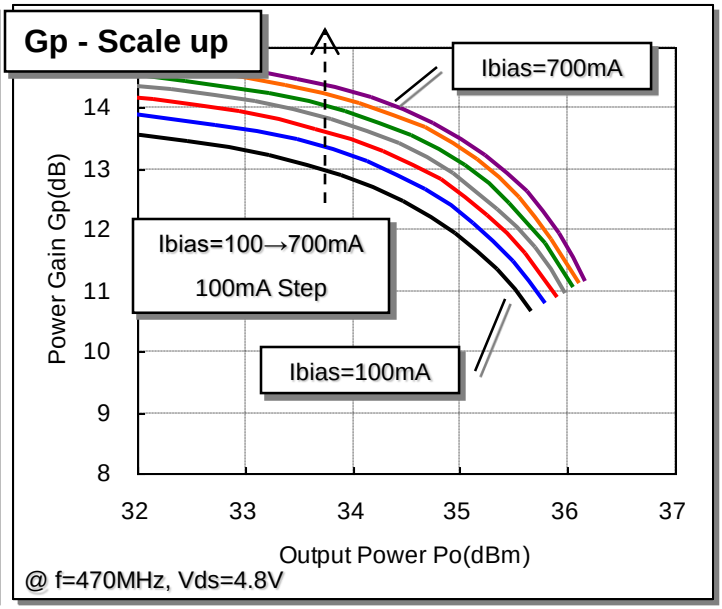
Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.66	3.6	694.7	470	0.0	1.0	15.4	0.034	15.4	696	1.4
1.66	3.6	694.7	470	1.0	1.3	16.4	0.043	15.4	697	1.7
1.66	3.6	694.7	470	2.0	1.6	17.4	0.055	15.4	698	2.2
1.66	3.6	694.7	470	3.0	2.0	18.4	0.069	15.4	699	2.7
1.66	3.6	694.7	470	4.0	2.5	19.4	0.086	15.4	700	3.4
1.66	3.6	694.7	470	5.0	3.2	20.4	0.108	15.4	702	4.3
1.66	3.6	694.7	470	6.0	4.0	21.3	0.136	15.3	703	5.4
1.66	3.6	694.7	470	7.0	5.0	22.3	0.171	15.3	705	6.7
1.66	3.6	694.7	470	8.0	6.3	23.3	0.214	15.3	707	8.4
1.66	3.6	694.7	470	9.0	7.9	24.3	0.269	15.3	711	10.5
1.66	3.6	694.7	470	10.0	10.0	25.3	0.337	15.3	717	13.1
1.66	3.6	694.7	470	11.0	12.6	26.3	0.422	15.3	724	16.2
1.66	3.6	694.7	470	12.0	15.8	27.2	0.525	15.2	734	19.9
1.66	3.6	694.7	470	13.0	20.0	28.1	0.652	15.1	748	24.2
1.66	3.6	694.7	470	14.0	25.1	29.0	0.802	15.0	769	29.0
1.66	3.6	694.7	470	15.0	31.6	29.9	0.971	14.9	798	33.8
1.66	3.6	694.7	470	16.0	39.8	30.6	1.161	14.6	835	38.6
1.66	3.6	694.7	470	17.0	50.1	31.4	1.365	14.4	878	43.2
1.66	3.6	694.7	470	18.0	63.1	32.0	1.570	14.0	920	47.4
1.66	3.6	694.7	470	19.0	79.4	32.5	1.778	13.5	963	51.3
1.66	3.6	694.7	470	20.0	100.0	33.0	1.977	13.0	1003	54.8
1.66	3.6	694.7	470	21.0	125.9	33.3	2.138	12.3	1037	57.3
1.66	3.6	694.7	470	22.0	158.5	33.6	2.291	11.6	1068	59.6
1.66	3.6	694.7	470	23.0	199.5	33.8	2.421	10.8	1095	61.4
1.66	3.6	694.7	470	24.0	251.2	34.0	2.529	10.0	1116	62.9
1.66	3.6	694.7	470	25.0	316.2	34.2	2.630	9.2	1135	64.4

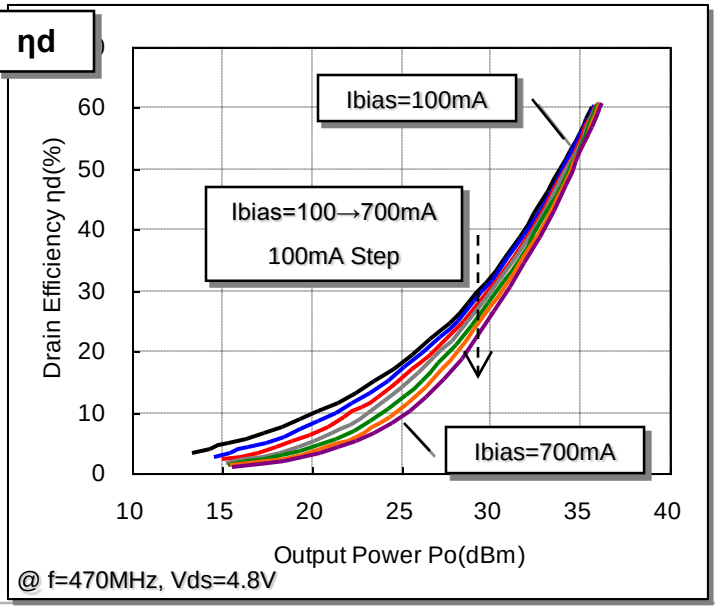
Input - Output Characteristics Vds＝4.8V - Condition 2

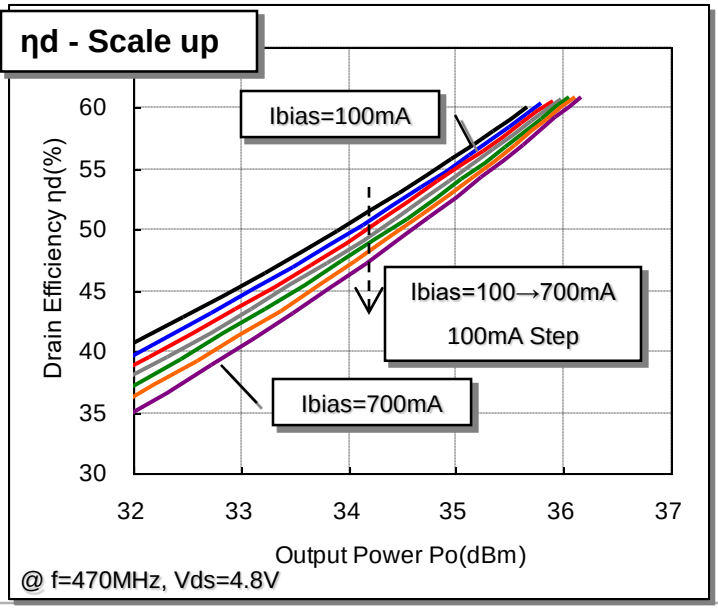








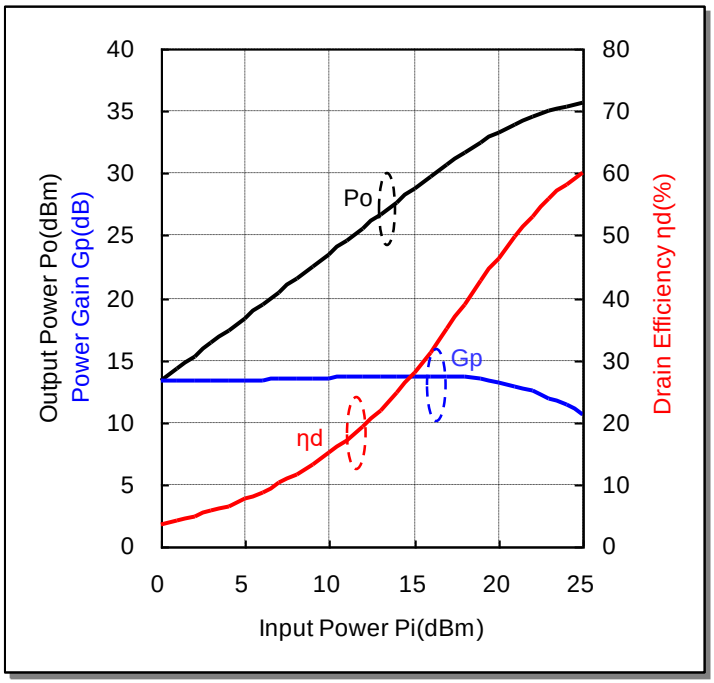




Input-Output Characteristics Vds＝4.8V, Ibias=100mA - Condition 2

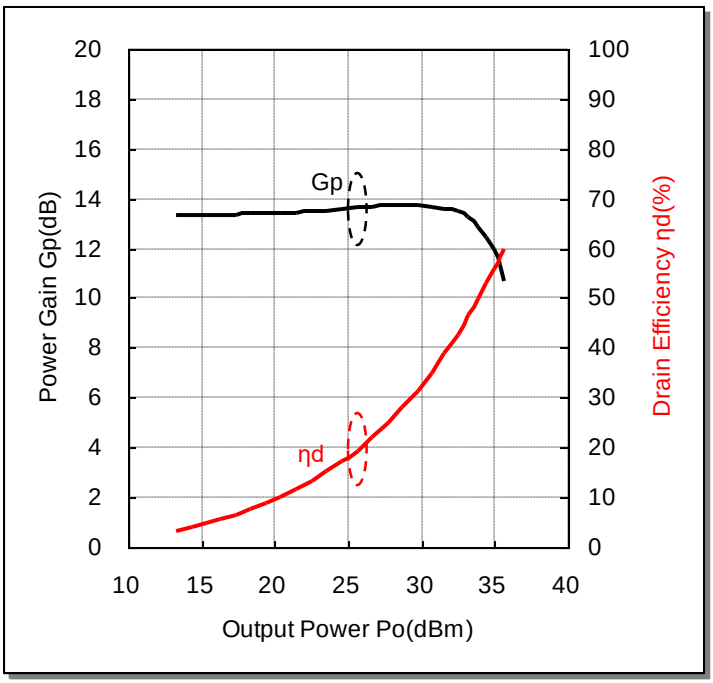
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=101.9mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=4.8V, Ibias=101.9mA

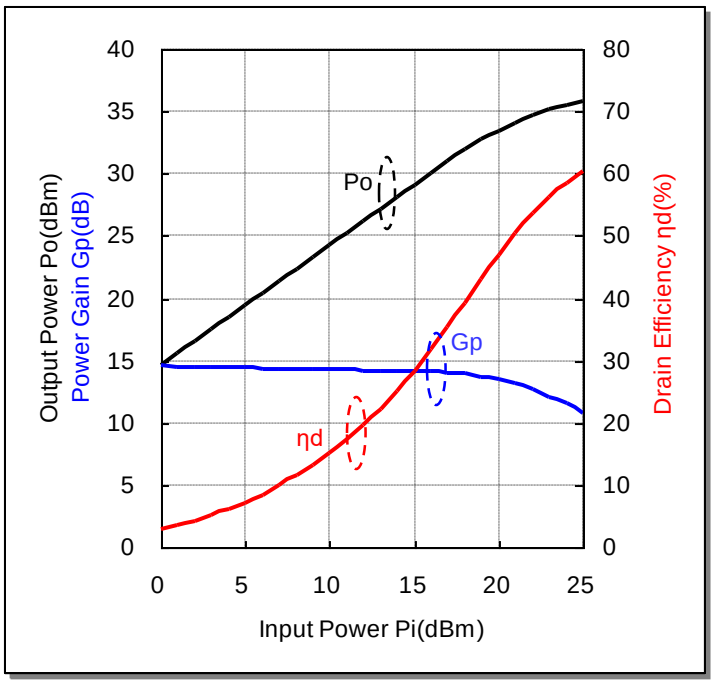
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.26	4.8	101.9	470	0.0	1.0	13.3	0.022	13.3	132	3.4
1.26	4.8	101.9	470	1.0	1.3	14.3	0.027	13.3	139	4.1
1.26	4.8	101.9	470	2.0	1.6	15.3	0.034	13.3	148	4.8
1.26	4.8	101.9	470	3.0	2.0	16.3	0.043	13.3	159	5.6
1.26	4.8	101.9	470	4.0	2.5	17.4	0.054	13.4	172	6.6
1.26	4.8	101.9	470	5.0	3.2	18.4	0.069	13.4	187	7.7
1.26	4.8	101.9	470	6.0	4.0	19.4	0.087	13.4	206	8.8
1.26	4.8	101.9	470	7.0	5.0	20.4	0.110	13.4	227	10.1
1.26	4.8	101.9	470	8.0	6.3	21.5	0.140	13.5	251	11.6
1.26	4.8	101.9	470	9.0	7.9	22.5	0.177	13.5	280	13.2
1.26	4.8	101.9	470	10.0	10.0	23.5	0.225	13.5	312	15.1
1.26	4.8	101.9	470	11.0	12.6	24.6	0.287	13.6	350	17.1
1.26	4.8	101.9	470	12.0	15.8	25.6	0.365	13.6	392	19.4
1.26	4.8	101.9	470	13.0	20.0	26.7	0.463	13.7	440	21.9
1.26	4.8	101.9	470	14.0	25.1	27.7	0.589	13.7	494	24.8
1.26	4.8	101.9	470	15.0	31.6	28.7	0.745	13.7	556	27.9
1.26	4.8	101.9	470	16.0	39.8	29.7	0.935	13.7	622	31.3
1.26	4.8	101.9	470	17.0	50.1	30.7	1.172	13.7	697	35.0
1.26	4.8	101.9	470	18.0	63.1	31.6	1.449	13.6	776	38.9
1.26	4.8	101.9	470	19.0	79.4	32.5	1.762	13.5	859	42.7
1.26	4.8	101.9	470	20.0	100.0	33.2	2.099	13.2	942	46.4
1.26	4.8	101.9	470	21.0	125.9	33.9	2.449	12.9	1022	49.9
1.26	4.8	101.9	470	22.0	158.5	34.5	2.799	12.5	1099	53.0
1.26	4.8	101.9	470	23.0	199.5	35.0	3.126	12.0	1167	55.8
1.26	4.8	101.9	470	24.0	251.2	35.3	3.420	11.3	1226	58.1
1.26	4.8	101.9	470	25.0	316.2	35.7	3.681	10.7	1278	60.0

Input-Output Characteristics Vds=4.8V, Ibias=200mA - Condition 2

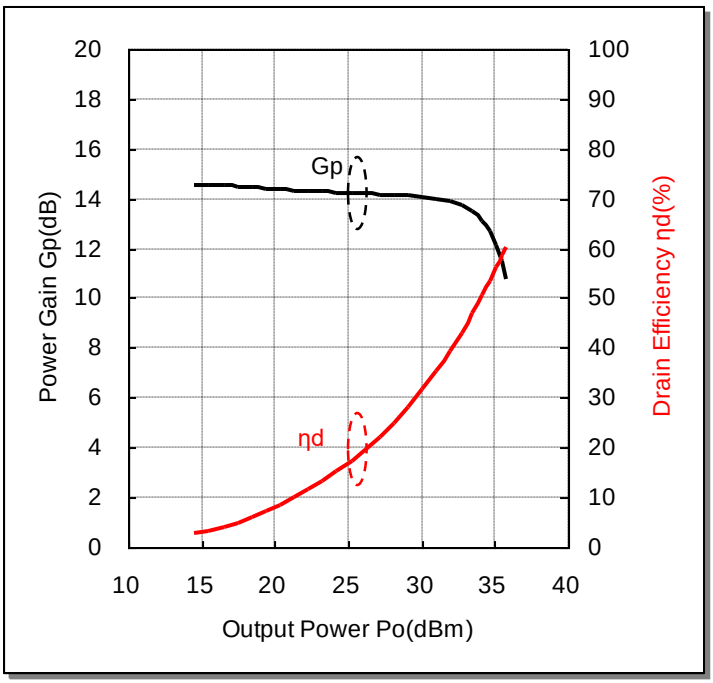
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=200.0mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=4.8V, Ibias=200.0mA

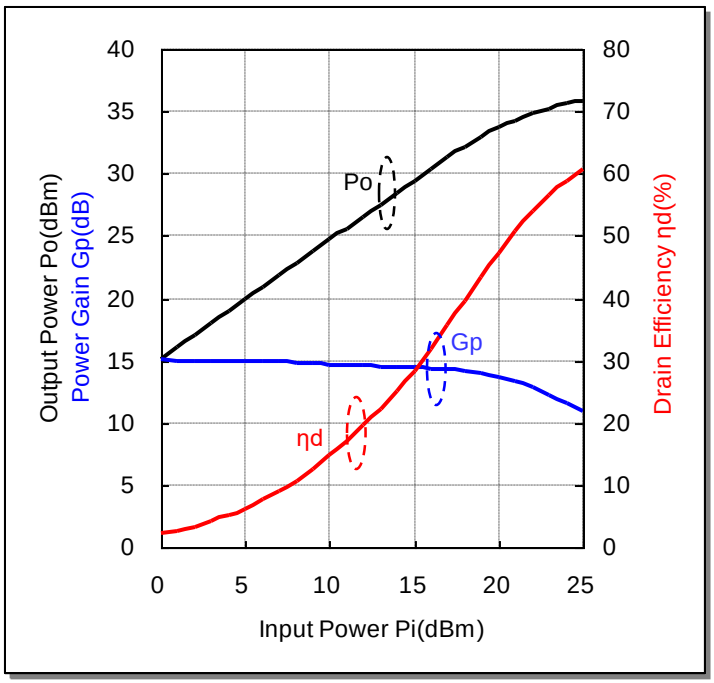
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.35	4.8	200.0	470	0.0	1.0	14.5	0.028	14.5	216	2.7
1.35	4.8	200.0	470	1.0	1.3	15.5	0.036	14.5	220	3.4
1.35	4.8	200.0	470	2.0	1.6	16.5	0.045	14.5	225	4.1
1.35	4.8	200.0	470	3.0	2.0	17.5	0.056	14.5	232	5.0
1.35	4.8	200.0	470	4.0	2.5	18.5	0.070	14.5	241	6.0
1.35	4.8	200.0	470	5.0	3.2	19.4	0.087	14.4	253	7.2
1.35	4.8	200.0	470	6.0	4.0	20.4	0.109	14.4	267	8.5
1.35	4.8	200.0	470	7.0	5.0	21.3	0.136	14.3	285	9.9
1.35	4.8	200.0	470	8.0	6.3	22.3	0.169	14.3	307	11.5
1.35	4.8	200.0	470	9.0	7.9	23.3	0.212	14.3	334	13.2
1.35	4.8	200.0	470	10.0	10.0	24.2	0.265	14.2	365	15.2
1.35	4.8	200.0	470	11.0	12.6	25.2	0.333	14.2	401	17.3
1.35	4.8	200.0	470	12.0	15.8	26.2	0.418	14.2	443	19.7
1.35	4.8	200.0	470	13.0	20.0	27.2	0.520	14.2	488	22.2
1.35	4.8	200.0	470	14.0	25.1	28.1	0.650	14.1	541	25.0
1.35	4.8	200.0	470	15.0	31.6	29.1	0.813	14.1	601	28.2
1.35	4.8	200.0	470	16.0	39.8	30.1	1.019	14.1	670	31.7
1.35	4.8	200.0	470	17.0	50.1	31.0	1.262	14.0	744	35.4
1.35	4.8	200.0	470	18.0	63.1	31.9	1.552	13.9	824	39.2
1.35	4.8	200.0	470	19.0	79.4	32.7	1.875	13.7	906	43.1
1.35	4.8	200.0	470	20.0	100.0	33.5	2.228	13.5	989	46.9
1.35	4.8	200.0	470	21.0	125.9	34.1	2.588	13.1	1069	50.5
1.35	4.8	200.0	470	22.0	158.5	34.7	2.931	12.7	1141	53.5
1.35	4.8	200.0	470	23.0	199.5	35.1	3.251	12.1	1206	56.2
1.35	4.8	200.0	470	24.0	251.2	35.5	3.540	11.5	1262	58.4
1.35	4.8	200.0	470	25.0	316.2	35.8	3.802	10.8	1312	60.4

