MMIC Amplifier GALI-51F+

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 = 50mA, Vd = 4.46V @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)
50	17.98	21.95	27.14	32.83	1.10	0.63	50	30.81	15.76	3.47
100	17.97	21.85	26.69	31.53	1.10	0.64	100	30.95	15.88	3.64
200	17.94	21.90	26.23	31.53	1.10	0.63	200	30.98	15.77	3.48
400	17.83	21.93	26.21	29.77	1.11	0.62	300	30.98	15.63	3.78
600	17.68	21.93	25.97	28.14	1.12	0.61	400	30.44	15.89	3.64
800	17.51	21.93	25.09	26.80	1.13	0.60	500	30.40	15.82	3.65
1000	17.34	21.98	24.31	25.65	1.14	0.58	600	30.40	15.66	3.68
1200	17.14	22.01	23.49	24.59	1.15	0.57	700	30.79	15.84	3.57
1400	16.93	21.98	22.33	23.53	1.16	0.55	800	31.08	15.87	3.65
1600	16.72	22.07	21.54	22.57	1.18	0.53	900	31.18	15.81	3.59
1800	16.49	22.07	20.45	21.72	1.19	0.52	1000	31.00	15.80	3.59
2000	16.27	22.10	19.47	21.11	1.21	0.50	1100	30.86	15.56	3.56
2200	16.05	22.15	18.69	20.70	1.22	0.49	1200	30.81	15.18	3.64
2400	15.82	22.23	17.79	20.43	1.25	0.47	1300	30.74	15.30	3.67
2600	15.61	22.28	16.93	20.07	1.26	0.45	1400	30.39	15.23	3.70
2800	15.38	22.34	16.14	19.77	1.29	0.44	1500	30.36	15.17	3.74
3000	15.19	22.41	15.41	19.43	1.31	0.42	1600	30.65	15.20	3.68
3200	14.99	22.43	14.89	19.16	1.32	0.41	1700	31.20	15.39	3.65
3400	14.84	22.52	14.27	18.80	1.34	0.40	1800	31.18	15.23	3.83
3600	14.66	22.59	13.85	18.73	1.37	0.39	1900	30.84	15.35	3.66
3800	14.53	22.57	13.47	18.42	1.37	0.38	2000	30.62	15.35	3.52
4000	14.39	22.68	13.22	18.81	1.40	0.37	2100	30.45	15.25	3.73
4200	14.29	22.68	13.10	18.85	1.41	0.37	2200	30.36	15.34	3.56
4400	14.19	22.68	13.11	19.15	1.43	0.37	2300	30.39	15.48	3.74
4600	14.14	22.71	13.05	19.33	1.44	0.36	2400	30.29	15.48	3.68
5000	14.12	22.81	13.02	20.55	1.46	0.36	2500	30.22	15.47	3.66
5500	14.17	22.68	13.01	22.61	1.44	0.37	2600	30.20	15.41	3.67
6000	14.40	22.41	12.77	24.93	1.37	0.38	2700	30.19	15.38	3.71
6500	14.52	21.87	12.95	20.69	1.30	0.42	2800	30.12	15.38	3.67
7000	14.31	21.36	12.35	15.42	1.25	0.44	2900	30.04	15.36	3.75
7500	13.30	20.96	11.25	11.94	1.27	0.44	3000	29.89	15.31	3.58
8000	11.78	20.51	10.73	9.55	1.35	0.43	3100	29.67	15.26	3.87
9000	8.08	19.00	9.24	7.29	1.51	0.41	3200	29.52	15.33	3.63
10000	5.04	16.77	8.00	6.73	1.52	0.40	3300	29.48	15.38	3.93
11000	3.13	14.08	8.29	7.21	1.40	0.37	3400	29.30	15.31	3.76
12000	2.05	11.11	9.19	8.37	1.24	0.37	3500	29.08	15.07	3.70
13000	1.15	7.63	10.92	11.35	1.11	0.45	3600	28.74	14.98	3.87
14000	0.05	4.95	8.80	10.04	1.00	0.61	3700	28.52	14.89	3.70
15000	-3.06	5.43	4.22	4.80	1.00	0.68	3800	28.38	14.78	3.90
16000	-5.91	6.90	3.06	3.42	1.12	0.68	4000	28.27	14.52	3.74

