MMIC Amplifier MERA-533+

Typical Performance Data

NOTE: Use PDF Bookmarks to view DATA at required conditions or to view GRAPHS.

Definitions:
Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: Icc = 65mA, Vd=4.79V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
20	20.69	24.47	23.55	37.78	1.09	0.65	20	35.23	18.70	2.95
30	20.66	23.95	23.60	35.72	1.07	0.69	30	34.97	18.75	2.91
50	20.65	23.92	23.98	37.16	1.07	0.69	50	34.84	18.77	2.90
100	20.66	24.08	23.69	34.98	1.08	0.68	100	34.87	18.73	2.95
200	20.61	24.14	23.61	31.18	1.08	0.67	200	35.02	18.87	2.91
400	20.53	23.97	23.68	24.89	1.07	0.67	300	34.67	18.72	3.00
600	20.41	23.94	23.27	21.68	1.07	0.66	400	34.07	18.71	2.99
800	20.30	23.89	22.52	19.14	1.07	0.65	500	33.76	18.57	3.02
1000	20.14	23.73	21.37	17.28	1.06	0.65	600	33.42	18.56	3.01
1200	19.96	23.62	19.98	15.90	1.05	0.64	700	33.40	18.42	3.03
1400	19.78	23.45	18.75	14.63	1.03	0.64	800	33.31	18.18	2.95
1600	19.57	23.31	17.70	13.62	1.02	0.63	900	33.15	18.13	3.00
1800	19.36	23.12	16.58	12.83	1.01	0.62	1000	32.91	17.90	3.01
2000	19.12	22.95	15.72	12.18	1.00	0.61	1100	32.56	18.01	3.02
2200	18.87	22.77	14.99	11.64	0.99	0.60	1200	32.44	17.85	3.05
2400	18.61	22.60	14.40	11.16	0.98	0.59	1300	32.27	17.95	3.05
2600	18.35	22.39	14.10	10.73	0.97	0.58	1400	31.79	17.85	3.14
2800	18.08	22.21	13.97	10.35	0.97	0.58	1500	31.97	17.72	3.11
3000	17.81	22.03	13.74	9.99	0.96	0.57	1600	32.19	17.67	3.19
3200	17.54	21.80	13.52	9.63	0.96	0.57	1700	32.21	17.53	3.08
3400	17.23	21.62	13.40	9.16	0.96	0.57	1800	31.53	17.62	3.22
3600	16.92	21.34	13.10	8.58	0.95	0.57	1900	30.98	17.44	3.05
3800	16.70	21.24	12.52	8.04	0.94	0.57	2000	30.81	17.34	3.21
4000	16.31	21.11	12.00	7.59	0.95	0.57	2100	30.45	17.23	3.10
4200	15.97	21.01	11.16	7.13	0.95	0.58	2200	30.21	16.92	3.14
4400	15.56	20.93	10.37	6.70	0.95	0.58	2300	29.85	16.80	3.06
4600	15.13	20.91	9.51	6.25	0.96	0.58	2400	29.42	16.31	3.16
4800	14.66	20.90	8.71	5.87	0.97	0.58	2500	29.17	16.44	3.18
5000	14.20	20.92	7.98	5.58	0.97	0.58	2600	28.82	15.78	3.26
5200	13.72	20.97	7.31	5.31	0.98	0.58	2700	28.37	15.82	3.24
5500	12.89	21.14	6.45	4.91	1.00	0.57	2800	28.16	15.19	3.21
6000	11.45	21.59	5.41	4.40	1.06	0.56	2900	27.66	15.30	3.13
6500	9.91	21.96	4.77	3.95	1.14	0.56	3000	27.68	14.74	3.29
7000	8.32	22.49	4.23	3.48	1.24	0.56	3100	27.17	14.45	3.21
8000	5.33	23.19	3.73	2.95	1.46	0.55	3200	27.09	14.40	3.24
9000	3.44	22.78	3.59	2.97	1.58	0.53	3300	27.03	14.13	3.27
10000	2.62	21.55	3.73	3.55	1.59	0.47	3400	26.48	14.04	3.35
11000	2.00	21.53	3.84	4.23	1.85	0.43	3600	26.00	13.53	3.35
12000	0.60	21.71	3.74	4.24	2.16	0.42	3800	25.62	13.01	3.30
13000	-1.91	22.39	3.23	3.24	2.31	0.48	4000	25.33	12.68	3.10

