

TOSHIBA Discrete Devices RF Power MOS FET **RFM01U7P** Application Note

Contents

- Bias Current / DC Characteristics
Vds = 4.8V, 6.0V, 7.2V, 8.4V, 9.6V
Vgs = 0.5V ~ 2.3V (0.05V Step)
- Input – Output Characteristics / RF Characteristics
Vds = 4.8V, 6.0V, 7.2V, 8.4V, 9.6V
Ibias= 20mA, 40mA, 60mA, 80mA, 100mA, 120mA, 140mA
f = 520MHz
Pi = -5 ~ 23dBm (1dB step)
ZL=7.73+j10.17Ω, 7.66+j5.24Ω

- 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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57					80	59
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Condition 1 ($Z_L = 7.73 + j10.17\Omega$)

⇒ "Condition 1" is the load impedance setup which gave priority to "Drain Efficiency".

Condition 2 ($Z_L = 7.66 + j5.24\Omega$)

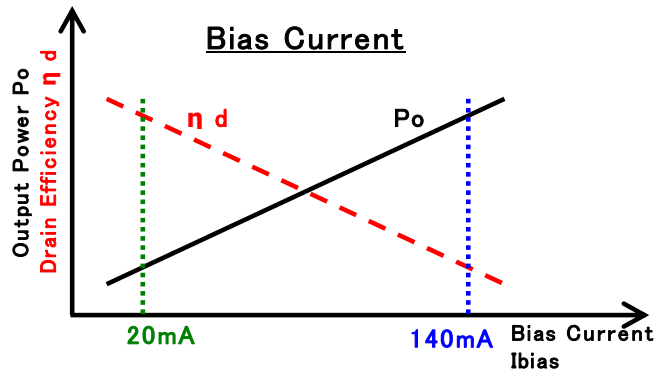
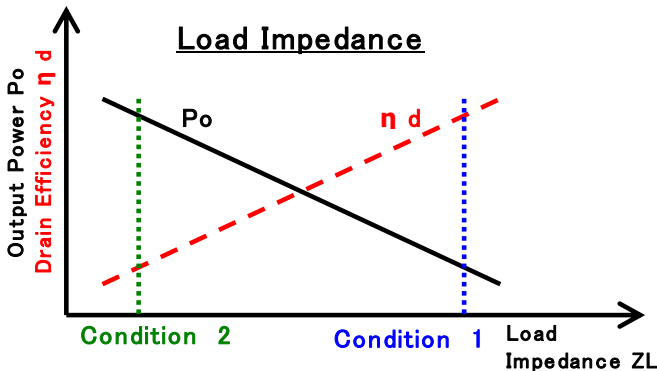
⇒ "Condition 2" is the load impedance setup which gave priority to "Output Power".

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

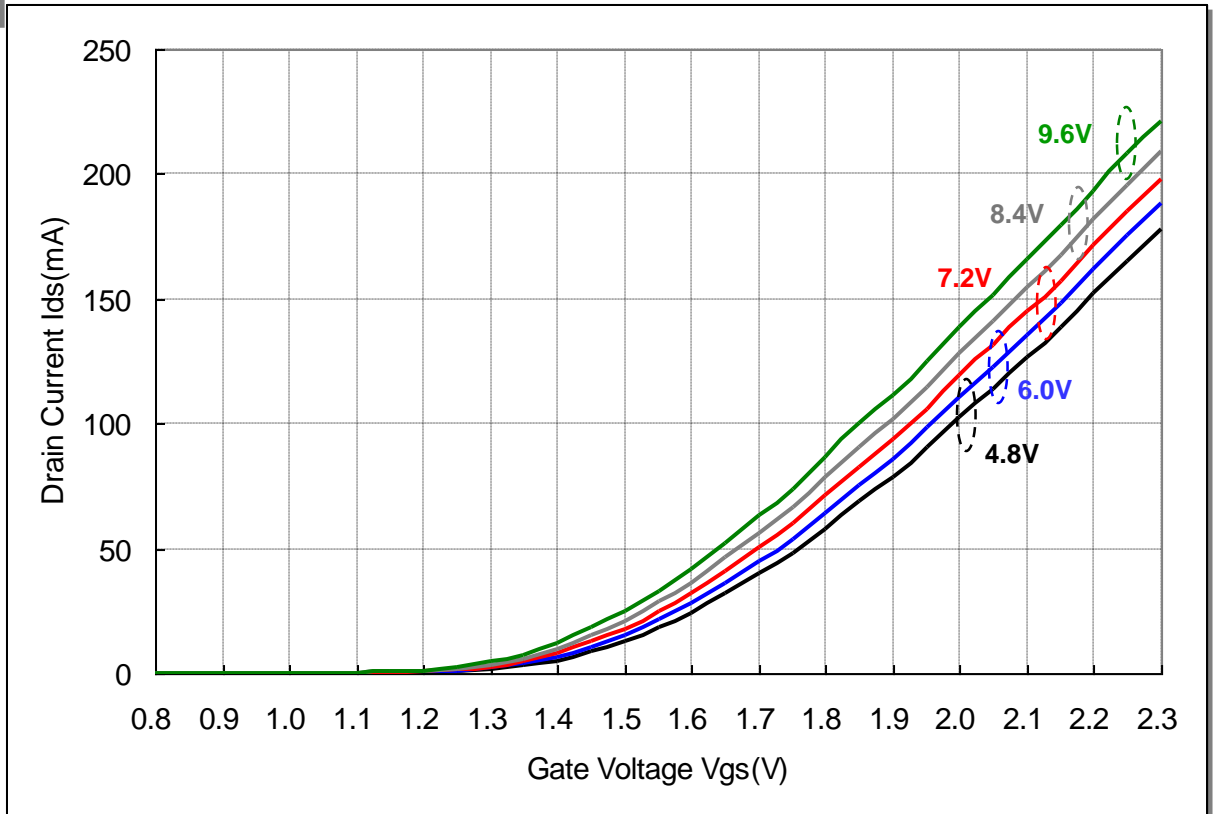
Selection Guide

Load Impedance	Drain-Source Voltage	Bias Current	Contents (Input-Output Characteristics)	Page No	
Priority Performance Drain Efficiency Condition 1 $7.73 + j10.17\Omega$ <i>(Please refer to P5 for details.)</i>	4.8V	20mA ~ 140mA Step 20mA	Graph → Data →	6 7 ~ 13	
	6.0V	20mA ~ 140mA Step 20mA	Graph → Data →	14 15 ~ 21	
	7.2V	20mA ~ 140mA Step 20mA	Graph → Data →	22 23 ~ 29	
	8.4V	20mA ~ 140mA Step 20mA	Graph → Data →	30 31 ~ 37	
	9.6V	20mA ~ 140mA Step 20mA	Graph → Data →	38 39 ~ 45	
	Priority Performance Output Power Condition 2 $7.66 + j5.24\Omega$ <i>(Please refer to P46 for details.)</i>	4.8V	20mA ~ 140mA Step 20mA	Graph → Data →	47 48 ~ 54
		6.0V	20mA ~ 140mA Step 20mA	Graph → Data →	55 56 ~ 62
		7.2V	20mA ~ 140mA Step 20mA	Graph → Data →	63 64 ~ 70
		8.4V	20mA ~ 140mA Step 20mA	Graph → Data →	71 72 ~ 78
		9.6V	20mA ~ 140mA Step 20mA	Graph → Data →	79 80 ~ 86



Bias Current Characteristics

Graph



Data

Vgs (V)	Vds (V)	Ids (mA)
0.50	4.8	0.0
0.55	4.8	0.0
0.60	4.8	0.0
0.65	4.8	0.0
0.70	4.8	0.0
0.75	4.8	0.0
0.80	4.8	0.0
0.85	4.8	0.0
0.90	4.8	0.0
0.95	4.8	0.0
1.00	4.8	0.0
1.05	4.8	0.1
1.10	4.8	0.1
1.15	4.8	0.2
1.20	4.8	0.4
1.25	4.8	0.8
1.30	4.8	1.6
1.35	4.8	2.9
1.40	4.8	5.2
1.45	4.8	8.6
1.50	4.8	12.6
1.55	4.8	18.1
1.60	4.8	24.1
1.65	4.8	31.8
1.70	4.8	40.0
1.75	4.8	48.3
1.80	4.8	58.1
1.85	4.8	68.9
1.90	4.8	78.6
1.95	4.8	90.4
2.00	4.8	102.5
2.05	4.8	114.0
2.10	4.8	126.5
2.15	4.8	138.5
2.20	4.8	152.1
2.25	4.8	165.4
2.30	4.8	177.9

Vgs (V)	Vds (V)	Ids (mA)
0.50	6.0	0.0
0.55	6.0	0.0
0.60	6.0	0.0
0.65	6.0	0.0
0.70	6.0	0.0
0.75	6.0	0.0
0.80	6.0	0.0
0.85	6.0	0.0
0.90	6.0	0.0
0.95	6.0	0.0
1.00	6.0	0.0
1.05	6.0	0.1
1.10	6.0	0.1
1.15	6.0	0.3
1.20	6.0	0.5
1.25	6.0	1.0
1.30	6.0	2.1
1.35	6.0	3.7
1.40	6.0	6.5
1.45	6.0	10.4
1.50	6.0	15.0
1.55	6.0	21.2
1.60	6.0	27.8
1.65	6.0	35.9
1.70	6.0	45.2
1.75	6.0	53.8
1.80	6.0	64.4
1.85	6.0	75.7
1.90	6.0	85.8
1.95	6.0	98.5
2.00	6.0	110.7
2.05	6.0	122.6
2.10	6.0	135.6
2.15	6.0	147.9
2.20	6.0	161.8
2.25	6.0	175.6
2.30	6.0	188.4

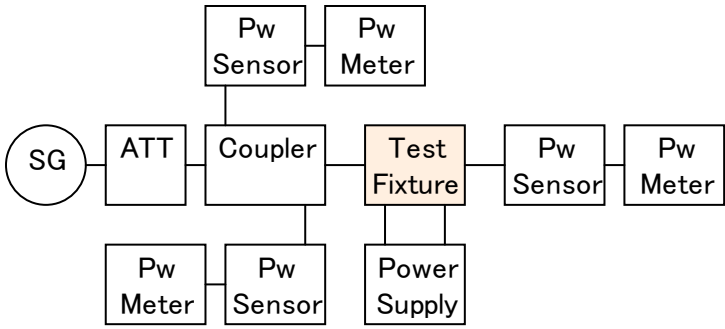
Vgs (V)	Vds (V)	Ids (mA)
0.50	7.2	0.0
0.55	7.2	0.0
0.60	7.2	0.0
0.65	7.2	0.0
0.70	7.2	0.0
0.75	7.2	0.0
0.80	7.2	0.0
0.85	7.2	0.0
0.90	7.2	0.0
0.95	7.2	0.0
1.00	7.2	0.1
1.05	7.2	0.1
1.10	7.2	0.2
1.15	7.2	0.4
1.20	7.2	0.7
1.25	7.2	1.4
1.30	7.2	2.7
1.35	7.2	4.7
1.40	7.2	8.0
1.45	7.2	12.6
1.50	7.2	17.8
1.55	7.2	24.7
1.60	7.2	32.0
1.65	7.2	40.7
1.70	7.2	50.3
1.75	7.2	60.0
1.80	7.2	71.0
1.85	7.2	82.5
1.90	7.2	93.6
1.95	7.2	105.9
2.00	7.2	119.4
2.05	7.2	131.2
2.10	7.2	144.9
2.15	7.2	157.1
2.20	7.2	171.1
2.25	7.2	185.0
2.30	7.2	198.1

Vgs (V)	Vds (V)	Ids (mA)
0.50	8.4	0.0
0.55	8.4	0.0
0.60	8.4	0.0
0.65	8.4	0.0
0.70	8.4	0.0
0.75	8.4	0.0
0.80	8.4	0.0
0.85	8.4	0.0
0.90	8.4	0.0
0.95	8.4	0.0
1.00	8.4	0.1
1.05	8.4	0.1
1.10	8.4	0.2
1.15	8.4	0.4
1.20	8.4	0.9
1.25	8.4	1.8
1.30	8.4	3.5
1.35	8.4	5.9
1.40	8.4	9.8
1.45	8.4	15.1
1.50	8.4	20.9
1.55	8.4	28.5
1.60	8.4	36.3
1.65	8.4	46.1
1.70	8.4	56.3
1.75	8.4	66.3
1.80	8.4	78.3
1.85	8.4	90.2
1.90	8.4	102.0
1.95	8.4	114.7
2.00	8.4	128.3
2.05	8.4	140.7
2.10	8.4	154.3
2.15	8.4	167.5
2.20	8.4	181.7
2.25	8.4	195.8
2.30	8.4	208.9

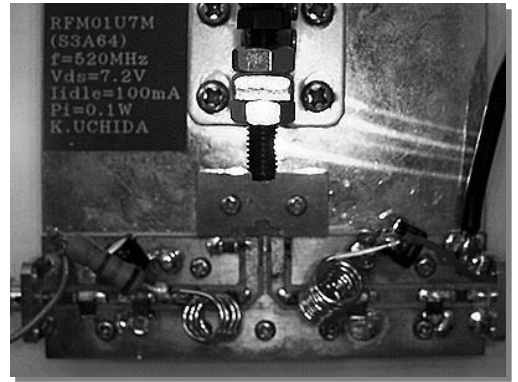
Vgs (V)	Vds (V)	Ids (mA)
0.50	9.6	0.0
0.55	9.6	0.0
0.60	9.6	0.0
0.65	9.6	0.0
0.70	9.6	0.0
0.75	9.6	0.0
0.80	9.6	0.0
0.85	9.6	0.0
0.90	9.6	0.0
0.95	9.6	0.0
1.00	9.6	0.1
1.05	9.6	0.1
1.10	9.6	0.3
1.15	9.6	0.6
1.20	9.6	1.1
1.25	9.6	2.3
1.30	9.6	4.5
1.35	9.6	7.5
1.40	9.6	12.0
1.45	9.6	18.1
1.50	9.6	24.7
1.55	9.6	33.1
1.60	9.6	41.7
1.65	9.6	52.3
1.70	9.6	63.5
1.75	9.6	74.0
1.80	9.6	86.8
1.85	9.6	99.8
1.90	9.6	111.5
1.95	9.6	125.2
2.00	9.6	138.9
2.05	9.6	151.7
2.10	9.6	166.2
2.15	9.6	179.3
2.20	9.6	193.3
2.25	9.6	208.0
2.30	9.6	221.4

Test System – Condition 1

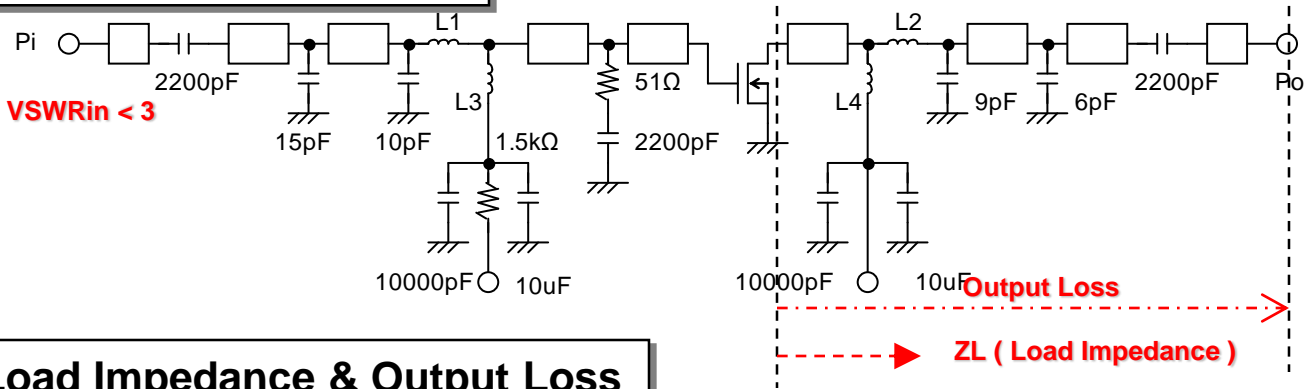
RF Test Block



Test Fixture

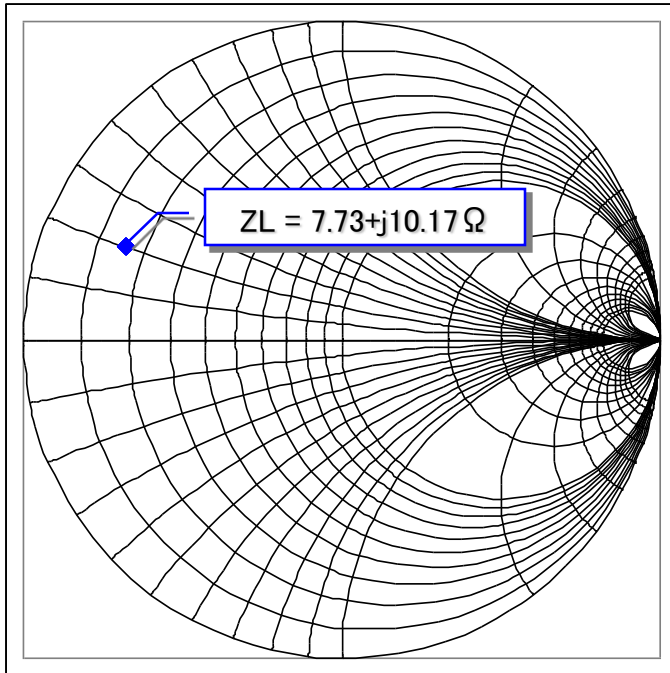


Schema of Test Fixture

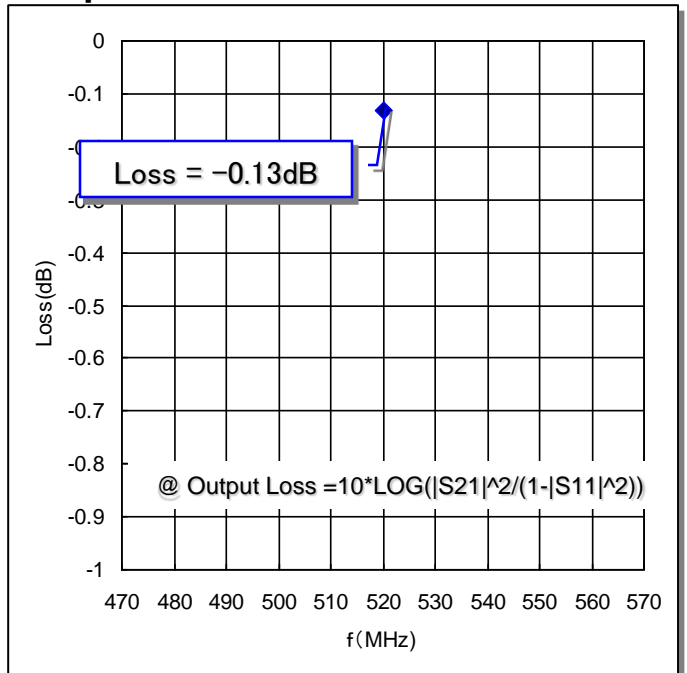


Load Impedance & Output Loss

Smith Chart



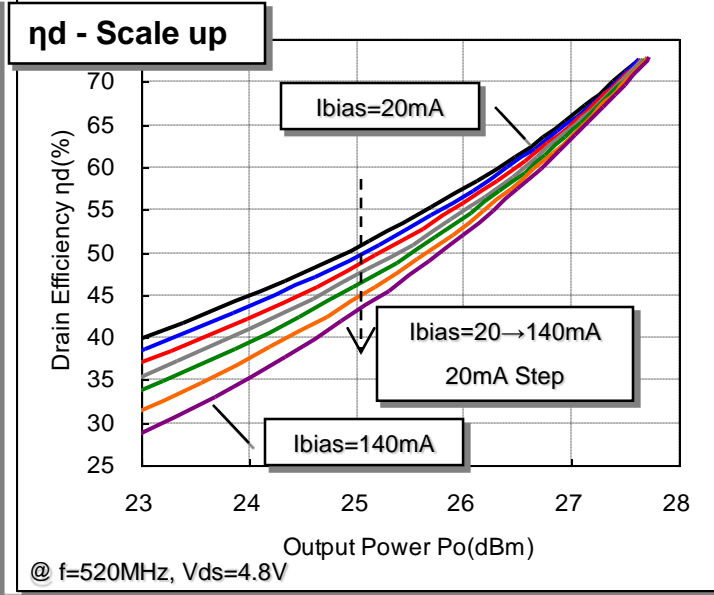
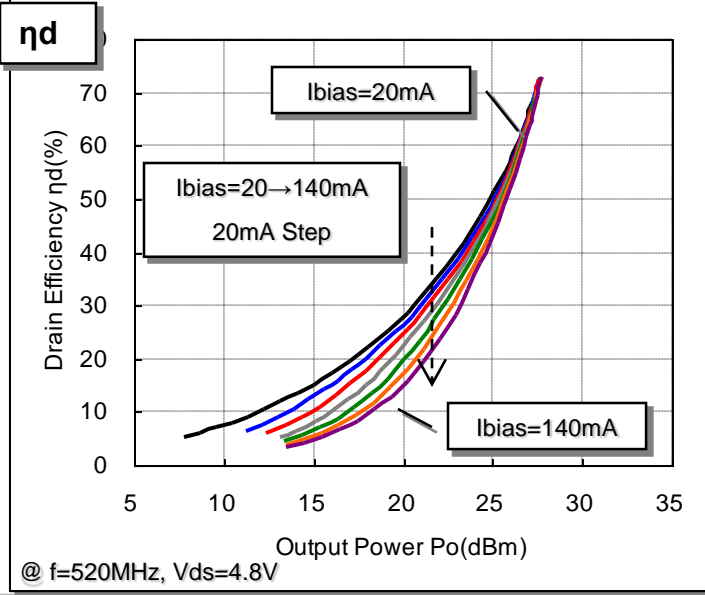
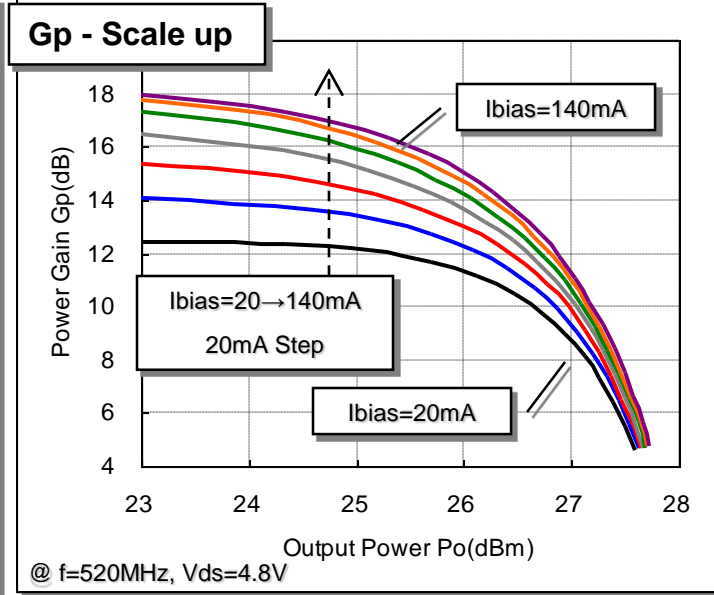
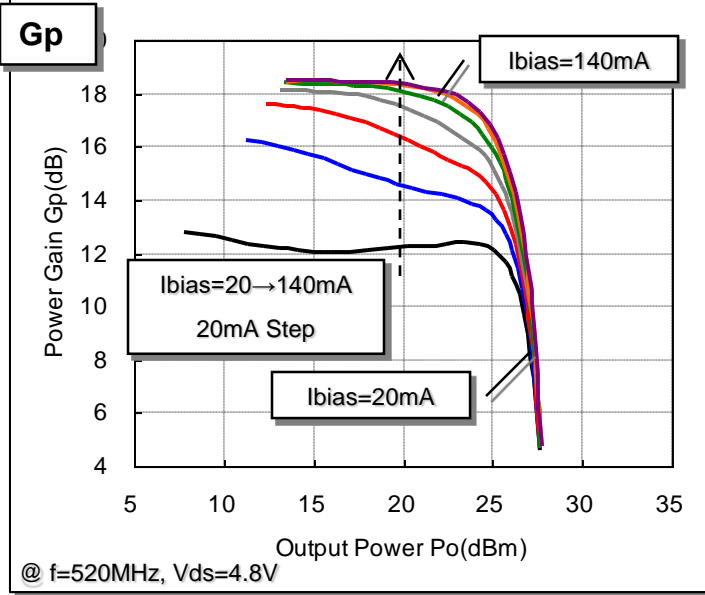
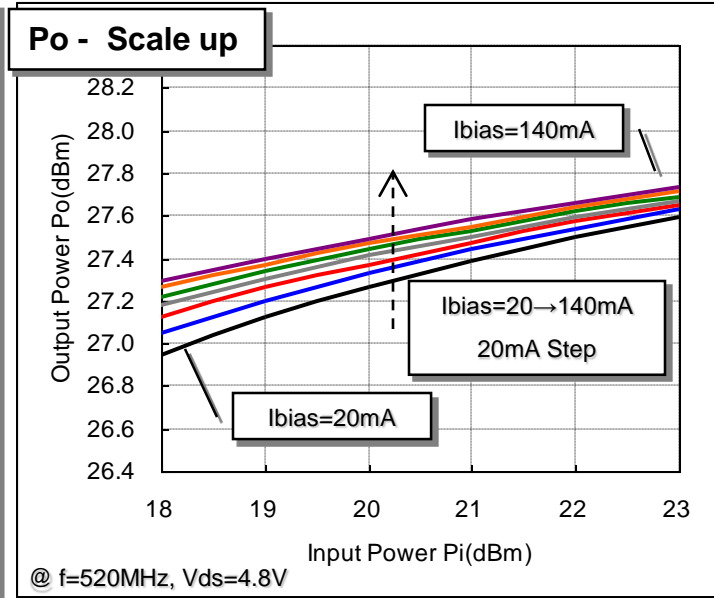
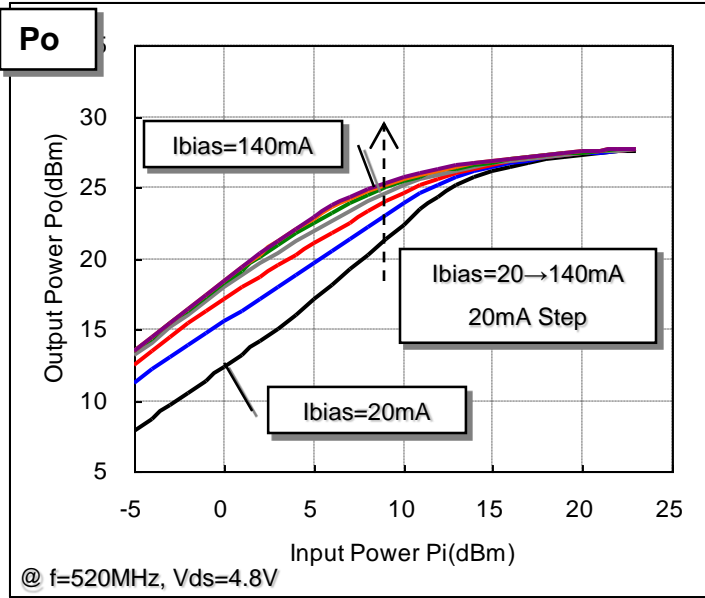
Output Loss



$Z_L = 7.73 + j 10.17 \Omega$, Output Circuit Loss = -0.13dB (@ $f=520\text{MHz}$)

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

Input - Output Characteristics $V_{ds}=4.8V$ - Condition 1

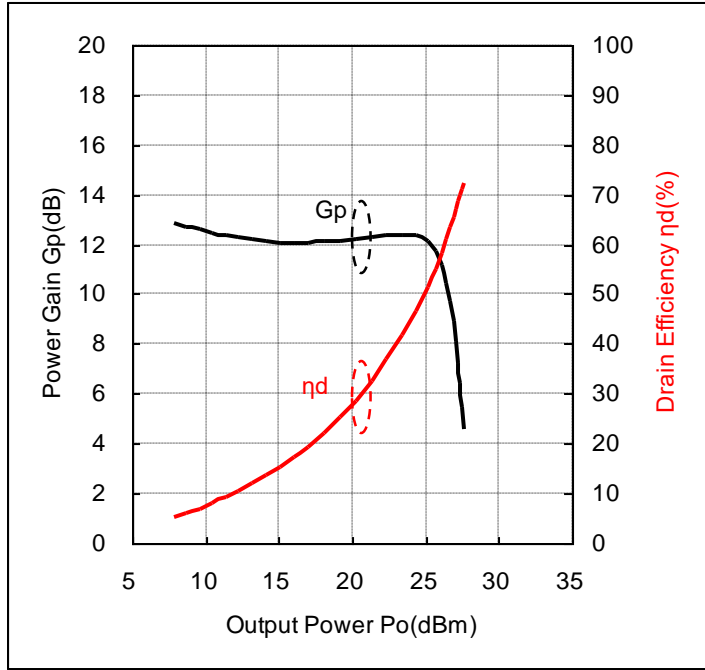
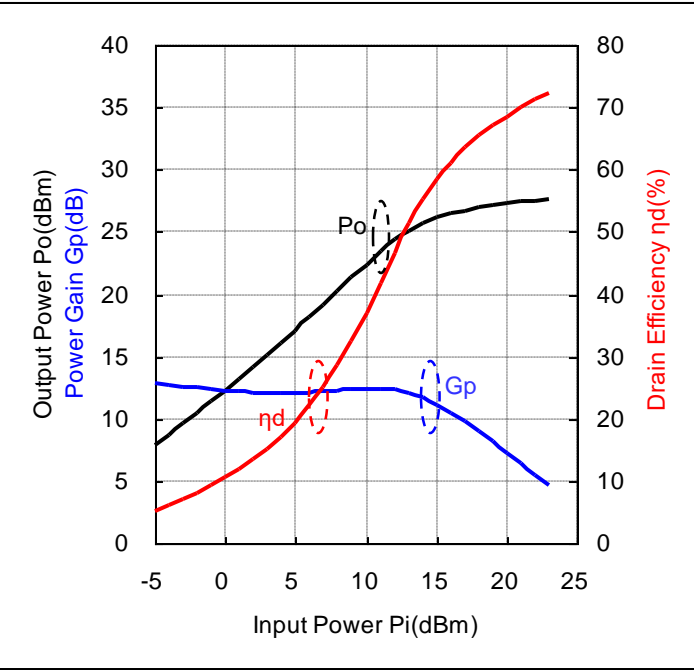


Input-Output Characteristics $V_{ds}=4.8V, I_{bias}=20mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=4.8V, I_{bias}=20.0mA$

@ $f=520MHz, V_{ds}=4.8V, I_{bias}=20.0mA$

Data

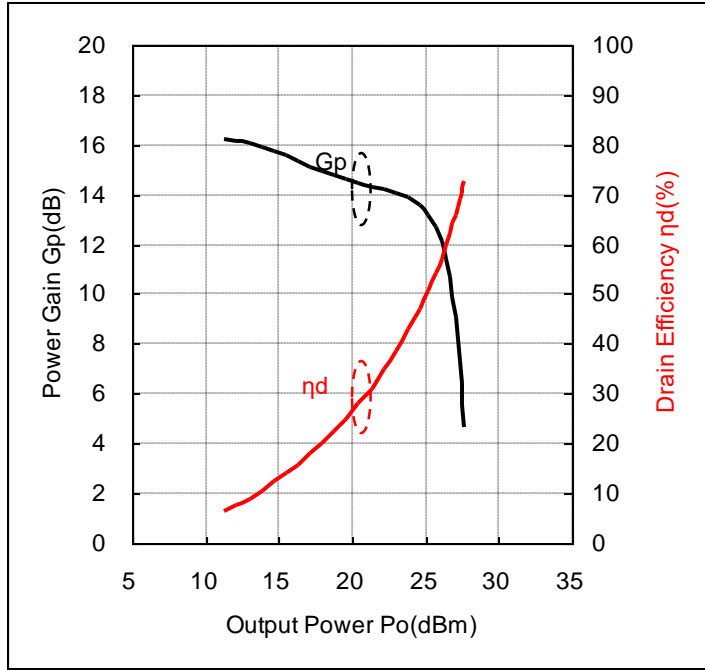
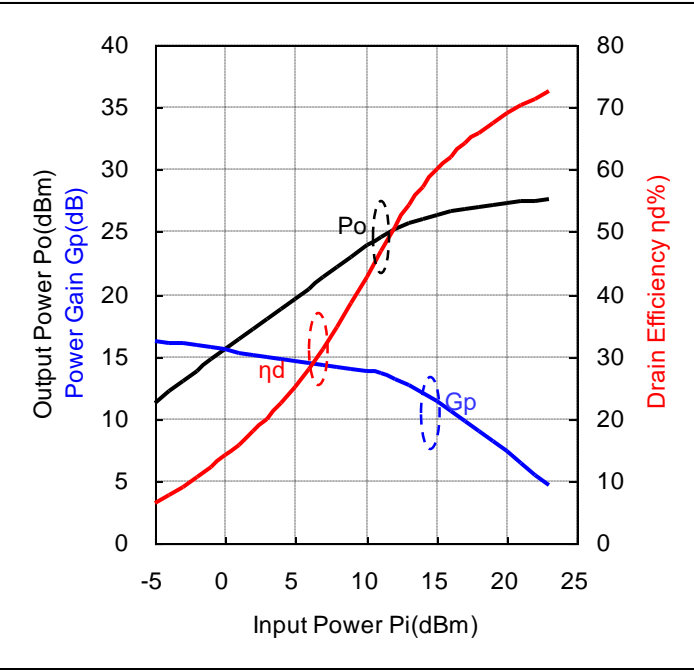
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.57	4.8	20.0	520	-5.0	0.3	7.8	0.006	12.8	25	5.1
1.57	4.8	20.0	520	-4.0	0.4	8.7	0.007	12.7	26	6.0
1.57	4.8	20.0	520	-3.0	0.5	9.6	0.009	12.6	27	7.0
1.57	4.8	20.0	520	-2.0	0.6	10.5	0.011	12.5	29	8.0
1.57	4.8	20.0	520	-1.0	0.8	11.4	0.014	12.4	31	9.2
1.57	4.8	20.0	520	0.0	1.0	12.3	0.017	12.3	34	10.5
1.57	4.8	20.0	520	1.0	1.3	13.2	0.021	12.2	36	11.9
1.57	4.8	20.0	520	2.0	1.6	14.1	0.026	12.1	40	13.5
1.57	4.8	20.0	520	3.0	2.0	15.1	0.032	12.1	44	15.2
1.57	4.8	20.0	520	4.0	2.5	16.0	0.040	12.0	49	17.2
1.57	4.8	20.0	520	5.0	3.2	17.0	0.051	12.0	54	19.4
1.57	4.8	20.0	520	6.0	4.0	18.1	0.064	12.1	61	22.2
1.57	4.8	20.0	520	7.0	5.0	19.2	0.082	12.2	68	25.2
1.57	4.8	20.0	520	8.0	6.3	20.2	0.105	12.2	77	28.6
1.57	4.8	20.0	520	9.0	7.9	21.3	0.135	12.3	87	32.5
1.57	4.8	20.0	520	10.0	10.0	22.4	0.173	12.4	97	37.0
1.57	4.8	20.0	520	11.0	12.6	23.4	0.218	12.4	109	41.6
1.57	4.8	20.0	520	12.0	15.8	24.3	0.272	12.3	121	46.6
1.57	4.8	20.0	520	13.0	20.0	25.1	0.325	12.1	132	51.4
1.57	4.8	20.0	520	14.0	25.1	25.7	0.371	11.7	140	55.2
1.57	4.8	20.0	520	15.0	31.6	26.1	0.410	11.1	146	58.4
1.57	4.8	20.0	520	16.0	39.8	26.5	0.444	10.5	151	61.2
1.57	4.8	20.0	520	17.0	50.1	26.7	0.471	9.7	155	63.5
1.57	4.8	20.0	520	18.0	63.1	26.9	0.494	8.9	158	65.4
1.57	4.8	20.0	520	19.0	79.4	27.1	0.515	8.1	160	67.2
1.57	4.8	20.0	520	20.0	100.0	27.3	0.532	7.3	162	68.5
1.57	4.8	20.0	520	21.0	125.9	27.4	0.548	6.4	163	70.0
1.57	4.8	20.0	520	22.0	158.5	27.5	0.562	5.5	165	71.2
1.57	4.8	20.0	520	23.0	199.5	27.6	0.574	4.6	166	72.2

Input-Output Characteristics $V_{ds}=4.8V, I_{bias}=40mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=4.8V, I_{bias}=40.1mA$

@ $f=520MHz, V_{ds}=4.8V, I_{bias}=40.1mA$

Data

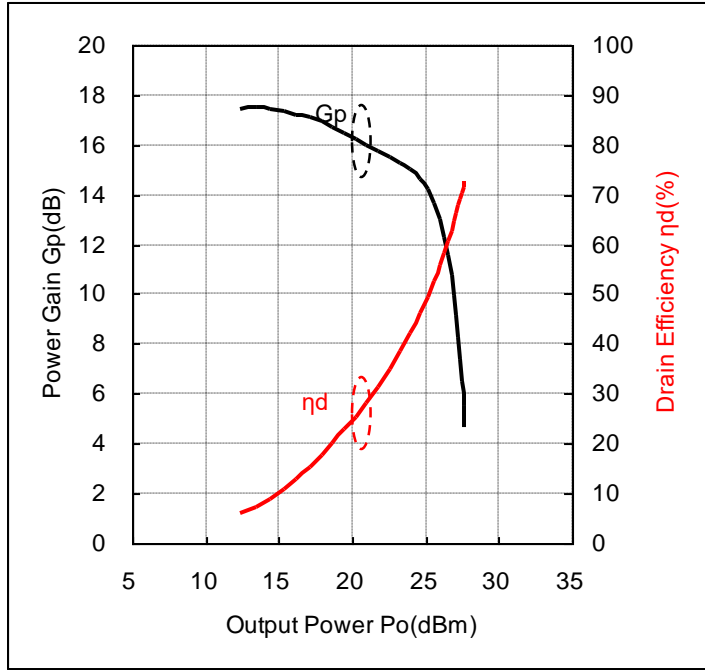
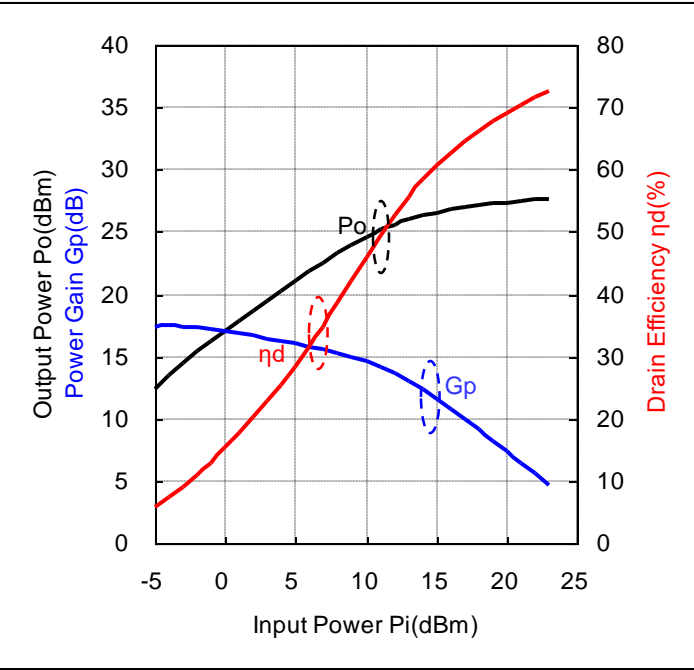
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.70	4.8	40.1	520	-5.0	0.3	11.2	0.013	16.2	44	6.3
1.70	4.8	40.1	520	-4.0	0.4	12.1	0.016	16.1	45	7.6
1.70	4.8	40.1	520	-3.0	0.5	13.0	0.020	16.0	46	9.0
1.70	4.8	40.1	520	-2.0	0.6	13.9	0.024	15.9	48	10.5
1.70	4.8	40.1	520	-1.0	0.8	14.7	0.030	15.7	50	12.3
1.70	4.8	40.1	520	0.0	1.0	15.6	0.036	15.6	53	14.1
1.70	4.8	40.1	520	1.0	1.3	16.3	0.043	15.3	56	15.8
1.70	4.8	40.1	520	2.0	1.6	17.1	0.052	15.1	60	17.9
1.70	4.8	40.1	520	3.0	2.0	17.9	0.062	14.9	65	20.0
1.70	4.8	40.1	520	4.0	2.5	18.8	0.075	14.8	70	22.4
1.70	4.8	40.1	520	5.0	3.2	19.6	0.091	14.6	76	25.0
1.70	4.8	40.1	520	6.0	4.0	20.5	0.111	14.5	83	28.0
1.70	4.8	40.1	520	7.0	5.0	21.3	0.135	14.3	90	31.1
1.70	4.8	40.1	520	8.0	6.3	22.2	0.165	14.2	99	34.8
1.70	4.8	40.1	520	9.0	7.9	23.0	0.201	14.0	109	38.6
1.70	4.8	40.1	520	10.0	10.0	23.9	0.243	13.9	118	42.8
1.70	4.8	40.1	520	11.0	12.6	24.6	0.289	13.6	128	47.0
1.70	4.8	40.1	520	12.0	15.8	25.2	0.332	13.2	136	50.7
1.70	4.8	40.1	520	13.0	20.0	25.7	0.372	12.7	143	54.2
1.70	4.8	40.1	520	14.0	25.1	26.1	0.406	12.1	148	57.2
1.70	4.8	40.1	520	15.0	31.6	26.4	0.438	11.4	152	59.9
1.70	4.8	40.1	520	16.0	39.8	26.7	0.463	10.7	155	62.1
1.70	4.8	40.1	520	17.0	50.1	26.9	0.486	9.9	158	64.2
1.70	4.8	40.1	520	18.0	63.1	27.0	0.507	9.0	160	66.0
1.70	4.8	40.1	520	19.0	79.4	27.2	0.525	8.2	162	67.5
1.70	4.8	40.1	520	20.0	100.0	27.3	0.541	7.3	163	69.0
1.70	4.8	40.1	520	21.0	125.9	27.4	0.555	6.4	165	70.2
1.70	4.8	40.1	520	22.0	158.5	27.5	0.568	5.5	166	71.4
1.70	4.8	40.1	520	23.0	199.5	27.6	0.579	4.6	166	72.5

Input-Output Characteristics $V_{ds}=4.8V, I_{bias}=60mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=4.8V, I_{bias}=59.2mA$

@ $f=520MHz, V_{ds}=4.8V, I_{bias}=59.2mA$

Data

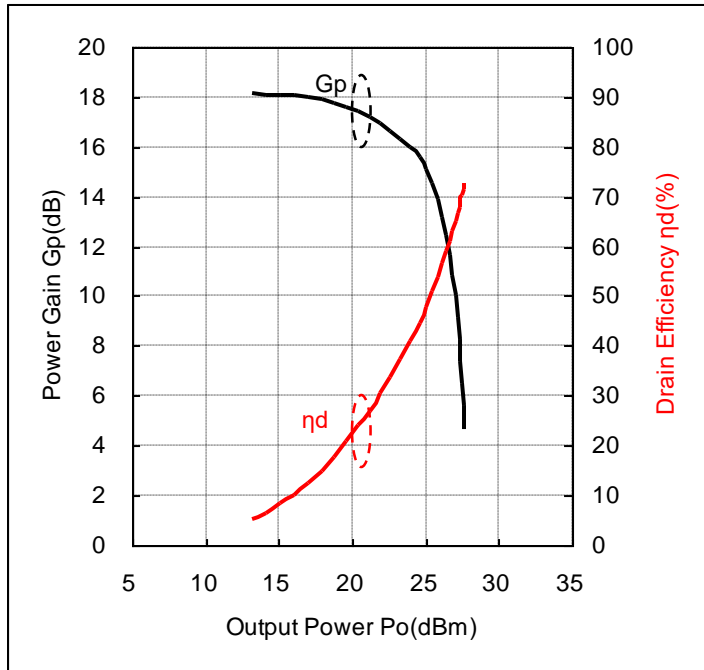
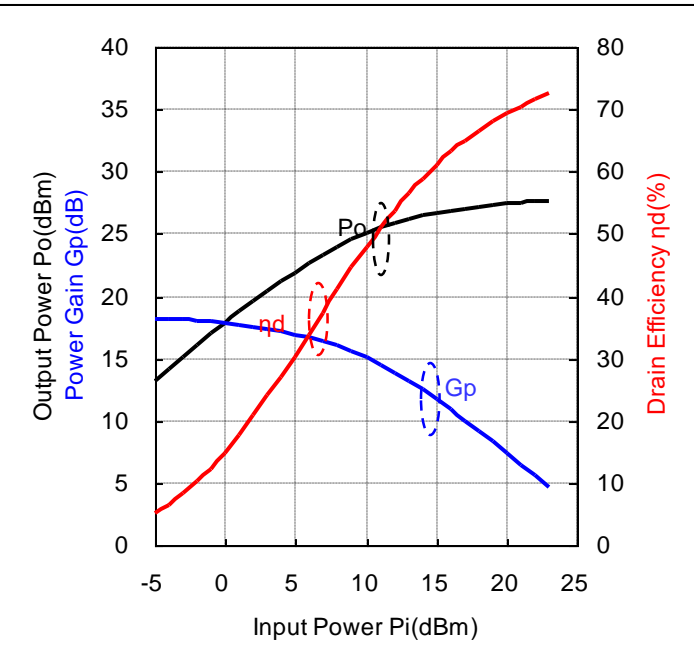
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.80	4.8	59.2	520	-5.0	0.3	12.4	0.017	17.4	62	5.8
1.80	4.8	59.2	520	-4.0	0.4	13.5	0.022	17.5	63	7.4
1.80	4.8	59.2	520	-3.0	0.5	14.4	0.028	17.4	64	9.0
1.80	4.8	59.2	520	-2.0	0.6	15.4	0.034	17.4	65	11.0
1.80	4.8	59.2	520	-1.0	0.8	16.2	0.042	17.2	67	13.0
1.80	4.8	59.2	520	0.0	1.0	17.1	0.051	17.1	70	15.3
1.80	4.8	59.2	520	1.0	1.3	17.9	0.062	16.9	73	17.7
1.80	4.8	59.2	520	2.0	1.6	18.7	0.074	16.7	76	20.3
1.80	4.8	59.2	520	3.0	2.0	19.5	0.088	16.5	81	22.8
1.80	4.8	59.2	520	4.0	2.5	20.2	0.106	16.2	86	25.5
1.80	4.8	59.2	520	5.0	3.2	21.0	0.126	16.0	93	28.3
1.80	4.8	59.2	520	6.0	4.0	21.8	0.150	15.8	99	31.5
1.80	4.8	59.2	520	7.0	5.0	22.5	0.179	15.5	107	34.8
1.80	4.8	59.2	520	8.0	6.3	23.3	0.213	15.3	115	38.4
1.80	4.8	59.2	520	9.0	7.9	24.0	0.251	15.0	124	42.2
1.80	4.8	59.2	520	10.0	10.0	24.6	0.291	14.6	132	46.0
1.80	4.8	59.2	520	11.0	12.6	25.2	0.330	14.2	139	49.6
1.80	4.8	59.2	520	12.0	15.8	25.6	0.365	13.6	144	52.6
1.80	4.8	59.2	520	13.0	20.0	26.0	0.398	13.0	149	55.7
1.80	4.8	59.2	520	14.0	25.1	26.3	0.428	12.3	153	58.3
1.80	4.8	59.2	520	15.0	31.6	26.6	0.454	11.6	156	60.7
1.80	4.8	59.2	520	16.0	39.8	26.8	0.476	10.8	158	62.8
1.80	4.8	59.2	520	17.0	50.1	27.0	0.498	10.0	160	64.7
1.80	4.8	59.2	520	18.0	63.1	27.1	0.515	9.1	162	66.3
1.80	4.8	59.2	520	19.0	79.4	27.3	0.532	8.3	163	67.9
1.80	4.8	59.2	520	20.0	100.0	27.4	0.546	7.4	164	69.1
1.80	4.8	59.2	520	21.0	125.9	27.5	0.558	6.5	165	70.3
1.80	4.8	59.2	520	22.0	158.5	27.6	0.571	5.6	166	71.6
1.80	4.8	59.2	520	23.0	199.5	27.6	0.582	4.6	167	72.6

Input-Output Characteristics $V_{ds}=4.8V, I_{bias}=80mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=4.8V, I_{bias}=78.5mA$

@ $f=520MHz, V_{ds}=4.8V, I_{bias}=78.5mA$

Data

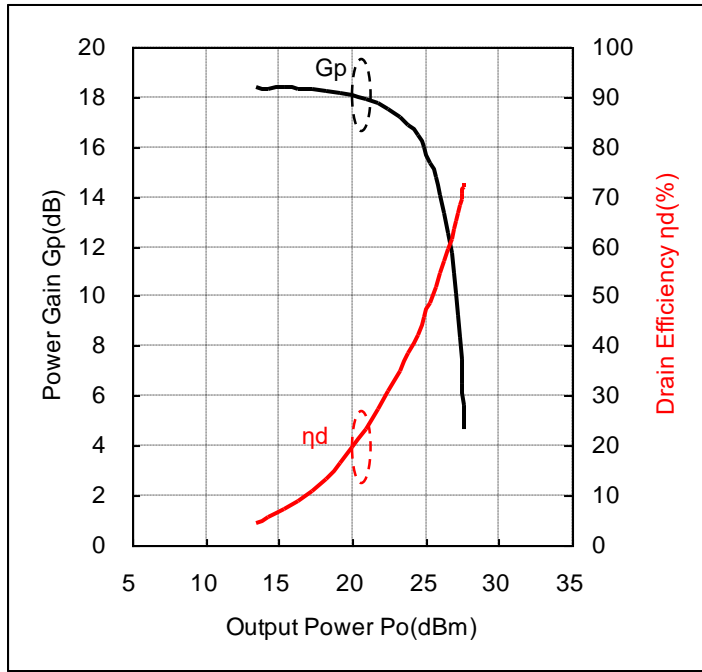
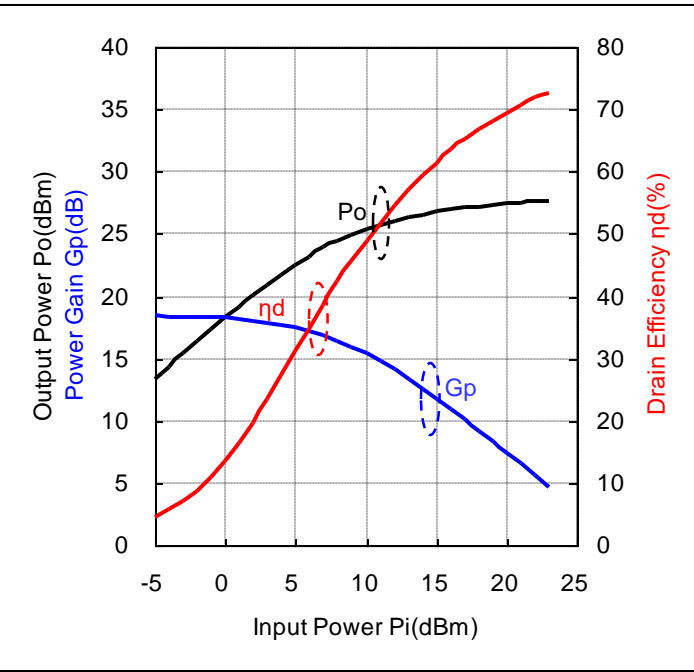
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.90	4.8	78.5	520	-5.0	0.3	13.1	0.021	18.1	81	5.3
1.90	4.8	78.5	520	-4.0	0.4	14.1	0.026	18.1	81	6.6
1.90	4.8	78.5	520	-3.0	0.5	15.1	0.032	18.1	82	8.2
1.90	4.8	78.5	520	-2.0	0.6	16.0	0.040	18.0	83	10.1
1.90	4.8	78.5	520	-1.0	0.8	17.0	0.050	18.0	84	12.3
1.90	4.8	78.5	520	0.0	1.0	17.9	0.062	17.9	86	14.9
1.90	4.8	78.5	520	1.0	1.3	18.8	0.075	17.8	88	17.7
1.90	4.8	78.5	520	2.0	1.6	19.6	0.091	17.6	91	20.8
1.90	4.8	78.5	520	3.0	2.0	20.4	0.110	17.4	95	24.0
1.90	4.8	78.5	520	4.0	2.5	21.2	0.131	17.2	100	27.1
1.90	4.8	78.5	520	5.0	3.2	21.9	0.155	16.9	107	30.3
1.90	4.8	78.5	520	6.0	4.0	22.6	0.184	16.6	113	33.8
1.90	4.8	78.5	520	7.0	5.0	23.3	0.216	16.3	121	37.3
1.90	4.8	78.5	520	8.0	6.3	24.0	0.252	16.0	128	41.0
1.90	4.8	78.5	520	9.0	7.9	24.6	0.288	15.6	135	44.6
1.90	4.8	78.5	520	10.0	10.0	25.1	0.324	15.1	141	47.9
1.90	4.8	78.5	520	11.0	12.6	25.5	0.356	14.5	146	50.9
1.90	4.8	78.5	520	12.0	15.8	25.9	0.387	13.9	150	53.8
1.90	4.8	78.5	520	13.0	20.0	26.2	0.416	13.2	153	56.5
1.90	4.8	78.5	520	14.0	25.1	26.5	0.442	12.5	156	58.9
1.90	4.8	78.5	520	15.0	31.6	26.7	0.466	11.7	158	61.2
1.90	4.8	78.5	520	16.0	39.8	26.9	0.486	10.9	160	63.2
1.90	4.8	78.5	520	17.0	50.1	27.0	0.505	10.0	162	64.9
1.90	4.8	78.5	520	18.0	63.1	27.2	0.522	9.2	163	66.7
1.90	4.8	78.5	520	19.0	79.4	27.3	0.537	8.3	164	68.0
1.90	4.8	78.5	520	20.0	100.0	27.4	0.551	7.4	165	69.4
1.90	4.8	78.5	520	21.0	125.9	27.5	0.562	6.5	166	70.5
1.90	4.8	78.5	520	22.0	158.5	27.6	0.574	5.6	167	71.6
1.90	4.8	78.5	520	23.0	199.5	27.7	0.585	4.7	168	72.7

Input-Output Characteristics $V_{ds}=4.8V$, $I_{bias}=100mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=4.8V$, $I_{bias}=98.7mA$

@ $f=520MHz$, $V_{ds}=4.8V$, $I_{bias}=98.7mA$

Data

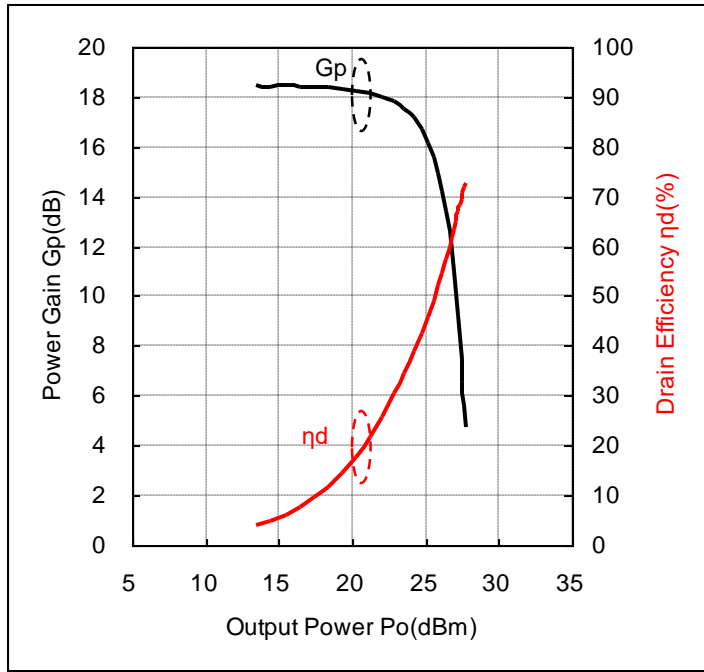
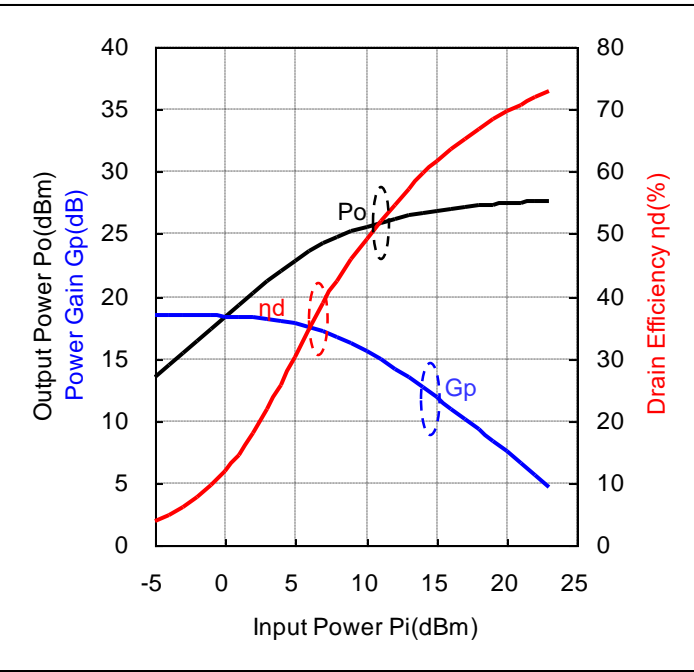
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.99	4.8	98.7	520	-5.0	0.3	13.4	0.022	18.4	100	4.6
1.99	4.8	98.7	520	-4.0	0.4	14.3	0.027	18.3	100	5.6
1.99	4.8	98.7	520	-3.0	0.5	15.4	0.034	18.4	101	7.1
1.99	4.8	98.7	520	-2.0	0.6	16.3	0.043	18.3	101	8.8
1.99	4.8	98.7	520	-1.0	0.8	17.3	0.053	18.3	102	10.9
1.99	4.8	98.7	520	0.0	1.0	18.2	0.067	18.2	103	13.4
1.99	4.8	98.7	520	1.0	1.3	19.1	0.082	18.1	105	16.3
1.99	4.8	98.7	520	2.0	1.6	20.1	0.101	18.1	107	19.7
1.99	4.8	98.7	520	3.0	2.0	20.9	0.123	17.9	110	23.4
1.99	4.8	98.7	520	4.0	2.5	21.7	0.149	17.7	114	27.3
1.99	4.8	98.7	520	5.0	3.2	22.5	0.177	17.5	119	31.1
1.99	4.8	98.7	520	6.0	4.0	23.2	0.209	17.2	125	34.9
1.99	4.8	98.7	520	7.0	5.0	23.9	0.244	16.9	132	38.7
1.99	4.8	98.7	520	8.0	6.3	24.5	0.279	16.5	138	42.3
1.99	4.8	98.7	520	9.0	7.9	25.0	0.314	16.0	143	45.8
1.99	4.8	98.7	520	10.0	10.0	25.4	0.345	15.4	148	48.7
1.99	4.8	98.7	520	11.0	12.6	25.7	0.375	14.7	151	51.7
1.99	4.8	98.7	520	12.0	15.8	26.1	0.404	14.1	154	54.5
1.99	4.8	98.7	520	13.0	20.0	26.3	0.430	13.3	157	57.0
1.99	4.8	98.7	520	14.0	25.1	26.6	0.453	12.6	159	59.4
1.99	4.8	98.7	520	15.0	31.6	26.8	0.474	11.8	161	61.5
1.99	4.8	98.7	520	16.0	39.8	26.9	0.494	10.9	162	63.5
1.99	4.8	98.7	520	17.0	50.1	27.1	0.512	10.1	163	65.2
1.99	4.8	98.7	520	18.0	63.1	27.2	0.527	9.2	165	66.7
1.99	4.8	98.7	520	19.0	79.4	27.3	0.542	8.3	165	68.2
1.99	4.8	98.7	520	20.0	100.0	27.4	0.555	7.4	166	69.5
1.99	4.8	98.7	520	21.0	125.9	27.5	0.566	6.5	167	70.6
1.99	4.8	98.7	520	22.0	158.5	27.6	0.578	5.6	168	71.8
1.99	4.8	98.7	520	23.0	199.5	27.7	0.587	4.7	168	72.8

Input-Output Characteristics $V_{ds}=4.8V$, $I_{bias}=120mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=4.8V$, $I_{bias}=118.7mA$

@ $f=520MHz$, $V_{ds}=4.8V$, $I_{bias}=118.7mA$

Data

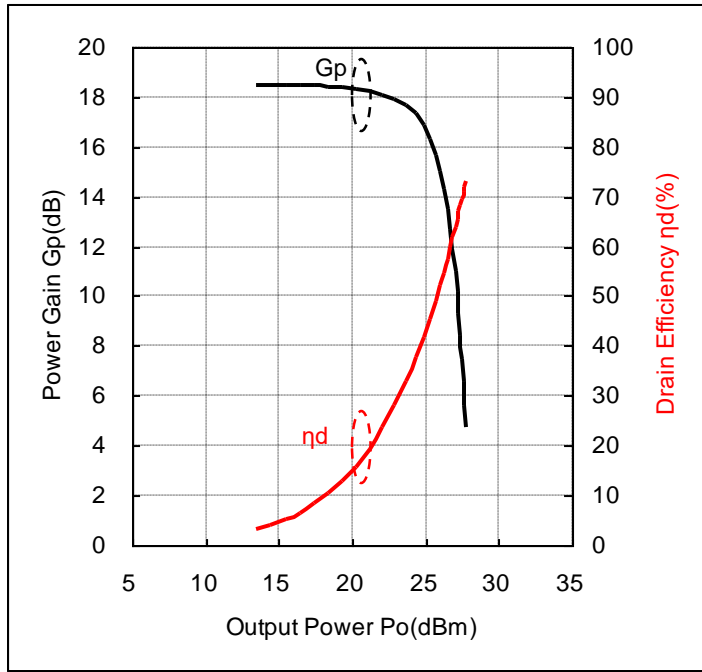
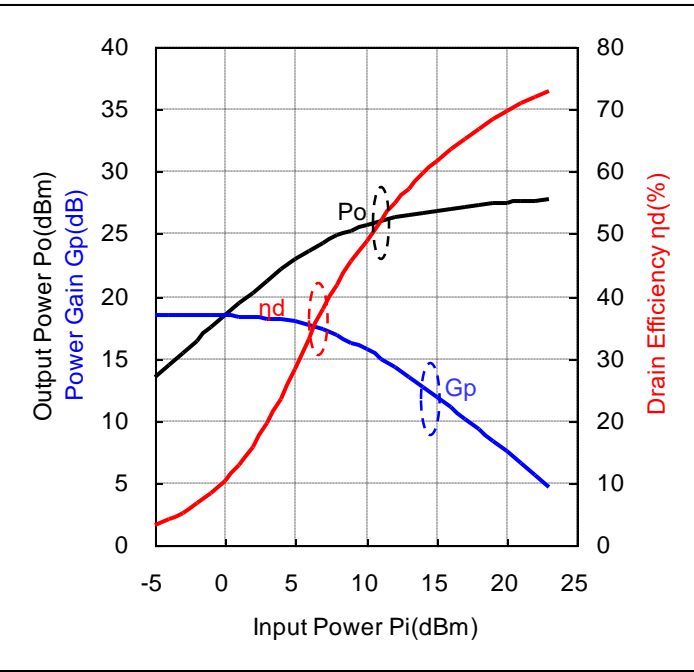
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.07	4.8	118.7	520	-5.0	0.3	13.4	0.022	18.4	119	3.9
2.07	4.8	118.7	520	-4.0	0.4	14.4	0.028	18.4	120	4.8
2.07	4.8	118.7	520	-3.0	0.5	15.5	0.035	18.5	120	6.1
2.07	4.8	118.7	520	-2.0	0.6	16.4	0.044	18.4	120	7.6
2.07	4.8	118.7	520	-1.0	0.8	17.4	0.055	18.4	121	9.5
2.07	4.8	118.7	520	0.0	1.0	18.4	0.069	18.4	122	11.8
2.07	4.8	118.7	520	1.0	1.3	19.3	0.086	18.3	122	14.6
2.07	4.8	118.7	520	2.0	1.6	20.3	0.106	18.3	124	17.8
2.07	4.8	118.7	520	3.0	2.0	21.2	0.131	18.2	125	21.8
2.07	4.8	118.7	520	4.0	2.5	22.0	0.158	18.0	128	25.8
2.07	4.8	118.7	520	5.0	3.2	22.8	0.191	17.8	131	30.3
2.07	4.8	118.7	520	6.0	4.0	23.5	0.226	17.5	136	34.7
2.07	4.8	118.7	520	7.0	5.0	24.2	0.262	17.2	141	38.9
2.07	4.8	118.7	520	8.0	6.3	24.7	0.296	16.7	145	42.5
2.07	4.8	118.7	520	9.0	7.9	25.2	0.330	16.2	149	46.0
2.07	4.8	118.7	520	10.0	10.0	25.6	0.361	15.6	153	49.2
2.07	4.8	118.7	520	11.0	12.6	25.9	0.389	14.9	156	52.1
2.07	4.8	118.7	520	12.0	15.8	26.2	0.415	14.2	158	54.7
2.07	4.8	118.7	520	13.0	20.0	26.4	0.440	13.4	160	57.3
2.07	4.8	118.7	520	14.0	25.1	26.6	0.462	12.6	161	59.7
2.07	4.8	118.7	520	15.0	31.6	26.8	0.482	11.8	163	61.7
2.07	4.8	118.7	520	16.0	39.8	27.0	0.500	11.0	164	63.6
2.07	4.8	118.7	520	17.0	50.1	27.1	0.516	10.1	165	65.2
2.07	4.8	118.7	520	18.0	63.1	27.3	0.532	9.3	166	66.9
2.07	4.8	118.7	520	19.0	79.4	27.4	0.546	8.4	167	68.3
2.07	4.8	118.7	520	20.0	100.0	27.5	0.558	7.5	167	69.6
2.07	4.8	118.7	520	21.0	125.9	27.5	0.569	6.5	168	70.7
2.07	4.8	118.7	520	22.0	158.5	27.6	0.581	5.6	168	71.9
2.07	4.8	118.7	520	23.0	199.5	27.7	0.590	4.7	169	72.9