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 = 40mA, Vd = 4.39V @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)
50	17.73	21.68	23.57	48.45	1.10	0.64	50	26.99	12.91	3.41
100	17.70	21.64	23.43	49.46	1.10	0.64	100	27.14	13.10	3.58
200	17.67	21.67	23.05	42.76	1.10	0.63	200	27.16	12.97	3.47
400	17.54	21.68	23.24	35.15	1.11	0.62	300	27.12	12.82	3.65
600	17.42	21.66	23.24	31.67	1.12	0.61	400	26.73	13.13	3.58
800	17.25	21.71	22.76	29.31	1.13	0.60	500	26.74	13.02	3.58
1000	17.09	21.73	22.12	27.48	1.14	0.58	600	26.73	12.91	3.62
1200	16.90	21.73	21.47	26.05	1.15	0.57	700	27.10	13.00	3.53
1400	16.70	21.79	20.61	24.46	1.16	0.55	800	27.40	13.08	3.63
1600	16.49	21.78	20.00	23.17	1.17	0.54	900	27.47	13.13	3.53
1800	16.28	21.88	19.02	22.08	1.19	0.52	1000	27.32	13.06	3.55
2000	16.06	21.89	18.14	21.22	1.20	0.50	1100	27.17	12.80	3.53
2200	15.83	21.94	17.51	20.64	1.22	0.48	1200	27.14	12.48	3.58
2400	15.62	22.02	16.68	20.18	1.24	0.47	1300	27.08	12.59	3.56
2600	15.41	22.05	15.90	19.74	1.26	0.45	1400	26.83	12.57	3.64
2800	15.19	22.15	15.20	19.38	1.28	0.44	1500	26.83	12.53	3.68
3000	14.99	22.21	14.53	18.92	1.30	0.42	1600	27.10	12.51	3.62
3200	14.80	22.27	14.04	18.61	1.32	0.41	1700	27.54	12.66	3.61
3400	14.64	22.33	13.47	18.19	1.33	0.40	1800	27.53	12.54	3.78
3600	14.46	22.39	13.12	18.08	1.36	0.39	1900	27.28	12.70	3.62
3800	14.34	22.37	12.78	17.78	1.36	0.39	2000	27.13	12.70	3.46
4000	14.21	22.52	12.55	18.13	1.39	0.38	2100	27.04	12.63	3.69
4200	14.10	22.53	12.38	18.11	1.40	0.37	2200	27.03	12.72	3.50
4400	14.00	22.50	12.45	18.44	1.42	0.37	2300	27.15	12.85	3.70
4600	13.97	22.48	12.37	18.73	1.42	0.37	2400	27.23	12.87	3.58
5000	13.94	22.61	12.36	19.91	1.44	0.36	2500	27.31	12.95	3.61
5500	14.00	22.48	12.31	22.14	1.42	0.37	2600	27.37	12.88	3.60
6000	14.21	22.21	12.12	25.51	1.36	0.39	2700	27.47	12.88	3.68
6500	14.33	21.68	12.22	22.05	1.29	0.42	2800	27.48	12.84	3.60
7000	14.07	21.16	11.74	16.24	1.25	0.44	2900	27.49	12.83	3.69
7500	13.08	20.77	10.81	12.42	1.27	0.44	3000	27.45	12.86	3.51
8000	11.56	20.35	10.44	9.90	1.36	0.42	3100	27.34	12.88	3.83
9000	7.90	18.88	9.14	7.53	1.53	0.40	3200	27.35	13.06	3.55
10000	4.89	16.75	7.94	6.92	1.54	0.39	3300	27.40	13.11	3.86
11000	2.98	14.11	8.22	7.39	1.43	0.35	3400	27.35	13.03	3.66
12000	1.89	11.17	9.06	8.50	1.26	0.36	3500	27.08	12.78	3.65
13000	1.02	7.67	10.72	11.38	1.11	0.44	3600	26.76	12.76	3.80
14000	-0.08	4.97	8.68	10.07	1.01	0.60	3700	26.45	12.79	3.66
15000	-3.16	5.43	4.20	4.82	1.01	0.68	3800	26.32	12.75	3.83
16000	-5.98	6.88	3.06	3.43	1.12	0.68	4000	26.38	12.69	3.68

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 = 60mA, Vd = 4.52V @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)
50	18.15	21.96	30.30	28.36	1.09	0.64	50	33.49	17.59	3.53
100	18.14	22.07	29.96	27.78	1.10	0.63	100	33.65	17.68	3.72
200	18.10	22.06	28.90	27.85	1.10	0.63	200	33.71	17.61	3.54
400	17.98	22.04	28.57	26.60	1.11	0.62	300	33.65	17.54	3.85
600	17.84	22.07	28.02	25.62	1.12	0.61	400	33.06	17.71	3.67
800	17.66	22.05	26.91	24.82	1.12	0.60	500	33.00	17.60	3.71
1000	17.49	22.12	25.74	24.03	1.14	0.58	600	32.93	17.50	3.68
1200	17.28	22.12	24.71	23.39	1.15	0.57	700	33.37	17.58	3.64
1400	17.07	22.16	23.52	22.61	1.16	0.55	800	33.63	17.60	3.71
1600	16.87	22.19	22.55	21.88	1.18	0.54	900	33.74	17.52	3.64
1800	16.62	22.21	21.45	21.25	1.19	0.52	1000	33.56	17.56	3.63
2000	16.41	22.27	20.31	20.85	1.21	0.50	1100	33.40	17.37	3.63
2200	16.18	22.31	19.50	20.53	1.23	0.48	1200	33.31	17.11	3.68
2400	15.95	22.36	18.52	20.36	1.25	0.47	1300	33.20	17.18	3.66
2600	15.74	22.41	17.60	20.06	1.27	0.45	1400	32.80	17.13	3.76
2800	15.50	22.48	16.83	19.87	1.29	0.43	1500	32.74	17.08	3.81
3000	15.31	22.51	16.05	19.60	1.31	0.42	1600	33.07	17.11	3.75
3200	15.11	22.59	15.45	19.36	1.33	0.41	1700	33.68	17.19	3.68
3400	14.96	22.64	14.82	19.05	1.35	0.40	1800	33.55	17.10	3.90
3600	14.77	22.72	14.41	19.03	1.38	0.39	1900	33.12	17.19	3.71
3800	14.65	22.67	13.95	18.72	1.38	0.38	2000	32.88	17.19	3.58
4000	14.50	22.81	13.75	19.10	1.41	0.37	2100	32.61	17.13	3.78
4200	14.40	22.81	13.59	19.16	1.42	0.37	2200	32.39	17.14	3.63
4400	14.31	22.83	13.60	19.43	1.44	0.36	2300	32.30	17.20	3.79
4600	14.25	22.81	13.55	19.63	1.44	0.36	2400	32.07	17.15	3.77
5000	14.24	22.92	13.52	20.82	1.46	0.36	2500	31.87	17.10	3.70
5500	14.30	22.79	13.53	22.59	1.44	0.37	2600	31.68	17.09	3.73
6000	14.52	22.53	13.27	24.14	1.38	0.38	2700	31.58	17.03	3.77
6500	14.68	22.00	13.49	19.94	1.30	0.42	2800	31.50	16.99	3.73
7000	14.49	21.50	12.81	14.97	1.25	0.44	2900	31.32	16.95	3.78
7500	13.50	21.07	11.60	11.65	1.26	0.44	3000	31.09	16.85	3.63
8000	11.99	20.60	10.94	9.32	1.34	0.44	3100	30.80	16.67	3.91
9000	8.27	19.02	9.32	7.12	1.49	0.42	3200	30.52	16.69	3.69
10000	5.18	16.79	8.05	6.59	1.50	0.41	3300	30.51	16.69	3.98
11000	3.26	14.06	8.34	7.09	1.39	0.38	3400	30.26	16.58	3.81
12000	2.16	11.07	9.31	8.27	1.23	0.38	3500	30.04	16.36	3.76
13000	1.26	7.58	11.09	11.33	1.10	0.46	3600	29.80	16.23	3.93
14000	0.13	4.94	8.91	10.04	1.00	0.62	3700	29.54	16.07	3.75
15000	-2.98	5.43	4.25	4.80	1.00	0.68	3800	29.41	15.86	3.97
16000	-5.86	6.89	3.07	3.40	1.11	0.68	4000	29.26	15.38	3.81

