APPLICATION NOTE

MITSUBISHI ELECTRIC
Silicon RF Power Semiconductors

Document NO. AN-900-039-A
Date : 10th Oct. '08
Rev.date : 30th Jun. 2010
Prepared : Y.Takase
S.Kametani
Confirmed :T.Okawa

SUBJECT: RD07MUS2B single-stage amplifier RF performance at f=763-870MHz,Vdd=7.2V

SUMMARY:

This application note shows the RF wide band characteristics data (Frequency characteristics, Pout vs. Pin characteristics) at 763 to 870 MHz band.

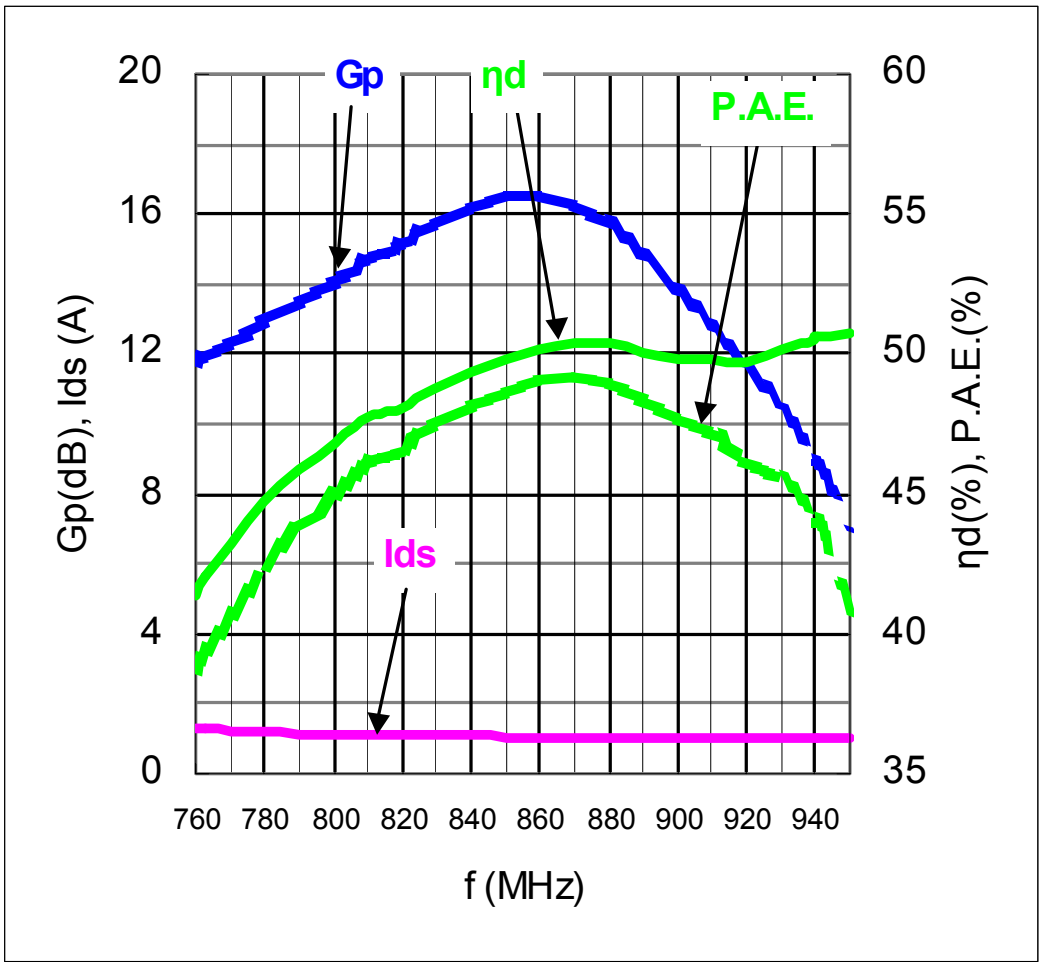
- Sample history :
  RD07MUS2B: Lot number "084YH-G"

- Evaluate conditions :
  RD07MUS2B @f=763 to 870MHz : Vds=7.2V, Idq=250mA (Vgs adjust)

- Results :
  Page 2-7. shows the typical RF characteristics (Frequency characteristics) data.
  Page 8-14. shows the typical RF characteristics (Pout vs. Pin characteristics) data.
  Page 15. shows the equivalent circuit.

RD07MUS2B single-stage amplifier Frequency characteristics 1-1

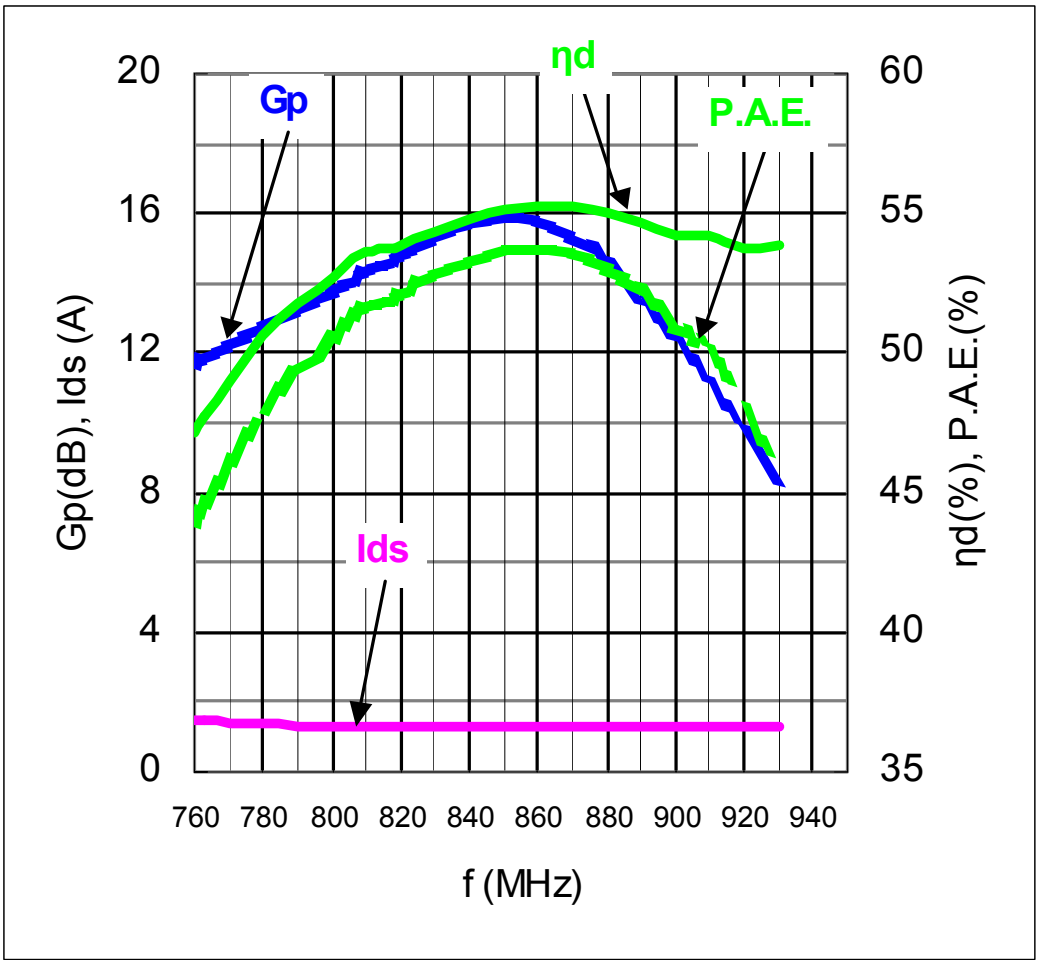
@ Vdd=7.2V, Idq=250mA, **Po=3.8W** (35.8dBm ; **ANT 3W + 1dB Condition**)