Input-Output Characteristics Vds＝4.8V, Ibias=300mA - Condition 2

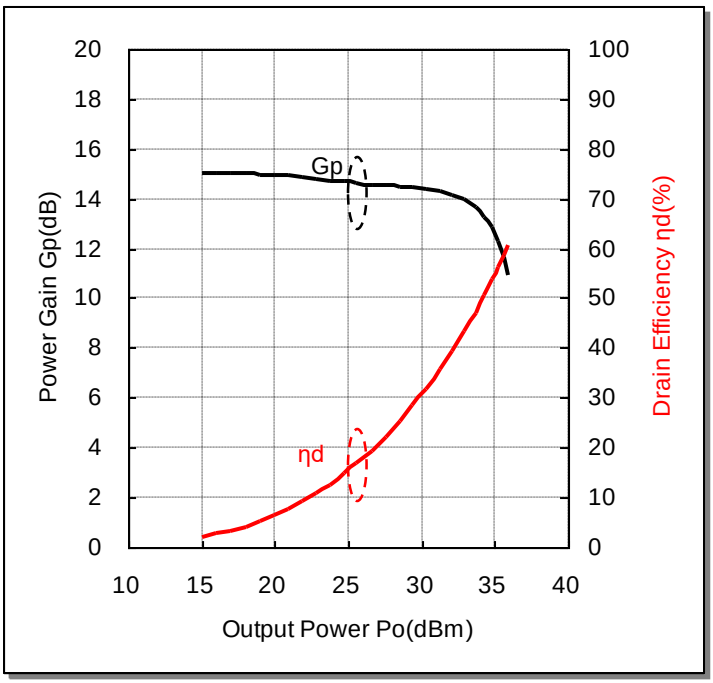
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=297.3mA,

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=4.8V, Ibias=297.3mA

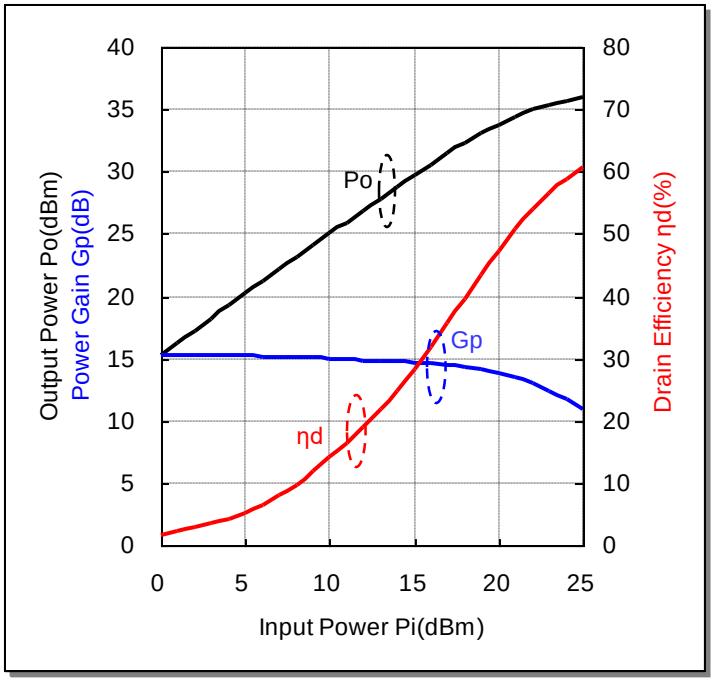
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.42	4.8	297.3	470	0.0	1.0	15.0	0.032	15.0	307	2.2
1.42	4.8	297.3	470	1.0	1.3	16.0	0.040	15.0	310	2.7
1.42	4.8	297.3	470	2.0	1.6	17.0	0.050	15.0	313	3.3
1.42	4.8	297.3	470	3.0	2.0	18.0	0.063	15.0	317	4.2
1.42	4.8	297.3	470	4.0	2.5	19.0	0.079	15.0	322	5.1
1.42	4.8	297.3	470	5.0	3.2	19.9	0.099	14.9	330	6.2
1.42	4.8	297.3	470	6.0	4.0	20.9	0.123	14.9	339	7.6
1.42	4.8	297.3	470	7.0	5.0	21.9	0.153	14.9	351	9.1
1.42	4.8	297.3	470	8.0	6.3	22.8	0.189	14.8	367	10.7
1.42	4.8	297.3	470	9.0	7.9	23.7	0.236	14.7	388	12.6
1.42	4.8	297.3	470	10.0	10.0	24.7	0.293	14.7	415	14.7
1.42	4.8	297.3	470	11.0	12.6	25.6	0.364	14.6	448	16.9
1.42	4.8	297.3	470	12.0	15.8	26.6	0.454	14.6	486	19.4
1.42	4.8	297.3	470	13.0	20.0	27.5	0.566	14.5	533	22.2
1.42	4.8	297.3	470	14.0	25.1	28.5	0.705	14.5	584	25.1
1.42	4.8	297.3	470	15.0	31.6	29.4	0.875	14.4	644	28.3
1.42	4.8	297.3	470	16.0	39.8	30.4	1.086	14.4	710	31.9
1.42	4.8	297.3	470	17.0	50.1	31.3	1.340	14.3	784	35.6
1.42	4.8	297.3	470	18.0	63.1	32.1	1.637	14.1	863	39.5
1.42	4.8	297.3	470	19.0	79.4	33.0	1.972	14.0	945	43.5
1.42	4.8	297.3	470	20.0	100.0	33.7	2.323	13.7	1026	47.2
1.42	4.8	297.3	470	21.0	125.9	34.3	2.685	13.3	1104	50.7
1.42	4.8	297.3	470	22.0	158.5	34.8	3.041	12.8	1175	53.9
1.42	4.8	297.3	470	23.0	199.5	35.3	3.350	12.3	1237	56.4
1.42	4.8	297.3	470	24.0	251.2	35.6	3.639	11.6	1290	58.8
1.42	4.8	297.3	470	25.0	316.2	35.9	3.890	10.9	1337	60.6

Input-Output Characteristics Vds=4.8V, Ibias=400mA - Condition 2

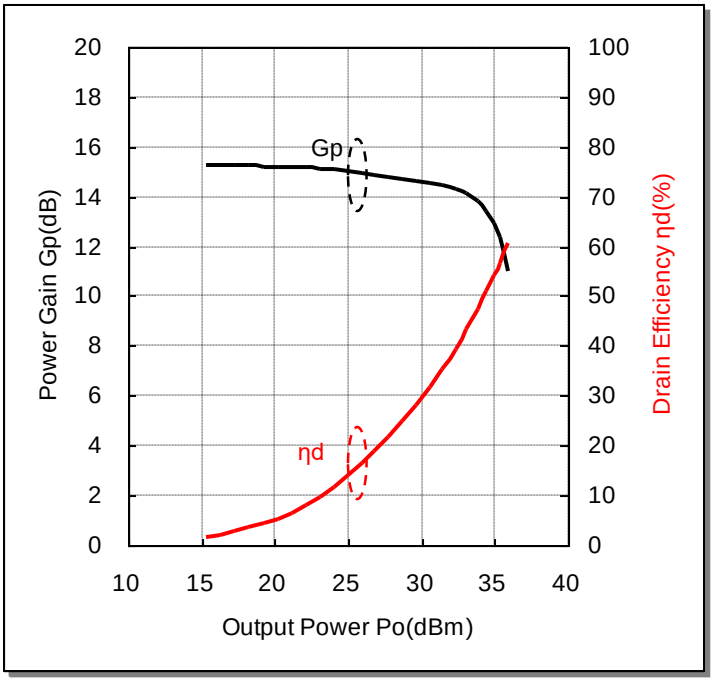
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=392.2mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=4.8V, Ibias=392.2mA,

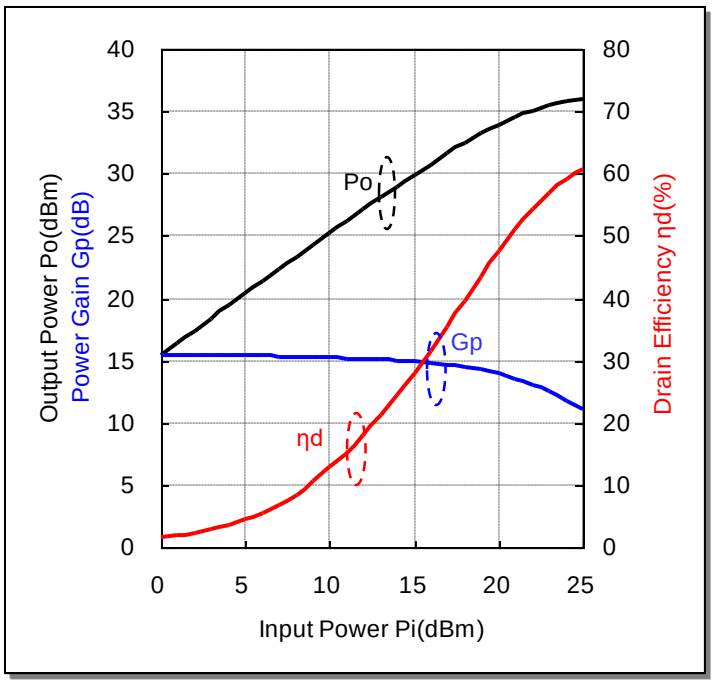
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.48	4.8	392.2	470	0.0	1.0	15.3	0.034	15.3	398	1.8
1.48	4.8	392.2	470	1.0	1.3	16.3	0.042	15.3	399	2.2
1.48	4.8	392.2	470	2.0	1.6	17.2	0.053	15.2	401	2.7
1.48	4.8	392.2	470	3.0	2.0	18.2	0.067	15.2	404	3.4
1.48	4.8	392.2	470	4.0	2.5	19.2	0.084	15.2	408	4.3
1.48	4.8	392.2	470	5.0	3.2	20.2	0.105	15.2	413	5.3
1.48	4.8	392.2	470	6.0	4.0	21.2	0.131	15.2	419	6.5
1.48	4.8	392.2	470	7.0	5.0	22.1	0.164	15.1	427	8.0
1.48	4.8	392.2	470	8.0	6.3	23.1	0.205	15.1	438	9.7
1.48	4.8	392.2	470	9.0	7.9	24.1	0.255	15.1	453	11.8
1.48	4.8	392.2	470	10.0	10.0	25.0	0.318	15.0	473	14.0
1.48	4.8	392.2	470	11.0	12.6	25.9	0.390	14.9	499	16.3
1.48	4.8	392.2	470	12.0	15.8	26.8	0.483	14.8	532	18.9
1.48	4.8	392.2	470	13.0	20.0	27.8	0.601	14.8	575	21.8
1.48	4.8	392.2	470	14.0	25.1	28.7	0.743	14.7	624	24.8
1.48	4.8	392.2	470	15.0	31.6	29.6	0.920	14.6	681	28.2
1.48	4.8	392.2	470	16.0	39.8	30.6	1.138	14.6	746	31.8
1.48	4.8	392.2	470	17.0	50.1	31.5	1.396	14.5	819	35.5
1.48	4.8	392.2	470	18.0	63.1	32.3	1.702	14.3	897	39.5
1.48	4.8	392.2	470	19.0	79.4	33.1	2.042	14.1	978	43.5
1.48	4.8	392.2	470	20.0	100.0	33.8	2.404	13.8	1058	47.3
1.48	4.8	392.2	470	21.0	125.9	34.4	2.773	13.4	1135	50.9
1.48	4.8	392.2	470	22.0	158.5	34.9	3.119	12.9	1203	54.0
1.48	4.8	392.2	470	23.0	199.5	35.3	3.428	12.3	1263	56.6
1.48	4.8	392.2	470	24.0	251.2	35.7	3.715	11.7	1315	58.9
1.48	4.8	392.2	470	25.0	316.2	36.0	3.954	11.0	1357	60.7

Input-Output Characteristics Vds＝4.8V, Ibias=500mA - Condition 2

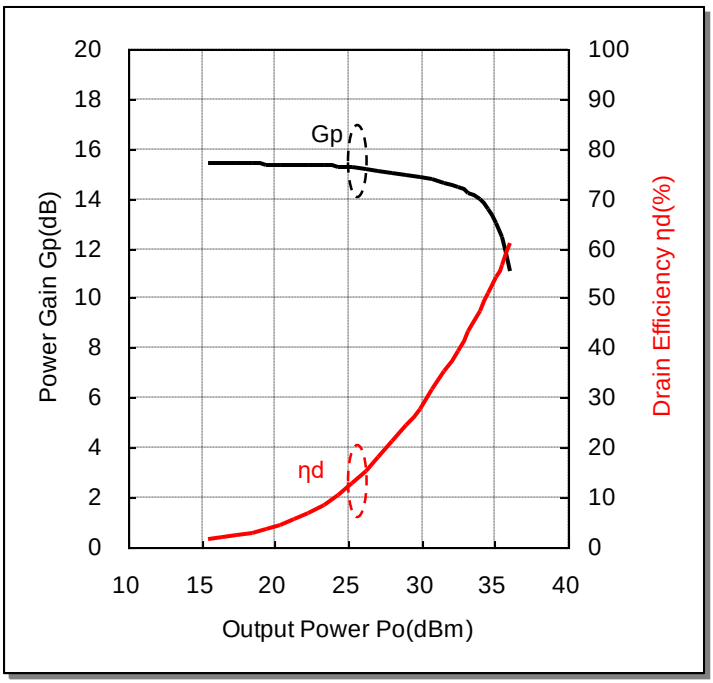
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=493.2mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=4.8V, Ibias=493.2mA

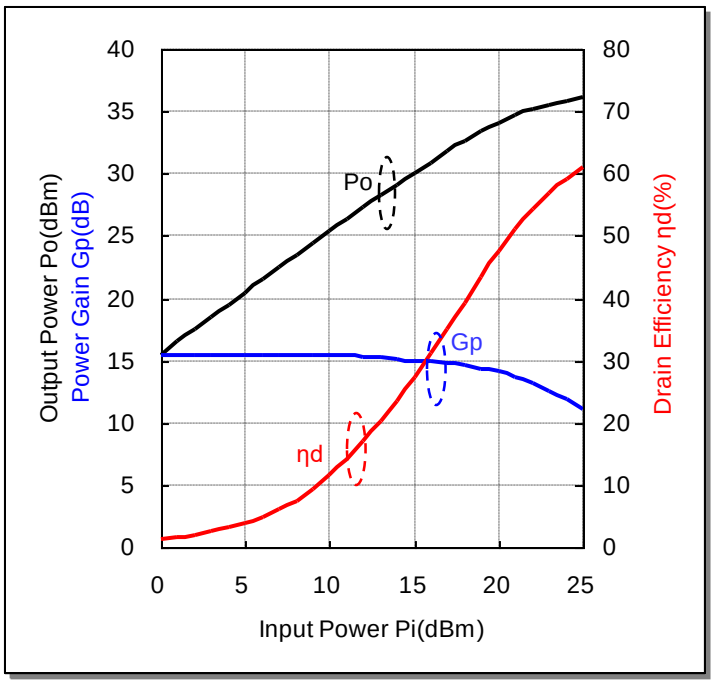
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.53	4.8	493.2	470	0.0	1.0	15.4	0.035	15.4	498	1.5
1.53	4.8	493.2	470	1.0	1.3	16.4	0.044	15.4	499	1.8
1.53	4.8	493.2	470	2.0	1.6	17.4	0.055	15.4	501	2.3
1.53	4.8	493.2	470	3.0	2.0	18.4	0.069	15.4	503	2.9
1.53	4.8	493.2	470	4.0	2.5	19.4	0.087	15.4	505	3.6
1.53	4.8	493.2	470	5.0	3.2	20.4	0.109	15.4	508	4.5
1.53	4.8	493.2	470	6.0	4.0	21.4	0.136	15.4	512	5.6
1.53	4.8	493.2	470	7.0	5.0	22.3	0.171	15.3	518	6.9
1.53	4.8	493.2	470	8.0	6.3	23.3	0.214	15.3	525	8.5
1.53	4.8	493.2	470	9.0	7.9	24.3	0.268	15.3	534	10.4
1.53	4.8	493.2	470	10.0	10.0	25.3	0.335	15.3	548	12.7
1.53	4.8	493.2	470	11.0	12.6	26.2	0.414	15.2	566	15.2
1.53	4.8	493.2	470	12.0	15.8	27.1	0.514	15.1	592	18.1
1.53	4.8	493.2	470	13.0	20.0	28.0	0.637	15.0	627	21.2
1.53	4.8	493.2	470	14.0	25.1	29.0	0.785	15.0	671	24.4
1.53	4.8	493.2	470	15.0	31.6	29.9	0.968	14.9	725	27.8
1.53	4.8	493.2	470	16.0	39.8	30.8	1.191	14.8	787	31.5
1.53	4.8	493.2	470	17.0	50.1	31.6	1.442	14.6	854	35.2
1.53	4.8	493.2	470	18.0	63.1	32.5	1.758	14.5	930	39.4
1.53	4.8	493.2	470	19.0	79.4	33.2	2.104	14.2	1009	43.4
1.53	4.8	493.2	470	20.0	100.0	33.9	2.477	13.9	1089	47.4
1.53	4.8	493.2	470	21.0	125.9	34.5	2.844	13.5	1163	50.9
1.53	4.8	493.2	470	22.0	158.5	35.0	3.199	13.0	1229	54.2
1.53	4.8	493.2	470	23.0	199.5	35.5	3.508	12.5	1287	56.8
1.53	4.8	493.2	470	24.0	251.2	35.8	3.793	11.8	1337	59.1
1.53	4.8	493.2	470	25.0	316.2	36.0	4.027	11.0	1378	60.9