Input-Output Characteristics $V_{ds}=4.8V$, $I_{bias}=140mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



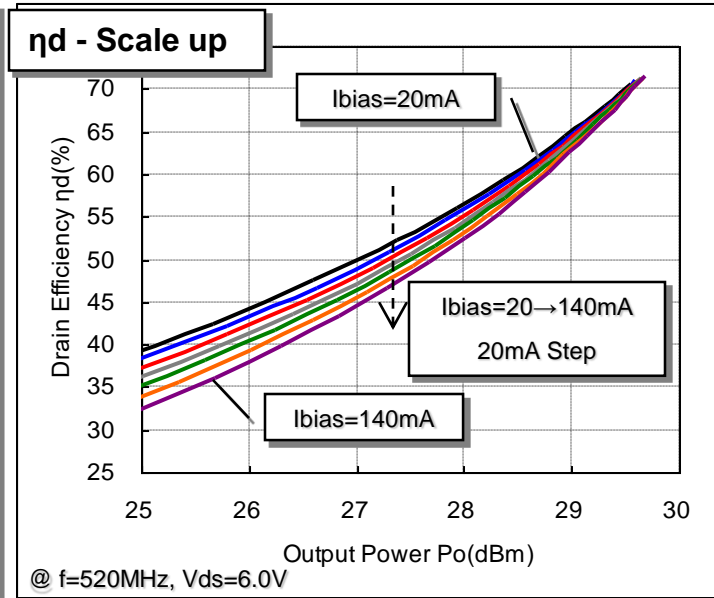
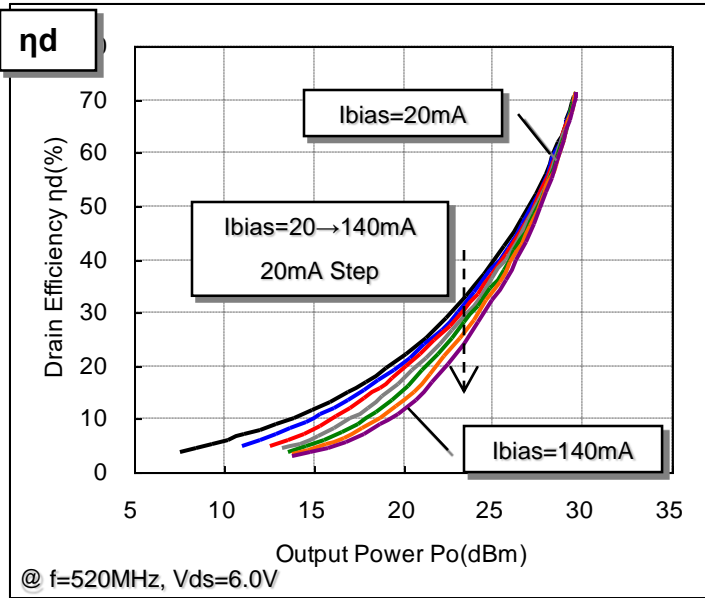
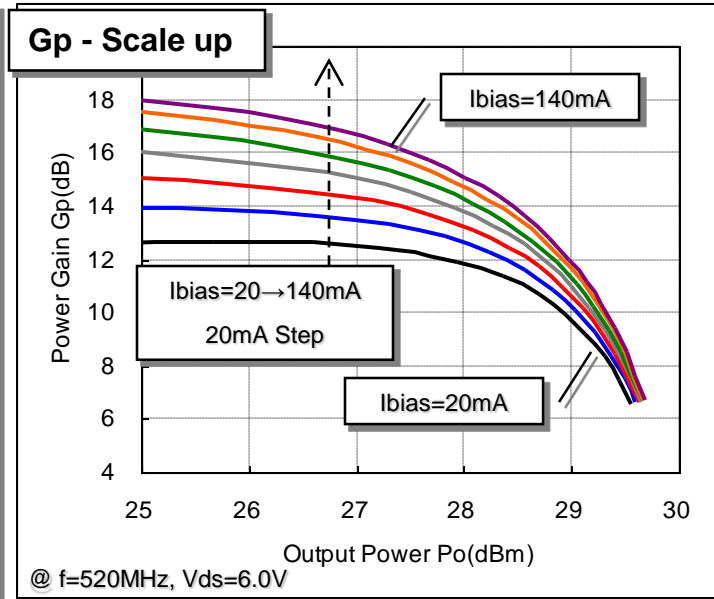
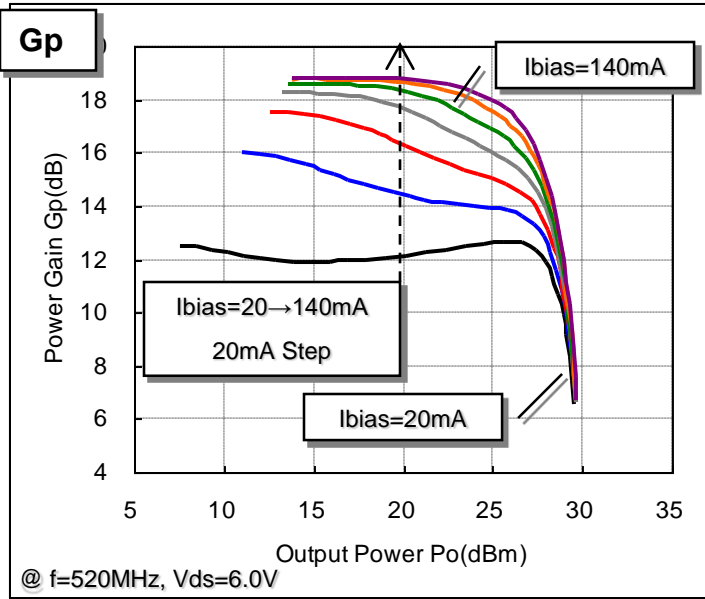
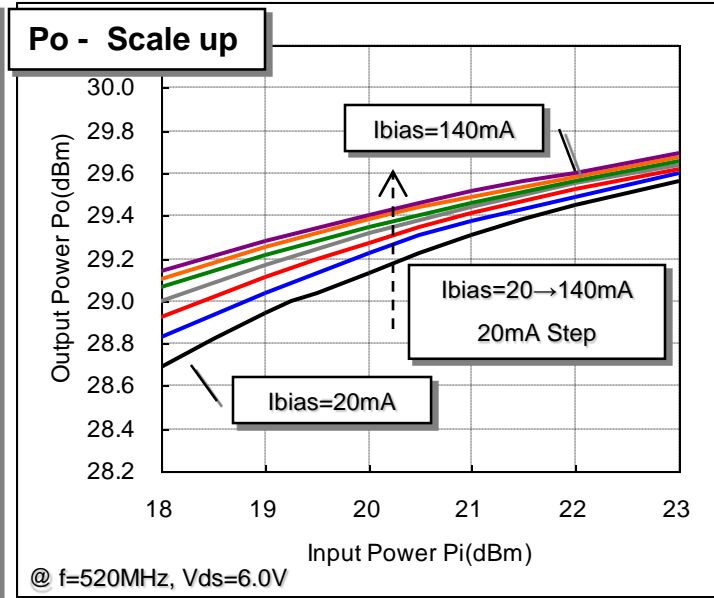
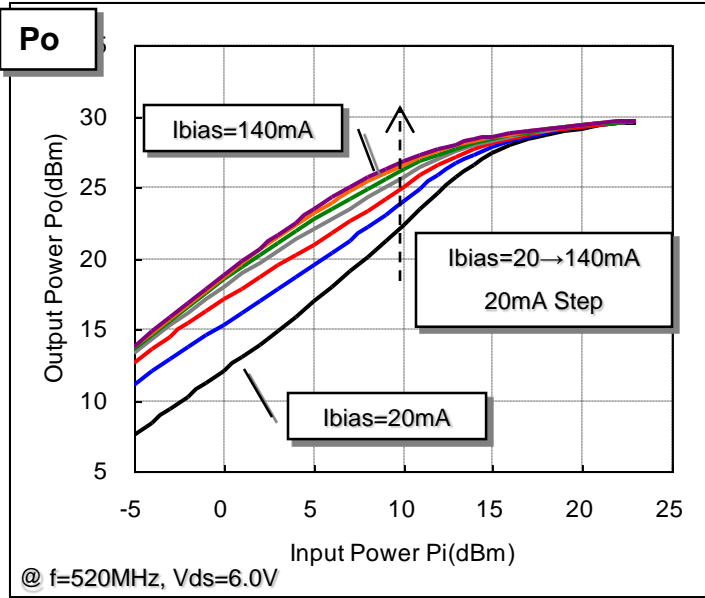
@ $f=520MHz$, $V_{ds}=4.8V$, $I_{bias}=138.4mA$

@ $f=520MHz$, $V_{ds}=4.8V$, $I_{bias}=138.4mA$

Data

V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.15	4.8	138.4	520	-5.0	0.3	13.5	0.022	18.5	139	3.3
2.15	4.8	138.4	520	-4.0	0.4	14.5	0.028	18.5	139	4.2
2.15	4.8	138.4	520	-3.0	0.5	15.5	0.035	18.5	139	5.3
2.15	4.8	138.4	520	-2.0	0.6	16.4	0.044	18.4	139	6.6
2.15	4.8	138.4	520	-1.0	0.8	17.5	0.056	18.5	140	8.3
2.15	4.8	138.4	520	0.0	1.0	18.4	0.069	18.4	140	10.3
2.15	4.8	138.4	520	1.0	1.3	19.4	0.086	18.4	140	12.9
2.15	4.8	138.4	520	2.0	1.6	20.3	0.107	18.3	141	15.8
2.15	4.8	138.4	520	3.0	2.0	21.2	0.132	18.2	142	19.5
2.15	4.8	138.4	520	4.0	2.5	22.1	0.162	18.1	143	23.6
2.15	4.8	138.4	520	5.0	3.2	22.9	0.196	17.9	144	28.3
2.15	4.8	138.4	520	6.0	4.0	23.7	0.233	17.7	147	33.1
2.15	4.8	138.4	520	7.0	5.0	24.3	0.271	17.3	149	37.8
2.15	4.8	138.4	520	8.0	6.3	24.9	0.306	16.9	152	41.8
2.15	4.8	138.4	520	9.0	7.9	25.3	0.339	16.3	155	45.5
2.15	4.8	138.4	520	10.0	10.0	25.7	0.370	15.7	157	48.9
2.15	4.8	138.4	520	11.0	12.6	26.0	0.398	15.0	159	52.0
2.15	4.8	138.4	520	12.0	15.8	26.3	0.424	14.3	161	54.8
2.15	4.8	138.4	520	13.0	20.0	26.5	0.447	13.5	162	57.3
2.15	4.8	138.4	520	14.0	25.1	26.7	0.469	12.7	164	59.7
2.15	4.8	138.4	520	15.0	31.6	26.9	0.488	11.9	164	61.7
2.15	4.8	138.4	520	16.0	39.8	27.0	0.506	11.0	165	63.7
2.15	4.8	138.4	520	17.0	50.1	27.2	0.521	10.2	166	65.3
2.15	4.8	138.4	520	18.0	63.1	27.3	0.536	9.3	167	66.9
2.15	4.8	138.4	520	19.0	79.4	27.4	0.550	8.4	167	68.4
2.15	4.8	138.4	520	20.0	100.0	27.5	0.561	7.5	168	69.6
2.15	4.8	138.4	520	21.0	125.9	27.6	0.573	6.6	168	70.9
2.15	4.8	138.4	520	22.0	158.5	27.7	0.583	5.7	169	72.0
2.15	4.8	138.4	520	23.0	199.5	27.7	0.593	4.7	169	73.0

Input - Output Characteristics $V_{ds}=6.0V$ - Condition 1

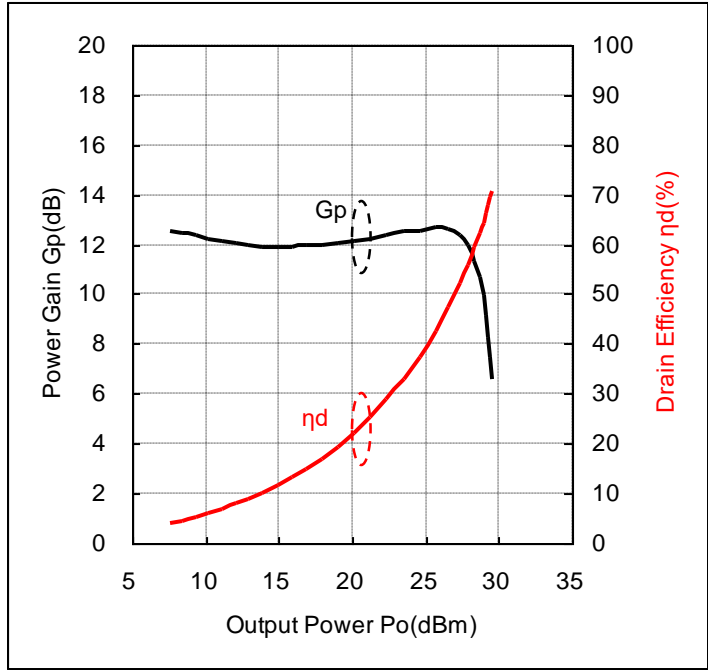
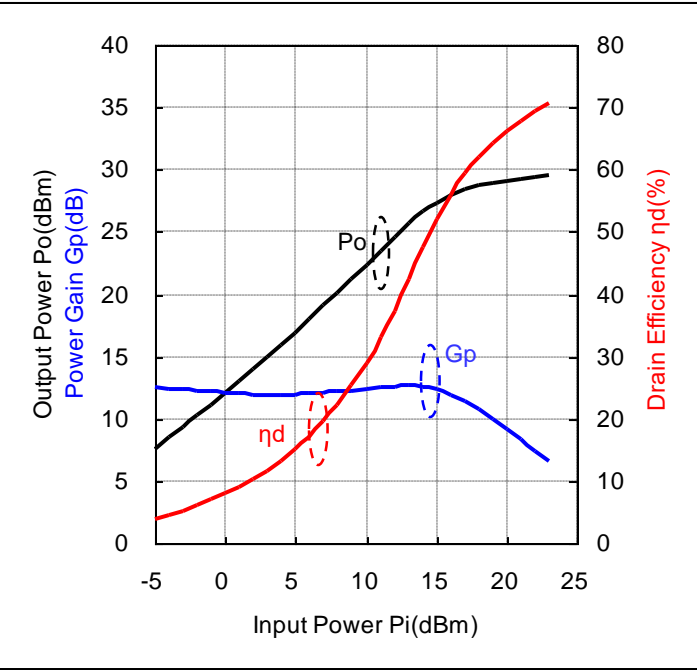


Input-Output Characteristics $V_{ds}=6.0V, I_{bias}=20mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=6.0V, I_{bias}=19.9mA$

@ $f=520MHz, V_{ds}=6.0V, I_{bias}=19.9mA$

Data

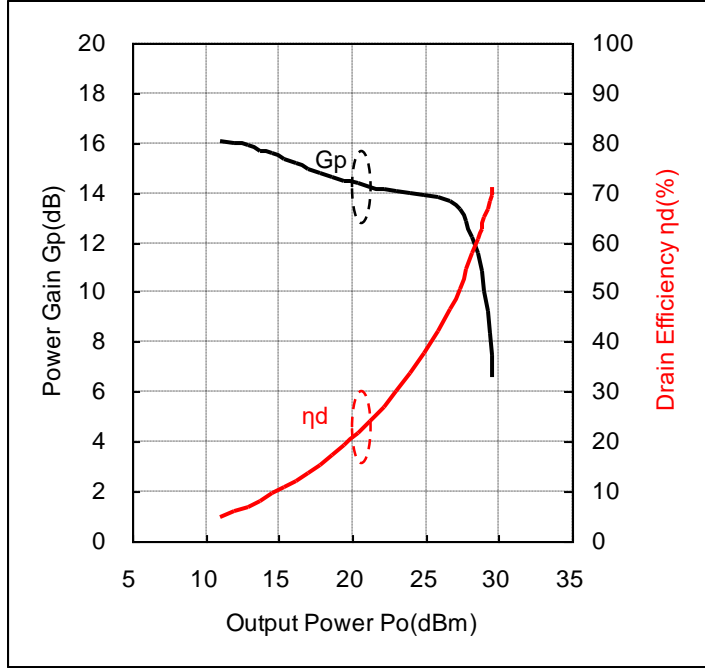
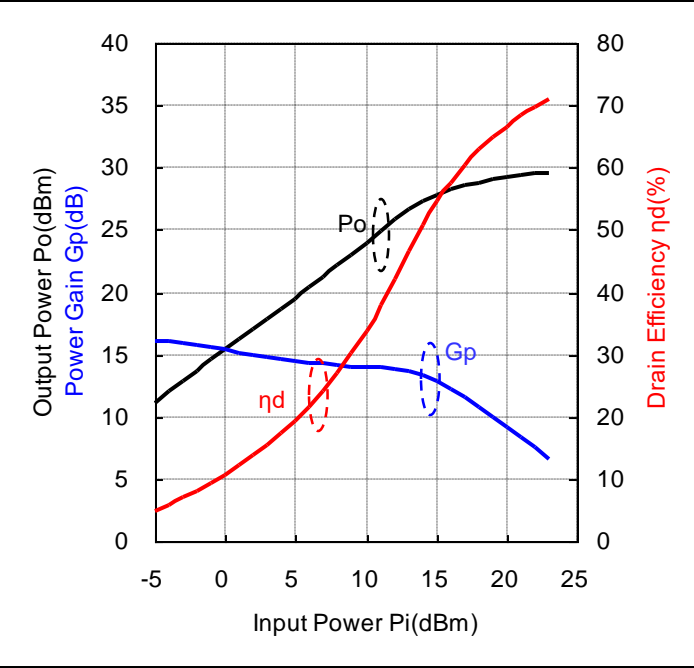
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.54	6.0	19.9	520	-5.0	0.3	7.6	0.006	12.6	25	3.9
1.54	6.0	19.9	520	-4.0	0.4	8.4	0.007	12.4	26	4.5
1.54	6.0	19.9	520	-3.0	0.5	9.4	0.009	12.4	27	5.3
1.54	6.0	19.9	520	-2.0	0.6	10.2	0.011	12.2	29	6.1
1.54	6.0	19.9	520	-1.0	0.8	11.1	0.013	12.1	31	7.0
1.54	6.0	19.9	520	0.0	1.0	12.0	0.016	12.0	34	7.9
1.54	6.0	19.9	520	1.0	1.3	13.0	0.020	12.0	37	9.0
1.54	6.0	19.9	520	2.0	1.6	13.9	0.025	11.9	40	10.2
1.54	6.0	19.9	520	3.0	2.0	14.9	0.031	11.9	44	11.6
1.54	6.0	19.9	520	4.0	2.5	15.9	0.039	11.9	49	13.2
1.54	6.0	19.9	520	5.0	3.2	16.9	0.049	11.9	55	15.0
1.54	6.0	19.9	520	6.0	4.0	18.0	0.063	12.0	61	17.0
1.54	6.0	19.9	520	7.0	5.0	19.0	0.080	12.0	69	19.4
1.54	6.0	19.9	520	8.0	6.3	20.1	0.103	12.1	78	22.2
1.54	6.0	19.9	520	9.0	7.9	21.2	0.133	12.2	88	25.3
1.54	6.0	19.9	520	10.0	10.0	22.4	0.172	12.4	99	28.9
1.54	6.0	19.9	520	11.0	12.6	23.5	0.224	12.5	113	33.0
1.54	6.0	19.9	520	12.0	15.8	24.6	0.286	12.6	128	37.4
1.54	6.0	19.9	520	13.0	20.0	25.7	0.368	12.7	144	42.5
1.54	6.0	19.9	520	14.0	25.1	26.6	0.457	12.6	160	47.5
1.54	6.0	19.9	520	15.0	31.6	27.4	0.546	12.4	174	52.2
1.54	6.0	19.9	520	16.0	39.8	27.9	0.621	11.9	185	56.0
1.54	6.0	19.9	520	17.0	50.1	28.4	0.685	11.4	193	59.3
1.54	6.0	19.9	520	18.0	63.1	28.7	0.740	10.7	199	62.1
1.54	6.0	19.9	520	19.0	79.4	28.9	0.783	9.9	203	64.3
1.54	6.0	19.9	520	20.0	100.0	29.1	0.818	9.1	206	66.1
1.54	6.0	19.9	520	21.0	125.9	29.3	0.853	8.3	209	67.9
1.54	6.0	19.9	520	22.0	158.5	29.5	0.881	7.5	211	69.4
1.54	6.0	19.9	520	23.0	199.5	29.6	0.904	6.6	213	70.6

Input-Output Characteristics $V_{ds}=6.0V, I_{bias}=40mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=6.0V, I_{bias}=39.5mA$

@ $f=520MHz, V_{ds}=6.0V, I_{bias}=39.5mA$

Data

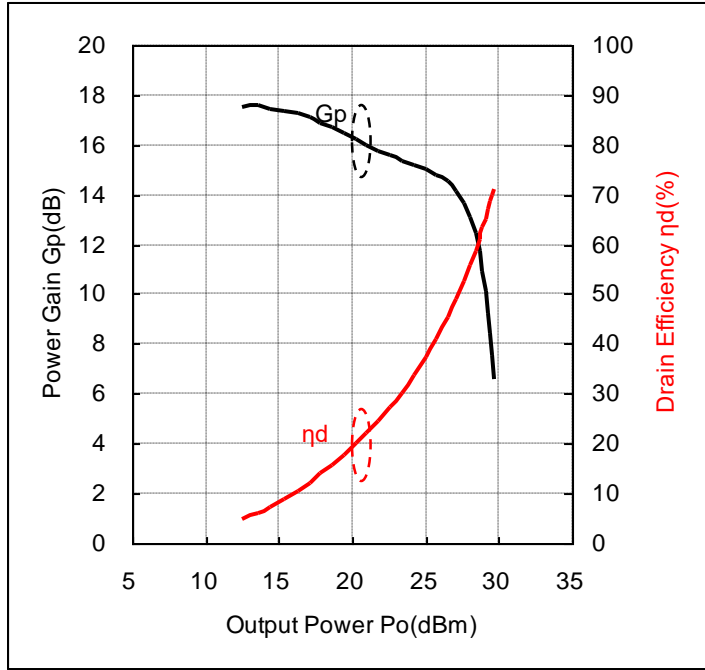
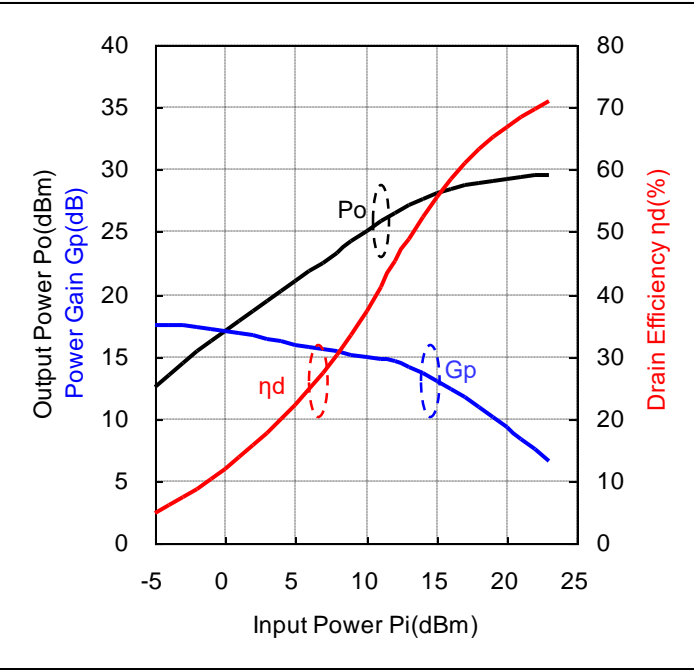
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.67	6.0	39.5	520	-5.0	0.3	11.0	0.013	16.0	44	4.8
1.67	6.0	39.5	520	-4.0	0.4	12.0	0.016	16.0	45	5.9
1.67	6.0	39.5	520	-3.0	0.5	12.9	0.019	15.9	46	7.0
1.67	6.0	39.5	520	-2.0	0.6	13.7	0.023	15.7	48	8.1
1.67	6.0	39.5	520	-1.0	0.8	14.6	0.029	15.6	50	9.5
1.67	6.0	39.5	520	0.0	1.0	15.4	0.034	15.4	53	10.7
1.67	6.0	39.5	520	1.0	1.3	16.1	0.041	15.1	57	12.1
1.67	6.0	39.5	520	2.0	1.6	17.0	0.050	15.0	61	13.7
1.67	6.0	39.5	520	3.0	2.0	17.8	0.060	14.8	65	15.4
1.67	6.0	39.5	520	4.0	2.5	18.6	0.073	14.6	71	17.2
1.67	6.0	39.5	520	5.0	3.2	19.5	0.089	14.5	77	19.3
1.67	6.0	39.5	520	6.0	4.0	20.4	0.108	14.4	84	21.6
1.67	6.0	39.5	520	7.0	5.0	21.2	0.132	14.2	92	24.1
1.67	6.0	39.5	520	8.0	6.3	22.1	0.163	14.1	101	26.8
1.67	6.0	39.5	520	9.0	7.9	23.0	0.201	14.0	111	30.0
1.67	6.0	39.5	520	10.0	10.0	24.0	0.250	14.0	123	33.8
1.67	6.0	39.5	520	11.0	12.6	24.9	0.309	13.9	136	37.8
1.67	6.0	39.5	520	12.0	15.8	25.8	0.380	13.8	151	42.1
1.67	6.0	39.5	520	13.0	20.0	26.6	0.460	13.6	165	46.6
1.67	6.0	39.5	520	14.0	25.1	27.3	0.537	13.3	176	50.8
1.67	6.0	39.5	520	15.0	31.6	27.8	0.607	12.8	186	54.5
1.67	6.0	39.5	520	16.0	39.8	28.2	0.667	12.2	193	57.7
1.67	6.0	39.5	520	17.0	50.1	28.6	0.719	11.6	198	60.5
1.67	6.0	39.5	520	18.0	63.1	28.8	0.764	10.8	203	62.8
1.67	6.0	39.5	520	19.0	79.4	29.0	0.802	10.0	206	64.9
1.67	6.0	39.5	520	20.0	100.0	29.2	0.836	9.2	209	66.7
1.67	6.0	39.5	520	21.0	125.9	29.4	0.865	8.4	211	68.3
1.67	6.0	39.5	520	22.0	158.5	29.5	0.889	7.5	213	69.6
1.67	6.0	39.5	520	23.0	199.5	29.6	0.912	6.6	214	71.0

Input-Output Characteristics $V_{ds}=6.0V$, $I_{bias}=60mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=59.2mA$,

@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=59.2mA$

Data

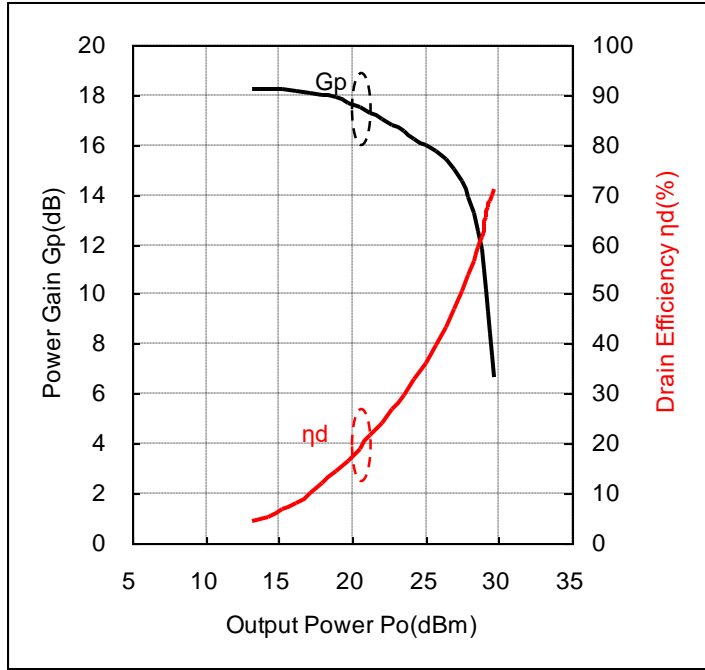
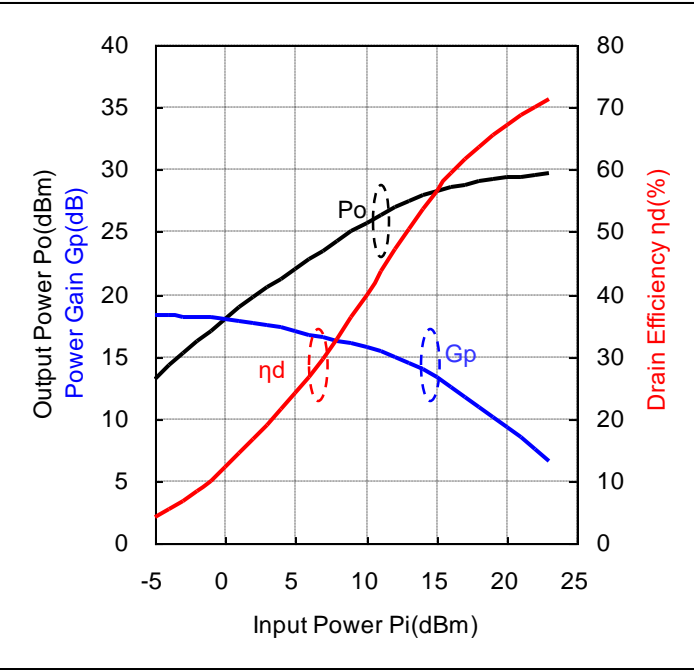
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.77	6.0	59.2	520	-5.0	0.3	12.6	0.018	17.6	62	4.8
1.77	6.0	59.2	520	-4.0	0.4	13.6	0.023	17.6	63	6.0
1.77	6.0	59.2	520	-3.0	0.5	14.5	0.028	17.5	64	7.2
1.77	6.0	59.2	520	-2.0	0.6	15.4	0.034	17.4	66	8.7
1.77	6.0	59.2	520	-1.0	0.8	16.3	0.042	17.3	68	10.3
1.77	6.0	59.2	520	0.0	1.0	17.1	0.051	17.1	71	12.0
1.77	6.0	59.2	520	1.0	1.3	17.9	0.061	16.9	73	13.9
1.77	6.0	59.2	520	2.0	1.6	18.7	0.074	16.7	78	15.8
1.77	6.0	59.2	520	3.0	2.0	19.4	0.088	16.4	83	17.7
1.77	6.0	59.2	520	4.0	2.5	20.2	0.105	16.2	88	19.9
1.77	6.0	59.2	520	5.0	3.2	21.0	0.125	16.0	95	22.0
1.77	6.0	59.2	520	6.0	4.0	21.8	0.150	15.8	102	24.6
1.77	6.0	59.2	520	7.0	5.0	22.6	0.181	15.6	110	27.3
1.77	6.0	59.2	520	8.0	6.3	23.4	0.217	15.4	119	30.3
1.77	6.0	59.2	520	9.0	7.9	24.2	0.262	15.2	130	33.5
1.77	6.0	59.2	520	10.0	10.0	25.0	0.316	15.0	141	37.3
1.77	6.0	59.2	520	11.0	12.6	25.8	0.379	14.8	154	41.1
1.77	6.0	59.2	520	12.0	15.8	26.5	0.451	14.5	166	45.2
1.77	6.0	59.2	520	13.0	20.0	27.1	0.519	14.1	177	49.0
1.77	6.0	59.2	520	14.0	25.1	27.7	0.583	13.7	185	52.5
1.77	6.0	59.2	520	15.0	31.6	28.1	0.643	13.1	192	55.7
1.77	6.0	59.2	520	16.0	39.8	28.4	0.695	12.4	198	58.6
1.77	6.0	59.2	520	17.0	50.1	28.7	0.741	11.7	202	61.1
1.77	6.0	59.2	520	18.0	63.1	28.9	0.780	10.9	205	63.3
1.77	6.0	59.2	520	19.0	79.4	29.1	0.815	10.1	208	65.3
1.77	6.0	59.2	520	20.0	100.0	29.3	0.845	9.3	211	66.9
1.77	6.0	59.2	520	21.0	125.9	29.4	0.873	8.4	212	68.5
1.77	6.0	59.2	520	22.0	158.5	29.5	0.895	7.5	214	69.8
1.77	6.0	59.2	520	23.0	199.5	29.6	0.916	6.6	215	71.0

Input-Output Characteristics $V_{ds}=6.0V, I_{bias}=80mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=6.0V, I_{bias}=78.7mA,$

@ $f=520MHz, V_{ds}=6.0V, I_{bias}=78.7mA$

Data

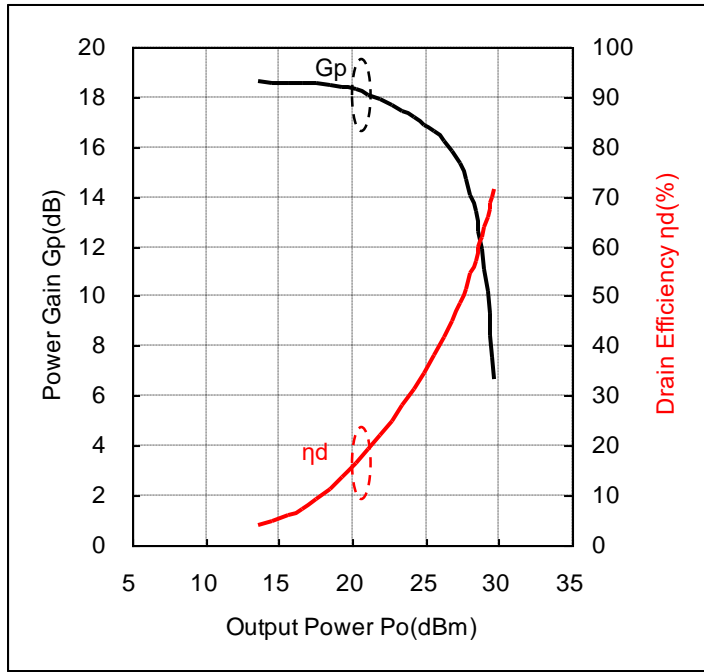
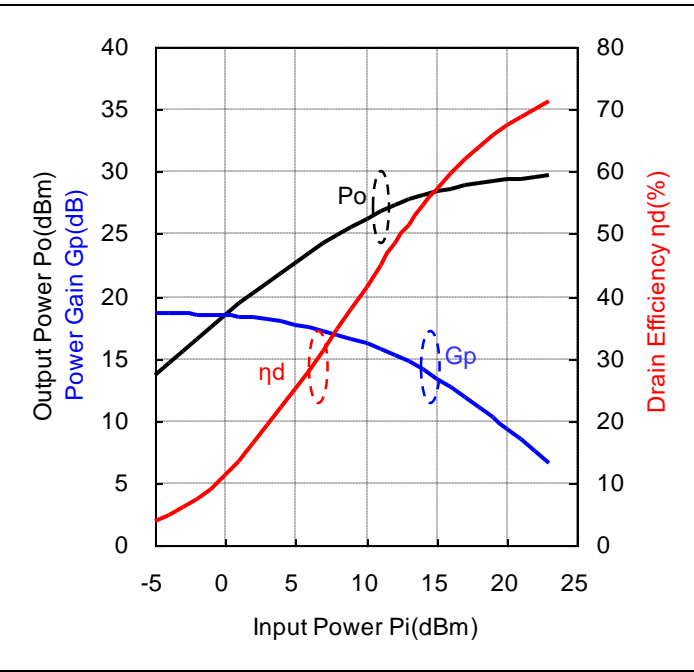
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.87	6.0	78.7	520	-5.0	0.3	13.2	0.021	18.2	81	4.3
1.87	6.0	78.7	520	-4.0	0.4	14.3	0.027	18.3	82	5.4
1.87	6.0	78.7	520	-3.0	0.5	15.2	0.033	18.2	83	6.7
1.87	6.0	78.7	520	-2.0	0.6	16.2	0.041	18.2	84	8.2
1.87	6.0	78.7	520	-1.0	0.8	17.1	0.051	18.1	85	10.0
1.87	6.0	78.7	520	0.0	1.0	18.0	0.063	18.0	87	12.1
1.87	6.0	78.7	520	1.0	1.3	18.9	0.077	17.9	90	14.3
1.87	6.0	78.7	520	2.0	1.6	19.7	0.094	17.7	94	16.6
1.87	6.0	78.7	520	3.0	2.0	20.5	0.112	17.5	98	19.0
1.87	6.0	78.7	520	4.0	2.5	21.3	0.134	17.3	104	21.5
1.87	6.0	78.7	520	5.0	3.2	22.0	0.159	17.0	110	24.0
1.87	6.0	78.7	520	6.0	4.0	22.8	0.189	16.8	118	26.8
1.87	6.0	78.7	520	7.0	5.0	23.5	0.224	16.5	126	29.6
1.87	6.0	78.7	520	8.0	6.3	24.3	0.267	16.3	135	32.8
1.87	6.0	78.7	520	9.0	7.9	25.0	0.317	16.0	146	36.3
1.87	6.0	78.7	520	10.0	10.0	25.7	0.374	15.7	157	39.8
1.87	6.0	78.7	520	11.0	12.6	26.4	0.438	15.4	167	43.5
1.87	6.0	78.7	520	12.0	15.8	27.0	0.501	15.0	177	47.2
1.87	6.0	78.7	520	13.0	20.0	27.5	0.562	14.5	185	50.5
1.87	6.0	78.7	520	14.0	25.1	27.9	0.619	13.9	192	53.7
1.87	6.0	78.7	520	15.0	31.6	28.3	0.671	13.3	198	56.6
1.87	6.0	78.7	520	16.0	39.8	28.6	0.718	12.6	202	59.3
1.87	6.0	78.7	520	17.0	50.1	28.8	0.759	11.8	205	61.6
1.87	6.0	78.7	520	18.0	63.1	29.0	0.794	11.0	208	63.7
1.87	6.0	78.7	520	19.0	79.4	29.2	0.826	10.2	210	65.5
1.87	6.0	78.7	520	20.0	100.0	29.3	0.855	9.3	212	67.3
1.87	6.0	78.7	520	21.0	125.9	29.4	0.879	8.4	213	68.7
1.87	6.0	78.7	520	22.0	158.5	29.5	0.902	7.5	214	70.1
1.87	6.0	78.7	520	23.0	199.5	29.6	0.920	6.6	216	71.2

Input-Output Characteristics $V_{ds}=6.0V$, $I_{bias}=100mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=98.2mA$,

@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=98.2mA$

Data

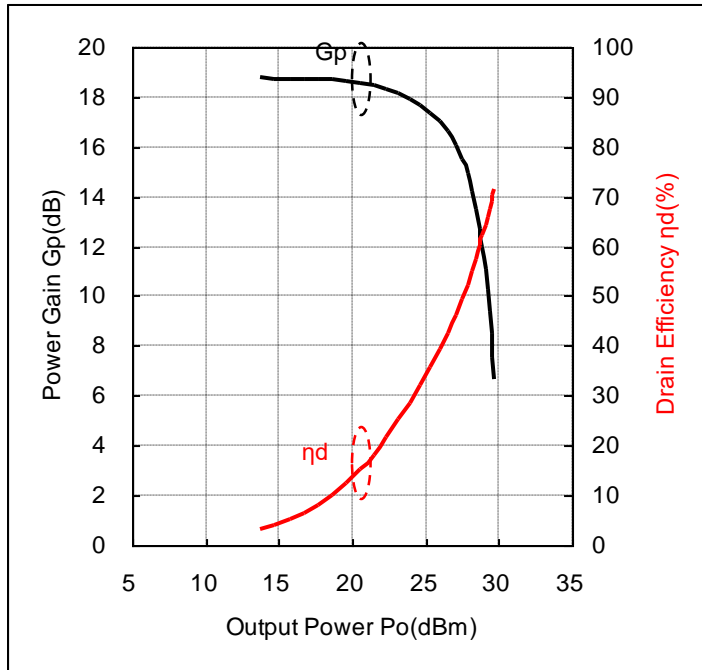
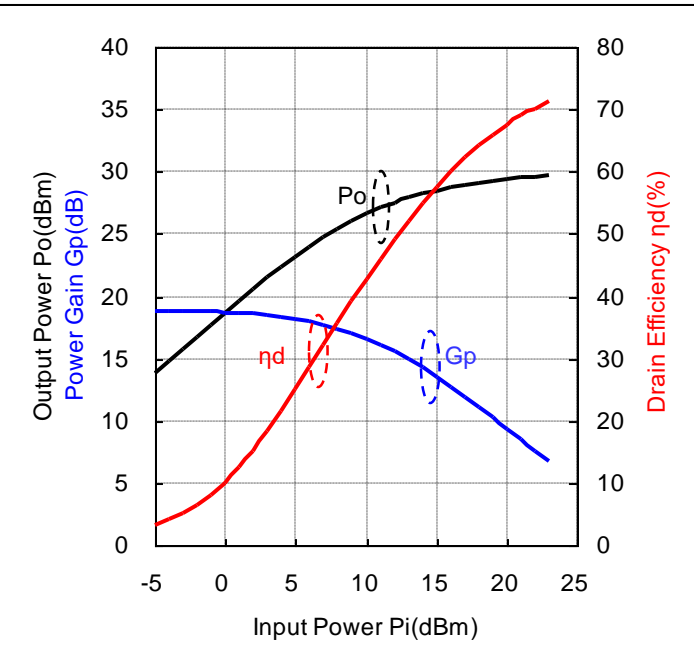
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.95	6.0	98.2	520	-5.0	0.3	13.6	0.023	18.6	100	3.8
1.95	6.0	98.2	520	-4.0	0.4	14.6	0.029	18.6	100	4.8
1.95	6.0	98.2	520	-3.0	0.5	15.6	0.036	18.6	101	6.0
1.95	6.0	98.2	520	-2.0	0.6	16.5	0.045	18.5	101	7.4
1.95	6.0	98.2	520	-1.0	0.8	17.5	0.056	18.5	103	9.1
1.95	6.0	98.2	520	0.0	1.0	18.5	0.070	18.5	104	11.2
1.95	6.0	98.2	520	1.0	1.3	19.4	0.086	18.4	106	13.6
1.95	6.0	98.2	520	2.0	1.6	20.3	0.107	18.3	109	16.3
1.95	6.0	98.2	520	3.0	2.0	21.1	0.129	18.1	112	19.2
1.95	6.0	98.2	520	4.0	2.5	21.9	0.156	17.9	117	22.1
1.95	6.0	98.2	520	5.0	3.2	22.7	0.187	17.7	124	25.1
1.95	6.0	98.2	520	6.0	4.0	23.4	0.221	17.4	131	28.0
1.95	6.0	98.2	520	7.0	5.0	24.2	0.262	17.2	140	31.3
1.95	6.0	98.2	520	8.0	6.3	24.9	0.308	16.9	149	34.6
1.95	6.0	98.2	520	9.0	7.9	25.6	0.362	16.6	159	38.1
1.95	6.0	98.2	520	10.0	10.0	26.2	0.421	16.2	169	41.6
1.95	6.0	98.2	520	11.0	12.6	26.8	0.481	15.8	178	45.1
1.95	6.0	98.2	520	12.0	15.8	27.3	0.538	15.3	185	48.4
1.95	6.0	98.2	520	13.0	20.0	27.7	0.593	14.7	192	51.5
1.95	6.0	98.2	520	14.0	25.1	28.1	0.644	14.1	197	54.5
1.95	6.0	98.2	520	15.0	31.6	28.4	0.690	13.4	201	57.2
1.95	6.0	98.2	520	16.0	39.8	28.6	0.733	12.6	205	59.7
1.95	6.0	98.2	520	17.0	50.1	28.9	0.771	11.9	207	62.0
1.95	6.0	98.2	520	18.0	63.1	29.1	0.805	11.1	210	64.0
1.95	6.0	98.2	520	19.0	79.4	29.2	0.834	10.2	211	65.7
1.95	6.0	98.2	520	20.0	100.0	29.4	0.861	9.4	213	67.4
1.95	6.0	98.2	520	21.0	125.9	29.5	0.883	8.5	214	68.8
1.95	6.0	98.2	520	22.0	158.5	29.6	0.904	7.6	215	70.0
1.95	6.0	98.2	520	23.0	199.5	29.7	0.925	6.7	216	71.3

Input-Output Characteristics $V_{ds}=6.0V$, $I_{bias}=120mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=118.5mA$,

@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=118.5mA$

Data

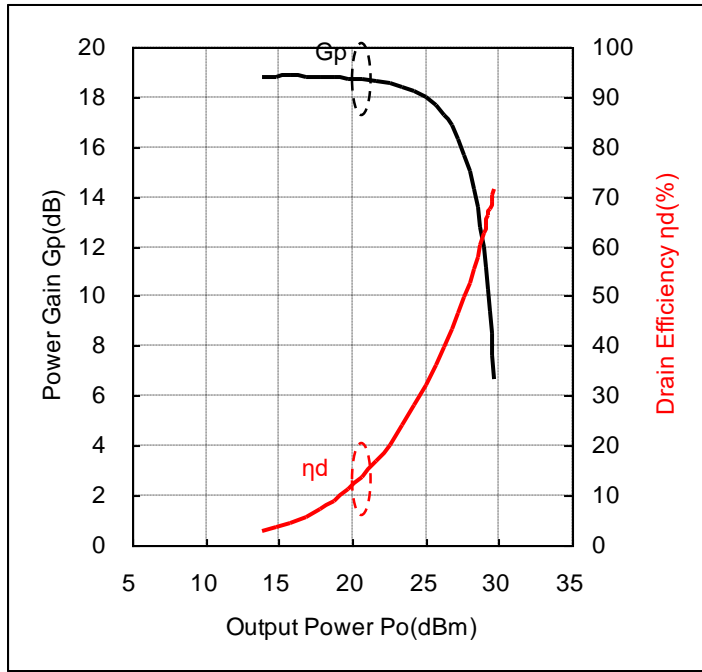
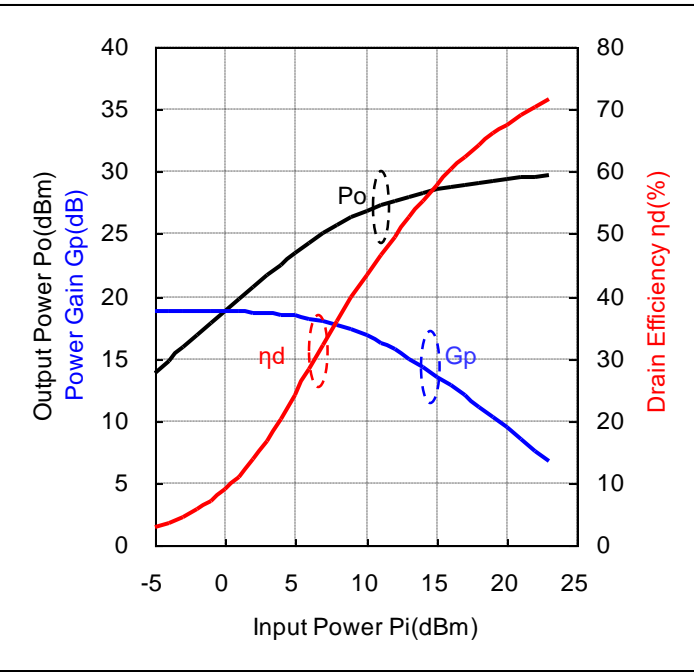
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.03	6.0	118.5	520	-5.0	0.3	13.8	0.024	18.8	119	3.3
2.03	6.0	118.5	520	-4.0	0.4	14.7	0.030	18.7	120	4.1
2.03	6.0	118.5	520	-3.0	0.5	15.8	0.038	18.8	120	5.2
2.03	6.0	118.5	520	-2.0	0.6	16.7	0.047	18.7	121	6.5
2.03	6.0	118.5	520	-1.0	0.8	17.7	0.059	18.7	122	8.1
2.03	6.0	118.5	520	0.0	1.0	18.7	0.074	18.7	122	10.1
2.03	6.0	118.5	520	1.0	1.3	19.6	0.092	18.6	124	12.4
2.03	6.0	118.5	520	2.0	1.6	20.6	0.114	18.6	126	15.1
2.03	6.0	118.5	520	3.0	2.0	21.5	0.140	18.5	128	18.2
2.03	6.0	118.5	520	4.0	2.5	22.3	0.171	18.3	132	21.6
2.03	6.0	118.5	520	5.0	3.2	23.2	0.207	18.2	137	25.2
2.03	6.0	118.5	520	6.0	4.0	23.9	0.247	17.9	144	28.6
2.03	6.0	118.5	520	7.0	5.0	24.7	0.294	17.7	152	32.2
2.03	6.0	118.5	520	8.0	6.3	25.4	0.344	17.4	161	35.7
2.03	6.0	118.5	520	9.0	7.9	26.0	0.400	17.0	170	39.3
2.03	6.0	118.5	520	10.0	10.0	26.6	0.457	16.6	178	42.7
2.03	6.0	118.5	520	11.0	12.6	27.1	0.513	16.1	185	46.1
2.03	6.0	118.5	520	12.0	15.8	27.5	0.566	15.5	192	49.2
2.03	6.0	118.5	520	13.0	20.0	27.9	0.617	14.9	197	52.2
2.03	6.0	118.5	520	14.0	25.1	28.2	0.664	14.2	201	55.0
2.03	6.0	118.5	520	15.0	31.6	28.5	0.706	13.5	204	57.6
2.03	6.0	118.5	520	16.0	39.8	28.7	0.746	12.7	207	60.1
2.03	6.0	118.5	520	17.0	50.1	28.9	0.782	11.9	209	62.2
2.03	6.0	118.5	520	18.0	63.1	29.1	0.813	11.1	211	64.1
2.03	6.0	118.5	520	19.0	79.4	29.3	0.841	10.3	213	65.9
2.03	6.0	118.5	520	20.0	100.0	29.4	0.867	9.4	214	67.6
2.03	6.0	118.5	520	21.0	125.9	29.5	0.889	8.5	215	69.0
2.03	6.0	118.5	520	22.0	158.5	29.6	0.908	7.6	216	70.1
2.03	6.0	118.5	520	23.0	199.5	29.7	0.927	6.7	217	71.3

Input-Output Characteristics $V_{ds}=6.0V$, $I_{bias}=140mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



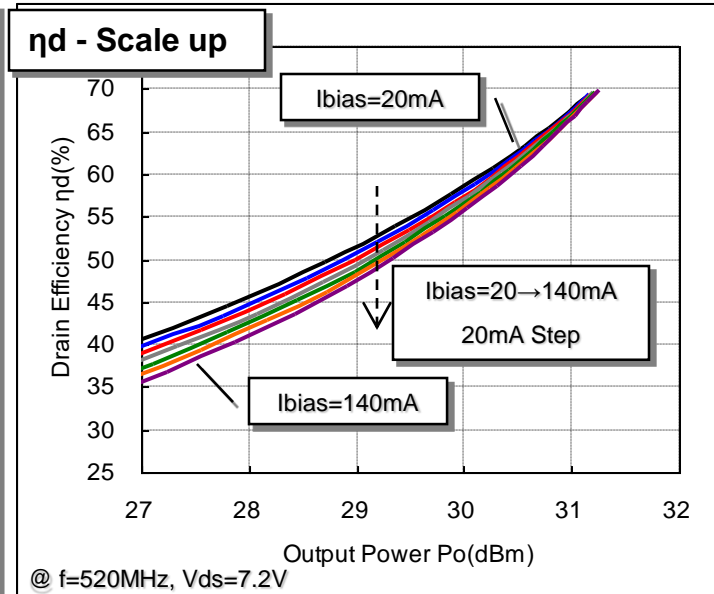
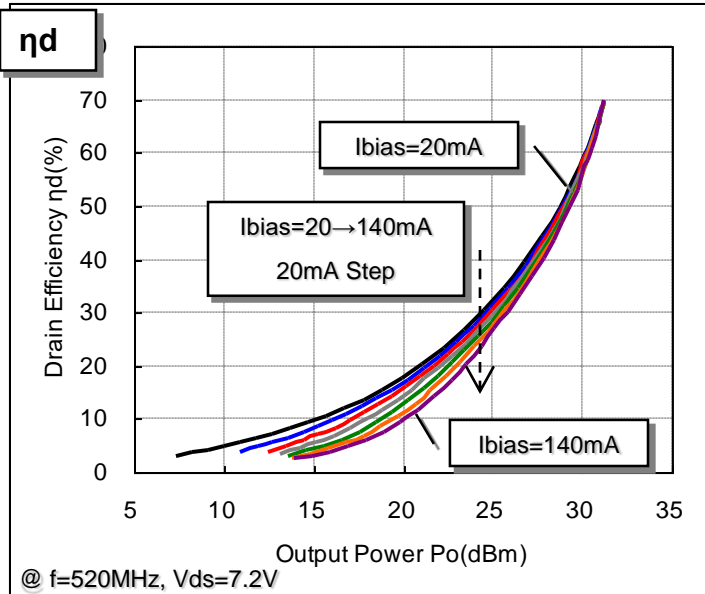
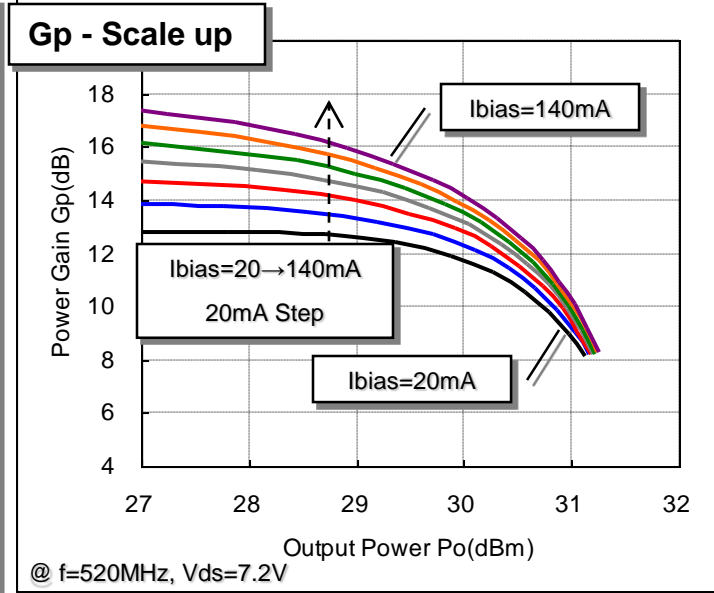
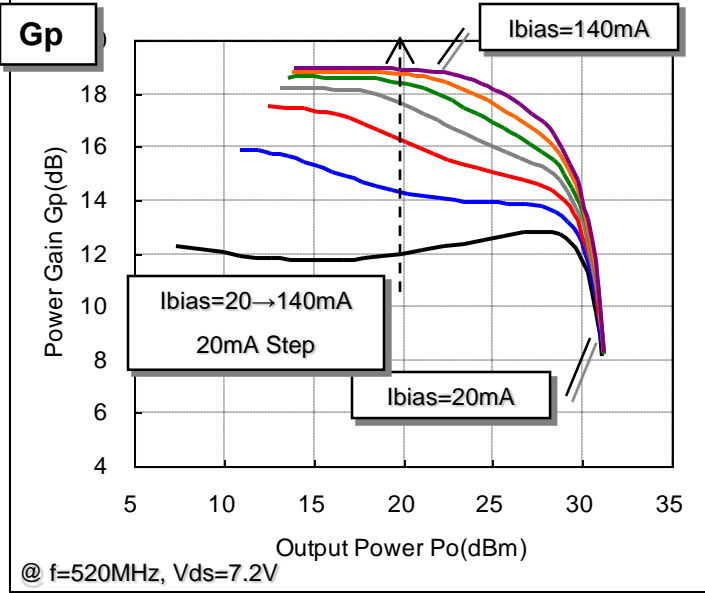
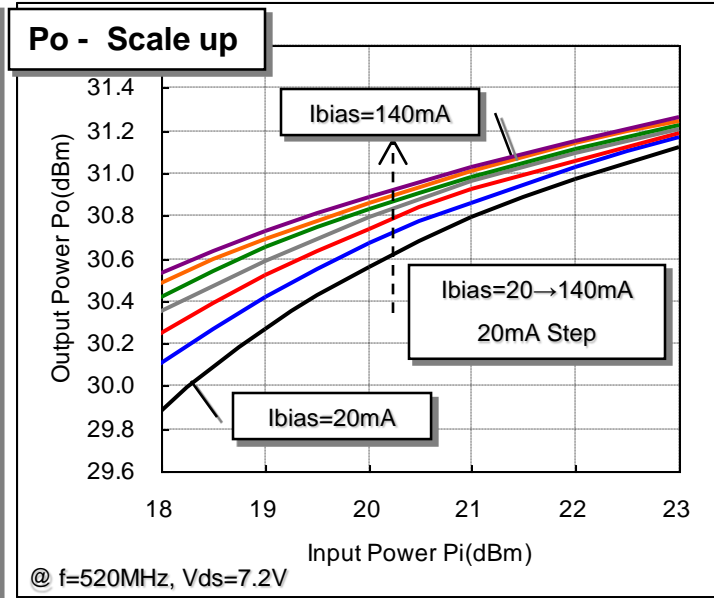
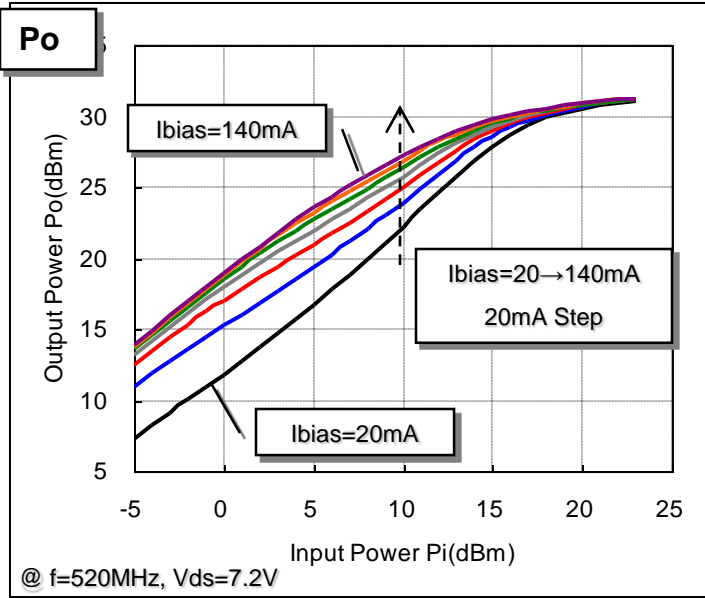
@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=137.6mA$,

@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=137.6mA$

Data

V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.11	6.0	137.6	520	-5.0	0.3	13.8	0.024	18.8	139	2.9
2.11	6.0	137.6	520	-4.0	0.4	14.8	0.030	18.8	139	3.6
2.11	6.0	137.6	520	-3.0	0.5	15.8	0.038	18.8	140	4.6
2.11	6.0	137.6	520	-2.0	0.6	16.8	0.048	18.8	140	5.7
2.11	6.0	137.6	520	-1.0	0.8	17.8	0.060	18.8	140	7.1
2.11	6.0	137.6	520	0.0	1.0	18.8	0.075	18.8	141	8.9
2.11	6.0	137.6	520	1.0	1.3	19.7	0.094	18.7	142	11.0
2.11	6.0	137.6	520	2.0	1.6	20.7	0.117	18.7	143	13.7
2.11	6.0	137.6	520	3.0	2.0	21.6	0.146	18.6	145	16.8
2.11	6.0	137.6	520	4.0	2.5	22.5	0.179	18.5	147	20.3
2.11	6.0	137.6	520	5.0	3.2	23.4	0.219	18.4	151	24.2
2.11	6.0	137.6	520	6.0	4.0	24.2	0.265	18.2	156	28.3
2.11	6.0	137.6	520	7.0	5.0	25.0	0.315	18.0	163	32.2
2.11	6.0	137.6	520	8.0	6.3	25.7	0.371	17.7	171	36.1
2.11	6.0	137.6	520	9.0	7.9	26.3	0.427	17.3	179	39.7
2.11	6.0	137.6	520	10.0	10.0	26.8	0.483	16.8	186	43.3
2.11	6.0	137.6	520	11.0	12.6	27.3	0.536	16.3	192	46.5
2.11	6.0	137.6	520	12.0	15.8	27.7	0.586	15.7	197	49.6
2.11	6.0	137.6	520	13.0	20.0	28.0	0.634	15.0	201	52.6
2.11	6.0	137.6	520	14.0	25.1	28.3	0.679	14.3	204	55.4
2.11	6.0	137.6	520	15.0	31.6	28.6	0.719	13.6	207	57.9
2.11	6.0	137.6	520	16.0	39.8	28.8	0.757	12.8	209	60.3
2.11	6.0	137.6	520	17.0	50.1	29.0	0.791	12.0	211	62.5
2.11	6.0	137.6	520	18.0	63.1	29.1	0.820	11.1	212	64.3
2.11	6.0	137.6	520	19.0	79.4	29.3	0.847	10.3	214	66.1
2.11	6.0	137.6	520	20.0	100.0	29.4	0.871	9.4	215	67.6
2.11	6.0	137.6	520	21.0	125.9	29.5	0.893	8.5	216	69.1
2.11	6.0	137.6	520	22.0	158.5	29.6	0.912	7.6	216	70.2
2.11	6.0	137.6	520	23.0	199.5	29.7	0.931	6.7	217	71.5

Input - Output Characteristics $V_{ds}=7.2V$ - Condition 1

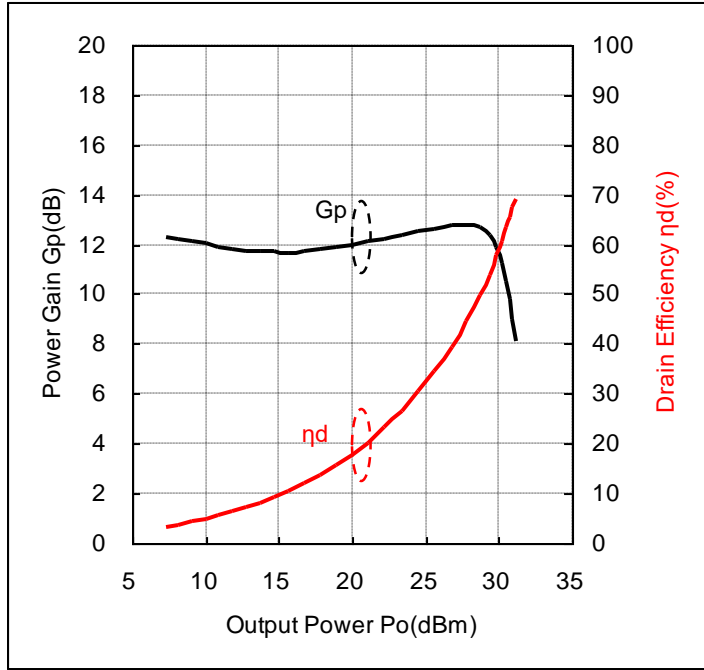
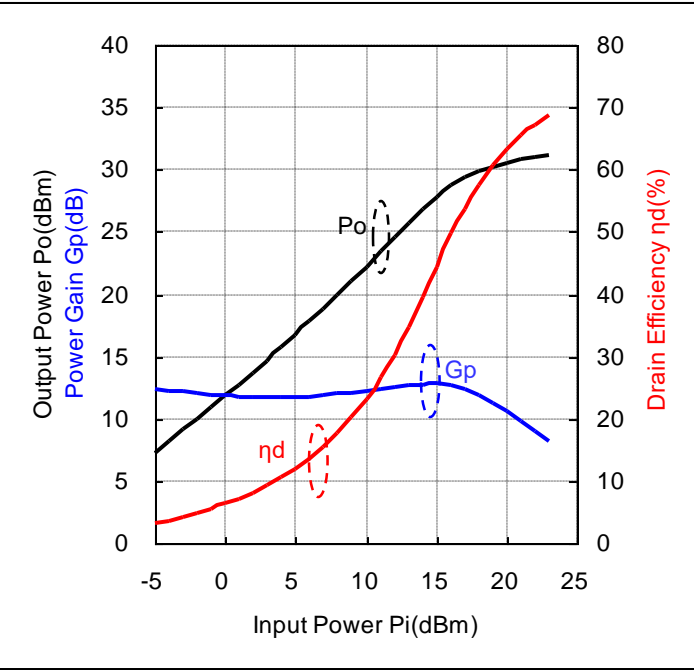


Input-Output Characteristics $V_{ds}=7.2V, I_{bias}=20mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=7.2V, I_{bias}=19.8mA$