Vds (V)	f (MHz)	Pi (W)	Pi (dBm)	Gp (dB)	Ids (A)	ηd (%)	P.A.E. (%)
7.2	760	0.252	24.0	11.8	1.28	41.4	38.7
	763	0.244	23.9	11.9	1.26	42.1	39.4
	770	0.222	23.5	12.3	1.22	43.2	40.7
	780	0.193	22.9	13.0	1.18	44.7	42.5
	790	0.170	22.3	13.5	1.15	45.8	43.8
	800	0.149	21.7	14.1	1.13	46.8	44.9
	806	0.137	21.4	14.4	1.11	47.4	45.7
	810	0.130	21.1	14.7	1.11	47.7	46.1
	817	0.120	20.8	15.0	1.10	47.9	46.4
	820	0.116	20.6	15.2	1.10	48.1	46.6
	830	0.102	20.1	15.7	1.08	48.8	47.5
	840	0.091	19.6	16.2	1.07	49.4	48.2
	850	0.084	19.3	16.5	1.06	49.8	48.7
	860	0.083	19.2	16.6	1.06	50.2	49.1
	870	0.089	19.5	16.3	1.05	50.4	49.3
	880	0.103	20.1	15.7	1.05	50.4	49.0
	890	0.124	20.9	14.9	1.06	50.0	48.4
	900	0.158	22.0	13.8	1.06	49.8	47.7
	910	0.201	23.0	12.8	1.06	49.9	47.2
	920	0.266	24.3	11.6	1.06	49.7	46.2
	930	0.351	25.5	10.3	1.05	50.1	45.5
	940	0.489	26.9	8.9	1.05	50.5	44.0
	941	0.502	27.0	8.8	1.04	50.7	44.0
	950	0.749	28.7	7.1	1.04	50.8	40.8

RD07MUS2B single-stage amplifier Frequency characteristics 1-2

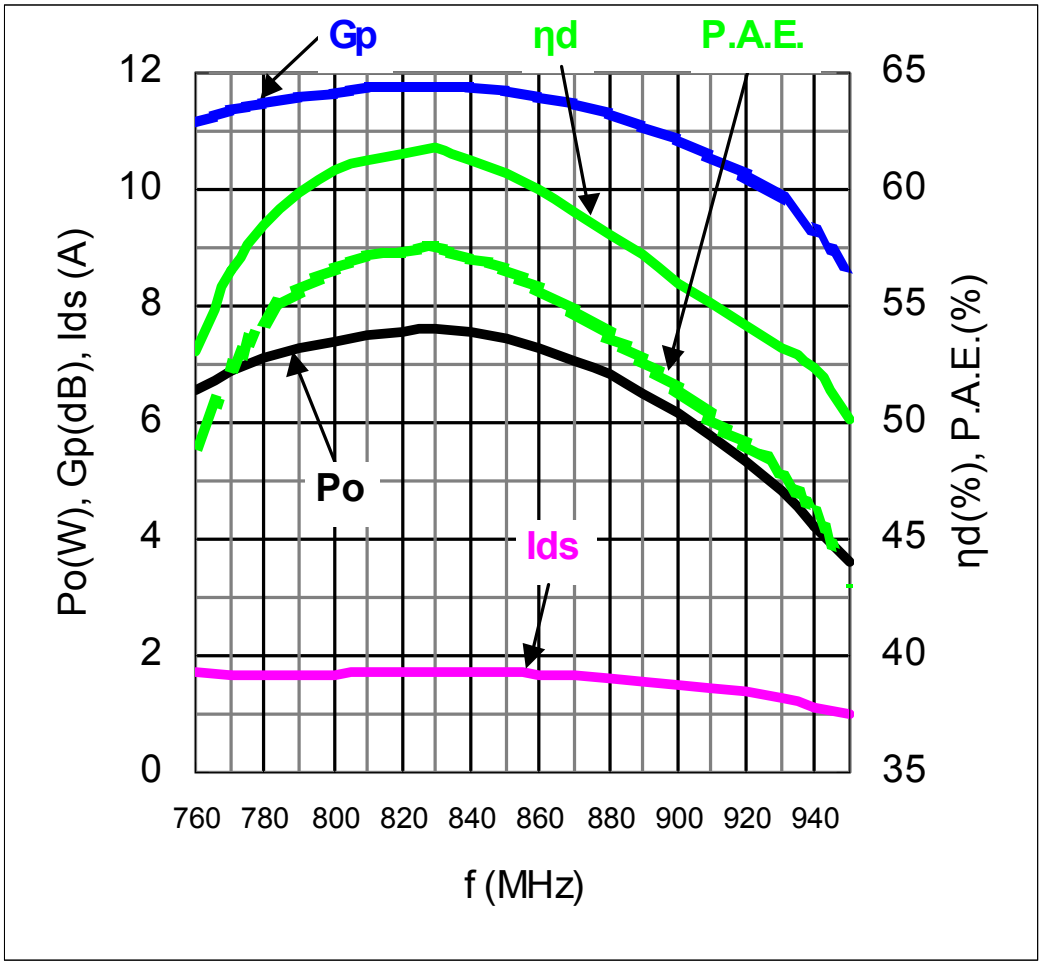
@ Vdd=7.2V, Idq=250mA, **Po=5W** (37dBm)



Vds (V)	f (MHz)	Pi (W)	Pi (dBm)	Gp (dB)	Ids (A)	ηd (%)	P.A.E. (%)
7.2	760	0.342	25.3	11.7	1.48	47.1	43.9
	763	0.329	25.2	11.8	1.46	47.8	44.6
	770	0.300	24.8	12.2	1.42	49.0	46.1
	780	0.265	24.2	12.8	1.37	50.7	48.0
	790	0.235	23.7	13.3	1.34	51.8	49.3
	800	0.209	23.2	13.8	1.32	52.7	50.5
	806	0.195	22.9	14.1	1.30	53.4	51.3
	810	0.183	22.6	14.4	1.29	53.6	51.6
	817	0.171	22.3	14.7	1.29	53.7	51.9
	820	0.164	22.2	14.8	1.29	53.9	52.1
	830	0.148	21.7	15.3	1.28	54.4	52.8
	840	0.135	21.3	15.7	1.27	54.8	53.3
	850	0.128	21.1	15.9	1.26	55.2	53.8
	860	0.131	21.2	15.8	1.26	55.2	53.8
	870	0.144	21.6	15.4	1.26	55.3	53.7
	880	0.175	22.4	14.6	1.26	55.0	53.1
	890	0.222	23.5	13.5	1.27	54.7	52.2
	900	0.293	24.7	12.3	1.28	54.2	51.0
	910	0.384	25.8	11.2	1.28	54.2	50.0
	920	0.533	27.3	9.7	1.29	53.7	48.0
	930	0.756	28.8	8.2	1.29	53.8	45.7

