MMIC Amplifier GALI-19+

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 = 40mA, Vd = 3.64V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	12.34	17.02	32.79	31.60	1.15	0.58	26.76	11.59	4.09
100	12.31	17.08	33.28	31.38	1.15	0.58	26.63	11.32	4.25
200	12.28	17.11	32.78	31.53	1.16	0.57	26.80	11.78	4.17
300	12.25	17.13	32.66	31.51	1.16	0.57	26.64	11.31	4.22
400	12.21	17.13	32.05	31.47	1.16	0.57	26.18	11.71	4.20
500	12.17	17.15	31.57	31.03	1.17	0.56	26.07	11.53	4.22
600	12.13	17.15	30.85	30.71	1.17	0.56	25.94	11.73	4.18
700	12.10	17.17	30.31	30.54	1.17	0.56	26.16	11.60	4.21
800	12.05	17.19	29.75	30.52	1.18	0.55	26.34	11.50	4.21
1000	11.97	17.23	28.53	30.60	1.19	0.55	26.19	11.09	4.20
1200	11.89	17.28	27.42	31.12	1.20	0.54	26.08	10.69	4.21
1400	11.79	17.35	26.27	31.56	1.21	0.53	25.80	10.87	4.21
1600	11.71	17.41	25.25	32.66	1.22	0.52	26.31	10.71	4.20
1800	11.62	17.48	24.15	34.85	1.23	0.51	26.79	11.14	4.15
2000	11.55	17.56	23.02	39.20	1.24	0.50	26.50	11.48	4.18
2200	11.46	17.66	22.03	49.53	1.26	0.49	26.54	11.60	4.14
2400	11.38	17.74	21.02	42.18	1.27	0.48	26.72	11.59	4.24
2600	11.28	17.86	20.21	34.63	1.29	0.47	26.81	11.41	4.22
2800	11.19	17.99	19.42	30.75	1.31	0.46	26.63	11.12	4.24
3000	11.10	18.09	18.40	27.62	1.33	0.45	26.83	10.95	4.18
3200	11.02	18.22	17.70	25.11	1.35	0.44	27.25	10.91	4.25
3400	10.94	18.35	16.99	23.44	1.37	0.43	27.21	10.86	4.30
3600	10.87	18.48	16.34	21.87	1.38	0.43	26.70	10.53	4.38
3800	10.79	18.59	15.85	20.73	1.40	0.42	26.26	10.53	4.43
4000	10.74	18.74	15.46	19.52	1.42	0.42	26.19	10.92	4.47
4200	10.67	18.81	15.21	18.87	1.44	0.41	26.31	11.15	4.46
4400	10.63	18.95	15.05	18.22	1.46	0.41	26.27	11.04	4.49
4600	10.60	19.06	14.86	17.60	1.47	0.40	25.81	10.96	4.62
4800	10.60	19.16	14.74	17.10	1.48	0.40	25.60	11.07	4.63
5000	10.58	19.24	15.02	16.79	1.50	0.39	25.55	11.18	4.54
5200	10.58	19.28	15.26	16.54	1.50	0.39	26.05	10.94	4.62
5400	10.64	19.35	15.43	16.43	1.50	0.39	26.02	10.88	4.61
5600	10.68	19.33	16.03	16.45	1.50	0.39	25.93	10.66	4.69
5800	10.78	19.38	16.58	16.25	1.49	0.39	25.87	11.06	4.71
6000	10.87	19.40	17.38	16.20	1.48	0.39	25.72	11.26	4.71
6200	11.00	19.32	18.60	16.07	1.46	0.40	25.74	11.60	4.72
6400	11.11	19.30	19.85	15.97	1.44	0.40	25.74	11.96	4.76
6600	11.25	19.16	21.96	15.64	1.41	0.41	25.72	12.29	4.83
6800	11.41	19.06	23.45	15.11	1.38	0.43	25.50	12.31	4.80
7000	11.57	18.93	23.81	14.56	1.35	0.44	25.05	12.32	4.76

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 = 32mA, Vd = 3.56V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	12.01	16.82	26.80	47.52	1.16	0.57	21.73	7.67	4.06
100	11.97	16.84	26.99	52.26	1.16	0.57	21.67	7.59	4.16
200	11.95	16.87	26.73	54.27	1.16	0.57	21.79	8.07	4.14
300	11.93	16.89	26.71	57.12	1.17	0.56	21.63	7.51	4.19
400	11.88	16.89	26.57	52.20	1.17	0.56	21.32	7.97	4.20
500	11.84	16.90	26.42	54.40	1.17	0.56	21.23	7.70	4.18
600	11.79	16.93	26.15	52.01	1.18	0.55	21.11	8.04	4.17
700	11.77	16.94	25.87	48.32	1.18	0.55	21.31	7.74	4.19
800	11.72	16.95	25.59	47.99	1.18	0.55	21.48	7.68	4.19