Typical Performance Data

Definitions:
Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: Icc = 52mA, Vd=4.71V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
20	20.49	23.82	22.29	31.75	1.07	0.68	20	31.84	17.04	2.90
30	20.46	23.86	22.00	29.46	1.07	0.68	30	31.63	16.93	2.89
50	20.45	23.92	21.95	29.38	1.08	0.67	50	31.56	17.08	2.84
100	20.46	23.91	21.67	29.30	1.08	0.67	100	31.60	16.92	2.89
200	20.41	23.94	21.86	28.21	1.08	0.67	200	31.82	17.13	2.87
400	20.33	23.86	21.86	24.25	1.08	0.67	300	31.65	16.93	2.93
600	20.22	23.75	21.70	21.66	1.07	0.66	400	31.21	17.02	2.97
800	20.11	23.70	21.30	19.28	1.06	0.65	500	31.00	16.92	2.93
1000	19.96	23.56	20.50	17.51	1.06	0.65	600	30.77	16.84	2.98
1200	19.79	23.41	19.35	16.17	1.04	0.64	700	30.88	16.69	2.98
1400	19.61	23.28	18.29	14.89	1.03	0.63	800	30.88	16.36	2.90
1600	19.40	23.16	17.30	13.88	1.02	0.62	900	30.80	16.53	2.94
1800	19.19	22.93	16.25	13.08	1.01	0.62	1000	30.70	16.14	2.96
2000	18.96	22.78	15.40	12.42	0.99	0.61	1100	30.48	16.48	2.94
2200	18.72	22.57	14.68	11.87	0.98	0.60	1200	30.35	16.28	3.03
2400	18.47	22.44	14.11	11.39	0.97	0.59	1300	30.43	16.30	3.01
2600	18.20	22.18	13.82	10.97	0.96	0.58	1400	29.95	16.26	3.10
2800	17.92	22.02	13.69	10.59	0.96	0.57	1500	30.23	16.12	3.03
3000	17.67	21.79	13.46	10.23	0.96	0.57	1600	30.57	16.21	3.13
3200	17.39	21.63	13.28	9.87	0.95	0.57	1700	30.76	15.99	3.02
3400	17.09	21.37	13.17	9.40	0.95	0.57	1800	30.40	16.25	3.14
3600	16.77	21.15	12.91	8.80	0.94	0.57	1900	29.78	16.05	2.98
3800	16.55	20.99	12.38	8.30	0.94	0.57	2000	29.80	16.13	3.12
4000	16.16	20.87	11.88	7.82	0.94	0.57	2100	29.42	16.05	3.03
4200	15.82	20.82	11.09	7.37	0.95	0.57	2200	29.24	15.72	3.09
4400	15.40	20.72	10.33	6.91	0.95	0.57	2300	29.02	15.79	3.00
4600	14.98	20.70	9.49	6.49	0.96	0.57	2400	28.63	15.21	3.08
4800	14.50	20.67	8.69	6.10	0.97	0.57	2500	28.53	15.60	3.11
5000	14.04	20.73	7.97	5.80	0.98	0.57	2600	28.15	14.93	3.18
5200	13.55	20.79	7.29	5.53	0.99	0.57	2700	27.82	15.15	3.16
5500	12.73	20.98	6.44	5.12	1.01	0.56	2800	27.60	14.49	3.12
6000	11.28	21.41	5.41	4.60	1.07	0.55	2900	27.12	14.69	3.09
6500	9.75	21.79	4.78	4.15	1.16	0.54	3000	27.20	14.07	3.20
7000	8.16	22.38	4.25	3.65	1.26	0.55	3100	26.68	13.77	3.16
8000	5.19	23.04	3.77	3.11	1.49	0.54	3200	26.60	13.77	3.15
9000	3.31	22.69	3.62	3.14	1.62	0.52	3300	26.49	13.43	3.21
10000	2.47	21.46	3.75	3.74	1.63	0.46	3400	25.97	13.36	3.26
11000	1.86	21.47	3.85	4.47	1.90	0.41	3600	25.42	12.90	3.26
12000	0.46	21.63	3.76	4.47	2.23	0.41	3800	25.09	12.34	3.18
13000	-2.02	22.32	3.26	3.39	2.39	0.47	4000	24.85	12.02	3.01

Typical Performance Data

Definitions:
Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: Icc = 78mA, Vd=4.86V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
20	20.81	23.80	25.57	39.04	1.06	0.71	20	37.83	19.62	2.98
30	20.79	24.06	25.39	45.07	1.07	0.69	30	37.53	19.75	2.98
50	20.78	24.12	25.50	44.42	1.07	0.68	50	37.41	19.78	2.96
100	20.78	24.17	25.13	38.02	1.07	0.68	100	37.42	19.84	3.03
200	20.72	24.15	25.20	31.74	1.08	0.67	200	37.30	19.88	2.94
400	20.64	24.13	24.97	24.85	1.07	0.67	300	36.61	19.74	3.07
600	20.53	24.08	24.26	21.47	1.07	0.66	400	35.95	19.64	3.06
800	20.40	23.97	23.29	18.91	1.06	0.66	500	35.44	19.49	3.08
1000	20.24	23.83	21.89	17.05	1.06	0.65	600	34.89	19.56	3.06
1200	20.07	23.75	20.30	15.70	1.05	0.64	700	34.70	19.38	3.11
1400	19.88	23.59	19.02	14.43	1.04	0.63	800	34.39	19.19	3.01
1600	19.67	23.47	17.90	13.44	1.03	0.62	900	34.12	19.02	3.08
1800	19.46	23.26	16.74	12.65	1.01	0.62	1000	33.72	18.82	3.06
2000	19.22	23.09	15.89	12.01	1.00	0.61	1100	33.31	18.81	3.09
2200	18.97	22.93	15.16	11.47	0.99	0.60	1200	33.16	18.55	3.13
2400	18.72	22.75	14.59	10.99	0.98	0.59	1300	32.78	18.78	3.11
2600	18.46	22.51	14.28	10.56	0.97	0.59	1400	32.44	18.56	3.21
2800	18.17	22.33	14.17	10.17	0.97	0.58	1500	32.47	18.37	3.18
3000	17.91	22.12	13.92	9.81	0.96	0.58	1600	32.54	18.23	3.26
3200	17.65	21.95	13.70	9.46	0.96	0.57	1700	32.32	18.08	3.14
3400	17.33	21.74	13.54	8.98	0.96	0.57	1800	31.59	18.11	3.29
3600	17.02	21.48	13.18	8.40	0.95	0.57	1900	31.17	17.92	3.11
3800	16.80	21.35	12.62	7.88	0.94	0.58	2000	30.90	17.79	3.28
4000	16.41	21.20	12.06	7.42	0.95	0.58	2100	30.59	17.65	3.15
4200	16.08	21.19	11.19	6.97	0.95	0.58	2200	30.29	17.38	3.25
4400	15.67	21.09	10.40	6.53	0.96	0.58	2300	29.93	17.21	3.14
4600	15.26	21.01	9.53	6.09	0.95	0.58	2400	29.54	16.77	3.24
4800	14.78	21.04	8.73	5.71	0.96	0.58	2500	29.25	16.84	3.24
5000	14.33	21.04	7.99	5.41	0.97	0.58	2600	28.96	16.21	3.36
5200	13.84	21.09	7.31	5.14	0.98	0.58	2700	28.49	16.19	3.28
5500	13.03	21.25	6.45	4.75	0.99	0.58	2800	28.27	15.60	3.29
6000	11.59	21.65	5.40	4.24	1.05	0.57	2900	27.79	15.69	3.22
6500	10.05	22.02	4.75	3.80	1.13	0.57	3000	27.78	15.13	3.36
7000	8.45	22.60	4.22	3.33	1.22	0.57	3100	27.32	14.88	3.28
8000	5.44	23.28	3.72	2.83	1.44	0.56	3200	27.19	14.82	3.32
9000	3.55	22.85	3.57	2.85	1.54	0.54	3300	27.15	14.59	3.37
10000	2.73	21.58	3.72	3.39	1.54	0.48	3400	26.62	14.45	3.45
11000	2.13	21.55	3.82	4.04	1.79	0.44	3600	26.15	13.97	3.44
12000	0.71	21.74	3.74	4.07	2.11	0.44	3800	25.81	13.47	3.40
13000	-1.84	22.49	3.22	3.12	2.27	0.49	4000	25.52	13.11	3.23