@ $f=520MHz, V_{ds}=7.2V, I_{bias}=19.8mA$

Data

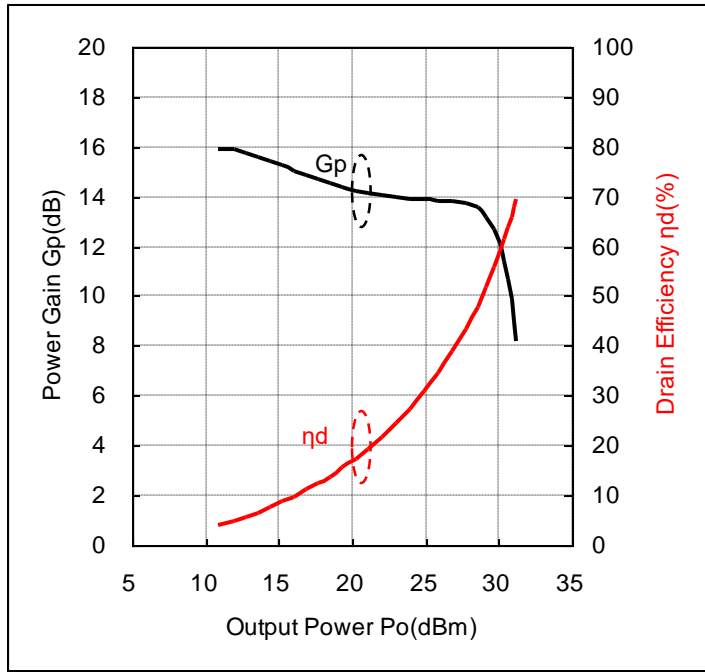
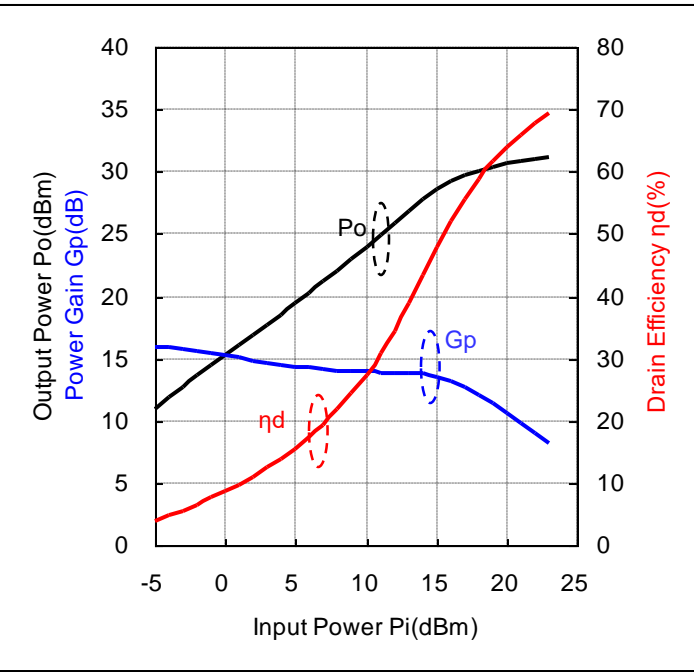
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.51	7.2	19.8	520	-5.0	0.3	7.3	0.005	12.3	24	3.1
1.51	7.2	19.8	520	-4.0	0.4	8.2	0.007	12.2	25	3.6
1.51	7.2	19.8	520	-3.0	0.5	9.1	0.008	12.1	27	4.2
1.51	7.2	19.8	520	-2.0	0.6	10.0	0.010	12.0	29	4.9
1.51	7.2	19.8	520	-1.0	0.8	10.9	0.012	11.9	31	5.5
1.51	7.2	19.8	520	0.0	1.0	11.8	0.015	11.8	33	6.3
1.51	7.2	19.8	520	1.0	1.3	12.8	0.019	11.8	36	7.2
1.51	7.2	19.8	520	2.0	1.6	13.7	0.023	11.7	40	8.2
1.51	7.2	19.8	520	3.0	2.0	14.7	0.029	11.7	44	9.3
1.51	7.2	19.8	520	4.0	2.5	15.7	0.037	11.7	49	10.5
1.51	7.2	19.8	520	5.0	3.2	16.7	0.047	11.7	54	12.0
1.51	7.2	19.8	520	6.0	4.0	17.8	0.060	11.8	61	13.6
1.51	7.2	19.8	520	7.0	5.0	18.9	0.077	11.9	69	15.6
1.51	7.2	19.8	520	8.0	6.3	20.0	0.100	12.0	78	17.7
1.51	7.2	19.8	520	9.0	7.9	21.1	0.129	12.1	88	20.2
1.51	7.2	19.8	520	10.0	10.0	22.2	0.167	12.2	100	23.2
1.51	7.2	19.8	520	11.0	12.6	23.4	0.218	12.4	114	26.5
1.51	7.2	19.8	520	12.0	15.8	24.5	0.284	12.5	130	30.3
1.51	7.2	19.8	520	13.0	20.0	25.6	0.366	12.6	147	34.6
1.51	7.2	19.8	520	14.0	25.1	26.8	0.475	12.8	167	39.5
1.51	7.2	19.8	520	15.0	31.6	27.8	0.603	12.8	188	44.5
1.51	7.2	19.8	520	16.0	39.8	28.7	0.743	12.7	208	49.7
1.51	7.2	19.8	520	17.0	50.1	29.4	0.863	12.4	223	53.8
1.51	7.2	19.8	520	18.0	63.1	29.9	0.973	11.9	234	57.6
1.51	7.2	19.8	520	19.0	79.4	30.3	1.064	11.3	243	60.8
1.51	7.2	19.8	520	20.0	100.0	30.6	1.138	10.6	250	63.3
1.51	7.2	19.8	520	21.0	125.9	30.8	1.199	9.8	255	65.5
1.51	7.2	19.8	520	22.0	158.5	31.0	1.250	9.0	258	67.3
1.51	7.2	19.8	520	23.0	199.5	31.1	1.294	8.1	261	68.9

Input-Output Characteristics $V_{ds}=7.2V, I_{bias}=40mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=7.2V, I_{bias}=39.7mA$

@ $f=520MHz, V_{ds}=7.2V, I_{bias}=39.7mA$

Data

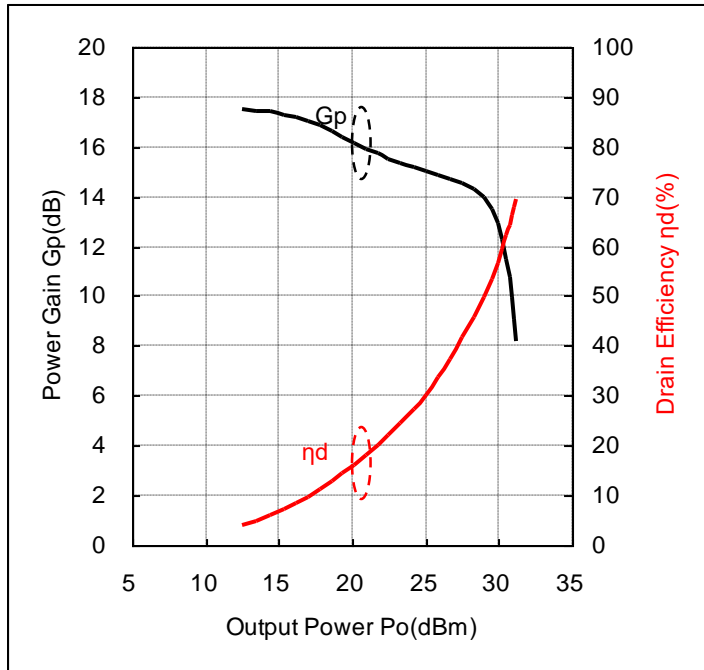
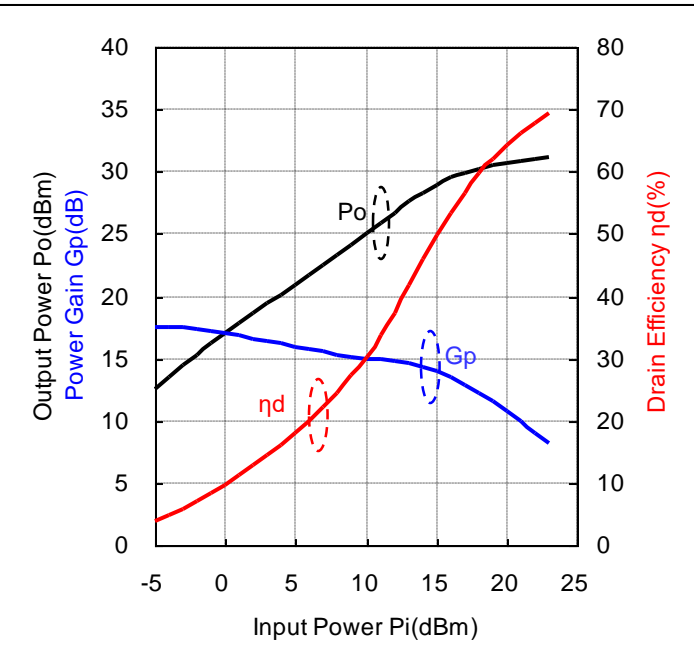
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.64	7.2	39.7	520	-5.0	0.3	10.9	0.012	15.9	44	3.9
1.64	7.2	39.7	520	-4.0	0.4	11.9	0.015	15.9	45	4.7
1.64	7.2	39.7	520	-3.0	0.5	12.8	0.019	15.8	47	5.6
1.64	7.2	39.7	520	-2.0	0.6	13.6	0.023	15.6	49	6.5
1.64	7.2	39.7	520	-1.0	0.8	14.4	0.028	15.4	51	7.6
1.64	7.2	39.7	520	0.0	1.0	15.3	0.034	15.3	54	8.7
1.64	7.2	39.7	520	1.0	1.3	16.0	0.040	15.0	57	9.8
1.64	7.2	39.7	520	2.0	1.6	16.9	0.048	14.9	61	11.1
1.64	7.2	39.7	520	3.0	2.0	17.7	0.058	14.7	65	12.4
1.64	7.2	39.7	520	4.0	2.5	18.5	0.071	14.5	71	13.8
1.64	7.2	39.7	520	5.0	3.2	19.4	0.086	14.4	77	15.5
1.64	7.2	39.7	520	6.0	4.0	20.2	0.106	14.2	84	17.4
1.64	7.2	39.7	520	7.0	5.0	21.1	0.130	14.1	93	19.4
1.64	7.2	39.7	520	8.0	6.3	22.0	0.160	14.0	102	21.7
1.64	7.2	39.7	520	9.0	7.9	23.0	0.198	14.0	113	24.4
1.64	7.2	39.7	520	10.0	10.0	23.9	0.246	13.9	125	27.3
1.64	7.2	39.7	520	11.0	12.6	24.9	0.308	13.9	139	30.8
1.64	7.2	39.7	520	12.0	15.8	25.9	0.385	13.9	155	34.5
1.64	7.2	39.7	520	13.0	20.0	26.8	0.481	13.8	172	38.8
1.64	7.2	39.7	520	14.0	25.1	27.8	0.597	13.8	191	43.4
1.64	7.2	39.7	520	15.0	31.6	28.5	0.714	13.5	208	47.8
1.64	7.2	39.7	520	16.0	39.8	29.2	0.832	13.2	222	52.0
1.64	7.2	39.7	520	17.0	50.1	29.7	0.935	12.7	233	55.7
1.64	7.2	39.7	520	18.0	63.1	30.1	1.026	12.1	242	58.8
1.64	7.2	39.7	520	19.0	79.4	30.4	1.102	11.4	249	61.6
1.64	7.2	39.7	520	20.0	100.0	30.7	1.167	10.7	253	64.0
1.64	7.2	39.7	520	21.0	125.9	30.9	1.219	9.9	257	65.9
1.64	7.2	39.7	520	22.0	158.5	31.0	1.268	9.0	260	67.7
1.64	7.2	39.7	520	23.0	199.5	31.2	1.309	8.2	262	69.3

Input-Output Characteristics $V_{ds}=7.2V, I_{bias}=60mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=7.2V, I_{bias}=59.9mA$

@ $f=520MHz, V_{ds}=7.2V, I_{bias}=59.9mA$

Data

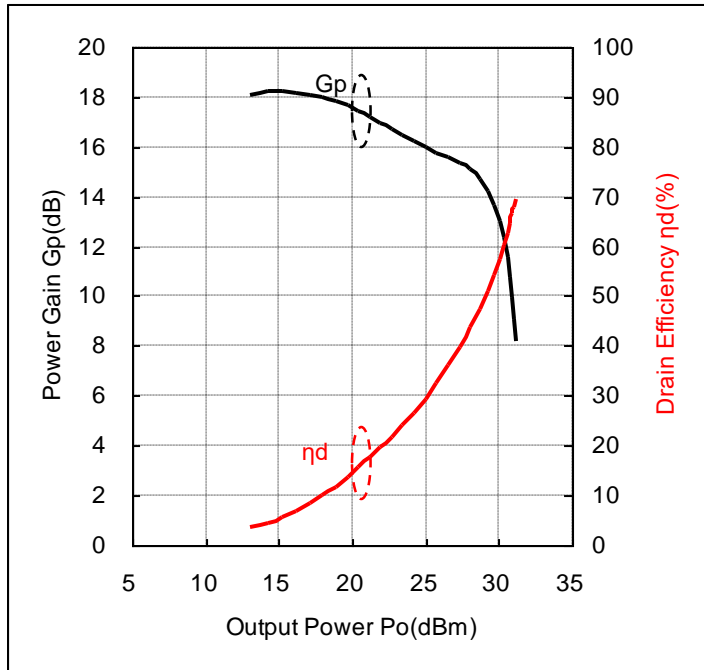
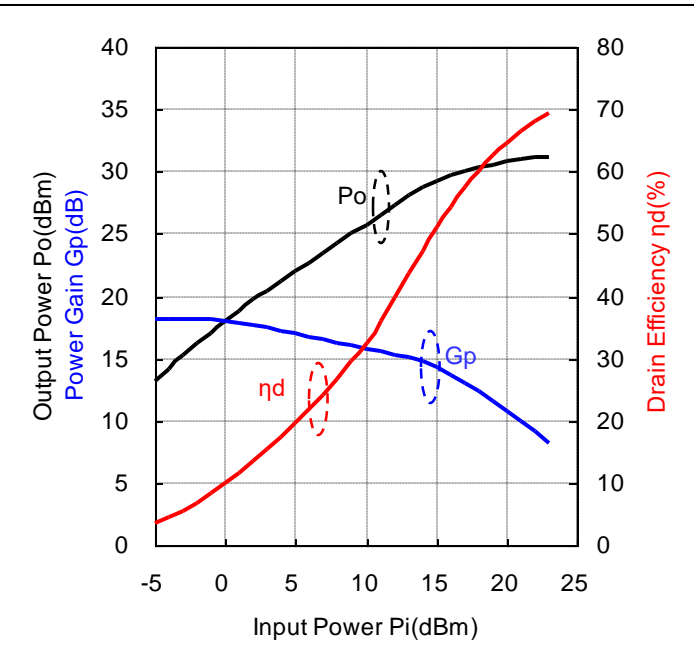
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.75	7.2	59.9	520	-5.0	0.3	12.5	0.018	17.5	63	3.9
1.75	7.2	59.9	520	-4.0	0.4	13.4	0.022	17.4	64	4.8
1.75	7.2	59.9	520	-3.0	0.5	14.4	0.028	17.4	65	5.9
1.75	7.2	59.9	520	-2.0	0.6	15.3	0.034	17.3	67	7.0
1.75	7.2	59.9	520	-1.0	0.8	16.2	0.042	17.2	69	8.4
1.75	7.2	59.9	520	0.0	1.0	17.0	0.050	17.0	72	9.7
1.75	7.2	59.9	520	1.0	1.3	17.8	0.061	16.8	75	11.3
1.75	7.2	59.9	520	2.0	1.6	18.6	0.073	16.6	79	12.8
1.75	7.2	59.9	520	3.0	2.0	19.4	0.086	16.4	84	14.4
1.75	7.2	59.9	520	4.0	2.5	20.2	0.104	16.2	90	16.1
1.75	7.2	59.9	520	5.0	3.2	20.9	0.124	15.9	96	17.9
1.75	7.2	59.9	520	6.0	4.0	21.7	0.149	15.7	104	19.9
1.75	7.2	59.9	520	7.0	5.0	22.5	0.179	15.5	112	22.1
1.75	7.2	59.9	520	8.0	6.3	23.3	0.215	15.3	122	24.5
1.75	7.2	59.9	520	9.0	7.9	24.2	0.261	15.2	133	27.3
1.75	7.2	59.9	520	10.0	10.0	25.0	0.316	15.0	145	30.3
1.75	7.2	59.9	520	11.0	12.6	25.9	0.385	14.9	159	33.7
1.75	7.2	59.9	520	12.0	15.8	26.7	0.468	14.7	174	37.3
1.75	7.2	59.9	520	13.0	20.0	27.6	0.570	14.6	190	41.6
1.75	7.2	59.9	520	14.0	25.1	28.3	0.681	14.3	206	45.8
1.75	7.2	59.9	520	15.0	31.6	29.0	0.791	14.0	220	49.9
1.75	7.2	59.9	520	16.0	39.8	29.5	0.889	13.5	231	53.4
1.75	7.2	59.9	520	17.0	50.1	29.9	0.979	12.9	240	56.7
1.75	7.2	59.9	520	18.0	63.1	30.3	1.059	12.3	247	59.6
1.75	7.2	59.9	520	19.0	79.4	30.5	1.127	11.5	252	62.1
1.75	7.2	59.9	520	20.0	100.0	30.7	1.186	10.7	256	64.4
1.75	7.2	59.9	520	21.0	125.9	30.9	1.236	9.9	259	66.3
1.75	7.2	59.9	520	22.0	158.5	31.1	1.276	9.1	261	67.8
1.75	7.2	59.9	520	23.0	199.5	31.2	1.315	8.2	263	69.4

Input-Output Characteristics $V_{ds}=7.2V, I_{bias}=80mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=7.2V, I_{bias}=79.2mA$

@ $f=520MHz, V_{ds}=7.2V, I_{bias}=79.2mA$

Data

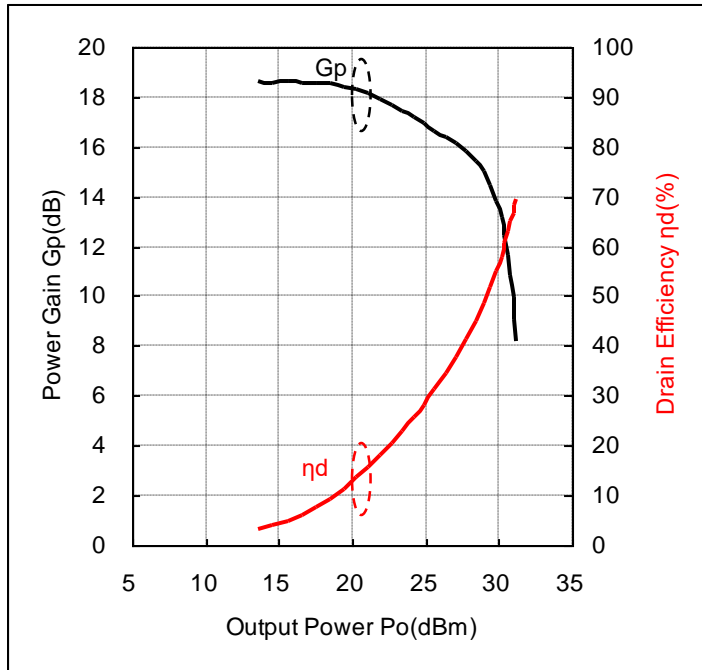
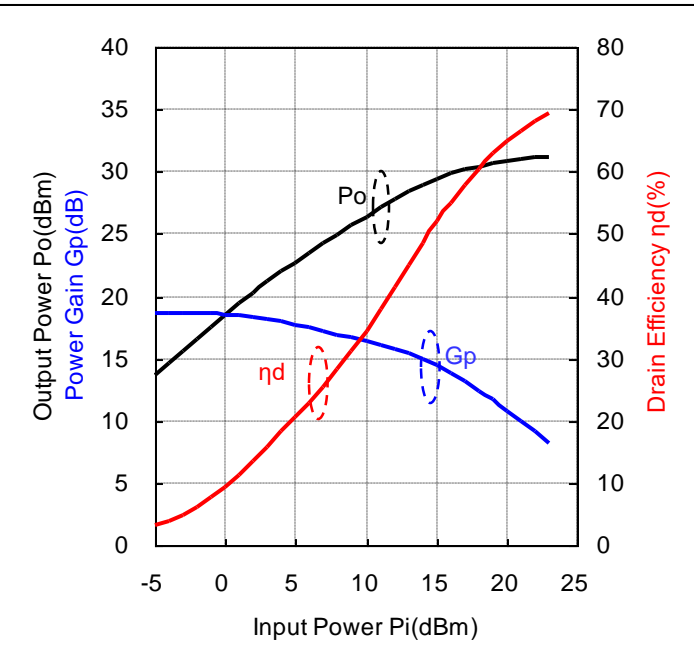
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.84	7.2	79.2	520	-5.0	0.3	13.1	0.020	18.1	82	3.5
1.84	7.2	79.2	520	-4.0	0.4	14.2	0.026	18.2	82	4.5
1.84	7.2	79.2	520	-3.0	0.5	15.2	0.033	18.2	83	5.5
1.84	7.2	79.2	520	-2.0	0.6	16.2	0.041	18.2	84	6.8
1.84	7.2	79.2	520	-1.0	0.8	17.1	0.051	18.1	86	8.3
1.84	7.2	79.2	520	0.0	1.0	18.0	0.063	18.0	88	10.0
1.84	7.2	79.2	520	1.0	1.3	18.9	0.077	17.9	91	11.7
1.84	7.2	79.2	520	2.0	1.6	19.7	0.093	17.7	95	13.6
1.84	7.2	79.2	520	3.0	2.0	20.5	0.111	17.5	99	15.6
1.84	7.2	79.2	520	4.0	2.5	21.2	0.132	17.2	105	17.5
1.84	7.2	79.2	520	5.0	3.2	22.0	0.157	17.0	112	19.6
1.84	7.2	79.2	520	6.0	4.0	22.7	0.187	16.7	119	21.7
1.84	7.2	79.2	520	7.0	5.0	23.5	0.222	16.5	128	24.1
1.84	7.2	79.2	520	8.0	6.3	24.2	0.265	16.2	138	26.7
1.84	7.2	79.2	520	9.0	7.9	25.0	0.316	16.0	149	29.5
1.84	7.2	79.2	520	10.0	10.0	25.8	0.378	15.8	162	32.5
1.84	7.2	79.2	520	11.0	12.6	26.6	0.454	15.6	175	36.0
1.84	7.2	79.2	520	12.0	15.8	27.3	0.542	15.3	190	39.7
1.84	7.2	79.2	520	13.0	20.0	28.1	0.641	15.1	204	43.6
1.84	7.2	79.2	520	14.0	25.1	28.7	0.741	14.7	217	47.3
1.84	7.2	79.2	520	15.0	31.6	29.2	0.839	14.2	229	51.0
1.84	7.2	79.2	520	16.0	39.8	29.7	0.929	13.7	238	54.3
1.84	7.2	79.2	520	17.0	50.1	30.0	1.012	13.0	245	57.4
1.84	7.2	79.2	520	18.0	63.1	30.4	1.084	12.4	250	60.2
1.84	7.2	79.2	520	19.0	79.4	30.6	1.146	11.6	255	62.5
1.84	7.2	79.2	520	20.0	100.0	30.8	1.199	10.8	258	64.6
1.84	7.2	79.2	520	21.0	125.9	31.0	1.247	10.0	260	66.6
1.84	7.2	79.2	520	22.0	158.5	31.1	1.285	9.1	262	68.0
1.84	7.2	79.2	520	23.0	199.5	31.2	1.321	8.2	264	69.5

Input-Output Characteristics $V_{ds}=7.2V$, $I_{bias}=100mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=7.2V$, $I_{bias}=98.6mA$

@ $f=520MHz$, $V_{ds}=7.2V$, $I_{bias}=98.6mA$

Data

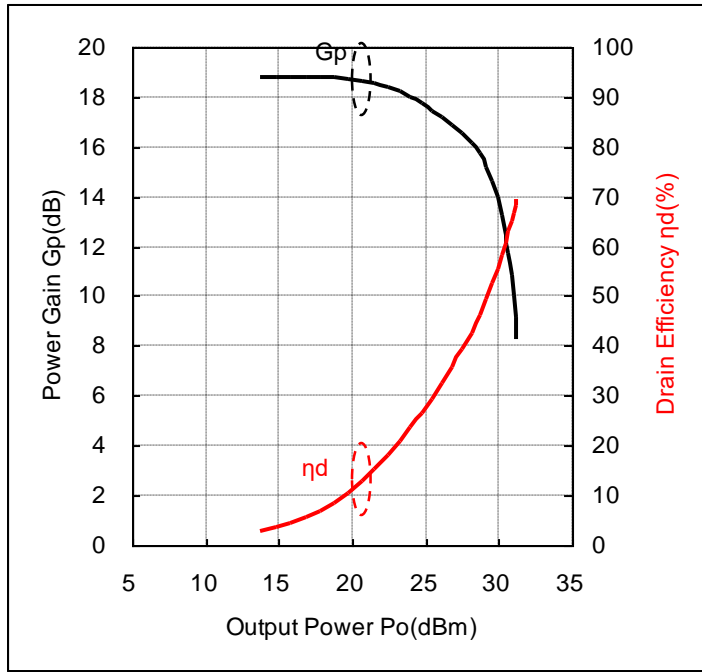
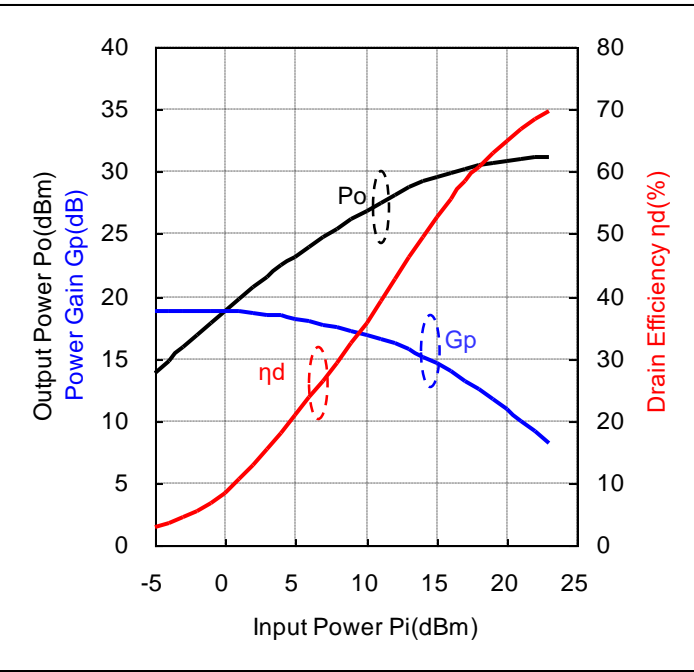
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.92	7.2	98.6	520	-5.0	0.3	13.6	0.023	18.6	100	3.2
1.92	7.2	98.6	520	-4.0	0.4	14.6	0.029	18.6	101	4.0
1.92	7.2	98.6	520	-3.0	0.5	15.6	0.036	18.6	101	5.0
1.92	7.2	98.6	520	-2.0	0.6	16.6	0.045	18.6	103	6.1
1.92	7.2	98.6	520	-1.0	0.8	17.6	0.057	18.6	104	7.6
1.92	7.2	98.6	520	0.0	1.0	18.5	0.071	18.5	106	9.4
1.92	7.2	98.6	520	1.0	1.3	19.4	0.088	18.4	107	11.3
1.92	7.2	98.6	520	2.0	1.6	20.3	0.107	18.3	110	13.6
1.92	7.2	98.6	520	3.0	2.0	21.1	0.130	18.1	114	15.8
1.92	7.2	98.6	520	4.0	2.5	22.0	0.157	18.0	120	18.2
1.92	7.2	98.6	520	5.0	3.2	22.7	0.187	17.7	126	20.6
1.92	7.2	98.6	520	6.0	4.0	23.5	0.221	17.5	134	23.0
1.92	7.2	98.6	520	7.0	5.0	24.2	0.262	17.2	143	25.5
1.92	7.2	98.6	520	8.0	6.3	24.9	0.310	16.9	153	28.2
1.92	7.2	98.6	520	9.0	7.9	25.6	0.367	16.6	164	31.2
1.92	7.2	98.6	520	10.0	10.0	26.4	0.436	16.4	176	34.4
1.92	7.2	98.6	520	11.0	12.6	27.1	0.514	16.1	189	37.8
1.92	7.2	98.6	520	12.0	15.8	27.8	0.603	15.8	202	41.3
1.92	7.2	98.6	520	13.0	20.0	28.5	0.700	15.5	215	45.1
1.92	7.2	98.6	520	14.0	25.1	29.0	0.791	15.0	226	48.6
1.92	7.2	98.6	520	15.0	31.6	29.5	0.881	14.5	235	52.0
1.92	7.2	98.6	520	16.0	39.8	29.8	0.962	13.8	243	55.0
1.92	7.2	98.6	520	17.0	50.1	30.2	1.038	13.2	249	58.0
1.92	7.2	98.6	520	18.0	63.1	30.4	1.102	12.4	253	60.5
1.92	7.2	98.6	520	19.0	79.4	30.6	1.161	11.6	257	62.9
1.92	7.2	98.6	520	20.0	100.0	30.8	1.211	10.8	259	64.9
1.92	7.2	98.6	520	21.0	125.9	31.0	1.253	10.0	261	66.6
1.92	7.2	98.6	520	22.0	158.5	31.1	1.291	9.1	263	68.1
1.92	7.2	98.6	520	23.0	199.5	31.2	1.324	8.2	265	69.5

Input-Output Characteristics $V_{ds}=7.2V$, $I_{bias}=120mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=7.2V$, $I_{bias}=117.9mA$

@ $f=520MHz$, $V_{ds}=7.2V$, $I_{bias}=117.9mA$

Data

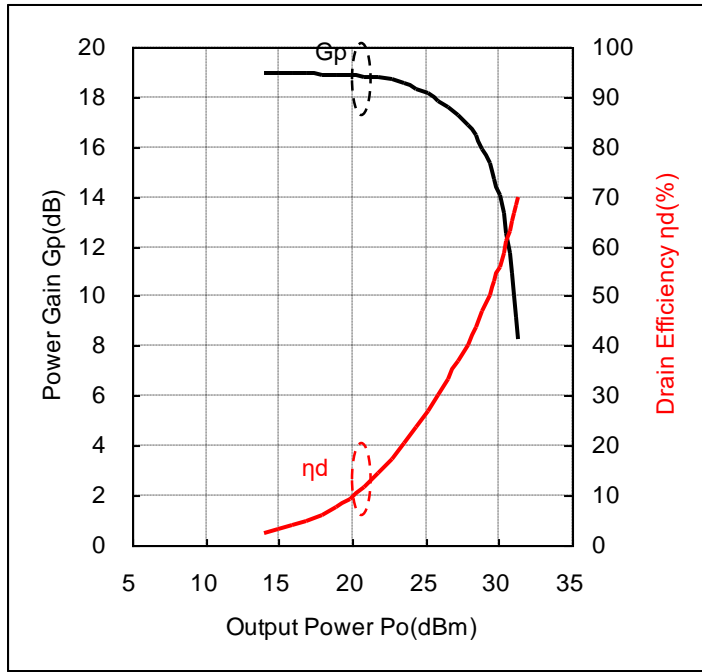
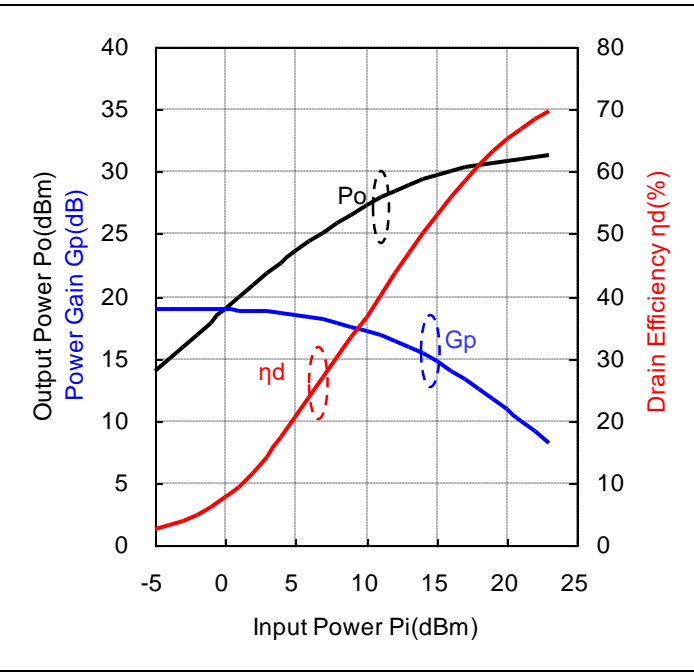
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.00	7.2	117.9	520	-5.0	0.3	13.8	0.024	18.8	119	2.8
2.00	7.2	117.9	520	-4.0	0.4	14.8	0.030	18.8	120	3.5
2.00	7.2	117.9	520	-3.0	0.5	15.8	0.038	18.8	120	4.4
2.00	7.2	117.9	520	-2.0	0.6	16.8	0.048	18.8	121	5.5
2.00	7.2	117.9	520	-1.0	0.8	17.8	0.060	18.8	122	6.9
2.00	7.2	117.9	520	0.0	1.0	18.8	0.075	18.8	123	8.5
2.00	7.2	117.9	520	1.0	1.3	19.7	0.094	18.7	125	10.5
2.00	7.2	117.9	520	2.0	1.6	20.7	0.117	18.7	127	12.8
2.00	7.2	117.9	520	3.0	2.0	21.5	0.143	18.5	129	15.3
2.00	7.2	117.9	520	4.0	2.5	22.4	0.174	18.4	134	18.1
2.00	7.2	117.9	520	5.0	3.2	23.2	0.209	18.2	140	20.8
2.00	7.2	117.9	520	6.0	4.0	24.0	0.251	18.0	147	23.7
2.00	7.2	117.9	520	7.0	5.0	24.7	0.296	17.7	156	26.4
2.00	7.2	117.9	520	8.0	6.3	25.5	0.351	17.5	166	29.4
2.00	7.2	117.9	520	9.0	7.9	26.2	0.413	17.2	177	32.4
2.00	7.2	117.9	520	10.0	10.0	26.9	0.485	16.9	189	35.7
2.00	7.2	117.9	520	11.0	12.6	27.5	0.569	16.5	201	39.3
2.00	7.2	117.9	520	12.0	15.8	28.2	0.656	16.2	213	42.7
2.00	7.2	117.9	520	13.0	20.0	28.7	0.745	15.7	224	46.2
2.00	7.2	117.9	520	14.0	25.1	29.2	0.828	15.2	233	49.4
2.00	7.2	117.9	520	15.0	31.6	29.6	0.912	14.6	241	52.7
2.00	7.2	117.9	520	16.0	39.8	29.9	0.986	13.9	247	55.5
2.00	7.2	117.9	520	17.0	50.1	30.2	1.057	13.2	251	58.4
2.00	7.2	117.9	520	18.0	63.1	30.5	1.117	12.5	255	60.8
2.00	7.2	117.9	520	19.0	79.4	30.7	1.172	11.7	258	63.1
2.00	7.2	117.9	520	20.0	100.0	30.9	1.219	10.9	260	65.0
2.00	7.2	117.9	520	21.0	125.9	31.0	1.262	10.0	262	66.8
2.00	7.2	117.9	520	22.0	158.5	31.1	1.300	9.1	264	68.4
2.00	7.2	117.9	520	23.0	199.5	31.2	1.330	8.2	265	69.7

Input-Output Characteristics $V_{ds}=7.2V$, $I_{bias}=140mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



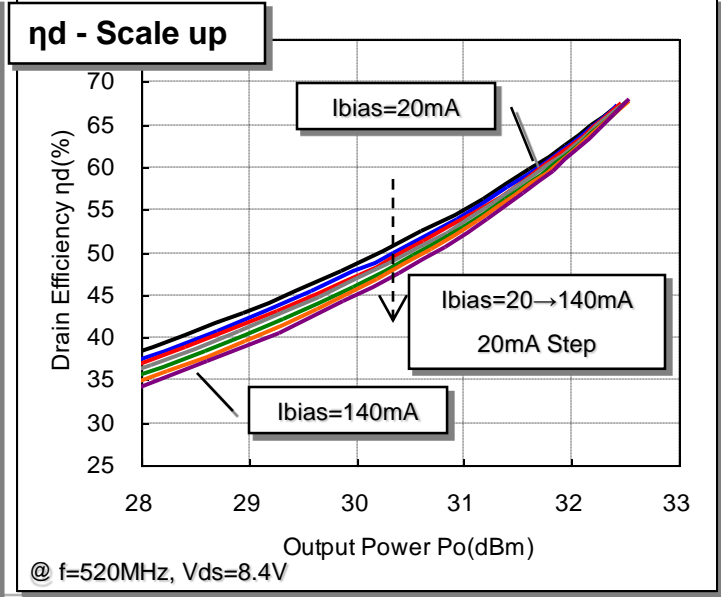
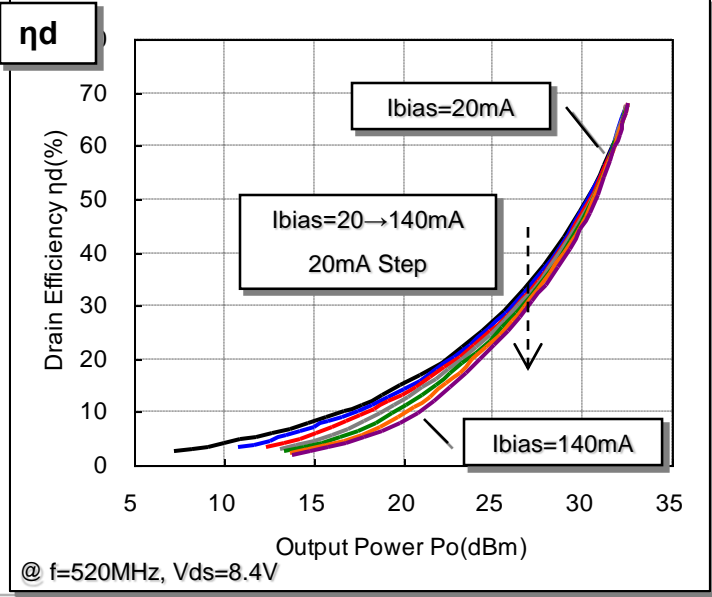
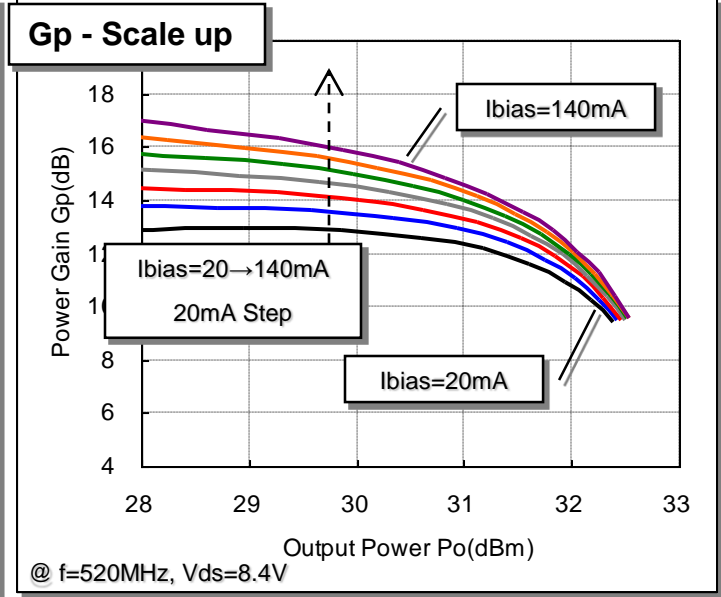
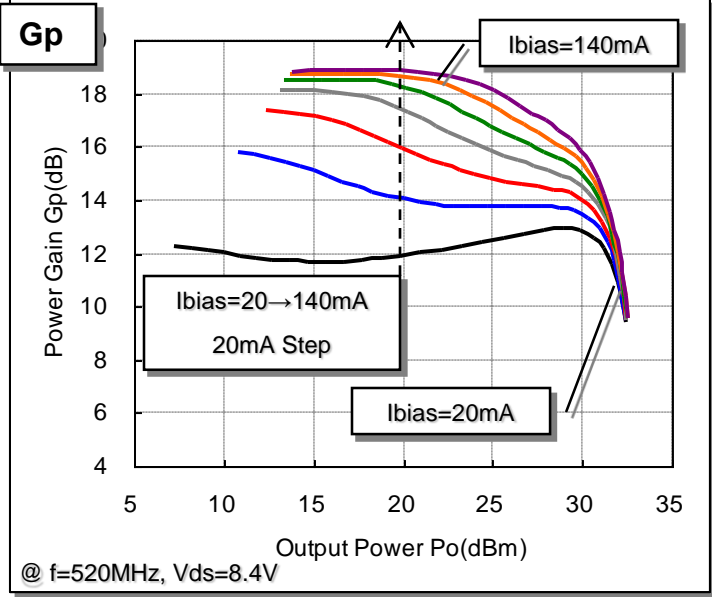
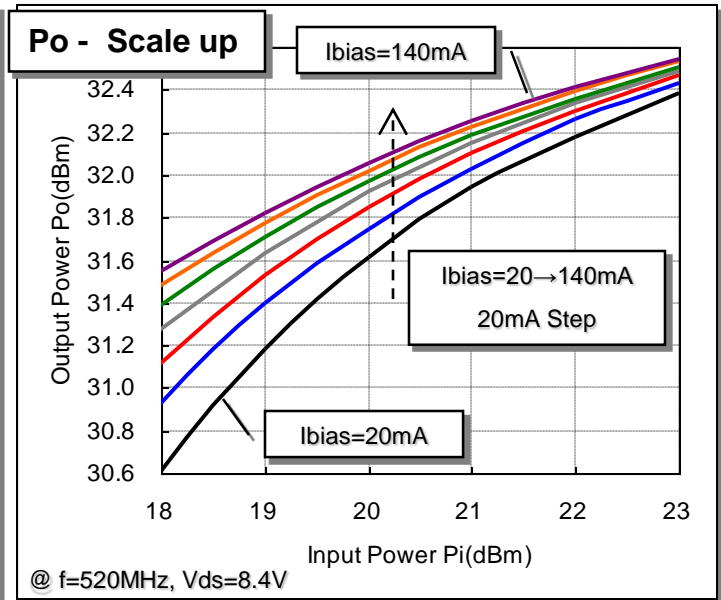
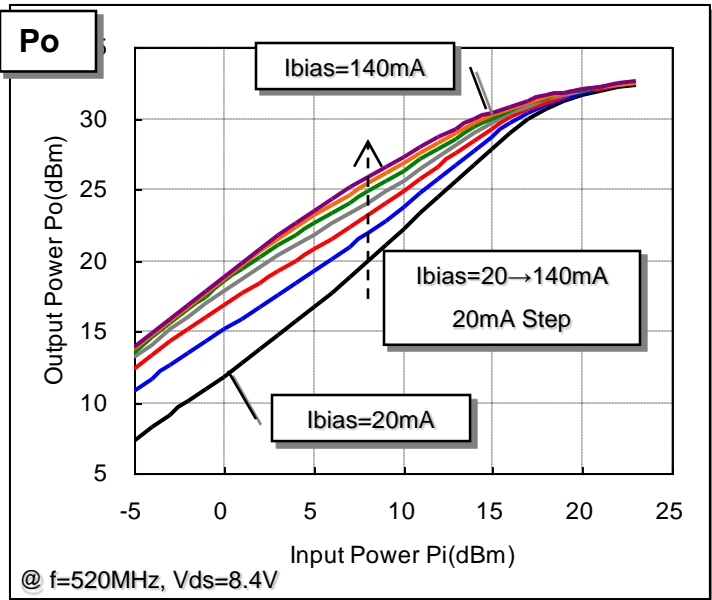
@ $f=520MHz$, $V_{ds}=7.2V$, $I_{bias}=137.8mA$

@ $f=520MHz$, $V_{ds}=7.2V$, $I_{bias}=137.8mA$

Data

V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.07	7.2	137.8	520	-5.0	0.3	13.9	0.025	18.9	138	2.5
2.07	7.2	137.8	520	-4.0	0.4	14.9	0.031	18.9	139	3.1
2.07	7.2	137.8	520	-3.0	0.5	15.9	0.039	18.9	139	3.9
2.07	7.2	137.8	520	-2.0	0.6	16.9	0.049	18.9	140	4.9
2.07	7.2	137.8	520	-1.0	0.8	17.9	0.062	18.9	141	6.1
2.07	7.2	137.8	520	0.0	1.0	18.9	0.078	18.9	141	7.6
2.07	7.2	137.8	520	1.0	1.3	19.9	0.097	18.9	143	9.4
2.07	7.2	137.8	520	2.0	1.6	20.8	0.121	18.8	144	11.6
2.07	7.2	137.8	520	3.0	2.0	21.8	0.150	18.8	146	14.3
2.07	7.2	137.8	520	4.0	2.5	22.7	0.185	18.7	150	17.2
2.07	7.2	137.8	520	5.0	3.2	23.5	0.226	18.5	154	20.4
2.07	7.2	137.8	520	6.0	4.0	24.4	0.272	18.4	160	23.6
2.07	7.2	137.8	520	7.0	5.0	25.1	0.326	18.1	168	26.9
2.07	7.2	137.8	520	8.0	6.3	25.9	0.385	17.9	178	30.1
2.07	7.2	137.8	520	9.0	7.9	26.6	0.454	17.6	189	33.3
2.07	7.2	137.8	520	10.0	10.0	27.2	0.530	17.2	200	36.8
2.07	7.2	137.8	520	11.0	12.6	27.9	0.614	16.9	212	40.2
2.07	7.2	137.8	520	12.0	15.8	28.4	0.698	16.4	222	43.6
2.07	7.2	137.8	520	13.0	20.0	28.9	0.780	15.9	231	46.8
2.07	7.2	137.8	520	14.0	25.1	29.4	0.861	15.4	239	50.0
2.07	7.2	137.8	520	15.0	31.6	29.7	0.938	14.7	245	53.1
2.07	7.2	137.8	520	16.0	39.8	30.0	1.007	14.0	250	55.9
2.07	7.2	137.8	520	17.0	50.1	30.3	1.072	13.3	254	58.5
2.07	7.2	137.8	520	18.0	63.1	30.5	1.130	12.5	257	61.0
2.07	7.2	137.8	520	19.0	79.4	30.7	1.183	11.7	260	63.2
2.07	7.2	137.8	520	20.0	100.0	30.9	1.227	10.9	262	65.1
2.07	7.2	137.8	520	21.0	125.9	31.0	1.268	10.0	263	66.8
2.07	7.2	137.8	520	22.0	158.5	31.1	1.303	9.1	265	68.4
2.07	7.2	137.8	520	23.0	199.5	31.3	1.337	8.3	266	69.9

Input - Output Characteristics $V_{ds}=8.4V$ - Condition 1

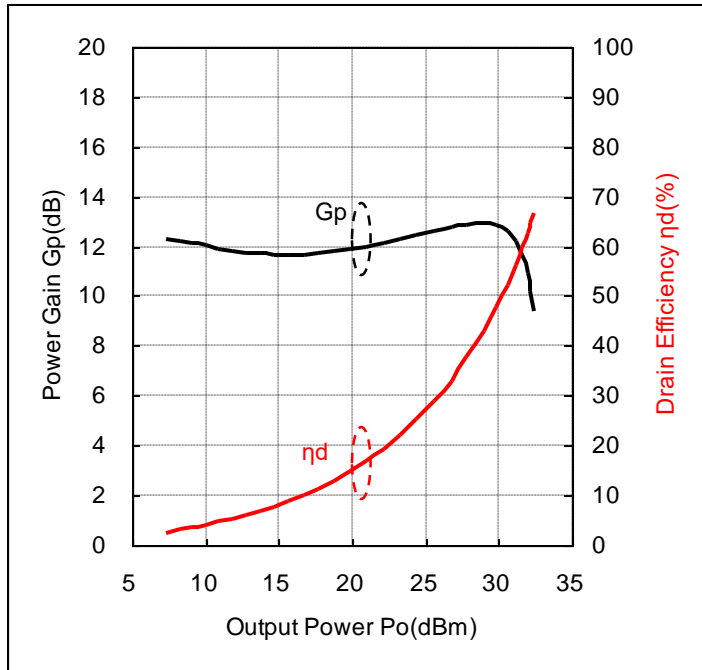
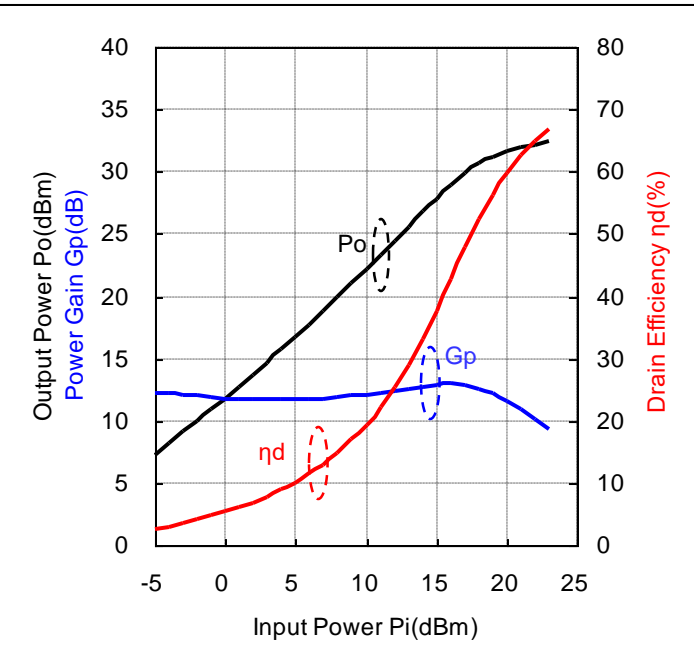


Input-Output Characteristics $V_{ds}=8.4V, I_{bias}=20mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=8.4V, I_{bias}=20.2mA$

@ $f=520MHz, V_{ds}=8.4V, I_{bias}=20.2mA$

Data

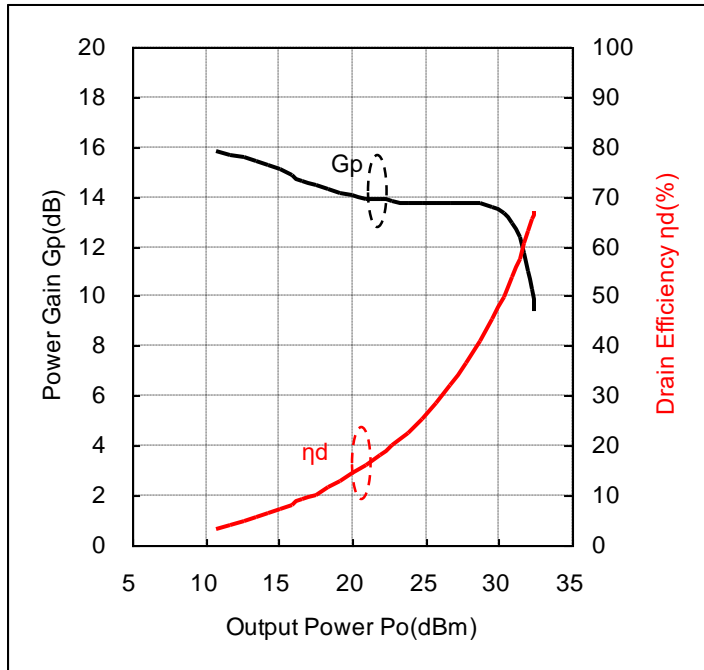
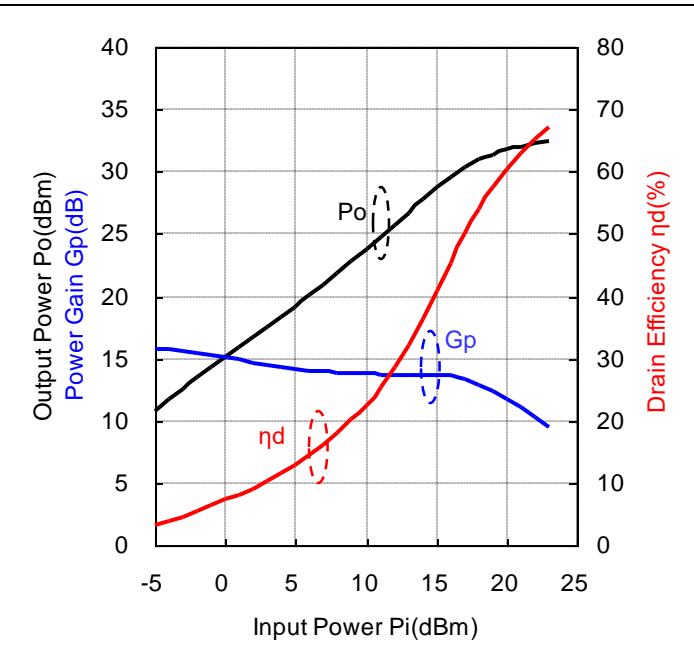
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.49	8.4	20.2	520	-5.0	0.3	7.3	0.005	12.3	25	2.5
1.49	8.4	20.2	520	-4.0	0.4	8.2	0.007	12.2	26	3.0
1.49	8.4	20.2	520	-3.0	0.5	9.1	0.008	12.1	27	3.5
1.49	8.4	20.2	520	-2.0	0.6	10.0	0.010	12.0	29	4.1
1.49	8.4	20.2	520	-1.0	0.8	10.9	0.012	11.9	31	4.7
1.49	8.4	20.2	520	0.0	1.0	11.8	0.015	11.8	34	5.3
1.49	8.4	20.2	520	1.0	1.3	12.7	0.019	11.7	37	6.1
1.49	8.4	20.2	520	2.0	1.6	13.7	0.023	11.7	41	6.9
1.49	8.4	20.2	520	3.0	2.0	14.7	0.029	11.7	45	7.8
1.49	8.4	20.2	520	4.0	2.5	15.7	0.037	11.7	50	8.9
1.49	8.4	20.2	520	5.0	3.2	16.7	0.047	11.7	55	10.0
1.49	8.4	20.2	520	6.0	4.0	17.7	0.059	11.7	62	11.4
1.49	8.4	20.2	520	7.0	5.0	18.8	0.076	11.8	69	13.0
1.49	8.4	20.2	520	8.0	6.3	19.9	0.097	11.9	78	14.9
1.49	8.4	20.2	520	9.0	7.9	21.0	0.126	12.0	88	16.9
1.49	8.4	20.2	520	10.0	10.0	22.1	0.163	12.1	101	19.3
1.49	8.4	20.2	520	11.0	12.6	23.3	0.213	12.3	115	22.1
1.49	8.4	20.2	520	12.0	15.8	24.4	0.277	12.4	130	25.3
1.49	8.4	20.2	520	13.0	20.0	25.6	0.362	12.6	149	29.0
1.49	8.4	20.2	520	14.0	25.1	26.8	0.474	12.8	170	33.1
1.49	8.4	20.2	520	15.0	31.6	27.8	0.608	12.8	193	37.6
1.49	8.4	20.2	520	16.0	39.8	29.0	0.785	13.0	218	42.9
1.49	8.4	20.2	520	17.0	50.1	29.9	0.968	12.9	242	47.7
1.49	8.4	20.2	520	18.0	63.1	30.6	1.151	12.6	262	52.4
1.49	8.4	20.2	520	19.0	79.4	31.2	1.312	12.2	277	56.3
1.49	8.4	20.2	520	20.0	100.0	31.6	1.449	11.6	289	59.7
1.49	8.4	20.2	520	21.0	125.9	31.9	1.563	10.9	297	62.6
1.49	8.4	20.2	520	22.0	158.5	32.2	1.652	10.2	303	64.8
1.49	8.4	20.2	520	23.0	199.5	32.4	1.730	9.4	308	66.8

Input-Output Characteristics $V_{ds}=8.4V, I_{bias}=40mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=8.4V, I_{bias}=39.2mA$

@ $f=520MHz, V_{ds}=8.4V, I_{bias}=39.2mA$

Data

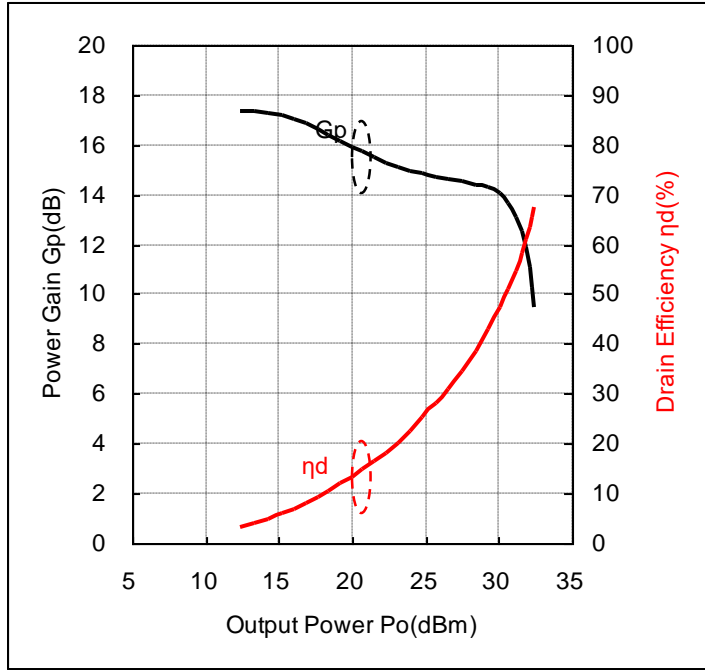
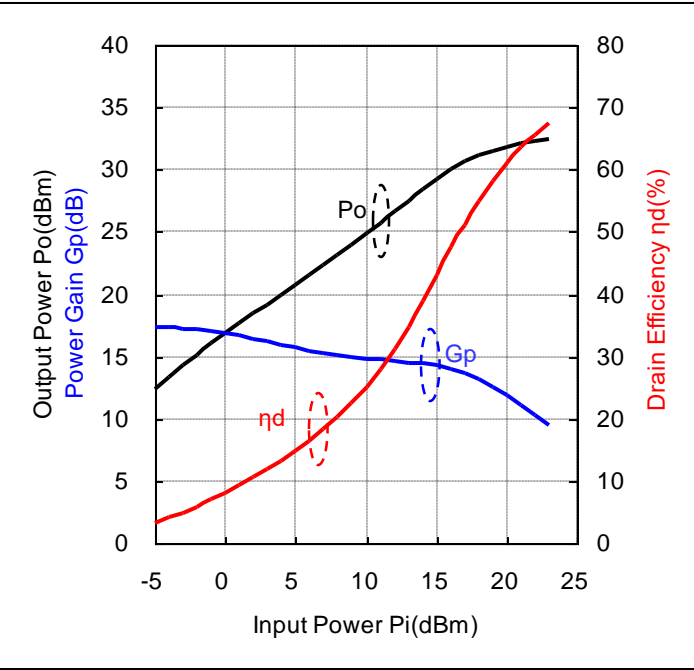
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.61	8.4	39.2	520	-5.0	0.3	10.8	0.012	15.8	44	3.3
1.61	8.4	39.2	520	-4.0	0.4	11.7	0.015	15.7	45	3.9
1.61	8.4	39.2	520	-3.0	0.5	12.6	0.018	15.6	46	4.6
1.61	8.4	39.2	520	-2.0	0.6	13.4	0.022	15.4	48	5.5
1.61	8.4	39.2	520	-1.0	0.8	14.3	0.027	15.3	51	6.3
1.61	8.4	39.2	520	0.0	1.0	15.1	0.032	15.1	53	7.2
1.61	8.4	39.2	520	1.0	1.3	15.9	0.039	14.9	57	8.1
1.61	8.4	39.2	520	2.0	1.6	16.6	0.046	14.6	61	9.1
1.61	8.4	39.2	520	3.0	2.0	17.5	0.056	14.5	65	10.2
1.61	8.4	39.2	520	4.0	2.5	18.3	0.068	14.3	71	11.4
1.61	8.4	39.2	520	5.0	3.2	19.2	0.083	14.2	77	12.8
1.61	8.4	39.2	520	6.0	4.0	20.0	0.101	14.0	84	14.3
1.61	8.4	39.2	520	7.0	5.0	20.9	0.124	13.9	92	16.0
1.61	8.4	39.2	520	8.0	6.3	21.9	0.153	13.9	102	18.0
1.61	8.4	39.2	520	9.0	7.9	22.8	0.190	13.8	112	20.1
1.61	8.4	39.2	520	10.0	10.0	23.8	0.237	13.8	125	22.6
1.61	8.4	39.2	520	11.0	12.6	24.7	0.296	13.7	139	25.4
1.61	8.4	39.2	520	12.0	15.8	25.7	0.372	13.7	155	28.6
1.61	8.4	39.2	520	13.0	20.0	26.7	0.469	13.7	173	32.3
1.61	8.4	39.2	520	14.0	25.1	27.7	0.592	13.7	194	36.4
1.61	8.4	39.2	520	15.0	31.6	28.7	0.741	13.7	216	40.8
1.61	8.4	39.2	520	16.0	39.8	29.6	0.908	13.6	238	45.4
1.61	8.4	39.2	520	17.0	50.1	30.3	1.081	13.3	258	50.0
1.61	8.4	39.2	520	18.0	63.1	30.9	1.239	12.9	274	53.9
1.61	8.4	39.2	520	19.0	79.4	31.4	1.380	12.4	286	57.6
1.61	8.4	39.2	520	20.0	100.0	31.8	1.496	11.8	295	60.5
1.61	8.4	39.2	520	21.0	125.9	32.0	1.596	11.0	301	63.1
1.61	8.4	39.2	520	22.0	158.5	32.3	1.683	10.3	306	65.4
1.61	8.4	39.2	520	23.0	199.5	32.4	1.750	9.4	310	67.2

Input-Output Characteristics $V_{ds}=8.4V, I_{bias}=60mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=8.4V, I_{bias}=59.0mA$

@ $f=520MHz, V_{ds}=8.4V, I_{bias}=59.0mA$

Data

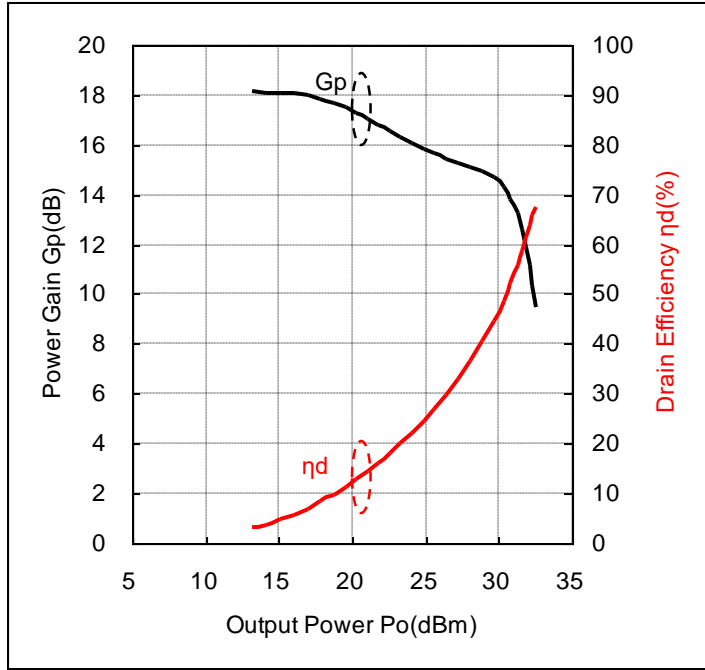
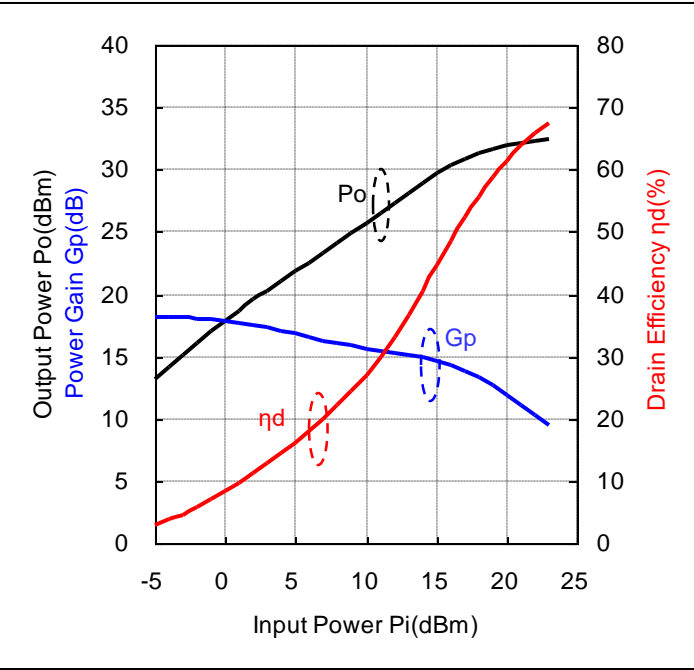
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.71	8.4	59.0	520	-5.0	0.3	12.3	0.017	17.3	62	3.3
1.71	8.4	59.0	520	-4.0	0.4	13.3	0.021	17.3	63	4.1
1.71	8.4	59.0	520	-3.0	0.5	14.2	0.027	17.2	64	4.9
1.71	8.4	59.0	520	-2.0	0.6	15.2	0.033	17.2	66	5.9
1.71	8.4	59.0	520	-1.0	0.8	16.0	0.040	17.0	68	7.0
1.71	8.4	59.0	520	0.0	1.0	16.9	0.048	16.9	71	8.2
1.71	8.4	59.0	520	1.0	1.3	17.6	0.058	16.6	74	9.3
1.71	8.4	59.0	520	2.0	1.6	18.4	0.070	16.4	78	10.6
1.71	8.4	59.0	520	3.0	2.0	19.2	0.083	16.2	83	11.9
1.71	8.4	59.0	520	4.0	2.5	19.9	0.099	15.9	89	13.2
1.71	8.4	59.0	520	5.0	3.2	20.7	0.118	15.7	95	14.8
1.71	8.4	59.0	520	6.0	4.0	21.5	0.141	15.5	102	16.4
1.71	8.4	59.0	520	7.0	5.0	22.3	0.170	15.3	111	18.2
1.71	8.4	59.0	520	8.0	6.3	23.1	0.206	15.1	121	20.2
1.71	8.4	59.0	520	9.0	7.9	24.0	0.249	15.0	132	22.5
1.71	8.4	59.0	520	10.0	10.0	24.8	0.304	14.8	144	25.1
1.71	8.4	59.0	520	11.0	12.6	25.7	0.372	14.7	159	27.9
1.71	8.4	59.0	520	12.0	15.8	26.6	0.456	14.6	175	31.1
1.71	8.4	59.0	520	13.0	20.0	27.5	0.562	14.5	193	34.7
1.71	8.4	59.0	520	14.0	25.1	28.4	0.692	14.4	213	38.7
1.71	8.4	59.0	520	15.0	31.6	29.3	0.845	14.3	233	43.1
1.71	8.4	59.0	520	16.0	39.8	30.0	1.007	14.0	253	47.4
1.71	8.4	59.0	520	17.0	50.1	30.6	1.153	13.6	268	51.2
1.71	8.4	59.0	520	18.0	63.1	31.1	1.294	13.1	281	54.8
1.71	8.4	59.0	520	19.0	79.4	31.5	1.422	12.5	291	58.2
1.71	8.4	59.0	520	20.0	100.0	31.9	1.531	11.9	298	61.1
1.71	8.4	59.0	520	21.0	125.9	32.1	1.622	11.1	304	63.5
1.71	8.4	59.0	520	22.0	158.5	32.3	1.698	10.3	308	65.6
1.71	8.4	59.0	520	23.0	199.5	32.5	1.766	9.5	312	67.5