1000	11.65	17.01	24.88	49.70	1.19	0.54	21.31	7.26	4.18
1200	11.58	17.05	24.25	47.20	1.20	0.53	21.15	6.83	4.17
1400	11.47	17.10	23.56	56.62	1.21	0.52	20.90	7.00	4.19
1600	11.39	17.18	22.72	58.14	1.23	0.51	21.32	6.95	4.19
1800	11.30	17.26	21.83	43.03	1.24	0.50	21.64	7.37	4.12
2000	11.24	17.34	20.88	38.44	1.25	0.50	21.45	7.79	4.12
2200	11.15	17.43	20.11	33.60	1.26	0.49	21.50	7.87	4.09
2400	11.07	17.53	19.20	30.53	1.28	0.48	21.71	8.04	4.20
2600	10.99	17.63	18.56	28.22	1.29	0.47	21.78	7.72	4.19
2800	10.89	17.76	17.87	25.85	1.31	0.46	21.70	7.45	4.19
3000	10.80	17.86	17.00	23.95	1.33	0.45	21.90	7.30	4.15
3200	10.75	18.00	16.38	22.57	1.34	0.44	22.28	7.17	4.20
3400	10.66	18.12	15.73	21.14	1.36	0.44	22.26	7.11	4.29
3600	10.59	18.24	15.20	19.98	1.38	0.43	21.73	6.84	4.33
3800	10.51	18.36	14.71	19.01	1.40	0.42	21.49	6.86	4.39
4000	10.48	18.53	14.34	18.20	1.42	0.42	21.56	7.38	4.41
4200	10.40	18.57	14.13	17.70	1.43	0.42	21.92	7.66	4.39
4400	10.36	18.70	14.01	17.09	1.45	0.41	21.72	7.51	4.47
4600	10.35	18.82	13.81	16.61	1.46	0.41	21.32	7.43	4.57
4800	10.35	18.95	13.65	16.21	1.48	0.40	21.13	7.52	4.60
5000	10.33	18.99	13.93	15.97	1.48	0.40	21.26	7.64	4.51
5200	10.33	19.01	14.18	15.79	1.49	0.40	21.74	7.67	4.59
5400	10.40	19.11	14.26	15.69	1.49	0.40	21.72	7.20	4.56
5600	10.45	19.08	14.78	15.82	1.48	0.40	21.73	6.89	4.66
5800	10.56	19.13	15.23	15.70	1.48	0.40	21.86	7.52	4.64
6000	10.64	19.12	15.90	15.70	1.47	0.40	21.92	7.72	4.68
6200	10.78	19.06	16.88	15.63	1.45	0.41	22.03	8.26	4.65
6400	10.91	19.05	17.73	15.63	1.43	0.41	22.18	8.87	4.68
6600	11.04	18.89	19.32	15.40	1.40	0.42	22.35	9.39	4.73
6800	11.21	18.77	20.45	14.95	1.37	0.43	22.35	9.56	4.71
7000	11.37	18.67	20.92	14.48	1.34	0.45	22.09	9.68	4.71

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 = 48mA, Vd = 3.71V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	12.51	17.22	39.58	27.83	1.15	0.58	30.10	13.90	4.16
100	12.48	17.21	41.24	27.73	1.15	0.58	30.12	13.80	4.31
200	12.45	17.24	39.89	27.68	1.15	0.58	30.47	13.89	4.21
300	12.41	17.24	38.36	27.68	1.16	0.57	30.16	13.77	4.27
400	12.38	17.26	36.62	27.58	1.16	0.57	29.66	13.96	4.25
500	12.35	17.27	35.57	27.54	1.16	0.57	29.31	13.83	4.28
600	12.31	17.28	34.38	27.42	1.17	0.56	29.19	13.96	4.22
700	12.26	17.30	33.47	27.26	1.17	0.56	29.49	13.88	4.26
800	12.22	17.31	32.31	27.19	1.17	0.56	29.69	13.76	4.23
1000	12.13	17.36	30.83	27.42	1.18	0.55	29.53	13.52	4.22
1200	12.05	17.41	29.23	27.51	1.19	0.54	29.51	13.17	4.25
1400	11.97	17.47	27.90	28.09	1.20	0.53	29.23	13.30	4.27
1600	11.87	17.54	26.65	28.80	1.22	0.52	29.92	13.25	4.24
1800	11.79	17.62	25.54	30.41	1.23	0.51	30.40	13.51	4.19
2000	11.70	17.69	24.29	32.47	1.24	0.50	30.17	13.76	4.22
2200	11.61	17.79	23.26	36.53	1.26	0.49	30.10	13.82	4.20
2400	11.52	17.88	22.14	46.02	1.27	0.48	30.24	13.86	4.30
2600	11.43	17.99	21.20	44.18	1.29	0.47	29.89	13.78	4.29
2800	11.34	18.13	20.35	35.06	1.31	0.46	29.78	13.53	4.30
3000	11.26	18.22	19.33	30.27	1.33	0.45	29.90	13.42	4.24