Typical Performance Data

Definitions:
Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: Icc = 65mA, Vd=5.03V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
20	20.86	23.69	25.70	41.25	1.05	0.72	20	36.23	18.93	2.42
30	20.83	23.98	24.69	44.12	1.06	0.70	30	35.92	18.92	2.39
50	20.82	24.23	24.69	43.47	1.08	0.68	50	35.92	19.06	2.38
100	20.83	24.10	23.97	36.54	1.07	0.69	100	35.99	18.96	2.44
200	20.78	24.14	23.94	31.21	1.07	0.68	200	36.27	19.10	2.39
400	20.71	24.15	24.18	25.05	1.07	0.67	300	36.09	18.99	2.47
600	20.60	24.04	23.67	21.73	1.07	0.67	400	35.60	19.02	2.50
800	20.49	23.92	22.84	19.05	1.06	0.67	500	35.34	18.91	2.47
1000	20.35	23.78	21.53	17.17	1.05	0.66	600	35.03	18.87	2.47
1200	20.19	23.66	19.94	15.79	1.04	0.66	700	35.11	18.73	2.48
1400	20.02	23.49	18.61	14.53	1.03	0.65	800	35.04	18.53	2.41
1600	19.82	23.35	17.61	13.47	1.01	0.64	900	34.89	18.50	2.45
1800	19.62	23.21	16.49	12.66	1.00	0.63	1000	34.67	18.25	2.45
2000	19.40	23.02	15.62	12.01	0.99	0.63	1100	34.28	18.41	2.43
2200	19.18	22.83	14.87	11.50	0.98	0.62	1200	34.14	18.27	2.53
2400	18.95	22.62	14.34	10.97	0.96	0.61	1300	33.96	18.33	2.49
2600	18.71	22.36	14.00	10.54	0.95	0.61	1400	33.44	18.25	2.60
2800	18.46	22.17	13.86	10.14	0.94	0.61	1500	33.70	18.18	2.54
3000	18.20	22.02	13.53	9.76	0.94	0.60	1600	33.84	18.17	2.61
3200	17.99	21.81	13.28	9.43	0.93	0.60	1700	33.93	18.06	2.51
3400	17.68	21.58	13.04	8.95	0.93	0.61	1800	33.18	18.17	2.66
3600	17.39	21.31	12.54	8.34	0.92	0.61	1900	32.60	18.05	2.46
3800	17.19	21.20	11.99	7.80	0.91	0.61	2000	32.43	18.01	2.62
4000	16.81	21.07	11.42	7.34	0.92	0.62	2100	32.01	17.91	2.50
4200	16.52	21.03	10.70	6.94	0.92	0.62	2200	31.81	17.66	2.57
4400	16.08	20.95	9.87	6.46	0.92	0.62	2300	31.39	17.56	2.48
4600	15.72	20.90	9.15	6.02	0.92	0.62	2400	31.01	17.14	2.57
4800	15.27	20.84	8.44	5.65	0.92	0.62	2500	30.66	17.25	2.59
5000	14.86	20.88	7.79	5.35	0.93	0.62	2600	30.33	16.63	2.66
5200	14.41	20.88	7.11	5.05	0.93	0.63	2700	29.89	16.67	2.61
5500	13.65	21.03	6.28	4.62	0.94	0.62	2800	29.61	16.08	2.61
6000	12.26	21.44	5.12	3.98	0.97	0.62	2900	29.17	16.17	2.50
6500	10.69	21.88	4.39	3.43	1.03	0.62	3000	29.11	15.60	2.69
7000	9.03	22.49	3.79	2.99	1.09	0.62	3100	28.63	15.33	2.61
8000	6.15	23.00	3.41	2.66	1.25	0.60	3200	28.52	15.27	2.63
9000	4.34	22.73	3.32	2.65	1.35	0.58	3300	28.45	15.02	2.65
10000	3.24	21.54	3.22	2.95	1.28	0.54	3400	27.92	14.91	2.74
11000	2.69	21.51	3.35	3.57	1.46	0.49	3600	27.44	14.41	2.72
12000	1.75	21.17	3.53	3.87	1.68	0.46	3800	27.06	13.93	2.66
13000	-0.98	22.07	2.83	2.77	1.73	0.54	4000	26.74	13.59	2.50