Input-Output Characteristics Vds＝4.8V, Ibias=600mA - Condition 2

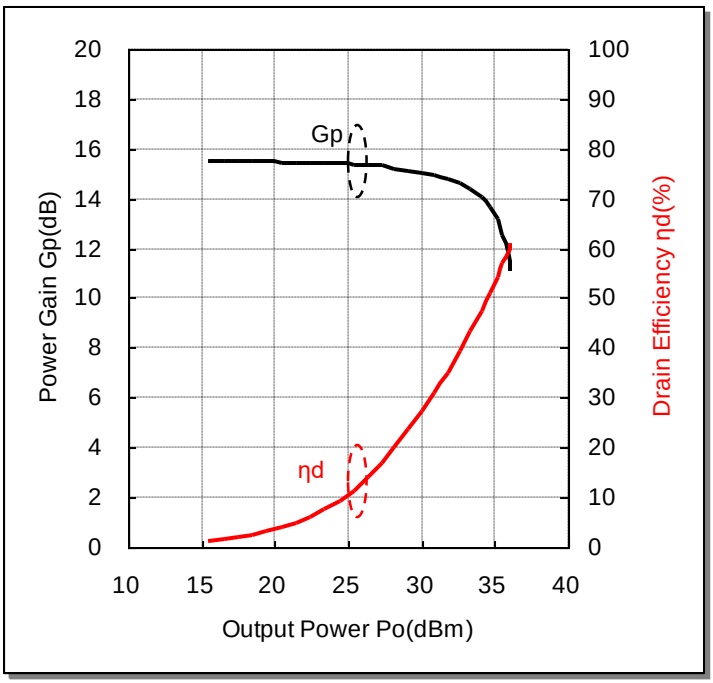
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=591.3mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=4.8V, Ibias=591.3mA

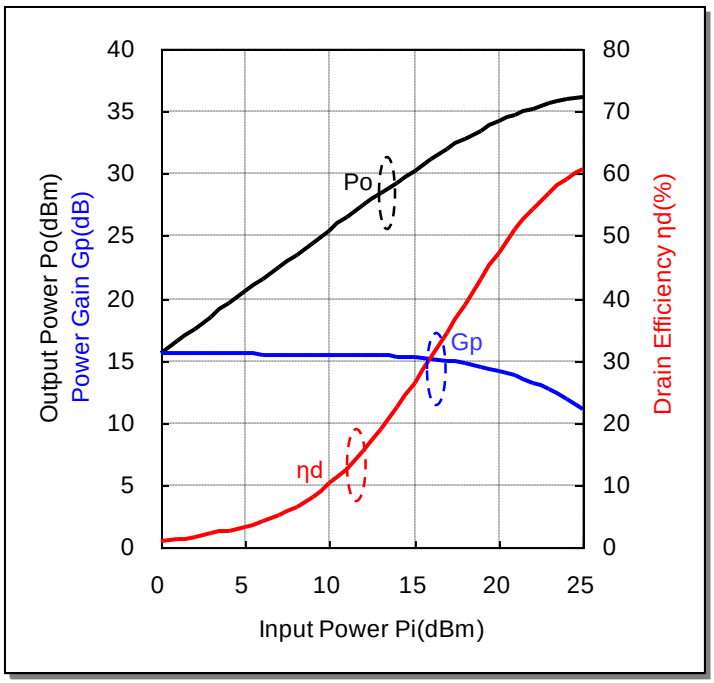
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.59	4.8	591.3	470	0.0	1.0	15.5	0.035	15.5	595	1.2
1.59	4.8	591.3	470	1.0	1.3	16.5	0.045	15.5	595	1.6
1.59	4.8	591.3	470	2.0	1.6	17.5	0.056	15.5	597	2.0
1.59	4.8	591.3	470	3.0	2.0	18.5	0.071	15.5	598	2.5
1.59	4.8	591.3	470	4.0	2.5	19.5	0.089	15.5	600	3.1
1.59	4.8	591.3	470	5.0	3.2	20.5	0.111	15.5	602	3.8
1.59	4.8	591.3	470	6.0	4.0	21.5	0.140	15.5	605	4.8
1.59	4.8	591.3	470	7.0	5.0	22.4	0.175	15.4	609	6.0
1.59	4.8	591.3	470	8.0	6.3	23.4	0.220	15.4	614	7.5
1.59	4.8	591.3	470	9.0	7.9	24.4	0.276	15.4	620	9.3
1.59	4.8	591.3	470	10.0	10.0	25.4	0.345	15.4	629	11.4
1.59	4.8	591.3	470	11.0	12.6	26.4	0.432	15.4	642	14.0
1.59	4.8	591.3	470	12.0	15.8	27.3	0.538	15.3	660	17.0
1.59	4.8	591.3	470	13.0	20.0	28.2	0.661	15.2	685	20.1
1.59	4.8	591.3	470	14.0	25.1	29.1	0.815	15.1	721	23.5
1.59	4.8	591.3	470	15.0	31.6	30.0	1.002	15.0	768	27.2
1.59	4.8	591.3	470	16.0	39.8	30.9	1.230	14.9	826	31.0
1.59	4.8	591.3	470	17.0	50.1	31.8	1.503	14.8	893	35.1
1.59	4.8	591.3	470	18.0	63.1	32.6	1.820	14.6	966	39.2
1.59	4.8	591.3	470	19.0	79.4	33.4	2.173	14.4	1043	43.4
1.59	4.8	591.3	470	20.0	100.0	34.1	2.553	14.1	1121	47.4
1.59	4.8	591.3	470	21.0	125.9	34.7	2.931	13.7	1193	51.2
1.59	4.8	591.3	470	22.0	158.5	35.2	3.281	13.2	1257	54.4
1.59	4.8	591.3	470	23.0	199.5	35.5	3.589	12.5	1312	57.0
1.59	4.8	591.3	470	24.0	251.2	35.8	3.846	11.8	1357	59.0
1.59	4.8	591.3	470	25.0	316.2	36.1	4.083	11.1	1396	60.9

Input-Output Characteristics Vds=4.8V, Ibias=700mA - Condition 2

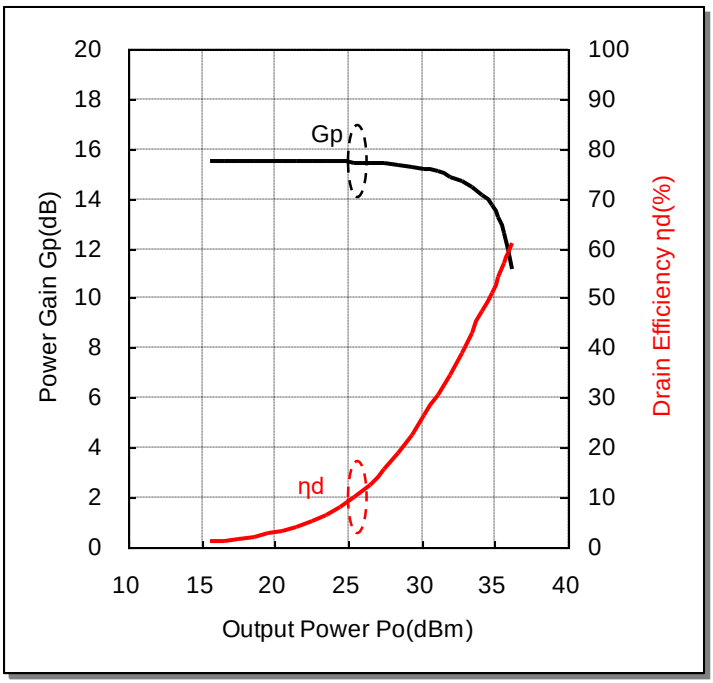
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=4.8V, Ibias=692.6mA

Power Gain, Drain Efficiency vs Output Power



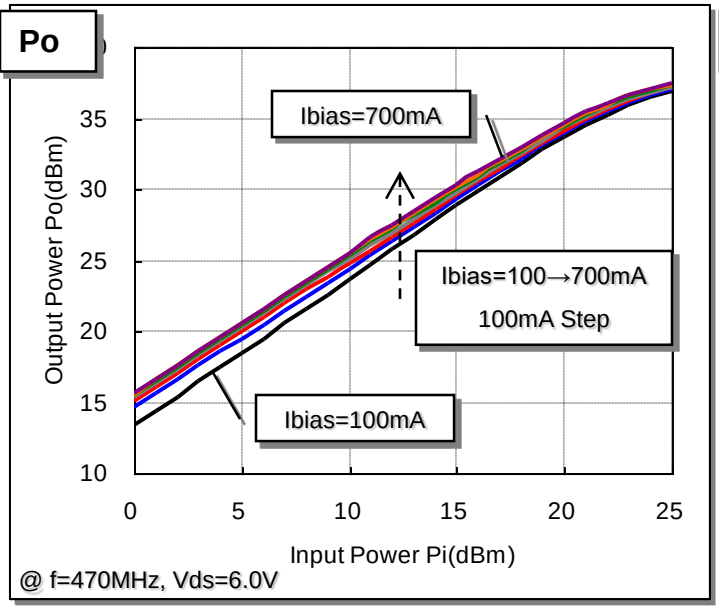
@ f=470MHz, Vds=4.8V, Ibias=692.6mA

Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.64	4.8	692.6	470	0.0	1.0	15.5	0.036	15.5	695	1.1
1.64	4.8	692.6	470	1.0	1.3	16.5	0.045	15.5	696	1.3
1.64	4.8	692.6	470	2.0	1.6	17.5	0.057	15.5	696	1.7
1.64	4.8	692.6	470	3.0	2.0	18.5	0.071	15.5	698	2.1
1.64	4.8	692.6	470	4.0	2.5	19.5	0.090	15.5	699	2.7
1.64	4.8	692.6	470	5.0	3.2	20.5	0.112	15.5	700	3.3
1.64	4.8	692.6	470	6.0	4.0	21.5	0.141	15.5	702	4.2
1.64	4.8	692.6	470	7.0	5.0	22.5	0.178	15.5	705	5.3
1.64	4.8	692.6	470	8.0	6.3	23.5	0.223	15.5	709	6.6
1.64	4.8	692.6	470	9.0	7.9	24.5	0.280	15.5	714	8.2
1.64	4.8	692.6	470	10.0	10.0	25.5	0.352	15.5	720	10.2
1.64	4.8	692.6	470	11.0	12.6	26.4	0.441	15.4	728	12.6
1.64	4.8	692.6	470	12.0	15.8	27.4	0.551	15.4	740	15.5
1.64	4.8	692.6	470	13.0	20.0	28.4	0.687	15.4	758	18.9
1.64	4.8	692.6	470	14.0	25.1	29.3	0.851	15.3	785	22.6
1.64	4.8	692.6	470	15.0	31.6	30.2	1.047	15.2	823	26.5
1.64	4.8	692.6	470	16.0	39.8	31.1	1.285	15.1	875	30.6
1.64	4.8	692.6	470	17.0	50.1	31.9	1.545	14.9	933	34.5
1.64	4.8	692.6	470	18.0	63.1	32.7	1.871	14.7	1002	38.9
1.64	4.8	692.6	470	19.0	79.4	33.5	2.228	14.5	1076	43.2
1.64	4.8	692.6	470	20.0	100.0	34.2	2.612	14.2	1150	47.3
1.64	4.8	692.6	470	21.0	125.9	34.8	2.992	13.8	1220	51.1
1.64	4.8	692.6	470	22.0	158.5	35.2	3.342	13.2	1282	54.3
1.64	4.8	692.6	470	23.0	199.5	35.6	3.648	12.6	1334	57.0
1.64	4.8	692.6	470	24.0	251.2	35.9	3.917	11.9	1378	59.2
1.64	4.8	692.6	470	25.0	316.2	36.2	4.130	11.2	1414	60.9

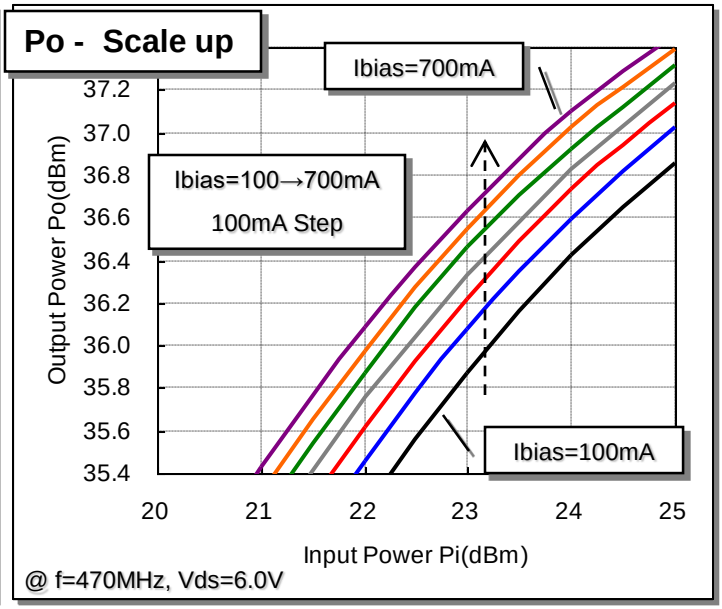
Input - Output Characteristics Vds＝6.0V - Condition 2