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 = 50mA, Vd = 4.69V @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)
50	18.09	21.91	26.15	33.35	1.10	0.64	50	31.42	15.61	3.01
100	18.08	21.86	25.14	34.44	1.09	0.65	100	31.55	15.73	3.16
200	18.05	21.87	24.05	36.74	1.09	0.64	200	31.49	15.58	3.01
400	17.93	21.94	26.71	28.59	1.10	0.63	300	31.59	15.48	3.26
600	17.80	21.93	26.19	27.47	1.11	0.62	400	31.17	15.84	3.12
800	17.64	21.94	25.64	25.96	1.12	0.61	500	31.20	15.74	3.11
1000	17.47	21.93	24.67	25.52	1.13	0.60	600	31.17	15.60	3.18
1200	17.29	21.95	24.24	24.22	1.14	0.58	700	31.57	15.73	3.06
1400	17.10	22.00	22.65	23.45	1.15	0.56	800	31.91	15.74	3.15
1600	16.88	22.01	21.86	22.53	1.16	0.55	900	31.95	15.69	3.05
1800	16.66	22.05	20.72	21.85	1.18	0.53	1000	31.82	15.71	3.05
2000	16.47	22.10	20.28	21.11	1.19	0.51	1100	31.71	15.44	3.02
2200	16.24	22.15	19.76	20.41	1.21	0.50	1200	31.67	15.11	3.08
2400	16.01	22.17	18.79	20.12	1.23	0.48	1300	31.62	15.25	3.06
2600	15.81	22.19	17.88	19.68	1.24	0.47	1400	31.35	15.20	3.13
2800	15.58	22.28	16.94	19.57	1.27	0.45	1500	31.31	15.11	3.18
3000	15.39	22.34	16.05	19.47	1.28	0.44	1600	31.58	15.11	3.13
3200	15.20	22.36	15.21	19.55	1.30	0.42	1700	32.13	15.31	3.09
3400	15.06	22.43	14.86	19.17	1.32	0.41	1800	32.10	15.19	3.26
3600	14.86	22.50	14.62	18.94	1.34	0.40	1900	31.83	15.28	3.09
3800	14.75	22.49	14.32	18.51	1.35	0.40	2000	31.73	15.34	2.96
4000	14.62	22.62	14.01	19.08	1.38	0.39	2100	31.63	15.21	3.15
4200	14.53	22.59	13.91	19.25	1.38	0.38	2200	31.58	15.39	2.99
4400	14.43	22.61	13.76	19.57	1.40	0.38	2300	31.62	15.48	3.17
4600	14.36	22.64	13.54	19.56	1.41	0.37	2400	31.58	15.51	3.09
5000	14.32	22.74	13.40	20.26	1.43	0.37	2500	31.49	15.57	3.09
5500	14.43	22.62	13.64	20.73	1.40	0.38	2600	31.67	15.53	3.07
6000	14.73	22.39	13.62	24.72	1.35	0.40	2700	31.50	15.46	3.14
6500	14.98	21.77	14.05	19.90	1.25	0.44	2800	31.48	15.43	3.05
7000	14.90	21.33	12.75	14.44	1.19	0.47	2900	31.45	15.45	3.16
7500	14.11	20.85	11.33	11.36	1.18	0.48	3000	31.28	15.46	3.06
8000	12.81	20.39	10.96	9.38	1.23	0.47	3100	31.17	15.42	3.26
9000	9.20	18.89	9.39	7.04	1.37	0.46	3200	30.98	15.44	3.05
10000	5.82	16.93	7.57	5.85	1.38	0.45	3300	31.04	15.52	3.32
11000	3.86	14.19	8.08	6.51	1.29	0.40	3400	30.89	15.53	3.12
12000	3.01	10.95	9.34	8.61	1.15	0.42	3500	30.72	15.33	3.09
13000	1.81	7.72	9.85	9.53	1.03	0.51	3600	30.45	15.26	3.20
14000	0.78	4.81	10.13	10.06	0.95	0.62	3700	30.11	15.21	3.11
15000	-1.99	4.75	3.92	4.86	0.93	0.77	3800	29.80	15.13	3.24
16000	-6.52	7.70	2.09	2.29	1.00	0.77	4000	29.77	15.03	3.13