Typical Performance Data

Definitions:
Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: Icc = 52mA, Vd=4.95V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
20	20.69	23.74	22.89	36.87	1.06	0.70	20	32.56	17.12	2.38
30	20.66	24.38	22.52	32.25	1.09	0.65	30	32.36	16.96	2.37
50	20.65	23.92	22.85	33.21	1.07	0.69	50	32.35	17.19	2.33
100	20.66	24.02	22.19	31.71	1.07	0.68	100	32.39	16.84	2.38
200	20.61	24.07	22.24	29.59	1.08	0.67	200	32.64	17.14	2.38
400	20.54	23.98	22.58	25.00	1.07	0.67	300	32.58	16.94	2.42
600	20.45	23.89	22.37	21.96	1.07	0.67	400	32.18	17.02	2.44
800	20.33	23.72	21.87	19.39	1.06	0.67	500	32.04	16.93	2.39
1000	20.20	23.63	20.87	17.49	1.05	0.66	600	31.86	16.80	2.45
1200	20.04	23.47	19.51	16.11	1.04	0.66	700	32.00	16.65	2.41
1400	19.87	23.33	18.31	14.83	1.02	0.65	800	32.04	16.29	2.38
1600	19.68	23.19	17.35	13.74	1.01	0.64	900	31.97	16.49	2.37
1800	19.49	23.02	16.24	12.90	1.00	0.64	1000	31.92	16.09	2.42
2000	19.27	22.86	15.38	12.23	0.98	0.63	1100	31.69	16.53	2.38
2200	19.05	22.65	14.63	11.70	0.97	0.62	1200	31.57	16.33	2.47
2400	18.82	22.50	14.09	11.18	0.96	0.61	1300	31.70	16.30	2.45
2600	18.58	22.27	13.75	10.74	0.95	0.61	1400	31.19	16.24	2.53
2800	18.33	22.05	13.59	10.35	0.94	0.60	1500	31.56	16.12	2.49
3000	18.08	21.83	13.30	9.98	0.94	0.60	1600	31.86	16.23	2.58
3200	17.86	21.61	13.06	9.62	0.93	0.60	1700	32.10	16.00	2.45
3400	17.55	21.39	12.85	9.15	0.93	0.60	1800	31.73	16.32	2.61
3600	17.28	21.12	12.38	8.52	0.91	0.61	1900	31.11	16.10	2.40
3800	17.07	21.03	11.86	8.00	0.91	0.61	2000	31.21	16.25	2.58
4000	16.68	20.88	11.35	7.56	0.91	0.61	2100	30.75	16.15	2.46
4200	16.39	20.81	10.65	7.14	0.91	0.61	2200	30.66	15.90	2.52
4400	15.96	20.78	9.81	6.65	0.92	0.61	2300	30.36	16.00	2.42
4600	15.58	20.67	9.10	6.22	0.92	0.62	2400	30.03	15.57	2.53
4800	15.13	20.69	8.40	5.85	0.92	0.62	2500	29.91	15.98	2.54
5000	14.72	20.69	7.76	5.55	0.93	0.62	2600	29.53	15.52	2.60
5200	14.26	20.73	7.10	5.24	0.94	0.62	2700	29.25	15.84	2.56
5500	13.50	20.90	6.26	4.80	0.95	0.61	2800	28.97	15.26	2.53
6000	12.10	21.31	5.11	4.16	0.98	0.61	2900	28.56	15.46	2.47
6500	10.54	21.74	4.39	3.61	1.04	0.61	3000	28.57	14.89	2.63
7000	8.88	22.34	3.81	3.15	1.11	0.61	3100	28.04	14.57	2.54
8000	6.02	22.85	3.44	2.81	1.27	0.59	3200	27.99	14.55	2.55
9000	4.22	22.67	3.34	2.82	1.39	0.56	3300	27.86	14.27	2.59
10000	3.10	21.49	3.24	3.12	1.32	0.53	3400	27.38	14.20	2.69
11000	2.55	21.48	3.37	3.78	1.51	0.47	3600	26.86	13.74	2.66
12000	1.61	21.18	3.54	4.10	1.74	0.45	3800	26.46	13.22	2.59
13000	-1.08	21.91	2.85	2.92	1.77	0.53	4000	26.17	12.90	2.44

Typical Performance Data

Definitions:
Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: Icc = 78mA, Vd=5.11V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
20	20.97	24.30	26.91	35.51	1.07	0.68	20	39.09	20.08	2.47
30	20.94	24.33	25.78	46.65	1.08	0.68	30	38.69	20.19	2.44
50	20.93	24.28	26.06	41.92	1.07	0.68	50	38.59	20.17	2.43
100	20.93	24.30	25.27	36.28	1.07	0.68	100	38.84	20.23	2.50
200	20.88	24.29	25.32	30.92	1.07	0.67	200	38.95	20.29	2.45
400	20.81	24.12	25.26	24.71	1.07	0.68	300	38.50	20.13	2.54
600	20.70	24.11	24.53	21.39	1.07	0.67	400	37.81	20.09	2.56
800	20.59	24.01	23.39	18.78	1.06	0.67	500	37.42	19.92	2.52
1000	20.44	23.88	21.84	16.93	1.05	0.66	600	36.93	19.95	2.53
1200	20.28	23.78	20.15	15.57	1.04	0.65	700	36.80	19.77	2.54
1400	20.11	23.61	18.75	14.34	1.03	0.65	800	36.49	19.61	2.46
1600	19.91	23.48	17.76	13.28	1.02	0.64	900	36.22	19.49	2.49
1800	19.70	23.29	16.62	12.49	1.00	0.64	1000	35.81	19.30	2.50
2000	19.49	23.12	15.76	11.83	0.99	0.63	1100	35.27	19.33	2.49
2200	19.27	22.92	15.00	11.33	0.98	0.62	1200	35.14	19.17	2.58
2400	19.03	22.69	14.43	10.81	0.96	0.62	1300	34.72	19.31	2.56
2600	18.79	22.47	14.16	10.38	0.95	0.61	1400	34.28	19.18	2.64
2800	18.54	22.36	14.01	9.98	0.95	0.60	1500	34.36	19.05	2.59
3000	18.30	22.12	13.69	9.61	0.94	0.60	1600	34.36	18.93	2.67
3200	18.08	21.94	13.42	9.25	0.94	0.60	1700	34.26	18.83	2.57
3400	17.77	21.72	13.17	8.79	0.93	0.60	1800	33.42	18.85	2.71
3600	17.49	21.42	12.66	8.19	0.92	0.61	1900	32.98	18.70	2.51
3800	17.29	21.32	12.09	7.65	0.91	0.62	2000	32.69	18.57	2.71
4000	16.91	21.17	11.50	7.19	0.92	0.62	2100	32.36	18.44	2.56
4200	16.63	21.15	10.78	6.79	0.92	0.62	2200	32.09	18.20	2.64
4400	16.20	21.02	9.90	6.30	0.92	0.62	2300	31.66	18.02	2.53
4600	15.84	21.01	9.18	5.86	0.92	0.63	2400	31.27	17.67	2.63
4800	15.40	20.99	8.47	5.50	0.92	0.63	2500	30.89	17.69	2.63
5000	14.99	20.97	7.81	5.19	0.92	0.63	2600	30.59	17.12	2.74
5200	14.54	20.99	7.13	4.88	0.93	0.63	2700	30.11	17.06	2.68
5500	13.79	21.12	6.29	4.45	0.93	0.63	2800	29.86	16.52	2.68
6000	12.40	21.49	5.12	3.83	0.96	0.63	2900	29.41	16.59	2.62
6500	10.85	21.96	4.39	3.28	1.01	0.63	3000	29.33	16.04	2.76
7000	9.17	22.57	3.78	2.85	1.07	0.63	3100	28.90	15.79	2.66
8000	6.28	23.03	3.40	2.53	1.22	0.61	3200	28.75	15.72	2.70
9000	4.47	22.84	3.30	2.54	1.32	0.59	3300	28.73	15.49	2.73
10000	3.37	21.60	3.22	2.80	1.25	0.55	3400	28.19	15.40	2.83
11000	2.82	21.57	3.34	3.38	1.42	0.50	3600	27.74	14.89	2.79
12000	1.88	21.22	3.51	3.70	1.63	0.47	3800	27.37	14.40	2.76
13000	-0.88	22.13	2.82	2.65	1.67	0.55	4000	27.06	14.07	2.62