Input-Output Characteristics $V_{ds}=8.4V, I_{bias}=80mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=8.4V, I_{bias}=78.5mA$

@ $f=520MHz, V_{ds}=8.4V, I_{bias}=78.5mA$

Data

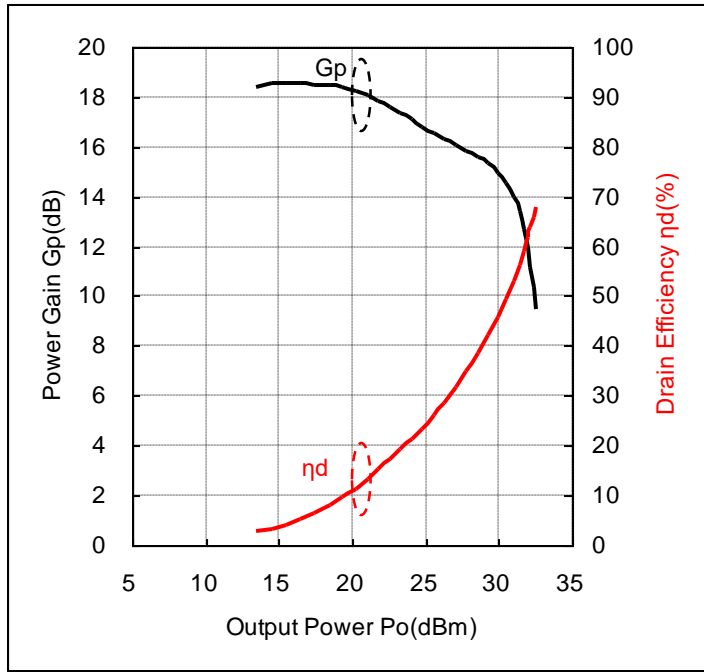
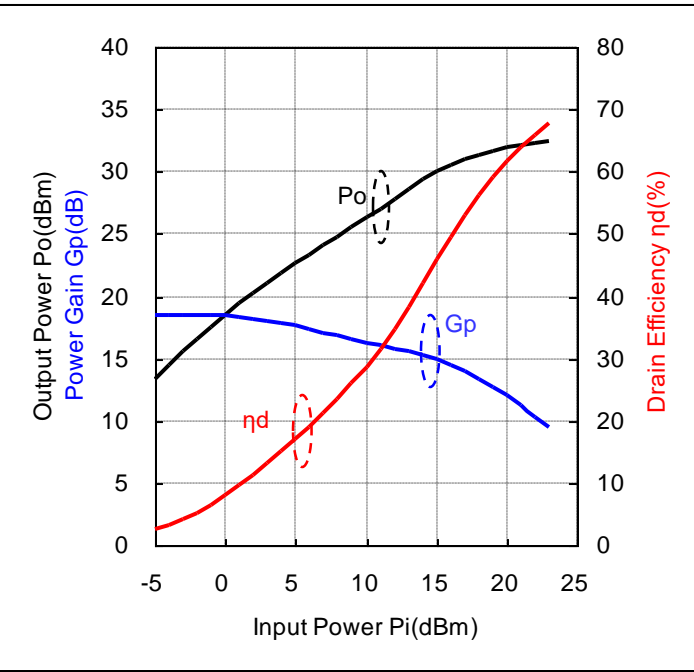
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.80	8.4	78.5	520	-5.0	0.3	13.1	0.021	18.1	81	3.0
1.80	8.4	78.5	520	-4.0	0.4	14.1	0.026	18.1	82	3.7
1.80	8.4	78.5	520	-3.0	0.5	15.1	0.032	18.1	83	4.7
1.80	8.4	78.5	520	-2.0	0.6	16.0	0.040	18.0	84	5.7
1.80	8.4	78.5	520	-1.0	0.8	17.0	0.050	18.0	86	6.9
1.80	8.4	78.5	520	0.0	1.0	17.9	0.061	17.9	87	8.3
1.80	8.4	78.5	520	1.0	1.3	18.7	0.074	17.7	91	9.8
1.80	8.4	78.5	520	2.0	1.6	19.5	0.090	17.5	94	11.3
1.80	8.4	78.5	520	3.0	2.0	20.3	0.107	17.3	99	12.9
1.80	8.4	78.5	520	4.0	2.5	21.0	0.127	17.0	104	14.5
1.80	8.4	78.5	520	5.0	3.2	21.8	0.151	16.8	111	16.2
1.80	8.4	78.5	520	6.0	4.0	22.5	0.179	16.5	119	18.0
1.80	8.4	78.5	520	7.0	5.0	23.3	0.214	16.3	128	19.9
1.80	8.4	78.5	520	8.0	6.3	24.1	0.255	16.1	138	22.1
1.80	8.4	78.5	520	9.0	7.9	24.9	0.305	15.9	149	24.4
1.80	8.4	78.5	520	10.0	10.0	25.6	0.366	15.6	161	27.0
1.80	8.4	78.5	520	11.0	12.6	26.5	0.442	15.5	176	29.9
1.80	8.4	78.5	520	12.0	15.8	27.3	0.532	15.3	191	33.1
1.80	8.4	78.5	520	13.0	20.0	28.1	0.646	15.1	210	36.7
1.80	8.4	78.5	520	14.0	25.1	28.9	0.778	14.9	228	40.6
1.80	8.4	78.5	520	15.0	31.6	29.7	0.925	14.7	247	44.6
1.80	8.4	78.5	520	16.0	39.8	30.3	1.074	14.3	263	48.6
1.80	8.4	78.5	520	17.0	50.1	30.8	1.213	13.8	276	52.3
1.80	8.4	78.5	520	18.0	63.1	31.3	1.343	13.3	287	55.7
1.80	8.4	78.5	520	19.0	79.4	31.6	1.455	12.6	295	58.7
1.80	8.4	78.5	520	20.0	100.0	31.9	1.556	11.9	302	61.4
1.80	8.4	78.5	520	21.0	125.9	32.2	1.641	11.2	306	63.8
1.80	8.4	78.5	520	22.0	158.5	32.3	1.714	10.3	310	65.9
1.80	8.4	78.5	520	23.0	199.5	32.5	1.774	9.5	313	67.6

Input-Output Characteristics $V_{ds}=8.4V$, $I_{bias}=100mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=98.1mA$

@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=98.1mA$

Data

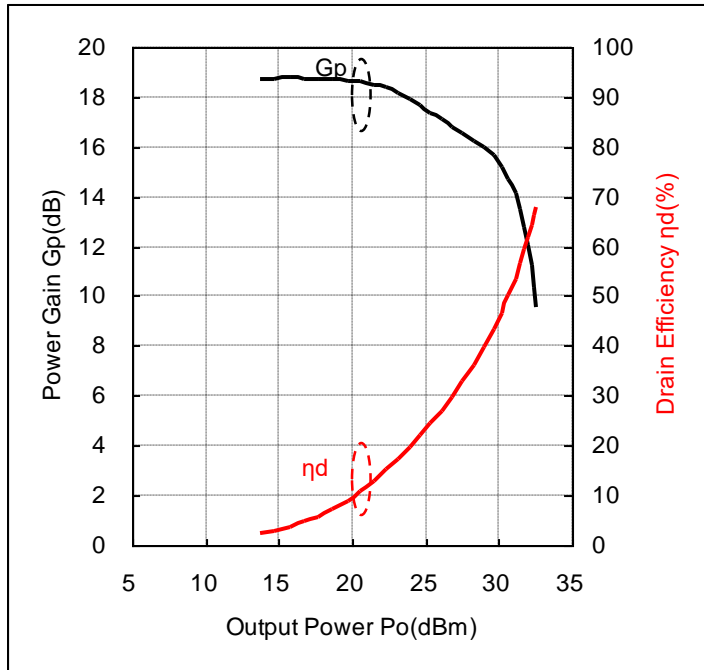
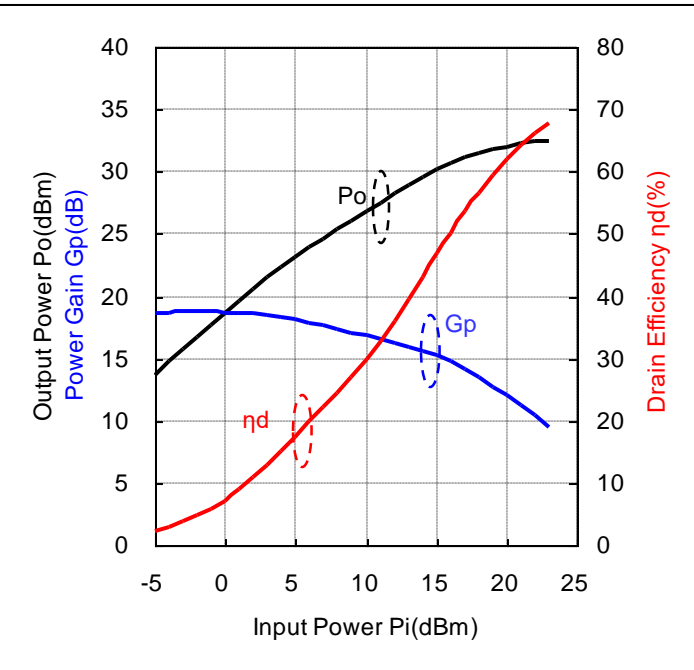
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.88	8.4	98.1	520	-5.0	0.3	13.4	0.022	18.4	100	2.6
1.88	8.4	98.1	520	-4.0	0.4	14.5	0.028	18.5	101	3.3
1.88	8.4	98.1	520	-3.0	0.5	15.5	0.036	18.5	101	4.2
1.88	8.4	98.1	520	-2.0	0.6	16.5	0.045	18.5	102	5.2
1.88	8.4	98.1	520	-1.0	0.8	17.5	0.056	18.5	103	6.4
1.88	8.4	98.1	520	0.0	1.0	18.5	0.070	18.5	105	7.9
1.88	8.4	98.1	520	1.0	1.3	19.4	0.086	18.4	107	9.6
1.88	8.4	98.1	520	2.0	1.6	20.2	0.105	18.2	110	11.3
1.88	8.4	98.1	520	3.0	2.0	21.0	0.127	18.0	114	13.2
1.88	8.4	98.1	520	4.0	2.5	21.8	0.152	17.8	120	15.2
1.88	8.4	98.1	520	5.0	3.2	22.6	0.182	17.6	126	17.2
1.88	8.4	98.1	520	6.0	4.0	23.3	0.215	17.3	134	19.1
1.88	8.4	98.1	520	7.0	5.0	24.1	0.255	17.1	143	21.2
1.88	8.4	98.1	520	8.0	6.3	24.8	0.302	16.8	153	23.4
1.88	8.4	98.1	520	9.0	7.9	25.5	0.358	16.5	164	25.9
1.88	8.4	98.1	520	10.0	10.0	26.3	0.426	16.3	177	28.6
1.88	8.4	98.1	520	11.0	12.6	27.0	0.507	16.0	191	31.5
1.88	8.4	98.1	520	12.0	15.8	27.8	0.604	15.8	207	34.8
1.88	8.4	98.1	520	13.0	20.0	28.6	0.723	15.6	224	38.4
1.88	8.4	98.1	520	14.0	25.1	29.3	0.855	15.3	242	42.1
1.88	8.4	98.1	520	15.0	31.6	30.0	0.993	15.0	258	45.9
1.88	8.4	98.1	520	16.0	39.8	30.5	1.130	14.5	272	49.5
1.88	8.4	98.1	520	17.0	50.1	31.0	1.259	14.0	283	53.0
1.88	8.4	98.1	520	18.0	63.1	31.4	1.377	13.4	292	56.2
1.88	8.4	98.1	520	19.0	79.4	31.7	1.483	12.7	299	59.1
1.88	8.4	98.1	520	20.0	100.0	32.0	1.574	12.0	304	61.7
1.88	8.4	98.1	520	21.0	125.9	32.2	1.656	11.2	308	64.0
1.88	8.4	98.1	520	22.0	158.5	32.4	1.722	10.4	311	65.9
1.88	8.4	98.1	520	23.0	199.5	32.5	1.782	9.5	314	67.7

Input-Output Characteristics $V_{ds}=8.4V$, $I_{bias}=120mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=117.8mA$

@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=117.8mA$

Data

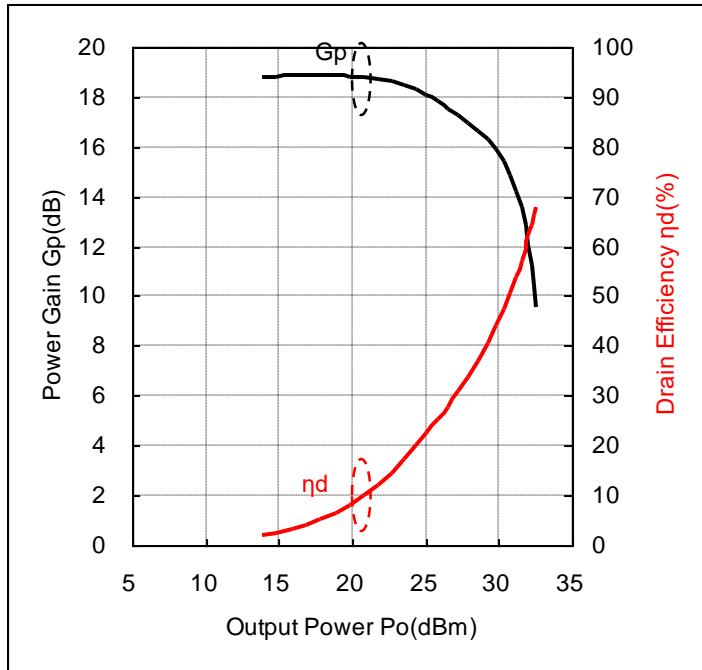
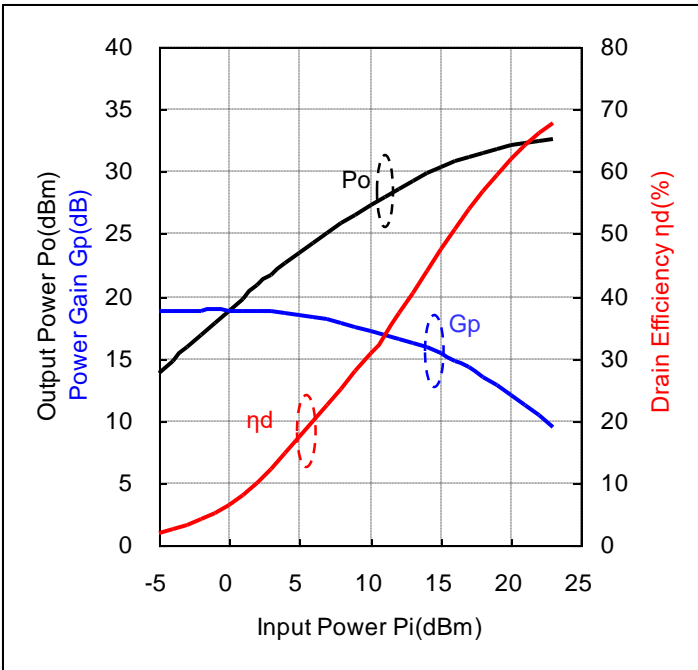
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.96	8.4	117.8	520	-5.0	0.3	13.7	0.023	18.7	119	2.3
1.96	8.4	117.8	520	-4.0	0.4	14.7	0.030	18.7	120	2.9
1.96	8.4	117.8	520	-3.0	0.5	15.8	0.038	18.8	120	3.7
1.96	8.4	117.8	520	-2.0	0.6	16.7	0.047	18.7	121	4.7
1.96	8.4	117.8	520	-1.0	0.8	17.7	0.059	18.7	122	5.8
1.96	8.4	117.8	520	0.0	1.0	18.7	0.074	18.7	123	7.2
1.96	8.4	117.8	520	1.0	1.3	19.7	0.093	18.7	125	8.9
1.96	8.4	117.8	520	2.0	1.6	20.6	0.115	18.6	127	10.8
1.96	8.4	117.8	520	3.0	2.0	21.5	0.141	18.5	130	12.9
1.96	8.4	117.8	520	4.0	2.5	22.4	0.172	18.4	134	15.2
1.96	8.4	117.8	520	5.0	3.2	23.1	0.206	18.1	141	17.5
1.96	8.4	117.8	520	6.0	4.0	23.9	0.245	17.9	148	19.8
1.96	8.4	117.8	520	7.0	5.0	24.6	0.291	17.6	157	22.1
1.96	8.4	117.8	520	8.0	6.3	25.4	0.344	17.4	167	24.5
1.96	8.4	117.8	520	9.0	7.9	26.1	0.406	17.1	179	27.0
1.96	8.4	117.8	520	10.0	10.0	26.8	0.479	16.8	191	29.8
1.96	8.4	117.8	520	11.0	12.6	27.5	0.568	16.5	205	32.9
1.96	8.4	117.8	520	12.0	15.8	28.3	0.668	16.3	221	36.0
1.96	8.4	117.8	520	13.0	20.0	29.0	0.789	16.0	237	39.7
1.96	8.4	117.8	520	14.0	25.1	29.6	0.918	15.6	253	43.2
1.96	8.4	117.8	520	15.0	31.6	30.2	1.047	15.2	267	46.8
1.96	8.4	117.8	520	16.0	39.8	30.7	1.175	14.7	278	50.2
1.96	8.4	117.8	520	17.0	50.1	31.1	1.294	14.1	288	53.5
1.96	8.4	117.8	520	18.0	63.1	31.5	1.406	13.5	295	56.6
1.96	8.4	117.8	520	19.0	79.4	31.8	1.503	12.8	301	59.4
1.96	8.4	117.8	520	20.0	100.0	32.0	1.592	12.0	306	62.0
1.96	8.4	117.8	520	21.0	125.9	32.2	1.667	11.2	309	64.2
1.96	8.4	117.8	520	22.0	158.5	32.4	1.734	10.4	312	66.1
1.96	8.4	117.8	520	23.0	199.5	32.5	1.791	9.5	314	67.8

Input-Output Characteristics $V_{ds}=8.4V$, $I_{bias}=140mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



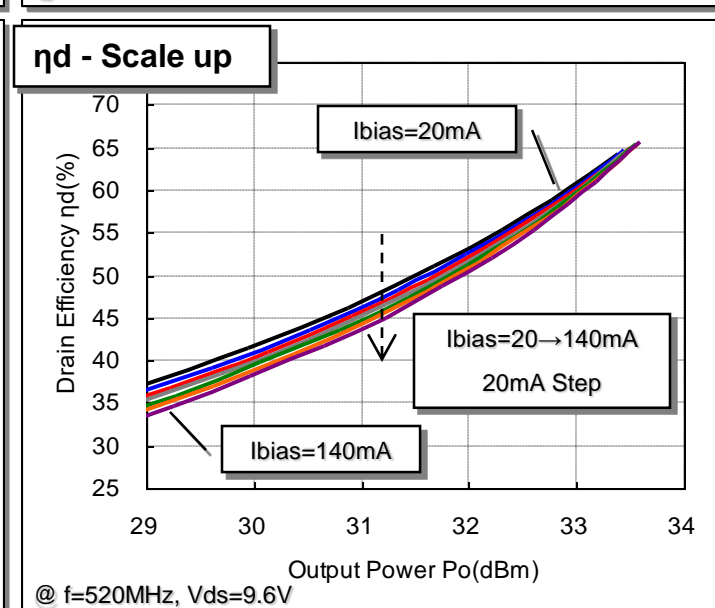
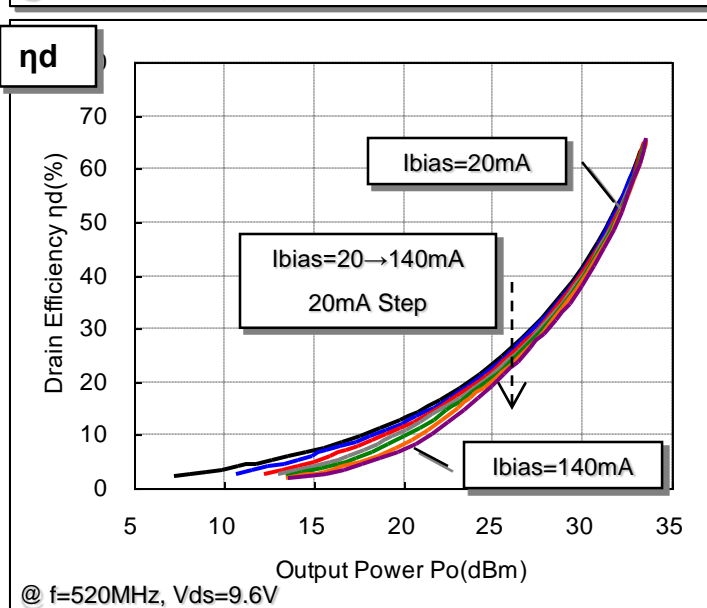
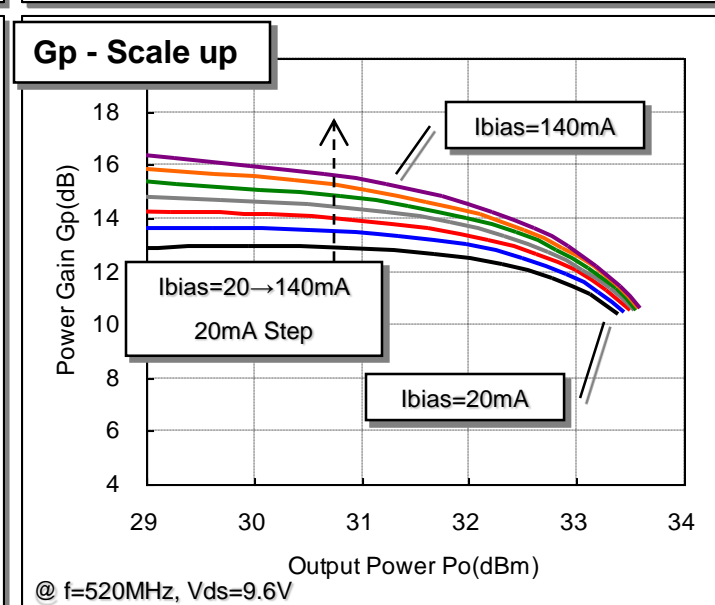
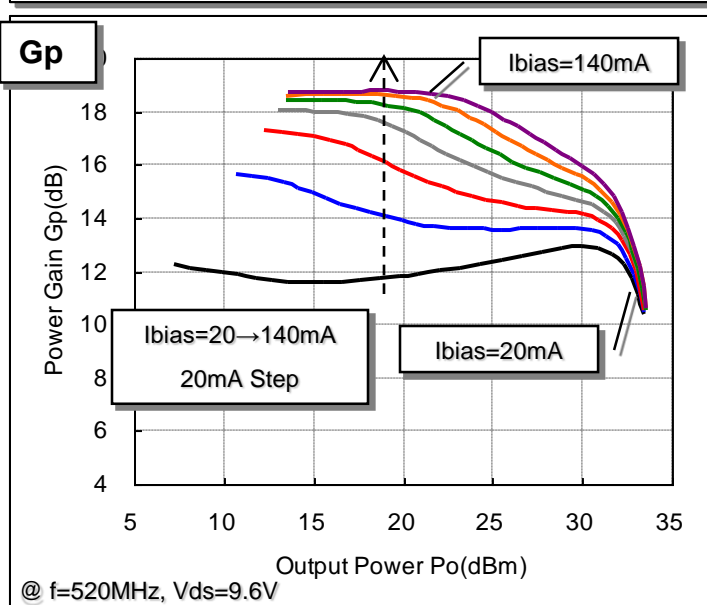
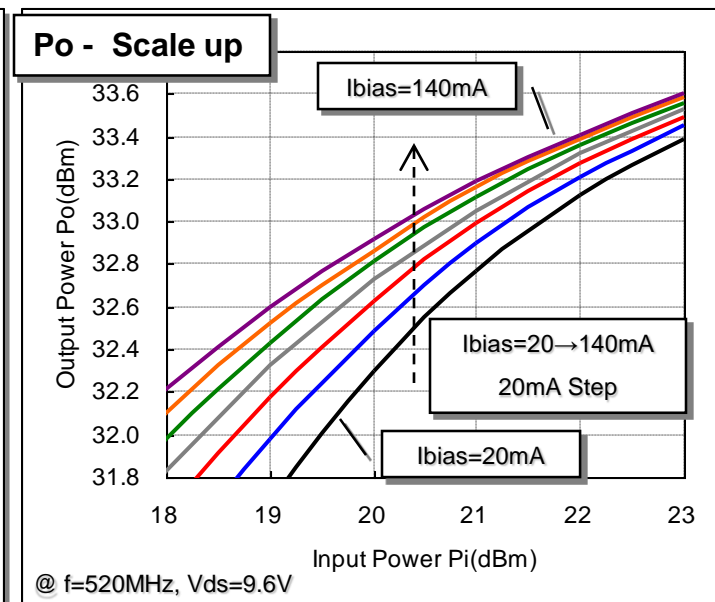
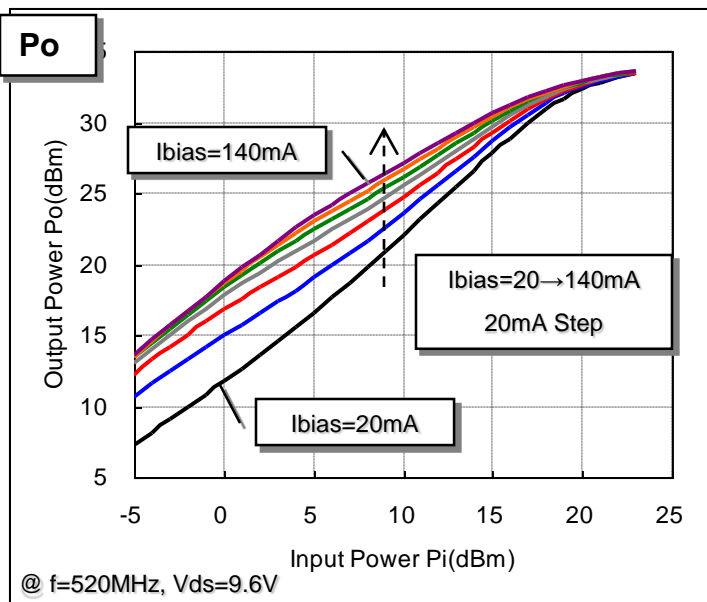
@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=137.6mA$

@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=137.6mA$

Data

V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.04	8.4	137.6	520	-5.0	0.3	13.8	0.024	18.8	139	2.1
2.04	8.4	137.6	520	-4.0	0.4	14.8	0.030	18.8	139	2.6
2.04	8.4	137.6	520	-3.0	0.5	15.9	0.039	18.9	139	3.3
2.04	8.4	137.6	520	-2.0	0.6	16.9	0.049	18.9	140	4.1
2.04	8.4	137.6	520	-1.0	0.8	17.9	0.061	18.9	141	5.2
2.04	8.4	137.6	520	0.0	1.0	18.9	0.077	18.9	142	6.4
2.04	8.4	137.6	520	1.0	1.3	19.8	0.096	18.8	143	8.0
2.04	8.4	137.6	520	2.0	1.6	20.8	0.121	18.8	145	9.9
2.04	8.4	137.6	520	3.0	2.0	21.8	0.150	18.8	147	12.1
2.04	8.4	137.6	520	4.0	2.5	22.7	0.185	18.7	150	14.6
2.04	8.4	137.6	520	5.0	3.2	23.5	0.224	18.5	155	17.2
2.04	8.4	137.6	520	6.0	4.0	24.3	0.271	18.3	162	19.9
2.04	8.4	137.6	520	7.0	5.0	25.1	0.322	18.1	171	22.5
2.04	8.4	137.6	520	8.0	6.3	25.8	0.381	17.8	181	25.1
2.04	8.4	137.6	520	9.0	7.9	26.5	0.451	17.5	192	27.9
2.04	8.4	137.6	520	10.0	10.0	27.2	0.530	17.2	205	30.8
2.04	8.4	137.6	520	11.0	12.6	27.9	0.622	16.9	219	33.9
2.04	8.4	137.6	520	12.0	15.8	28.6	0.728	16.6	233	37.1
2.04	8.4	137.6	520	13.0	20.0	29.3	0.847	16.3	248	40.6
2.04	8.4	137.6	520	14.0	25.1	29.9	0.973	15.9	262	44.1
2.04	8.4	137.6	520	15.0	31.6	30.4	1.094	15.4	274	47.5
2.04	8.4	137.6	520	16.0	39.8	30.8	1.211	14.8	284	50.7
2.04	8.4	137.6	520	17.0	50.1	31.2	1.324	14.2	292	53.9
2.04	8.4	137.6	520	18.0	63.1	31.5	1.429	13.5	299	56.9
2.04	8.4	137.6	520	19.0	79.4	31.8	1.521	12.8	304	59.6
2.04	8.4	137.6	520	20.0	100.0	32.1	1.607	12.1	308	62.2
2.04	8.4	137.6	520	21.0	125.9	32.3	1.679	11.3	311	64.3
2.04	8.4	137.6	520	22.0	158.5	32.4	1.742	10.4	313	66.2
2.04	8.4	137.6	520	23.0	199.5	32.5	1.795	9.5	315	67.8

Input - Output Characteristics $V_{ds}=9.6V$ - Condition 1

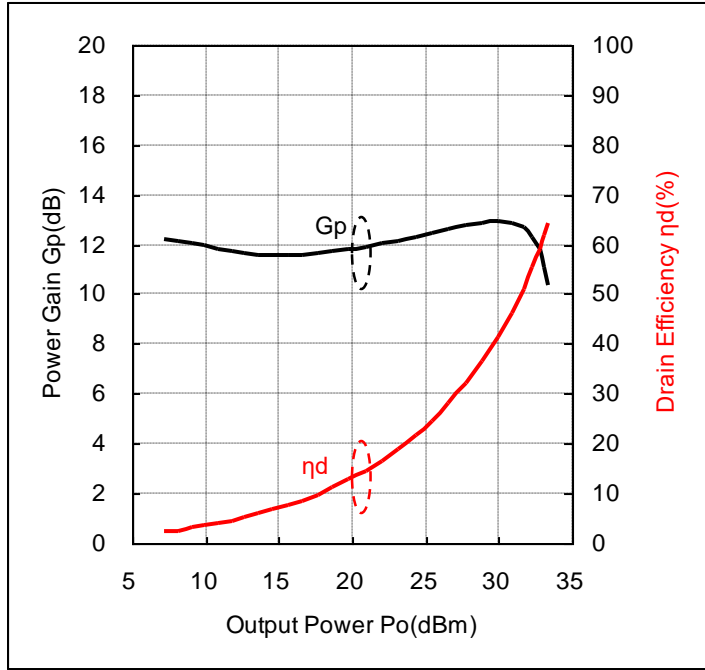
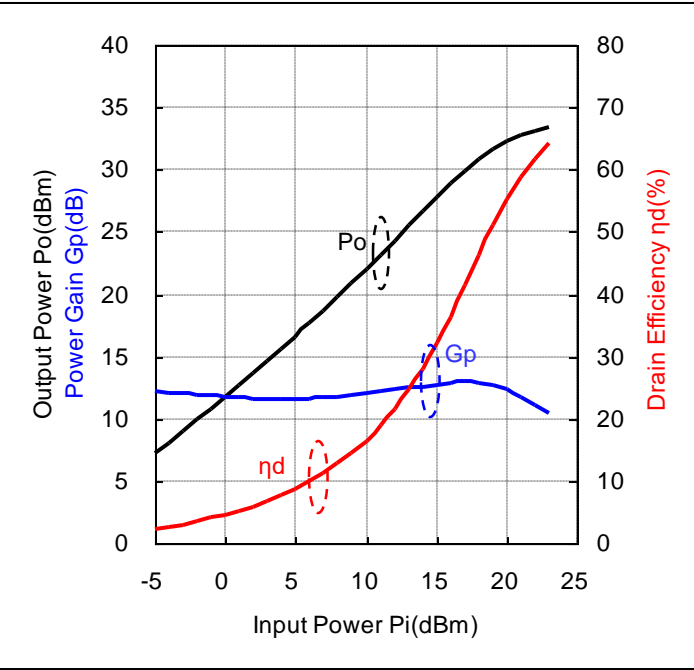


Input-Output Characteristics $V_{ds}=9.6V, I_{bias}=20mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=9.6V, I_{bias}=20.2mA$

@ $f=520MHz, V_{ds}=9.6V, I_{bias}=20.2mA$

Data

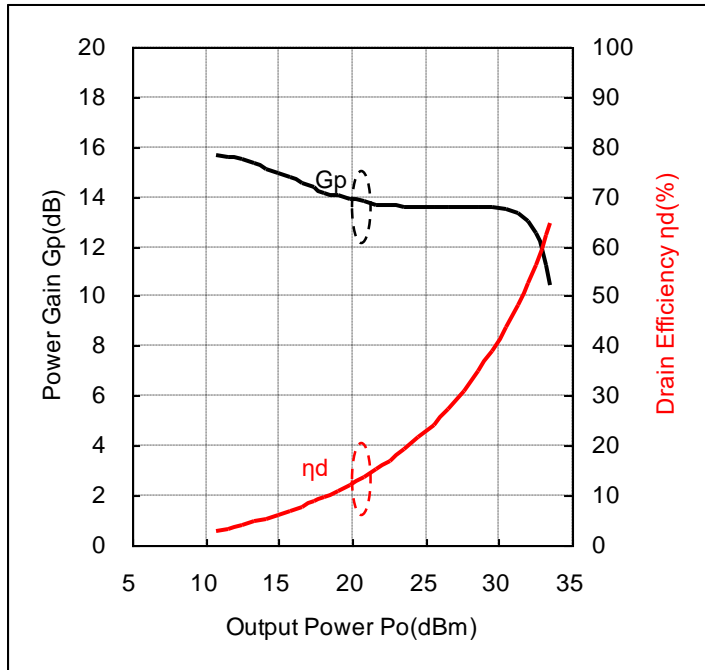
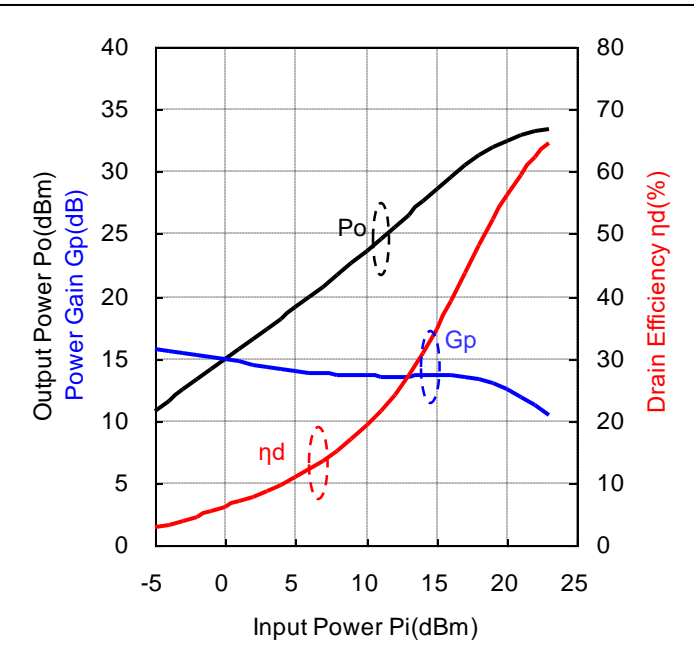
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.47	9.6	20.2	520	-5.0	0.3	7.2	0.005	12.2	25	2.2
1.47	9.6	20.2	520	-4.0	0.4	8.1	0.006	12.1	26	2.6
1.47	9.6	20.2	520	-3.0	0.5	9.1	0.008	12.1	28	3.0
1.47	9.6	20.2	520	-2.0	0.6	9.9	0.010	11.9	29	3.5
1.47	9.6	20.2	520	-1.0	0.8	10.8	0.012	11.8	31	4.0
1.47	9.6	20.2	520	0.0	1.0	11.8	0.015	11.8	34	4.6
1.47	9.6	20.2	520	1.0	1.3	12.7	0.018	11.7	37	5.2
1.47	9.6	20.2	520	2.0	1.6	13.6	0.023	11.6	41	5.9
1.47	9.6	20.2	520	3.0	2.0	14.6	0.029	11.6	45	6.7
1.47	9.6	20.2	520	4.0	2.5	15.6	0.036	11.6	50	7.6
1.47	9.6	20.2	520	5.0	3.2	16.6	0.046	11.6	55	8.6
1.47	9.6	20.2	520	6.0	4.0	17.6	0.058	11.6	61	9.8
1.47	9.6	20.2	520	7.0	5.0	18.7	0.074	11.7	69	11.1
1.47	9.6	20.2	520	8.0	6.3	19.8	0.095	11.8	78	12.7
1.47	9.6	20.2	520	9.0	7.9	20.9	0.123	11.9	89	14.4
1.47	9.6	20.2	520	10.0	10.0	22.0	0.159	12.0	101	16.5
1.47	9.6	20.2	520	11.0	12.6	23.2	0.207	12.2	115	18.8
1.47	9.6	20.2	520	12.0	15.8	24.3	0.270	12.3	131	21.5
1.47	9.6	20.2	520	13.0	20.0	25.5	0.352	12.5	149	24.6
1.47	9.6	20.2	520	14.0	25.1	26.6	0.456	12.6	169	28.1
1.47	9.6	20.2	520	15.0	31.6	27.8	0.596	12.8	194	32.1
1.47	9.6	20.2	520	16.0	39.8	28.8	0.766	12.8	219	36.5
1.47	9.6	20.2	520	17.0	50.1	29.9	0.986	12.9	248	41.4
1.47	9.6	20.2	520	18.0	63.1	30.9	1.225	12.9	276	46.2
1.47	9.6	20.2	520	19.0	79.4	31.7	1.472	12.7	301	51.0
1.47	9.6	20.2	520	20.0	100.0	32.3	1.698	12.3	320	55.3
1.47	9.6	20.2	520	21.0	125.9	32.8	1.892	11.8	335	58.9
1.47	9.6	20.2	520	22.0	158.5	33.1	2.051	11.1	346	61.8
1.47	9.6	20.2	520	23.0	199.5	33.4	2.183	10.4	354	64.3

Input-Output Characteristics $V_{ds}=9.6V, I_{bias}=40mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=9.6V, I_{bias}=39.4mA$

@ $f=520MHz, V_{ds}=9.6V, I_{bias}=39.4mA$

Data

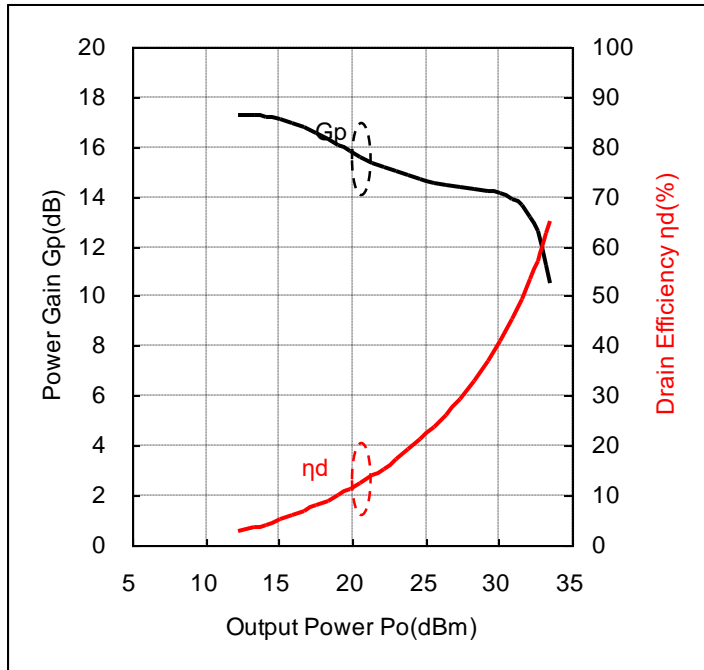
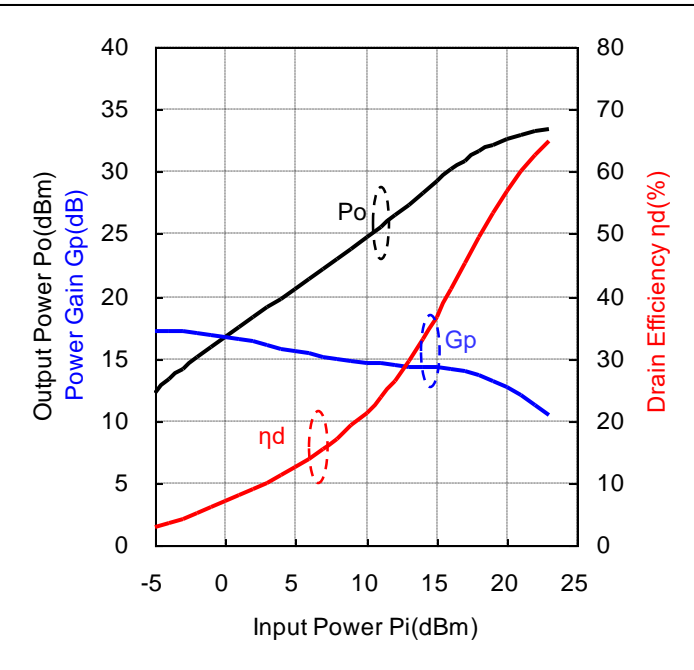
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.58	9.6	39.4	520	-5.0	0.3	10.7	0.012	15.7	43	2.8
1.58	9.6	39.4	520	-4.0	0.4	11.6	0.014	15.6	45	3.4
1.58	9.6	39.4	520	-3.0	0.5	12.5	0.018	15.5	46	4.0
1.58	9.6	39.4	520	-2.0	0.6	13.3	0.021	15.3	48	4.6
1.58	9.6	39.4	520	-1.0	0.8	14.1	0.026	15.1	50	5.4
1.58	9.6	39.4	520	0.0	1.0	15.0	0.031	15.0	53	6.2
1.58	9.6	39.4	520	1.0	1.3	15.8	0.038	14.8	56	7.0
1.58	9.6	39.4	520	2.0	1.6	16.5	0.045	14.5	60	7.8
1.58	9.6	39.4	520	3.0	2.0	17.4	0.054	14.4	65	8.7
1.58	9.6	39.4	520	4.0	2.5	18.1	0.065	14.1	70	9.7
1.58	9.6	39.4	520	5.0	3.2	19.0	0.080	14.0	77	10.9
1.58	9.6	39.4	520	6.0	4.0	19.9	0.097	13.9	83	12.2
1.58	9.6	39.4	520	7.0	5.0	20.8	0.120	13.8	92	13.6
1.58	9.6	39.4	520	8.0	6.3	21.7	0.147	13.7	101	15.2
1.58	9.6	39.4	520	9.0	7.9	22.6	0.183	13.6	112	17.0
1.58	9.6	39.4	520	10.0	10.0	23.6	0.228	13.6	124	19.1
1.58	9.6	39.4	520	11.0	12.6	24.6	0.286	13.6	139	21.5
1.58	9.6	39.4	520	12.0	15.8	25.5	0.358	13.5	154	24.2
1.58	9.6	39.4	520	13.0	20.0	26.6	0.453	13.6	173	27.3
1.58	9.6	39.4	520	14.0	25.1	27.6	0.573	13.6	194	30.8
1.58	9.6	39.4	520	15.0	31.6	28.6	0.726	13.6	217	34.8
1.58	9.6	39.4	520	16.0	39.8	29.6	0.914	13.6	244	39.1
1.58	9.6	39.4	520	17.0	50.1	30.5	1.127	13.5	269	43.6
1.58	9.6	39.4	520	18.0	63.1	31.4	1.365	13.4	294	48.3
1.58	9.6	39.4	520	19.0	79.4	32.0	1.578	13.0	313	52.4
1.58	9.6	39.4	520	20.0	100.0	32.5	1.774	12.5	329	56.2
1.58	9.6	39.4	520	21.0	125.9	32.9	1.950	11.9	341	59.6
1.58	9.6	39.4	520	22.0	158.5	33.2	2.094	11.2	350	62.3
1.58	9.6	39.4	520	23.0	199.5	33.5	2.213	10.5	357	64.6

Input-Output Characteristics $V_{ds}=9.6V, I_{bias}=60mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=9.6V, I_{bias}=59.2mA$

@ $f=520MHz, V_{ds}=9.6V, I_{bias}=59.2mA$

Data

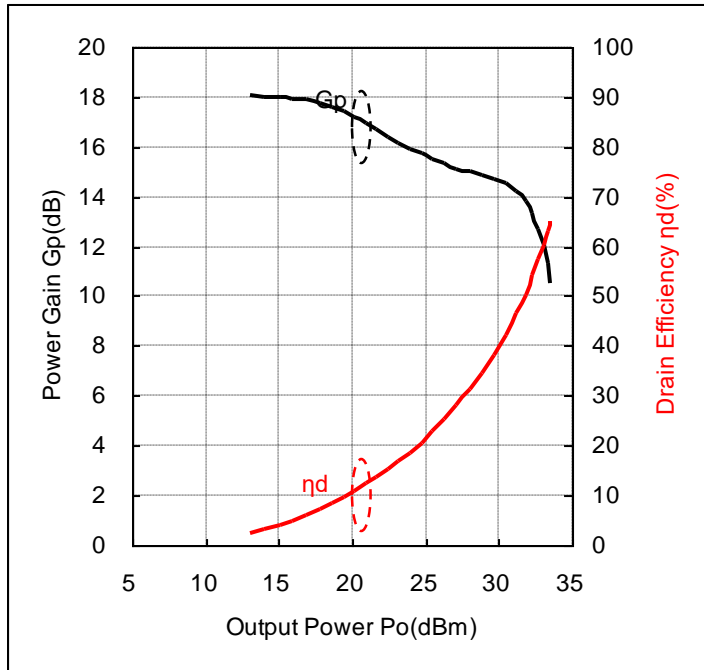
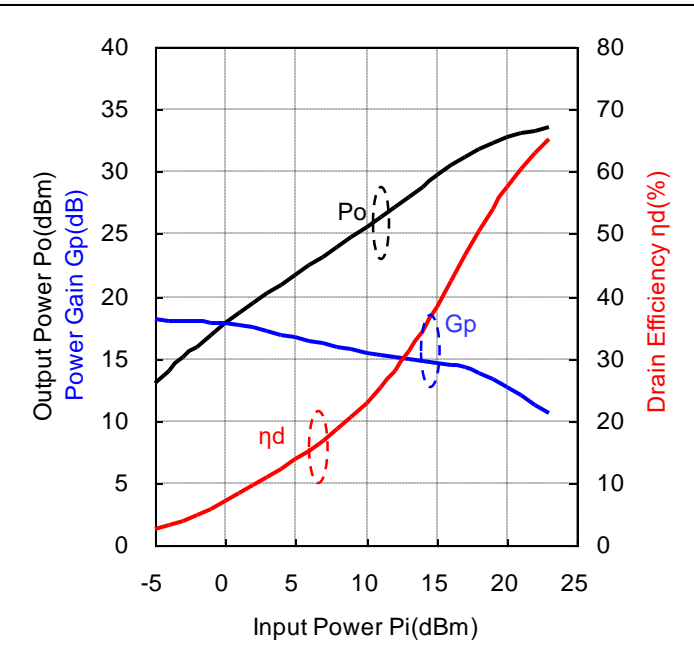
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.68	9.6	59.2	520	-5.0	0.3	12.3	0.017	17.3	63	2.8
1.68	9.6	59.2	520	-4.0	0.4	13.3	0.021	17.3	64	3.5
1.68	9.6	59.2	520	-3.0	0.5	14.2	0.026	17.2	65	4.2
1.68	9.6	59.2	520	-2.0	0.6	15.1	0.032	17.1	66	5.0
1.68	9.6	59.2	520	-1.0	0.8	15.9	0.039	16.9	68	6.0
1.68	9.6	59.2	520	0.0	1.0	16.8	0.048	16.8	71	7.0
1.68	9.6	59.2	520	1.0	1.3	17.5	0.057	16.5	74	8.0
1.68	9.6	59.2	520	2.0	1.6	18.3	0.068	16.3	78	9.0
1.68	9.6	59.2	520	3.0	2.0	19.0	0.080	16.0	83	10.1
1.68	9.6	59.2	520	4.0	2.5	19.8	0.096	15.8	89	11.3
1.68	9.6	59.2	520	5.0	3.2	20.6	0.114	15.6	95	12.6
1.68	9.6	59.2	520	6.0	4.0	21.4	0.137	15.4	103	13.9
1.68	9.6	59.2	520	7.0	5.0	22.2	0.165	15.2	111	15.4
1.68	9.6	59.2	520	8.0	6.3	23.0	0.199	15.0	121	17.2
1.68	9.6	59.2	520	9.0	7.9	23.8	0.242	14.8	131	19.1
1.68	9.6	59.2	520	10.0	10.0	24.7	0.293	14.7	144	21.2
1.68	9.6	59.2	520	11.0	12.6	25.6	0.360	14.6	159	23.6
1.68	9.6	59.2	520	12.0	15.8	26.4	0.441	14.4	175	26.3
1.68	9.6	59.2	520	13.0	20.0	27.4	0.546	14.4	193	29.4
1.68	9.6	59.2	520	14.0	25.1	28.3	0.676	14.3	214	33.0
1.68	9.6	59.2	520	15.0	31.6	29.2	0.836	14.2	237	36.8
1.68	9.6	59.2	520	16.0	39.8	30.1	1.030	14.1	261	41.1
1.68	9.6	59.2	520	17.0	50.1	30.9	1.236	13.9	285	45.2
1.68	9.6	59.2	520	18.0	63.1	31.6	1.452	13.6	306	49.5
1.68	9.6	59.2	520	19.0	79.4	32.2	1.652	13.2	323	53.4
1.68	9.6	59.2	520	20.0	100.0	32.6	1.832	12.6	336	56.9
1.68	9.6	59.2	520	21.0	125.9	33.0	1.991	12.0	346	60.0
1.68	9.6	59.2	520	22.0	158.5	33.3	2.123	11.3	353	62.7
1.68	9.6	59.2	520	23.0	199.5	33.5	2.234	10.5	359	64.9

Input-Output Characteristics $V_{ds}=9.6V, I_{bias}=80mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=9.6V, I_{bias}=79.4mA$

@ $f=520MHz, V_{ds}=9.6V, I_{bias}=79.4mA$

Data

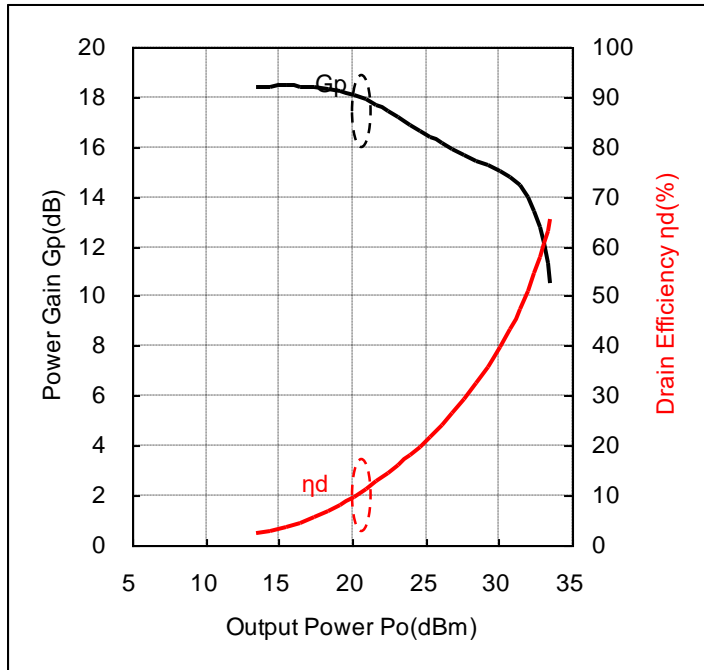
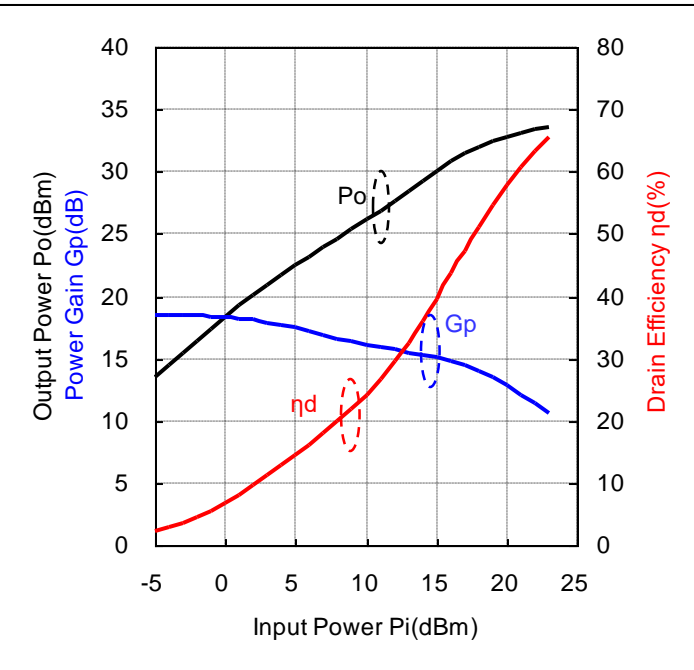
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.77	9.6	79.4	520	-5.0	0.3	13.1	0.020	18.1	82	2.6
1.77	9.6	79.4	520	-4.0	0.4	14.0	0.025	18.0	83	3.2
1.77	9.6	79.4	520	-3.0	0.5	15.0	0.032	18.0	84	4.0
1.77	9.6	79.4	520	-2.0	0.6	15.9	0.039	17.9	84	4.9
1.77	9.6	79.4	520	-1.0	0.8	16.9	0.049	17.9	86	5.9
1.77	9.6	79.4	520	0.0	1.0	17.8	0.060	17.8	88	7.1
1.77	9.6	79.4	520	1.0	1.3	18.6	0.073	17.6	91	8.3
1.77	9.6	79.4	520	2.0	1.6	19.4	0.088	17.4	94	9.7
1.77	9.6	79.4	520	3.0	2.0	20.2	0.104	17.2	99	11.0
1.77	9.6	79.4	520	4.0	2.5	20.9	0.124	16.9	105	12.3
1.77	9.6	79.4	520	5.0	3.2	21.7	0.147	16.7	111	13.7
1.77	9.6	79.4	520	6.0	4.0	22.4	0.175	16.4	119	15.3
1.77	9.6	79.4	520	7.0	5.0	23.2	0.207	16.2	128	16.9
1.77	9.6	79.4	520	8.0	6.3	23.9	0.247	15.9	138	18.7
1.77	9.6	79.4	520	9.0	7.9	24.7	0.296	15.7	149	20.7
1.77	9.6	79.4	520	10.0	10.0	25.5	0.355	15.5	162	22.8
1.77	9.6	79.4	520	11.0	12.6	26.3	0.428	15.3	176	25.3
1.77	9.6	79.4	520	12.0	15.8	27.1	0.518	15.1	192	28.1
1.77	9.6	79.4	520	13.0	20.0	28.0	0.630	15.0	210	31.2
1.77	9.6	79.4	520	14.0	25.1	28.8	0.764	14.8	231	34.5
1.77	9.6	79.4	520	15.0	31.6	29.7	0.929	14.7	253	38.3
1.77	9.6	79.4	520	16.0	39.8	30.5	1.122	14.5	276	42.4
1.77	9.6	79.4	520	17.0	50.1	31.2	1.327	14.2	297	46.5
1.77	9.6	79.4	520	18.0	63.1	31.8	1.524	13.8	315	50.4
1.77	9.6	79.4	520	19.0	79.4	32.3	1.710	13.3	329	54.1
1.77	9.6	79.4	520	20.0	100.0	32.7	1.875	12.7	340	57.4
1.77	9.6	79.4	520	21.0	125.9	33.0	2.018	12.0	349	60.3
1.77	9.6	79.4	520	22.0	158.5	33.3	2.148	11.3	355	63.0
1.77	9.6	79.4	520	23.0	199.5	33.5	2.254	10.5	360	65.2

Input-Output Characteristics $V_{ds}=9.6V$, $I_{bias}=100mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=9.6V$, $I_{bias}=98.6mA$

@ $f=520MHz$, $V_{ds}=9.6V$, $I_{bias}=98.6mA$

Data

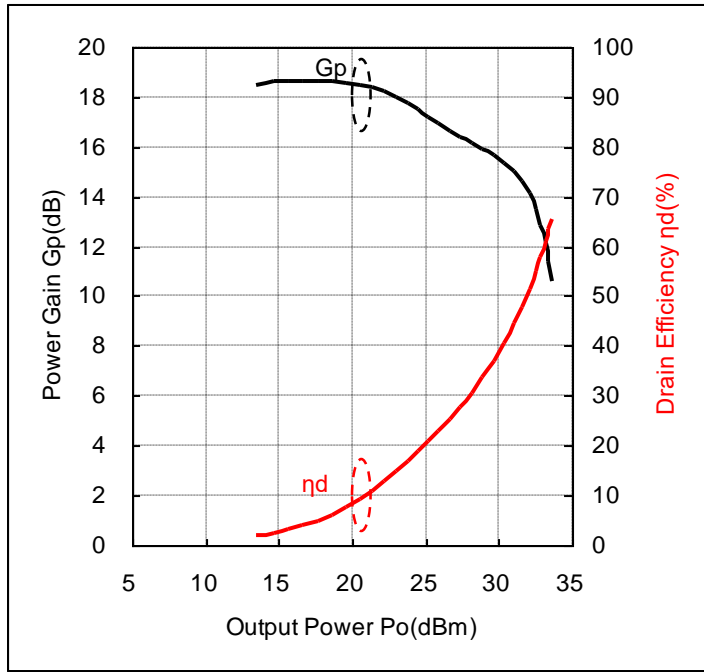
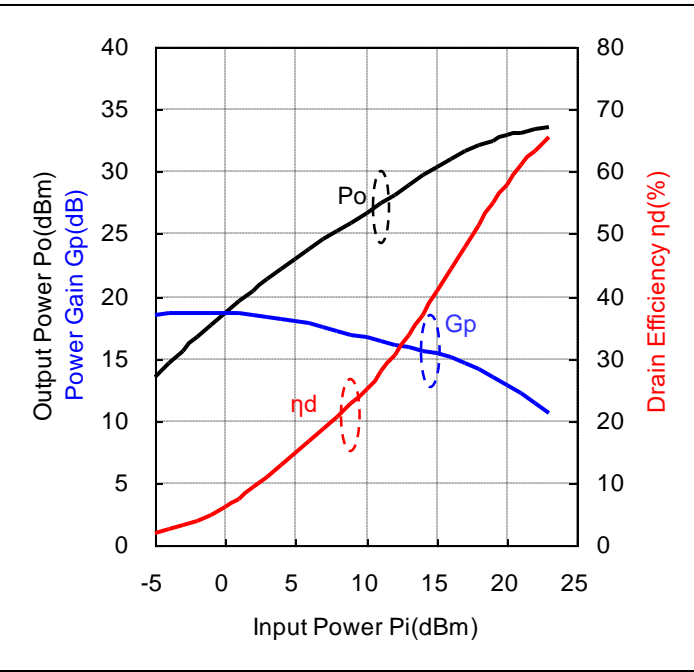
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.85	9.6	98.6	520	-5.0	0.3	13.4	0.022	18.4	100	2.3
1.85	9.6	98.6	520	-4.0	0.4	14.4	0.028	18.4	101	2.9
1.85	9.6	98.6	520	-3.0	0.5	15.4	0.035	18.4	101	3.6
1.85	9.6	98.6	520	-2.0	0.6	16.4	0.044	18.4	102	4.5
1.85	9.6	98.6	520	-1.0	0.8	17.4	0.054	18.4	103	5.5
1.85	9.6	98.6	520	0.0	1.0	18.3	0.068	18.3	105	6.7
1.85	9.6	98.6	520	1.0	1.3	19.2	0.083	18.2	107	8.1
1.85	9.6	98.6	520	2.0	1.6	20.1	0.102	18.1	110	9.7
1.85	9.6	98.6	520	3.0	2.0	20.9	0.123	17.9	114	11.3
1.85	9.6	98.6	520	4.0	2.5	21.7	0.148	17.7	120	12.9
1.85	9.6	98.6	520	5.0	3.2	22.4	0.175	17.4	126	14.5
1.85	9.6	98.6	520	6.0	4.0	23.2	0.208	17.2	134	16.2
1.85	9.6	98.6	520	7.0	5.0	23.9	0.245	16.9	143	17.9
1.85	9.6	98.6	520	8.0	6.3	24.6	0.290	16.6	152	19.8
1.85	9.6	98.6	520	9.0	7.9	25.4	0.344	16.4	164	21.9
1.85	9.6	98.6	520	10.0	10.0	26.1	0.409	16.1	176	24.2
1.85	9.6	98.6	520	11.0	12.6	26.9	0.488	15.9	191	26.6
1.85	9.6	98.6	520	12.0	15.8	27.7	0.585	15.7	207	29.4
1.85	9.6	98.6	520	13.0	20.0	28.5	0.701	15.5	225	32.4
1.85	9.6	98.6	520	14.0	25.1	29.3	0.845	15.3	245	35.9
1.85	9.6	98.6	520	15.0	31.6	30.1	1.014	15.1	266	39.7
1.85	9.6	98.6	520	16.0	39.8	30.8	1.202	14.8	288	43.6
1.85	9.6	98.6	520	17.0	50.1	31.4	1.390	14.4	306	47.3
1.85	9.6	98.6	520	18.0	63.1	32.0	1.578	14.0	322	51.1
1.85	9.6	98.6	520	19.0	79.4	32.4	1.750	13.4	334	54.5
1.85	9.6	98.6	520	20.0	100.0	32.8	1.910	12.8	344	57.8
1.85	9.6	98.6	520	21.0	125.9	33.1	2.046	12.1	351	60.6
1.85	9.6	98.6	520	22.0	158.5	33.4	2.168	11.4	357	63.2
1.85	9.6	98.6	520	23.0	199.5	33.6	2.270	10.6	362	65.4

Input-Output Characteristics $V_{ds}=9.6V$, $I_{bias}=120mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=9.6V$, $I_{bias}=118.3mA$