Po



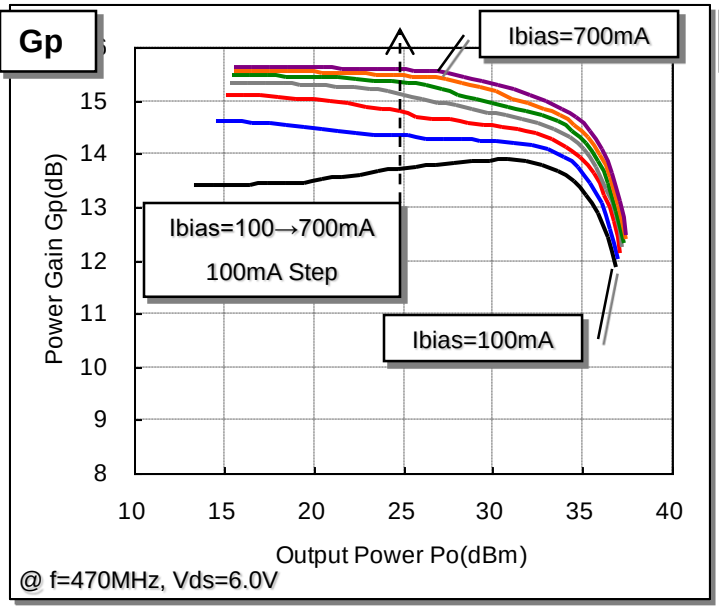
@ f=470MHz, Vds=6.0V

Po - Scale up



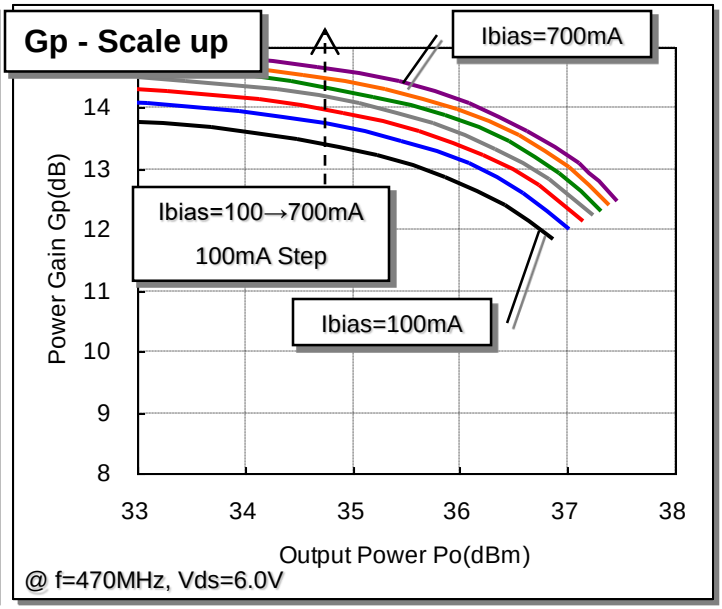
@ f=470MHz, Vds=6.0V

Gp



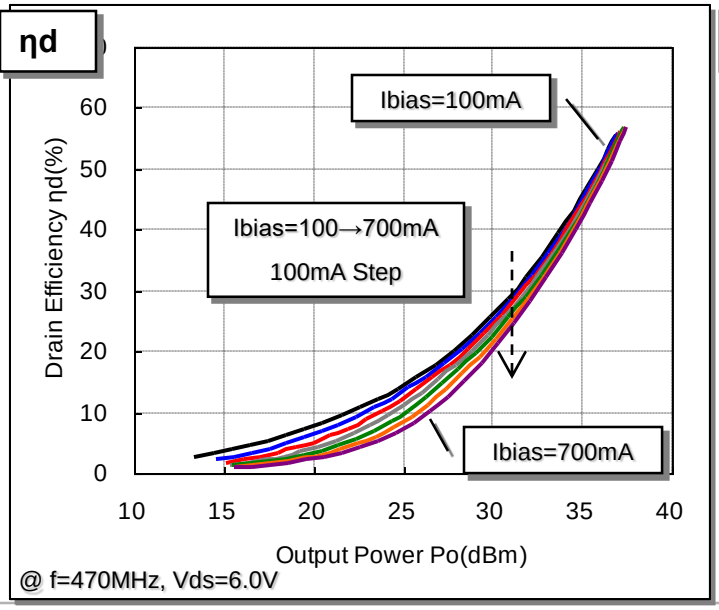
@ f=470MHz, Vds=6.0V

Gp - Scale up



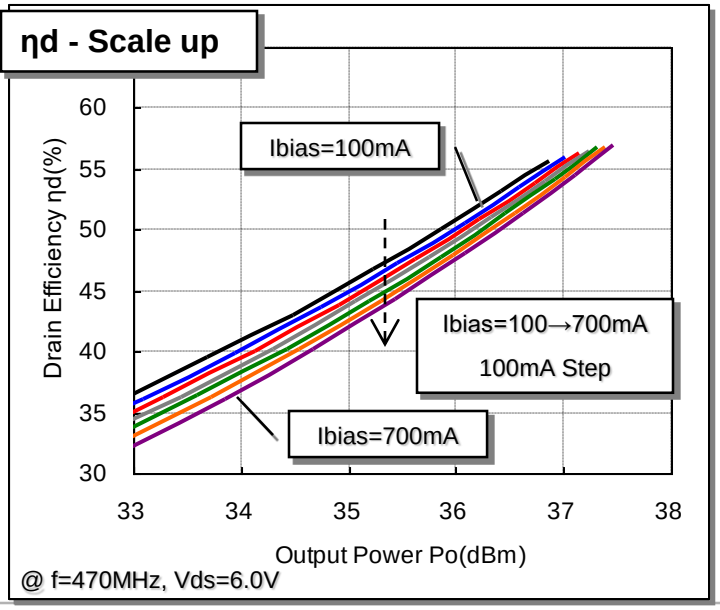
@ f=470MHz, Vds=6.0V

ηd



@ f=470MHz, Vds=6.0V

ηd - Scale up

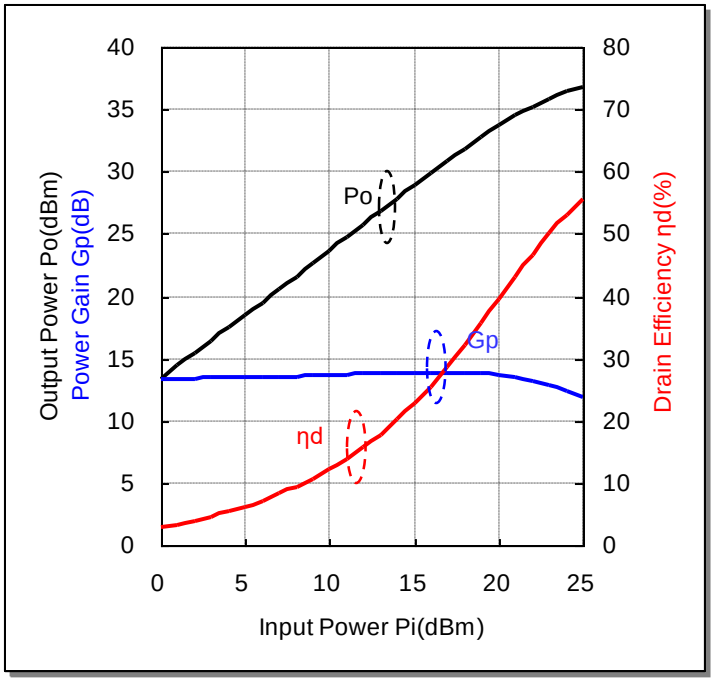


@ f=470MHz, Vds=6.0V

Input-Output Characteristics Vds=6.0V, Ibias=100mA - Condition 2

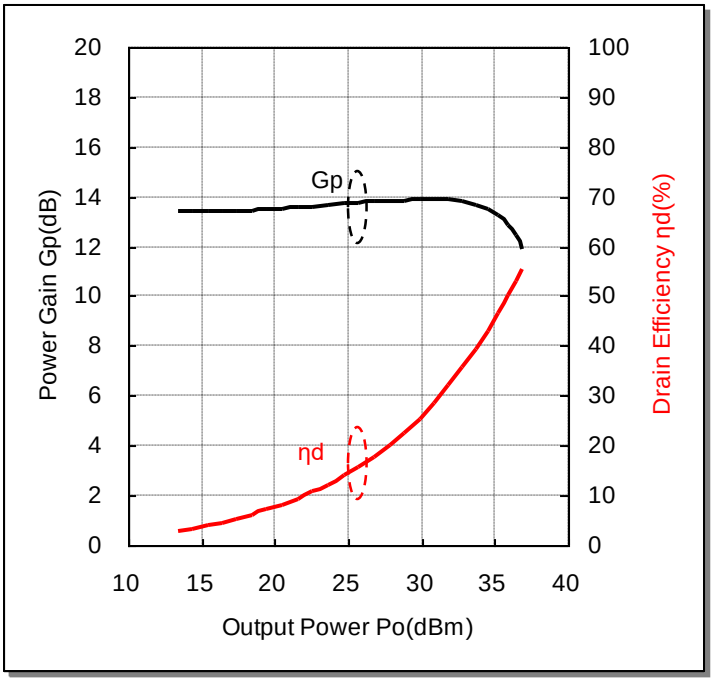
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=99.3mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=6.0V, Ibias=99.3mA

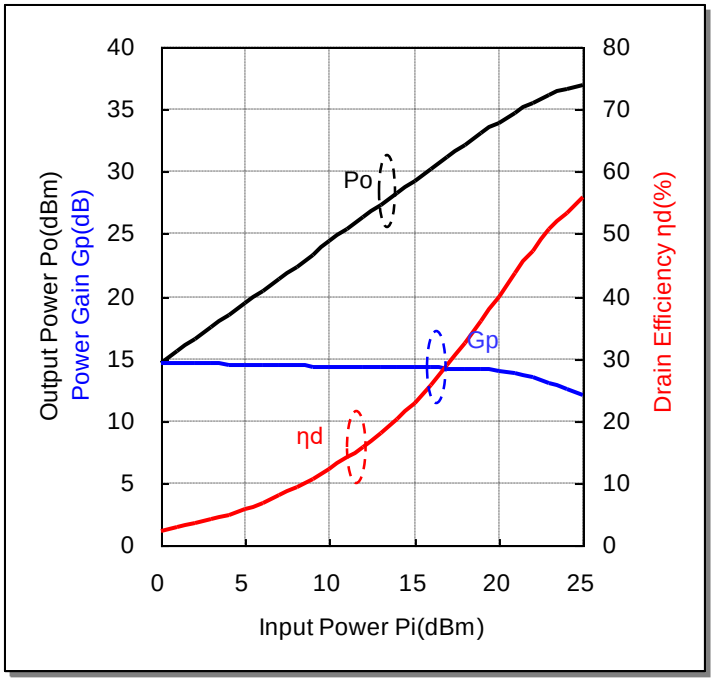
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.24	6.0	99.3	470	0.0	1.0	13.4	0.022	13.4	131	2.8
1.24	6.0	99.3	470	1.0	1.3	14.4	0.028	13.4	139	3.3
1.24	6.0	99.3	470	2.0	1.6	15.4	0.035	13.4	148	3.9
1.24	6.0	99.3	470	3.0	2.0	16.4	0.044	13.4	159	4.6
1.24	6.0	99.3	470	4.0	2.5	17.4	0.055	13.4	173	5.3
1.24	6.0	99.3	470	5.0	3.2	18.4	0.070	13.4	188	6.2
1.24	6.0	99.3	470	6.0	4.0	19.5	0.088	13.5	207	7.1
1.24	6.0	99.3	470	7.0	5.0	20.5	0.113	13.5	229	8.2
1.24	6.0	99.3	470	8.0	6.3	21.6	0.143	13.6	254	9.4
1.24	6.0	99.3	470	9.0	7.9	22.6	0.182	13.6	283	10.7
1.24	6.0	99.3	470	10.0	10.0	23.7	0.232	13.7	317	12.2
1.24	6.0	99.3	470	11.0	12.6	24.7	0.295	13.7	355	13.9
1.24	6.0	99.3	470	12.0	15.8	25.7	0.375	13.7	398	15.7
1.24	6.0	99.3	470	13.0	20.0	26.8	0.478	13.8	447	17.8
1.24	6.0	99.3	470	14.0	25.1	27.8	0.605	13.8	502	20.1
1.24	6.0	99.3	470	15.0	31.6	28.9	0.767	13.9	565	22.7
1.24	6.0	99.3	470	16.0	39.8	29.9	0.971	13.9	635	25.5
1.24	6.0	99.3	470	17.0	50.1	30.9	1.225	13.9	713	28.6
1.24	6.0	99.3	470	18.0	63.1	31.9	1.535	13.9	798	32.1
1.24	6.0	99.3	470	19.0	79.4	32.8	1.901	13.8	890	35.6
1.24	6.0	99.3	470	20.0	100.0	33.7	2.339	13.7	988	39.5
1.24	6.0	99.3	470	21.0	125.9	34.5	2.812	13.5	1088	43.1
1.24	6.0	99.3	470	22.0	158.5	35.2	3.334	13.2	1190	46.7
1.24	6.0	99.3	470	23.0	199.5	35.9	3.864	12.9	1285	50.1
1.24	6.0	99.3	470	24.0	251.2	36.4	4.385	12.4	1376	53.1
1.24	6.0	99.3	470	25.0	316.2	36.9	4.853	11.9	1456	55.6

Input-Output Characteristics Vds=6.0V, Ibias=200mA - Condition 2

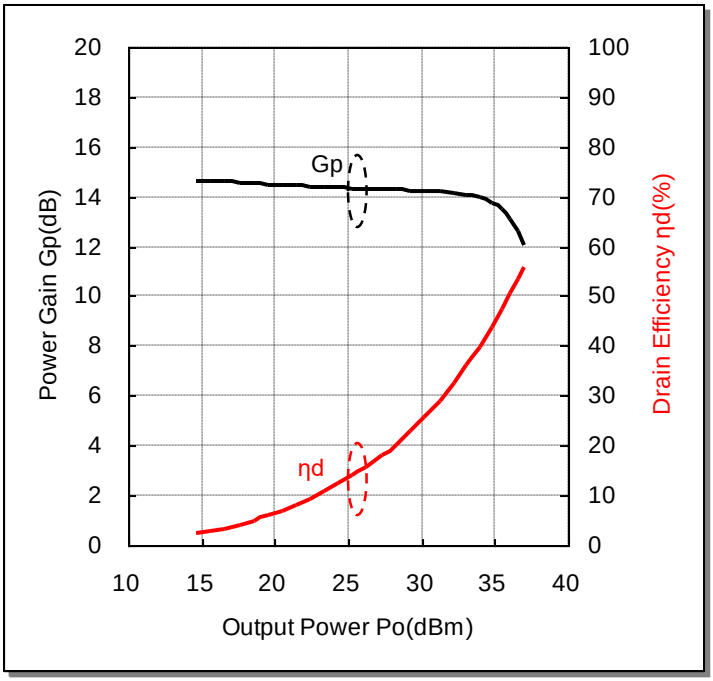
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=197.5mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=6.0V, Ibias=197.5mA

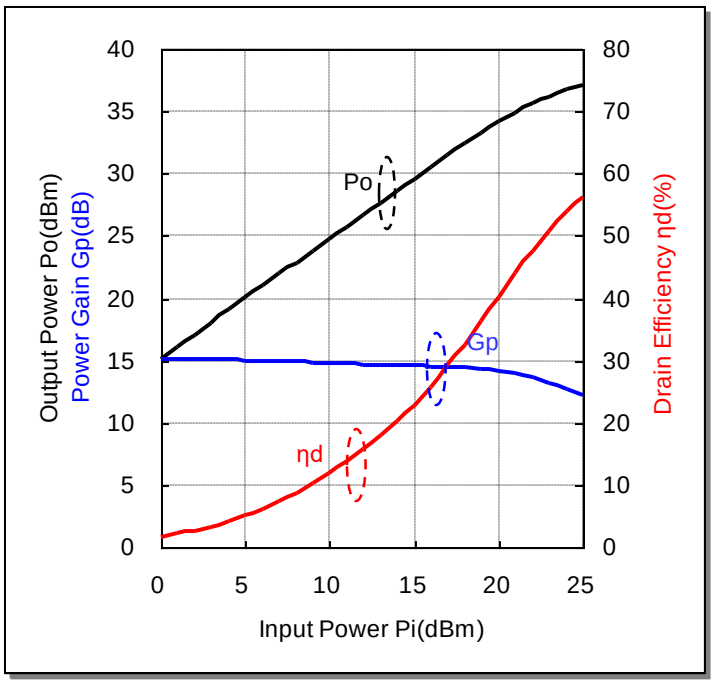
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.33	6.0	197.5	470	0.0	1.0	14.6	0.029	14.6	214	2.3
1.33	6.0	197.5	470	1.0	1.3	15.6	0.036	14.6	219	2.8
1.33	6.0	197.5	470	2.0	1.6	16.6	0.045	14.6	225	3.4
1.33	6.0	197.5	470	3.0	2.0	17.6	0.057	14.6	232	4.1
1.33	6.0	197.5	470	4.0	2.5	18.5	0.071	14.5	242	4.9
1.33	6.0	197.5	470	5.0	3.2	19.5	0.089	14.5	254	5.8
1.33	6.0	197.5	470	6.0	4.0	20.5	0.111	14.5	269	6.9
1.33	6.0	197.5	470	7.0	5.0	21.4	0.139	14.4	288	8.0
1.33	6.0	197.5	470	8.0	6.3	22.4	0.174	14.4	311	9.3
1.33	6.0	197.5	470	9.0	7.9	23.4	0.217	14.4	338	10.7
1.33	6.0	197.5	470	10.0	10.0	24.4	0.272	14.4	369	12.3
1.33	6.0	197.5	470	11.0	12.6	25.3	0.341	14.3	406	14.0
1.33	6.0	197.5	470	12.0	15.8	26.3	0.425	14.3	447	15.8
1.33	6.0	197.5	470	13.0	20.0	27.3	0.535	14.3	496	18.0
1.33	6.0	197.5	470	14.0	25.1	28.3	0.670	14.3	551	20.3
1.33	6.0	197.5	470	15.0	31.6	29.3	0.841	14.3	613	22.9
1.33	6.0	197.5	470	16.0	39.8	30.2	1.052	14.2	682	25.7
1.33	6.0	197.5	470	17.0	50.1	31.2	1.321	14.2	761	28.9
1.33	6.0	197.5	470	18.0	63.1	32.2	1.644	14.2	846	32.4
1.33	6.0	197.5	470	19.0	79.4	33.1	2.037	14.1	940	36.1
1.33	6.0	197.5	470	20.0	100.0	34.0	2.483	14.0	1039	39.8
1.33	6.0	197.5	470	21.0	125.9	34.8	2.985	13.8	1141	43.6
1.33	6.0	197.5	470	22.0	158.5	35.5	3.516	13.5	1240	47.2
1.33	6.0	197.5	470	23.0	199.5	36.1	4.055	13.1	1335	50.6
1.33	6.0	197.5	470	24.0	251.2	36.6	4.560	12.6	1422	53.5
1.33	6.0	197.5	470	25.0	316.2	37.0	5.035	12.0	1499	56.0

Input-Output Characteristics Vds=6.0V, Ibias=300mA - Condition 2

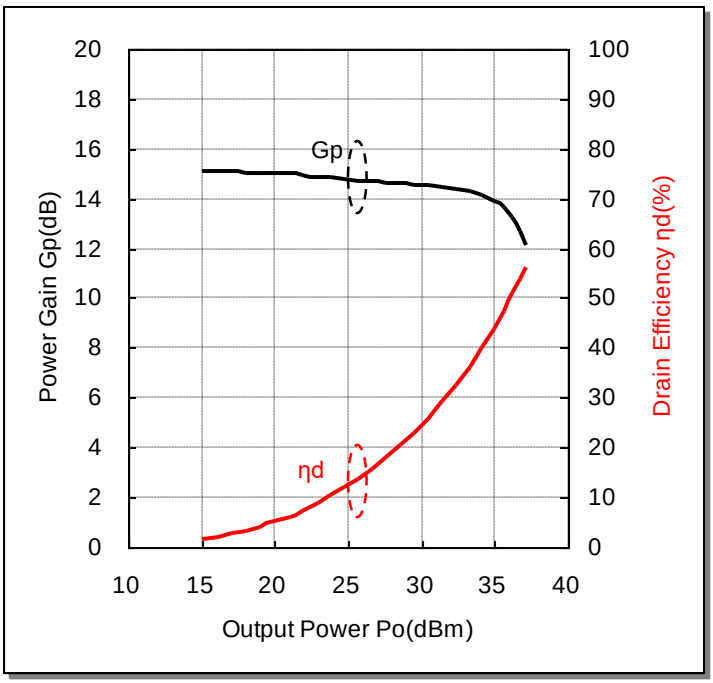
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=296.6mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=6.0V, Ibias=296.6mA

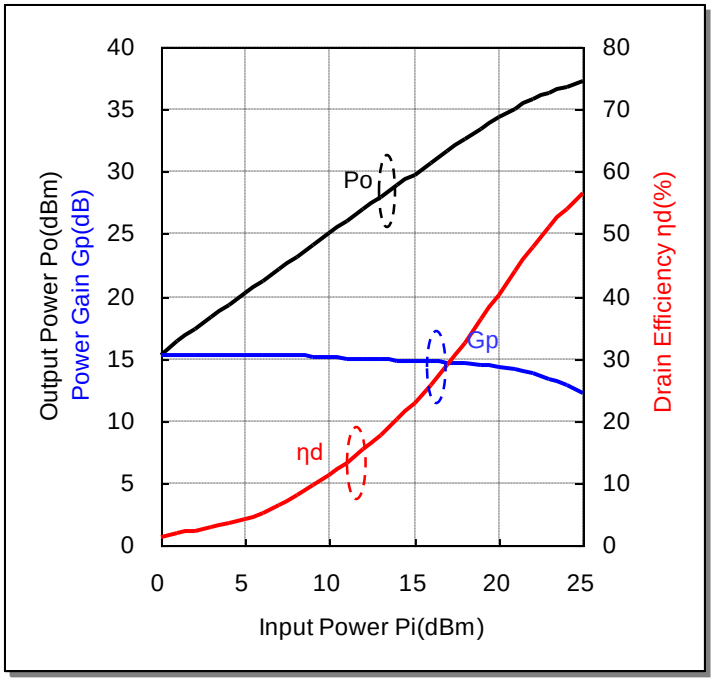
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.40	6.0	296.6	470	0.0	1.0	15.1	0.032	15.1	307	1.8
1.40	6.0	296.6	470	1.0	1.3	16.1	0.041	15.1	309	2.2
1.40	6.0	296.6	470	2.0	1.6	17.1	0.051	15.1	313	2.7
1.40	6.0	296.6	470	3.0	2.0	18.1	0.064	15.1	317	3.4
1.40	6.0	296.6	470	4.0	2.5	19.0	0.080	15.0	323	4.1
1.40	6.0	296.6	470	5.0	3.2	20.0	0.100	15.0	330	5.1
1.40	6.0	296.6	470	6.0	4.0	21.0	0.125	15.0	341	6.1
1.40	6.0	296.6	470	7.0	5.0	21.9	0.156	14.9	353	7.4
1.40	6.0	296.6	470	8.0	6.3	22.9	0.195	14.9	371	8.7
1.40	6.0	296.6	470	9.0	7.9	23.8	0.242	14.8	393	10.3
1.40	6.0	296.6	470	10.0	10.0	24.8	0.301	14.8	421	11.9
1.40	6.0	296.6	470	11.0	12.6	25.7	0.372	14.7	453	13.7
1.40	6.0	296.6	470	12.0	15.8	26.7	0.463	14.7	492	15.7
1.40	6.0	296.6	470	13.0	20.0	27.6	0.579	14.6	539	17.9
1.40	6.0	296.6	470	14.0	25.1	28.6	0.723	14.6	593	20.3
1.40	6.0	296.6	470	15.0	31.6	29.5	0.899	14.5	654	22.9
1.40	6.0	296.6	470	16.0	39.8	30.5	1.122	14.5	723	25.9
1.40	6.0	296.6	470	17.0	50.1	31.5	1.400	14.5	801	29.1
1.40	6.0	296.6	470	18.0	63.1	32.4	1.730	14.4	887	32.5
1.40	6.0	296.6	470	19.0	79.4	33.3	2.128	14.3	980	36.2
1.40	6.0	296.6	470	20.0	100.0	34.1	2.594	14.1	1080	40.0
1.40	6.0	296.6	470	21.0	125.9	34.9	3.105	13.9	1180	43.9
1.40	6.0	296.6	470	22.0	158.5	35.6	3.648	13.6	1279	47.5
1.40	6.0	296.6	470	23.0	199.5	36.2	4.188	13.2	1373	50.8
1.40	6.0	296.6	470	24.0	251.2	36.7	4.710	12.7	1457	53.9
1.40	6.0	296.6	470	25.0	316.2	37.1	5.176	12.1	1532	56.3