Typical Performance Data

Definitions:
Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: Icc = 65mA, Vd=4.60V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
20	20.54	24.14	23.57	33.43	1.09	0.66	20	34.64	18.38	3.33
30	20.51	23.87	22.93	31.41	1.07	0.68	30	34.34	18.44	3.32
50	20.51	23.94	23.25	33.01	1.08	0.68	50	34.22	18.47	3.30
100	20.51	23.97	23.19	32.89	1.08	0.67	100	34.32	18.44	3.39
200	20.46	23.92	23.54	30.51	1.08	0.67	200	34.52	18.56	3.31
400	20.36	23.93	23.08	24.38	1.08	0.66	300	34.14	18.39	3.44
600	20.25	23.85	22.85	21.48	1.07	0.66	400	33.56	18.37	3.42
800	20.11	23.76	22.24	19.01	1.07	0.65	500	33.20	18.19	3.43
1000	19.95	23.65	21.20	17.19	1.06	0.64	600	32.81	18.22	3.42
1200	19.76	23.52	19.89	15.83	1.05	0.63	700	32.79	18.06	3.47
1400	19.57	23.38	18.81	14.58	1.04	0.62	800	32.63	17.83	3.36
1600	19.36	23.24	17.72	13.64	1.03	0.61	900	32.45	17.75	3.44
1800	19.12	23.08	16.55	12.92	1.02	0.60	1000	32.17	17.50	3.43
2000	18.86	22.89	15.65	12.24	1.01	0.59	1100	31.78	17.61	3.42
2200	18.61	22.69	15.04	11.66	0.99	0.58	1200	31.65	17.40	3.51
2400	18.32	22.50	14.48	11.22	0.99	0.57	1300	31.42	17.55	3.47
2600	18.04	22.33	14.13	10.85	0.98	0.57	1400	30.97	17.42	3.59
2800	17.72	22.15	14.02	10.44	0.98	0.55	1500	31.17	17.22	3.56
3000	17.43	21.93	13.90	9.97	0.98	0.55	1600	31.34	17.14	3.66
3200	17.14	21.77	13.87	9.67	0.98	0.54	1700	31.18	16.96	3.51
3400	16.81	21.55	13.60	9.30	0.98	0.54	1800	30.48	17.04	3.66
3600	16.46	21.34	13.44	8.85	0.98	0.54	1900	29.91	16.81	3.50
3800	16.22	21.16	12.81	8.19	0.97	0.55	2000	29.72	16.70	3.65
4000	15.81	21.05	12.34	7.79	0.98	0.54	2100	29.35	16.56	3.56
4200	15.46	20.95	11.36	7.37	0.98	0.55	2200	29.04	16.22	3.61
4400	15.03	20.91	10.53	6.94	0.99	0.55	2300	28.70	16.09	3.53
4600	14.57	20.89	9.65	6.45	1.00	0.55	2400	28.22	15.54	3.64
4800	14.08	20.87	8.86	6.11	1.01	0.55	2500	27.98	15.70	3.63
5000	13.58	20.93	8.05	5.80	1.02	0.54	2600	27.61	14.98	3.73
5200	13.04	21.02	7.35	5.51	1.04	0.54	2700	27.16	15.05	3.68
5500	12.19	21.19	6.57	5.11	1.06	0.53	2800	26.95	14.38	3.68
6000	10.73	21.61	5.61	4.70	1.15	0.52	2900	26.42	14.51	3.60
6500	9.25	21.99	5.09	4.34	1.26	0.51	3000	26.45	13.92	3.74
7000	7.63	22.33	4.60	3.93	1.39	0.51	3100	25.92	13.60	3.69
8000	4.60	23.27	3.99	3.18	1.66	0.52	3200	25.82	13.58	3.69
9000	2.65	22.89	3.73	3.12	1.76	0.50	3300	25.76	13.32	3.77
10000	1.98	21.64	3.89	3.94	1.81	0.43	3400	25.18	13.20	3.85
11000	1.34	21.33	4.17	4.71	2.13	0.39	3600	24.67	12.72	3.83
12000	-0.25	21.74	4.04	4.53	2.56	0.39	3800	24.32	12.17	3.79
13000	-2.75	22.88	3.42	3.57	2.95	0.45	4000	24.07	11.84	3.61