RD07MUS2B single-stage amplifier Frequency characteristics 2-1

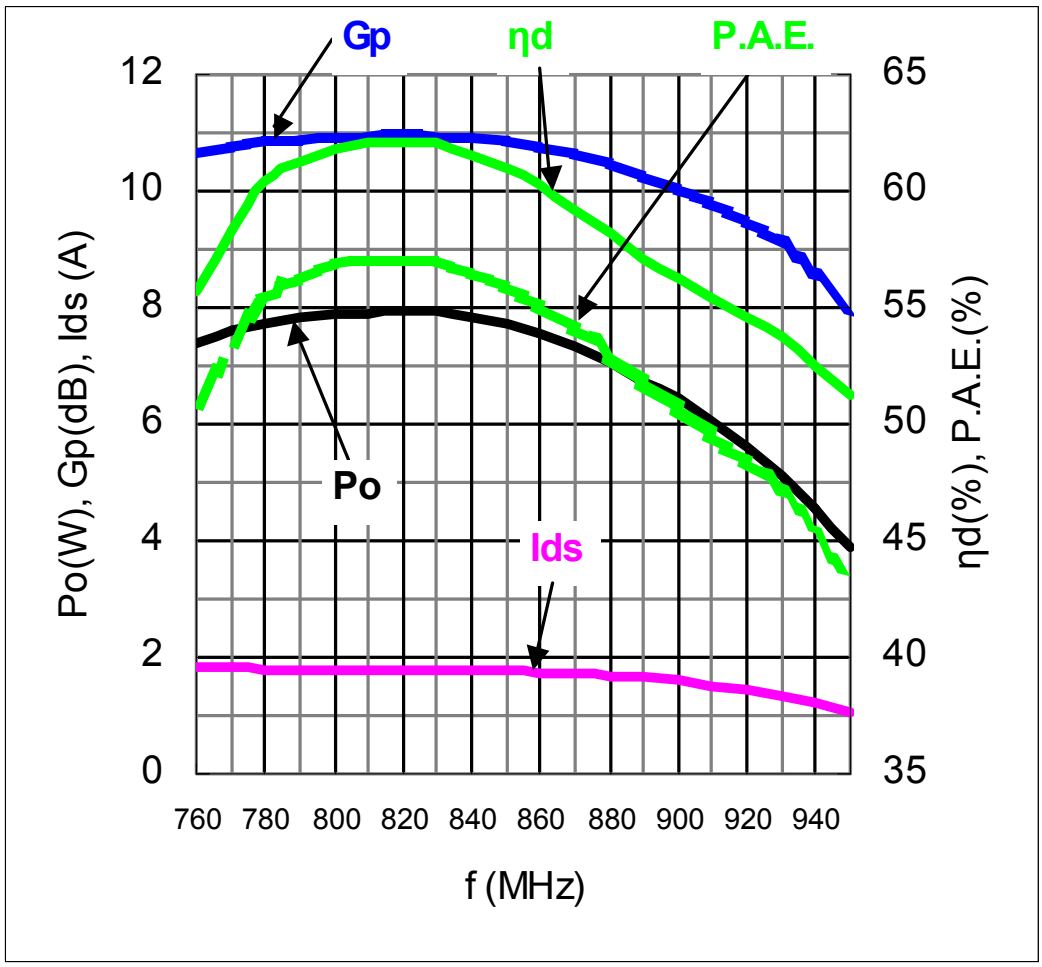
@ Vdd=7.2V, Idq=250mA, **Pi=0.5W** (27dBm)



Vds (V)	f (MHz)	Po (W)	Po (dBm)	Gp (dB)	Ids (A)	ηd (%)	P.A.E. (%)
7.2	760	6.54	38.2	11.1	1.71	53.1	49.0
	770	6.87	38.4	11.4	1.69	56.5	52.4
	780	7.13	38.5	11.5	1.69	58.4	54.3
	790	7.27	38.6	11.6	1.69	59.9	55.7
	800	7.41	38.7	11.7	1.69	60.8	56.7
	810	7.49	38.7	11.8	1.70	61.3	57.2
	820	7.55	38.8	11.8	1.71	61.5	57.4
	830	7.59	38.8	11.8	1.71	61.7	57.6
	840	7.56	38.8	11.8	1.72	61.2	57.1
	850	7.46	38.7	11.7	1.71	60.7	56.6
	860	7.28	38.6	11.6	1.69	60.0	55.9
	870	7.08	38.5	11.5	1.66	59.1	54.9
	880	6.82	38.3	11.3	1.63	58.0	53.8
	890	6.50	38.1	11.1	1.58	57.2	52.8
	900	6.15	37.9	10.9	1.52	56.0	51.5
	910	5.77	37.6	10.6	1.45	55.1	50.3
	920	5.32	37.3	10.3	1.36	54.2	49.1
	930	4.82	36.8	9.8	1.26	53.2	47.6
	940	4.25	36.3	9.3	1.13	52.3	46.1
	950	3.62	35.6	8.6	1.00	50.2	43.3

RD07MUS2B single-stage amplifier Frequency characteristics 2-2

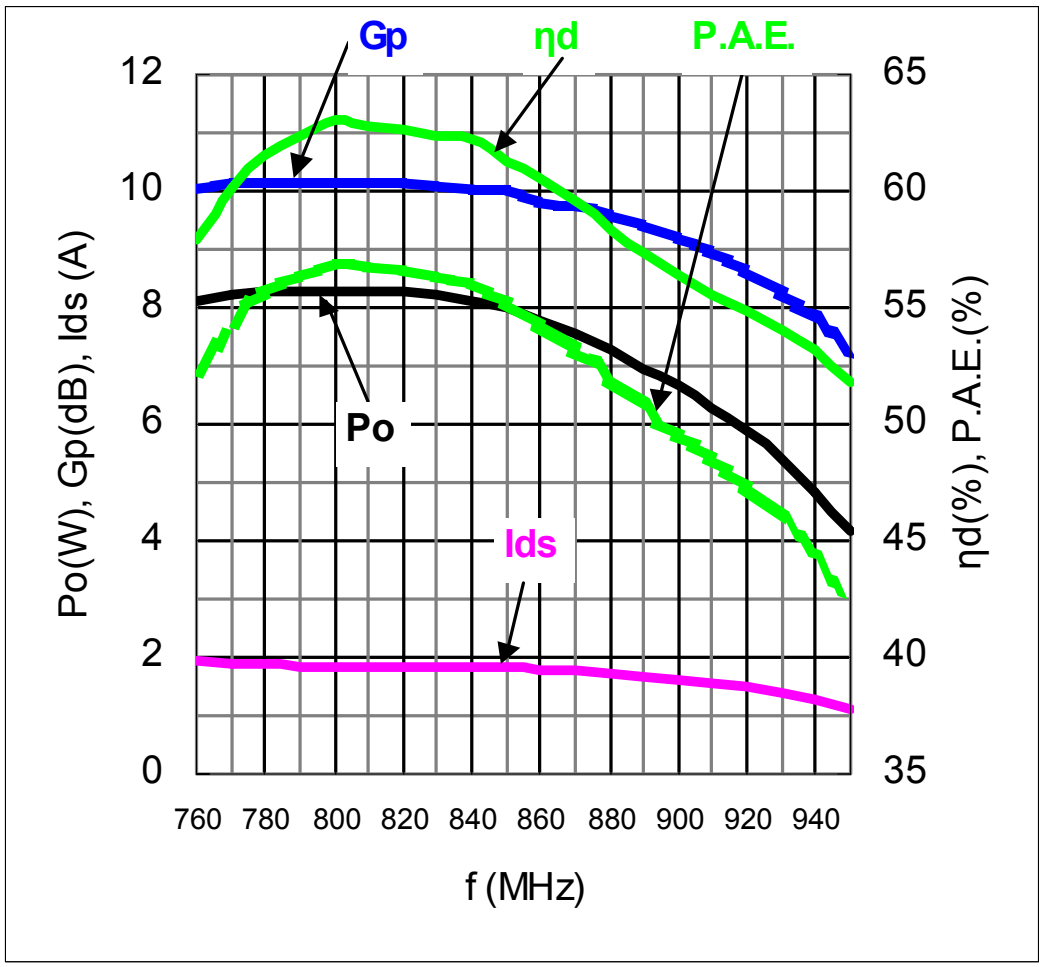
@ Vdd=7.2V, Idq=250mA, **Pi=0.63W** (28dBm)