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 = 40mA, Vd = 4.61V @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)
50	17.85	21.64	23.44	55.81	1.09	0.65	50	27.43	12.77	2.97
100	17.84	21.76	22.40	43.69	1.10	0.64	100	27.55	12.85	3.10
200	17.81	21.73	21.68	39.90	1.10	0.64	200	27.50	12.76	2.98
400	17.70	21.72	23.72	34.59	1.10	0.63	300	27.54	12.67	3.21
600	17.57	21.72	23.65	31.04	1.11	0.62	400	27.25	13.02	3.10
800	17.43	21.75	23.21	28.40	1.12	0.61	500	27.30	12.91	3.06
1000	17.26	21.71	22.59	27.23	1.12	0.60	600	27.29	12.81	3.14
1200	17.07	21.75	22.40	25.81	1.14	0.58	700	27.70	12.91	3.00
1400	16.89	21.77	21.19	24.68	1.15	0.56	800	27.97	12.90	3.11
1600	16.68	21.80	20.48	23.39	1.16	0.55	900	28.07	12.87	2.99
1800	16.47	21.86	19.56	22.33	1.18	0.53	1000	27.94	12.93	3.04
2000	16.28	21.90	18.97	21.35	1.19	0.51	1100	27.78	12.65	2.98
2200	16.05	21.96	18.55	20.55	1.21	0.50	1200	27.75	12.32	3.04
2400	15.83	21.96	17.74	20.07	1.22	0.48	1300	27.71	12.48	3.02
2600	15.62	21.98	16.90	19.56	1.23	0.47	1400	27.49	12.38	3.10
2800	15.40	22.11	16.09	19.32	1.26	0.45	1500	27.49	12.40	3.12
3000	15.22	22.17	15.22	19.09	1.28	0.44	1600	27.71	12.40	3.08
3200	15.03	22.18	14.49	19.09	1.29	0.43	1700	28.12	12.46	3.05
3400	14.89	22.26	14.11	18.71	1.31	0.42	1800	28.14	12.45	3.21
3600	14.71	22.32	13.89	18.45	1.33	0.40	1900	27.97	12.59	3.06
3800	14.59	22.31	13.63	18.03	1.34	0.40	2000	27.86	12.57	2.92
4000	14.47	22.42	13.38	18.54	1.36	0.39	2100	27.78	12.53	3.10
4200	14.37	22.47	13.22	18.73	1.38	0.38	2200	27.82	12.62	2.92
4400	14.28	22.45	13.06	19.05	1.39	0.38	2300	27.94	12.77	3.13
4600	14.21	22.43	12.94	19.10	1.39	0.38	2400	28.07	12.85	3.10
5000	14.17	22.57	12.79	19.80	1.41	0.37	2500	28.17	12.91	3.04
5500	14.27	22.43	12.97	20.44	1.39	0.38	2600	28.42	12.83	3.03
6000	14.57	22.20	12.97	24.91	1.34	0.41	2700	28.39	12.74	3.09
6500	14.82	21.57	13.34	20.94	1.24	0.45	2800	28.42	12.82	3.01
7000	14.70	21.15	12.07	15.06	1.19	0.47	2900	28.45	12.80	3.11
7500	13.90	20.69	10.92	11.78	1.18	0.48	3000	28.46	12.85	3.06
8000	12.59	20.26	10.65	9.71	1.24	0.46	3100	28.43	12.89	3.22
9000	9.01	18.78	9.28	7.24	1.38	0.45	3200	28.52	12.96	2.96
10000	5.68	16.93	7.53	6.01	1.40	0.44	3300	28.64	13.03	3.27
11000	3.74	14.20	8.02	6.66	1.30	0.39	3400	28.59	13.05	3.06
12000	2.89	11.00	9.20	8.75	1.16	0.41	3500	28.44	12.80	3.04
13000	1.70	7.77	9.68	9.58	1.04	0.50	3600	28.07	12.77	3.14
14000	0.69	4.83	9.98	10.05	0.95	0.61	3700	27.70	12.77	3.05
15000	-2.06	4.77	3.89	4.87	0.93	0.76	3800	27.50	12.70	3.18
16000	-6.59	7.72	2.08	2.30	1.00	0.77	4000	27.53	12.70	3.08

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 = 60mA, Vd = 4.75V @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)
50	18.22	21.84	28.64	29.03	1.08	0.66	50	34.24	17.67	3.07
100	18.22	21.97	27.02	29.62	1.09	0.65	100	34.41	17.76	3.22
200	18.18	22.09	25.78	31.22	1.10	0.64	200	34.44	17.64	3.05
400	18.07	22.04	28.91	25.92	1.10	0.63	300	34.48	17.58	3.30
600	17.94	22.04	28.10	25.35	1.11	0.62	400	33.96	17.84	3.17
800	17.78	22.05	27.31	24.36	1.12	0.61	500	33.93	17.76	3.19
1000	17.61	22.05	26.07	24.12	1.12	0.60	600	33.91	17.63	3.19
1200	17.42	22.08	25.45	23.05	1.14	0.58	700	34.31	17.69	3.12
1400	17.21	22.11	23.65	22.52	1.15	0.56	800	34.72	17.74	3.20
1600	17.01	22.12	22.80	21.80	1.16	0.55	900	34.77	17.68	3.11
1800	16.78	22.20	21.62	21.35	1.18	0.53	1000	34.60	17.69	3.09
2000	16.57	22.19	21.12	20.79	1.19	0.52	1100	34.49	17.47	3.07
2200	16.35	22.25	20.60	20.16	1.21	0.50	1200	34.46	17.16	3.15
2400	16.13	22.25	19.56	19.97	1.23	0.48	1300	34.32	17.32	3.12
2600	15.92	22.33	18.56	19.62	1.25	0.47	1400	34.02	17.24	3.19
2800	15.68	22.42	17.59	19.64	1.27	0.45	1500	33.99	17.16	3.22
3000	15.49	22.46	16.65	19.59	1.29	0.43	1600	34.27	17.19	3.17
3200	15.30	22.51	15.74	19.76	1.31	0.42	1700	34.86	17.29	3.15
3400	15.16	22.55	15.40	19.37	1.32	0.41	1800	34.86	17.20	3.32
3600	14.97	22.60	15.14	19.15	1.35	0.40	1900	34.56	17.31	3.14
3800	14.86	22.62	14.82	18.72	1.36	0.40	2000	34.34	17.36	3.03
4000	14.71	22.72	14.51	19.33	1.39	0.39	2100	34.15	17.24	3.19
4200	14.62	22.73	14.39	19.45	1.40	0.38	2200	33.99	17.35	3.05
4400	14.53	22.71	14.24	19.77	1.40	0.38	2300	33.86	17.41	3.20
4600	14.46	22.76	14.01	19.73	1.42	0.37	2400	33.74	17.41	3.15
5000	14.43	22.87	13.86	20.44	1.43	0.37	2500	33.46	17.42	3.12
5500	14.51	22.73	14.14	20.75	1.41	0.38	2600	33.53	17.36	3.11
6000	14.84	22.49	14.15	24.29	1.35	0.40	2700	33.25	17.31	3.18
6500	15.10	21.87	14.65	19.35	1.26	0.44	2800	33.22	17.28	3.11
7000	15.05	21.41	13.25	14.11	1.19	0.48	2900	33.00	17.30	3.20
7500	14.28	20.97	11.65	11.11	1.18	0.48	3000	32.78	17.24	3.15
8000	13.00	20.49	11.20	9.17	1.22	0.48	3100	32.59	17.09	3.32
9000	9.36	18.93	9.48	6.89	1.35	0.46	3200	32.39	17.11	3.14
10000	5.96	16.94	7.60	5.73	1.36	0.46	3300	32.36	17.14	3.36
11000	3.98	14.16	8.14	6.41	1.27	0.41	3400	32.08	17.12	3.17
12000	3.13	10.92	9.48	8.52	1.14	0.43	3500	31.86	16.91	3.15
13000	1.90	7.69	10.00	9.50	1.03	0.52	3600	31.64	16.82	3.28
14000	0.84	4.81	10.28	10.06	0.95	0.63	3700	31.21	16.72	3.17
15000	-1.91	4.74	3.96	4.85	0.93	0.77	3800	31.02	16.55	3.30
16000	-6.45	7.69	2.10	2.29	0.99	0.77	4000	30.92	16.21	3.20