Typical Performance Data

Definitions:
Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: Icc = 52mA, Vd=4.52V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
20	20.31	24.05	21.23	27.71	1.09	0.65	20	31.44	16.91	3.29
30	20.29	23.61	20.95	26.17	1.07	0.69	30	31.22	16.78	3.29
50	20.28	23.84	21.22	27.03	1.08	0.67	50	31.17	16.91	3.26
100	20.29	23.78	21.17	27.43	1.08	0.67	100	31.24	16.82	3.32
200	20.23	23.75	21.47	27.09	1.08	0.67	200	31.50	17.05	3.26
400	20.13	23.70	21.20	23.41	1.08	0.66	300	31.28	16.86	3.37
600	20.03	23.65	21.13	21.20	1.07	0.66	400	30.81	16.91	3.36
800	19.91	23.58	20.85	19.02	1.07	0.65	500	30.57	16.80	3.36
1000	19.74	23.45	20.16	17.35	1.06	0.64	600	30.33	16.73	3.36
1200	19.57	23.30	19.08	16.04	1.05	0.63	700	30.41	16.63	3.39
1400	19.38	23.16	18.20	14.80	1.04	0.62	800	30.41	16.28	3.32
1600	19.16	23.03	17.21	13.86	1.03	0.61	900	30.31	16.38	3.35
1800	18.94	22.87	16.15	13.17	1.01	0.60	1000	30.17	16.05	3.37
2000	18.69	22.68	15.26	12.50	1.00	0.59	1100	29.93	16.32	3.36
2200	18.44	22.50	14.68	11.91	0.99	0.58	1200	29.79	16.12	3.45
2400	18.16	22.30	14.15	11.46	0.98	0.57	1300	29.82	16.17	3.41
2600	17.87	22.08	13.79	11.09	0.97	0.57	1400	29.34	16.12	3.51
2800	17.56	21.93	13.68	10.69	0.97	0.55	1500	29.63	15.96	3.48
3000	17.28	21.69	13.64	10.21	0.97	0.55	1600	30.00	16.02	3.61
3200	16.99	21.50	13.55	9.91	0.97	0.55	1700	30.10	15.80	3.46
3400	16.66	21.27	13.36	9.54	0.97	0.55	1800	29.63	16.03	3.59
3600	16.32	21.06	13.23	9.10	0.97	0.54	1900	29.01	15.81	3.43
3800	16.06	20.93	12.67	8.45	0.96	0.54	2000	28.97	15.82	3.58
4000	15.67	20.80	12.24	8.02	0.97	0.54	2100	28.59	15.74	3.49
4200	15.30	20.72	11.32	7.60	0.98	0.54	2200	28.35	15.33	3.55
4400	14.87	20.67	10.49	7.17	0.99	0.54	2300	28.09	15.39	3.46
4600	14.42	20.65	9.64	6.70	0.99	0.54	2400	27.64	14.71	3.53
4800	13.94	20.66	8.86	6.33	1.01	0.54	2500	27.53	15.09	3.56
5000	13.42	20.71	8.05	6.04	1.02	0.54	2600	27.13	14.30	3.63
5200	12.89	20.81	7.36	5.75	1.04	0.53	2700	26.75	14.50	3.62
5500	12.02	20.99	6.58	5.33	1.07	0.52	2800	26.56	13.79	3.59
6000	10.57	21.43	5.62	4.91	1.16	0.51	2900	26.02	13.99	3.54
6500	9.08	21.79	5.10	4.54	1.27	0.50	3000	26.12	13.36	3.65
7000	7.48	22.16	4.62	4.12	1.41	0.50	3100	25.51	13.02	3.63
8000	4.47	23.11	4.01	3.33	1.69	0.51	3200	25.45	13.04	3.62
9000	2.53	22.76	3.76	3.29	1.80	0.49	3300	25.39	12.75	3.69
10000	1.86	21.55	3.91	4.14	1.85	0.42	3400	24.77	12.65	3.73
11000	1.21	21.22	4.19	4.94	2.18	0.37	3600	24.24	12.18	3.75
12000	-0.37	21.67	4.06	4.74	2.64	0.38	3800	23.95	11.63	3.70
13000	-2.84	22.82	3.44	3.71	3.03	0.44	4000	23.67	11.27	3.54