Vds (V)	f (MHz)	Po (W)	Po (dBm)	Gp (dB)	Ids (A)	ηd (%)	P.A.E. (%)
7.2	760	7.38	38.7	10.6	1.84	55.7	50.9
	770	7.62	38.8	10.8	1.81	58.3	53.5
	780	7.73	38.9	10.9	1.78	60.4	55.4
	790	7.82	38.9	10.9	1.77	61.2	56.2
	800	7.88	39.0	10.9	1.77	61.9	56.9
	810	7.91	39.0	11.0	1.77	62.1	57.1
	820	7.93	39.0	11.0	1.77	62.1	57.1
	830	7.92	39.0	11.0	1.77	62.1	57.1
	840	7.85	38.9	11.0	1.77	61.5	56.6
	850	7.73	38.9	10.9	1.76	61.0	56.0
	860	7.54	38.8	10.8	1.74	60.3	55.2
	870	7.33	38.6	10.6	1.72	59.2	54.1
	880	7.06	38.5	10.5	1.68	58.2	53.0
	890	6.74	38.3	10.3	1.64	57.1	51.8
	900	6.42	38.1	10.0	1.59	56.2	50.6
	910	6.04	37.8	9.8	1.51	55.4	49.6
	920	5.61	37.5	9.5	1.43	54.5	48.4
	930	5.12	37.1	9.1	1.32	53.7	47.1
	940	4.55	36.6	8.6	1.20	52.5	45.3
	950	3.91	35.9	7.9	1.06	51.3	43.0

RD07MUS2B single-stage amplifier Frequency characteristics 2-3

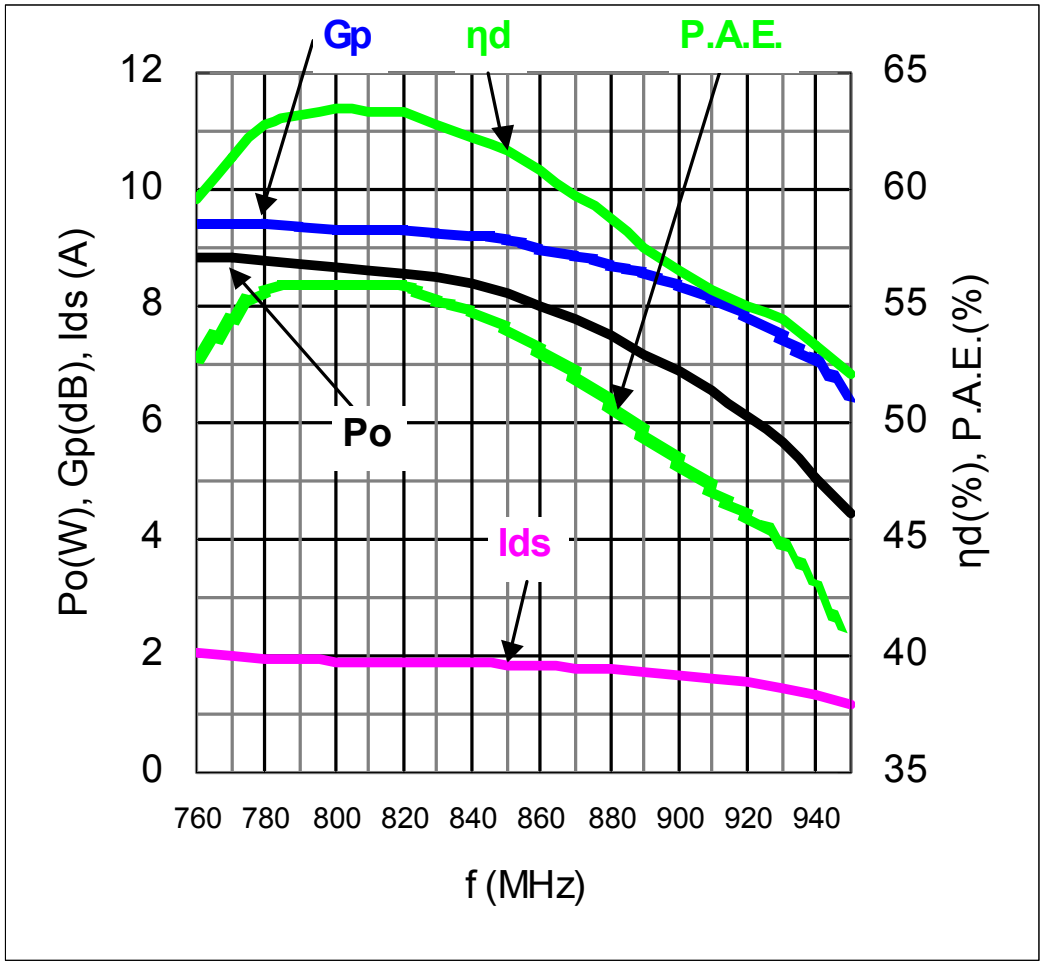
@ Vdd=7.2V, Idq=250mA, **Pi=0.8W** (29dBm)



Vds (V)	f (MHz)	Po (W)	Po (dBm)	Gp (dB)	Ids (A)	ηd (%)	P.A.E. (%)
7.2	760	8.13	39.1	10.1	1.95	57.9	52.2
	770	8.25	39.2	10.1	1.91	60.1	54.3
	780	8.29	39.2	10.2	1.87	61.5	55.6
	790	8.28	39.2	10.2	1.85	62.3	56.4
	800	8.29	39.2	10.2	1.83	63.0	56.9
	810	8.27	39.2	10.2	1.83	62.8	56.7
	820	8.26	39.2	10.1	1.83	62.7	56.6
	830	8.22	39.1	10.1	1.83	62.4	56.4
	840	8.14	39.1	10.1	1.82	62.2	56.1
	850	7.98	39.0	10.0	1.81	61.3	55.2
	860	7.80	38.9	9.9	1.79	60.6	54.4
	870	7.56	38.8	9.8	1.76	59.5	53.2
	880	7.26	38.6	9.6	1.73	58.3	51.9
	890	6.95	38.4	9.4	1.68	57.4	50.8
	900	6.64	38.2	9.2	1.64	56.4	49.6
	910	6.29	38.0	9.0	1.57	55.6	48.5
	920	5.88	37.7	8.7	1.49	54.8	47.4
	930	5.39	37.3	8.3	1.39	54.1	46.0
	940	4.81	36.8	7.8	1.26	53.1	44.4
	950	4.18	36.2	7.2	1.12	51.7	41.9

RD07MUS2B single-stage amplifier Frequency characteristics 2-4

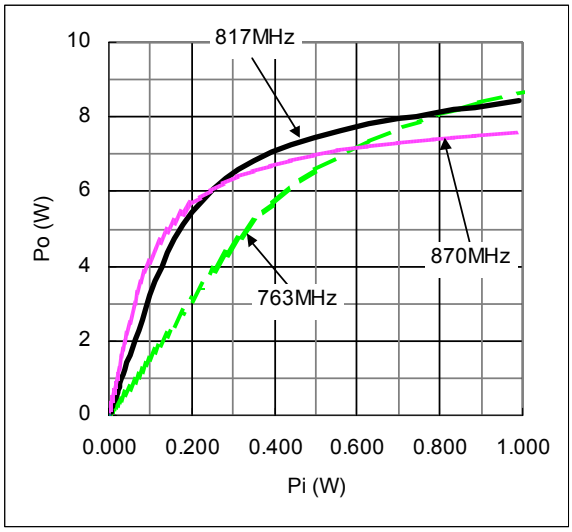
@ Vdd=7.2V, Idq=250mA, **Pi=1W** (30dBm)