Input-Output Characteristics Vds=6.0V, Ibias=400mA - Condition 2

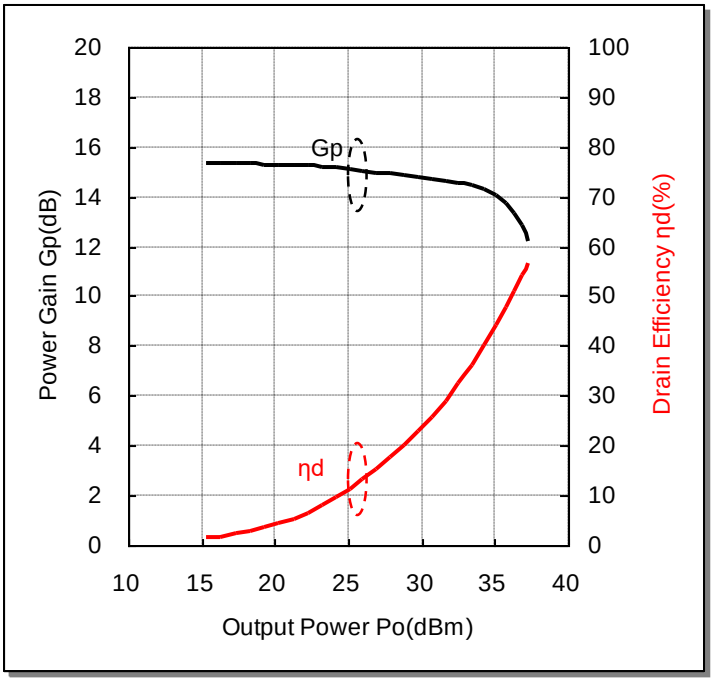
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=392.4mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=6.0V, Ibias=392.4mA

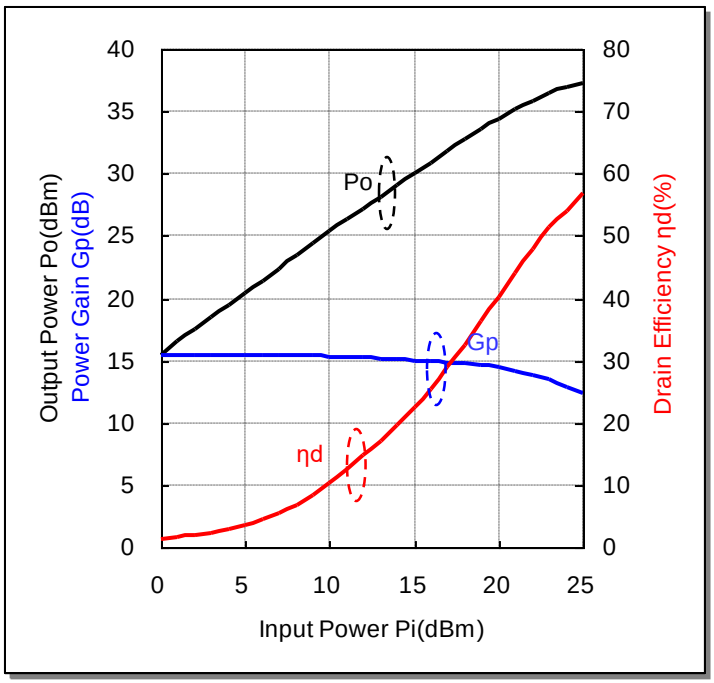
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.46	6.0	392.4	470	0.0	1.0	15.3	0.034	15.3	399	1.4
1.46	6.0	392.4	470	1.0	1.3	16.3	0.043	15.3	400	1.8
1.46	6.0	392.4	470	2.0	1.6	17.3	0.054	15.3	403	2.2
1.46	6.0	392.4	470	3.0	2.0	18.3	0.068	15.3	405	2.8
1.46	6.0	392.4	470	4.0	2.5	19.3	0.085	15.3	409	3.5
1.46	6.0	392.4	470	5.0	3.2	20.3	0.107	15.3	414	4.3
1.46	6.0	392.4	470	6.0	4.0	21.3	0.134	15.3	420	5.3
1.46	6.0	392.4	470	7.0	5.0	22.2	0.167	15.2	430	6.5
1.46	6.0	392.4	470	8.0	6.3	23.2	0.209	15.2	441	7.9
1.46	6.0	392.4	470	9.0	7.9	24.2	0.261	15.2	457	9.5
1.46	6.0	392.4	470	10.0	10.0	25.1	0.324	15.1	478	11.3
1.46	6.0	392.4	470	11.0	12.6	26.0	0.399	15.0	504	13.2
1.46	6.0	392.4	470	12.0	15.8	27.0	0.495	15.0	539	15.3
1.46	6.0	392.4	470	13.0	20.0	27.9	0.617	14.9	583	17.6
1.46	6.0	392.4	470	14.0	25.1	28.8	0.766	14.8	633	20.1
1.46	6.0	392.4	470	15.0	31.6	29.8	0.948	14.8	693	22.8
1.46	6.0	392.4	470	16.0	39.8	30.7	1.178	14.7	761	25.8
1.46	6.0	392.4	470	17.0	50.1	31.6	1.459	14.6	838	29.0
1.46	6.0	392.4	470	18.0	63.1	32.6	1.803	14.6	923	32.6
1.46	6.0	392.4	470	19.0	79.4	33.5	2.213	14.5	1016	36.3
1.46	6.0	392.4	470	20.0	100.0	34.3	2.692	14.3	1115	40.2
1.46	6.0	392.4	470	21.0	125.9	35.1	3.214	14.1	1215	44.1
1.46	6.0	392.4	470	22.0	158.5	35.8	3.767	13.8	1314	47.8
1.46	6.0	392.4	470	23.0	199.5	36.3	4.295	13.3	1404	51.0
1.46	6.0	392.4	470	24.0	251.2	36.8	4.819	12.8	1486	54.1
1.46	6.0	392.4	470	25.0	316.2	37.2	5.284	12.2	1558	56.5

Input-Output Characteristics Vds=6.0V, Ibias=500mA - Condition 2

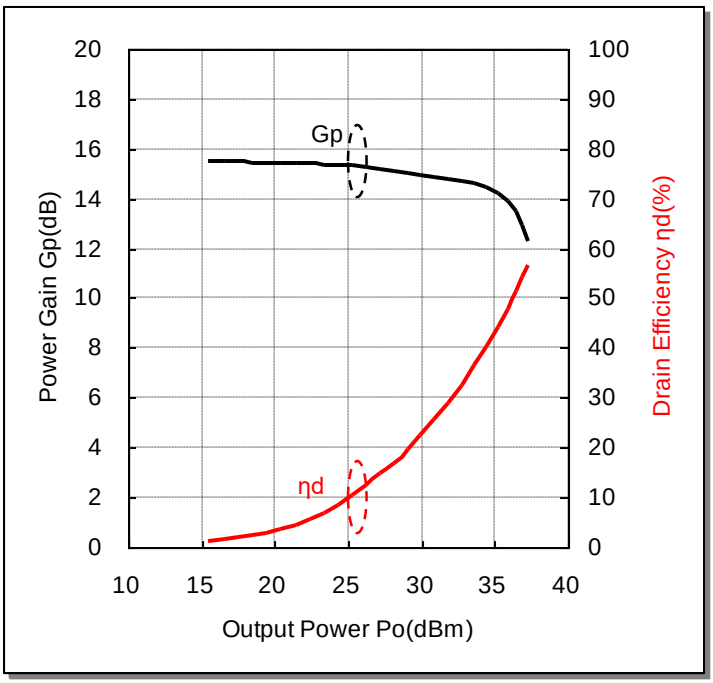
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=495.2mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=6.0V, Ibias=495.2mA

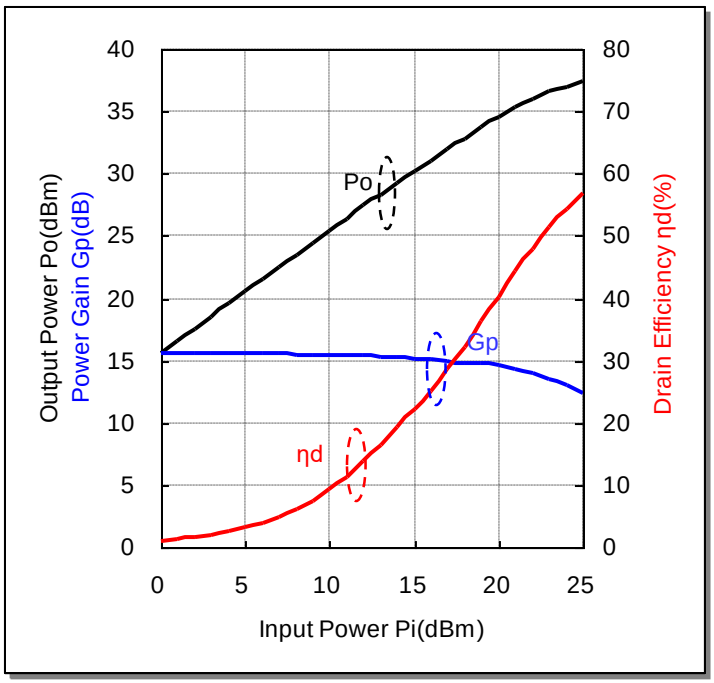
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.51	6.0	495.2	470	0.0	1.0	15.5	0.035	15.5	500	1.2
1.51	6.0	495.2	470	1.0	1.3	16.5	0.045	15.5	501	1.5
1.51	6.0	495.2	470	2.0	1.6	17.5	0.056	15.5	503	1.9
1.51	6.0	495.2	470	3.0	2.0	18.4	0.070	15.4	505	2.3
1.51	6.0	495.2	470	4.0	2.5	19.4	0.088	15.4	507	2.9
1.51	6.0	495.2	470	5.0	3.2	20.4	0.110	15.4	511	3.6
1.51	6.0	495.2	470	6.0	4.0	21.4	0.139	15.4	515	4.5
1.51	6.0	495.2	470	7.0	5.0	22.4	0.174	15.4	520	5.6
1.51	6.0	495.2	470	8.0	6.3	23.4	0.218	15.4	528	6.9
1.51	6.0	495.2	470	9.0	7.9	24.4	0.273	15.4	538	8.5
1.51	6.0	495.2	470	10.0	10.0	25.3	0.340	15.3	552	10.3
1.51	6.0	495.2	470	11.0	12.6	26.3	0.425	15.3	572	12.4
1.51	6.0	495.2	470	12.0	15.8	27.2	0.527	15.2	599	14.7
1.51	6.0	495.2	470	13.0	20.0	28.1	0.647	15.1	634	17.0
1.51	6.0	495.2	470	14.0	25.1	29.0	0.802	15.0	679	19.7
1.51	6.0	495.2	470	15.0	31.6	30.0	0.991	15.0	735	22.5
1.51	6.0	495.2	470	16.0	39.8	30.9	1.225	14.9	799	25.5
1.51	6.0	495.2	470	17.0	50.1	31.8	1.517	14.8	874	28.9
1.51	6.0	495.2	470	18.0	63.1	32.7	1.866	14.7	958	32.5
1.51	6.0	495.2	470	19.0	79.4	33.6	2.291	14.6	1050	36.4
1.51	6.0	495.2	470	20.0	100.0	34.4	2.773	14.4	1149	40.2
1.51	6.0	495.2	470	21.0	125.9	35.2	3.304	14.2	1249	44.1
1.51	6.0	495.2	470	22.0	158.5	35.9	3.864	13.9	1347	47.8
1.51	6.0	495.2	470	23.0	199.5	36.5	4.426	13.5	1437	51.3
1.51	6.0	495.2	470	24.0	251.2	36.9	4.920	12.9	1515	54.1
1.51	6.0	495.2	470	25.0	316.2	37.3	5.395	12.3	1585	56.7

Input-Output Characteristics Vds=6.0V, Ibias=600mA - Condition 2

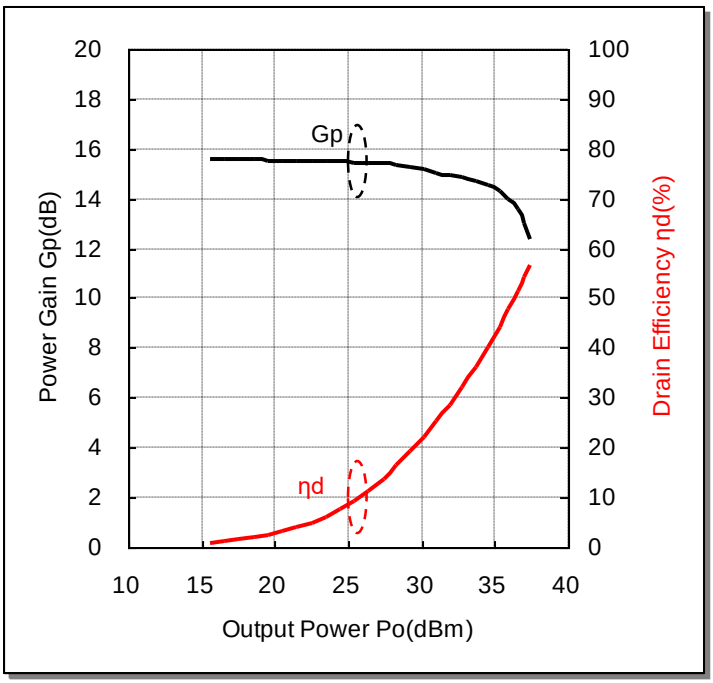
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=593.5mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=6.0V, Ibias=593.5mA

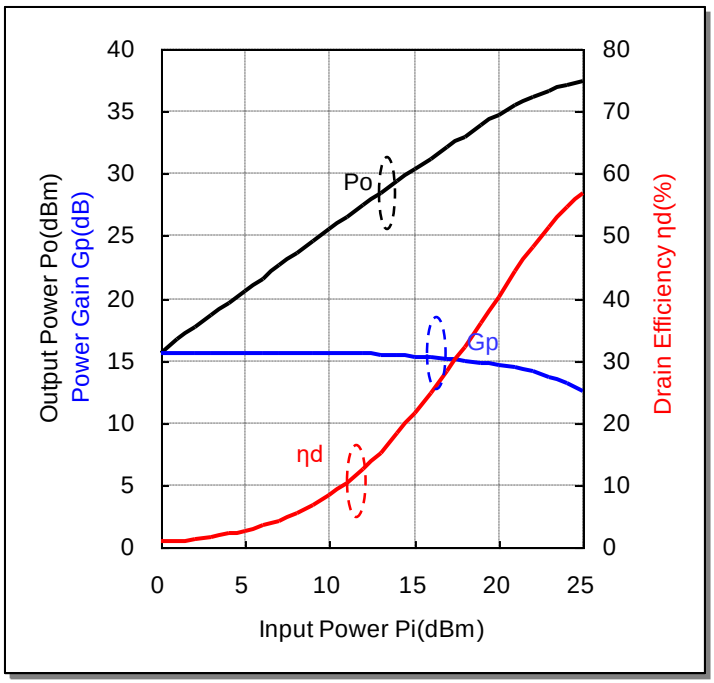
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.57	6.0	593.5	470	0.0	1.0	15.6	0.036	15.6	597	1.0
1.57	6.0	593.5	470	1.0	1.3	16.5	0.045	15.5	598	1.3
1.57	6.0	593.5	470	2.0	1.6	17.5	0.057	15.5	599	1.6
1.57	6.0	593.5	470	3.0	2.0	18.5	0.072	15.5	600	2.0
1.57	6.0	593.5	470	4.0	2.5	19.5	0.090	15.5	602	2.5
1.57	6.0	593.5	470	5.0	3.2	20.5	0.113	15.5	604	3.1
1.57	6.0	593.5	470	6.0	4.0	21.5	0.142	15.5	607	3.9
1.57	6.0	593.5	470	7.0	5.0	22.5	0.178	15.5	612	4.9
1.57	6.0	593.5	470	8.0	6.3	23.5	0.223	15.5	617	6.0
1.57	6.0	593.5	470	9.0	7.9	24.5	0.281	15.5	623	7.5
1.57	6.0	593.5	470	10.0	10.0	25.5	0.351	15.5	633	9.2
1.57	6.0	593.5	470	11.0	12.6	26.4	0.439	15.4	647	11.3
1.57	6.0	593.5	470	12.0	15.8	27.4	0.548	15.4	666	13.7
1.57	6.0	593.5	470	13.0	20.0	28.3	0.682	15.3	694	16.4
1.57	6.0	593.5	470	14.0	25.1	29.3	0.843	15.3	732	19.2
1.57	6.0	593.5	470	15.0	31.6	30.2	1.040	15.2	782	22.2
1.57	6.0	593.5	470	16.0	39.8	31.0	1.271	15.0	840	25.2
1.57	6.0	593.5	470	17.0	50.1	32.0	1.567	15.0	911	28.7
1.57	6.0	593.5	470	18.0	63.1	32.8	1.923	14.8	993	32.3
1.57	6.0	593.5	470	19.0	79.4	33.7	2.355	14.7	1084	36.2
1.57	6.0	593.5	470	20.0	100.0	34.5	2.851	14.5	1182	40.2
1.57	6.0	593.5	470	21.0	125.9	35.3	3.396	14.3	1280	44.2
1.57	6.0	593.5	470	22.0	158.5	36.0	3.954	14.0	1376	47.9
1.57	6.0	593.5	470	23.0	199.5	36.5	4.519	13.5	1465	51.4
1.57	6.0	593.5	470	24.0	251.2	37.0	5.035	13.0	1543	54.4
1.57	6.0	593.5	470	25.0	316.2	37.4	5.483	12.4	1608	56.8