Typical Performance Data

Definitions:
Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

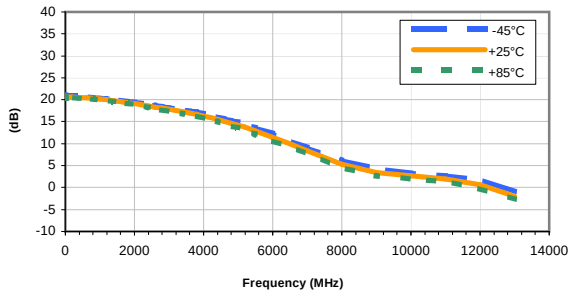
TEST CONDITIONS: Icc = 78mA, Vd=4.68V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
20	20.68	24.02	25.12	38.65	1.07	0.68	20	37.29	19.20	3.38
30	20.65	24.00	24.83	40.31	1.07	0.68	30	36.93	19.25	3.38
50	20.64	24.09	24.78	38.98	1.08	0.67	50	36.74	19.33	3.38
100	20.65	24.13	24.69	37.35	1.08	0.67	100	36.97	19.43	3.46
200	20.58	24.13	25.21	31.86	1.08	0.66	200	36.87	19.42	3.36
400	20.49	24.06	24.44	24.64	1.08	0.66	300	36.08	19.31	3.50
600	20.37	24.00	23.93	21.39	1.08	0.65	400	35.38	19.30	3.46
800	20.24	23.84	23.11	18.83	1.07	0.65	500	34.82	19.09	3.50
1000	20.07	23.78	21.86	17.04	1.06	0.64	600	34.24	19.21	3.48
1200	19.88	23.65	20.29	15.66	1.05	0.63	700	34.02	18.99	3.53
1400	19.68	23.50	19.14	14.40	1.04	0.62	800	33.69	18.79	3.42
1600	19.46	23.38	17.97	13.48	1.03	0.61	900	33.34	18.59	3.51
1800	19.23	23.16	16.77	12.77	1.02	0.61	1000	32.87	18.33	3.49
2000	18.97	23.06	15.84	12.10	1.01	0.59	1100	32.42	18.31	3.51
2200	18.71	22.84	15.23	11.53	1.00	0.58	1200	32.26	18.02	3.56
2400	18.43	22.66	14.68	11.09	0.99	0.57	1300	31.86	18.27	3.58
2600	18.14	22.51	14.29	10.71	0.99	0.56	1400	31.53	18.02	3.67
2800	17.82	22.28	14.18	10.30	0.98	0.56	1500	31.57	17.78	3.62
3000	17.54	22.10	14.11	9.86	0.98	0.55	1600	31.58	17.60	3.73
3200	17.23	21.90	13.99	9.53	0.98	0.55	1700	31.11	17.45	3.60
3400	16.91	21.69	13.73	9.16	0.98	0.54	1800	30.39	17.48	3.73
3600	16.56	21.47	13.54	8.71	0.98	0.54	1900	29.97	17.24	3.56
3800	16.32	21.32	12.88	8.06	0.97	0.55	2000	29.68	17.10	3.71
4000	15.90	21.19	12.35	7.64	0.98	0.55	2100	29.37	16.97	3.63
4200	15.55	21.13	11.37	7.23	0.98	0.55	2200	29.03	16.63	3.73
4400	15.12	21.04	10.51	6.80	0.99	0.55	2300	28.69	16.49	3.59
4600	14.67	21.01	9.64	6.34	1.00	0.55	2400	28.22	15.99	3.70
4800	14.19	21.00	8.84	5.97	1.01	0.55	2500	27.94	16.08	3.72
5000	13.68	21.05	8.03	5.68	1.02	0.55	2600	27.62	15.39	3.82
5200	13.14	21.16	7.35	5.39	1.03	0.54	2700	27.17	15.40	3.76
5500	12.29	21.33	6.56	4.98	1.06	0.54	2800	26.95	14.73	3.76
6000	10.84	21.72	5.60	4.57	1.14	0.53	2900	26.44	14.87	3.70
6500	9.34	22.10	5.07	4.22	1.25	0.52	3000	26.43	14.30	3.85
7000	7.72	22.46	4.58	3.82	1.38	0.52	3100	25.96	14.02	3.78
8000	4.68	23.34	3.96	3.08	1.63	0.52	3200	25.79	13.98	3.80
9000	2.73	22.94	3.71	3.03	1.73	0.51	3300	25.74	13.73	3.84
10000	2.06	21.68	3.87	3.81	1.77	0.44	3400	25.20	13.63	3.94
11000	1.43	21.35	4.16	4.57	2.09	0.39	3600	24.71	13.13	3.93
12000	-0.18	21.80	4.03	4.40	2.53	0.40	3800	24.36	12.59	3.90
13000	-2.71	23.02	3.40	3.47	2.92	0.46	4000	24.03	12.26	3.72