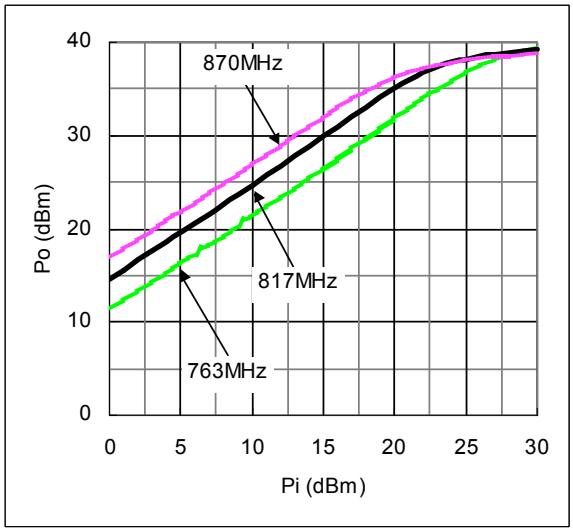


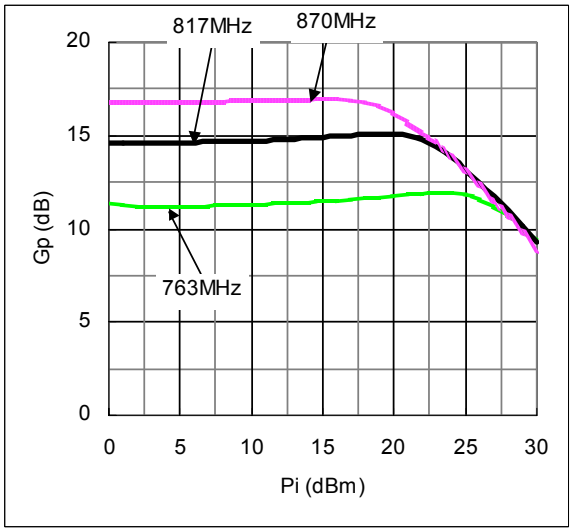
Vds (V)	f (MHz)	Po (W)	Po (dBm)	Gp (dB)	Ids (A)	ηd (%)	P.A.E. (%)
7.2	760	8.81	39.4	9.4	2.05	59.6	52.8
	770	8.82	39.5	9.4	1.99	61.4	54.4
	780	8.78	39.4	9.4	1.94	62.8	55.6
	790	8.73	39.4	9.4	1.92	63.2	55.9
	800	8.68	39.4	9.3	1.90	63.4	56.0
	810	8.61	39.3	9.3	1.89	63.3	56.0
	820	8.56	39.3	9.3	1.88	63.3	55.9
	830	8.49	39.3	9.3	1.88	62.8	55.3
	840	8.39	39.2	9.2	1.87	62.3	54.8
	850	8.22	39.1	9.1	1.85	61.6	54.1
	860	8.01	39.0	9.0	1.83	60.8	53.1
	870	7.76	38.9	8.9	1.80	59.8	52.1
	880	7.49	38.7	8.7	1.77	58.7	50.8
	890	7.17	38.6	8.6	1.73	57.5	49.5
	900	6.87	38.4	8.4	1.69	56.6	48.3
	910	6.53	38.1	8.2	1.63	55.8	47.2
	920	6.13	37.9	7.9	1.55	55.1	46.1
	930	5.66	37.5	7.5	1.44	54.4	44.7
	940	5.08	37.1	7.1	1.32	53.4	42.9
	950	4.42	36.5	6.4	1.18	52.1	40.3

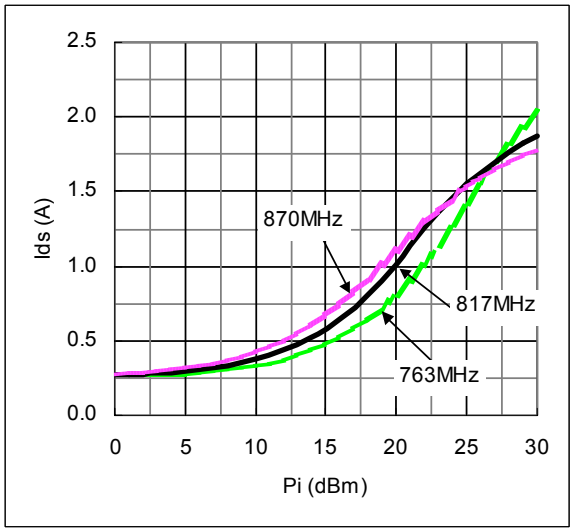
RD07MUS2B single-stage amplifier Pout vs. Pin characteristics 1-1

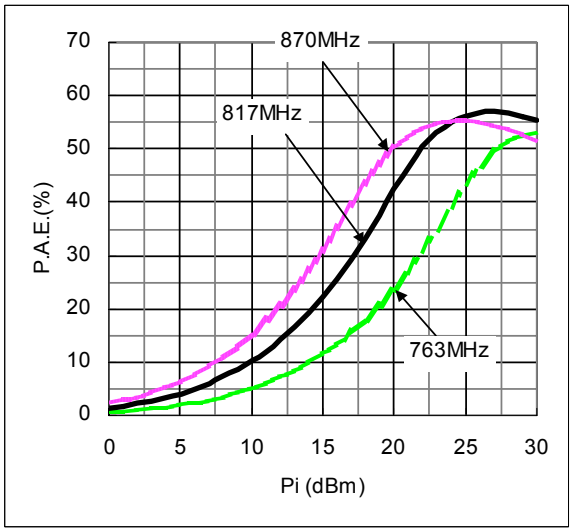
@ Vdd=7.2V, Idq=250mA, **f=763MHz, 817MHz, 870MHz**