@ $f=520MHz$, $V_{ds}=9.6V$, $I_{bias}=118.3mA$

Data

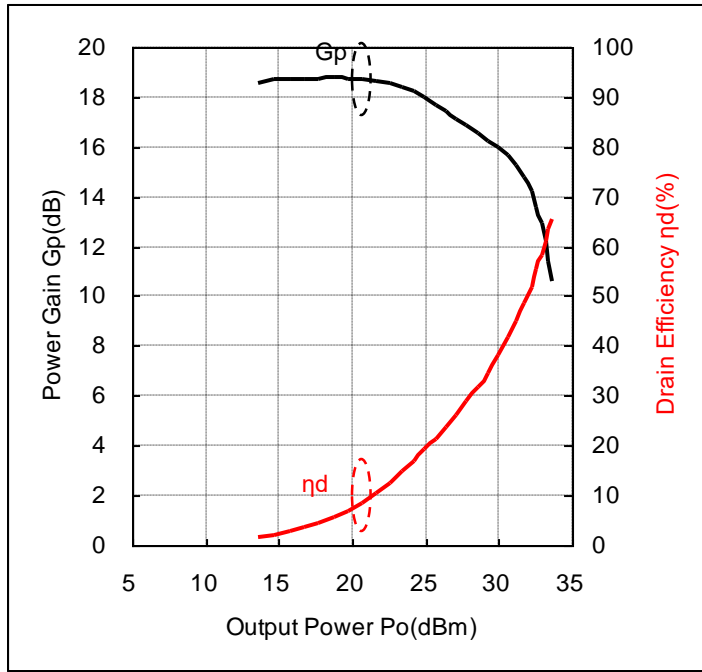
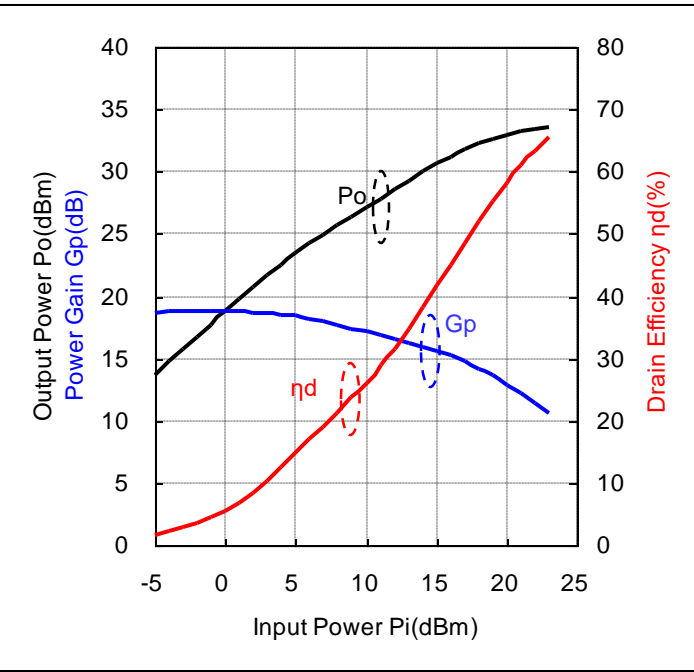
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.92	9.6	118.3	520	-5.0	0.3	13.5	0.022	18.5	120	1.9
1.92	9.6	118.3	520	-4.0	0.4	14.6	0.029	18.6	120	2.5
1.92	9.6	118.3	520	-3.0	0.5	15.6	0.037	18.6	120	3.2
1.92	9.6	118.3	520	-2.0	0.6	16.6	0.046	18.6	121	4.0
1.92	9.6	118.3	520	-1.0	0.8	17.6	0.058	18.6	122	4.9
1.92	9.6	118.3	520	0.0	1.0	18.6	0.073	18.6	123	6.2
1.92	9.6	118.3	520	1.0	1.3	19.6	0.091	18.6	125	7.5
1.92	9.6	118.3	520	2.0	1.6	20.5	0.112	18.5	127	9.2
1.92	9.6	118.3	520	3.0	2.0	21.4	0.138	18.4	130	11.0
1.92	9.6	118.3	520	4.0	2.5	22.2	0.167	18.2	135	12.9
1.92	9.6	118.3	520	5.0	3.2	23.0	0.200	18.0	141	14.9
1.92	9.6	118.3	520	6.0	4.0	23.8	0.238	17.8	148	16.7
1.92	9.6	118.3	520	7.0	5.0	24.5	0.282	17.5	157	18.7
1.92	9.6	118.3	520	8.0	6.3	25.2	0.332	17.2	167	20.7
1.92	9.6	118.3	520	9.0	7.9	25.9	0.392	16.9	179	22.9
1.92	9.6	118.3	520	10.0	10.0	26.7	0.463	16.7	191	25.2
1.92	9.6	118.3	520	11.0	12.6	27.4	0.550	16.4	206	27.8
1.92	9.6	118.3	520	12.0	15.8	28.1	0.650	16.1	222	30.5
1.92	9.6	118.3	520	13.0	20.0	28.9	0.774	15.9	239	33.7
1.92	9.6	118.3	520	14.0	25.1	29.6	0.920	15.6	259	37.0
1.92	9.6	118.3	520	15.0	31.6	30.4	1.089	15.4	279	40.7
1.92	9.6	118.3	520	16.0	39.8	31.0	1.271	15.0	298	44.4
1.92	9.6	118.3	520	17.0	50.1	31.6	1.445	14.6	314	47.9
1.92	9.6	118.3	520	18.0	63.1	32.1	1.622	14.1	328	51.5
1.92	9.6	118.3	520	19.0	79.4	32.5	1.786	13.5	339	54.9
1.92	9.6	118.3	520	20.0	100.0	32.9	1.932	12.9	347	58.0
1.92	9.6	118.3	520	21.0	125.9	33.2	2.070	12.2	354	60.9
1.92	9.6	118.3	520	22.0	158.5	33.4	2.183	11.4	359	63.4
1.92	9.6	118.3	520	23.0	199.5	33.6	2.280	10.6	363	65.5

Input-Output Characteristics $V_{ds}=9.6V$, $I_{bias}=140mA$ - Condition 1

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=9.6V$, $I_{bias}=138.5mA$

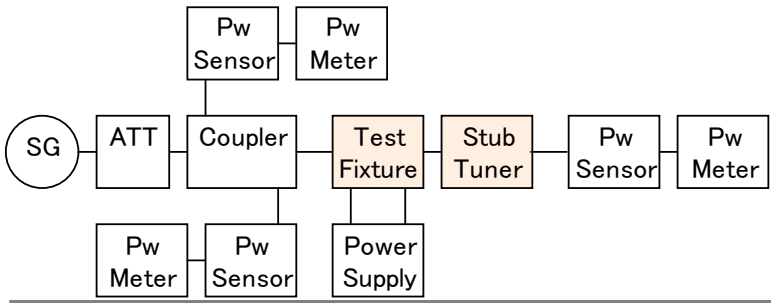
@ $f=520MHz$, $V_{ds}=9.6V$, $I_{bias}=138.5mA$

Data

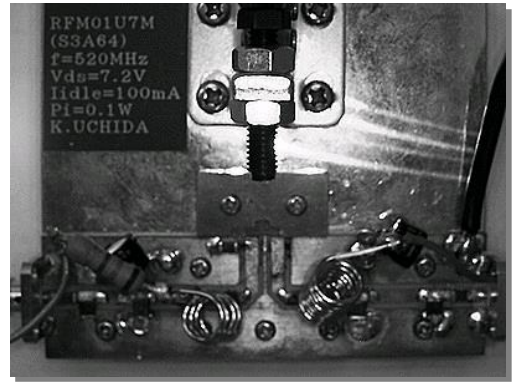
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.00	9.6	138.5	520	-5.0	0.3	13.6	0.023	18.6	139	1.7
2.00	9.6	138.5	520	-4.0	0.4	14.7	0.030	18.7	140	2.2
2.00	9.6	138.5	520	-3.0	0.5	15.7	0.037	18.7	140	2.8
2.00	9.6	138.5	520	-2.0	0.6	16.8	0.047	18.8	141	3.5
2.00	9.6	138.5	520	-1.0	0.8	17.7	0.059	18.7	141	4.4
2.00	9.6	138.5	520	0.0	1.0	18.8	0.075	18.8	142	5.5
2.00	9.6	138.5	520	1.0	1.3	19.7	0.094	18.7	143	6.8
2.00	9.6	138.5	520	2.0	1.6	20.7	0.117	18.7	145	8.4
2.00	9.6	138.5	520	3.0	2.0	21.6	0.146	18.6	148	10.3
2.00	9.6	138.5	520	4.0	2.5	22.5	0.180	18.5	151	12.4
2.00	9.6	138.5	520	5.0	3.2	23.4	0.220	18.4	156	14.7
2.00	9.6	138.5	520	6.0	4.0	24.2	0.264	18.2	163	16.9
2.00	9.6	138.5	520	7.0	5.0	25.0	0.314	18.0	171	19.1
2.00	9.6	138.5	520	8.0	6.3	25.7	0.370	17.7	181	21.3
2.00	9.6	138.5	520	9.0	7.9	26.4	0.438	17.4	193	23.7
2.00	9.6	138.5	520	10.0	10.0	27.1	0.515	17.1	205	26.1
2.00	9.6	138.5	520	11.0	12.6	27.8	0.608	16.8	220	28.8
2.00	9.6	138.5	520	12.0	15.8	28.5	0.714	16.5	236	31.6
2.00	9.6	138.5	520	13.0	20.0	29.3	0.843	16.3	253	34.7
2.00	9.6	138.5	520	14.0	25.1	30.0	0.993	16.0	272	38.1
2.00	9.6	138.5	520	15.0	31.6	30.6	1.161	15.6	290	41.7
2.00	9.6	138.5	520	16.0	39.8	31.2	1.327	15.2	307	45.0
2.00	9.6	138.5	520	17.0	50.1	31.8	1.500	14.8	321	48.6
2.00	9.6	138.5	520	18.0	63.1	32.2	1.663	14.2	333	52.0
2.00	9.6	138.5	520	19.0	79.4	32.6	1.820	13.6	343	55.3
2.00	9.6	138.5	520	20.0	100.0	32.9	1.959	12.9	350	58.3
2.00	9.6	138.5	520	21.0	125.9	33.2	2.084	12.2	356	61.0
2.00	9.6	138.5	520	22.0	158.5	33.4	2.193	11.4	360	63.4
2.00	9.6	138.5	520	23.0	199.5	33.6	2.291	10.6	364	65.6

Test System – Condition 2

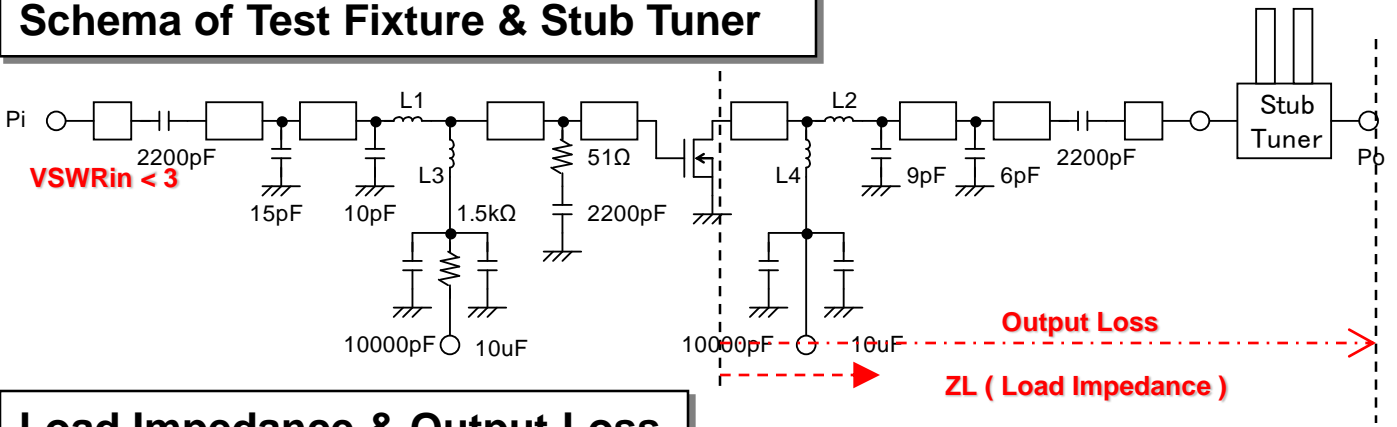
RF Test Block



Test Fixture

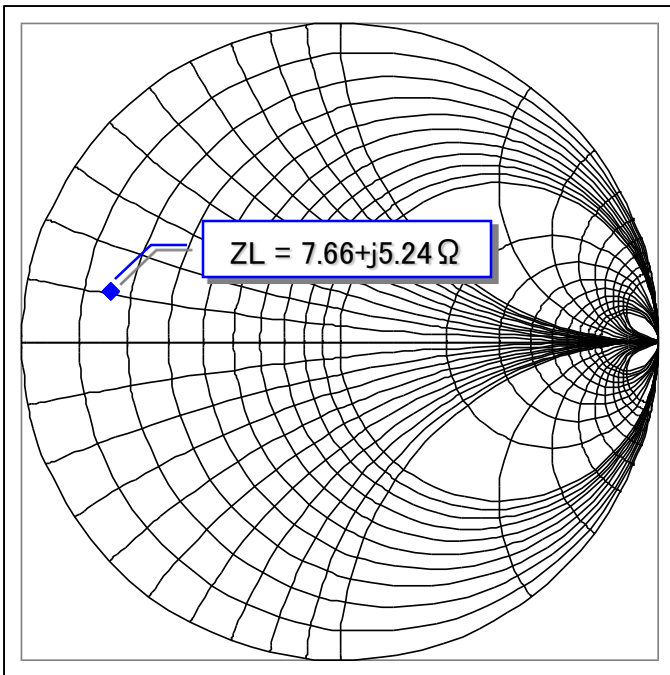


Schema of Test Fixture & Stub Tuner

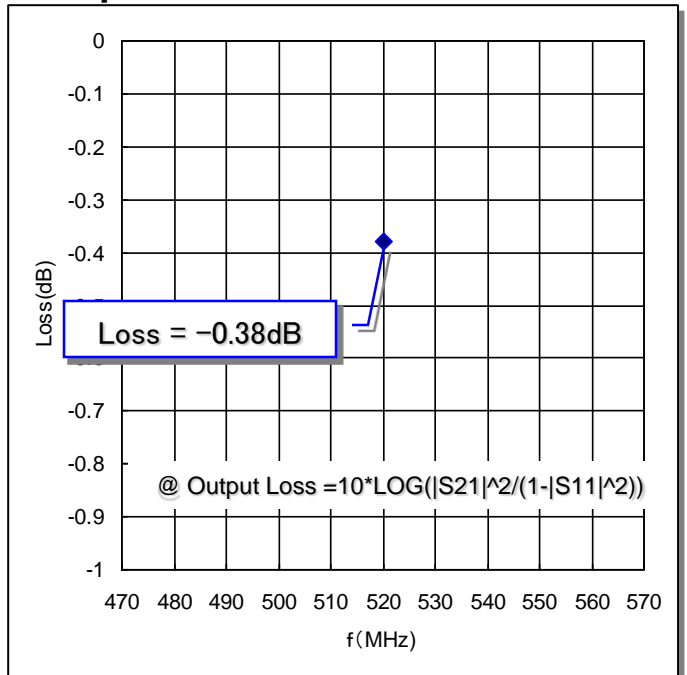


Load Impedance & Output Loss

Smith Chart



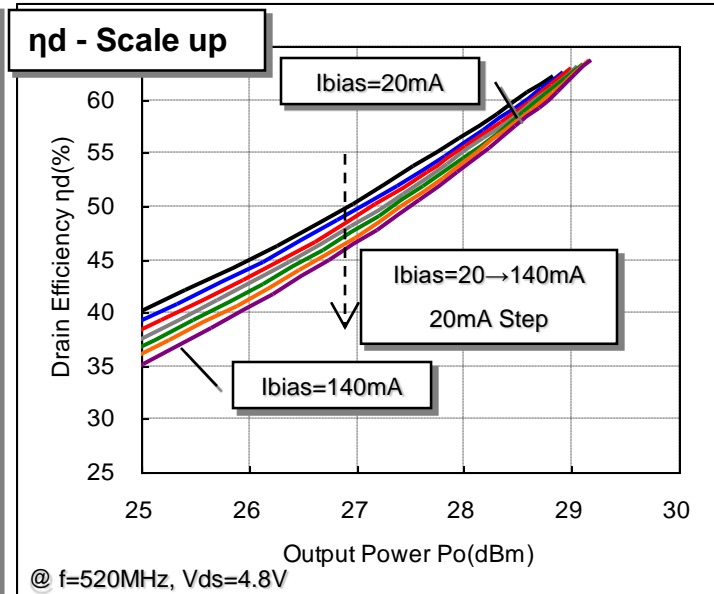
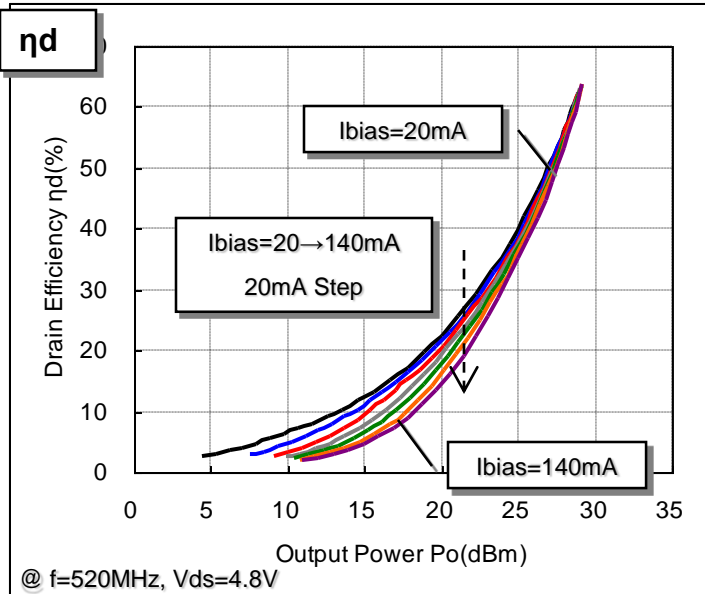
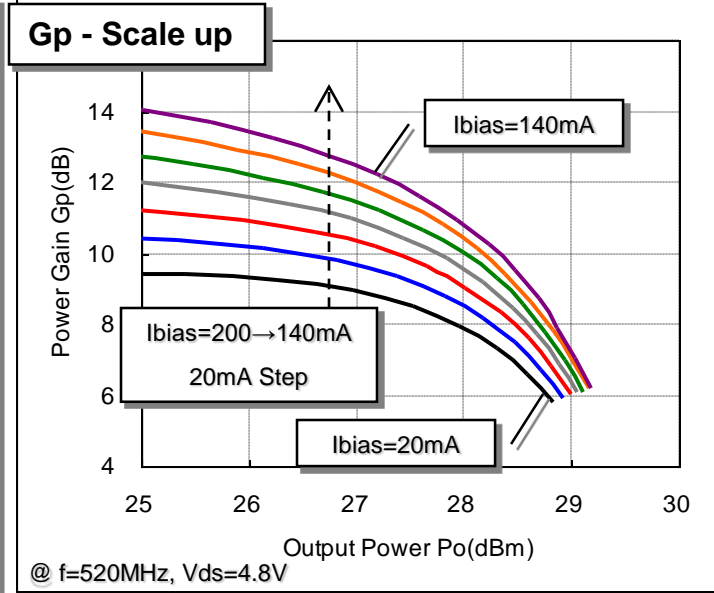
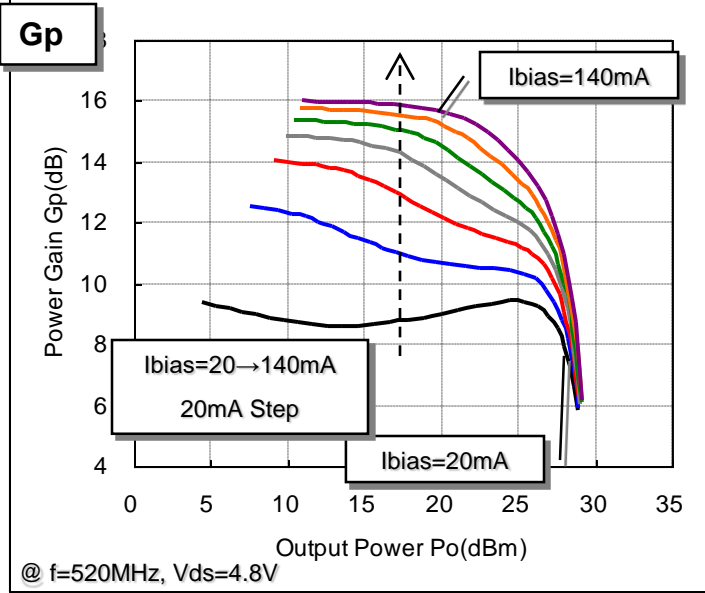
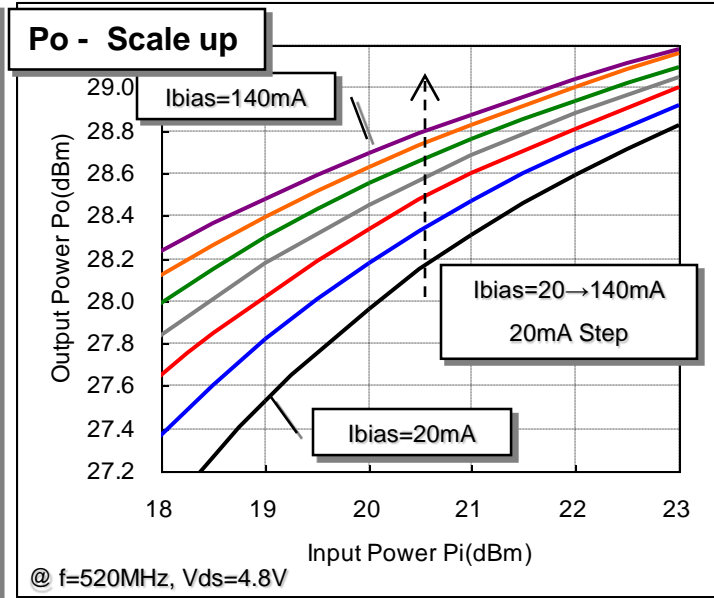
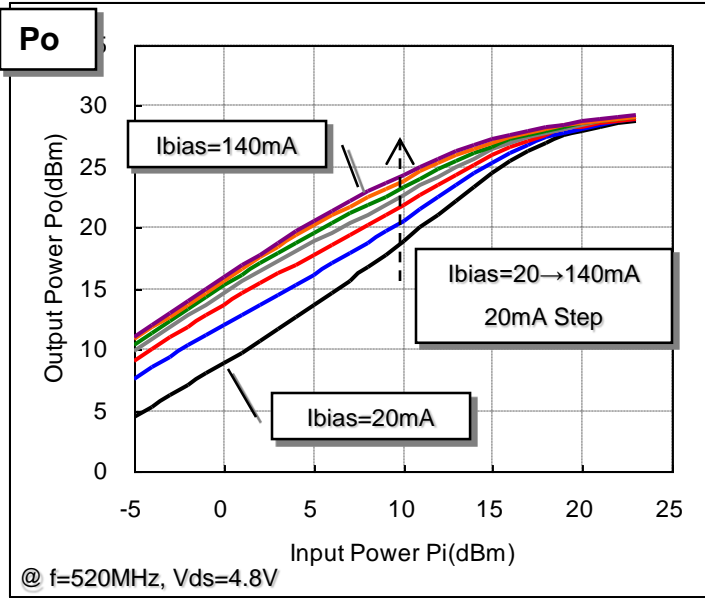
Output Loss



ZL = 7.66 + j 5.24 Ω, Output Circuit Loss = -0.38dB (@ f=520MHz)

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

Input - Output Characteristics $V_{ds}=4.8V$ - Condition 2

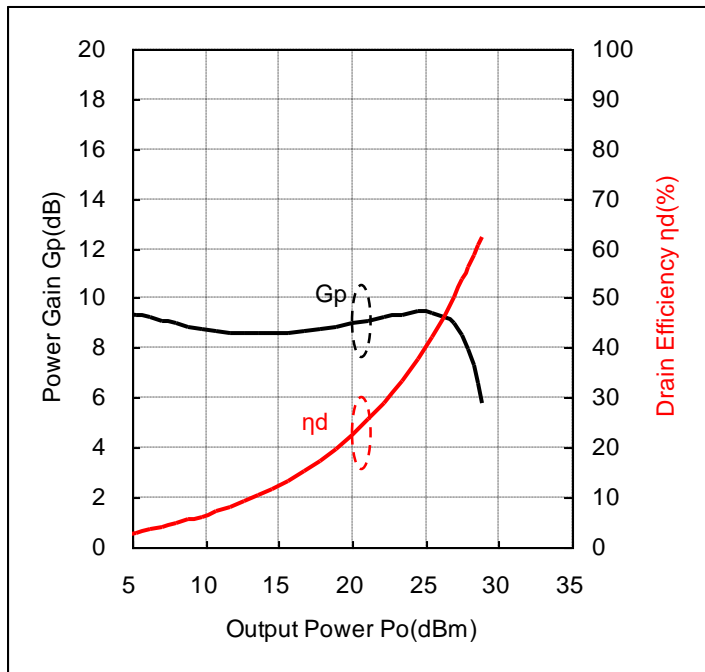
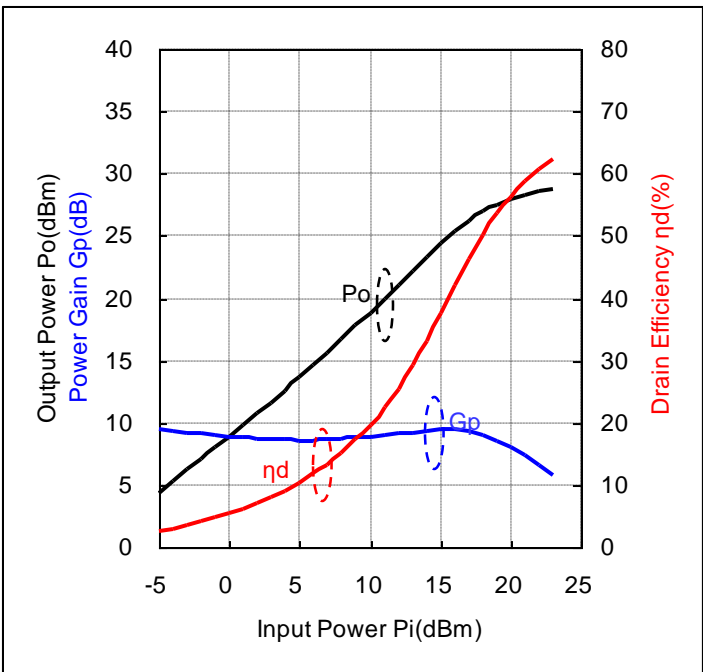


Input-Output Characteristics $V_{ds}=4.8V, I_{bias}=20mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=4.8V, I_{bias}=19.7mA$

@ $f=520MHz, V_{ds}=4.8V, I_{bias}=19.7mA$

Data

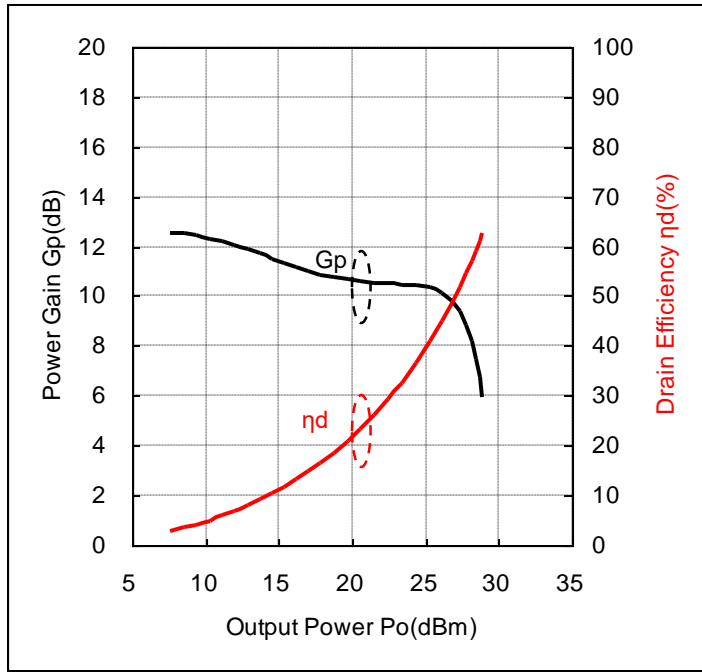
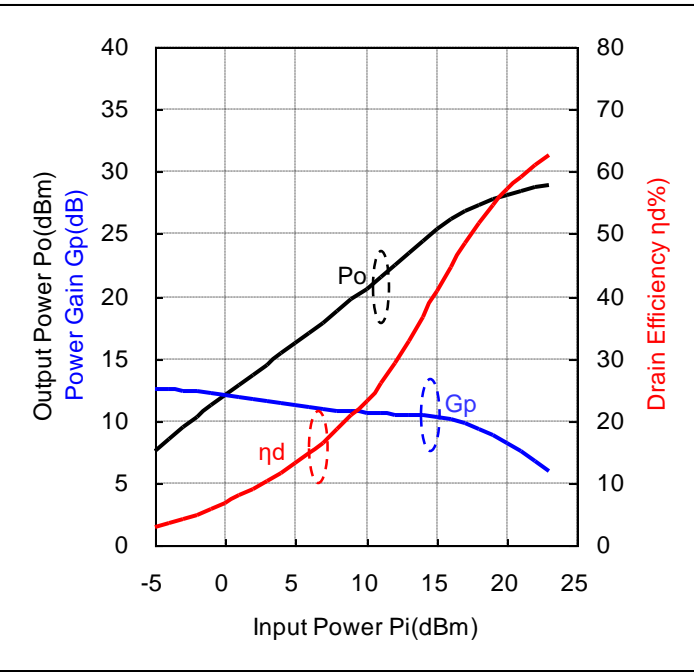
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.56	4.8	19.7	520	-5.0	0.3	4.4	0.003	9.4	23	2.5
1.56	4.8	19.7	520	-4.0	0.4	5.3	0.003	9.3	24	3.0
1.56	4.8	19.7	520	-3.0	0.5	6.2	0.004	9.2	25	3.5
1.56	4.8	19.7	520	-2.0	0.6	7.1	0.005	9.1	26	4.1
1.56	4.8	19.7	520	-1.0	0.8	8.0	0.006	9.0	28	4.7
1.56	4.8	19.7	520	0.0	1.0	8.9	0.008	8.9	30	5.4
1.56	4.8	19.7	520	1.0	1.3	9.8	0.009	8.8	32	6.2
1.56	4.8	19.7	520	2.0	1.6	10.7	0.012	8.7	34	7.1
1.56	4.8	19.7	520	3.0	2.0	11.6	0.015	8.6	38	8.0
1.56	4.8	19.7	520	4.0	2.5	12.6	0.018	8.6	42	9.1
1.56	4.8	19.7	520	5.0	3.2	13.6	0.023	8.6	46	10.3
1.56	4.8	19.7	520	6.0	4.0	14.6	0.029	8.6	51	11.7
1.56	4.8	19.7	520	7.0	5.0	15.6	0.036	8.6	57	13.3
1.56	4.8	19.7	520	8.0	6.3	16.7	0.047	8.7	64	15.1
1.56	4.8	19.7	520	9.0	7.9	17.8	0.060	8.8	72	17.2
1.56	4.8	19.7	520	10.0	10.0	18.9	0.077	8.9	82	19.7
1.56	4.8	19.7	520	11.0	12.6	20.0	0.100	9.0	93	22.4
1.56	4.8	19.7	520	12.0	15.8	21.1	0.129	9.1	105	25.5
1.56	4.8	19.7	520	13.0	20.0	22.2	0.167	9.2	120	29.1
1.56	4.8	19.7	520	14.0	25.1	23.4	0.216	9.4	136	33.1
1.56	4.8	19.7	520	15.0	31.6	24.5	0.279	9.5	154	37.6
1.56	4.8	19.7	520	16.0	39.8	25.4	0.348	9.4	172	42.0
1.56	4.8	19.7	520	17.0	50.1	26.3	0.423	9.3	190	46.3
1.56	4.8	19.7	520	18.0	63.1	27.0	0.498	9.0	206	50.3
1.56	4.8	19.7	520	19.0	79.4	27.5	0.566	8.5	220	53.7
1.56	4.8	19.7	520	20.0	100.0	28.0	0.625	8.0	231	56.3
1.56	4.8	19.7	520	21.0	125.9	28.3	0.678	7.3	241	58.7
1.56	4.8	19.7	520	22.0	158.5	28.6	0.723	6.6	248	60.6
1.56	4.8	19.7	520	23.0	199.5	28.8	0.762	5.8	255	62.2

Input-Output Characteristics $V_{ds}=4.8V, I_{bias}=40mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=4.8V, I_{bias}=39.8mA$

@ $f=520MHz, V_{ds}=4.8V, I_{bias}=39.8mA$

Data

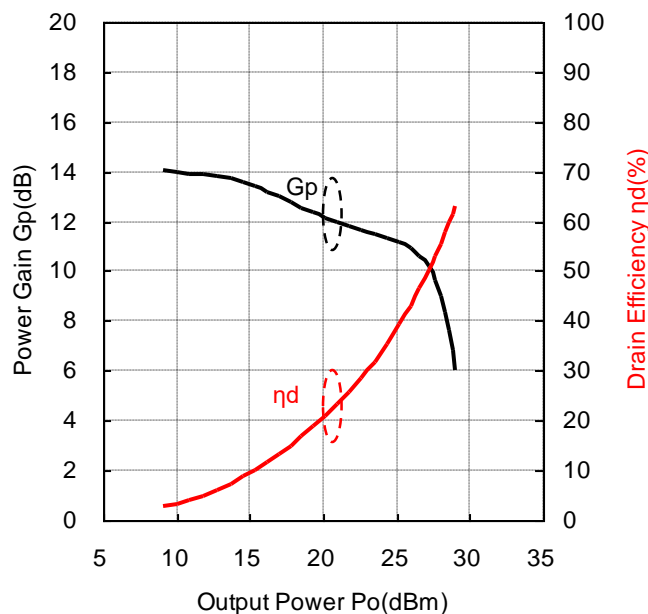
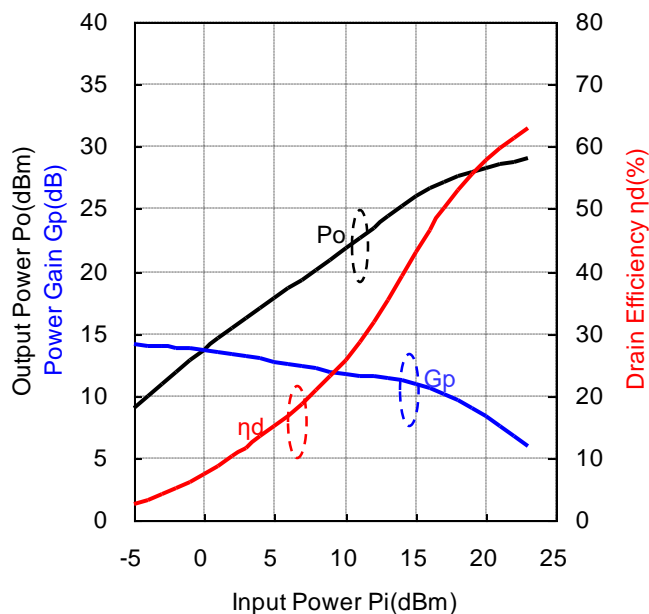
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.70	4.8	39.8	520	-5.0	0.3	7.6	0.006	12.6	42	2.8
1.70	4.8	39.8	520	-4.0	0.4	8.5	0.007	12.5	43	3.4
1.70	4.8	39.8	520	-3.0	0.5	9.4	0.009	12.4	44	4.1
1.70	4.8	39.8	520	-2.0	0.6	10.3	0.011	12.3	45	4.9
1.70	4.8	39.8	520	-1.0	0.8	11.2	0.013	12.2	46	5.9
1.70	4.8	39.8	520	0.0	1.0	12.0	0.016	12.0	48	6.9
1.70	4.8	39.8	520	1.0	1.3	12.9	0.019	11.9	50	8.0
1.70	4.8	39.8	520	2.0	1.6	13.7	0.023	11.7	54	9.1
1.70	4.8	39.8	520	3.0	2.0	14.5	0.028	11.5	57	10.3
1.70	4.8	39.8	520	4.0	2.5	15.4	0.034	11.4	61	11.7
1.70	4.8	39.8	520	5.0	3.2	16.2	0.041	11.2	66	13.1
1.70	4.8	39.8	520	6.0	4.0	17.0	0.050	11.0	71	14.7
1.70	4.8	39.8	520	7.0	5.0	17.9	0.061	10.9	78	16.5
1.70	4.8	39.8	520	8.0	6.3	18.8	0.076	10.8	85	18.5
1.70	4.8	39.8	520	9.0	7.9	19.7	0.093	10.7	94	20.7
1.70	4.8	39.8	520	10.0	10.0	20.6	0.115	10.6	104	23.1
1.70	4.8	39.8	520	11.0	12.6	21.6	0.143	10.6	115	26.0
1.70	4.8	39.8	520	12.0	15.8	22.5	0.178	10.5	127	29.1
1.70	4.8	39.8	520	13.0	20.0	23.5	0.222	10.5	142	32.7
1.70	4.8	39.8	520	14.0	25.1	24.4	0.277	10.4	157	36.6
1.70	4.8	39.8	520	15.0	31.6	25.3	0.341	10.3	174	40.8
1.70	4.8	39.8	520	16.0	39.8	26.1	0.411	10.1	191	44.8
1.70	4.8	39.8	520	17.0	50.1	26.8	0.481	9.8	206	48.6
1.70	4.8	39.8	520	18.0	63.1	27.4	0.546	9.4	219	51.9
1.70	4.8	39.8	520	19.0	79.4	27.8	0.605	8.8	230	54.7
1.70	4.8	39.8	520	20.0	100.0	28.2	0.658	8.2	240	57.2
1.70	4.8	39.8	520	21.0	125.9	28.5	0.703	7.5	247	59.2
1.70	4.8	39.8	520	22.0	158.5	28.7	0.743	6.7	254	61.0
1.70	4.8	39.8	520	23.0	199.5	28.9	0.780	5.9	260	62.5

Input-Output Characteristics $V_{ds}=4.8V, I_{bias}=60mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=4.8V, I_{bias}=59.5mA$

@ $f=520MHz, V_{ds}=4.8V, I_{bias}=59.5mA$

Data

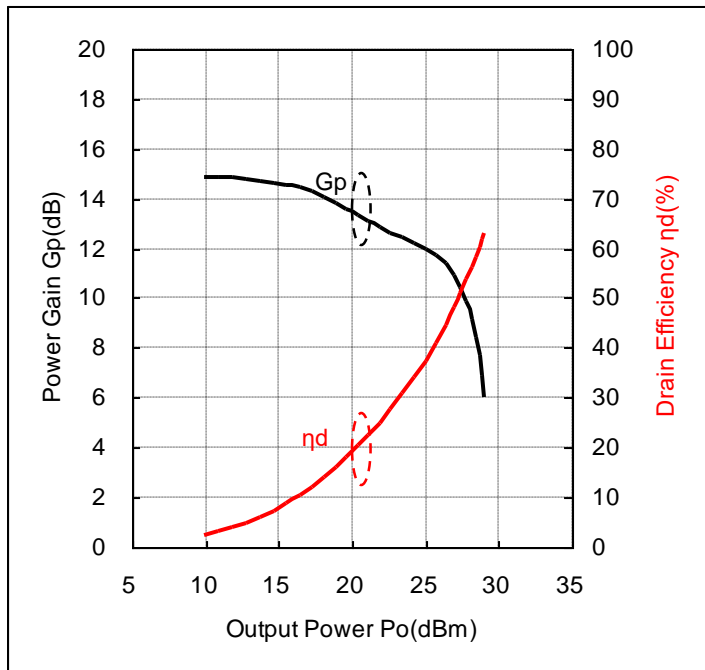
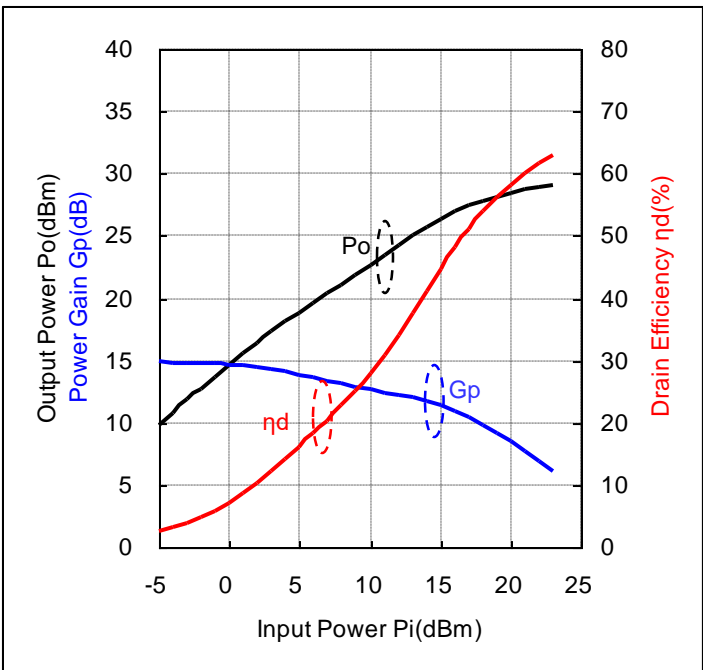
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.80	4.8	59.5	520	-5.0	0.3	9.1	0.008	14.1	62	2.7
1.80	4.8	59.5	520	-4.0	0.4	10.0	0.010	14.0	62	3.3
1.80	4.8	59.5	520	-3.0	0.5	10.9	0.012	13.9	63	4.1
1.80	4.8	59.5	520	-2.0	0.6	11.9	0.015	13.9	64	5.0
1.80	4.8	59.5	520	-1.0	0.8	12.8	0.019	13.8	65	6.1
1.80	4.8	59.5	520	0.0	1.0	13.7	0.023	13.7	67	7.3
1.80	4.8	59.5	520	1.0	1.3	14.6	0.029	13.6	69	8.7
1.80	4.8	59.5	520	2.0	1.6	15.4	0.035	13.4	71	10.1
1.80	4.8	59.5	520	3.0	2.0	16.2	0.042	13.2	74	11.7
1.80	4.8	59.5	520	4.0	2.5	17.0	0.050	13.0	78	13.3
1.80	4.8	59.5	520	5.0	3.2	17.8	0.060	12.8	83	15.0
1.80	4.8	59.5	520	6.0	4.0	18.6	0.072	12.6	89	16.8
1.80	4.8	59.5	520	7.0	5.0	19.3	0.086	12.3	95	18.7
1.80	4.8	59.5	520	8.0	6.3	20.1	0.103	12.1	103	20.8
1.80	4.8	59.5	520	9.0	7.9	21.0	0.125	12.0	112	23.3
1.80	4.8	59.5	520	10.0	10.0	21.8	0.151	11.8	122	25.8
1.80	4.8	59.5	520	11.0	12.6	22.6	0.183	11.6	133	28.6
1.80	4.8	59.5	520	12.0	15.8	23.5	0.223	11.5	146	31.9
1.80	4.8	59.5	520	13.0	20.0	24.3	0.272	11.3	160	35.4
1.80	4.8	59.5	520	14.0	25.1	25.2	0.330	11.2	175	39.2
1.80	4.8	59.5	520	15.0	31.6	26.0	0.394	11.0	190	43.1
1.80	4.8	59.5	520	16.0	39.8	26.6	0.458	10.6	204	46.7
1.80	4.8	59.5	520	17.0	50.1	27.2	0.522	10.2	217	50.1
1.80	4.8	59.5	520	18.0	63.1	27.6	0.582	9.6	228	53.2
1.80	4.8	59.5	520	19.0	79.4	28.0	0.634	9.0	237	55.6
1.80	4.8	59.5	520	20.0	100.0	28.3	0.682	8.3	246	57.9
1.80	4.8	59.5	520	21.0	125.9	28.6	0.724	7.6	252	59.8
1.80	4.8	59.5	520	22.0	158.5	28.8	0.760	6.8	258	61.4
1.80	4.8	59.5	520	23.0	199.5	29.0	0.794	6.0	263	62.9

Input-Output Characteristics $V_{ds}=4.8V, I_{bias}=80mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=4.8V, I_{bias}=79.4mA$

@ $f=520MHz, V_{ds}=4.8V, I_{bias}=79.4mA$

Data

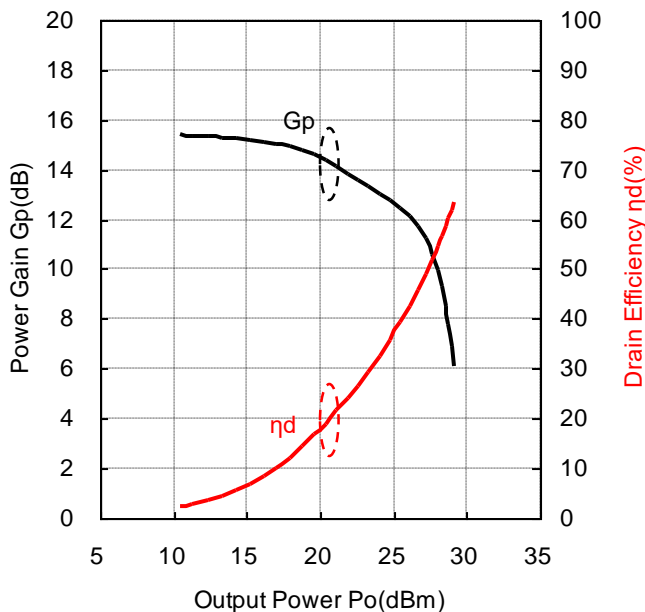
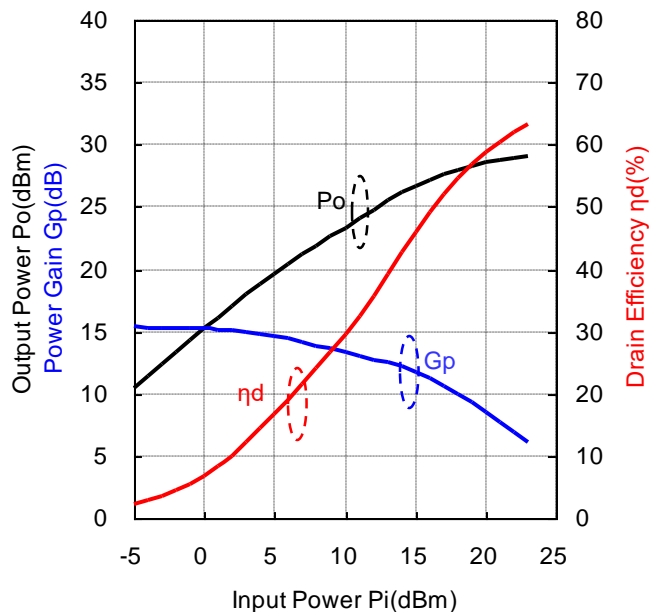
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.90	4.8	79.4	520	-5.0	0.3	9.9	0.010	14.9	81	2.5
1.90	4.8	79.4	520	-4.0	0.4	10.8	0.012	14.8	81	3.1
1.90	4.8	79.4	520	-3.0	0.5	11.8	0.015	14.8	82	3.9
1.90	4.8	79.4	520	-2.0	0.6	12.8	0.019	14.8	83	4.7
1.90	4.8	79.4	520	-1.0	0.8	13.7	0.023	14.7	83	5.9
1.90	4.8	79.4	520	0.0	1.0	14.6	0.029	14.6	84	7.2
1.90	4.8	79.4	520	1.0	1.3	15.5	0.036	14.5	86	8.6
1.90	4.8	79.4	520	2.0	1.6	16.4	0.044	14.4	88	10.3
1.90	4.8	79.4	520	3.0	2.0	17.3	0.053	14.3	91	12.2
1.90	4.8	79.4	520	4.0	2.5	18.1	0.064	14.1	95	14.1
1.90	4.8	79.4	520	5.0	3.2	18.9	0.077	13.9	99	16.2
1.90	4.8	79.4	520	6.0	4.0	19.6	0.091	13.6	104	18.2
1.90	4.8	79.4	520	7.0	5.0	20.4	0.108	13.4	111	20.3
1.90	4.8	79.4	520	8.0	6.3	21.1	0.129	13.1	119	22.7
1.90	4.8	79.4	520	9.0	7.9	21.9	0.153	12.9	127	25.1
1.90	4.8	79.4	520	10.0	10.0	22.6	0.184	12.6	138	27.8
1.90	4.8	79.4	520	11.0	12.6	23.4	0.220	12.4	149	30.9
1.90	4.8	79.4	520	12.0	15.8	24.2	0.264	12.2	161	34.1
1.90	4.8	79.4	520	13.0	20.0	25.0	0.315	12.0	175	37.5
1.90	4.8	79.4	520	14.0	25.1	25.7	0.372	11.7	189	41.1
1.90	4.8	79.4	520	15.0	31.6	26.4	0.435	11.4	203	44.7
1.90	4.8	79.4	520	16.0	39.8	27.0	0.495	11.0	215	48.1
1.90	4.8	79.4	520	17.0	50.1	27.4	0.553	10.4	226	51.1
1.90	4.8	79.4	520	18.0	63.1	27.8	0.608	9.8	235	53.9
1.90	4.8	79.4	520	19.0	79.4	28.2	0.658	9.2	243	56.3
1.90	4.8	79.4	520	20.0	100.0	28.5	0.700	8.5	250	58.3
1.90	4.8	79.4	520	21.0	125.9	28.7	0.738	7.7	256	60.1
1.90	4.8	79.4	520	22.0	158.5	28.9	0.773	6.9	261	61.7
1.90	4.8	79.4	520	23.0	199.5	29.0	0.804	6.0	265	63.1

Input-Output Characteristics $V_{ds}=4.8V$, $I_{bias}=100mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=4.8V$, $I_{bias}=98.2mA$

@ $f=520MHz$, $V_{ds}=4.8V$, $I_{bias}=98.2mA$

Data

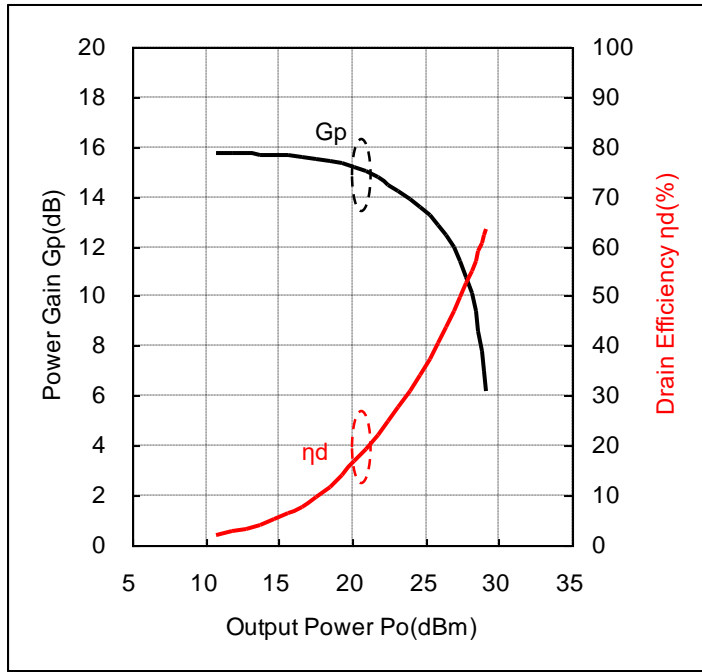
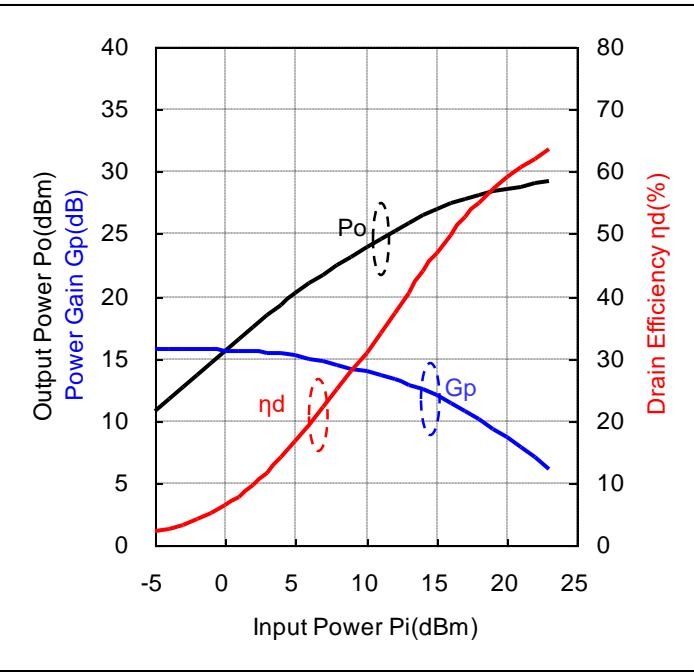
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.98	4.8	98.2	520	-5.0	0.3	10.4	0.011	15.4	99	2.3
1.98	4.8	98.2	520	-4.0	0.4	11.3	0.014	15.3	100	2.8
1.98	4.8	98.2	520	-3.0	0.5	12.3	0.017	15.3	100	3.5
1.98	4.8	98.2	520	-2.0	0.6	13.3	0.021	15.3	101	4.4
1.98	4.8	98.2	520	-1.0	0.8	14.3	0.027	15.3	102	5.5
1.98	4.8	98.2	520	0.0	1.0	15.2	0.033	15.2	102	6.7
1.98	4.8	98.2	520	1.0	1.3	16.1	0.041	15.1	104	8.3
1.98	4.8	98.2	520	2.0	1.6	17.1	0.051	15.1	105	10.1
1.98	4.8	98.2	520	3.0	2.0	18.0	0.062	15.0	107	12.1
1.98	4.8	98.2	520	4.0	2.5	18.8	0.076	14.8	110	14.4
1.98	4.8	98.2	520	5.0	3.2	19.6	0.092	14.6	114	16.7
1.98	4.8	98.2	520	6.0	4.0	20.4	0.109	14.4	119	19.0
1.98	4.8	98.2	520	7.0	5.0	21.1	0.130	14.1	126	21.5
1.98	4.8	98.2	520	8.0	6.3	21.9	0.153	13.9	133	24.0
1.98	4.8	98.2	520	9.0	7.9	22.6	0.181	13.6	142	26.6
1.98	4.8	98.2	520	10.0	10.0	23.3	0.214	13.3	151	29.5
1.98	4.8	98.2	520	11.0	12.6	24.0	0.254	13.0	163	32.6
1.98	4.8	98.2	520	12.0	15.8	24.8	0.300	12.8	175	35.7
1.98	4.8	98.2	520	13.0	20.0	25.5	0.353	12.5	188	39.2
1.98	4.8	98.2	520	14.0	25.1	26.1	0.410	12.1	200	42.7
1.98	4.8	98.2	520	15.0	31.6	26.7	0.468	11.7	212	45.9
1.98	4.8	98.2	520	16.0	39.8	27.2	0.526	11.2	223	49.1
1.98	4.8	98.2	520	17.0	50.1	27.6	0.579	10.6	232	51.9
1.98	4.8	98.2	520	18.0	63.1	28.0	0.630	10.0	241	54.5
1.98	4.8	98.2	520	19.0	79.4	28.3	0.676	9.3	248	56.8
1.98	4.8	98.2	520	20.0	100.0	28.5	0.716	8.5	254	58.8
1.98	4.8	98.2	520	21.0	125.9	28.8	0.752	7.8	259	60.4
1.98	4.8	98.2	520	22.0	158.5	28.9	0.783	6.9	264	61.9
1.98	4.8	98.2	520	23.0	199.5	29.1	0.813	6.1	268	63.3

Input-Output Characteristics $V_{ds}=4.8V$, $I_{bias}=120mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=4.8V$, $I_{bias}=118.1mA$

@ $f=520MHz$, $V_{ds}=4.8V$, $I_{bias}=118.1mA$

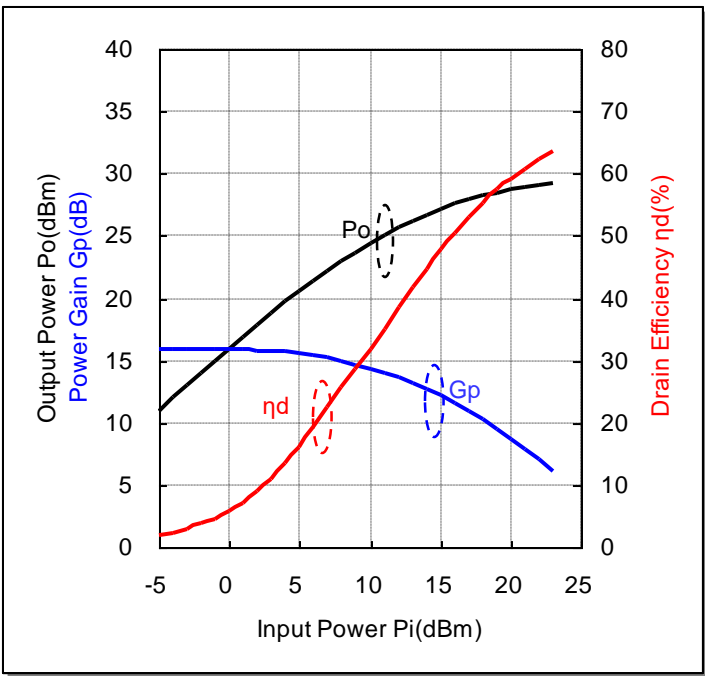
Data

V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.06	4.8	118.1	520	-5.0	0.3	10.8	0.012	15.8	119	2.1
2.06	4.8	118.1	520	-4.0	0.4	11.8	0.015	15.8	119	2.6
2.06	4.8	118.1	520	-3.0	0.5	12.7	0.019	15.7	120	3.3
2.06	4.8	118.1	520	-2.0	0.6	13.7	0.023	15.7	120	4.1
2.06	4.8	118.1	520	-1.0	0.8	14.7	0.029	15.7	121	5.1
2.06	4.8	118.1	520	0.0	1.0	15.6	0.037	15.6	121	6.3
2.06	4.8	118.1	520	1.0	1.3	16.6	0.046	15.6	122	7.8
2.06	4.8	118.1	520	2.0	1.6	17.5	0.057	15.5	124	9.6
2.06	4.8	118.1	520	3.0	2.0	18.5	0.070	15.5	125	11.7
2.06	4.8	118.1	520	4.0	2.5	19.4	0.086	15.4	128	14.1
2.06	4.8	118.1	520	5.0	3.2	20.2	0.105	15.2	130	16.7
2.06	4.8	118.1	520	6.0	4.0	21.0	0.125	15.0	134	19.4
2.06	4.8	118.1	520	7.0	5.0	21.8	0.150	14.8	141	22.2
2.06	4.8	118.1	520	8.0	6.3	22.5	0.177	14.5	147	25.0
2.06	4.8	118.1	520	9.0	7.9	23.2	0.208	14.2	156	27.9
2.06	4.8	118.1	520	10.0	10.0	23.9	0.245	13.9	166	30.9
2.06	4.8	118.1	520	11.0	12.6	24.6	0.288	13.6	176	34.0
2.06	4.8	118.1	520	12.0	15.8	25.3	0.336	13.3	188	37.3
2.06	4.8	118.1	520	13.0	20.0	25.9	0.388	12.9	199	40.6
2.06	4.8	118.1	520	14.0	25.1	26.5	0.444	12.5	211	43.9
2.06	4.8	118.1	520	15.0	31.6	27.0	0.499	12.0	221	47.0
2.06	4.8	118.1	520	16.0	39.8	27.4	0.552	11.4	230	49.9
2.06	4.8	118.1	520	17.0	50.1	27.8	0.603	10.8	239	52.6
2.06	4.8	118.1	520	18.0	63.1	28.1	0.649	10.1	246	55.0
2.06	4.8	118.1	520	19.0	79.4	28.4	0.690	9.4	252	57.1
2.06	4.8	118.1	520	20.0	100.0	28.6	0.729	8.6	257	59.1
2.06	4.8	118.1	520	21.0	125.9	28.8	0.762	7.8	262	60.6
2.06	4.8	118.1	520	22.0	158.5	29.0	0.794	7.0	266	62.2
2.06	4.8	118.1	520	23.0	199.5	29.2	0.824	6.2	270	63.6

Input-Output Characteristics $V_{ds}=4.8V$, $I_{bias}=140mA$ - Condition 2

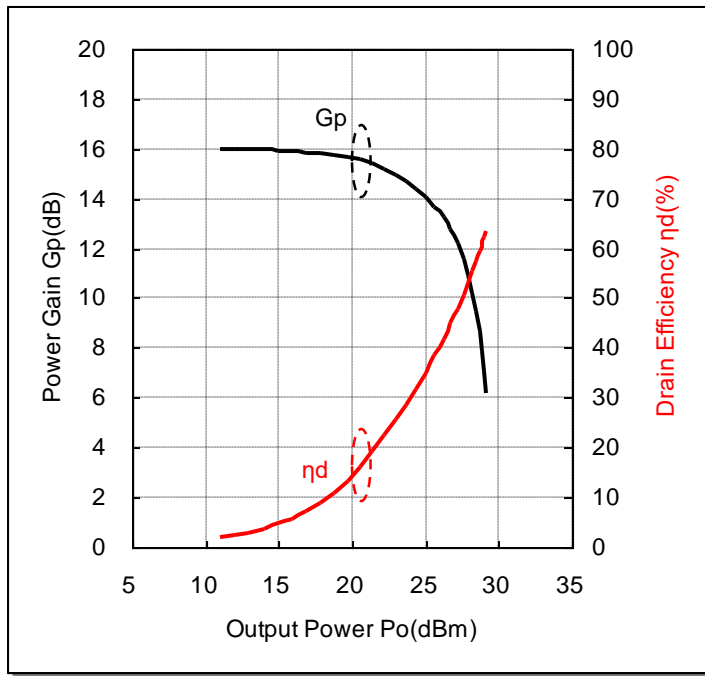
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ $f=520MHz$, $V_{ds}=4.8V$, $I_{bias}=137.7mA$

Power Gain, Drain Efficiency vs Output Power

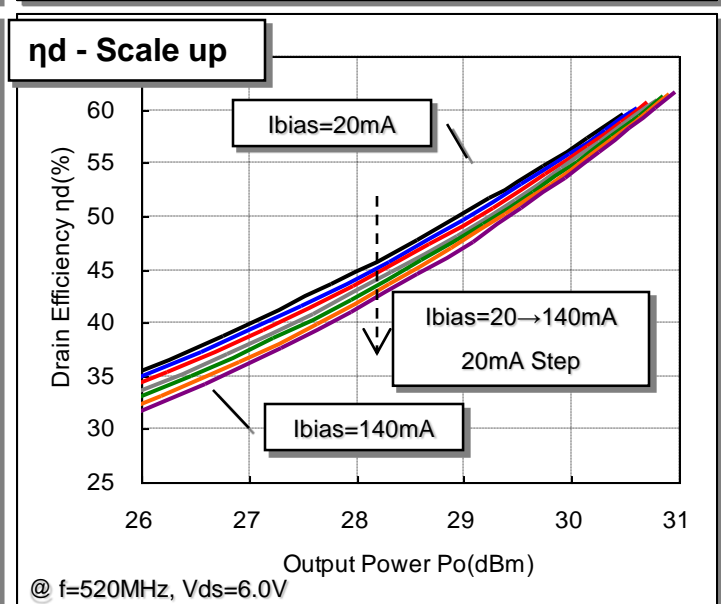
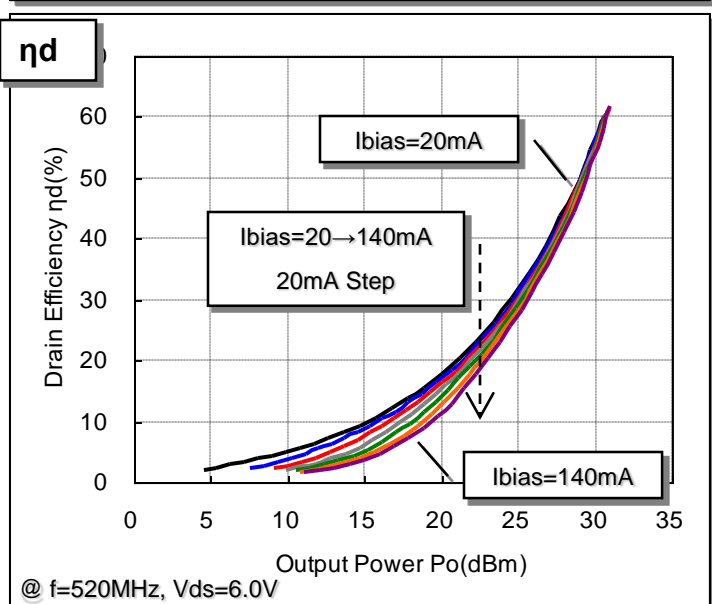
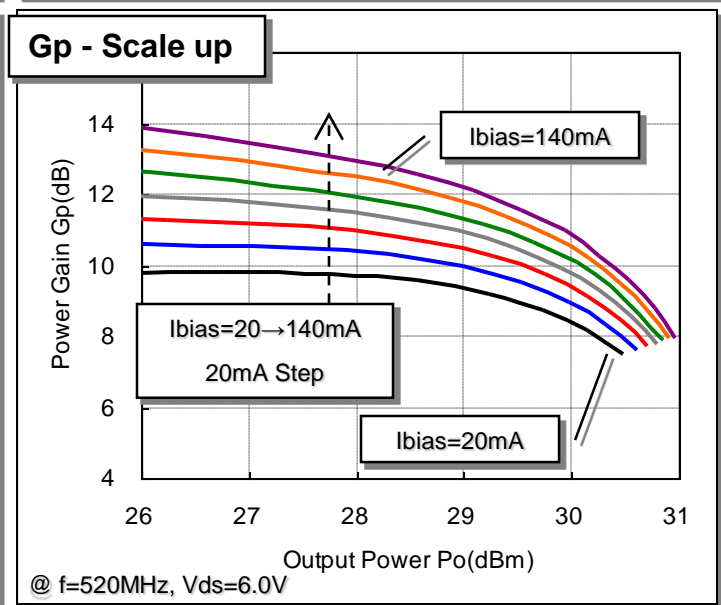
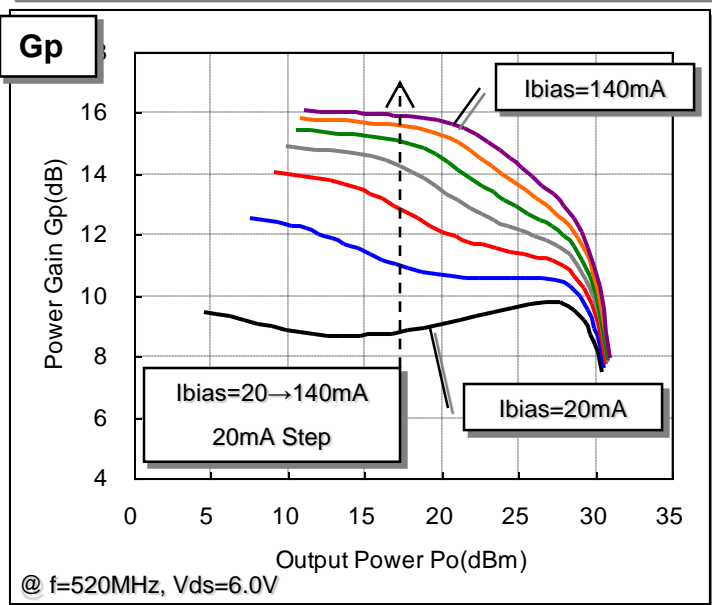
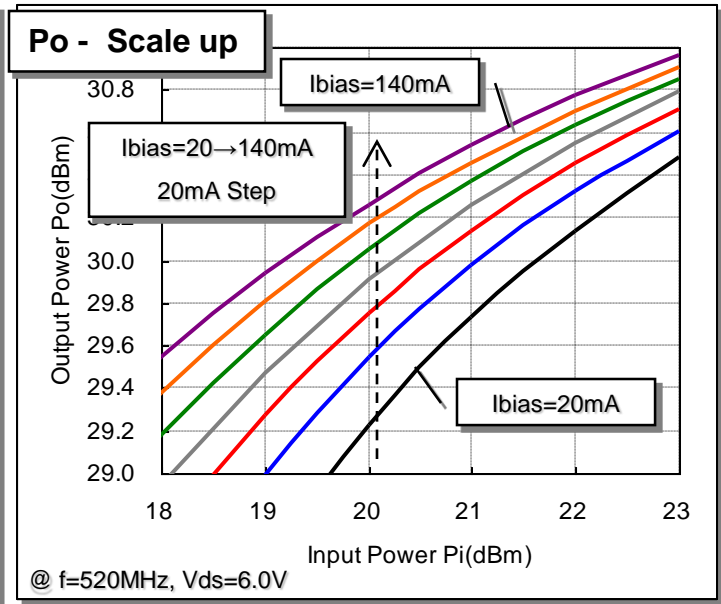
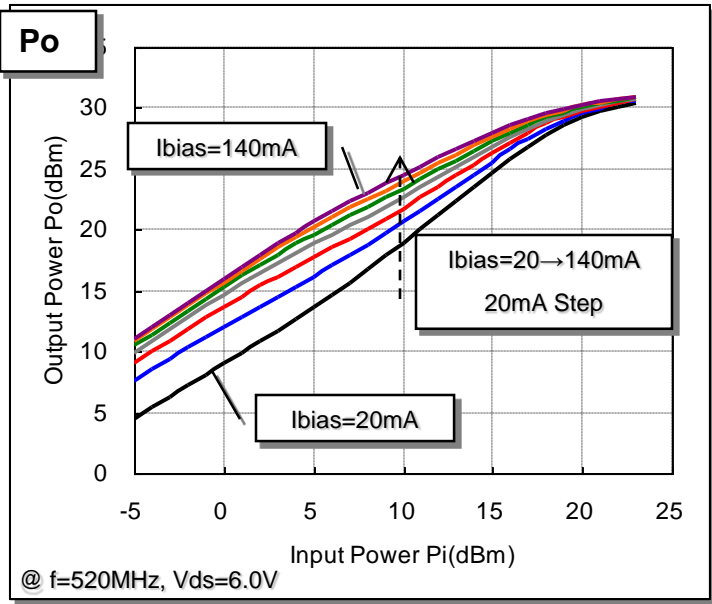