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 = 50mA, Vd = 4.27V @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)
50	17.87	21.94	26.87	35.09	1.11	0.62	50	30.55	15.83	3.87
100	17.84	21.84	27.54	31.12	1.10	0.63	100	30.69	15.98	4.05
200	17.81	21.77	28.80	29.31	1.10	0.63	200	30.83	15.90	3.90
400	17.68	21.83	25.84	29.92	1.11	0.62	300	30.75	15.73	4.19
600	17.54	21.82	24.76	29.48	1.12	0.61	400	30.15	15.98	4.05
800	17.37	21.84	23.73	28.08	1.13	0.59	500	30.06	15.85	4.09
1000	17.19	21.85	22.75	26.95	1.14	0.58	600	30.03	15.72	4.09
1200	16.98	21.91	22.02	25.63	1.15	0.56	700	30.38	15.84	4.04
1400	16.77	21.95	21.31	24.21	1.17	0.55	800	30.65	15.86	4.11
1600	16.55	21.98	20.57	22.90	1.18	0.53	900	30.66	15.78	4.05
1800	16.32	22.06	19.72	21.87	1.20	0.51	1000	30.48	15.83	4.03
2000	16.10	22.05	18.76	21.18	1.21	0.49	1100	30.31	15.56	4.03
2200	15.87	22.13	17.91	20.78	1.24	0.48	1200	30.24	15.22	4.09
2400	15.64	22.17	16.99	20.42	1.25	0.46	1300	30.14	15.31	4.08
2600	15.41	22.25	16.13	20.00	1.28	0.44	1400	29.83	15.28	4.16
2800	15.17	22.33	15.46	19.65	1.30	0.42	1500	29.80	15.19	4.22
3000	14.98	22.37	14.79	19.17	1.32	0.41	1600	30.10	15.20	4.17
3200	14.75	22.43	14.20	18.70	1.34	0.40	1700	30.66	15.38	4.14
3400	14.59	22.54	13.58	18.26	1.36	0.39	1800	30.52	15.21	4.32
3600	14.40	22.59	13.16	18.18	1.39	0.38	1900	30.17	15.32	4.18
3800	14.27	22.62	12.67	17.92	1.40	0.37	2000	29.96	15.31	3.99
4000	14.12	22.74	12.41	18.29	1.43	0.36	2100	29.79	15.28	4.23
4200	14.01	22.73	12.27	18.62	1.44	0.36	2200	29.66	15.28	4.02
4400	13.93	22.71	12.29	19.17	1.45	0.36	2300	29.54	15.44	4.23
4600	13.87	22.74	12.34	19.67	1.47	0.35	2400	29.47	15.42	4.17
5000	13.85	22.82	12.36	21.04	1.48	0.35	2500	29.23	15.37	4.16
5500	13.87	22.69	12.32	23.43	1.46	0.35	2600	29.29	15.32	4.19
6000	13.97	22.41	11.93	25.32	1.41	0.36	2700	29.00	15.27	4.23
6500	13.92	21.89	11.98	21.56	1.35	0.39	2800	28.96	15.24	4.18
7000	13.50	21.39	11.78	16.73	1.33	0.40	2900	28.88	15.22	4.24
7500	12.33	20.97	11.11	12.85	1.39	0.40	3000	28.71	15.13	4.09
8000	10.68	20.57	10.56	9.93	1.50	0.39	3100	28.47	14.98	4.42
9000	6.96	19.02	9.13	7.32	1.67	0.37	3200	28.30	15.06	4.14
10000	4.18	16.65	8.11	7.43	1.65	0.35	3300	28.23	15.09	4.45
11000	2.41	13.91	8.46	8.11	1.53	0.33	3400	28.10	14.98	4.29
12000	1.06	11.22	8.93	8.08	1.35	0.35	3500	27.86	14.68	4.22
13000	0.28	7.73	11.06	11.57	1.19	0.39	3600	27.62	14.53	4.41
14000	-0.65	5.02	8.51	10.70	1.07	0.58	3700	27.39	14.42	4.24
15000	-4.25	6.27	3.98	4.30	1.08	0.64	3800	27.20	14.26	4.47
16000	-5.75	6.51	3.98	4.49	1.22	0.59	4000	26.94	13.92	4.31