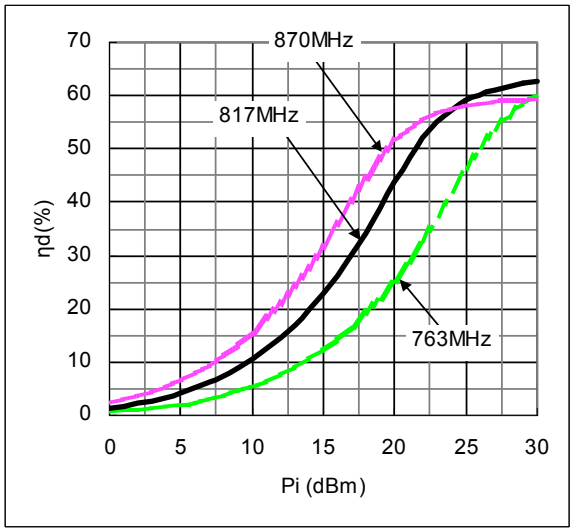






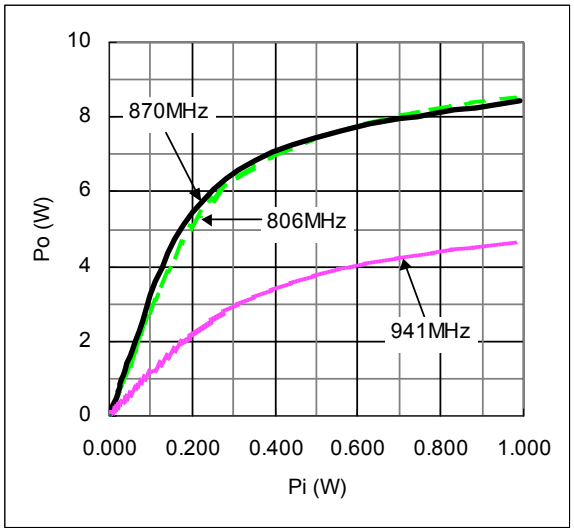


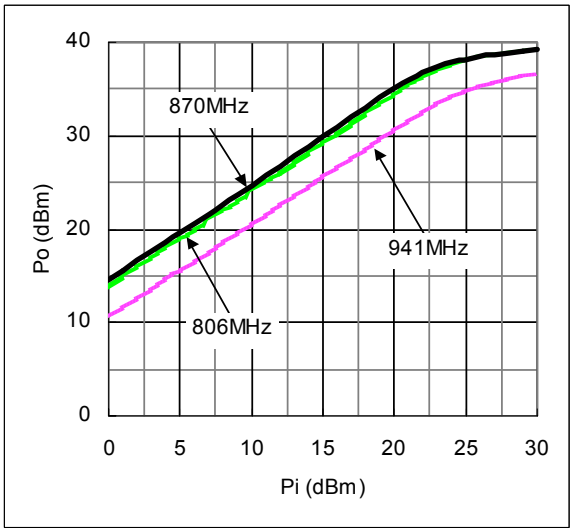


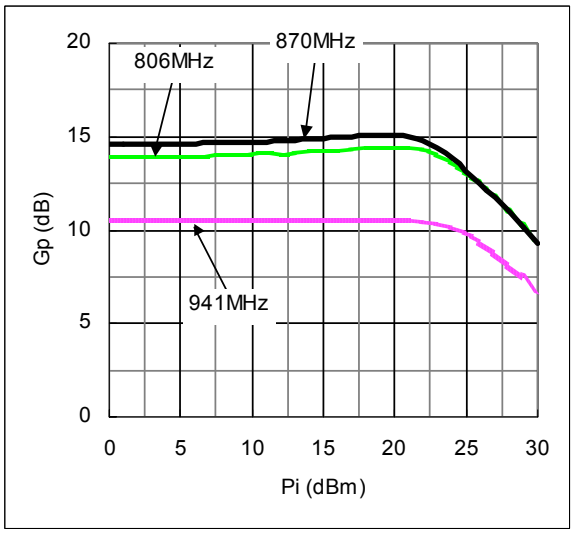


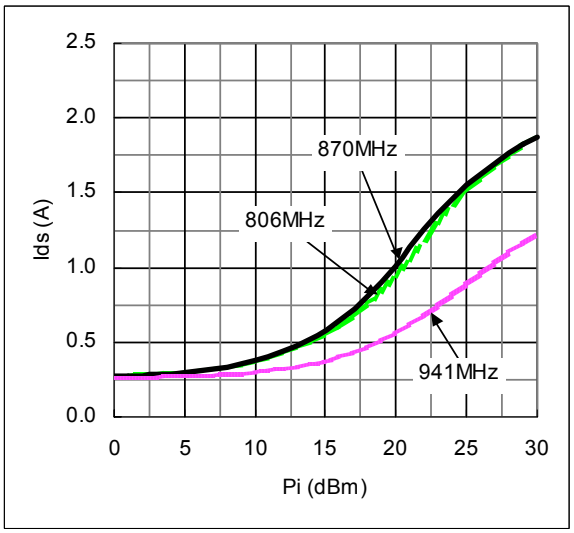
RD07MUS2B single-stage amplifier Pout vs. Pin characteristics 1-2

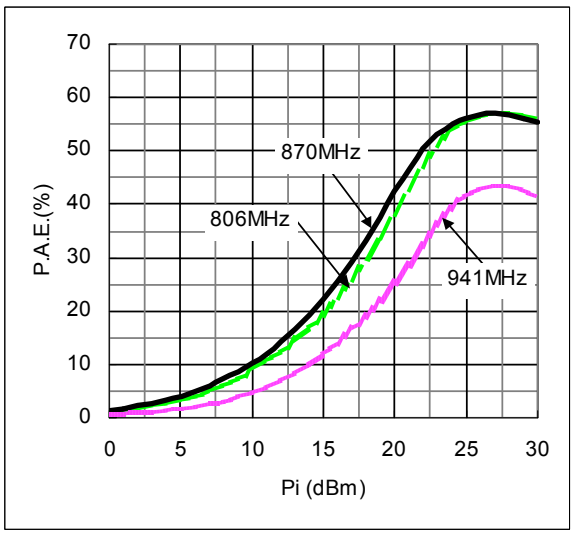
@ Vdd=7.2V, Idq=250mA, **f=806MHz, 870MHz, 941MHz**

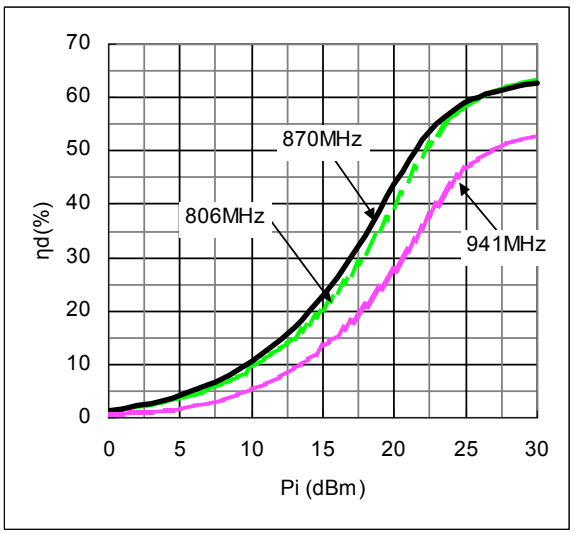












RD07MUS2B single-stage amplifier Pout vs. Pin characteristics data

@ **f=763MHz,** Idq=250mA

Vds (V)	Pi (W)	Pi (dBm)	Po (W)	Po (dBm)	Gp (dB)	Ids (A)	ηd (%)	P.A.E. (%)
7.51	0.001	0.0	0.014	11.3	11.3	0.27	0.7	0.6
7.51	0.001	1.0	0.017	12.3	11.3	0.27	0.8	0.8
7.50	0.002	2.0	0.021	13.2	11.2	0.27	1.0	1.0
7.50	0.002	3.0	0.026	14.2	11.2	0.27	1.3	1.2
7.51	0.003	4.0	0.033	15.2	11.2	0.27	1.6	1.5
7.51	0.003	5.0	0.042	16.2	11.2	0.28	2.0	1.9
7.50	0.004	6.0	0.053	17.2	11.2	0.28	2.5	2.3
7.50	0.005	7.0	0.066	18.2	11.2	0.29	3.0	2.8
7.50	0.006	8.0	0.084	19.2	11.2	0.30	3.7	3.4
7.50	0.008	9.0	0.106	20.3	11.3	0.32	4.5	4.1
7.50	0.010	10.0	0.134	21.3	11.3	0.33	5.4	5.0
7.49	0.013	11.0	0.169	22.3	11.3	0.35	6.5	6.0
7.48	0.016	12.0	0.215	23.3	11.3	0.37	7.7	7.1
7.48	0.020	13.0	0.272	24.3	11.4	0.40	9.1	8.4
7.47	0.025	14.0	0.346	25.4	11.4	0.43	10.7	9.9
7.47	0.031	15.0	0.440	26.4	11.4	0.47	12.4	11.5
7.46	0.040	16.0	0.561	27.5	11.5	0.52	14.4	13.4
7.44	0.050	17.0	0.718	28.6	11.6	0.58	16.7	15.5
7.43	0.063	18.0	0.916	29.6	11.6	0.64	19.2	17.9
7.42	0.079	19.0	1.170	30.7	11.7	0.72	22.0	20.5
7.40	0.100	20.0	1.499	31.8	11.8	0.80	25.3	23.6
7.38	0.126	21.0	1.919	32.8	11.8	0.90	28.9	27.0
7.36	0.158	22.0	2.440	33.9	11.9	1.01	32.8	30.7
7.33	0.200	23.0	3.103	34.9	11.9	1.14	37.3	34.9
7.30	0.251	24.0	3.905	35.9	11.9	1.27	42.0	39.3
7.27	0.315	25.0	4.787	36.8	11.8	1.42	46.4	43.3
7.24	0.397	26.0	5.704	37.6	11.6	1.57	50.3	46.8
7.21	0.501	27.0	6.570	38.2	11.2	1.70	53.6	49.5
7.19	0.632	28.0	7.365	38.7	10.7	1.82	56.2	51.4
7.17	0.795	29.0	8.057	39.1	10.1	1.93	58.3	52.6
7.15	1.007	30.0	8.688	39.4	9.4	2.02	60.1	53.1