@ $f=520MHz$, $V_{ds}=4.8V$, $I_{bias}=137.7mA$

Data

V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.14	4.8	137.7	520	-5.0	0.3	11.0	0.013	16.0	138	1.9
2.14	4.8	137.7	520	-4.0	0.4	12.0	0.016	16.0	139	2.4
2.14	4.8	137.7	520	-3.0	0.5	13.0	0.020	16.0	138	3.0
2.14	4.8	137.7	520	-2.0	0.6	13.9	0.025	15.9	139	3.7
2.14	4.8	137.7	520	-1.0	0.8	14.9	0.031	15.9	140	4.6
2.14	4.8	137.7	520	0.0	1.0	15.9	0.039	15.9	140	5.8
2.14	4.8	137.7	520	1.0	1.3	16.9	0.049	15.9	140	7.2
2.14	4.8	137.7	520	2.0	1.6	17.8	0.061	15.8	142	8.9
2.14	4.8	137.7	520	3.0	2.0	18.8	0.076	15.8	143	11.0
2.14	4.8	137.7	520	4.0	2.5	19.7	0.093	15.7	145	13.4
2.14	4.8	137.7	520	5.0	3.2	20.6	0.114	15.6	147	16.2
2.14	4.8	137.7	520	6.0	4.0	21.4	0.138	15.4	150	19.2
2.14	4.8	137.7	520	7.0	5.0	22.2	0.167	15.2	155	22.4
2.14	4.8	137.7	520	8.0	6.3	23.0	0.198	15.0	162	25.6
2.14	4.8	137.7	520	9.0	7.9	23.7	0.233	14.7	169	28.7
2.14	4.8	137.7	520	10.0	10.0	24.4	0.273	14.4	178	31.9
2.14	4.8	137.7	520	11.0	12.6	25.0	0.318	14.0	188	35.1
2.14	4.8	137.7	520	12.0	15.8	25.6	0.367	13.6	199	38.5
2.14	4.8	137.7	520	13.0	20.0	26.2	0.420	13.2	210	41.7
2.14	4.8	137.7	520	14.0	25.1	26.7	0.472	12.7	219	44.8
2.14	4.8	137.7	520	15.0	31.6	27.2	0.525	12.2	229	47.8
2.14	4.8	137.7	520	16.0	39.8	27.6	0.574	11.6	237	50.5
2.14	4.8	137.7	520	17.0	50.1	27.9	0.622	10.9	244	53.1
2.14	4.8	137.7	520	18.0	63.1	28.2	0.665	10.2	250	55.4
2.14	4.8	137.7	520	19.0	79.4	28.5	0.705	9.5	256	57.5
2.14	4.8	137.7	520	20.0	100.0	28.7	0.740	8.7	260	59.2
2.14	4.8	137.7	520	21.0	125.9	28.9	0.771	7.9	264	60.8
2.14	4.8	137.7	520	22.0	158.5	29.0	0.802	7.0	268	62.4
2.14	4.8	137.7	520	23.0	199.5	29.2	0.828	6.2	271	63.6

Input - Output Characteristics $V_{ds}=6.0V$ - Condition 2

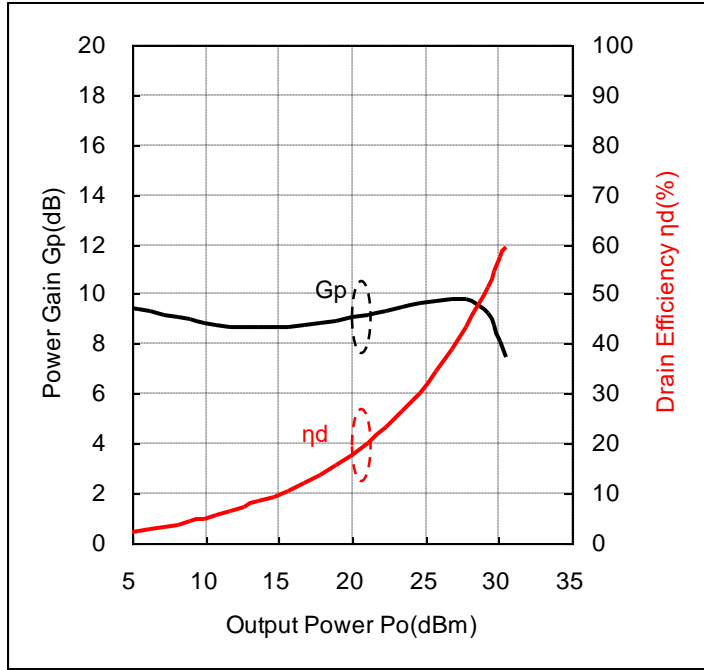
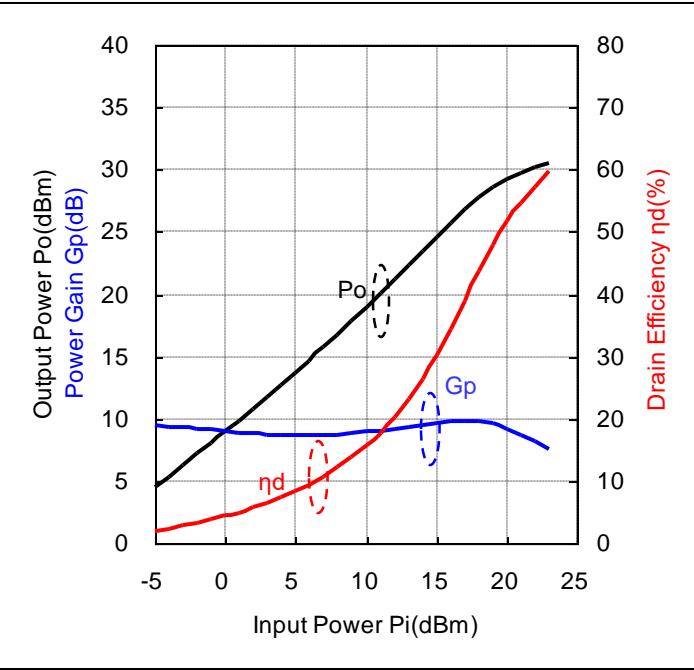


Input-Output Characteristics $V_{ds}=6.0V$, $I_{bias}=20mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=20.2mA$

@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=20.2mA$

Data

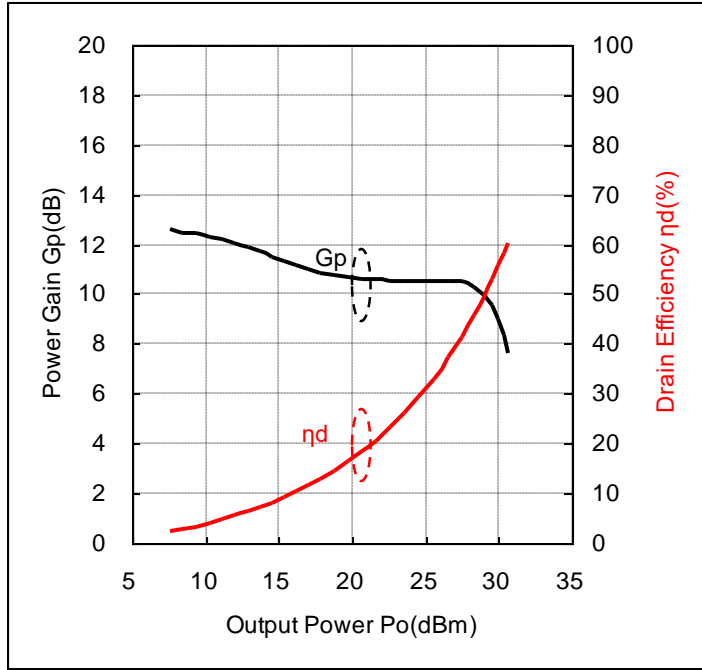
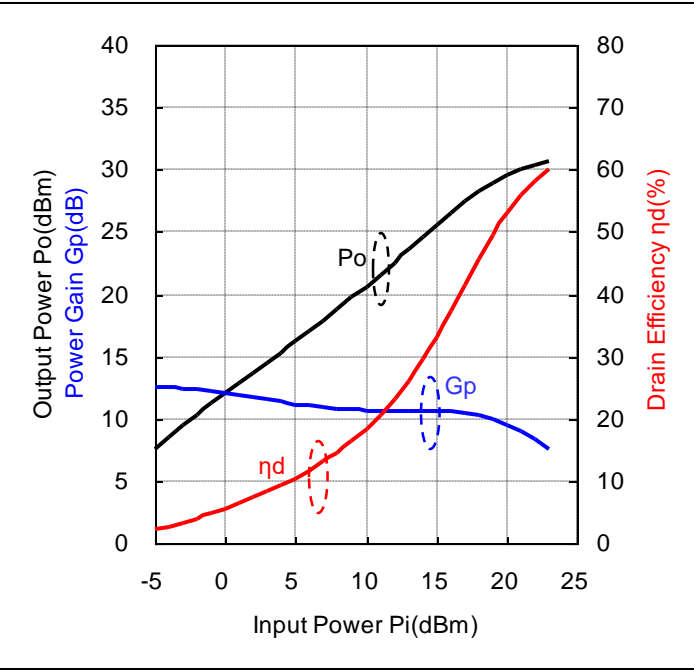
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.54	6.0	20.2	520	-5.0	0.3	4.5	0.003	9.5	24	2.0
1.54	6.0	20.2	520	-4.0	0.4	5.4	0.003	9.4	24	2.4
1.54	6.0	20.2	520	-3.0	0.5	6.3	0.004	9.3	25	2.8
1.54	6.0	20.2	520	-2.0	0.6	7.2	0.005	9.2	27	3.3
1.54	6.0	20.2	520	-1.0	0.8	8.1	0.006	9.1	28	3.8
1.54	6.0	20.2	520	0.0	1.0	9.0	0.008	9.0	30	4.3
1.54	6.0	20.2	520	1.0	1.3	9.9	0.010	8.9	33	5.0
1.54	6.0	20.2	520	2.0	1.6	10.8	0.012	8.8	35	5.6
1.54	6.0	20.2	520	3.0	2.0	11.7	0.015	8.7	39	6.3
1.54	6.0	20.2	520	4.0	2.5	12.6	0.018	8.6	42	7.3
1.54	6.0	20.2	520	5.0	3.2	13.6	0.023	8.6	47	8.2
1.54	6.0	20.2	520	6.0	4.0	14.7	0.029	8.7	52	9.4
1.54	6.0	20.2	520	7.0	5.0	15.7	0.037	8.7	58	10.6
1.54	6.0	20.2	520	8.0	6.3	16.8	0.047	8.8	65	12.1
1.54	6.0	20.2	520	9.0	7.9	17.8	0.061	8.8	74	13.7
1.54	6.0	20.2	520	10.0	10.0	18.9	0.078	8.9	84	15.6
1.54	6.0	20.2	520	11.0	12.6	20.0	0.101	9.0	95	17.8
1.54	6.0	20.2	520	12.0	15.8	21.1	0.130	9.1	107	20.2
1.54	6.0	20.2	520	13.0	20.0	22.3	0.170	9.3	122	23.1
1.54	6.0	20.2	520	14.0	25.1	23.5	0.221	9.5	139	26.5
1.54	6.0	20.2	520	15.0	31.6	24.6	0.288	9.6	159	30.2
1.54	6.0	20.2	520	16.0	39.8	25.7	0.375	9.7	181	34.5
1.54	6.0	20.2	520	17.0	50.1	26.8	0.475	9.8	204	38.8
1.54	6.0	20.2	520	18.0	63.1	27.8	0.597	9.8	228	43.6
1.54	6.0	20.2	520	19.0	79.4	28.6	0.719	9.6	251	47.8
1.54	6.0	20.2	520	20.0	100.0	29.2	0.838	9.2	271	51.6
1.54	6.0	20.2	520	21.0	125.9	29.7	0.940	8.7	287	54.6
1.54	6.0	20.2	520	22.0	158.5	30.1	1.033	8.1	300	57.3
1.54	6.0	20.2	520	23.0	199.5	30.5	1.117	7.5	312	59.6

Input-Output Characteristics $V_{ds}=6.0V$, $I_{bias}=40mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=39.9mA$

@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=39.9mA$

Data

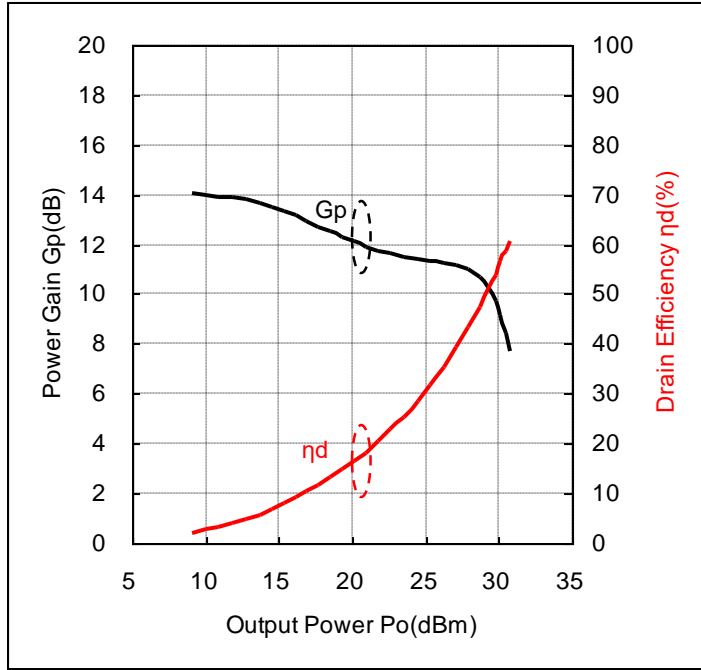
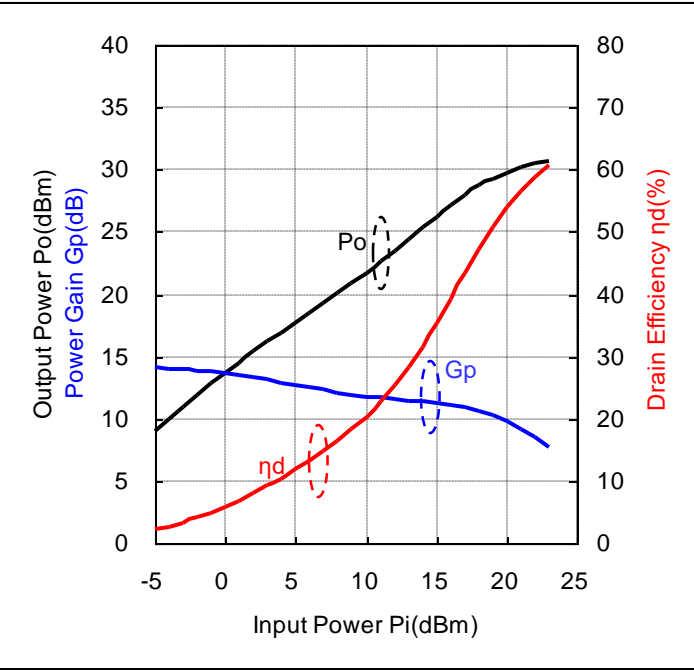
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.67	6.0	39.9	520	-5.0	0.3	7.6	0.006	12.6	43	2.2
1.67	6.0	39.9	520	-4.0	0.4	8.5	0.007	12.5	43	2.7
1.67	6.0	39.9	520	-3.0	0.5	9.4	0.009	12.4	44	3.3
1.67	6.0	39.9	520	-2.0	0.6	10.3	0.011	12.3	45	3.9
1.67	6.0	39.9	520	-1.0	0.8	11.2	0.013	12.2	47	4.7
1.67	6.0	39.9	520	0.0	1.0	12.0	0.016	12.0	49	5.5
1.67	6.0	39.9	520	1.0	1.3	12.9	0.019	11.9	51	6.3
1.67	6.0	39.9	520	2.0	1.6	13.7	0.023	11.7	54	7.2
1.67	6.0	39.9	520	3.0	2.0	14.5	0.028	11.5	57	8.2
1.67	6.0	39.9	520	4.0	2.5	15.3	0.034	11.3	61	9.3
1.67	6.0	39.9	520	5.0	3.2	16.2	0.041	11.2	66	10.4
1.67	6.0	39.9	520	6.0	4.0	17.0	0.050	11.0	72	11.6
1.67	6.0	39.9	520	7.0	5.0	17.9	0.061	10.9	78	13.0
1.67	6.0	39.9	520	8.0	6.3	18.8	0.076	10.8	86	14.6
1.67	6.0	39.9	520	9.0	7.9	19.7	0.093	10.7	95	16.4
1.67	6.0	39.9	520	10.0	10.0	20.6	0.116	10.6	105	18.4
1.67	6.0	39.9	520	11.0	12.6	21.6	0.144	10.6	116	20.5
1.67	6.0	39.9	520	12.0	15.8	22.6	0.180	10.6	130	23.2
1.67	6.0	39.9	520	13.0	20.0	23.5	0.226	10.5	145	26.1
1.67	6.0	39.9	520	14.0	25.1	24.5	0.285	10.5	162	29.4
1.67	6.0	39.9	520	15.0	31.6	25.5	0.359	10.5	181	33.1
1.67	6.0	39.9	520	16.0	39.8	26.5	0.452	10.5	202	37.2
1.67	6.0	39.9	520	17.0	50.1	27.5	0.561	10.5	225	41.5
1.67	6.0	39.9	520	18.0	63.1	28.3	0.678	10.3	247	45.7
1.67	6.0	39.9	520	19.0	79.4	29.0	0.793	10.0	267	49.6
1.67	6.0	39.9	520	20.0	100.0	29.5	0.899	9.5	283	52.9
1.67	6.0	39.9	520	21.0	125.9	30.0	0.995	9.0	298	55.8
1.67	6.0	39.9	520	22.0	158.5	30.3	1.076	8.3	309	58.0
1.67	6.0	39.9	520	23.0	199.5	30.6	1.151	7.6	319	60.1

Input-Output Characteristics $V_{ds}=6.0V$, $I_{bias}=60mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=59.5mA$

@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=59.5mA$

Data

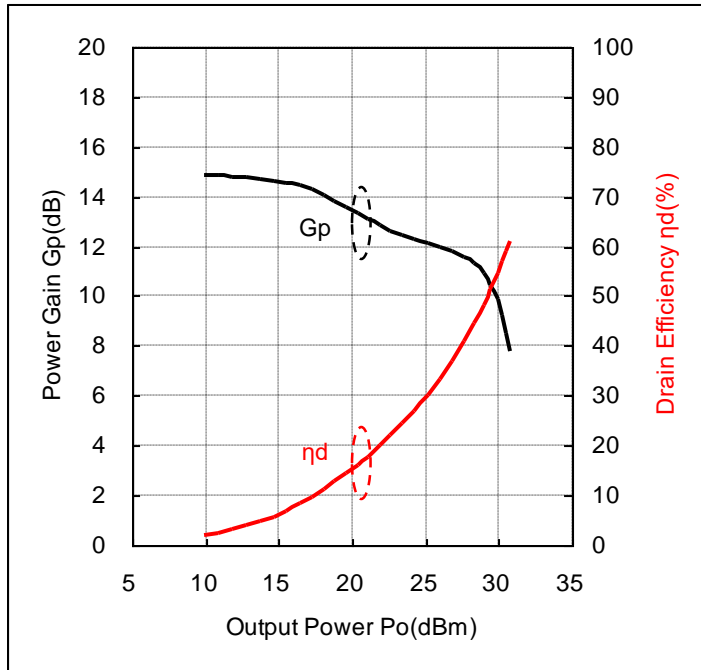
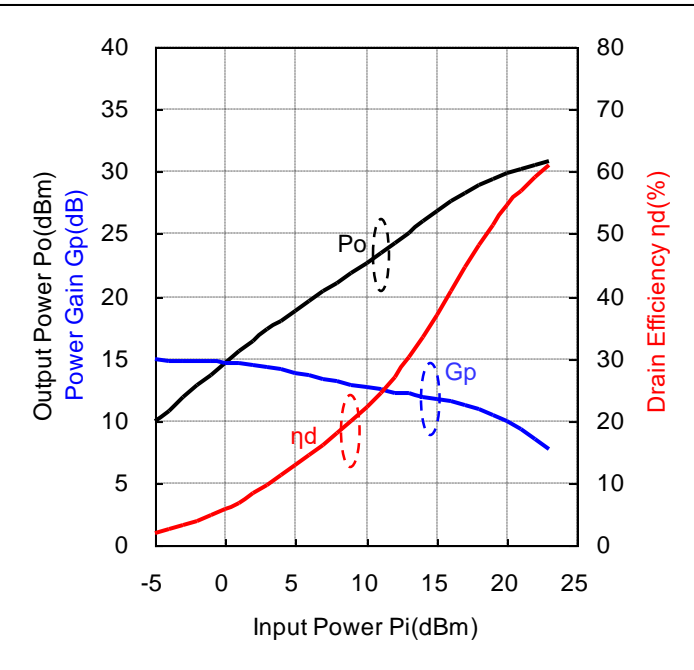
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.77	6.0	59.5	520	-5.0	0.3	9.1	0.008	14.1	62	2.2
1.77	6.0	59.5	520	-4.0	0.4	10.0	0.010	14.0	62	2.7
1.77	6.0	59.5	520	-3.0	0.5	10.9	0.012	13.9	63	3.3
1.77	6.0	59.5	520	-2.0	0.6	11.9	0.015	13.9	64	4.0
1.77	6.0	59.5	520	-1.0	0.8	12.8	0.019	13.8	65	4.9
1.77	6.0	59.5	520	0.0	1.0	13.7	0.023	13.7	67	5.8
1.77	6.0	59.5	520	1.0	1.3	14.5	0.028	13.5	69	6.9
1.77	6.0	59.5	520	2.0	1.6	15.4	0.034	13.4	71	8.1
1.77	6.0	59.5	520	3.0	2.0	16.2	0.041	13.2	74	9.3
1.77	6.0	59.5	520	4.0	2.5	16.9	0.049	12.9	79	10.4
1.77	6.0	59.5	520	5.0	3.2	17.7	0.059	12.7	83	11.8
1.77	6.0	59.5	520	6.0	4.0	18.5	0.071	12.5	89	13.3
1.77	6.0	59.5	520	7.0	5.0	19.3	0.085	12.3	96	14.8
1.77	6.0	59.5	520	8.0	6.3	20.1	0.102	12.1	104	16.4
1.77	6.0	59.5	520	9.0	7.9	20.9	0.124	11.9	113	18.2
1.77	6.0	59.5	520	10.0	10.0	21.8	0.150	11.8	123	20.4
1.77	6.0	59.5	520	11.0	12.6	22.6	0.184	11.6	135	22.8
1.77	6.0	59.5	520	12.0	15.8	23.5	0.225	11.5	148	25.4
1.77	6.0	59.5	520	13.0	20.0	24.4	0.278	11.4	163	28.4
1.77	6.0	59.5	520	14.0	25.1	25.3	0.341	11.3	180	31.6
1.77	6.0	59.5	520	15.0	31.6	26.3	0.422	11.3	199	35.3
1.77	6.0	59.5	520	16.0	39.8	27.1	0.518	11.1	220	39.2
1.77	6.0	59.5	520	17.0	50.1	28.0	0.627	11.0	240	43.4
1.77	6.0	59.5	520	18.0	63.1	28.7	0.738	10.7	260	47.3
1.77	6.0	59.5	520	19.0	79.4	29.3	0.845	10.3	277	50.8
1.77	6.0	59.5	520	20.0	100.0	29.8	0.944	9.8	292	53.8
1.77	6.0	59.5	520	21.0	125.9	30.1	1.033	9.1	305	56.5
1.77	6.0	59.5	520	22.0	158.5	30.5	1.112	8.5	315	58.8
1.77	6.0	59.5	520	23.0	199.5	30.7	1.178	7.7	324	60.6

Input-Output Characteristics $V_{ds}=6.0V, I_{bias}=80mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=6.0V, I_{bias}=79.1mA$

@ $f=520MHz, V_{ds}=6.0V, I_{bias}=79.1mA$

Data

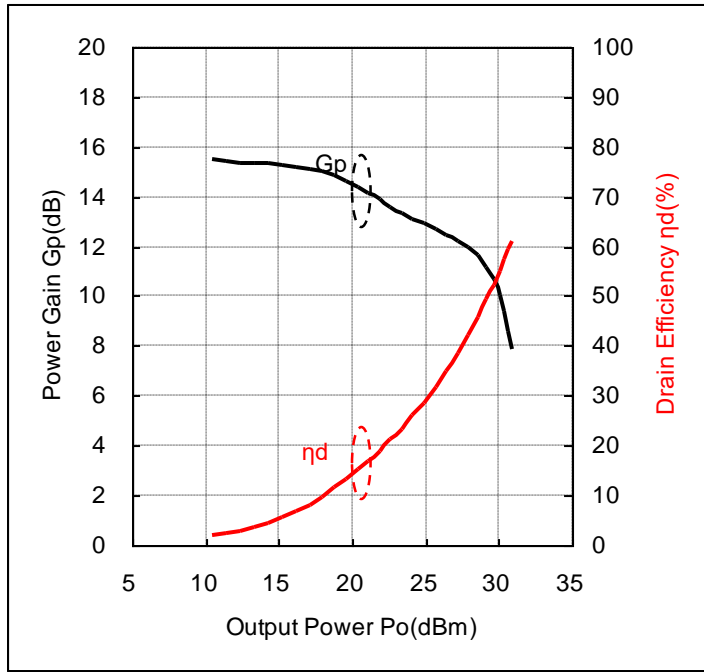
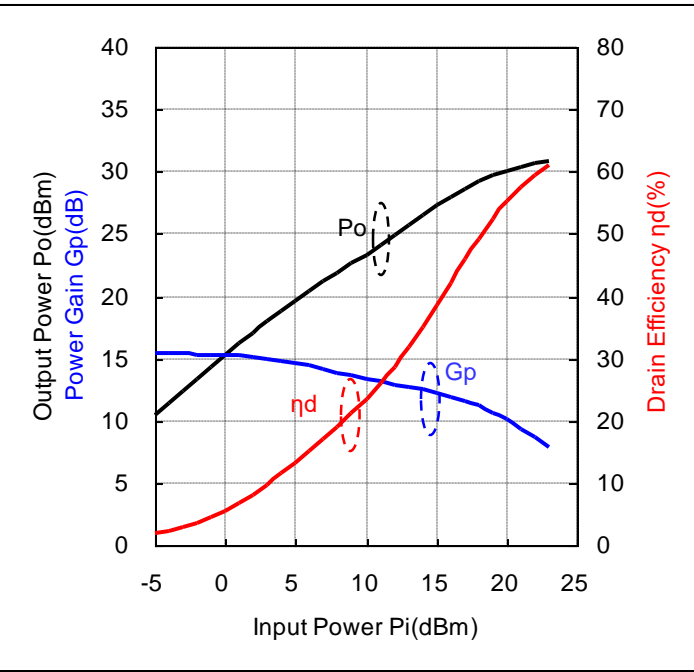
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.87	6.0	79.1	520	-5.0	0.3	9.9	0.010	14.9	81	2.0
1.87	6.0	79.1	520	-4.0	0.4	10.8	0.012	14.8	81	2.5
1.87	6.0	79.1	520	-3.0	0.5	11.8	0.015	14.8	82	3.1
1.87	6.0	79.1	520	-2.0	0.6	12.8	0.019	14.8	83	3.8
1.87	6.0	79.1	520	-1.0	0.8	13.7	0.024	14.7	84	4.7
1.87	6.0	79.1	520	0.0	1.0	14.6	0.029	14.6	85	5.7
1.87	6.0	79.1	520	1.0	1.3	15.5	0.036	14.5	87	6.9
1.87	6.0	79.1	520	2.0	1.6	16.4	0.044	14.4	89	8.2
1.87	6.0	79.1	520	3.0	2.0	17.3	0.053	14.3	92	9.7
1.87	6.0	79.1	520	4.0	2.5	18.1	0.064	14.1	95	11.2
1.87	6.0	79.1	520	5.0	3.2	18.8	0.076	13.8	100	12.8
1.87	6.0	79.1	520	6.0	4.0	19.6	0.091	13.6	106	14.4
1.87	6.0	79.1	520	7.0	5.0	20.4	0.108	13.4	112	16.1
1.87	6.0	79.1	520	8.0	6.3	21.1	0.129	13.1	120	17.8
1.87	6.0	79.1	520	9.0	7.9	21.9	0.154	12.9	129	19.9
1.87	6.0	79.1	520	10.0	10.0	22.6	0.184	12.6	139	22.0
1.87	6.0	79.1	520	11.0	12.6	23.5	0.222	12.5	151	24.5
1.87	6.0	79.1	520	12.0	15.8	24.3	0.268	12.3	165	27.1
1.87	6.0	79.1	520	13.0	20.0	25.1	0.326	12.1	180	30.2
1.87	6.0	79.1	520	14.0	25.1	26.0	0.394	12.0	197	33.4
1.87	6.0	79.1	520	15.0	31.6	26.8	0.478	11.8	215	37.0
1.87	6.0	79.1	520	16.0	39.8	27.6	0.574	11.6	235	40.8
1.87	6.0	79.1	520	17.0	50.1	28.3	0.679	11.3	254	44.7
1.87	6.0	79.1	520	18.0	63.1	28.9	0.783	10.9	271	48.2
1.87	6.0	79.1	520	19.0	79.4	29.5	0.885	10.5	286	51.5
1.87	6.0	79.1	520	20.0	100.0	29.9	0.979	9.9	300	54.5
1.87	6.0	79.1	520	21.0	125.9	30.3	1.062	9.3	311	57.0
1.87	6.0	79.1	520	22.0	158.5	30.5	1.135	8.5	320	59.1
1.87	6.0	79.1	520	23.0	199.5	30.8	1.199	7.8	328	61.0

Input-Output Characteristics $V_{ds}=6.0V$, $I_{bias}=100mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=98.2mA$

@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=98.2mA$

Data

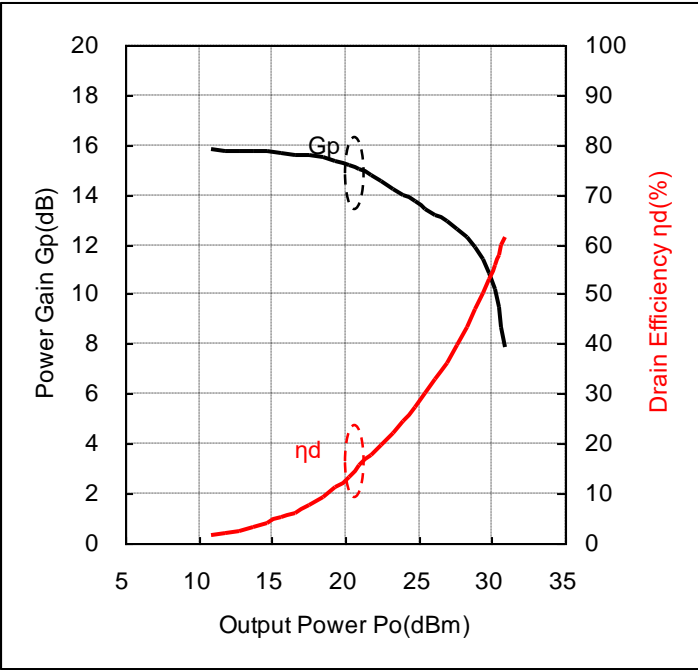
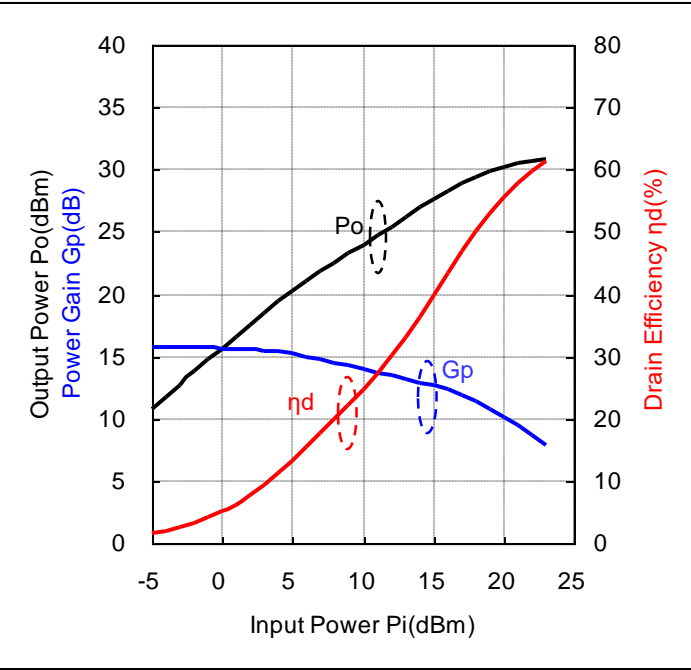
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.95	6.0	98.2	520	-5.0	0.3	10.5	0.011	15.5	100	1.9
1.95	6.0	98.2	520	-4.0	0.4	11.4	0.014	15.4	100	2.3
1.95	6.0	98.2	520	-3.0	0.5	12.4	0.017	15.4	100	2.9
1.95	6.0	98.2	520	-2.0	0.6	13.3	0.022	15.3	101	3.5
1.95	6.0	98.2	520	-1.0	0.8	14.3	0.027	15.3	102	4.4
1.95	6.0	98.2	520	0.0	1.0	15.3	0.033	15.3	103	5.4
1.95	6.0	98.2	520	1.0	1.3	16.2	0.042	15.2	104	6.7
1.95	6.0	98.2	520	2.0	1.6	17.1	0.051	15.1	106	8.1
1.95	6.0	98.2	520	3.0	2.0	18.0	0.063	15.0	109	9.7
1.95	6.0	98.2	520	4.0	2.5	18.8	0.076	14.8	111	11.5
1.95	6.0	98.2	520	5.0	3.2	19.6	0.092	14.6	115	13.2
1.95	6.0	98.2	520	6.0	4.0	20.4	0.110	14.4	121	15.2
1.95	6.0	98.2	520	7.0	5.0	21.1	0.130	14.1	127	17.0
1.95	6.0	98.2	520	8.0	6.3	21.9	0.154	13.9	135	19.0
1.95	6.0	98.2	520	9.0	7.9	22.6	0.182	13.6	144	21.1
1.95	6.0	98.2	520	10.0	10.0	23.4	0.217	13.4	154	23.4
1.95	6.0	98.2	520	11.0	12.6	24.1	0.258	13.1	166	25.9
1.95	6.0	98.2	520	12.0	15.8	24.9	0.309	12.9	180	28.7
1.95	6.0	98.2	520	13.0	20.0	25.7	0.370	12.7	194	31.7
1.95	6.0	98.2	520	14.0	25.1	26.5	0.444	12.5	211	35.0
1.95	6.0	98.2	520	15.0	31.6	27.2	0.528	12.2	229	38.5
1.95	6.0	98.2	520	16.0	39.8	28.0	0.625	12.0	247	42.1
1.95	6.0	98.2	520	17.0	50.1	28.6	0.726	11.6	264	45.8
1.95	6.0	98.2	520	18.0	63.1	29.2	0.828	11.2	280	49.2
1.95	6.0	98.2	520	19.0	79.4	29.6	0.923	10.6	294	52.3
1.95	6.0	98.2	520	20.0	100.0	30.0	1.012	10.0	306	55.1
1.95	6.0	98.2	520	21.0	125.9	30.4	1.089	9.4	316	57.5
1.95	6.0	98.2	520	22.0	158.5	30.6	1.156	8.6	324	59.5
1.95	6.0	98.2	520	23.0	199.5	30.9	1.216	7.9	331	61.2

Input-Output Characteristics $V_{ds}=6.0V$, $I_{bias}=120mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=118.3mA$

@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=118.3mA$

Data

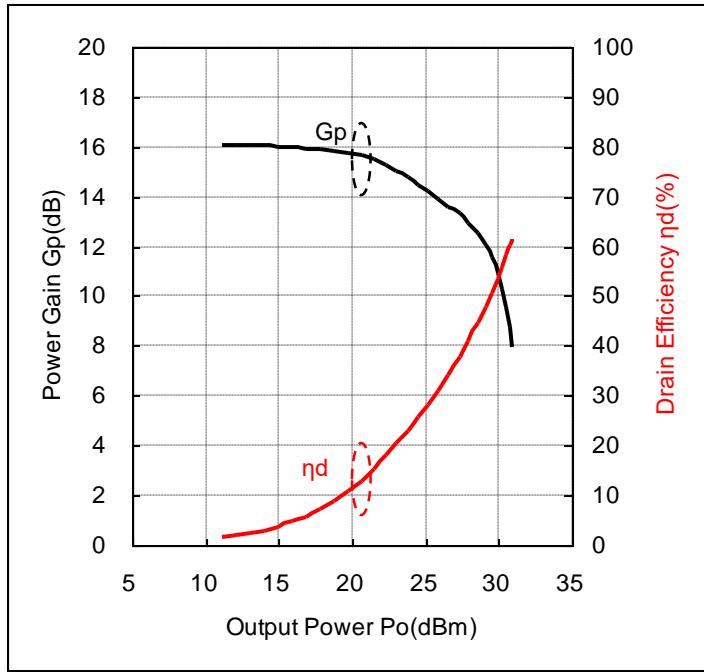
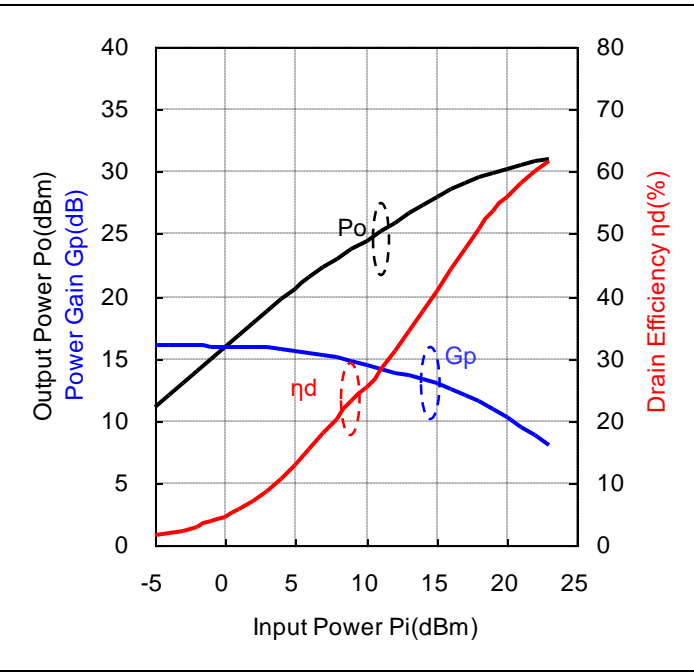
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.03	6.0	118.3	520	-5.0	0.3	10.8	0.012	15.8	120	1.7
2.03	6.0	118.3	520	-4.0	0.4	11.8	0.015	15.8	120	2.1
2.03	6.0	118.3	520	-3.0	0.5	12.8	0.019	15.8	121	2.6
2.03	6.0	118.3	520	-2.0	0.6	13.7	0.024	15.7	121	3.3
2.03	6.0	118.3	520	-1.0	0.8	14.7	0.030	15.7	121	4.1
2.03	6.0	118.3	520	0.0	1.0	15.7	0.037	15.7	122	5.0
2.03	6.0	118.3	520	1.0	1.3	16.6	0.046	15.6	124	6.2
2.03	6.0	118.3	520	2.0	1.6	17.6	0.057	15.6	125	7.6
2.03	6.0	118.3	520	3.0	2.0	18.5	0.071	15.5	127	9.3
2.03	6.0	118.3	520	4.0	2.5	19.4	0.087	15.4	129	11.2
2.03	6.0	118.3	520	5.0	3.2	20.2	0.105	15.2	132	13.2
2.03	6.0	118.3	520	6.0	4.0	21.0	0.126	15.0	136	15.5
2.03	6.0	118.3	520	7.0	5.0	21.8	0.151	14.8	143	17.7
2.03	6.0	118.3	520	8.0	6.3	22.5	0.179	14.5	150	19.9
2.03	6.0	118.3	520	9.0	7.9	23.3	0.211	14.3	159	22.2
2.03	6.0	118.3	520	10.0	10.0	24.0	0.249	14.0	169	24.6
2.03	6.0	118.3	520	11.0	12.6	24.7	0.296	13.7	181	27.2
2.03	6.0	118.3	520	12.0	15.8	25.4	0.350	13.4	194	30.0
2.03	6.0	118.3	520	13.0	20.0	26.2	0.415	13.2	209	33.1
2.03	6.0	118.3	520	14.0	25.1	26.9	0.491	12.9	225	36.3
2.03	6.0	118.3	520	15.0	31.6	27.6	0.579	12.6	242	39.9
2.03	6.0	118.3	520	16.0	39.8	28.3	0.676	12.3	259	43.5
2.03	6.0	118.3	520	17.0	50.1	28.9	0.773	11.9	274	46.9
2.03	6.0	118.3	520	18.0	63.1	29.4	0.867	11.4	288	50.1
2.03	6.0	118.3	520	19.0	79.4	29.8	0.957	10.8	301	53.0
2.03	6.0	118.3	520	20.0	100.0	30.2	1.040	10.2	311	55.7
2.03	6.0	118.3	520	21.0	125.9	30.5	1.112	9.5	320	57.8
2.03	6.0	118.3	520	22.0	158.5	30.7	1.175	8.7	328	59.7
2.03	6.0	118.3	520	23.0	199.5	30.9	1.233	7.9	334	61.5

Input-Output Characteristics $V_{ds}=6.0V$, $I_{bias}=140mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



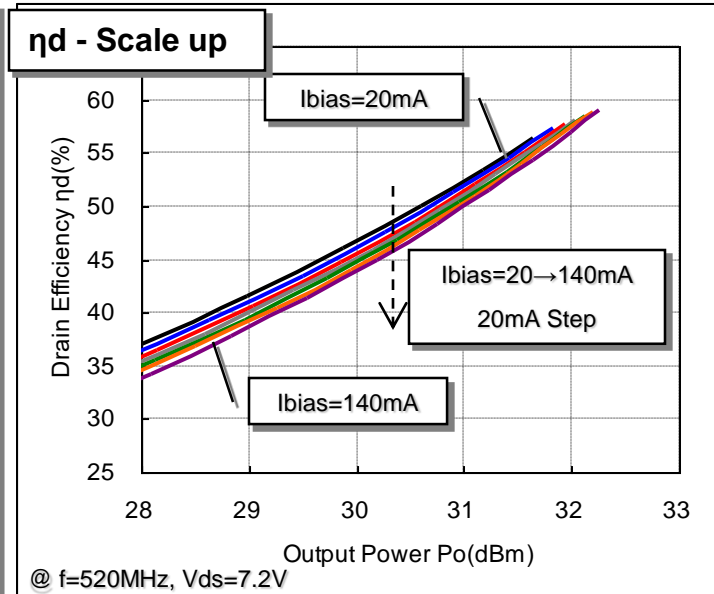
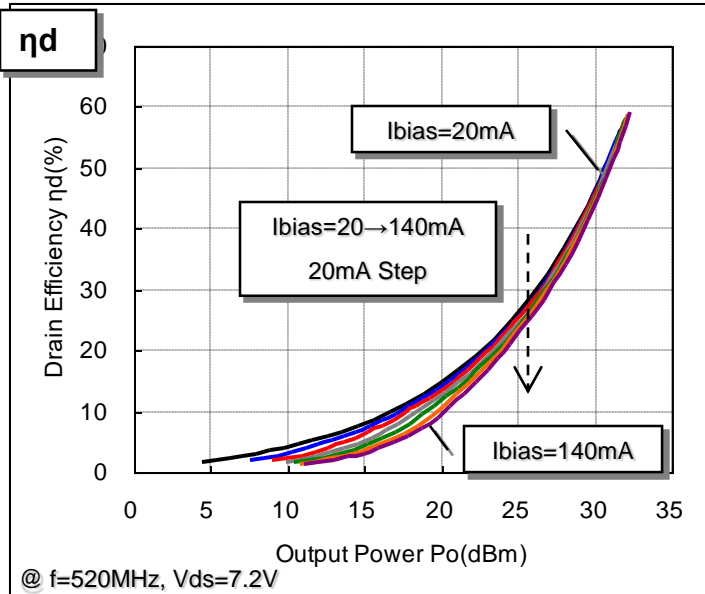
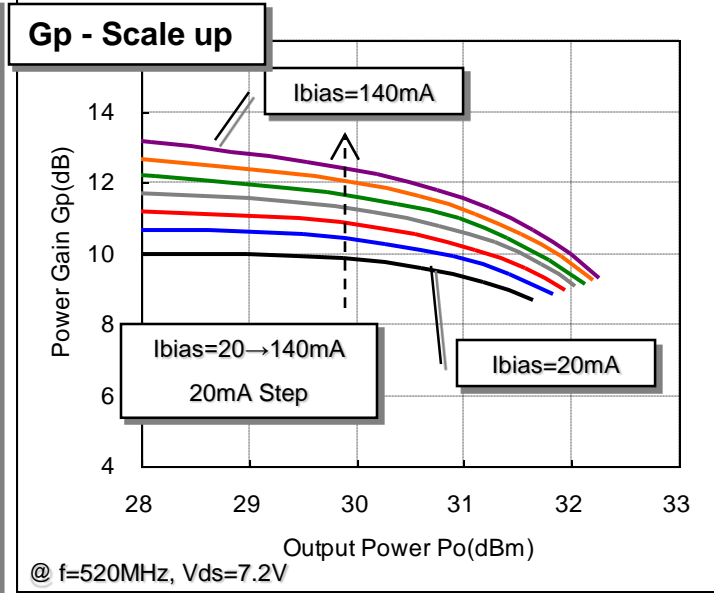
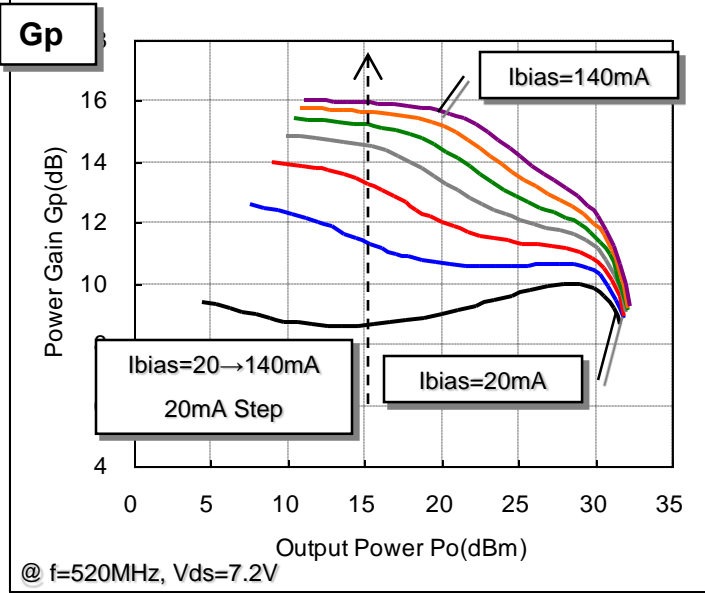
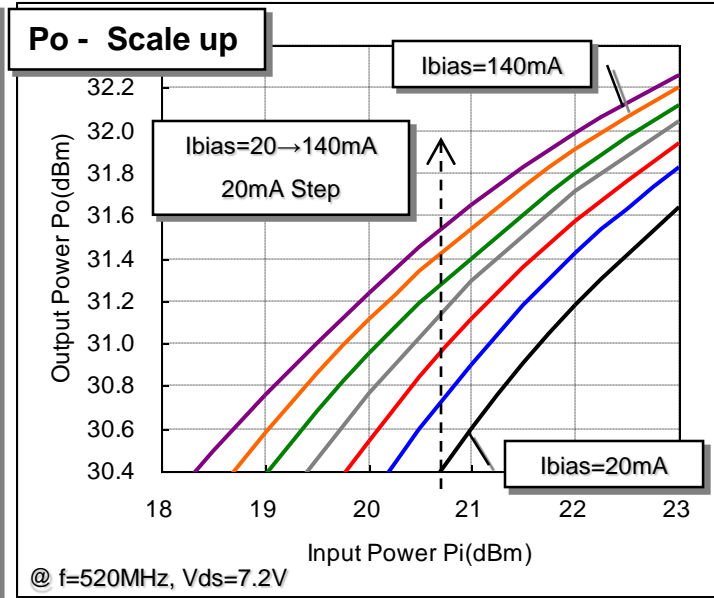
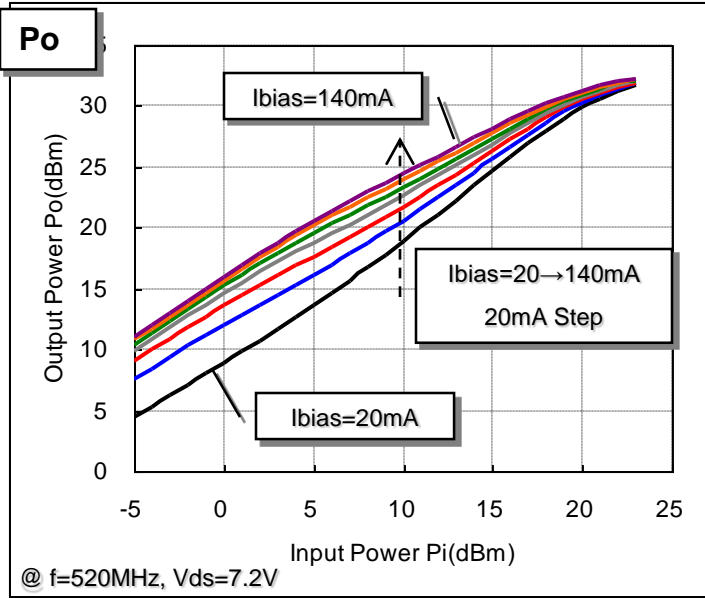
@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=138.6mA$

@ $f=520MHz$, $V_{ds}=6.0V$, $I_{bias}=138.6mA$

Data

V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.11	6.0	138.6	520	-5.0	0.3	11.1	0.013	16.1	139	1.5
2.11	6.0	138.6	520	-4.0	0.4	12.1	0.016	16.1	139	1.9
2.11	6.0	138.6	520	-3.0	0.5	13.1	0.020	16.1	140	2.4
2.11	6.0	138.6	520	-2.0	0.6	14.0	0.025	16.0	140	3.0
2.11	6.0	138.6	520	-1.0	0.8	15.0	0.031	16.0	140	3.7
2.11	6.0	138.6	520	0.0	1.0	16.0	0.039	16.0	141	4.7
2.11	6.0	138.6	520	1.0	1.3	16.9	0.049	15.9	142	5.8
2.11	6.0	138.6	520	2.0	1.6	17.9	0.061	15.9	143	7.2
2.11	6.0	138.6	520	3.0	2.0	18.8	0.077	15.8	145	8.8
2.11	6.0	138.6	520	4.0	2.5	19.8	0.094	15.8	146	10.8
2.11	6.0	138.6	520	5.0	3.2	20.6	0.116	15.6	149	13.0
2.11	6.0	138.6	520	6.0	4.0	21.5	0.141	15.5	153	15.3
2.11	6.0	138.6	520	7.0	5.0	22.3	0.169	15.3	158	17.9
2.11	6.0	138.6	520	8.0	6.3	23.0	0.201	15.0	165	20.4
2.11	6.0	138.6	520	9.0	7.9	23.8	0.239	14.8	173	23.0
2.11	6.0	138.6	520	10.0	10.0	24.5	0.281	14.5	183	25.5
2.11	6.0	138.6	520	11.0	12.6	25.2	0.330	14.2	195	28.2
2.11	6.0	138.6	520	12.0	15.8	25.9	0.388	13.9	208	31.1
2.11	6.0	138.6	520	13.0	20.0	26.6	0.457	13.6	222	34.3
2.11	6.0	138.6	520	14.0	25.1	27.3	0.537	13.3	238	37.6
2.11	6.0	138.6	520	15.0	31.6	28.0	0.624	13.0	254	40.9
2.11	6.0	138.6	520	16.0	39.8	28.6	0.718	12.6	269	44.4
2.11	6.0	138.6	520	17.0	50.1	29.1	0.809	12.1	283	47.6
2.11	6.0	138.6	520	18.0	63.1	29.5	0.899	11.5	296	50.7
2.11	6.0	138.6	520	19.0	79.4	29.9	0.986	10.9	307	53.5
2.11	6.0	138.6	520	20.0	100.0	30.3	1.062	10.3	317	55.9
2.11	6.0	138.6	520	21.0	125.9	30.5	1.132	9.5	324	58.2
2.11	6.0	138.6	520	22.0	158.5	30.8	1.194	8.8	331	60.1
2.11	6.0	138.6	520	23.0	199.5	31.0	1.247	8.0	337	61.6

Input - Output Characteristics $V_{ds}=7.2V$ - Condition 2

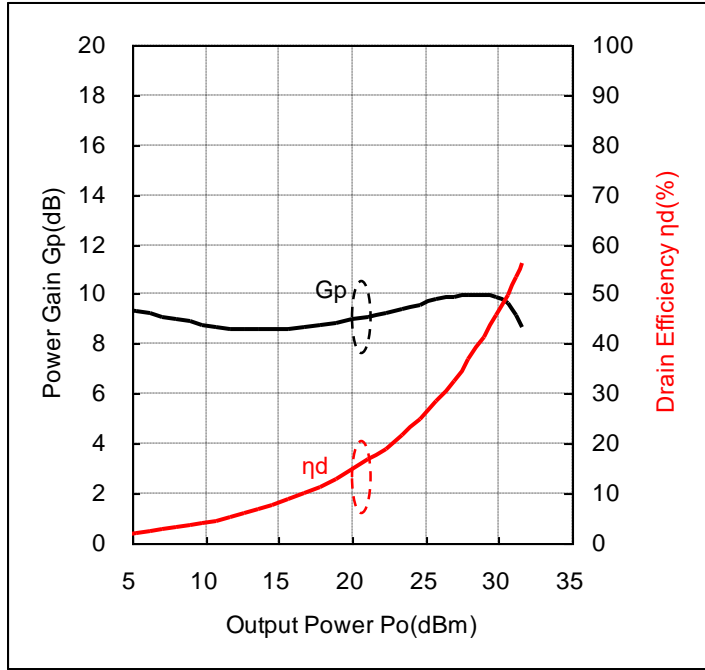
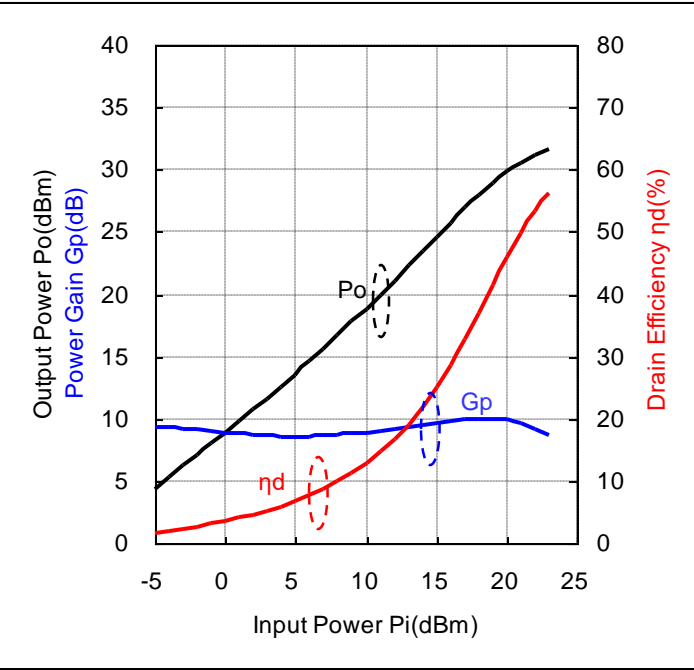


Input-Output Characteristics $V_{ds}=7.2V, I_{bias}=20mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=7.2V, I_{bias}=19.9mA$

@ $f=520MHz, V_{ds}=7.2V, I_{bias}=19.9mA$

Data

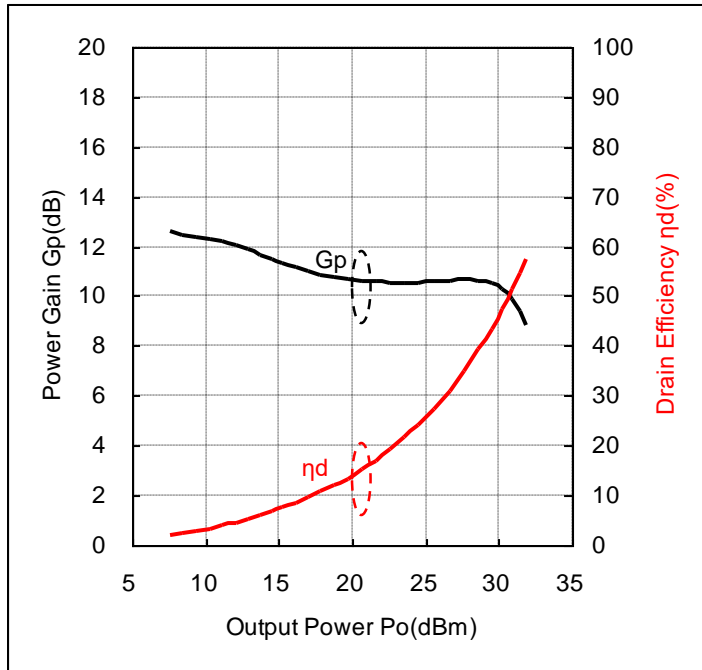
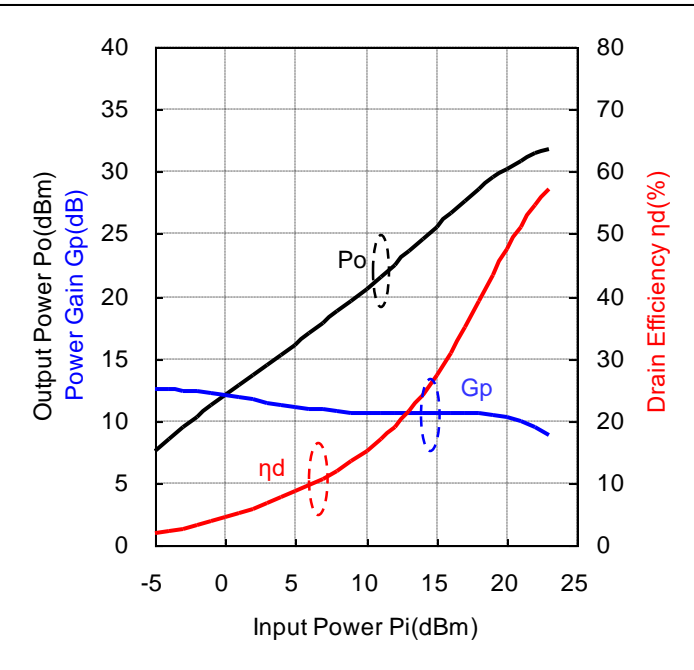
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.51	7.2	19.9	520	-5.0	0.3	4.4	0.003	9.4	23	1.6
1.51	7.2	19.9	520	-4.0	0.4	5.3	0.003	9.3	24	2.0
1.51	7.2	19.9	520	-3.0	0.5	6.2	0.004	9.2	25	2.3
1.51	7.2	19.9	520	-2.0	0.6	7.1	0.005	9.1	27	2.7
1.51	7.2	19.9	520	-1.0	0.8	8.0	0.006	9.0	28	3.1
1.51	7.2	19.9	520	0.0	1.0	8.9	0.008	8.9	30	3.6
1.51	7.2	19.9	520	1.0	1.3	9.8	0.010	8.8	33	4.1
1.51	7.2	19.9	520	2.0	1.6	10.7	0.012	8.7	35	4.6
1.51	7.2	19.9	520	3.0	2.0	11.6	0.015	8.6	39	5.2
1.51	7.2	19.9	520	4.0	2.5	12.6	0.018	8.6	42	5.9
1.51	7.2	19.9	520	5.0	3.2	13.6	0.023	8.6	47	6.7
1.51	7.2	19.9	520	6.0	4.0	14.6	0.029	8.6	52	7.6
1.51	7.2	19.9	520	7.0	5.0	15.6	0.036	8.6	58	8.7
1.51	7.2	19.9	520	8.0	6.3	16.7	0.047	8.7	65	9.9
1.51	7.2	19.9	520	9.0	7.9	17.8	0.060	8.8	74	11.2
1.51	7.2	19.9	520	10.0	10.0	18.9	0.077	8.9	84	12.8
1.51	7.2	19.9	520	11.0	12.6	20.0	0.100	9.0	95	14.7
1.51	7.2	19.9	520	12.0	15.8	21.1	0.129	9.1	107	16.7
1.51	7.2	19.9	520	13.0	20.0	22.3	0.168	9.3	123	19.1
1.51	7.2	19.9	520	14.0	25.1	23.4	0.220	9.4	140	21.8
1.51	7.2	19.9	520	15.0	31.6	24.6	0.288	9.6	160	25.0
1.51	7.2	19.9	520	16.0	39.8	25.8	0.377	9.8	183	28.6
1.51	7.2	19.9	520	17.0	50.1	26.9	0.491	9.9	209	32.6
1.51	7.2	19.9	520	18.0	63.1	28.0	0.627	10.0	236	36.9
1.51	7.2	19.9	520	19.0	79.4	29.0	0.793	10.0	265	41.5
1.51	7.2	19.9	520	20.0	100.0	29.9	0.973	9.9	294	46.0
1.51	7.2	19.9	520	21.0	125.9	30.6	1.148	9.6	320	49.9
1.51	7.2	19.9	520	22.0	158.5	31.2	1.312	9.2	341	53.4
1.51	7.2	19.9	520	23.0	199.5	31.6	1.459	8.6	360	56.3

Input-Output Characteristics $V_{ds}=7.2V, I_{bias}=40mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=7.2V, I_{bias}=39.8mA$