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 = 40mA, Vd = 4.20V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability	
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta
50	17.58	21.50	23.24	39.73	1.10	0.64
100	17.55	21.54	23.76	52.29	1.10	0.63
200	17.51	21.54	24.33	41.51	1.11	0.63
400	17.37	21.64	22.62	33.01	1.12	0.61
600	17.25	21.58	22.15	31.05	1.12	0.61
800	17.08	21.60	21.33	29.03	1.13	0.59
1000	16.90	21.62	20.70	27.51	1.14	0.58
1200	16.71	21.67	20.18	26.11	1.15	0.56
1400	16.52	21.66	19.56	24.50	1.16	0.55
1600	16.31	21.73	19.01	23.08	1.18	0.53
1800	16.08	21.77	18.30	21.86	1.19	0.51
2000	15.86	21.82	17.41	21.00	1.21	0.49
2200	15.62	21.88	16.68	20.45	1.23	0.48
2400	15.40	21.96	15.94	19.98	1.25	0.46
2600	15.19	22.00	15.17	19.51	1.27	0.44
2800	14.96	22.08	14.55	19.15	1.29	0.43
3000	14.74	22.15	13.90	18.54	1.31	0.41
3200	14.55	22.24	13.42	18.07	1.33	0.40
3400	14.38	22.31	12.80	17.58	1.35	0.39
3600	14.18	22.41	12.40	17.41	1.38	0.38
3800	14.05	22.42	11.99	17.13	1.39	0.37
4000	13.92	22.49	11.75	17.51	1.41	0.37
4200	13.80	22.49	11.62	17.73	1.42	0.36
4400	13.71	22.49	11.64	18.26	1.44	0.36
4600	13.68	22.50	11.73	18.82	1.45	0.36
5000	13.65	22.61	11.74	20.15	1.47	0.35
5500	13.67	22.47	11.65	22.78	1.45	0.35
6000	13.77	22.18	11.35	25.93	1.40	0.37
6500	13.71	21.67	11.40	23.23	1.34	0.39
7000	13.25	21.17	11.25	17.76	1.33	0.40
7500	12.11	20.76	10.74	13.38	1.39	0.39
8000	10.47	20.38	10.32	10.30	1.50	0.38
9000	6.80	18.90	9.06	7.53	1.68	0.37
10000	4.05	16.62	8.07	7.65	1.67	0.34
11000	2.28	13.95	8.38	8.30	1.55	0.32
12000	0.93	11.29	8.83	8.19	1.37	0.33
13000	0.16	7.78	10.88	11.55	1.20	0.38
14000	-0.75	5.04	8.42	10.73	1.07	0.58
15000	-4.35	6.28	3.97	4.30	1.09	0.64
16000	-5.81	6.52	3.98	4.49	1.23	0.59

FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dBm)	(dBm)	(dB)
50	26.94	13.17	3.83
100	27.11	13.32	3.98
200	27.20	13.25	3.87
300	27.12	13.14	4.11
400	26.61	13.36	4.03
500	26.58	13.21	4.03
600	26.56	13.12	4.06
700	26.92	13.20	3.96
800	27.19	13.24	4.07
900	27.22	13.18	4.00
1000	27.09	13.20	4.00
1100	26.89	12.92	3.98
1200	26.86	12.59	4.05
1300	26.79	12.68	4.02
1400	26.56	12.67	4.14
1500	26.56	12.63	4.16
1600	26.82	12.67	4.09
1700	27.31	12.82	4.09
1800	27.29	12.71	4.27
1900	27.02	12.85	4.11
2000	26.86	12.88	3.95
2100	26.76	12.66	4.20
2200	26.75	12.78	3.97
2300	26.82	12.96	4.20
2400	26.87	13.02	4.10
2500	26.82	12.98	4.10
2600	27.04	12.96	4.12
2700	26.79	12.94	4.18
2800	26.85	12.92	4.08
2900	26.80	12.96	4.20
3000	26.74	12.91	4.01
3100	26.66	12.88	4.37
3200	26.60	13.05	4.08
3300	26.61	13.06	4.41
3400	26.51	13.02	4.21
3500	26.26	12.74	4.15
3600	25.96	12.69	4.36
3700	25.74	12.64	4.17
3800	25.57	12.60	4.40
4000	25.54	12.46	4.23

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 = 60mA, Vd = 4.33V @Temperature = +85degC