Input-Output Characteristics Vds=6.0V, Ibias=700mA - Condition 2

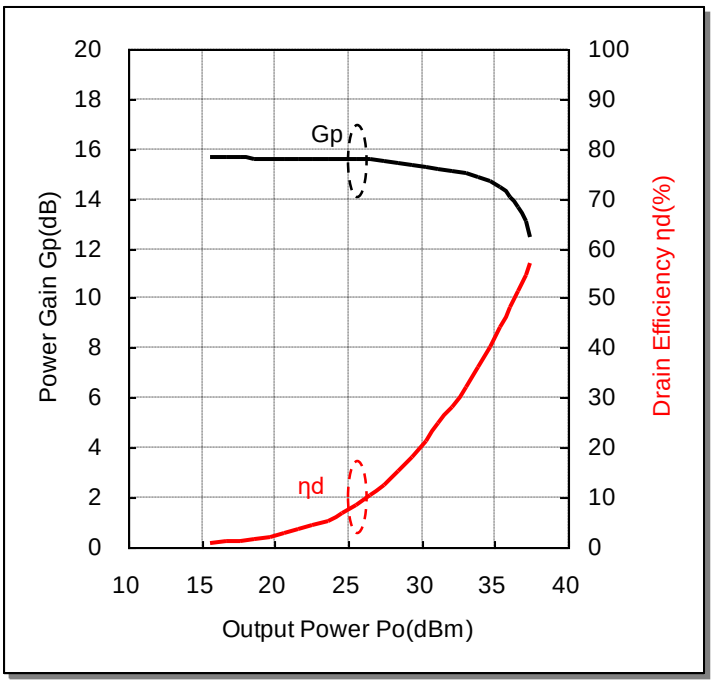
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=6.0V, Ibias=694.5mA

Power Gain, Drain Efficiency vs Output Power



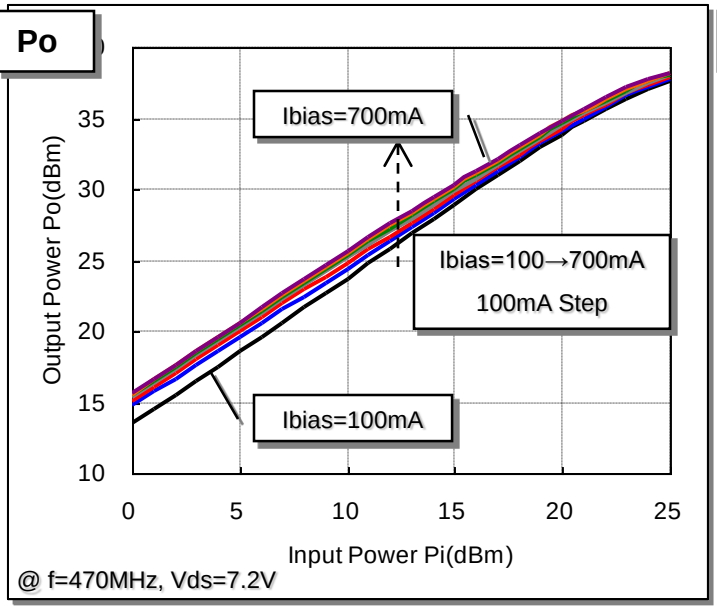
@ f=470MHz, Vds=6.0V, Ibias=694.5mA

Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.62	6.0	694.5	470	0.0	1.0	15.6	0.037	15.6	698	0.9
1.62	6.0	694.5	470	1.0	1.3	16.6	0.046	15.6	698	1.1
1.62	6.0	694.5	470	2.0	1.6	17.6	0.058	15.6	699	1.4
1.62	6.0	694.5	470	3.0	2.0	18.6	0.073	15.6	700	1.7
1.62	6.0	694.5	470	4.0	2.5	19.6	0.092	15.6	701	2.2
1.62	6.0	694.5	470	5.0	3.2	20.6	0.115	15.6	703	2.7
1.62	6.0	694.5	470	6.0	4.0	21.6	0.145	15.6	706	3.4
1.62	6.0	694.5	470	7.0	5.0	22.6	0.182	15.6	708	4.3
1.62	6.0	694.5	470	8.0	6.3	23.6	0.228	15.6	712	5.3
1.62	6.0	694.5	470	9.0	7.9	24.6	0.286	15.6	718	6.7
1.62	6.0	694.5	470	10.0	10.0	25.6	0.360	15.6	724	8.3
1.62	6.0	694.5	470	11.0	12.6	26.5	0.452	15.5	734	10.3
1.62	6.0	694.5	470	12.0	15.8	27.5	0.565	15.5	747	12.6
1.62	6.0	694.5	470	13.0	20.0	28.4	0.698	15.4	766	15.2
1.62	6.0	694.5	470	14.0	25.1	29.4	0.867	15.4	794	18.2
1.62	6.0	694.5	470	15.0	31.6	30.3	1.072	15.3	834	21.4
1.62	6.0	694.5	470	16.0	39.8	31.2	1.318	15.2	888	24.7
1.62	6.0	694.5	470	17.0	50.1	32.1	1.622	15.1	955	28.3
1.62	6.0	694.5	470	18.0	63.1	33.0	1.991	15.0	1033	32.1
1.62	6.0	694.5	470	19.0	79.4	33.8	2.427	14.8	1122	36.1
1.62	6.0	694.5	470	20.0	100.0	34.7	2.938	14.7	1217	40.2
1.62	6.0	694.5	470	21.0	125.9	35.4	3.491	14.4	1315	44.2
1.62	6.0	694.5	470	22.0	158.5	36.1	4.064	14.1	1409	48.1
1.62	6.0	694.5	470	23.0	199.5	36.6	4.603	13.6	1493	51.4
1.62	6.0	694.5	470	24.0	251.2	37.1	5.129	13.1	1569	54.5
1.62	6.0	694.5	470	25.0	316.2	37.5	5.572	12.5	1632	56.9

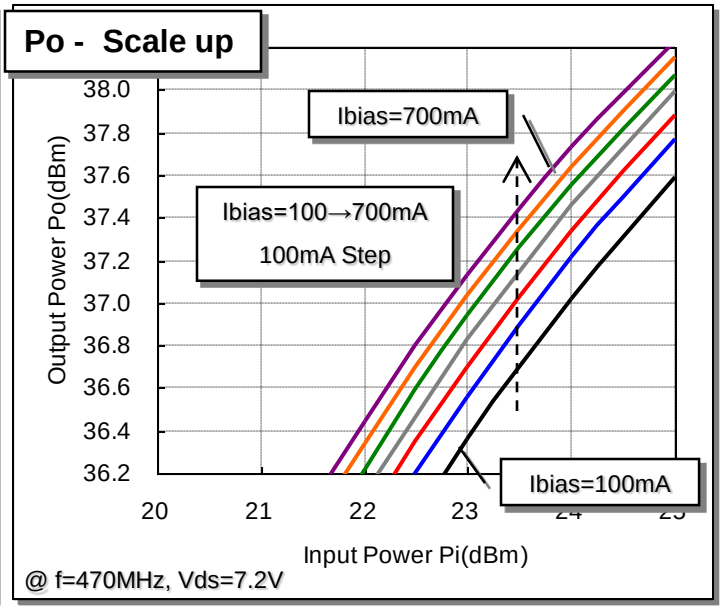
Input - Output Characteristics Vds＝7.2V - Condition 2

Po



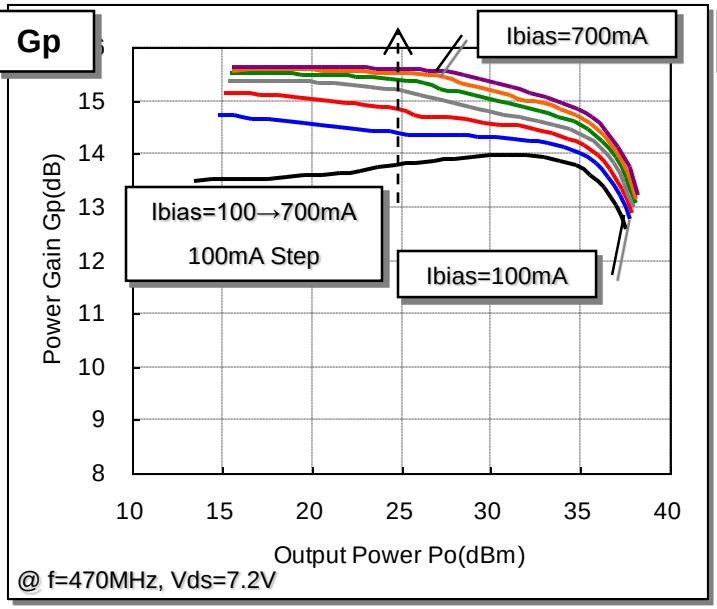
@ f=470MHz, Vds=7.2V

Po - Scale up



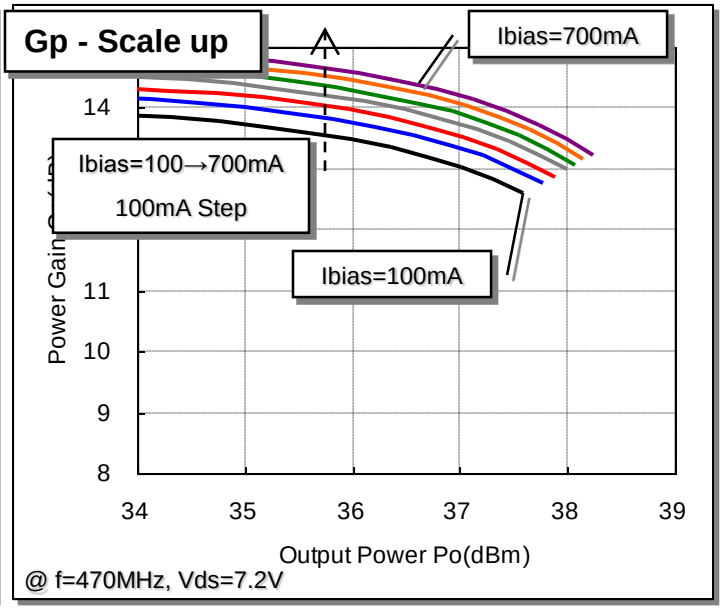
@ f=470MHz, Vds=7.2V

Gp



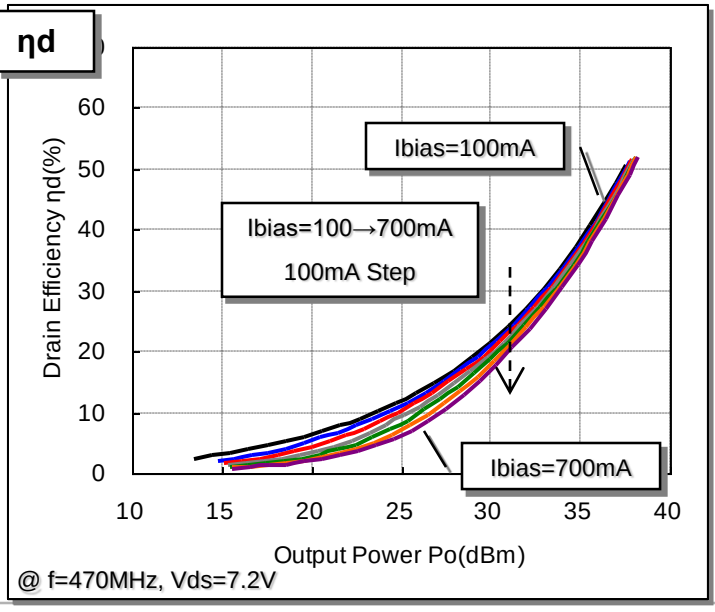
@ f=470MHz, Vds=7.2V

Gp - Scale up



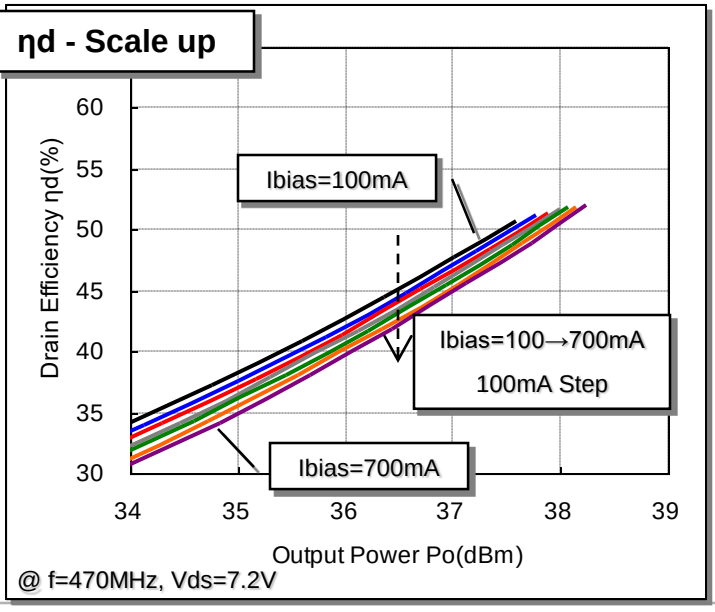
@ f=470MHz, Vds=7.2V

ηd



@ f=470MHz, Vds=7.2V

ηd - Scale up

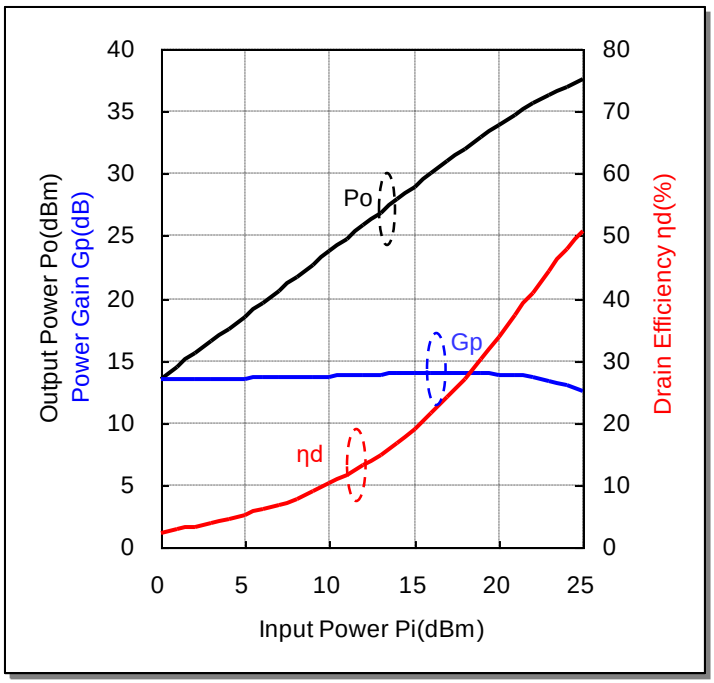


@ f=470MHz, Vds=7.2V

Input-Output Characteristics Vds=7.2V, Ibias=100mA - Condition 2

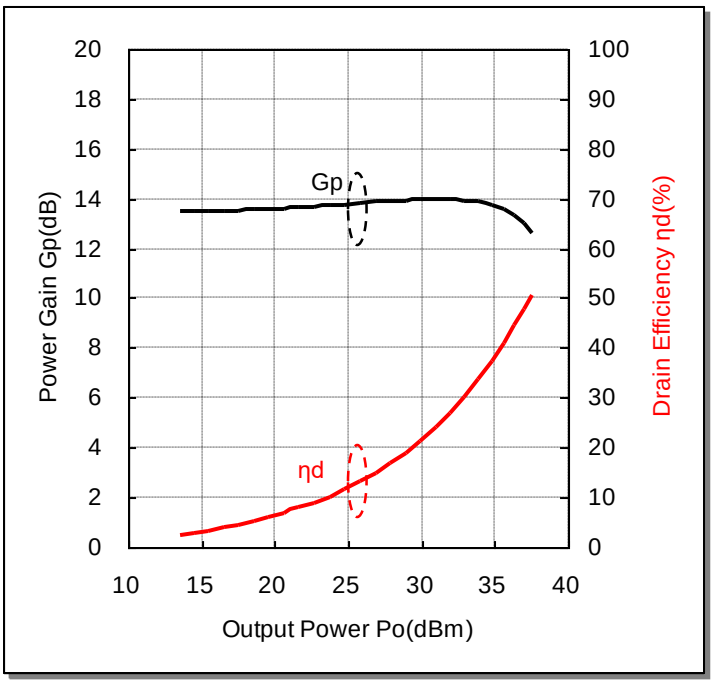
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=100.0mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=7.2V, Ibias=100.0mA