@ $f=520MHz, V_{ds}=7.2V, I_{bias}=39.8mA$

Data

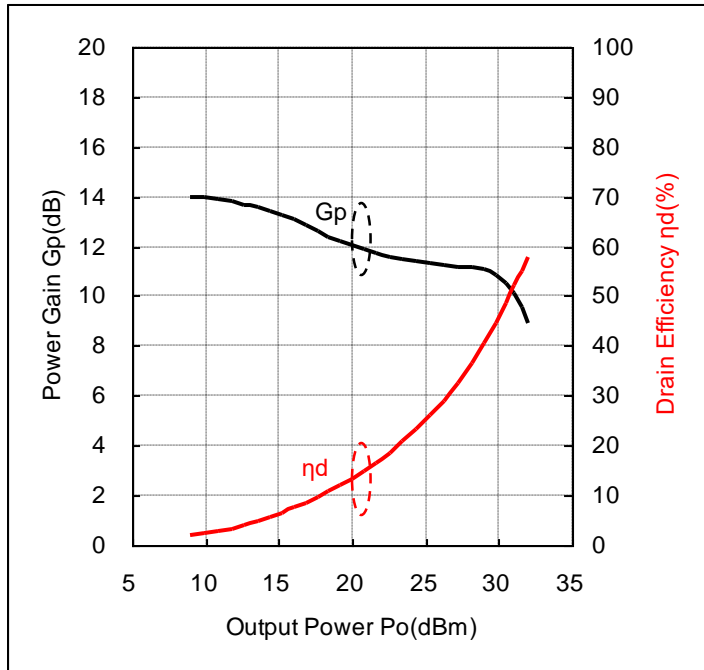
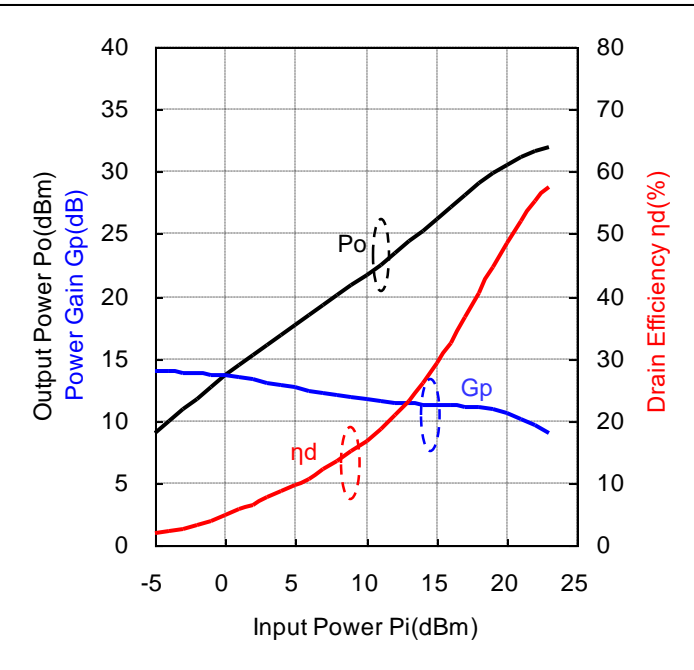
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.64	7.2	39.8	520	-5.0	0.3	7.6	0.006	12.6	43	1.9
1.64	7.2	39.8	520	-4.0	0.4	8.5	0.007	12.5	44	2.2
1.64	7.2	39.8	520	-3.0	0.5	9.4	0.009	12.4	45	2.7
1.64	7.2	39.8	520	-2.0	0.6	10.3	0.011	12.3	46	3.2
1.64	7.2	39.8	520	-1.0	0.8	11.2	0.013	12.2	47	3.9
1.64	7.2	39.8	520	0.0	1.0	12.0	0.016	12.0	49	4.5
1.64	7.2	39.8	520	1.0	1.3	12.9	0.019	11.9	51	5.2
1.64	7.2	39.8	520	2.0	1.6	13.7	0.023	11.7	54	5.9
1.64	7.2	39.8	520	3.0	2.0	14.5	0.028	11.5	58	6.7
1.64	7.2	39.8	520	4.0	2.5	15.3	0.034	11.3	62	7.6
1.64	7.2	39.8	520	5.0	3.2	16.1	0.041	11.1	67	8.5
1.64	7.2	39.8	520	6.0	4.0	17.0	0.050	11.0	73	9.5
1.64	7.2	39.8	520	7.0	5.0	17.9	0.061	10.9	79	10.7
1.64	7.2	39.8	520	8.0	6.3	18.8	0.075	10.8	87	12.0
1.64	7.2	39.8	520	9.0	7.9	19.7	0.092	10.7	96	13.4
1.64	7.2	39.8	520	10.0	10.0	20.6	0.115	10.6	106	15.2
1.64	7.2	39.8	520	11.0	12.6	21.6	0.144	10.6	117	17.0
1.64	7.2	39.8	520	12.0	15.8	22.5	0.180	10.5	131	19.1
1.64	7.2	39.8	520	13.0	20.0	23.5	0.226	10.5	146	21.6
1.64	7.2	39.8	520	14.0	25.1	24.5	0.285	10.5	164	24.2
1.64	7.2	39.8	520	15.0	31.6	25.6	0.361	10.6	183	27.4
1.64	7.2	39.8	520	16.0	39.8	26.6	0.459	10.6	206	31.0
1.64	7.2	39.8	520	17.0	50.1	27.6	0.582	10.6	232	34.9
1.64	7.2	39.8	520	18.0	63.1	28.6	0.731	10.6	259	39.2
1.64	7.2	39.8	520	19.0	79.4	29.5	0.891	10.5	285	43.4
1.64	7.2	39.8	520	20.0	100.0	30.3	1.064	10.3	311	47.6
1.64	7.2	39.8	520	21.0	125.9	30.9	1.230	9.9	333	51.2
1.64	7.2	39.8	520	22.0	158.5	31.4	1.387	9.4	353	54.5
1.64	7.2	39.8	520	23.0	199.5	31.8	1.524	8.8	370	57.3

Input-Output Characteristics $V_{ds}=7.2V, I_{bias}=60mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=7.2V, I_{bias}=58.8mA$

@ $f=520MHz, V_{ds}=7.2V, I_{bias}=58.8mA$

Data

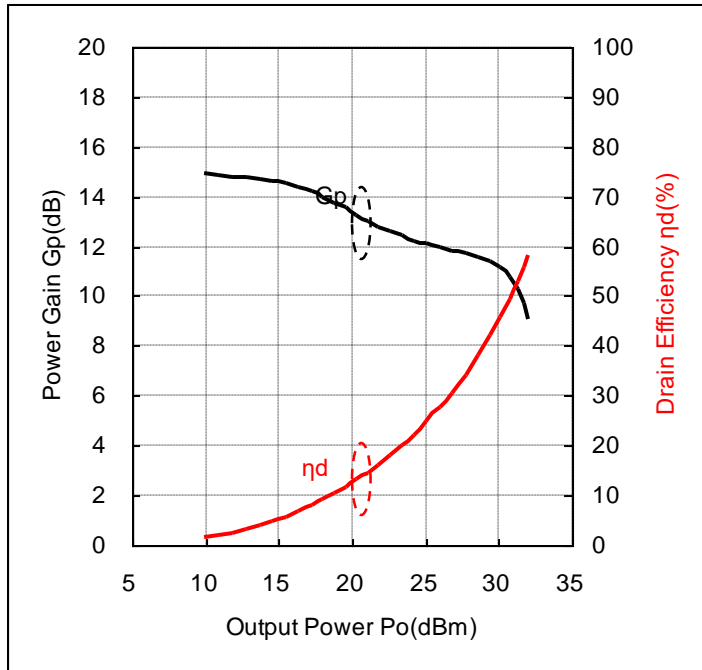
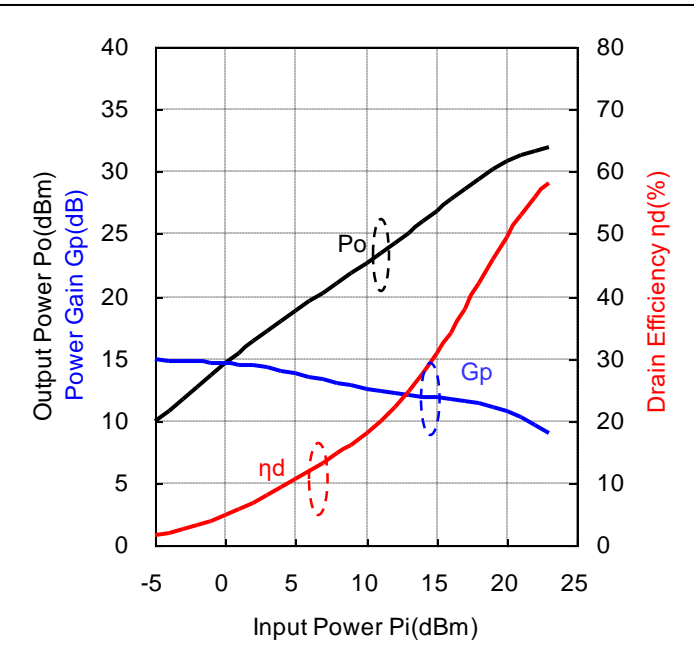
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.74	7.2	58.8	520	-5.0	0.3	9.0	0.008	14.0	61	1.8
1.74	7.2	58.8	520	-4.0	0.4	9.9	0.010	13.9	62	2.2
1.74	7.2	58.8	520	-3.0	0.5	10.9	0.012	13.9	62	2.7
1.74	7.2	58.8	520	-2.0	0.6	11.8	0.015	13.8	63	3.3
1.74	7.2	58.8	520	-1.0	0.8	12.7	0.019	13.7	65	4.0
1.74	7.2	58.8	520	0.0	1.0	13.6	0.023	13.6	66	4.8
1.74	7.2	58.8	520	1.0	1.3	14.4	0.028	13.4	68	5.7
1.74	7.2	58.8	520	2.0	1.6	15.3	0.034	13.3	71	6.6
1.74	7.2	58.8	520	3.0	2.0	16.1	0.041	13.1	74	7.6
1.74	7.2	58.8	520	4.0	2.5	16.9	0.048	12.9	79	8.6
1.74	7.2	58.8	520	5.0	3.2	17.6	0.058	12.6	83	9.7
1.74	7.2	58.8	520	6.0	4.0	18.4	0.069	12.4	89	10.7
1.74	7.2	58.8	520	7.0	5.0	19.2	0.083	12.2	96	12.1
1.74	7.2	58.8	520	8.0	6.3	20.0	0.100	12.0	104	13.4
1.74	7.2	58.8	520	9.0	7.9	20.9	0.122	11.9	113	15.0
1.74	7.2	58.8	520	10.0	10.0	21.7	0.148	11.7	123	16.6
1.74	7.2	58.8	520	11.0	12.6	22.6	0.181	11.6	135	18.6
1.74	7.2	58.8	520	12.0	15.8	23.5	0.222	11.5	148	20.8
1.74	7.2	58.8	520	13.0	20.0	24.4	0.274	11.4	164	23.2
1.74	7.2	58.8	520	14.0	25.1	25.3	0.339	11.3	181	26.0
1.74	7.2	58.8	520	15.0	31.6	26.3	0.422	11.3	201	29.1
1.74	7.2	58.8	520	16.0	39.8	27.2	0.525	11.2	224	32.6
1.74	7.2	58.8	520	17.0	50.1	28.1	0.653	11.1	248	36.5
1.74	7.2	58.8	520	18.0	63.1	29.0	0.804	11.0	275	40.6
1.74	7.2	58.8	520	19.0	79.4	29.9	0.968	10.9	301	44.8
1.74	7.2	58.8	520	20.0	100.0	30.5	1.132	10.5	324	48.6
1.74	7.2	58.8	520	21.0	125.9	31.1	1.291	10.1	344	52.1
1.74	7.2	58.8	520	22.0	158.5	31.6	1.435	9.6	362	55.1
1.74	7.2	58.8	520	23.0	199.5	31.9	1.563	8.9	377	57.7

Input-Output Characteristics $V_{ds}=7.2V, I_{bias}=80mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=7.2V, I_{bias}=79.1mA$

@ $f=520MHz, V_{ds}=7.2V, I_{bias}=79.1mA$

Data

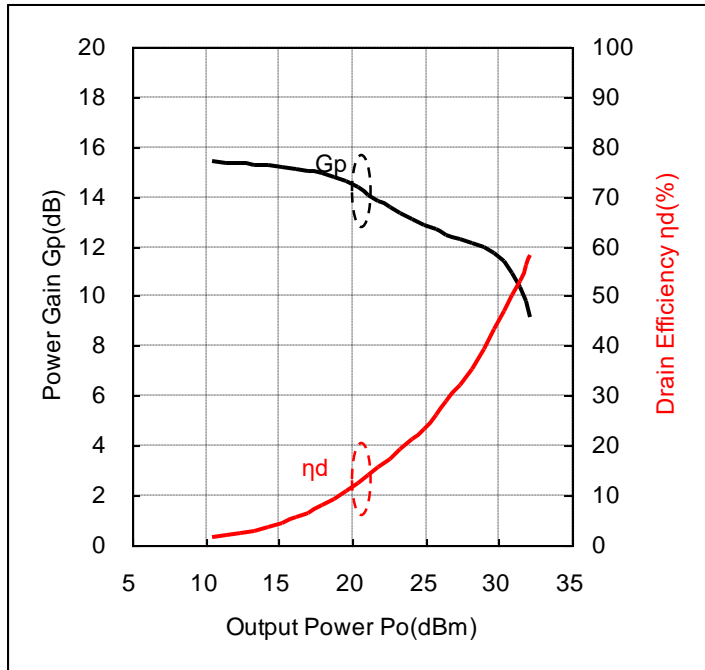
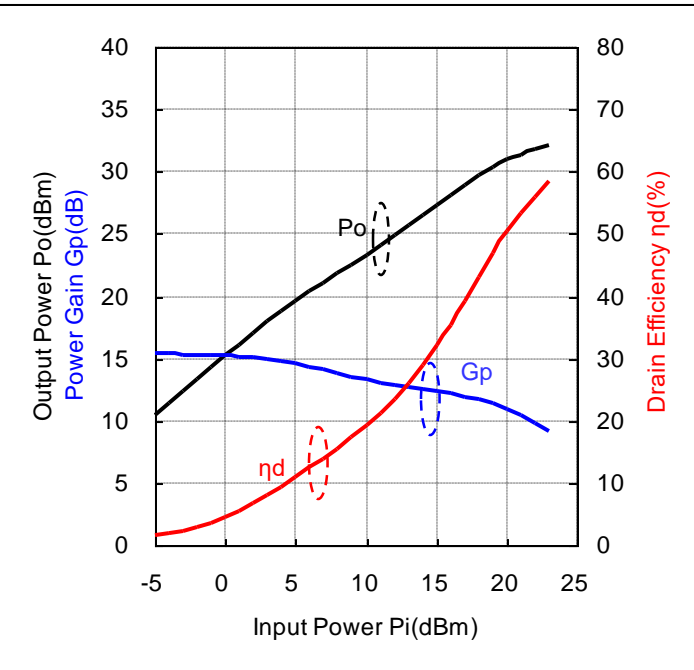
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.84	7.2	79.1	520	-5.0	0.3	9.9	0.010	14.9	81	1.7
1.84	7.2	79.1	520	-4.0	0.4	10.8	0.012	14.8	81	2.1
1.84	7.2	79.1	520	-3.0	0.5	11.8	0.015	14.8	82	2.6
1.84	7.2	79.1	520	-2.0	0.6	12.7	0.019	14.7	83	3.1
1.84	7.2	79.1	520	-1.0	0.8	13.7	0.023	14.7	84	3.9
1.84	7.2	79.1	520	0.0	1.0	14.6	0.029	14.6	85	4.7
1.84	7.2	79.1	520	1.0	1.3	15.5	0.035	14.5	87	5.7
1.84	7.2	79.1	520	2.0	1.6	16.4	0.043	14.4	89	6.8
1.84	7.2	79.1	520	3.0	2.0	17.2	0.053	14.2	92	8.0
1.84	7.2	79.1	520	4.0	2.5	18.0	0.063	14.0	95	9.2
1.84	7.2	79.1	520	5.0	3.2	18.8	0.075	13.8	100	10.5
1.84	7.2	79.1	520	6.0	4.0	19.5	0.090	13.5	106	11.8
1.84	7.2	79.1	520	7.0	5.0	20.3	0.107	13.3	113	13.2
1.84	7.2	79.1	520	8.0	6.3	21.0	0.127	13.0	121	14.7
1.84	7.2	79.1	520	9.0	7.9	21.8	0.151	12.8	130	16.2
1.84	7.2	79.1	520	10.0	10.0	22.6	0.182	12.6	140	18.0
1.84	7.2	79.1	520	11.0	12.6	23.4	0.220	12.4	152	20.1
1.84	7.2	79.1	520	12.0	15.8	24.2	0.265	12.2	166	22.2
1.84	7.2	79.1	520	13.0	20.0	25.1	0.323	12.1	181	24.7
1.84	7.2	79.1	520	14.0	25.1	26.0	0.394	12.0	199	27.6
1.84	7.2	79.1	520	15.0	31.6	26.8	0.483	11.8	219	30.7
1.84	7.2	79.1	520	16.0	39.8	27.7	0.592	11.7	240	34.2
1.84	7.2	79.1	520	17.0	50.1	28.6	0.723	11.6	264	38.0
1.84	7.2	79.1	520	18.0	63.1	29.4	0.875	11.4	289	42.0
1.84	7.2	79.1	520	19.0	79.4	30.1	1.035	11.1	313	45.9
1.84	7.2	79.1	520	20.0	100.0	30.8	1.194	10.8	335	49.6
1.84	7.2	79.1	520	21.0	125.9	31.3	1.346	10.3	353	52.9
1.84	7.2	79.1	520	22.0	158.5	31.7	1.483	9.7	369	55.8
1.84	7.2	79.1	520	23.0	199.5	32.0	1.600	9.0	383	58.1

Input-Output Characteristics $V_{ds}=7.2V$, $I_{bias}=100mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=7.2V$, $I_{bias}=98.6mA$

@ $f=520MHz$, $V_{ds}=7.2V$, $I_{bias}=98.6mA$

Data

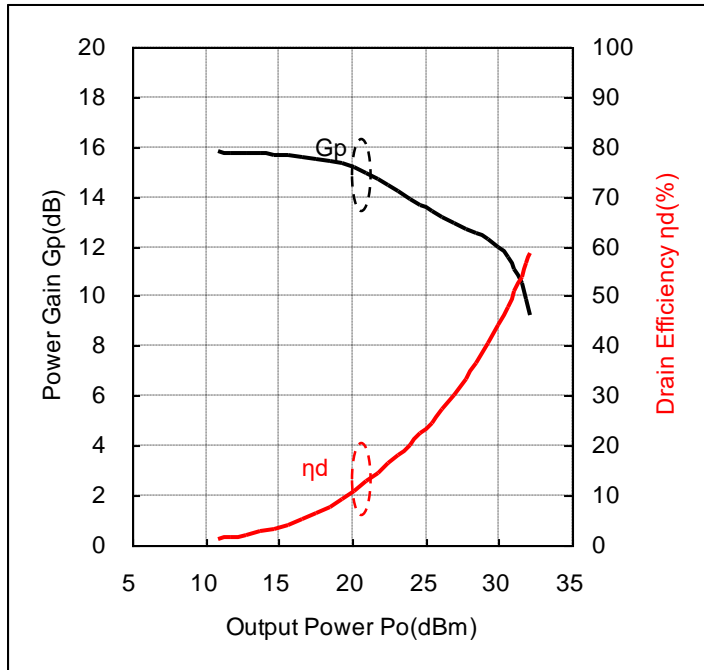
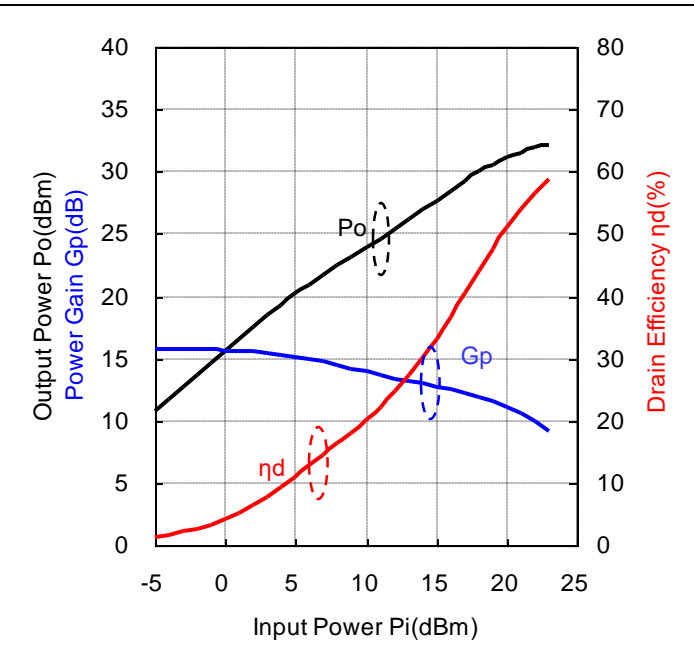
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.92	7.2	98.6	520	-5.0	0.3	10.4	0.011	15.4	100	1.5
1.92	7.2	98.6	520	-4.0	0.4	11.4	0.014	15.4	100	1.9
1.92	7.2	98.6	520	-3.0	0.5	12.3	0.017	15.3	101	2.4
1.92	7.2	98.6	520	-2.0	0.6	13.3	0.021	15.3	102	2.9
1.92	7.2	98.6	520	-1.0	0.8	14.3	0.027	15.3	102	3.6
1.92	7.2	98.6	520	0.0	1.0	15.2	0.033	15.2	104	4.5
1.92	7.2	98.6	520	1.0	1.3	16.1	0.041	15.1	105	5.4
1.92	7.2	98.6	520	2.0	1.6	17.0	0.051	15.0	106	6.6
1.92	7.2	98.6	520	3.0	2.0	17.9	0.062	14.9	109	7.9
1.92	7.2	98.6	520	4.0	2.5	18.8	0.076	14.8	111	9.4
1.92	7.2	98.6	520	5.0	3.2	19.6	0.091	14.6	116	10.9
1.92	7.2	98.6	520	6.0	4.0	20.4	0.108	14.4	121	12.4
1.92	7.2	98.6	520	7.0	5.0	21.1	0.128	14.1	128	13.9
1.92	7.2	98.6	520	8.0	6.3	21.8	0.152	13.8	136	15.6
1.92	7.2	98.6	520	9.0	7.9	22.5	0.180	13.5	145	17.3
1.92	7.2	98.6	520	10.0	10.0	23.3	0.215	13.3	155	19.2
1.92	7.2	98.6	520	11.0	12.6	24.1	0.255	13.1	167	21.2
1.92	7.2	98.6	520	12.0	15.8	24.9	0.306	12.9	181	23.5
1.92	7.2	98.6	520	13.0	20.0	25.7	0.368	12.7	196	26.1
1.92	7.2	98.6	520	14.0	25.1	26.5	0.444	12.5	214	28.8
1.92	7.2	98.6	520	15.0	31.6	27.3	0.537	12.3	233	32.0
1.92	7.2	98.6	520	16.0	39.8	28.1	0.650	12.1	255	35.5
1.92	7.2	98.6	520	17.0	50.1	29.0	0.787	12.0	278	39.3
1.92	7.2	98.6	520	18.0	63.1	29.7	0.938	11.7	302	43.2
1.92	7.2	98.6	520	19.0	79.4	30.4	1.091	11.4	324	46.8
1.92	7.2	98.6	520	20.0	100.0	31.0	1.245	11.0	343	50.3
1.92	7.2	98.6	520	21.0	125.9	31.4	1.380	10.4	360	53.2
1.92	7.2	98.6	520	22.0	158.5	31.8	1.514	9.8	375	56.1
1.92	7.2	98.6	520	23.0	199.5	32.1	1.629	9.1	388	58.4

Input-Output Characteristics $V_{ds}=7.2V$, $I_{bias}=120mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=7.2V$, $I_{bias}=117.9mA$

@ $f=520MHz$, $V_{ds}=7.2V$, $I_{bias}=117.9mA$

Data

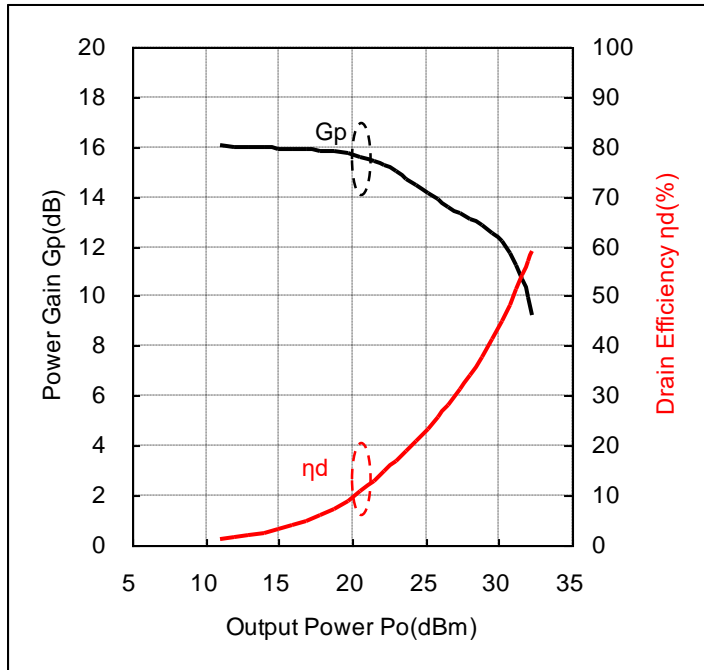
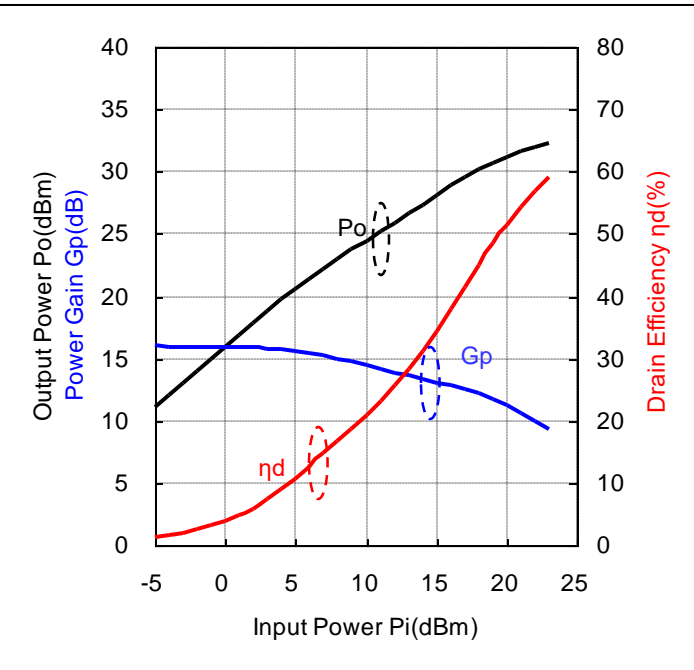
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.00	7.2	117.9	520	-5.0	0.3	10.8	0.012	15.8	119	1.4
2.00	7.2	117.9	520	-4.0	0.4	11.7	0.015	15.7	119	1.7
2.00	7.2	117.9	520	-3.0	0.5	12.7	0.019	15.7	119	2.2
2.00	7.2	117.9	520	-2.0	0.6	13.7	0.023	15.7	120	2.7
2.00	7.2	117.9	520	-1.0	0.8	14.7	0.029	15.7	121	3.4
2.00	7.2	117.9	520	0.0	1.0	15.6	0.037	15.6	122	4.2
2.00	7.2	117.9	520	1.0	1.3	16.6	0.046	15.6	123	5.2
2.00	7.2	117.9	520	2.0	1.6	17.5	0.057	15.5	124	6.3
2.00	7.2	117.9	520	3.0	2.0	18.5	0.070	15.5	126	7.7
2.00	7.2	117.9	520	4.0	2.5	19.3	0.086	15.3	128	9.3
2.00	7.2	117.9	520	5.0	3.2	20.2	0.104	15.2	132	11.0
2.00	7.2	117.9	520	6.0	4.0	21.0	0.125	15.0	136	12.7
2.00	7.2	117.9	520	7.0	5.0	21.7	0.148	14.7	143	14.4
2.00	7.2	117.9	520	8.0	6.3	22.5	0.176	14.5	150	16.3
2.00	7.2	117.9	520	9.0	7.9	23.2	0.208	14.2	159	18.2
2.00	7.2	117.9	520	10.0	10.0	23.9	0.246	13.9	169	20.2
2.00	7.2	117.9	520	11.0	12.6	24.6	0.292	13.6	182	22.3
2.00	7.2	117.9	520	12.0	15.8	25.4	0.347	13.4	195	24.7
2.00	7.2	117.9	520	13.0	20.0	26.2	0.413	13.2	211	27.2
2.00	7.2	117.9	520	14.0	25.1	26.9	0.494	12.9	228	30.1
2.00	7.2	117.9	520	15.0	31.6	27.7	0.590	12.7	247	33.2
2.00	7.2	117.9	520	16.0	39.8	28.5	0.710	12.5	268	36.7
2.00	7.2	117.9	520	17.0	50.1	29.3	0.845	12.3	291	40.4
2.00	7.2	117.9	520	18.0	63.1	30.0	0.991	12.0	313	44.0
2.00	7.2	117.9	520	19.0	79.4	30.6	1.143	11.6	333	47.7
2.00	7.2	117.9	520	20.0	100.0	31.1	1.291	11.1	352	51.0
2.00	7.2	117.9	520	21.0	125.9	31.5	1.426	10.5	367	53.9
2.00	7.2	117.9	520	22.0	158.5	31.9	1.552	9.9	381	56.6
2.00	7.2	117.9	520	23.0	199.5	32.2	1.660	9.2	392	58.8

Input-Output Characteristics $V_{ds}=7.2V$, $I_{bias}=140mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



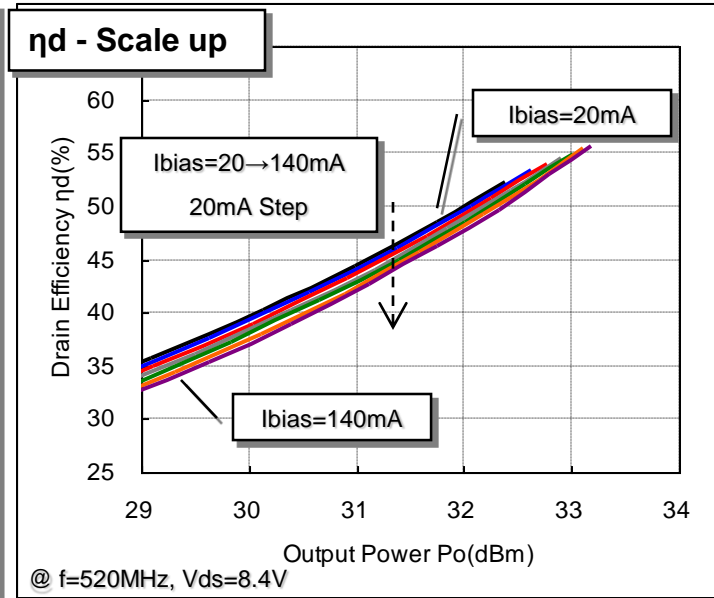
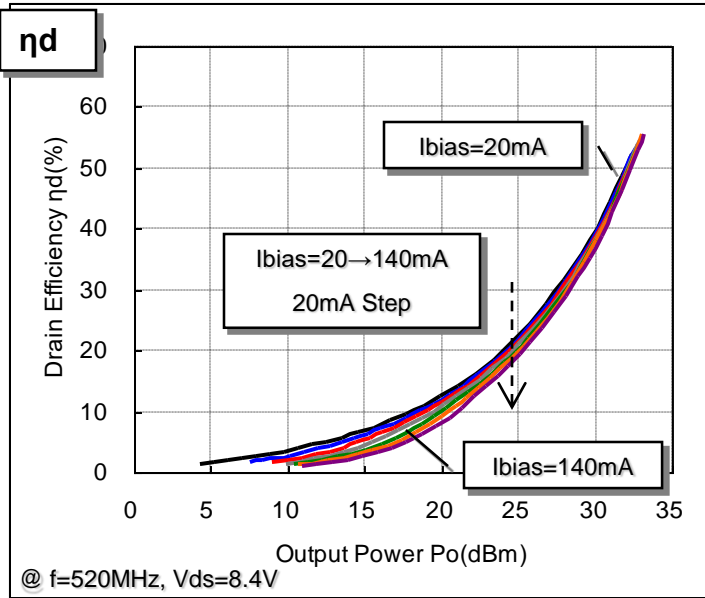
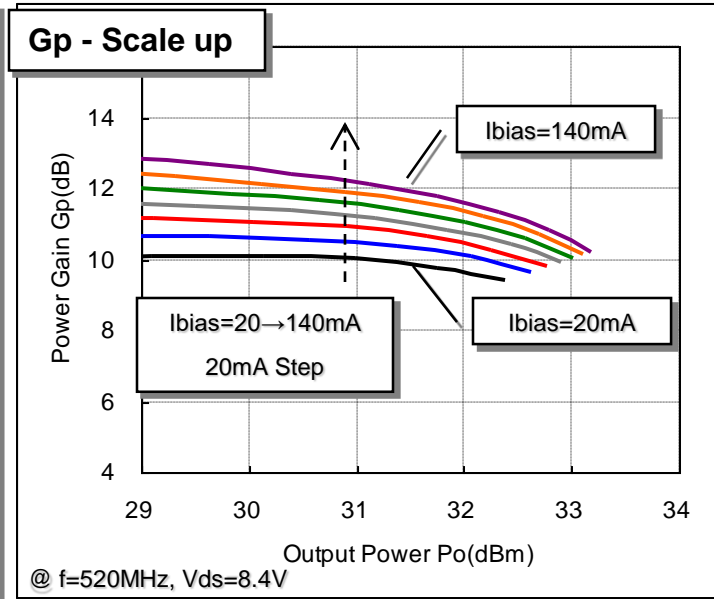
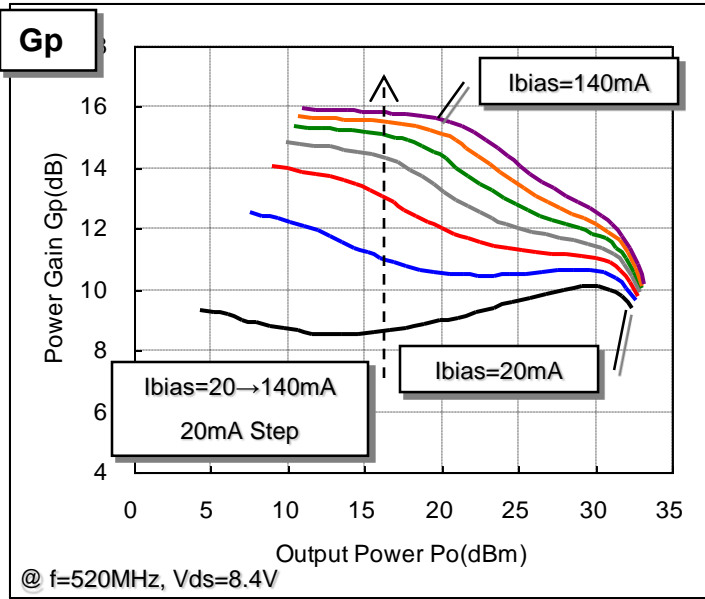
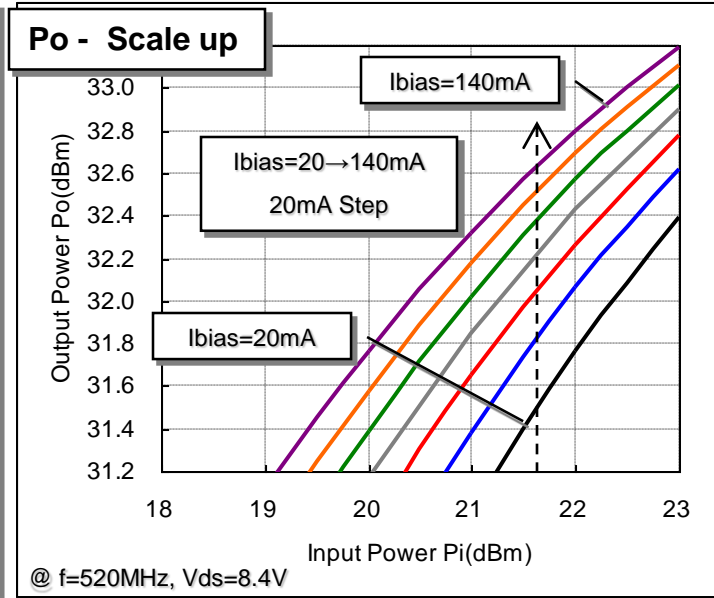
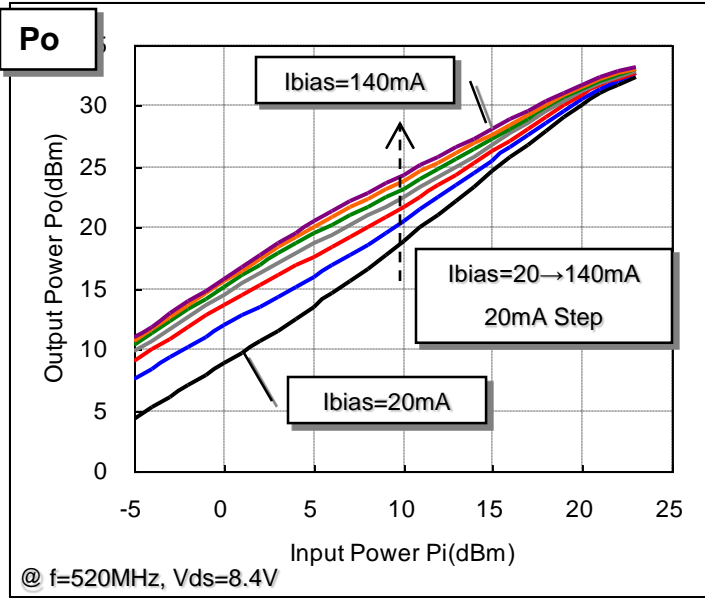
@ $f=520MHz$, $V_{ds}=7.2V$, $I_{bias}=137.8mA$

@ $f=520MHz$, $V_{ds}=7.2V$, $I_{bias}=137.8mA$

Data

V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.07	7.2	137.8	520	-5.0	0.3	11.0	0.013	16.0	139	1.3
2.07	7.2	137.8	520	-4.0	0.4	12.0	0.016	16.0	139	1.6
2.07	7.2	137.8	520	-3.0	0.5	13.0	0.020	16.0	139	2.0
2.07	7.2	137.8	520	-2.0	0.6	13.9	0.025	15.9	139	2.5
2.07	7.2	137.8	520	-1.0	0.8	14.9	0.031	15.9	140	3.1
2.07	7.2	137.8	520	0.0	1.0	15.9	0.039	15.9	141	3.8
2.07	7.2	137.8	520	1.0	1.3	16.9	0.049	15.9	142	4.8
2.07	7.2	137.8	520	2.0	1.6	17.8	0.061	15.8	143	5.9
2.07	7.2	137.8	520	3.0	2.0	18.8	0.076	15.8	145	7.3
2.07	7.2	137.8	520	4.0	2.5	19.7	0.094	15.7	147	8.9
2.07	7.2	137.8	520	5.0	3.2	20.6	0.115	15.6	149	10.7
2.07	7.2	137.8	520	6.0	4.0	21.4	0.139	15.4	152	12.7
2.07	7.2	137.8	520	7.0	5.0	22.2	0.167	15.2	158	14.7
2.07	7.2	137.8	520	8.0	6.3	23.0	0.199	15.0	165	16.7
2.07	7.2	137.8	520	9.0	7.9	23.7	0.234	14.7	174	18.7
2.07	7.2	137.8	520	10.0	10.0	24.4	0.277	14.4	184	20.9
2.07	7.2	137.8	520	11.0	12.6	25.1	0.327	14.1	196	23.2
2.07	7.2	137.8	520	12.0	15.8	25.9	0.386	13.9	210	25.6
2.07	7.2	137.8	520	13.0	20.0	26.6	0.458	13.6	225	28.3
2.07	7.2	137.8	520	14.0	25.1	27.4	0.545	13.4	242	31.2
2.07	7.2	137.8	520	15.0	31.6	28.1	0.644	13.1	261	34.3
2.07	7.2	137.8	520	16.0	39.8	28.8	0.766	12.8	282	37.8
2.07	7.2	137.8	520	17.0	50.1	29.5	0.902	12.5	303	41.3
2.07	7.2	137.8	520	18.0	63.1	30.2	1.047	12.2	324	45.0
2.07	7.2	137.8	520	19.0	79.4	30.8	1.191	11.8	342	48.4
2.07	7.2	137.8	520	20.0	100.0	31.2	1.330	11.2	359	51.5
2.07	7.2	137.8	520	21.0	125.9	31.6	1.462	10.6	374	54.4
2.07	7.2	137.8	520	22.0	158.5	32.0	1.581	10.0	386	56.9
2.07	7.2	137.8	520	23.0	199.5	32.3	1.683	9.3	396	59.0

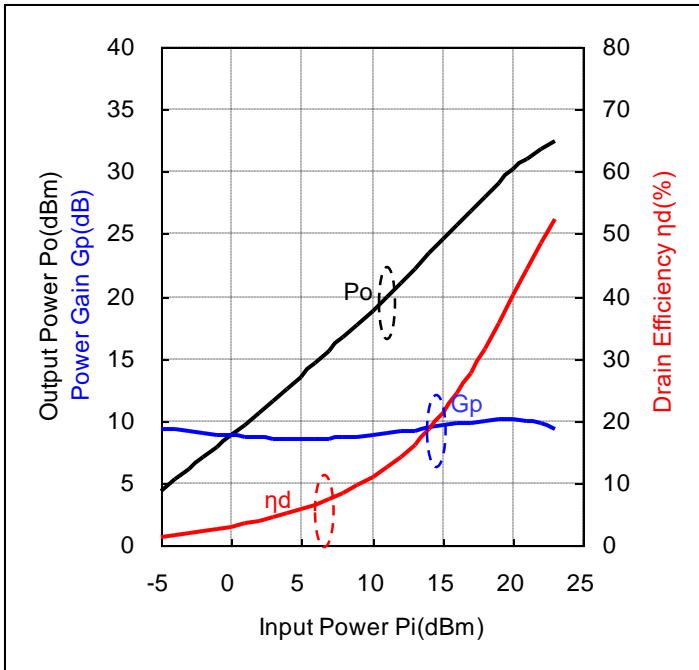
Input - Output Characteristics $V_{ds}=8.4V$ - Condition 2



Input-Output Characteristics $V_{ds}=8.4V$, $I_{bias}=20mA$ - Condition 2

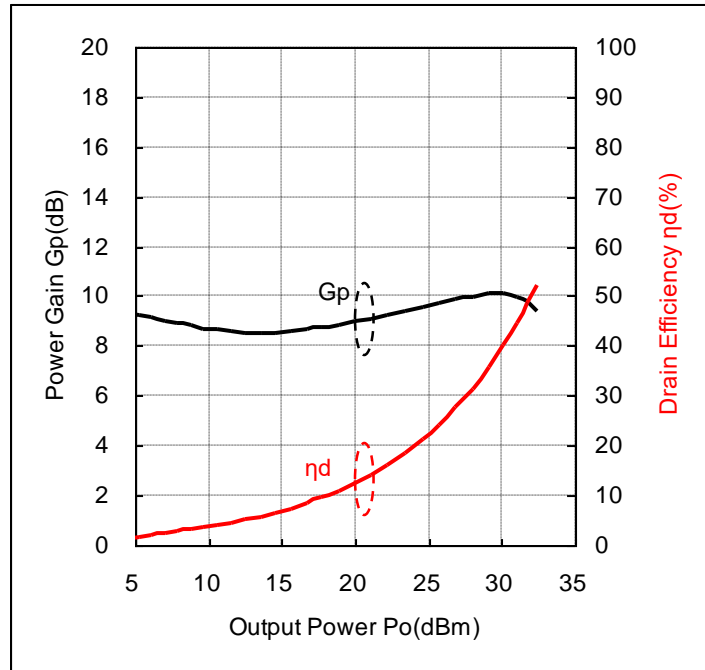
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=19.7mA$

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=19.7mA$

Data

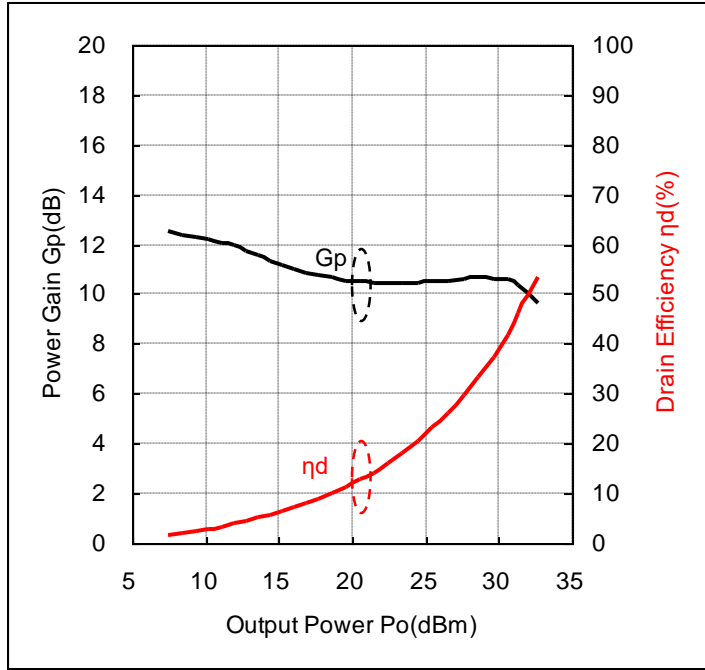
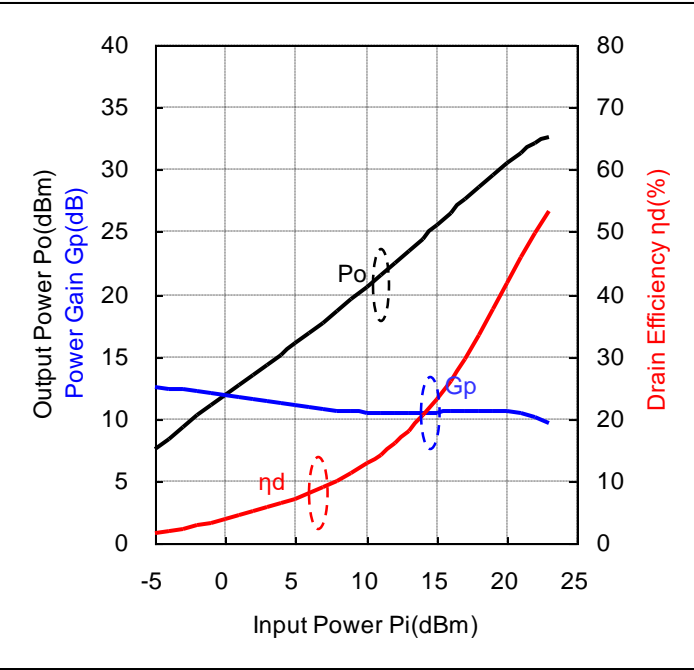
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.49	8.4	19.7	520	-5.0	0.3	4.3	0.003	9.3	23	1.4
1.49	8.4	19.7	520	-4.0	0.4	5.3	0.003	9.3	24	1.7
1.49	8.4	19.7	520	-3.0	0.5	6.1	0.004	9.1	25	1.9
1.49	8.4	19.7	520	-2.0	0.6	7.0	0.005	9.0	26	2.3
1.49	8.4	19.7	520	-1.0	0.8	7.9	0.006	8.9	28	2.6
1.49	8.4	19.7	520	0.0	1.0	8.8	0.008	8.8	30	3.0
1.49	8.4	19.7	520	1.0	1.3	9.7	0.009	8.7	32	3.4
1.49	8.4	19.7	520	2.0	1.6	10.6	0.012	8.6	35	3.9
1.49	8.4	19.7	520	3.0	2.0	11.6	0.014	8.6	38	4.4
1.49	8.4	19.7	520	4.0	2.5	12.5	0.018	8.5	42	5.0
1.49	8.4	19.7	520	5.0	3.2	13.5	0.023	8.5	47	5.7
1.49	8.4	19.7	520	6.0	4.0	14.6	0.029	8.6	52	6.5
1.49	8.4	19.7	520	7.0	5.0	15.6	0.036	8.6	59	7.4
1.49	8.4	19.7	520	8.0	6.3	16.7	0.046	8.7	66	8.4
1.49	8.4	19.7	520	9.0	7.9	17.7	0.059	8.7	74	9.6
1.49	8.4	19.7	520	10.0	10.0	18.9	0.077	8.9	84	10.9
1.49	8.4	19.7	520	11.0	12.6	20.0	0.099	9.0	95	12.4
1.49	8.4	19.7	520	12.0	15.8	21.1	0.128	9.1	108	14.1
1.49	8.4	19.7	520	13.0	20.0	22.2	0.167	9.2	123	16.2
1.49	8.4	19.7	520	14.0	25.1	23.4	0.219	9.4	141	18.5
1.49	8.4	19.7	520	15.0	31.6	24.6	0.286	9.6	161	21.2
1.49	8.4	19.7	520	16.0	39.8	25.7	0.375	9.7	184	24.3
1.49	8.4	19.7	520	17.0	50.1	26.8	0.483	9.8	209	27.6
1.49	8.4	19.7	520	18.0	63.1	28.0	0.628	10.0	238	31.5
1.49	8.4	19.7	520	19.0	79.4	29.1	0.811	10.1	270	35.7
1.49	8.4	19.7	520	20.0	100.0	30.1	1.030	10.1	305	40.3
1.49	8.4	19.7	520	21.0	125.9	31.0	1.256	10.0	337	44.4
1.49	8.4	19.7	520	22.0	158.5	31.8	1.500	9.8	368	48.6
1.49	8.4	19.7	520	23.0	199.5	32.4	1.734	9.4	395	52.2

Input-Output Characteristics $V_{ds}=8.4V, I_{bias}=40mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=8.4V, I_{bias}=39.2mA$

@ $f=520MHz, V_{ds}=8.4V, I_{bias}=39.2mA$

Data

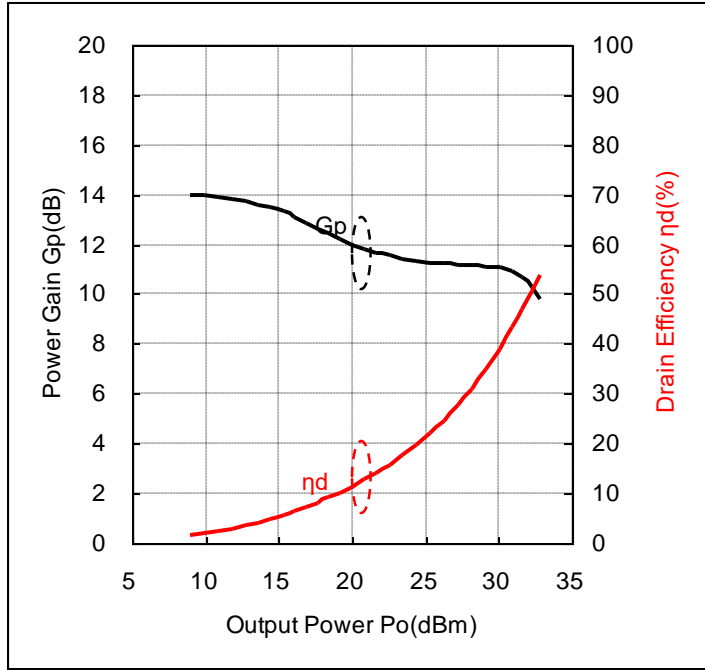
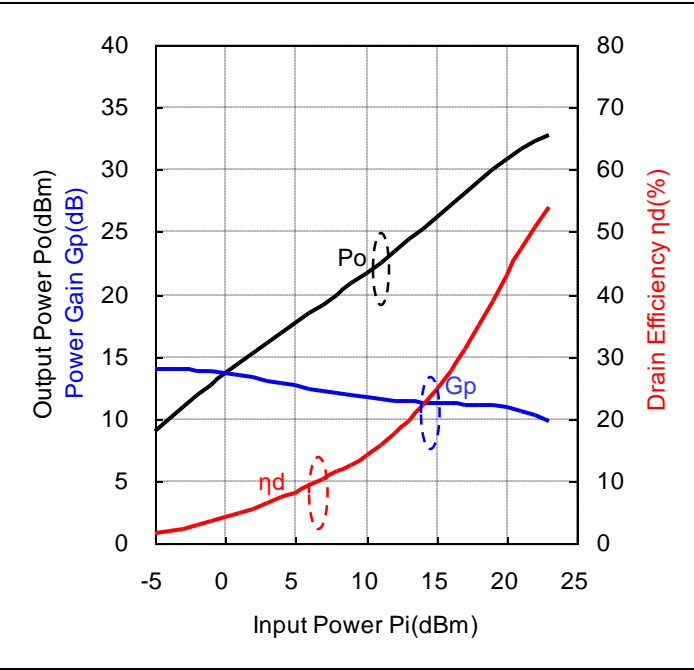
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.61	8.4	39.2	520	-5.0	0.3	7.5	0.006	12.5	42	1.6
1.61	8.4	39.2	520	-4.0	0.4	8.4	0.007	12.4	43	1.9
1.61	8.4	39.2	520	-3.0	0.5	9.3	0.009	12.3	44	2.3
1.61	8.4	39.2	520	-2.0	0.6	10.2	0.010	12.2	45	2.8
1.61	8.4	39.2	520	-1.0	0.8	11.1	0.013	12.1	46	3.3
1.61	8.4	39.2	520	0.0	1.0	11.9	0.016	11.9	49	3.8
1.61	8.4	39.2	520	1.0	1.3	12.7	0.019	11.7	51	4.4
1.61	8.4	39.2	520	2.0	1.6	13.5	0.023	11.5	54	5.0
1.61	8.4	39.2	520	3.0	2.0	14.4	0.027	11.4	57	5.7
1.61	8.4	39.2	520	4.0	2.5	15.2	0.033	11.2	61	6.4
1.61	8.4	39.2	520	5.0	3.2	16.0	0.040	11.0	66	7.2
1.61	8.4	39.2	520	6.0	4.0	16.9	0.049	10.9	72	8.0
1.61	8.4	39.2	520	7.0	5.0	17.7	0.059	10.7	79	9.0
1.61	8.4	39.2	520	8.0	6.3	18.6	0.073	10.6	86	10.1
1.61	8.4	39.2	520	9.0	7.9	19.6	0.090	10.6	95	11.3
1.61	8.4	39.2	520	10.0	10.0	20.5	0.112	10.5	105	12.7
1.61	8.4	39.2	520	11.0	12.6	21.5	0.140	10.5	117	14.2
1.61	8.4	39.2	520	12.0	15.8	22.4	0.175	10.4	130	16.0
1.61	8.4	39.2	520	13.0	20.0	23.5	0.221	10.5	146	18.1
1.61	8.4	39.2	520	14.0	25.1	24.5	0.280	10.5	163	20.4
1.61	8.4	39.2	520	15.0	31.6	25.5	0.356	10.5	183	23.2
1.61	8.4	39.2	520	16.0	39.8	26.6	0.453	10.6	206	26.2
1.61	8.4	39.2	520	17.0	50.1	27.6	0.577	10.6	232	29.6
1.61	8.4	39.2	520	18.0	63.1	28.6	0.733	10.6	261	33.5
1.61	8.4	39.2	520	19.0	79.4	29.6	0.918	10.6	291	37.5
1.61	8.4	39.2	520	20.0	100.0	30.6	1.140	10.6	324	41.9
1.61	8.4	39.2	520	21.0	125.9	31.4	1.374	10.4	355	46.0
1.61	8.4	39.2	520	22.0	158.5	32.1	1.607	10.1	383	49.9
1.61	8.4	39.2	520	23.0	199.5	32.6	1.828	9.6	408	53.3

Input-Output Characteristics $V_{ds}=8.4V, I_{bias}=60mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=8.4V, I_{bias}=59.5mA$

@ $f=520MHz, V_{ds}=8.4V, I_{bias}=59.5mA$

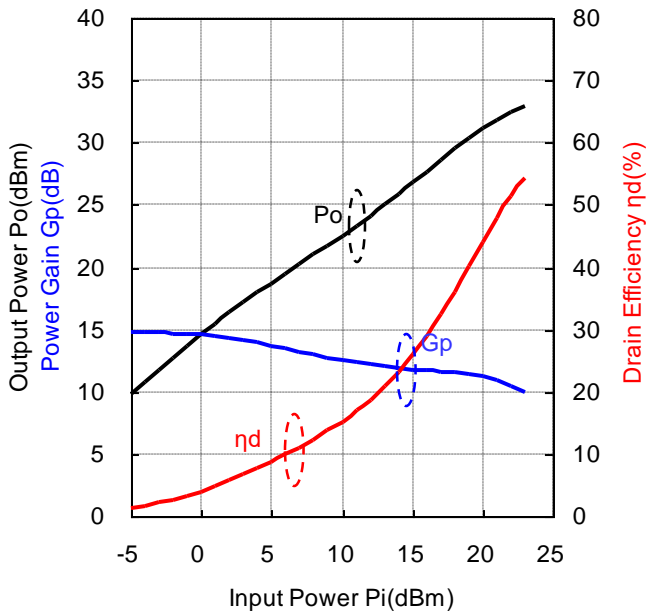
Data

V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.72	8.4	59.5	520	-5.0	0.3	9.0	0.008	14.0	62	1.5
1.72	8.4	59.5	520	-4.0	0.4	10.0	0.010	14.0	62	1.9
1.72	8.4	59.5	520	-3.0	0.5	10.9	0.012	13.9	63	2.3
1.72	8.4	59.5	520	-2.0	0.6	11.8	0.015	13.8	64	2.8
1.72	8.4	59.5	520	-1.0	0.8	12.7	0.019	13.7	65	3.4
1.72	8.4	59.5	520	0.0	1.0	13.6	0.023	13.6	67	4.1
1.72	8.4	59.5	520	1.0	1.3	14.5	0.028	13.5	69	4.8
1.72	8.4	59.5	520	2.0	1.6	15.3	0.034	13.3	72	5.6
1.72	8.4	59.5	520	3.0	2.0	16.1	0.041	13.1	75	6.4
1.72	8.4	59.5	520	4.0	2.5	16.9	0.048	12.9	79	7.3
1.72	8.4	59.5	520	5.0	3.2	17.6	0.058	12.6	84	8.2
1.72	8.4	59.5	520	6.0	4.0	18.4	0.069	12.4	90	9.2
1.72	8.4	59.5	520	7.0	5.0	19.2	0.083	12.2	97	10.2
1.72	8.4	59.5	520	8.0	6.3	20.0	0.100	12.0	104	11.4
1.72	8.4	59.5	520	9.0	7.9	20.8	0.121	11.8	114	12.7
1.72	8.4	59.5	520	10.0	10.0	21.7	0.147	11.7	124	14.1
1.72	8.4	59.5	520	11.0	12.6	22.5	0.180	11.5	136	15.8
1.72	8.4	59.5	520	12.0	15.8	23.4	0.221	11.4	149	17.6
1.72	8.4	59.5	520	13.0	20.0	24.3	0.272	11.3	165	19.6
1.72	8.4	59.5	520	14.0	25.1	25.3	0.337	11.3	182	22.0
1.72	8.4	59.5	520	15.0	31.6	26.2	0.418	11.2	202	24.6
1.72	8.4	59.5	520	16.0	39.8	27.2	0.521	11.2	224	27.6
1.72	8.4	59.5	520	17.0	50.1	28.1	0.653	11.1	250	31.1
1.72	8.4	59.5	520	18.0	63.1	29.1	0.817	11.1	279	34.9
1.72	8.4	59.5	520	19.0	79.4	30.0	1.012	11.0	309	38.9
1.72	8.4	59.5	520	20.0	100.0	30.9	1.236	10.9	341	43.2
1.72	8.4	59.5	520	21.0	125.9	31.6	1.462	10.6	369	47.1
1.72	8.4	59.5	520	22.0	158.5	32.3	1.683	10.3	395	50.7
1.72	8.4	59.5	520	23.0	199.5	32.8	1.897	9.8	418	54.0

Input-Output Characteristics $V_{ds}=8.4V$, $I_{bias}=80mA$ - Condition 2

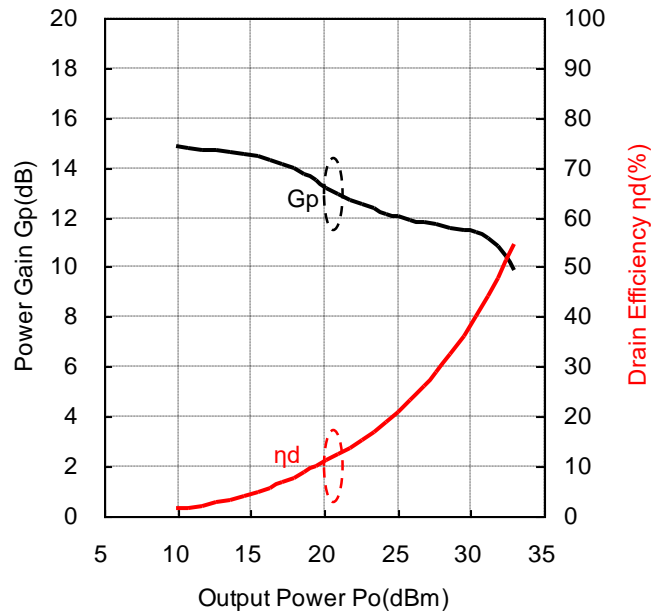
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=79.1mA$

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=79.1mA$

Data

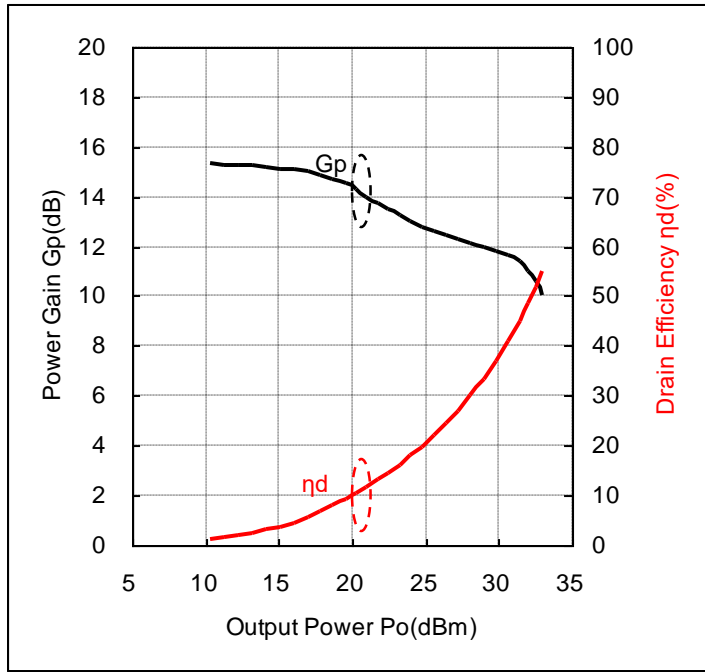
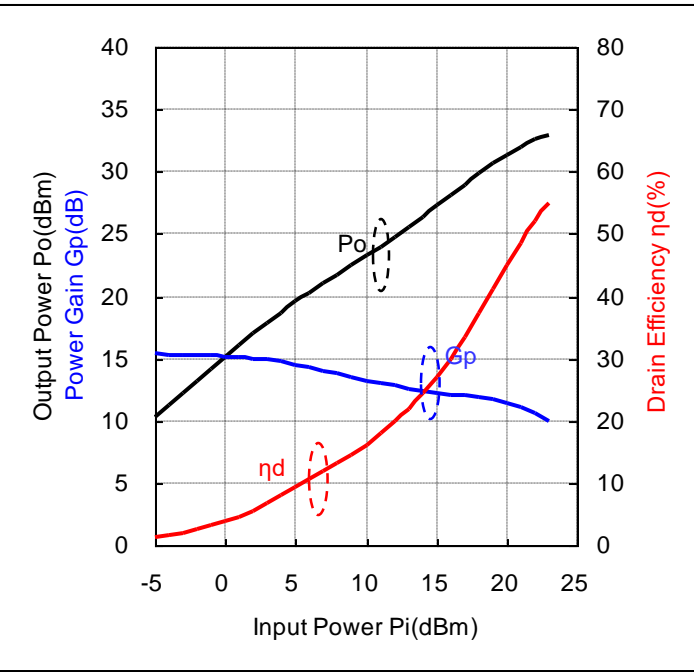
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.80	8.4	79.1	520	-5.0	0.3	9.9	0.010	14.9	81	1.4
1.80	8.4	79.1	520	-4.0	0.4	10.8	0.012	14.8	81	1.7
1.80	8.4	79.1	520	-3.0	0.5	11.7	0.015	14.7	82	2.2
1.80	8.4	79.1	520	-2.0	0.6	12.7	0.019	14.7	83	2.7
1.80	8.4	79.1	520	-1.0	0.8	13.6	0.023	14.6	84	3.3
1.80	8.4	79.1	520	0.0	1.0	14.5	0.028	14.5	85	4.0
1.80	8.4	79.1	520	1.0	1.3	15.4	0.035	14.4	87	4.8
1.80	8.4	79.1	520	2.0	1.6	16.3	0.043	14.3	89	5.8
1.80	8.4	79.1	520	3.0	2.0	17.1	0.052	14.1	91	6.8
1.80	8.4	79.1	520	4.0	2.5	18.0	0.062	14.0	95	7.8
1.80	8.4	79.1	520	5.0	3.2	18.7	0.074	13.7	100	8.8
1.80	8.4	79.1	520	6.0	4.0	19.5	0.089	13.5	106	10.0
1.80	8.4	79.1	520	7.0	5.0	20.2	0.105	13.2	112	11.1
1.80	8.4	79.1	520	8.0	6.3	21.0	0.125	13.0	120	12.4
1.80	8.4	79.1	520	9.0	7.9	21.7	0.149	12.7	129	13.7
1.80	8.4	79.1	520	10.0	10.0	22.5	0.179	12.5	140	15.2
1.80	8.4	79.1	520	11.0	12.6	23.4	0.216	12.4	152	16.9
1.80	8.4	79.1	520	12.0	15.8	24.2	0.261	12.2	165	18.8
1.80	8.4	79.1	520	13.0	20.0	25.0	0.317	12.0	181	20.9
1.80	8.4	79.1	520	14.0	25.1	25.9	0.387	11.9	198	23.3
1.80	8.4	79.1	520	15.0	31.6	26.8	0.475	11.8	218	25.9
1.80	8.4	79.1	520	16.0	39.8	27.7	0.587	11.7	241	29.0
1.80	8.4	79.1	520	17.0	50.1	28.6	0.724	11.6	267	32.3
1.80	8.4	79.1	520	18.0	63.1	29.5	0.893	11.5	295	36.1
1.80	8.4	79.1	520	19.0	79.4	30.4	1.094	11.4	325	40.1
1.80	8.4	79.1	520	20.0	100.0	31.2	1.309	11.2	354	44.0
1.80	8.4	79.1	520	21.0	125.9	31.9	1.531	10.9	381	47.9
1.80	8.4	79.1	520	22.0	158.5	32.4	1.750	10.4	405	51.4
1.80	8.4	79.1	520	23.0	199.5	32.9	1.950	9.9	427	54.4