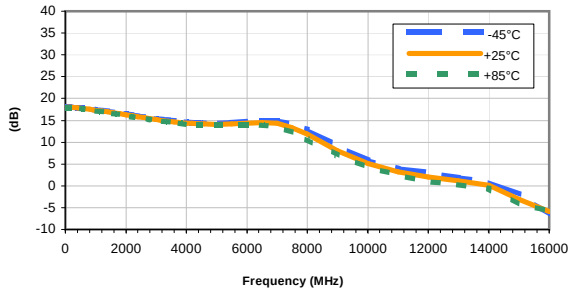
FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability	
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta
50	18.04	21.85	30.22	29.06	1.09	0.64
100	18.04	21.96	31.09	27.00	1.10	0.64
200	17.99	21.99	32.64	25.90	1.10	0.63
400	17.85	22.01	28.29	26.79	1.11	0.62
600	17.71	21.99	27.01	26.77	1.12	0.61
800	17.53	22.02	25.47	26.10	1.13	0.59
1000	17.34	22.03	24.29	25.55	1.14	0.58
1200	17.14	22.06	23.42	24.49	1.15	0.56
1400	16.92	22.08	22.49	23.44	1.17	0.55
1600	16.71	22.13	21.72	22.36	1.18	0.53
1800	16.47	22.19	20.72	21.53	1.20	0.51
2000	16.26	22.24	19.60	21.04	1.22	0.49
2200	16.01	22.27	18.73	20.70	1.24	0.48
2400	15.77	22.34	17.75	20.47	1.26	0.46
2600	15.56	22.39	16.84	20.13	1.28	0.44
2800	15.31	22.47	16.11	19.84	1.31	0.42
3000	15.09	22.51	15.38	19.41	1.33	0.41
3200	14.89	22.62	14.78	18.99	1.35	0.40
3400	14.73	22.65	14.08	18.62	1.37	0.39
3600	14.52	22.71	13.64	18.57	1.39	0.38
3800	14.39	22.76	13.13	18.33	1.41	0.37
4000	14.25	22.85	12.86	18.75	1.44	0.36
4200	14.15	22.86	12.70	19.04	1.45	0.36
4400	14.05	22.84	12.75	19.63	1.46	0.36
4600	14.00	22.87	12.80	20.10	1.48	0.35
5000	13.96	22.93	12.82	21.40	1.49	0.35
5500	14.02	22.84	12.75	23.46	1.47	0.35
6000	14.11	22.53	12.39	24.54	1.41	0.37
6500	14.09	22.03	12.40	20.66	1.35	0.39
7000	13.67	21.51	12.15	16.18	1.33	0.40
7500	12.52	21.06	11.38	12.51	1.38	0.40
8000	10.86	20.66	10.74	9.71	1.49	0.39
9000	7.11	19.09	9.18	7.16	1.65	0.38
10000	4.30	16.66	8.14	7.28	1.63	0.36
11000	2.52	13.89	8.50	7.98	1.51	0.34
12000	1.15	11.17	8.99	8.00	1.33	0.36
13000	0.37	7.69	11.20	11.56	1.18	0.40
14000	-0.58	5.02	8.58	10.68	1.07	0.59
15000	-4.20	6.28	3.99	4.29	1.08	0.65
16000	-5.71	6.51	3.99	4.48	1.22	0.59

FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dBm)	(dBm)	(dB)
50	33.16	17.51	3.91
100	33.34	17.57	4.13
200	33.43	17.55	3.93
300	33.34	17.43	4.25
400	32.70	17.60	4.11
500	32.50	17.46	4.18
600	32.40	17.35	4.14
700	32.78	17.39	4.09
800	32.98	17.43	4.16
900	33.01	17.33	4.13
1000	32.74	17.35	4.09
1100	32.59	17.23	4.10
1200	32.47	16.98	4.16
1300	32.33	17.03	4.13
1400	31.97	17.00	4.23
1500	31.86	16.97	4.28
1600	32.24	16.96	4.22
1700	32.75	17.03	4.18
1800	32.49	16.92	4.38
1900	32.05	16.96	4.22
2000	31.83	17.01	4.06
2100	31.49	16.93	4.29
2200	31.25	16.91	4.10
2300	31.00	16.92	4.31
2400	30.71	16.83	4.22
2500	30.40	16.74	4.21
2600	30.31	16.74	4.26
2700	29.96	16.65	4.28
2800	29.90	16.57	4.26
2900	29.74	16.50	4.32
3000	29.48	16.38	4.15
3100	29.28	16.17	4.45
3200	28.99	16.15	4.22
3300	28.86	16.12	4.50
3400	28.73	15.98	4.35
3500	28.46	15.69	4.30
3600	28.29	15.52	4.49
3700	28.03	15.30	4.31
3800	27.79	15.15	4.56
4000	27.48	14.70	4.39

Typical Performance Curves

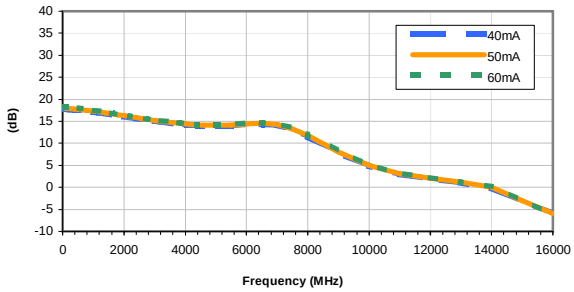
GAIN vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 50mA



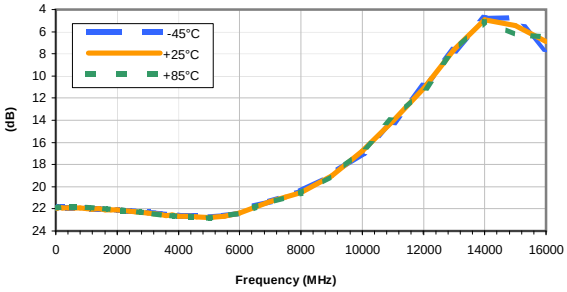
GAIN vs. CURRENT

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



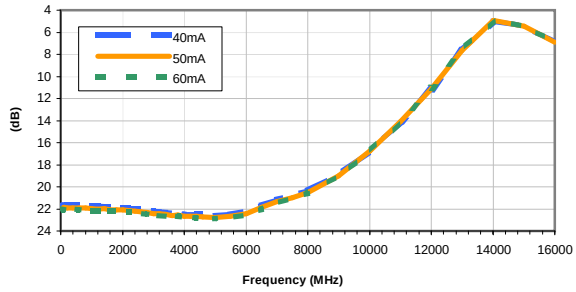
ISOLATION vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 50mA