Typical Performance Curves

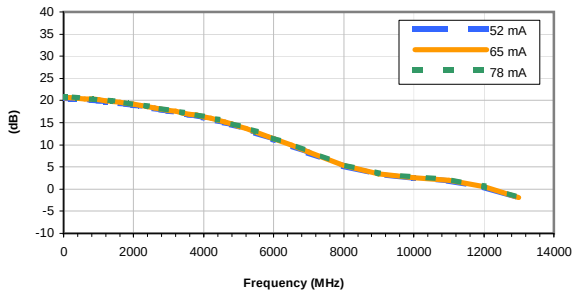
GAIN vs. TEMPERATURE

INPUT POWER = -20dB, CURRENT = 65 mA



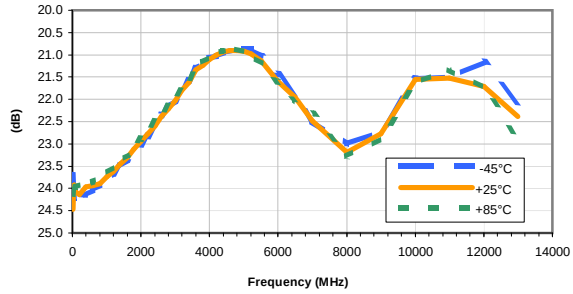
GAIN vs. CURRENT

INPUT POWER = -20dB, Temperature = +25°C



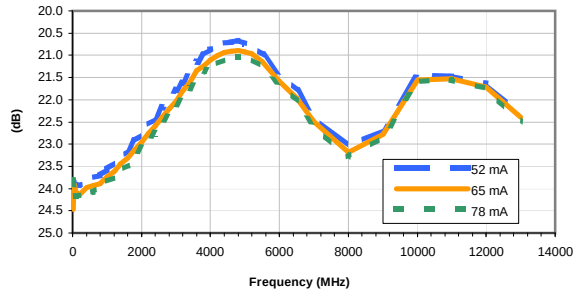
ISOLATION vs. TEMPERATURE

INPUT POWER = -20dB CURRENT = 65 mA



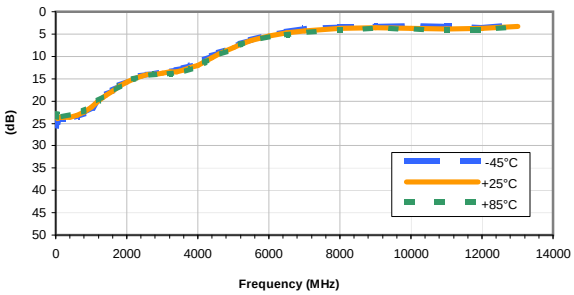
ISOLATION vs. CURRENT

INPUT POWER = -20dB, Temperature = +25°C



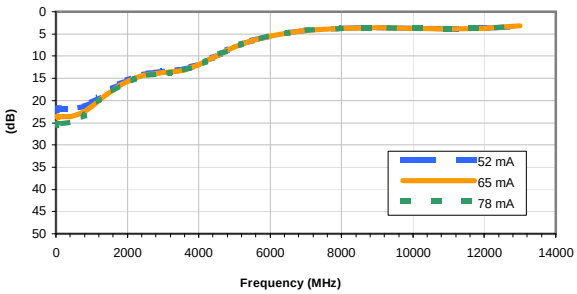
INPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -20dB, CURRENT = 65 mA



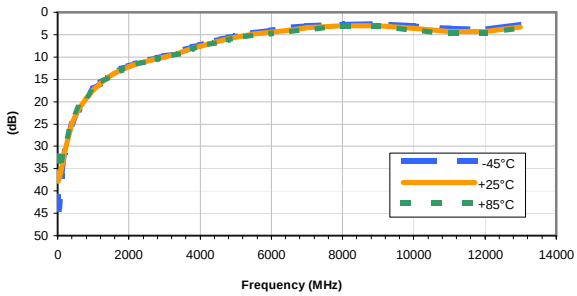
INPUT RETURN LOSS vs. CURRENT

INPUT POWER = -20dB, Temperature = +25°C



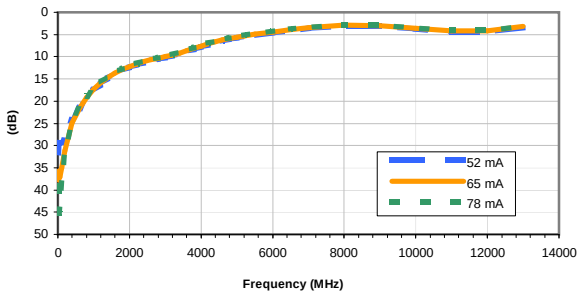
OUTPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -20dB, CURRENT = 65 mA



OUTPUT RETURN LOSS vs. CURRENT

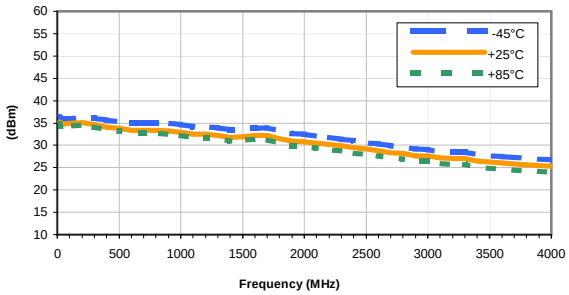
INPUT POWER = -20dB, Temperature = +25°C



Typical Performance Curves

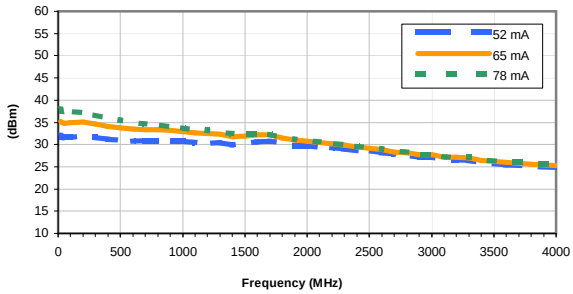
OUTPUT IP3 vs. TEMPERATURE

INPUT POWER = -20dB, CURRENT = 65 mA



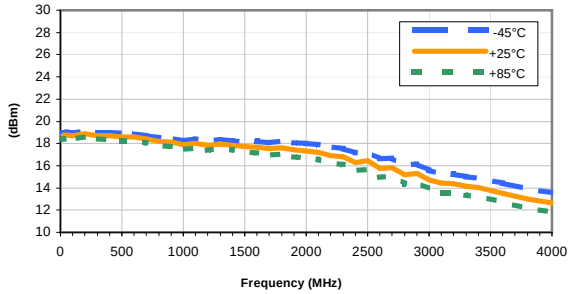
OUTPUT IP-3 vs. CURRENT

INPUT POWER = -20dB, Temperature = +25°C



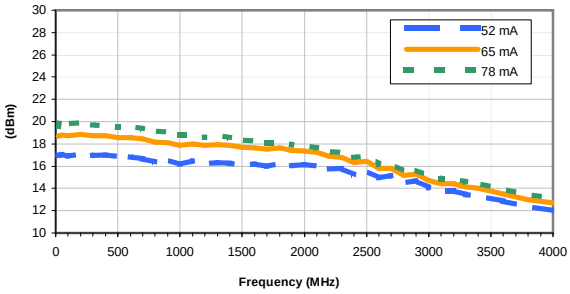
OUTPUT POWER at 1dB Compression vs. TEMPERATURE

CURRENT = 65 mA



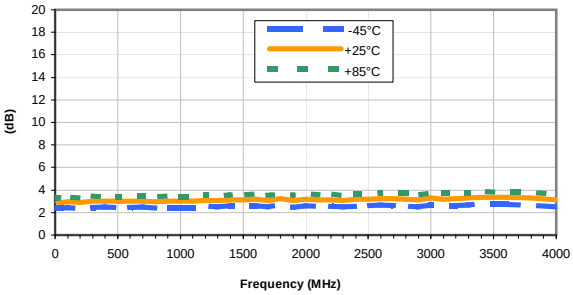
OUTPUT POWER at 1dB Compression vs. CURRENT

Temperature = +25°C



Noise Figure vs. TEMPERATURE

CURRENT = 65 mA



Noise Figure vs. CURRENT

Temperature = +25°C