@ **f=806MHz**, Idq=250mA

Vds (V)	Pi (W)	Pi (dBm)	Po (W)	Po (dBm)	Gp (dB)	Ids (A)	ηd (%)	P.A.E. (%)
7.47	0.001	0.0	0.025	13.9	13.9	0.27	1.2	1.2
7.47	0.001	1.0	0.031	14.9	13.9	0.28	1.5	1.4
7.47	0.002	2.0	0.039	15.9	13.9	0.28	1.9	1.8
7.46	0.002	3.0	0.049	16.9	13.9	0.28	2.3	2.2
7.46	0.003	4.0	0.062	17.9	13.9	0.29	2.8	2.7
7.46	0.003	5.0	0.078	18.9	13.9	0.30	3.5	3.4
7.46	0.004	6.0	0.099	19.9	13.9	0.31	4.3	4.1
7.46	0.005	7.0	0.125	21.0	14.0	0.32	5.3	5.1
7.46	0.006	8.0	0.157	22.0	14.0	0.33	6.4	6.1
7.45	0.008	9.0	0.198	23.0	14.0	0.35	7.7	7.4
7.45	0.010	10.0	0.253	24.0	14.1	0.37	9.2	8.9
7.45	0.012	11.0	0.320	25.1	14.1	0.39	11.0	10.6
7.44	0.016	12.0	0.402	26.0	14.1	0.42	12.8	12.3
7.43	0.020	13.0	0.511	27.1	14.1	0.46	15.1	14.5
7.42	0.025	14.0	0.654	28.2	14.2	0.50	17.6	17.0
7.41	0.031	15.0	0.821	29.1	14.2	0.55	20.2	19.4
7.40	0.040	16.0	1.055	30.2	14.3	0.61	23.4	22.5
7.39	0.050	17.0	1.342	31.3	14.3	0.68	26.8	25.8
7.38	0.063	18.0	1.715	32.3	14.4	0.75	30.8	29.7
7.36	0.079	19.0	2.180	33.4	14.4	0.84	35.1	33.8
7.34	0.099	20.0	2.751	34.4	14.4	0.95	39.6	38.2
7.32	0.125	21.0	3.446	35.4	14.4	1.06	44.4	42.8
7.30	0.157	22.0	4.237	36.3	14.3	1.18	49.0	47.2
7.27	0.198	23.0	5.040	37.0	14.1	1.31	53.1	51.0
7.25	0.249	24.0	5.766	37.6	13.7	1.42	56.1	53.6
7.24	0.311	24.9	6.382	38.0	13.1	1.52	58.1	55.3
7.22	0.391	25.9	6.922	38.4	12.5	1.61	59.7	56.3
7.20	0.493	26.9	7.404	38.7	11.8	1.68	61.1	57.0
7.19	0.621	27.9	7.830	38.9	11.0	1.76	62.1	57.1
7.18	0.780	28.9	8.193	39.1	10.2	1.82	62.8	56.8
7.16	0.984	29.9	8.523	39.3	9.4	1.88	63.5	56.1

@ **f=817MHz,** Idq=250mA

Vds (V)	Pi (W)	Pi (dBm)	Po (W)	Po (dBm)	Gp (dB)	Ids (A)	ηd (%)	P.A.E. (%)
7.40	0.001	0.0	0.029	14.6	14.6	0.27	1.5	1.4
7.40	0.001	1.0	0.036	15.6	14.6	0.27	1.8	1.8
7.40	0.002	2.0	0.046	16.6	14.6	0.28	2.3	2.2
7.40	0.002	3.0	0.058	17.6	14.6	0.28	2.8	2.7
7.40	0.003	4.0	0.073	18.6	14.6	0.29	3.4	3.3
7.40	0.003	5.0	0.092	19.6	14.6	0.30	4.2	4.1
7.40	0.004	6.0	0.116	20.7	14.6	0.31	5.1	5.0
7.40	0.005	7.0	0.147	21.7	14.6	0.32	6.2	6.0
7.40	0.006	8.0	0.184	22.6	14.7	0.33	7.5	7.2
7.39	0.008	9.0	0.233	23.7	14.7	0.35	8.9	8.6
7.39	0.010	10.0	0.296	24.7	14.7	0.38	10.6	10.3
7.38	0.013	11.0	0.373	25.7	14.7	0.40	12.5	12.1
7.38	0.016	12.0	0.475	26.8	14.8	0.44	14.7	14.2
7.38	0.020	13.0	0.601	27.8	14.8	0.48	17.1	16.5
7.37	0.025	14.0	0.766	28.8	14.9	0.53	19.8	19.1
7.36	0.032	15.0	0.982	29.9	14.9	0.58	22.9	22.2
7.35	0.040	16.0	1.248	31.0	15.0	0.65	26.3	25.4
7.34	0.050	17.0	1.593	32.0	15.0	0.72	30.1	29.2
7.33	0.063	18.0	2.018	33.1	15.1	0.80	34.2	33.1
7.31	0.079	19.0	2.556	34.1	15.1	0.90	38.8	37.6
7.30	0.100	20.0	3.238	35.1	15.1	1.01	43.8	42.4
7.28	0.126	21.0	3.993	36.0	15.0	1.13	48.4	46.9
7.26	0.158	22.0	4.733	36.8	14.8	1.25	52.1	50.4
7.24	0.199	23.0	5.436	37.4	14.4	1.36	55.1	53.1
7.23	0.251	24.0	6.057	37.8	13.8	1.46	57.3	54.9
7.21	0.314	25.0	6.582	38.2	13.2	1.55	58.9	56.1
7.20	0.395	26.0	7.048	38.5	12.5	1.63	60.1	56.8
7.19	0.497	27.0	7.454	38.7	11.8	1.70	61.0	56.9
7.18	0.626	28.0	7.815	38.9	11.0	1.76	61.7	56.8
7.17	0.786	29.0	8.125	39.1	10.1	1.82	62.2	56.2
7.16	0.990	30.0	8.416	39.3	9.3	1.87	62.7	55.4