Input-Output Characteristics $V_{ds}=8.4V$, $I_{bias}=100mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=98.7mA$

@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=98.7mA$

Data

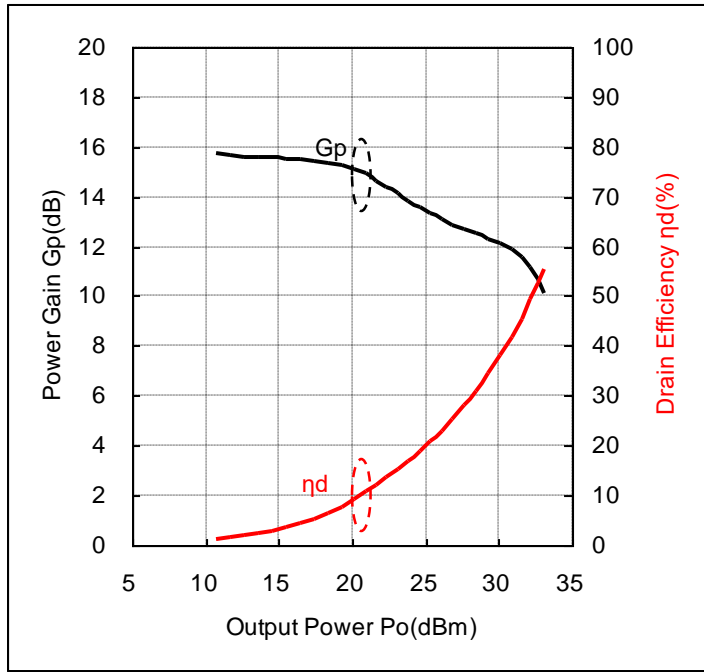
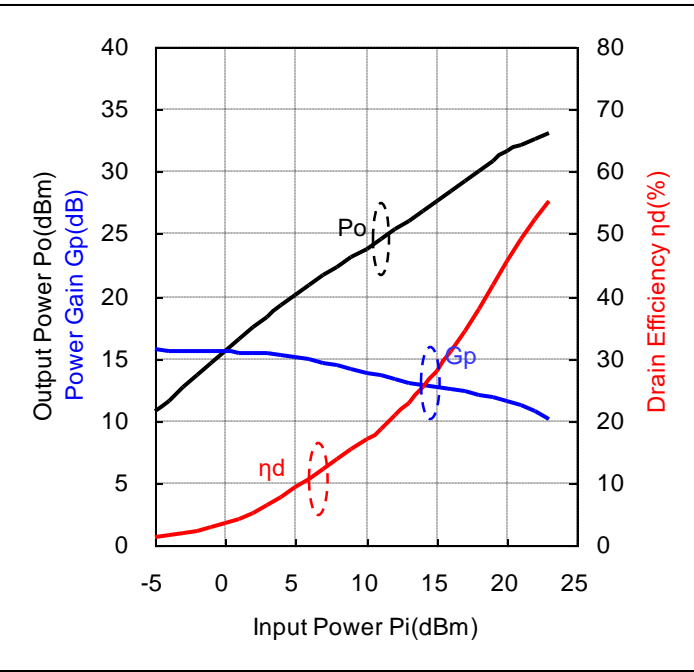
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.89	8.4	98.7	520	-5.0	0.3	10.4	0.011	15.4	100	1.3
1.89	8.4	98.7	520	-4.0	0.4	11.3	0.013	15.3	101	1.6
1.89	8.4	98.7	520	-3.0	0.5	12.3	0.017	15.3	101	2.0
1.89	8.4	98.7	520	-2.0	0.6	13.2	0.021	15.2	101	2.5
1.89	8.4	98.7	520	-1.0	0.8	14.2	0.026	15.2	102	3.1
1.89	8.4	98.7	520	0.0	1.0	15.1	0.033	15.1	103	3.8
1.89	8.4	98.7	520	1.0	1.3	16.1	0.040	15.1	105	4.6
1.89	8.4	98.7	520	2.0	1.6	17.0	0.050	15.0	106	5.6
1.89	8.4	98.7	520	3.0	2.0	17.9	0.061	14.9	109	6.7
1.89	8.4	98.7	520	4.0	2.5	18.7	0.074	14.7	112	7.9
1.89	8.4	98.7	520	5.0	3.2	19.5	0.090	14.5	116	9.2
1.89	8.4	98.7	520	6.0	4.0	20.3	0.106	14.3	121	10.4
1.89	8.4	98.7	520	7.0	5.0	21.0	0.126	14.0	128	11.7
1.89	8.4	98.7	520	8.0	6.3	21.8	0.150	13.8	135	13.1
1.89	8.4	98.7	520	9.0	7.9	22.5	0.177	13.5	145	14.5
1.89	8.4	98.7	520	10.0	10.0	23.2	0.211	13.2	155	16.2
1.89	8.4	98.7	520	11.0	12.6	24.0	0.252	13.0	167	17.9
1.89	8.4	98.7	520	12.0	15.8	24.8	0.302	12.8	181	19.8
1.89	8.4	98.7	520	13.0	20.0	25.6	0.362	12.6	196	21.9
1.89	8.4	98.7	520	14.0	25.1	26.4	0.438	12.4	214	24.3
1.89	8.4	98.7	520	15.0	31.6	27.3	0.531	12.3	234	27.0
1.89	8.4	98.7	520	16.0	39.8	28.1	0.647	12.1	257	30.0
1.89	8.4	98.7	520	17.0	50.1	29.0	0.791	12.0	281	33.4
1.89	8.4	98.7	520	18.0	63.1	29.8	0.964	11.8	309	37.1
1.89	8.4	98.7	520	19.0	79.4	30.7	1.164	11.7	338	41.1
1.89	8.4	98.7	520	20.0	100.0	31.4	1.377	11.4	365	44.9
1.89	8.4	98.7	520	21.0	125.9	32.0	1.592	11.0	391	48.5
1.89	8.4	98.7	520	22.0	158.5	32.6	1.807	10.6	414	52.0
1.89	8.4	98.7	520	23.0	199.5	33.0	2.000	10.0	434	54.9

Input-Output Characteristics $V_{ds}=8.4V$, $I_{bias}=120mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=118.0mA$

@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=118.0mA$

Data

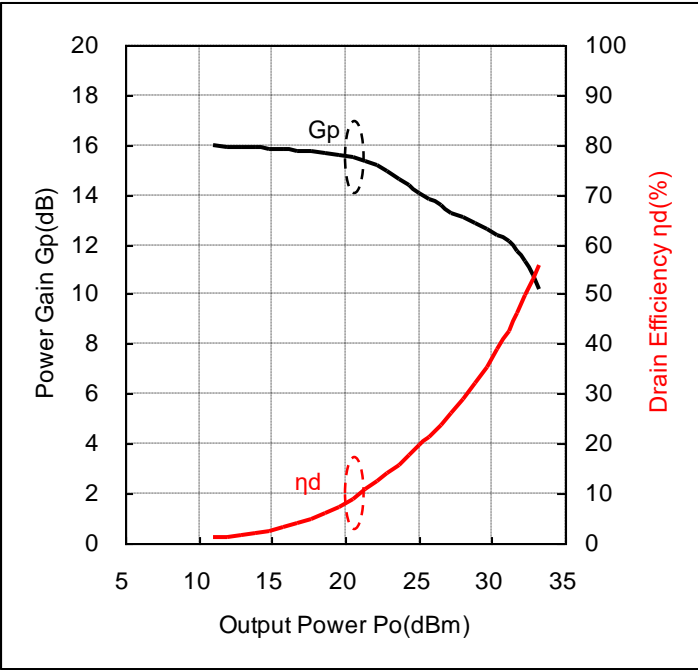
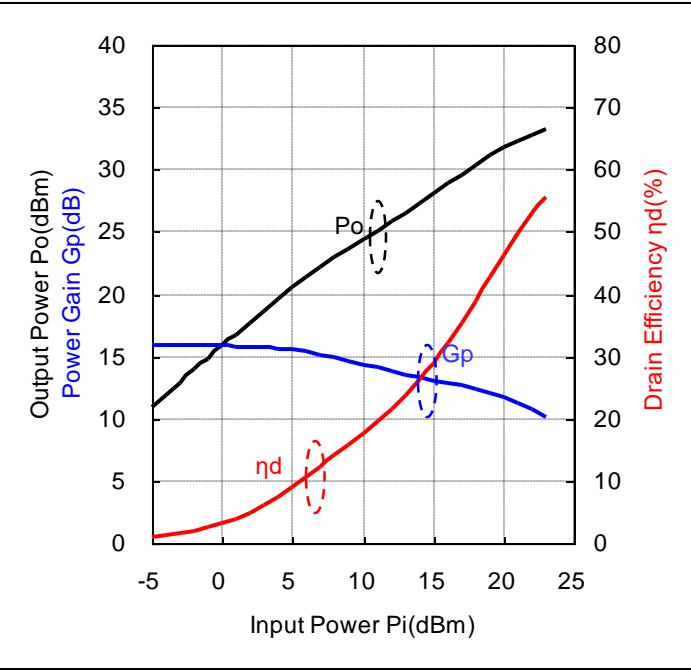
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.97	8.4	118.0	520	-5.0	0.3	10.7	0.012	15.7	119	1.2
1.97	8.4	118.0	520	-4.0	0.4	11.6	0.015	15.6	120	1.4
1.97	8.4	118.0	520	-3.0	0.5	12.6	0.018	15.6	120	1.8
1.97	8.4	118.0	520	-2.0	0.6	13.6	0.023	15.6	121	2.3
1.97	8.4	118.0	520	-1.0	0.8	14.6	0.029	15.6	121	2.8
1.97	8.4	118.0	520	0.0	1.0	15.5	0.036	15.5	122	3.5
1.97	8.4	118.0	520	1.0	1.3	16.5	0.045	15.5	123	4.3
1.97	8.4	118.0	520	2.0	1.6	17.4	0.055	15.4	125	5.3
1.97	8.4	118.0	520	3.0	2.0	18.4	0.069	15.4	126	6.5
1.97	8.4	118.0	520	4.0	2.5	19.3	0.084	15.3	129	7.8
1.97	8.4	118.0	520	5.0	3.2	20.1	0.102	15.1	132	9.2
1.97	8.4	118.0	520	6.0	4.0	20.9	0.123	14.9	137	10.7
1.97	8.4	118.0	520	7.0	5.0	21.6	0.146	14.6	143	12.2
1.97	8.4	118.0	520	8.0	6.3	22.4	0.173	14.4	150	13.7
1.97	8.4	118.0	520	9.0	7.9	23.1	0.205	14.1	159	15.3
1.97	8.4	118.0	520	10.0	10.0	23.8	0.242	13.8	170	17.0
1.97	8.4	118.0	520	11.0	12.6	24.6	0.287	13.6	182	18.8
1.97	8.4	118.0	520	12.0	15.8	25.3	0.341	13.3	196	20.7
1.97	8.4	118.0	520	13.0	20.0	26.1	0.406	13.1	211	22.9
1.97	8.4	118.0	520	14.0	25.1	26.9	0.488	12.9	229	25.4
1.97	8.4	118.0	520	15.0	31.6	27.7	0.585	12.7	248	28.0
1.97	8.4	118.0	520	16.0	39.8	28.5	0.706	12.5	271	31.1
1.97	8.4	118.0	520	17.0	50.1	29.3	0.853	12.3	295	34.4
1.97	8.4	118.0	520	18.0	63.1	30.1	1.028	12.1	322	38.0
1.97	8.4	118.0	520	19.0	79.4	30.9	1.227	11.9	350	41.8
1.97	8.4	118.0	520	20.0	100.0	31.6	1.439	11.6	376	45.6
1.97	8.4	118.0	520	21.0	125.9	32.2	1.652	11.2	400	49.2
1.97	8.4	118.0	520	22.0	158.5	32.7	1.858	10.7	421	52.5
1.97	8.4	118.0	520	23.0	199.5	33.1	2.046	10.1	440	55.4

Input-Output Characteristics $V_{ds}=8.4V$, $I_{bias}=140mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



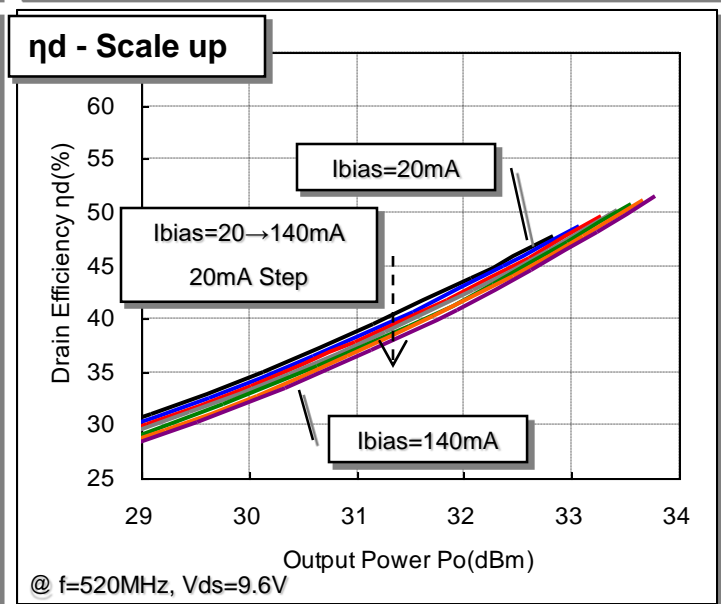
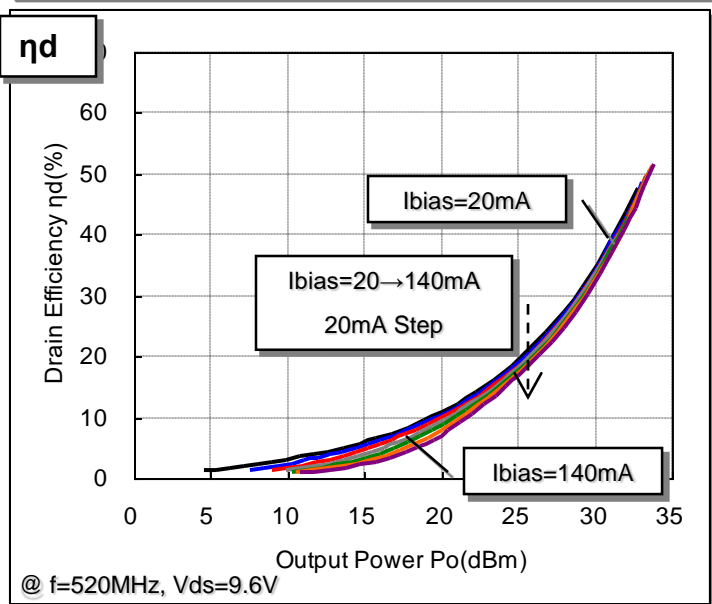
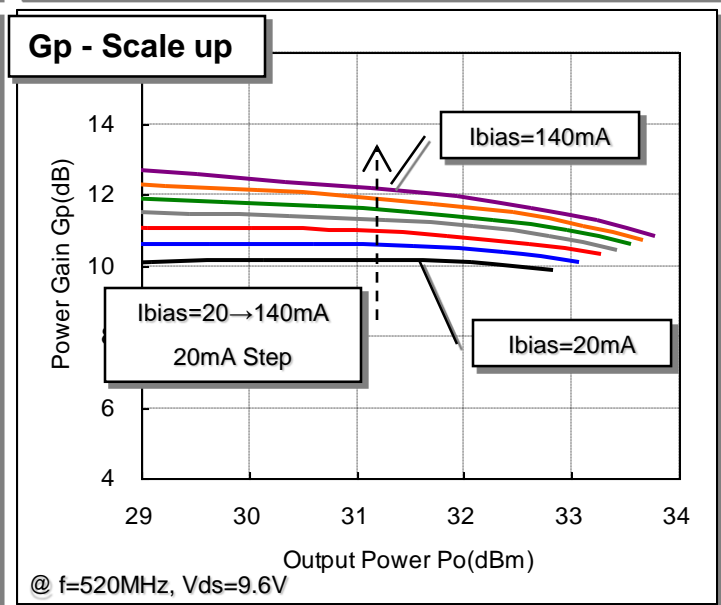
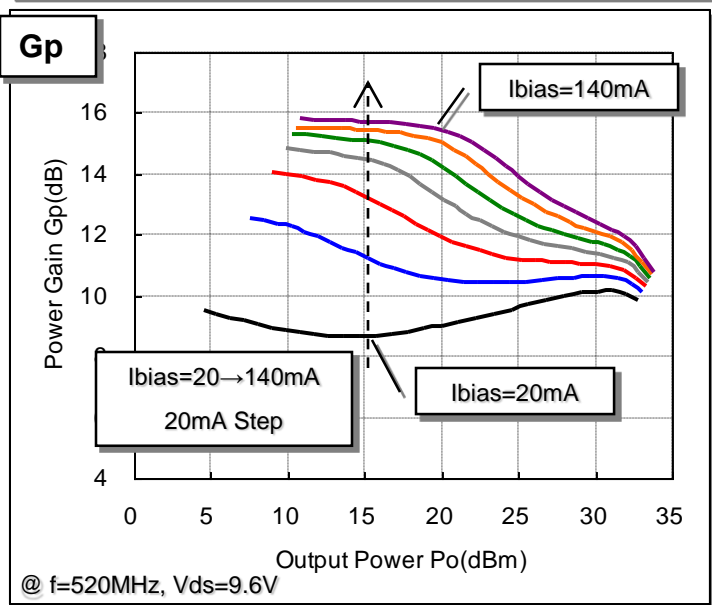
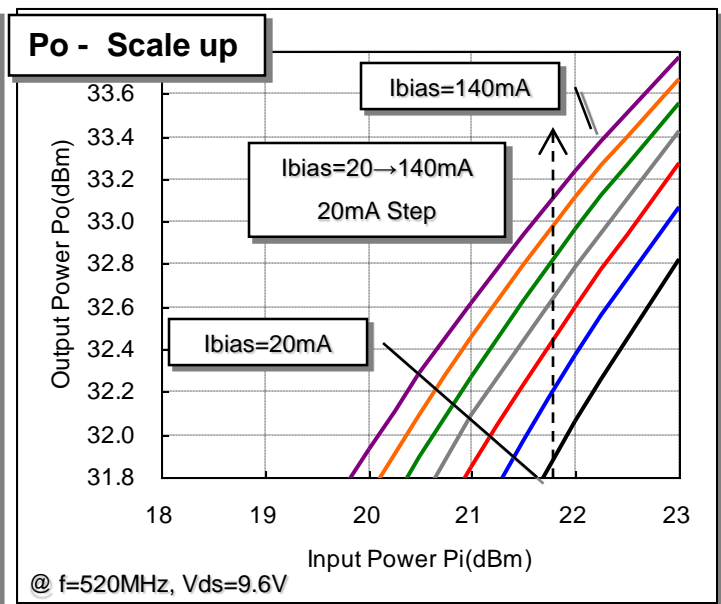
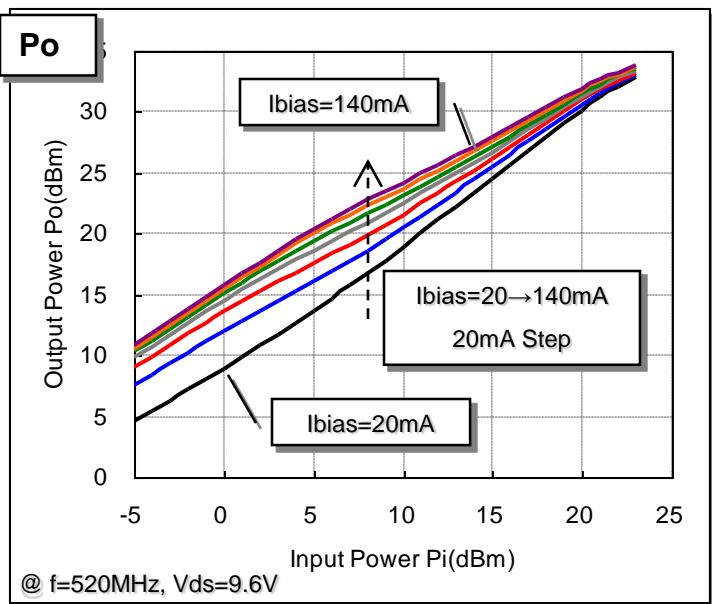
@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=138.4mA$

@ $f=520MHz$, $V_{ds}=8.4V$, $I_{bias}=138.4mA$

Data

V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.04	8.4	138.4	520	-5.0	0.3	10.9	0.012	15.9	139	1.1
2.04	8.4	138.4	520	-4.0	0.4	11.9	0.015	15.9	139	1.3
2.04	8.4	138.4	520	-3.0	0.5	12.9	0.020	15.9	140	1.7
2.04	8.4	138.4	520	-2.0	0.6	13.9	0.025	15.9	140	2.1
2.04	8.4	138.4	520	-1.0	0.8	14.8	0.030	15.8	141	2.6
2.04	8.4	138.4	520	0.0	1.0	15.8	0.038	15.8	142	3.2
2.04	8.4	138.4	520	1.0	1.3	16.8	0.047	15.8	143	4.0
2.04	8.4	138.4	520	2.0	1.6	17.7	0.059	15.7	144	4.9
2.04	8.4	138.4	520	3.0	2.0	18.7	0.074	15.7	145	6.1
2.04	8.4	138.4	520	4.0	2.5	19.6	0.092	15.6	147	7.4
2.04	8.4	138.4	520	5.0	3.2	20.5	0.112	15.5	149	9.0
2.04	8.4	138.4	520	6.0	4.0	21.4	0.137	15.4	153	10.7
2.04	8.4	138.4	520	7.0	5.0	22.2	0.164	15.2	159	12.3
2.04	8.4	138.4	520	8.0	6.3	22.9	0.196	14.9	166	14.1
2.04	8.4	138.4	520	9.0	7.9	23.6	0.231	14.6	174	15.8
2.04	8.4	138.4	520	10.0	10.0	24.4	0.272	14.4	185	17.6
2.04	8.4	138.4	520	11.0	12.6	25.1	0.323	14.1	197	19.5
2.04	8.4	138.4	520	12.0	15.8	25.8	0.379	13.8	210	21.5
2.04	8.4	138.4	520	13.0	20.0	26.5	0.452	13.5	226	23.8
2.04	8.4	138.4	520	14.0	25.1	27.3	0.536	13.3	243	26.2
2.04	8.4	138.4	520	15.0	31.6	28.1	0.640	13.1	263	29.0
2.04	8.4	138.4	520	16.0	39.8	28.9	0.767	12.9	285	32.0
2.04	8.4	138.4	520	17.0	50.1	29.6	0.918	12.6	310	35.3
2.04	8.4	138.4	520	18.0	63.1	30.4	1.096	12.4	335	38.9
2.04	8.4	138.4	520	19.0	79.4	31.1	1.294	12.1	361	42.6
2.04	8.4	138.4	520	20.0	100.0	31.8	1.500	11.8	386	46.3
2.04	8.4	138.4	520	21.0	125.9	32.3	1.706	11.3	409	49.7
2.04	8.4	138.4	520	22.0	158.5	32.8	1.905	10.8	429	52.9
2.04	8.4	138.4	520	23.0	199.5	33.2	2.084	10.2	446	55.6

Input - Output Characteristics $V_{ds}=9.6V$ - Condition 2

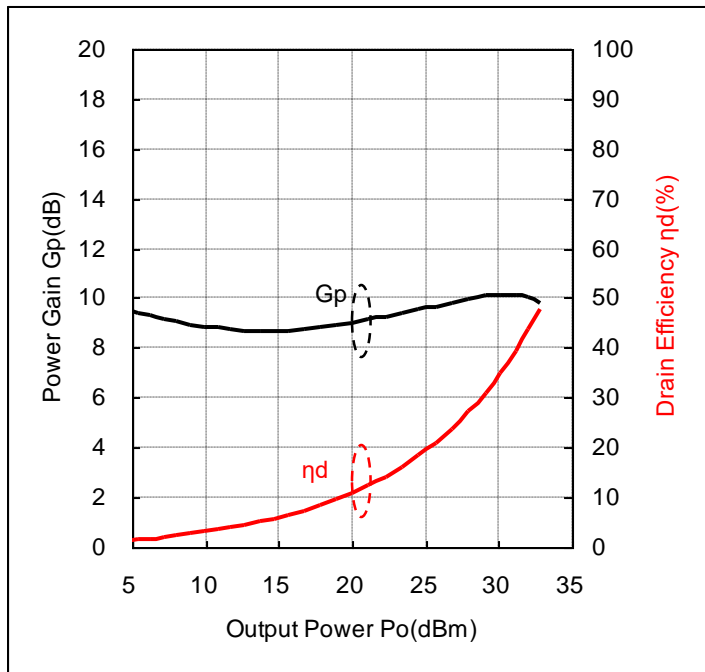
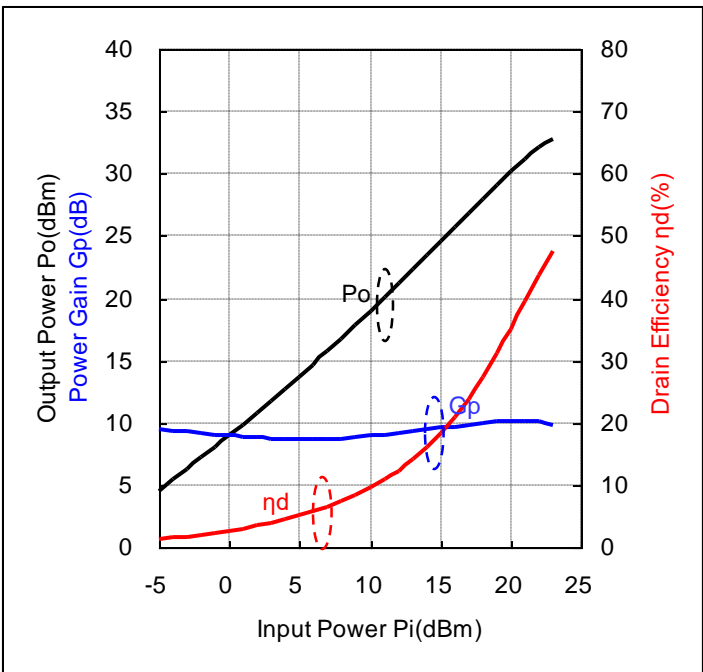


Input-Output Characteristics $V_{ds}=9.6V, I_{bias}=20mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=9.6V, I_{bias}=20.2mA$

@ $f=520MHz, V_{ds}=9.6V, I_{bias}=20.2mA$

Data

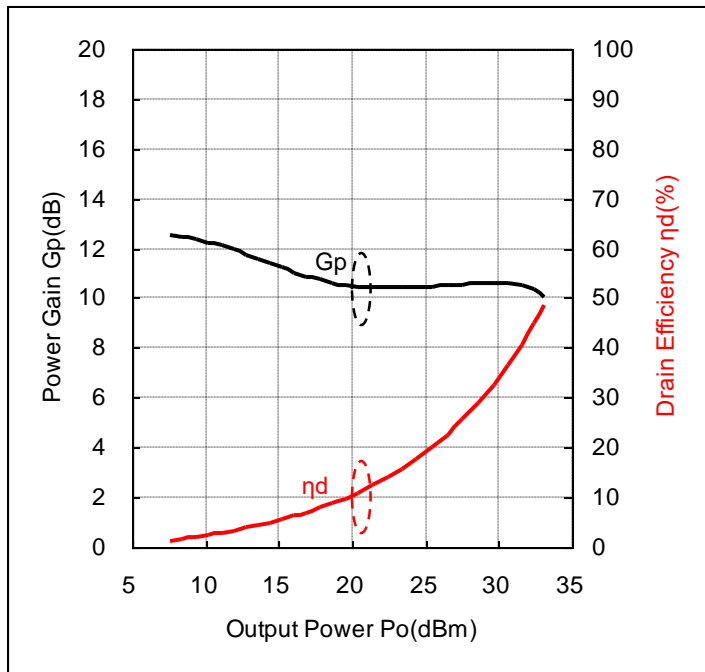
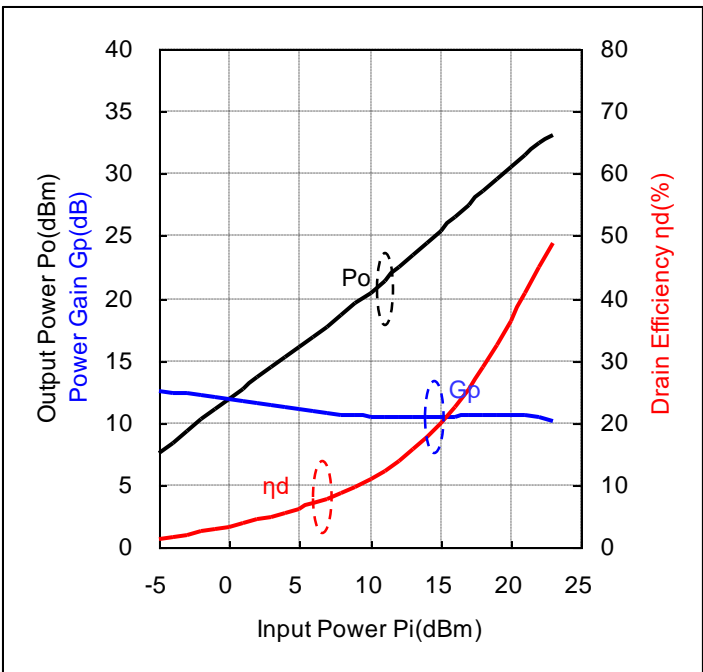
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.47	9.6	20.2	520	-5.0	0.3	4.5	0.003	9.5	24	1.2
1.47	9.6	20.2	520	-4.0	0.4	5.4	0.003	9.4	25	1.5
1.47	9.6	20.2	520	-3.0	0.5	6.3	0.004	9.3	26	1.7
1.47	9.6	20.2	520	-2.0	0.6	7.2	0.005	9.2	27	2.0
1.47	9.6	20.2	520	-1.0	0.8	8.1	0.006	9.1	29	2.3
1.47	9.6	20.2	520	0.0	1.0	8.9	0.008	8.9	31	2.7
1.47	9.6	20.2	520	1.0	1.3	9.9	0.010	8.9	33	3.0
1.47	9.6	20.2	520	2.0	1.6	10.8	0.012	8.8	36	3.5
1.47	9.6	20.2	520	3.0	2.0	11.7	0.015	8.7	40	3.9
1.47	9.6	20.2	520	4.0	2.5	12.7	0.019	8.7	44	4.4
1.47	9.6	20.2	520	5.0	3.2	13.7	0.023	8.7	48	5.0
1.47	9.6	20.2	520	6.0	4.0	14.7	0.029	8.7	54	5.7
1.47	9.6	20.2	520	7.0	5.0	15.7	0.037	8.7	60	6.5
1.47	9.6	20.2	520	8.0	6.3	16.8	0.047	8.8	67	7.3
1.47	9.6	20.2	520	9.0	7.9	17.8	0.061	8.8	76	8.3
1.47	9.6	20.2	520	10.0	10.0	18.9	0.078	8.9	85	9.5
1.47	9.6	20.2	520	11.0	12.6	20.0	0.101	9.0	97	10.8
1.47	9.6	20.2	520	12.0	15.8	21.1	0.130	9.1	110	12.3
1.47	9.6	20.2	520	13.0	20.0	22.3	0.168	9.3	125	14.0
1.47	9.6	20.2	520	14.0	25.1	23.4	0.219	9.4	142	16.1
1.47	9.6	20.2	520	15.0	31.6	24.6	0.286	9.6	162	18.4
1.47	9.6	20.2	520	16.0	39.8	25.7	0.369	9.7	184	20.9
1.47	9.6	20.2	520	17.0	50.1	26.8	0.481	9.8	210	23.9
1.47	9.6	20.2	520	18.0	63.1	28.0	0.625	10.0	239	27.2
1.47	9.6	20.2	520	19.0	79.4	29.1	0.811	10.1	272	31.1
1.47	9.6	20.2	520	20.0	100.0	30.1	1.033	10.1	307	35.0
1.47	9.6	20.2	520	21.0	125.9	31.2	1.306	10.2	345	39.4
1.47	9.6	20.2	520	22.0	158.5	32.1	1.607	10.1	383	43.7
1.47	9.6	20.2	520	23.0	199.5	32.8	1.914	9.8	418	47.7

Input-Output Characteristics $V_{ds}=9.6V, I_{bias}=40mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=9.6V, I_{bias}=39.4mA$

@ $f=520MHz, V_{ds}=9.6V, I_{bias}=39.4mA$

Data

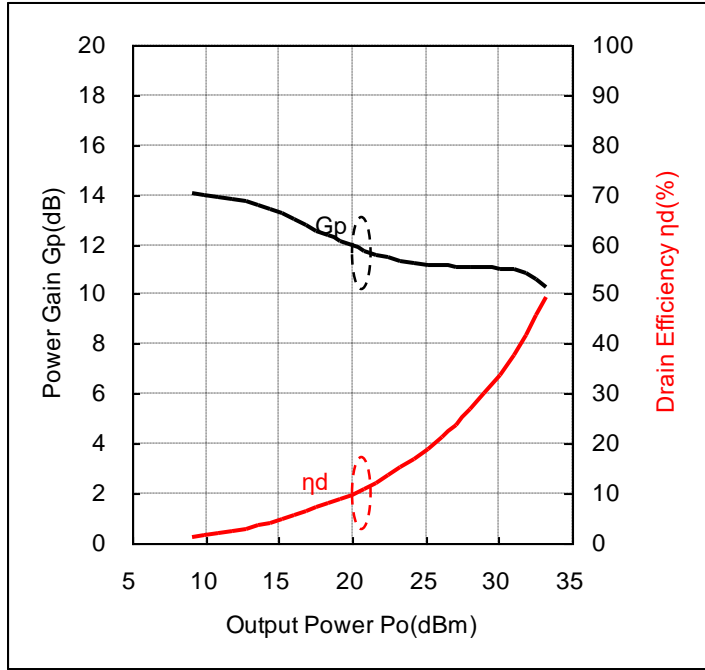
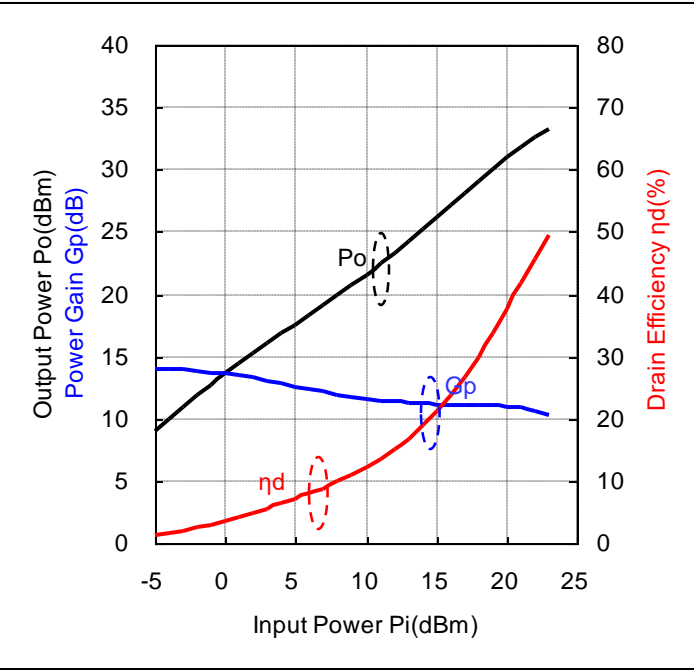
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.59	9.6	39.4	520	-5.0	0.3	7.6	0.006	12.6	43	1.4
1.59	9.6	39.4	520	-4.0	0.4	8.4	0.007	12.4	43	1.7
1.59	9.6	39.4	520	-3.0	0.5	9.4	0.009	12.4	44	2.0
1.59	9.6	39.4	520	-2.0	0.6	10.2	0.011	12.2	45	2.4
1.59	9.6	39.4	520	-1.0	0.8	11.1	0.013	12.1	47	2.9
1.59	9.6	39.4	520	0.0	1.0	11.9	0.016	11.9	49	3.3
1.59	9.6	39.4	520	1.0	1.3	12.8	0.019	11.8	51	3.8
1.59	9.6	39.4	520	2.0	1.6	13.6	0.023	11.6	54	4.4
1.59	9.6	39.4	520	3.0	2.0	14.4	0.027	11.4	58	4.9
1.59	9.6	39.4	520	4.0	2.5	15.2	0.033	11.2	62	5.6
1.59	9.6	39.4	520	5.0	3.2	16.0	0.040	11.0	67	6.2
1.59	9.6	39.4	520	6.0	4.0	16.9	0.049	10.9	73	7.0
1.59	9.6	39.4	520	7.0	5.0	17.8	0.060	10.8	79	7.8
1.59	9.6	39.4	520	8.0	6.3	18.6	0.073	10.6	87	8.8
1.59	9.6	39.4	520	9.0	7.9	19.5	0.090	10.5	96	9.8
1.59	9.6	39.4	520	10.0	10.0	20.5	0.111	10.5	106	11.0
1.59	9.6	39.4	520	11.0	12.6	21.4	0.139	10.4	117	12.4
1.59	9.6	39.4	520	12.0	15.8	22.4	0.174	10.4	131	13.9
1.59	9.6	39.4	520	13.0	20.0	23.4	0.219	10.4	146	15.7
1.59	9.6	39.4	520	14.0	25.1	24.4	0.277	10.4	163	17.6
1.59	9.6	39.4	520	15.0	31.6	25.5	0.351	10.5	183	19.9
1.59	9.6	39.4	520	16.0	39.8	26.5	0.447	10.5	206	22.6
1.59	9.6	39.4	520	17.0	50.1	27.5	0.569	10.5	232	25.5
1.59	9.6	39.4	520	18.0	63.1	28.6	0.724	10.6	261	28.9
1.59	9.6	39.4	520	19.0	79.4	29.6	0.918	10.6	294	32.6
1.59	9.6	39.4	520	20.0	100.0	30.6	1.146	10.6	328	36.4
1.59	9.6	39.4	520	21.0	125.9	31.5	1.422	10.5	364	40.7
1.59	9.6	39.4	520	22.0	158.5	32.4	1.726	10.4	401	44.8
1.59	9.6	39.4	520	23.0	199.5	33.1	2.028	10.1	434	48.7

Input-Output Characteristics $V_{ds}=9.6V, I_{bias}=60mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=9.6V, I_{bias}=59.4mA$

@ $f=520MHz, V_{ds}=9.6V, I_{bias}=59.4mA$

Data

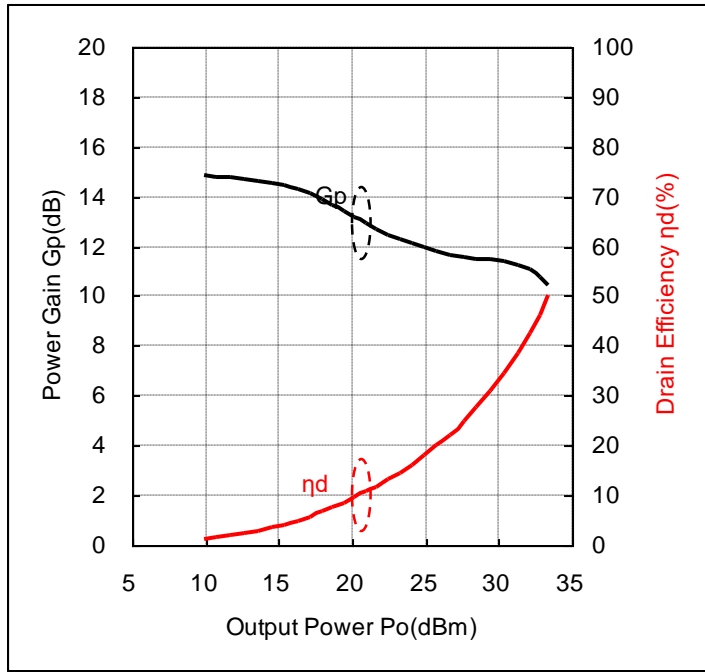
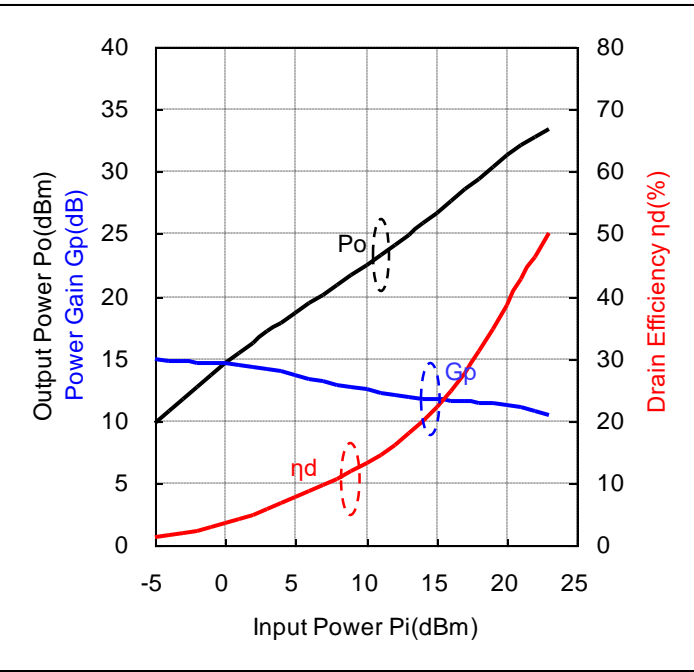
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.68	9.6	59.4	520	-5.0	0.3	9.0	0.008	14.0	62	1.4
1.68	9.6	59.4	520	-4.0	0.4	9.9	0.010	13.9	62	1.6
1.68	9.6	59.4	520	-3.0	0.5	10.9	0.012	13.9	63	2.0
1.68	9.6	59.4	520	-2.0	0.6	11.8	0.015	13.8	64	2.5
1.68	9.6	59.4	520	-1.0	0.8	12.7	0.019	13.7	65	3.0
1.68	9.6	59.4	520	0.0	1.0	13.6	0.023	13.6	67	3.6
1.68	9.6	59.4	520	1.0	1.3	14.4	0.028	13.4	69	4.2
1.68	9.6	59.4	520	2.0	1.6	15.3	0.034	13.3	72	4.9
1.68	9.6	59.4	520	3.0	2.0	16.0	0.040	13.0	75	5.6
1.68	9.6	59.4	520	4.0	2.5	16.8	0.048	12.8	79	6.3
1.68	9.6	59.4	520	5.0	3.2	17.6	0.057	12.6	84	7.1
1.68	9.6	59.4	520	6.0	4.0	18.3	0.068	12.3	90	7.9
1.68	9.6	59.4	520	7.0	5.0	19.1	0.082	12.1	97	8.8
1.68	9.6	59.4	520	8.0	6.3	19.9	0.099	11.9	105	9.8
1.68	9.6	59.4	520	9.0	7.9	20.8	0.119	11.8	114	10.9
1.68	9.6	59.4	520	10.0	10.0	21.6	0.144	11.6	124	12.1
1.68	9.6	59.4	520	11.0	12.6	22.5	0.176	11.5	135	13.5
1.68	9.6	59.4	520	12.0	15.8	23.3	0.216	11.3	149	15.1
1.68	9.6	59.4	520	13.0	20.0	24.2	0.265	11.2	164	16.9
1.68	9.6	59.4	520	14.0	25.1	25.2	0.330	11.2	182	18.9
1.68	9.6	59.4	520	15.0	31.6	26.1	0.410	11.1	202	21.2
1.68	9.6	59.4	520	16.0	39.8	27.1	0.512	11.1	224	23.8
1.68	9.6	59.4	520	17.0	50.1	28.1	0.641	11.1	250	26.7
1.68	9.6	59.4	520	18.0	63.1	29.0	0.804	11.0	279	30.0
1.68	9.6	59.4	520	19.0	79.4	30.0	1.007	11.0	311	33.7
1.68	9.6	59.4	520	20.0	100.0	31.0	1.253	11.0	346	37.7
1.68	9.6	59.4	520	21.0	125.9	31.9	1.531	10.9	382	41.8
1.68	9.6	59.4	520	22.0	158.5	32.6	1.820	10.6	415	45.6
1.68	9.6	59.4	520	23.0	199.5	33.3	2.123	10.3	446	49.6

Input-Output Characteristics $V_{ds}=9.6V, I_{bias}=80mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz, V_{ds}=9.6V, I_{bias}=79.2mA$

@ $f=520MHz, V_{ds}=9.6V, I_{bias}=79.2mA$

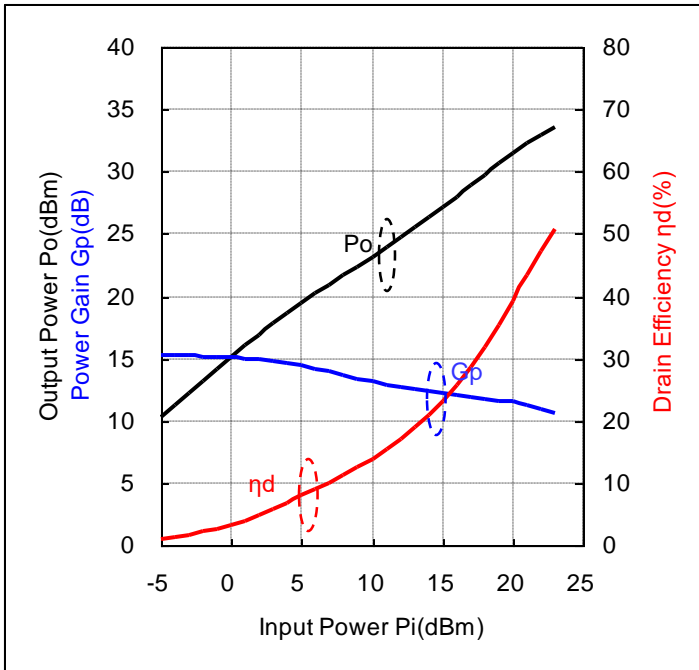
Data

V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.77	9.6	79.2	520	-5.0	0.3	9.9	0.010	14.9	81	1.2
1.77	9.6	79.2	520	-4.0	0.4	10.8	0.012	14.8	82	1.5
1.77	9.6	79.2	520	-3.0	0.5	11.7	0.015	14.7	82	1.9
1.77	9.6	79.2	520	-2.0	0.6	12.7	0.019	14.7	83	2.3
1.77	9.6	79.2	520	-1.0	0.8	13.6	0.023	14.6	84	2.9
1.77	9.6	79.2	520	0.0	1.0	14.5	0.028	14.5	85	3.5
1.77	9.6	79.2	520	1.0	1.3	15.4	0.035	14.4	87	4.2
1.77	9.6	79.2	520	2.0	1.6	16.3	0.042	14.3	89	5.0
1.77	9.6	79.2	520	3.0	2.0	17.1	0.051	14.1	92	5.8
1.77	9.6	79.2	520	4.0	2.5	17.9	0.062	13.9	95	6.7
1.77	9.6	79.2	520	5.0	3.2	18.6	0.073	13.6	100	7.6
1.77	9.6	79.2	520	6.0	4.0	19.4	0.087	13.4	106	8.6
1.77	9.6	79.2	520	7.0	5.0	20.1	0.103	13.1	113	9.6
1.77	9.6	79.2	520	8.0	6.3	20.9	0.123	12.9	121	10.7
1.77	9.6	79.2	520	9.0	7.9	21.7	0.147	12.7	130	11.8
1.77	9.6	79.2	520	10.0	10.0	22.5	0.176	12.5	140	13.1
1.77	9.6	79.2	520	11.0	12.6	23.3	0.212	12.3	152	14.5
1.77	9.6	79.2	520	12.0	15.8	24.1	0.256	12.1	165	16.2
1.77	9.6	79.2	520	13.0	20.0	24.9	0.312	11.9	181	18.0
1.77	9.6	79.2	520	14.0	25.1	25.8	0.379	11.8	198	20.0
1.77	9.6	79.2	520	15.0	31.6	26.7	0.466	11.7	218	22.3
1.77	9.6	79.2	520	16.0	39.8	27.6	0.575	11.6	241	24.9
1.77	9.6	79.2	520	17.0	50.1	28.5	0.711	11.5	267	27.8
1.77	9.6	79.2	520	18.0	63.1	29.5	0.881	11.5	295	31.1
1.77	9.6	79.2	520	19.0	79.4	30.4	1.089	11.4	327	34.7
1.77	9.6	79.2	520	20.0	100.0	31.3	1.337	11.3	360	38.6
1.77	9.6	79.2	520	21.0	125.9	32.1	1.618	11.1	395	42.6
1.77	9.6	79.2	520	22.0	158.5	32.8	1.901	10.8	427	46.4
1.77	9.6	79.2	520	23.0	199.5	33.4	2.198	10.4	457	50.1

Input-Output Characteristics $V_{ds}=9.6V$, $I_{bias}=100mA$ - Condition 2

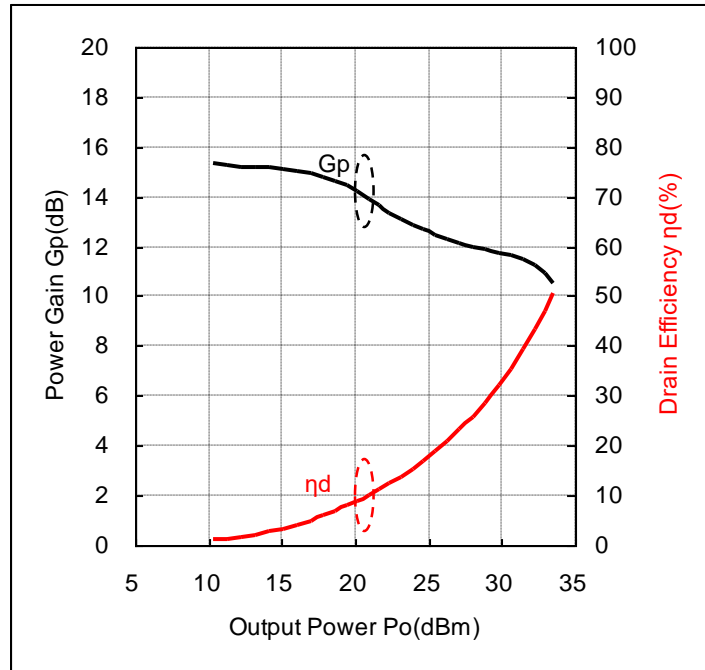
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power



@ $f=520MHz$, $V_{ds}=9.6V$, $I_{bias}=98.1mA$

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=9.6V$, $I_{bias}=98.1mA$

Data

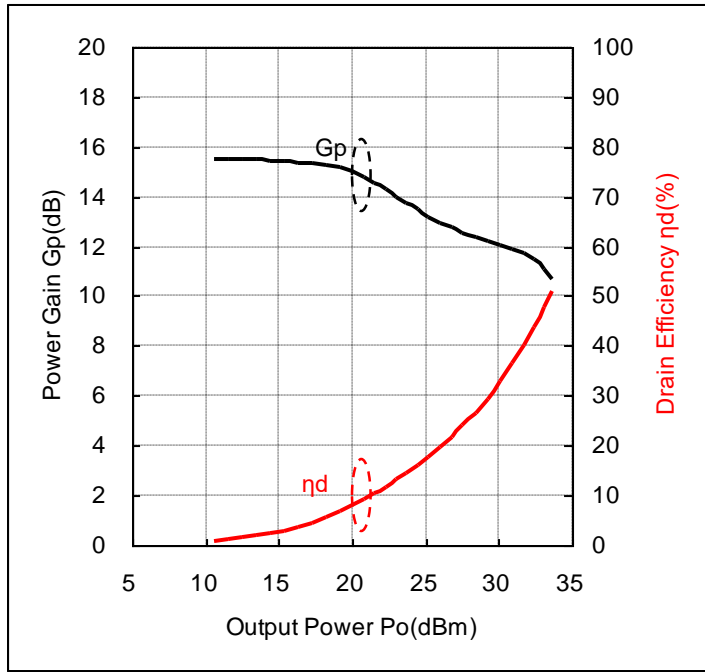
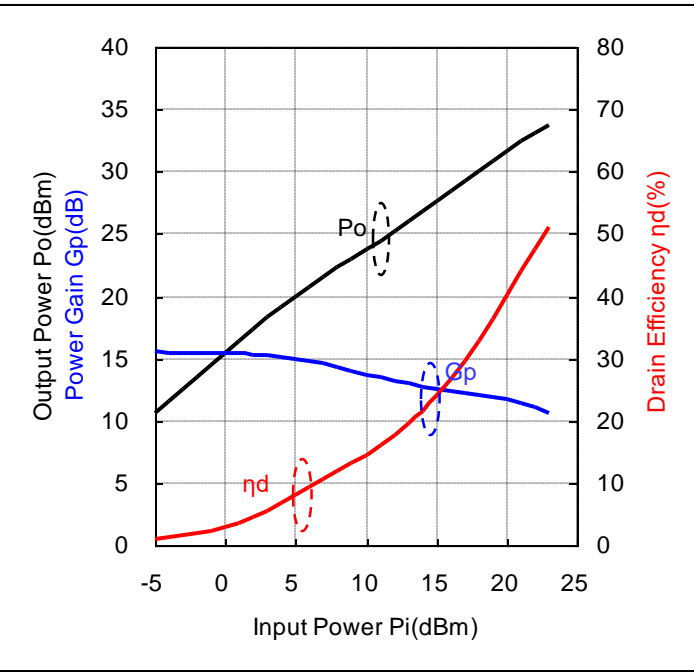
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.85	9.6	98.1	520	-5.0	0.3	10.3	0.011	15.3	100	1.1
1.85	9.6	98.1	520	-4.0	0.4	11.3	0.013	15.3	100	1.4
1.85	9.6	98.1	520	-3.0	0.5	12.2	0.017	15.2	100	1.7
1.85	9.6	98.1	520	-2.0	0.6	13.2	0.021	15.2	101	2.1
1.85	9.6	98.1	520	-1.0	0.8	14.1	0.026	15.1	102	2.7
1.85	9.6	98.1	520	0.0	1.0	15.1	0.032	15.1	103	3.3
1.85	9.6	98.1	520	1.0	1.3	16.0	0.040	15.0	104	4.0
1.85	9.6	98.1	520	2.0	1.6	16.9	0.049	14.9	106	4.9
1.85	9.6	98.1	520	3.0	2.0	17.8	0.060	14.8	108	5.8
1.85	9.6	98.1	520	4.0	2.5	18.6	0.073	14.6	111	6.9
1.85	9.6	98.1	520	5.0	3.2	19.4	0.087	14.4	115	7.9
1.85	9.6	98.1	520	6.0	4.0	20.2	0.104	14.2	120	9.0
1.85	9.6	98.1	520	7.0	5.0	20.9	0.123	13.9	127	10.1
1.85	9.6	98.1	520	8.0	6.3	21.6	0.146	13.6	135	11.3
1.85	9.6	98.1	520	9.0	7.9	22.4	0.173	13.4	144	12.5
1.85	9.6	98.1	520	10.0	10.0	23.1	0.205	13.1	154	13.8
1.85	9.6	98.1	520	11.0	12.6	23.9	0.245	12.9	166	15.3
1.85	9.6	98.1	520	12.0	15.8	24.7	0.292	12.7	180	16.9
1.85	9.6	98.1	520	13.0	20.0	25.5	0.353	12.5	195	18.9
1.85	9.6	98.1	520	14.0	25.1	26.3	0.426	12.3	213	20.8
1.85	9.6	98.1	520	15.0	31.6	27.1	0.518	12.1	233	23.2
1.85	9.6	98.1	520	16.0	39.8	28.0	0.631	12.0	255	25.7
1.85	9.6	98.1	520	17.0	50.1	28.9	0.771	11.9	281	28.6
1.85	9.6	98.1	520	18.0	63.1	29.8	0.946	11.8	308	32.0
1.85	9.6	98.1	520	19.0	79.4	30.6	1.159	11.6	340	35.5
1.85	9.6	98.1	520	20.0	100.0	31.5	1.409	11.5	373	39.3
1.85	9.6	98.1	520	21.0	125.9	32.3	1.687	11.3	406	43.2
1.85	9.6	98.1	520	22.0	158.5	33.0	1.977	11.0	437	47.1
1.85	9.6	98.1	520	23.0	199.5	33.6	2.270	10.6	466	50.8

Input-Output Characteristics $V_{ds}=9.6V$, $I_{bias}=120mA$ - Condition 2

Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=9.6V$, $I_{bias}=118.1mA$

@ $f=520MHz$, $V_{ds}=9.6V$, $I_{bias}=118.1mA$

Data

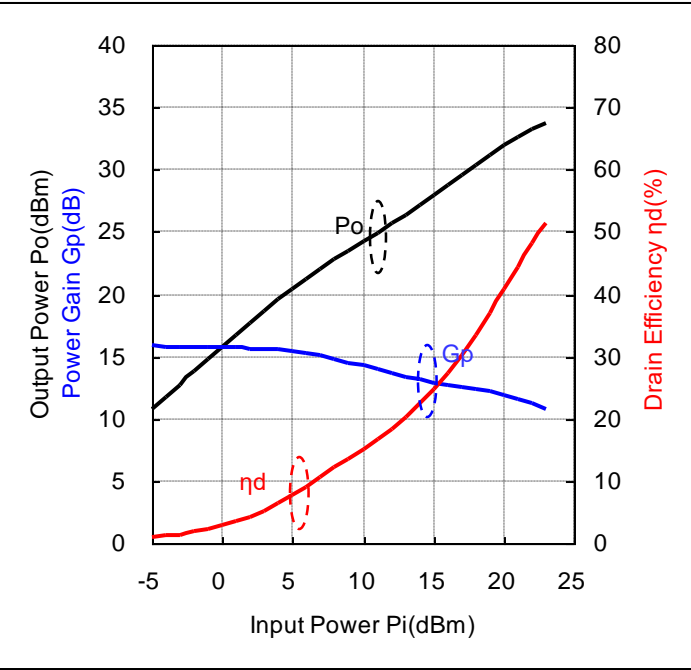
V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
1.93	9.6	118.1	520	-5.0	0.3	10.5	0.011	15.5	119	1.0
1.93	9.6	118.1	520	-4.0	0.4	11.5	0.014	15.5	119	1.2
1.93	9.6	118.1	520	-3.0	0.5	12.5	0.018	15.5	120	1.5
1.93	9.6	118.1	520	-2.0	0.6	13.5	0.022	15.5	120	1.9
1.93	9.6	118.1	520	-1.0	0.8	14.4	0.028	15.4	121	2.4
1.93	9.6	118.1	520	0.0	1.0	15.4	0.035	15.4	121	3.0
1.93	9.6	118.1	520	1.0	1.3	16.4	0.043	15.4	123	3.7
1.93	9.6	118.1	520	2.0	1.6	17.3	0.054	15.3	124	4.5
1.93	9.6	118.1	520	3.0	2.0	18.3	0.067	15.3	126	5.5
1.93	9.6	118.1	520	4.0	2.5	19.1	0.082	15.1	128	6.7
1.93	9.6	118.1	520	5.0	3.2	20.0	0.100	15.0	131	7.9
1.93	9.6	118.1	520	6.0	4.0	20.8	0.120	14.8	136	9.2
1.93	9.6	118.1	520	7.0	5.0	21.5	0.143	14.5	142	10.5
1.93	9.6	118.1	520	8.0	6.3	22.3	0.169	14.3	150	11.7
1.93	9.6	118.1	520	9.0	7.9	23.0	0.200	14.0	159	13.1
1.93	9.6	118.1	520	10.0	10.0	23.7	0.236	13.7	169	14.6
1.93	9.6	118.1	520	11.0	12.6	24.5	0.279	13.5	181	16.1
1.93	9.6	118.1	520	12.0	15.8	25.2	0.331	13.2	194	17.7
1.93	9.6	118.1	520	13.0	20.0	26.0	0.395	13.0	210	19.6
1.93	9.6	118.1	520	14.0	25.1	26.8	0.474	12.8	228	21.7
1.93	9.6	118.1	520	15.0	31.6	27.6	0.570	12.6	247	24.0
1.93	9.6	118.1	520	16.0	39.8	28.4	0.690	12.4	270	26.6
1.93	9.6	118.1	520	17.0	50.1	29.2	0.836	12.2	295	29.5
1.93	9.6	118.1	520	18.0	63.1	30.1	1.016	12.1	323	32.8
1.93	9.6	118.1	520	19.0	79.4	30.9	1.236	11.9	354	36.4
1.93	9.6	118.1	520	20.0	100.0	31.7	1.486	11.7	386	40.1
1.93	9.6	118.1	520	21.0	125.9	32.5	1.762	11.5	418	44.0
1.93	9.6	118.1	520	22.0	158.5	33.1	2.046	11.1	447	47.7
1.93	9.6	118.1	520	23.0	199.5	33.7	2.328	10.7	474	51.2

Input-Output Characteristics $V_{ds}=9.6V$, $I_{bias}=140mA$ - Condition 2

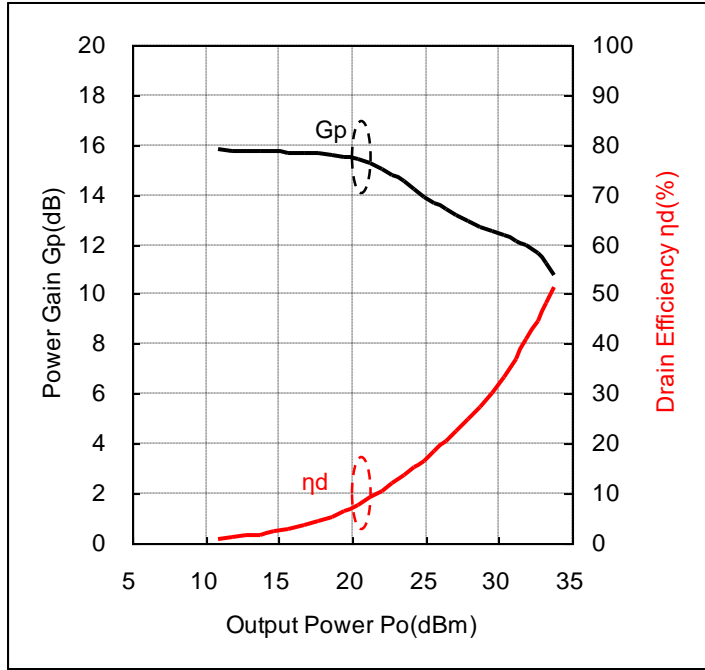
Graph

Output Power, Power Gain, Drain Efficiency vs Input Power

Power Gain, Drain Efficiency vs Output Power



@ $f=520MHz$, $V_{ds}=9.6V$, $I_{bias}=137.4mA$



@ $f=520MHz$, $V_{ds}=9.6V$, $I_{bias}=137.4mA$

Data

V_{gs} (V)	V_{ds} (V)	I_{bias} (mA)	f (MHz)	P_i (dBm)	P_i (mW)	P_o (dBm)	P_o (W)	G_p (dB)	I_{ds} (mA)	η_d (%)
2.00	9.6	137.4	520	-5.0	0.3	10.8	0.012	15.8	138	0.9
2.00	9.6	137.4	520	-4.0	0.4	11.8	0.015	15.8	138	1.1
2.00	9.6	137.4	520	-3.0	0.5	12.8	0.019	15.8	139	1.4
2.00	9.6	137.4	520	-2.0	0.6	13.7	0.024	15.7	139	1.8
2.00	9.6	137.4	520	-1.0	0.8	14.7	0.030	15.7	140	2.2
2.00	9.6	137.4	520	0.0	1.0	15.7	0.037	15.7	140	2.8
2.00	9.6	137.4	520	1.0	1.3	16.7	0.047	15.7	141	3.4
2.00	9.6	137.4	520	2.0	1.6	17.6	0.058	15.6	142	4.3
2.00	9.6	137.4	520	3.0	2.0	18.6	0.072	15.6	144	5.3
2.00	9.6	137.4	520	4.0	2.5	19.5	0.090	15.5	146	6.4
2.00	9.6	137.4	520	5.0	3.2	20.4	0.110	15.4	148	7.7
2.00	9.6	137.4	520	6.0	4.0	21.2	0.133	15.2	152	9.1
2.00	9.6	137.4	520	7.0	5.0	22.0	0.160	15.0	157	10.6
2.00	9.6	137.4	520	8.0	6.3	22.8	0.190	14.8	164	12.1
2.00	9.6	137.4	520	9.0	7.9	23.5	0.224	14.5	173	13.5
2.00	9.6	137.4	520	10.0	10.0	24.2	0.265	14.2	183	15.1
2.00	9.6	137.4	520	11.0	12.6	24.9	0.311	13.9	195	16.7
2.00	9.6	137.4	520	12.0	15.8	25.6	0.367	13.6	208	18.4
2.00	9.6	137.4	520	13.0	20.0	26.4	0.437	13.4	224	20.3
2.00	9.6	137.4	520	14.0	25.1	27.1	0.519	13.1	241	22.4
2.00	9.6	137.4	520	15.0	31.6	27.9	0.621	12.9	261	24.8
2.00	9.6	137.4	520	16.0	39.8	28.7	0.745	12.7	284	27.4
2.00	9.6	137.4	520	17.0	50.1	29.5	0.895	12.5	308	30.3
2.00	9.6	137.4	520	18.0	63.1	30.3	1.079	12.3	336	33.5
2.00	9.6	137.4	520	19.0	79.4	31.1	1.300	12.1	366	37.0
2.00	9.6	137.4	520	20.0	100.0	31.9	1.560	11.9	398	40.8
2.00	9.6	137.4	520	21.0	125.9	32.6	1.828	11.6	428	44.5
2.00	9.6	137.4	520	22.0	158.5	33.2	2.109	11.2	456	48.1
2.00	9.6	137.4	520	23.0	199.5	33.8	2.382	10.8	482	51.5

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