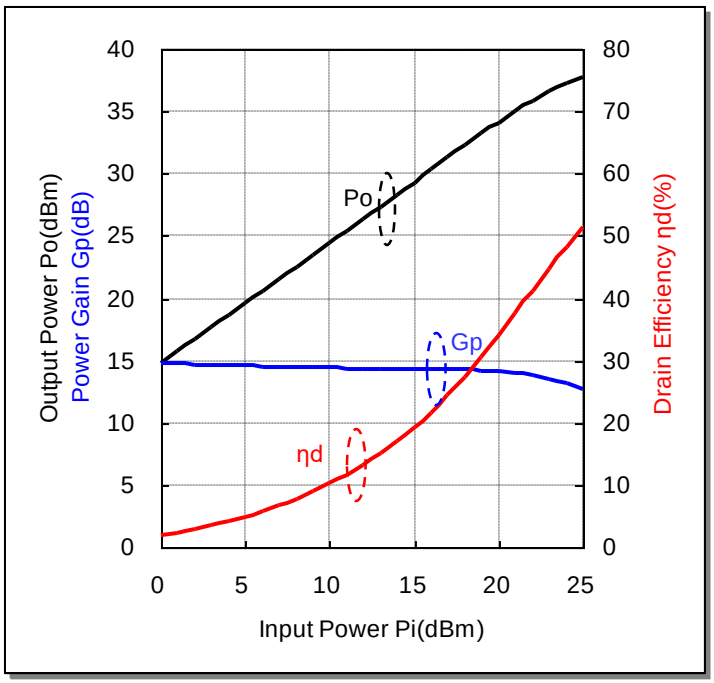
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.23	7.2	100.0	470	0.0	1.0	13.5	0.022	13.5	132	2.3
1.23	7.2	100.0	470	1.0	1.3	14.5	0.028	13.5	140	2.8
1.23	7.2	100.0	470	2.0	1.6	15.5	0.036	13.5	150	3.3
1.23	7.2	100.0	470	3.0	2.0	16.5	0.045	13.5	161	3.9
1.23	7.2	100.0	470	4.0	2.5	17.5	0.057	13.5	175	4.5
1.23	7.2	100.0	470	5.0	3.2	18.5	0.072	13.5	191	5.2
1.23	7.2	100.0	470	6.0	4.0	19.6	0.091	13.6	210	6.0
1.23	7.2	100.0	470	7.0	5.0	20.6	0.115	13.6	232	6.9
1.23	7.2	100.0	470	8.0	6.3	21.6	0.146	13.6	258	7.9
1.23	7.2	100.0	470	9.0	7.9	22.7	0.185	13.7	287	9.0
1.23	7.2	100.0	470	10.0	10.0	23.7	0.236	13.7	321	10.2
1.23	7.2	100.0	470	11.0	12.6	24.8	0.300	13.8	359	11.6
1.23	7.2	100.0	470	12.0	15.8	25.8	0.383	13.8	404	13.2
1.23	7.2	100.0	470	13.0	20.0	26.9	0.486	13.9	453	14.9
1.23	7.2	100.0	470	14.0	25.1	27.9	0.617	13.9	509	16.8
1.23	7.2	100.0	470	15.0	31.6	28.9	0.782	13.9	572	19.0
1.23	7.2	100.0	470	16.0	39.8	30.0	0.991	14.0	643	21.4
1.23	7.2	100.0	470	17.0	50.1	31.0	1.250	14.0	722	24.1
1.23	7.2	100.0	470	18.0	63.1	32.0	1.570	14.0	809	27.0
1.23	7.2	100.0	470	19.0	79.4	32.9	1.959	13.9	904	30.1
1.23	7.2	100.0	470	20.0	100.0	33.9	2.438	13.9	1007	33.6
1.23	7.2	100.0	470	21.0	125.9	34.8	2.999	13.8	1119	37.2
1.23	7.2	100.0	470	22.0	158.5	35.6	3.622	13.6	1232	40.8
1.23	7.2	100.0	470	23.0	199.5	36.4	4.325	13.4	1351	44.5
1.23	7.2	100.0	470	24.0	251.2	37.0	5.035	13.0	1464	47.8
1.23	7.2	100.0	470	25.0	316.2	37.6	5.741	12.6	1571	50.8

Input-Output Characteristics Vds=7.2V, Ibias=200mA - Condition 2

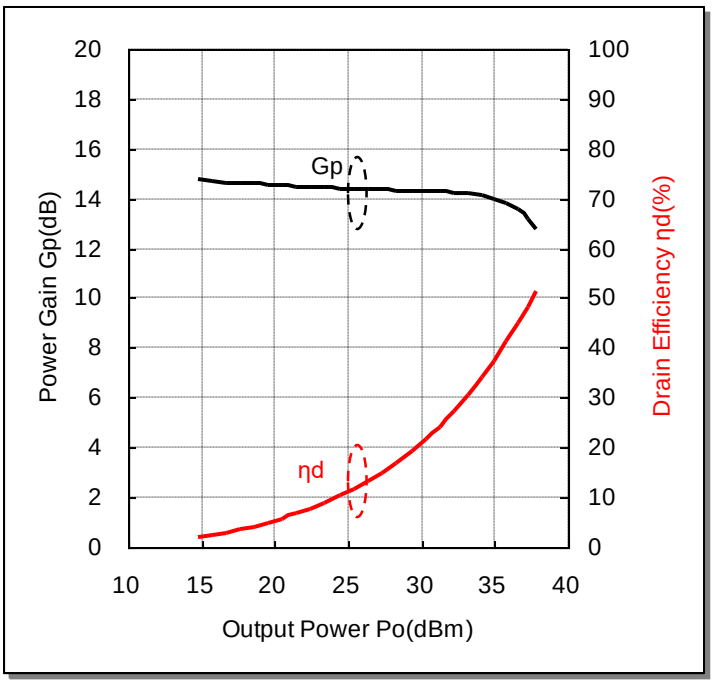
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=200.9mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=7.2V, Ibias=200.9mA

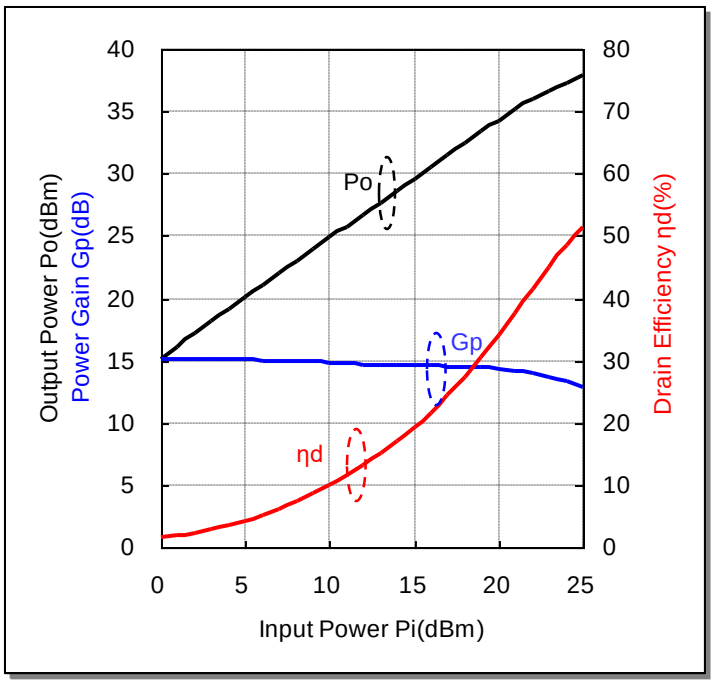
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.32	7.2	200.9	470	0.0	1.0	14.7	0.030	14.7	218	1.9
1.32	7.2	200.9	470	1.0	1.3	15.7	0.037	14.7	223	2.3
1.32	7.2	200.9	470	2.0	1.6	16.6	0.046	14.6	228	2.8
1.32	7.2	200.9	470	3.0	2.0	17.6	0.058	14.6	236	3.4
1.32	7.2	200.9	470	4.0	2.5	18.6	0.072	14.6	245	4.1
1.32	7.2	200.9	470	5.0	3.2	19.6	0.090	14.6	257	4.9
1.32	7.2	200.9	470	6.0	4.0	20.5	0.113	14.5	273	5.8
1.32	7.2	200.9	470	7.0	5.0	21.5	0.141	14.5	292	6.7
1.32	7.2	200.9	470	8.0	6.3	22.5	0.176	14.5	315	7.8
1.32	7.2	200.9	470	9.0	7.9	23.4	0.220	14.4	342	8.9
1.32	7.2	200.9	470	10.0	10.0	24.4	0.276	14.4	374	10.2
1.32	7.2	200.9	470	11.0	12.6	25.4	0.344	14.4	410	11.6
1.32	7.2	200.9	470	12.0	15.8	26.4	0.432	14.4	453	13.2
1.32	7.2	200.9	470	13.0	20.0	27.4	0.543	14.4	502	15.0
1.32	7.2	200.9	470	14.0	25.1	28.3	0.681	14.3	557	17.0
1.32	7.2	200.9	470	15.0	31.6	29.3	0.853	14.3	619	19.1
1.32	7.2	200.9	470	16.0	39.8	30.3	1.076	14.3	691	21.6
1.32	7.2	200.9	470	17.0	50.1	31.3	1.346	14.3	769	24.3
1.32	7.2	200.9	470	18.0	63.1	32.2	1.675	14.2	856	27.2
1.32	7.2	200.9	470	19.0	79.4	33.2	2.089	14.2	953	30.4
1.32	7.2	200.9	470	20.0	100.0	34.1	2.588	14.1	1058	34.0
1.32	7.2	200.9	470	21.0	125.9	35.0	3.162	14.0	1171	37.5
1.32	7.2	200.9	470	22.0	158.5	35.8	3.819	13.8	1288	41.2
1.32	7.2	200.9	470	23.0	199.5	36.6	4.529	13.6	1404	44.8
1.32	7.2	200.9	470	24.0	251.2	37.2	5.260	13.2	1516	48.2
1.32	7.2	200.9	470	25.0	316.2	37.8	5.984	12.8	1622	51.3

Input-Output Characteristics Vds=7.2V, Ibias=300mA - Condition 2

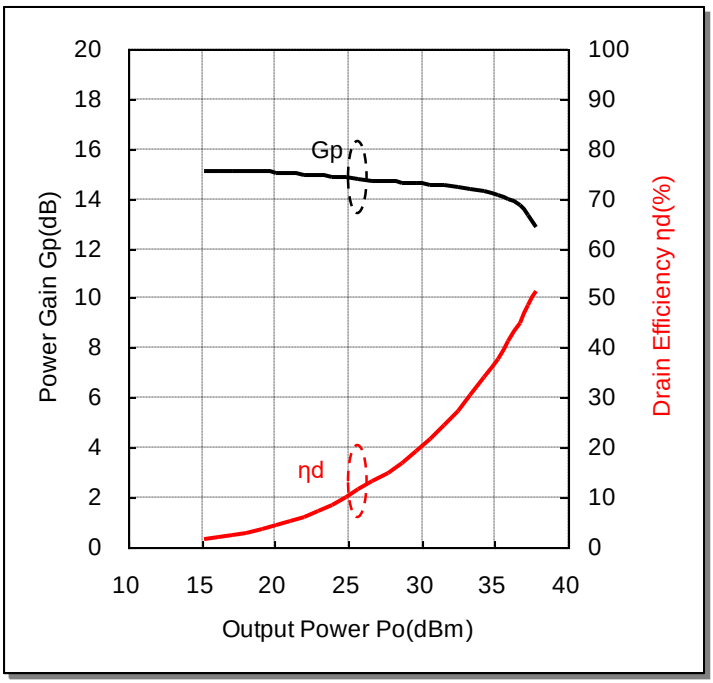
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=294.1mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=7.2V, Ibias=294.1mA

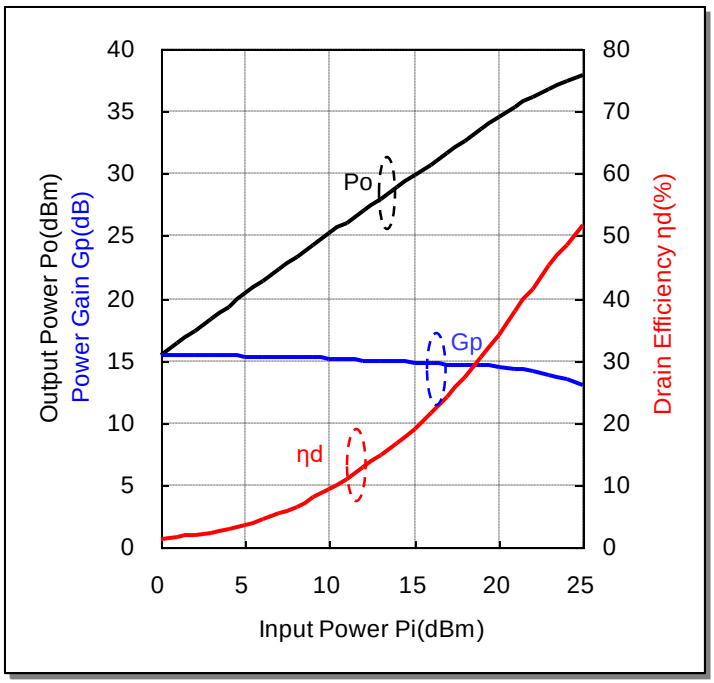
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.38	7.2	294.1	470	0.0	1.0	15.1	0.033	15.1	304	1.5
1.38	7.2	294.1	470	1.0	1.3	16.1	0.041	15.1	307	1.9
1.38	7.2	294.1	470	2.0	1.6	17.1	0.051	15.1	310	2.3
1.38	7.2	294.1	470	3.0	2.0	18.1	0.064	15.1	315	2.8
1.38	7.2	294.1	470	4.0	2.5	19.1	0.081	15.1	321	3.5
1.38	7.2	294.1	470	5.0	3.2	20.0	0.101	15.0	329	4.3
1.38	7.2	294.1	470	6.0	4.0	21.0	0.126	15.0	339	5.2
1.38	7.2	294.1	470	7.0	5.0	22.0	0.157	15.0	353	6.2
1.38	7.2	294.1	470	8.0	6.3	22.9	0.196	14.9	371	7.3
1.38	7.2	294.1	470	9.0	7.9	23.9	0.244	14.9	394	8.6
1.38	7.2	294.1	470	10.0	10.0	24.8	0.304	14.8	422	10.0
1.38	7.2	294.1	470	11.0	12.6	25.7	0.375	14.7	454	11.5
1.38	7.2	294.1	470	12.0	15.8	26.7	0.467	14.7	495	13.1
1.38	7.2	294.1	470	13.0	20.0	27.7	0.585	14.7	542	15.0
1.38	7.2	294.1	470	14.0	25.1	28.6	0.729	14.6	597	17.0
1.38	7.2	294.1	470	15.0	31.6	29.6	0.910	14.6	658	19.2
1.38	7.2	294.1	470	16.0	39.8	30.5	1.135	14.5	728	21.7
1.38	7.2	294.1	470	17.0	50.1	31.5	1.419	14.5	807	24.4
1.38	7.2	294.1	470	18.0	63.1	32.5	1.758	14.5	894	27.3
1.38	7.2	294.1	470	19.0	79.4	33.4	2.178	14.4	990	30.5
1.38	7.2	294.1	470	20.0	100.0	34.3	2.685	14.3	1095	34.1
1.38	7.2	294.1	470	21.0	125.9	35.2	3.289	14.2	1210	37.8
1.38	7.2	294.1	470	22.0	158.5	36.0	3.954	14.0	1326	41.4
1.38	7.2	294.1	470	23.0	199.5	36.7	4.677	13.7	1442	45.0
1.38	7.2	294.1	470	24.0	251.2	37.3	5.420	13.3	1554	48.4
1.38	7.2	294.1	470	25.0	316.2	37.9	6.138	12.9	1657	51.4

Input-Output Characteristics Vds=7.2V, Ibias=400mA - Condition 2

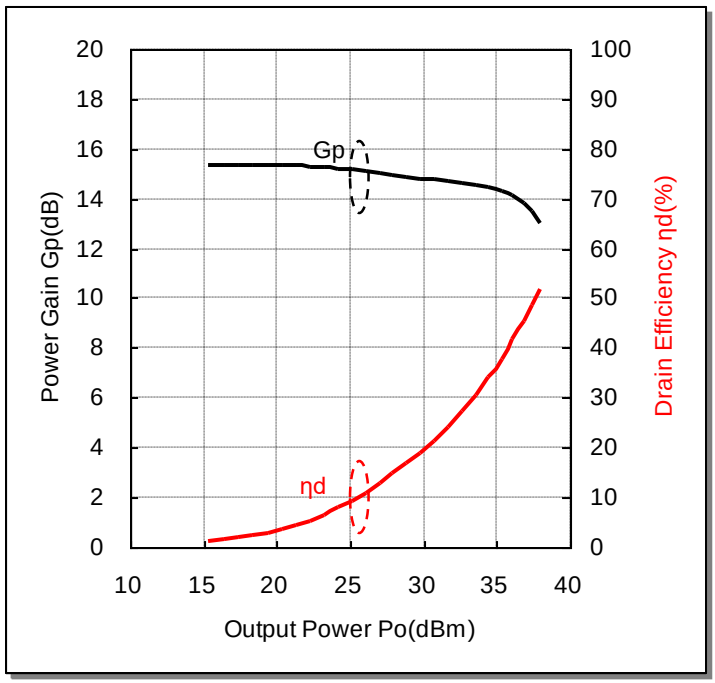
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=399.1mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=7.2V, Ibias=399.1mA