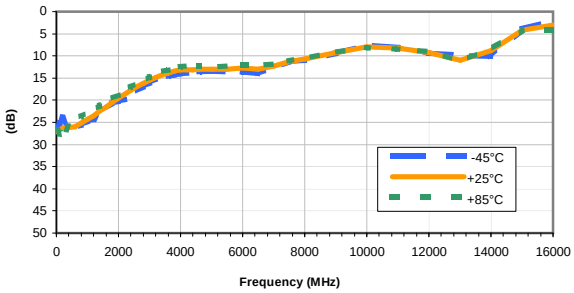
ISOLATION vs. CURRENT

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



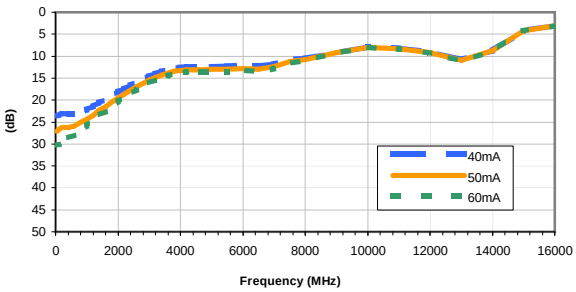
INPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 50mA



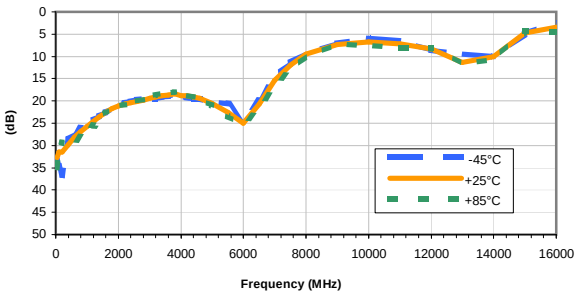
INPUT RETURN LOSS vs. CURRENT

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



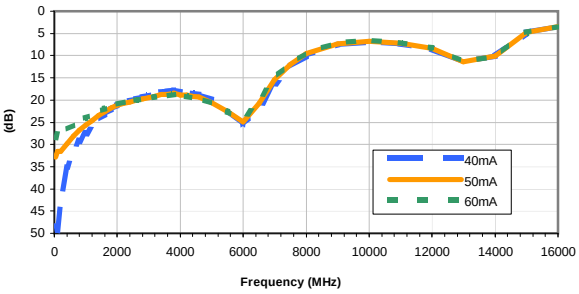
OUTPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 50mA



OUTPUT RETURN LOSS vs. CURRENT

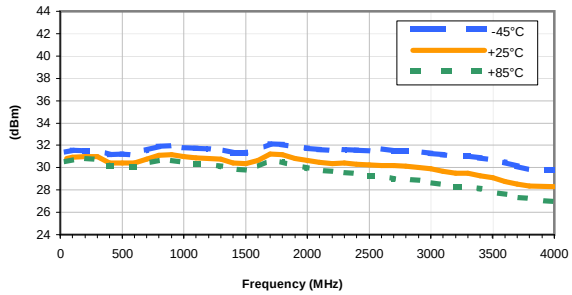
INPUT POWER = -20dBm, Temperature = +25°C



Typical Performance Curves

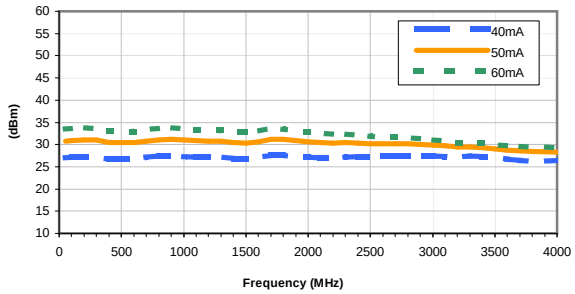
OUTPUT IP3 vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 50mA



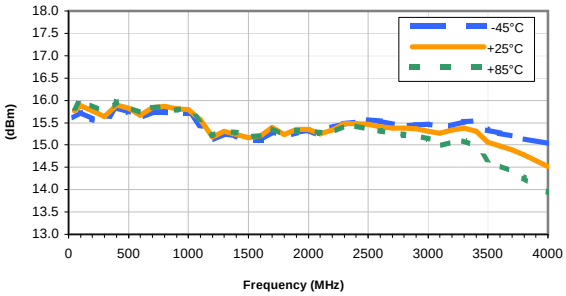
OUTPUT IP3 vs. CURRENT

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



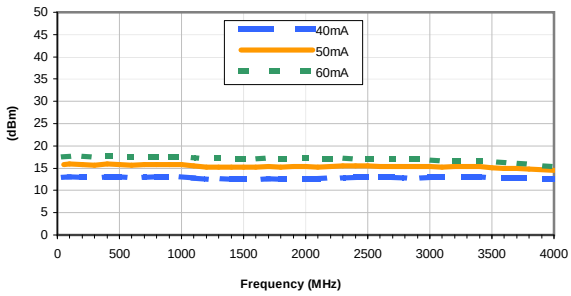
OUTPUT POWER at 1dB Compression vs. TEMPERATURE

CURRENT = 50mA



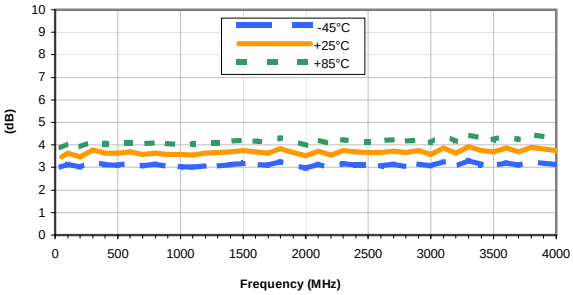
OUTPUT POWER at 1dB Compression vs. CURRENT

Temperature = +25°C



Noise Figure vs. TEMPERATURE

CURRENT = 50mA



Noise Figure vs. CURRENT

Temperature = +25°C