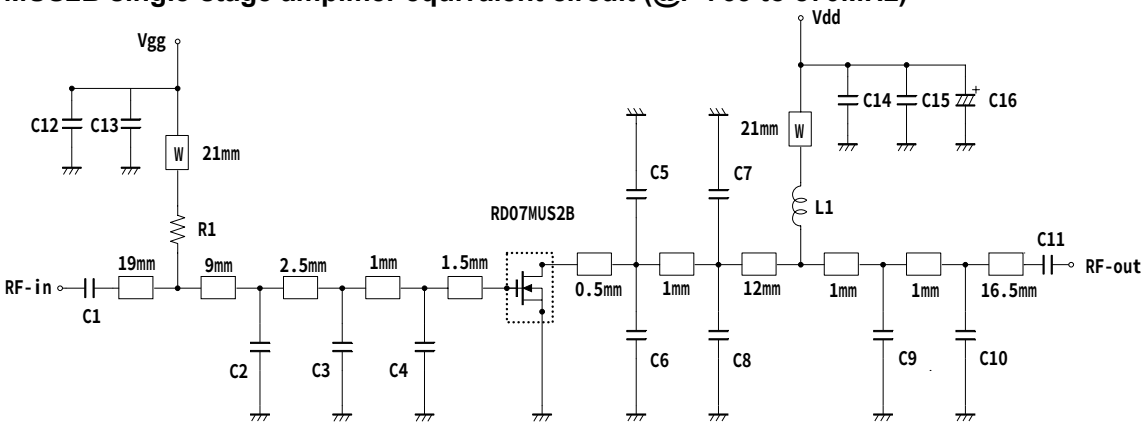
@ **f=870MHz,** Idq=250mA

Vds (V)	Pi (W)	Pi (dBm)	Po (W)	Po (dBm)	Gp (dB)	Ids (A)	ηd (%)	P.A.E. (%)
7.40	0.001	0.0	0.048	16.8	16.8	0.28	2.3	2.3
7.40	0.001	1.0	0.060	17.8	16.8	0.28	2.9	2.8
7.40	0.002	2.0	0.076	18.8	16.8	0.29	3.6	3.5
7.40	0.002	3.0	0.095	19.8	16.8	0.30	4.4	4.3
7.40	0.003	4.0	0.120	20.8	16.8	0.30	5.3	5.2
7.40	0.003	5.0	0.152	21.8	16.8	0.32	6.5	6.4
7.39	0.004	6.0	0.191	22.8	16.8	0.33	7.9	7.7
7.39	0.005	7.0	0.242	23.8	16.8	0.35	9.4	9.2
7.39	0.006	8.0	0.304	24.8	16.8	0.37	11.2	11.0
7.38	0.008	9.0	0.384	25.8	16.8	0.39	13.3	13.0
7.38	0.010	10.0	0.487	26.9	16.8	0.42	15.6	15.3
7.37	0.013	11.0	0.613	27.9	16.9	0.46	18.2	17.8
7.37	0.016	12.0	0.775	28.9	16.9	0.50	21.0	20.6
7.36	0.020	13.0	0.976	29.9	16.9	0.55	24.2	23.7
7.35	0.025	14.0	1.234	30.9	16.9	0.61	27.7	27.1
7.35	0.032	15.0	1.553	31.9	16.9	0.67	31.5	30.9
7.34	0.040	16.0	1.954	32.9	16.9	0.75	35.7	35.0
7.32	0.050	17.0	2.441	33.9	16.9	0.83	40.3	39.5
7.31	0.063	18.0	2.980	34.7	16.8	0.92	44.5	43.6
7.30	0.079	19.0	3.555	35.5	16.5	1.01	48.2	47.1
7.28	0.099	20.0	4.127	36.2	16.2	1.11	51.3	50.0
7.27	0.124	20.9	4.664	36.7	15.8	1.20	53.5	52.1
7.26	0.156	21.9	5.174	37.1	15.2	1.29	55.3	53.6
7.24	0.196	22.9	5.624	37.5	14.6	1.37	56.6	54.7
7.23	0.248	23.9	6.031	37.8	13.9	1.45	57.5	55.1
7.22	0.313	25.0	6.386	38.1	13.1	1.52	58.1	55.2
7.21	0.393	25.9	6.689	38.3	12.3	1.59	58.5	55.0
7.20	0.496	27.0	6.958	38.4	11.5	1.65	58.7	54.5
7.19	0.625	28.0	7.192	38.6	10.6	1.70	58.9	53.8
7.18	0.785	28.9	7.394	38.7	9.7	1.74	59.1	52.8
7.17	0.988	29.9	7.576	38.8	8.8	1.78	59.3	51.6

@ **f=941MHz**, Idq=250mA

Vds (V)	Pi (W)	Pi (dBm)	Po (W)	Po (dBm)	Gp (dB)	Ids (A)	ηd (%)	P.A.E. (%)
7.31	0.001	0.0	0.011	10.5	10.5	0.26	0.6	0.5
7.31	0.001	1.0	0.014	11.5	10.5	0.26	0.7	0.7
7.31	0.002	2.0	0.018	12.5	10.5	0.26	0.9	0.8
7.31	0.002	3.0	0.022	13.5	10.5	0.27	1.2	1.1
7.31	0.003	4.0	0.028	14.5	10.5	0.27	1.4	1.3
7.31	0.003	5.0	0.036	15.5	10.5	0.27	1.8	1.6
7.31	0.004	6.0	0.045	16.5	10.5	0.27	2.2	2.0
7.31	0.005	7.0	0.057	17.5	10.5	0.28	2.8	2.5
7.31	0.006	8.0	0.071	18.5	10.5	0.28	3.4	3.1
7.31	0.008	9.0	0.090	19.5	10.5	0.29	4.2	3.9
7.31	0.010	10.0	0.113	20.5	10.5	0.30	5.2	4.7
7.31	0.013	11.0	0.142	21.5	10.5	0.31	6.3	5.8
7.31	0.016	12.0	0.179	22.5	10.5	0.32	7.7	7.0
7.30	0.020	13.0	0.226	23.5	10.5	0.33	9.3	8.4
7.30	0.025	14.0	0.283	24.5	10.5	0.35	11.1	10.1
7.29	0.032	15.0	0.357	25.5	10.5	0.37	13.2	12.0
7.30	0.040	16.0	0.447	26.5	10.5	0.40	15.4	14.0
7.29	0.050	17.0	0.564	27.5	10.5	0.43	18.0	16.4
7.29	0.063	18.0	0.708	28.5	10.5	0.47	20.9	19.0
7.28	0.079	19.0	0.892	29.5	10.5	0.51	24.1	22.0
7.27	0.099	20.0	1.118	30.5	10.5	0.56	27.6	25.1
7.27	0.124	20.9	1.397	31.5	10.5	0.61	31.3	28.5
7.26	0.157	22.0	1.746	32.4	10.5	0.68	35.5	32.3
7.24	0.197	22.9	2.145	33.3	10.4	0.75	39.7	36.0
7.24	0.248	23.9	2.574	34.1	10.2	0.82	43.3	39.1
7.22	0.311	24.9	2.986	34.8	9.8	0.89	46.3	41.5
7.22	0.393	25.9	3.381	35.3	9.4	0.97	48.5	42.9
7.21	0.495	26.9	3.744	35.7	8.8	1.04	50.2	43.5
7.19	0.621	27.9	4.068	36.1	8.2	1.10	51.4	43.6
7.18	0.782	28.9	4.366	36.4	7.5	1.16	52.3	42.9
7.17	0.983	29.9	4.628	36.7	6.7	1.22	52.8	41.6

RD07MUS2B single-stage amplifier equivalent circuit (@f=763 to 870MHz)



Note:Board material- Glass-Epoxy Substrate
Micro strip line width=1.3mm/50OHM,er:4.8,t=0.8mm
W:Line width=1.0mm

Parts Type		Value	Type name	Vender
Capacitor	C1	150pF	GRM2162C1H151JD01E	Murata Manufacturing Co., Ltd.
	C2	1pF	GRM1884C1H1R0CZ01	Murata Manufacturing Co., Ltd.
	C3	6pF	GRM1882C1H6R0DZ01	Murata Manufacturing Co., Ltd.
	C4	12pF	GRM1882C1H120JA01	Murata Manufacturing Co., Ltd.
	C5	10pF	GRM1882C1H100JA01	Murata Manufacturing Co., Ltd.
	C6	10pF	GRM1882C1H100JA01	Murata Manufacturing Co., Ltd.
	C7	8pF	CRM1882C1H8R0DZ01	Murata Manufacturing Co., Ltd.
	C8	8pF	CRM1882C1H8R0DZ01	Murata Manufacturing Co., Ltd.
	C9	6pF	GRM1882C1H6R0DZ01	Murata Manufacturing Co., Ltd.
	C10	1pF	GRM1884C1H1R0CZ01	Murata Manufacturing Co., Ltd.
	C11	150pF	GRM2162C1H151JD01E	Murata Manufacturing Co., Ltd.
	C12	1000pF	GRM1882C1H102JA01	Murata Manufacturing Co., Ltd.
	C13	100pF	GRM1882C1H101JA01	Murata Manufacturing Co., Ltd.
	C14	100pF	GRM1882C1H101JA01	Murata Manufacturing Co., Ltd.
	C15	1000pF	GRM1882C1H102JA01	Murata Manufacturing Co., Ltd.
	C16	22μF	A0603	NICHICON CORPORATION
Resistance	R1	4.7K OHM	CR1/10-472JB	Hokuriku Electric Industry Co.,Ltd.
Inductance	L1	37.8nH Enameled wire 7Turns, Diameter:0.23mm,φ1.6mm (the out side diameter)	2307A	Yoneda Processing Place Co.,Ltd.