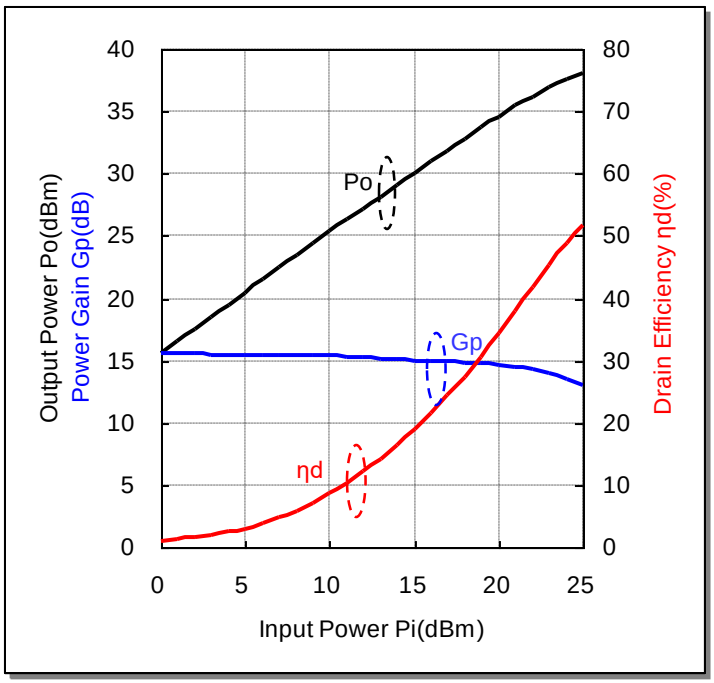
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.44	7.2	399.1	470	0.0	1.0	15.4	0.035	15.4	406	1.2
1.44	7.2	399.1	470	1.0	1.3	16.4	0.043	15.4	408	1.5
1.44	7.2	399.1	470	2.0	1.6	17.4	0.055	15.4	410	1.9
1.44	7.2	399.1	470	3.0	2.0	18.4	0.069	15.4	413	2.3
1.44	7.2	399.1	470	4.0	2.5	19.4	0.086	15.4	416	2.9
1.44	7.2	399.1	470	5.0	3.2	20.3	0.108	15.3	422	3.6
1.44	7.2	399.1	470	6.0	4.0	21.3	0.135	15.3	428	4.4
1.44	7.2	399.1	470	7.0	5.0	22.3	0.169	15.3	436	5.4
1.44	7.2	399.1	470	8.0	6.3	23.3	0.211	15.3	447	6.6
1.44	7.2	399.1	470	9.0	7.9	24.2	0.264	15.2	463	7.9
1.44	7.2	399.1	470	10.0	10.0	25.2	0.328	15.2	484	9.4
1.44	7.2	399.1	470	11.0	12.6	26.1	0.406	15.1	512	11.0
1.44	7.2	399.1	470	12.0	15.8	27.0	0.504	15.0	547	12.8
1.44	7.2	399.1	470	13.0	20.0	27.9	0.621	14.9	588	14.7
1.44	7.2	399.1	470	14.0	25.1	28.9	0.769	14.9	639	16.7
1.44	7.2	399.1	470	15.0	31.6	29.8	0.955	14.8	698	19.0
1.44	7.2	399.1	470	16.0	39.8	30.7	1.186	14.7	767	21.5
1.44	7.2	399.1	470	17.0	50.1	31.7	1.472	14.7	844	24.2
1.44	7.2	399.1	470	18.0	63.1	32.6	1.828	14.6	931	27.3
1.44	7.2	399.1	470	19.0	79.4	33.5	2.265	14.5	1028	30.6
1.44	7.2	399.1	470	20.0	100.0	34.5	2.793	14.5	1135	34.2
1.44	7.2	399.1	470	21.0	125.9	35.3	3.396	14.3	1247	37.8
1.44	7.2	399.1	470	22.0	158.5	36.1	4.083	14.1	1363	41.6
1.44	7.2	399.1	470	23.0	199.5	36.8	4.819	13.8	1479	45.3
1.44	7.2	399.1	470	24.0	251.2	37.5	5.572	13.5	1590	48.7
1.44	7.2	399.1	470	25.0	316.2	38.0	6.295	13.0	1691	51.7

Input-Output Characteristics Vds=7.2V, Ibias=500mA - Condition 2

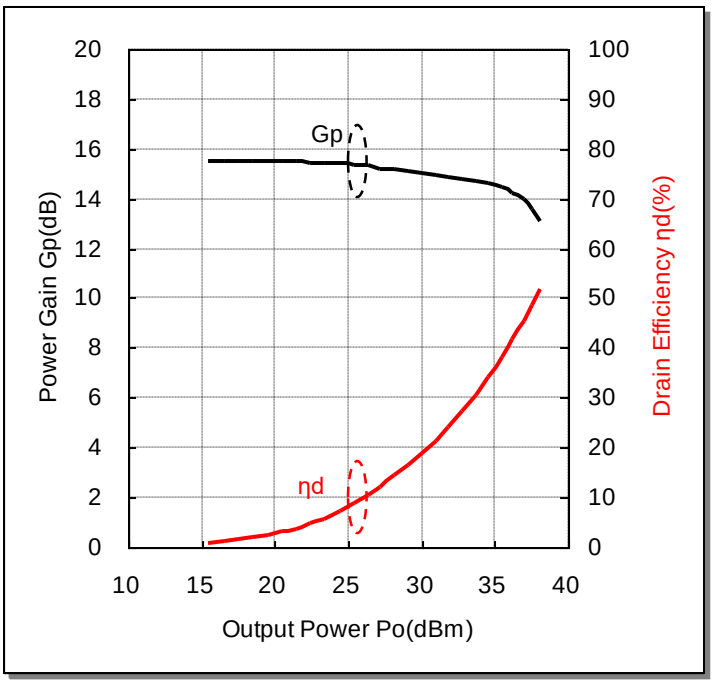
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=493.2mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=7.2V, Ibias=493.2mA

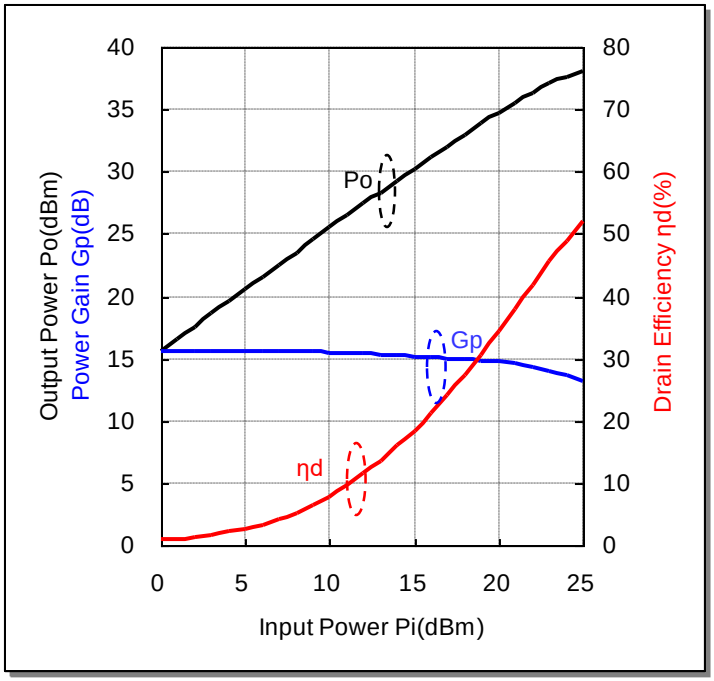
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.49	7.2	493.2	470	0.0	1.0	15.5	0.036	15.5	499	1.0
1.49	7.2	493.2	470	1.0	1.3	16.5	0.045	15.5	500	1.2
1.49	7.2	493.2	470	2.0	1.6	17.5	0.056	15.5	501	1.6
1.49	7.2	493.2	470	3.0	2.0	18.5	0.071	15.5	503	2.0
1.49	7.2	493.2	470	4.0	2.5	19.5	0.089	15.5	506	2.4
1.49	7.2	493.2	470	5.0	3.2	20.5	0.112	15.5	509	3.0
1.49	7.2	493.2	470	6.0	4.0	21.5	0.140	15.5	513	3.8
1.49	7.2	493.2	470	7.0	5.0	22.5	0.176	15.5	520	4.7
1.49	7.2	493.2	470	8.0	6.3	23.4	0.220	15.4	528	5.8
1.49	7.2	493.2	470	9.0	7.9	24.4	0.275	15.4	538	7.1
1.49	7.2	493.2	470	10.0	10.0	25.4	0.344	15.4	552	8.7
1.49	7.2	493.2	470	11.0	12.6	26.3	0.429	15.3	573	10.4
1.49	7.2	493.2	470	12.0	15.8	27.2	0.527	15.2	599	12.2
1.49	7.2	493.2	470	13.0	20.0	28.2	0.655	15.2	637	14.3
1.49	7.2	493.2	470	14.0	25.1	29.1	0.811	15.1	683	16.5
1.49	7.2	493.2	470	15.0	31.6	30.0	1.002	15.0	740	18.8
1.49	7.2	493.2	470	16.0	39.8	30.9	1.242	14.9	806	21.4
1.49	7.2	493.2	470	17.0	50.1	31.9	1.542	14.9	882	24.3
1.49	7.2	493.2	470	18.0	63.1	32.8	1.905	14.8	968	27.3
1.49	7.2	493.2	470	19.0	79.4	33.7	2.344	14.7	1064	30.6
1.49	7.2	493.2	470	20.0	100.0	34.6	2.884	14.6	1170	34.2
1.49	7.2	493.2	470	21.0	125.9	35.5	3.508	14.5	1282	38.0
1.49	7.2	493.2	470	22.0	158.5	36.2	4.188	14.2	1396	41.7
1.49	7.2	493.2	470	23.0	199.5	36.9	4.943	13.9	1512	45.4
1.49	7.2	493.2	470	24.0	251.2	37.5	5.689	13.5	1620	48.8
1.49	7.2	493.2	470	25.0	316.2	38.1	6.412	13.1	1718	51.8

Input-Output Characteristics Vds=7.2V, Ibias=600mA - Condition 2

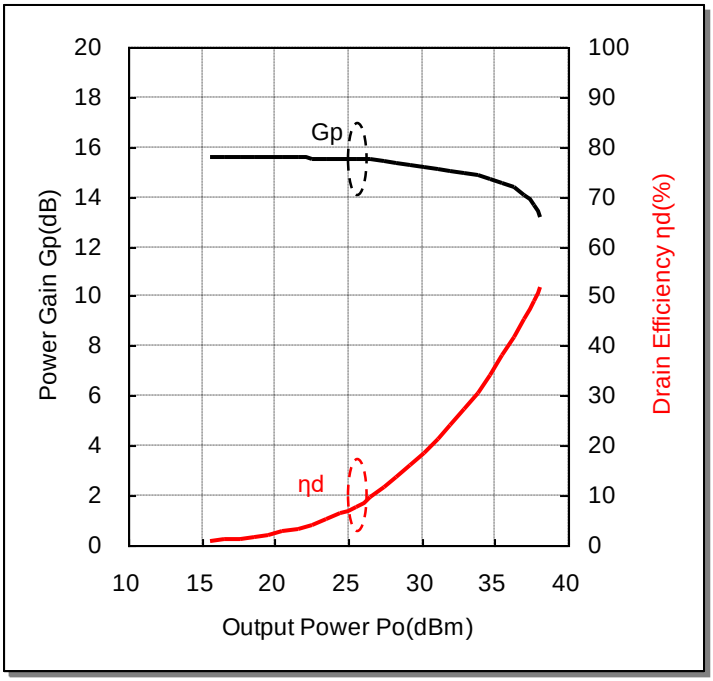
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=591.6mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=7.2V, Ibias=591.6mA

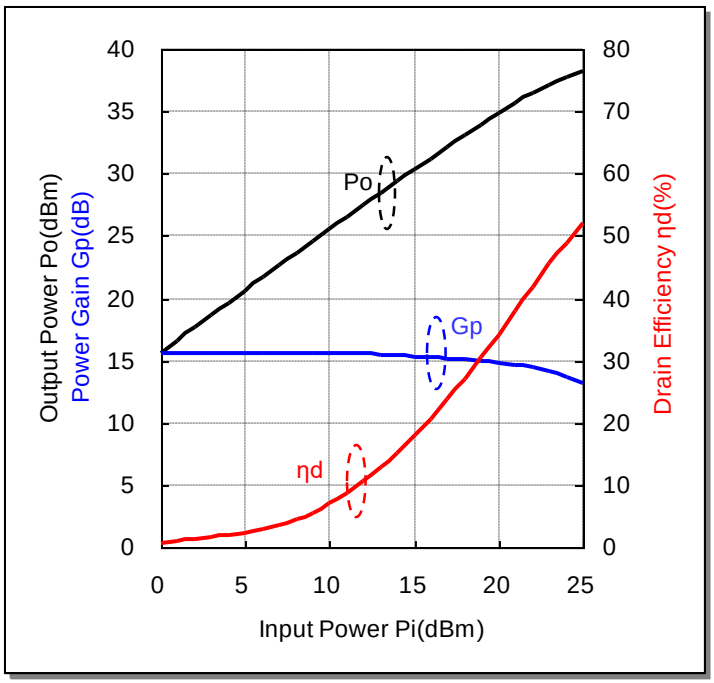
Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.54	7.2	591.6	470	0.0	1.0	15.6	0.036	15.6	595	0.8
1.54	7.2	591.6	470	1.0	1.3	16.6	0.046	15.6	596	1.1
1.54	7.2	591.6	470	2.0	1.6	17.6	0.057	15.6	597	1.3
1.54	7.2	591.6	470	3.0	2.0	18.6	0.072	15.6	599	1.7
1.54	7.2	591.6	470	4.0	2.5	19.6	0.091	15.6	601	2.1
1.54	7.2	591.6	470	5.0	3.2	20.6	0.114	15.6	604	2.6
1.54	7.2	591.6	470	6.0	4.0	21.5	0.143	15.5	607	3.3
1.54	7.2	591.6	470	7.0	5.0	22.5	0.179	15.5	611	4.1
1.54	7.2	591.6	470	8.0	6.3	23.5	0.225	15.5	616	5.1
1.54	7.2	591.6	470	9.0	7.9	24.5	0.283	15.5	623	6.3
1.54	7.2	591.6	470	10.0	10.0	25.5	0.355	15.5	634	7.8
1.54	7.2	591.6	470	11.0	12.6	26.5	0.444	15.5	648	9.5
1.54	7.2	591.6	470	12.0	15.8	27.4	0.553	15.4	668	11.5
1.54	7.2	591.6	470	13.0	20.0	28.3	0.681	15.3	695	13.6
1.54	7.2	591.6	470	14.0	25.1	29.3	0.841	15.3	733	15.9
1.54	7.2	591.6	470	15.0	31.6	30.2	1.040	15.2	784	18.4
1.54	7.2	591.6	470	16.0	39.8	31.1	1.285	15.1	846	21.1
1.54	7.2	591.6	470	17.0	50.1	32.0	1.585	15.0	918	24.0
1.54	7.2	591.6	470	18.0	63.1	32.9	1.963	14.9	1003	27.2
1.54	7.2	591.6	470	19.0	79.4	33.8	2.415	14.8	1098	30.6
1.54	7.2	591.6	470	20.0	100.0	34.7	2.965	14.7	1203	34.2
1.54	7.2	591.6	470	21.0	125.9	35.6	3.597	14.6	1316	38.0
1.54	7.2	591.6	470	22.0	158.5	36.3	4.305	14.3	1430	41.8
1.54	7.2	591.6	470	23.0	199.5	37.0	5.058	14.0	1544	45.5
1.54	7.2	591.6	470	24.0	251.2	37.6	5.808	13.6	1651	48.9
1.54	7.2	591.6	470	25.0	316.2	38.2	6.531	13.2	1748	51.9

Input-Output Characteristics Vds=7.2V, Ibias=700mA - Condition 2

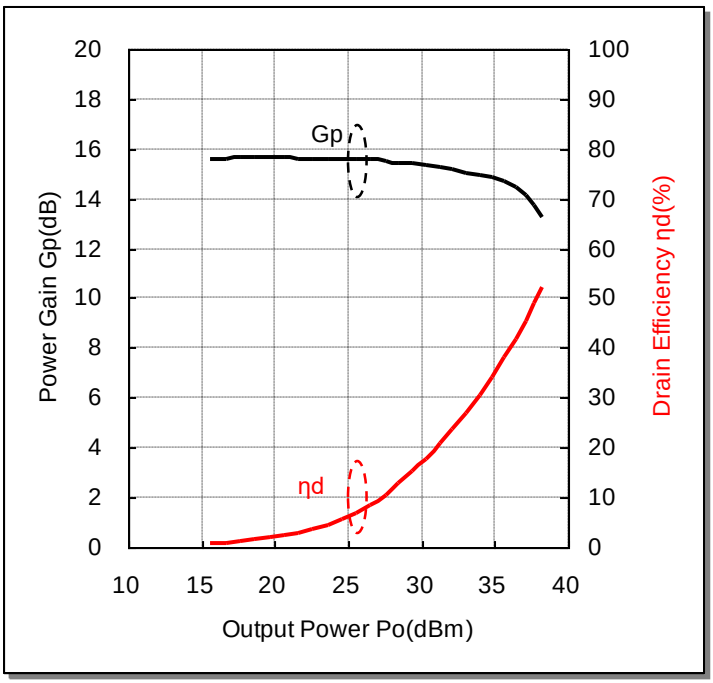
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ f=470MHz, Vds=7.2V, Ibias=692.4mA

Power Gain, Drain Efficiency vs Output Power



@ f=470MHz, Vds=7.2V, Ibias=692.4mA

Data

Vgs (V)	Vds (V)	Ibias (mA)	f (MHz)	Pi (dBm)	Pi (mW)	Po (dBm)	Po (W)	Gp (dB)	Ids (mA)	ηD (%)
1.60	7.2	692.4	470	0.0	1.0	15.6	0.036	15.6	696	0.7
1.60	7.2	692.4	470	1.0	1.3	16.6	0.046	15.6	696	0.9
1.60	7.2	692.4	470	2.0	1.6	17.6	0.058	15.6	697	1.2
1.60	7.2	692.4	470	3.0	2.0	18.6	0.073	15.6	698	1.5
1.60	7.2	692.4	470	4.0	2.5	19.6	0.092	15.6	700	1.8
1.60	7.2	692.4	470	5.0	3.2	20.6	0.116	15.6	701	2.3
1.60	7.2	692.4	470	6.0	4.0	21.6	0.145	15.6	704	2.9
1.60	7.2	692.4	470	7.0	5.0	22.6	0.182	15.6	707	3.6
1.60	7.2	692.4	470	8.0	6.3	23.6	0.229	15.6	711	4.5
1.60	7.2	692.4	470	9.0	7.9	24.6	0.288	15.6	716	5.6
1.60	7.2	692.4	470	10.0	10.0	25.6	0.361	15.6	724	6.9
1.60	7.2	692.4	470	11.0	12.6	26.6	0.453	15.6	734	8.6
1.60	7.2	692.4	470	12.0	15.8	27.5	0.568	15.5	748	10.5
1.60	7.2	692.4	470	13.0	20.0	28.5	0.701	15.5	767	12.7
1.60	7.2	692.4	470	14.0	25.1	29.4	0.871	15.4	796	15.2
1.60	7.2	692.4	470	15.0	31.6	30.3	1.076	15.3	837	17.9
1.60	7.2	692.4	470	16.0	39.8	31.2	1.330	15.2	892	20.7
1.60	7.2	692.4	470	17.0	50.1	32.2	1.641	15.2	960	23.7
1.60	7.2	692.4	470	18.0	63.1	33.0	2.018	15.0	1041	26.9
1.60	7.2	692.4	470	19.0	79.4	34.0	2.483	15.0	1134	30.4
1.60	7.2	692.4	470	20.0	100.0	34.8	3.041	14.8	1238	34.1
1.60	7.2	692.4	470	21.0	125.9	35.7	3.690	14.7	1350	38.0
1.60	7.2	692.4	470	22.0	158.5	36.4	4.406	14.4	1464	41.8
1.60	7.2	692.4	470	23.0	199.5	37.1	5.164	14.1	1575	45.5
1.60	7.2	692.4	470	24.0	251.2	37.7	5.929	13.7	1682	49.0
1.60	7.2	692.4	470	25.0	316.2	38.2	6.653	13.2	1776	52.0

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