3200	11.16	18.35	18.54	27.16	1.35	0.44	29.89	13.28	4.32
3400	11.09	18.49	17.77	24.96	1.37	0.43	29.85	13.21	4.37
3600	11.01	18.60	17.11	23.06	1.39	0.43	29.04	12.99	4.43
3800	10.93	18.73	16.64	21.67	1.41	0.42	28.28	12.95	4.48
4000	10.86	18.88	16.17	20.37	1.43	0.41	27.98	13.16	4.51
4200	10.80	18.95	15.90	19.65	1.44	0.41	28.19	13.44	4.51
4400	10.75	19.09	15.76	18.86	1.46	0.40	28.29	13.37	4.56
4600	10.72	19.20	15.61	18.17	1.48	0.40	27.92	13.40	4.65
4800	10.71	19.33	15.47	17.64	1.50	0.39	27.72	13.51	4.69
5000	10.69	19.40	15.75	17.27	1.51	0.39	27.38	13.49	4.61
5200	10.70	19.43	16.07	16.98	1.51	0.39	27.56	13.35	4.69
5400	10.74	19.50	16.30	16.84	1.51	0.39	27.54	13.34	4.68
5600	10.77	19.50	16.98	16.87	1.51	0.38	27.29	13.09	4.74
5800	10.86	19.55	17.54	16.64	1.51	0.38	26.91	13.42	4.79
6000	10.96	19.56	18.44	16.56	1.50	0.39	26.37	13.33	4.79
6200	11.08	19.49	20.00	16.39	1.47	0.39	26.20	13.40	4.79
6400	11.19	19.49	21.51	16.27	1.46	0.39	25.99	13.59	4.83
6600	11.33	19.33	24.15	15.89	1.43	0.41	25.83	13.77	4.91
6800	11.50	19.22	26.27	15.32	1.39	0.42	25.53	13.69	4.88
7000	11.65	19.10	25.96	14.74	1.36	0.43	25.17	13.66	4.89

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 = 3.82V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	12.30	17.01	29.17	37.35	1.15	0.58	27.35	11.21	3.65
100	12.26	16.99	28.24	41.42	1.15	0.58	27.28	10.97	3.79
200	12.25	17.03	26.86	46.66	1.15	0.58	27.45	11.39	3.70
300	12.22	17.04	28.74	36.84	1.16	0.57	27.40	11.03	3.75
400	12.20	17.05	30.37	33.33	1.16	0.57	27.02	11.50	3.68
500	12.16	17.06	30.11	33.46	1.16	0.57	26.91	11.24	3.66
600	12.12	17.06	29.56	33.34	1.16	0.57	26.70	11.51	3.64
700	12.08	17.07	29.00	32.50	1.17	0.56	27.01	11.34	3.63
800	12.05	17.10	28.00	33.57	1.17	0.56	27.22	11.23	3.65
1000	11.97	17.12	27.22	33.25	1.18	0.55	26.98	10.83	3.64
1200	11.90	17.18	26.85	32.82	1.19	0.54	26.88	10.49	3.62
1400	11.82	17.22	26.35	32.83	1.20	0.54	26.69	10.69	3.65
1600	11.73	17.28	25.13	36.19	1.21	0.53	27.19	10.52	3.62
1800	11.64	17.35	24.03	41.75	1.22	0.52	27.54	10.95	3.56
2000	11.57	17.43	22.87	40.82	1.23	0.51	27.45	11.29	3.57
2200	11.48	17.52	22.12	42.47	1.25	0.50	27.49	11.45	3.55
2400	11.41	17.61	21.04	42.30	1.26	0.49	27.68	11.48	3.62
2600	11.32	17.73	20.09	34.87	1.28	0.48	27.67	11.35	3.63
2800	11.22	17.83	19.22	30.38	1.29	0.47	27.53	11.05	3.61
3000	11.14	17.93	18.26	26.51	1.31	0.46	27.81	10.88	3.55
3200	11.07	18.07	17.81	24.47	1.33	0.45	28.24	10.78	3.64
3400	10.99	18.17	17.32	22.94	1.34	0.45	28.43	10.74	3.71
3600	10.92	18.29	16.85	21.82	1.36	0.44	27.80	10.48	3.69
3800	10.85	18.39	16.41	20.82	1.38	0.43	27.31	10.34	3.75
4000	10.80	18.55	16.16	19.98	1.40	0.42	27.06	10.70	3.80
4200	10.74	18.61	15.92	19.53	1.41	0.42	27.39	10.98	3.81
4400	10.68	18.71	15.88	18.83	1.43	0.41	27.42	10.90	3.83
4600	10.65	18.82	15.62	18.09	1.44	0.41	26.98	10.82	3.91
4800	10.64	18.95	15.24	17.13	1.45	0.41	26.70	10.98	3.89
5000	10.62	19.03	15.43	16.60	1.47	0.40	26.65	11.11	3.89
5200	10.60	19.06	15.36	16.08	1.47	0.40	27.01	10.99	3.98
5400	10.64	19.16	15.28	15.66	1.47	0.40	27.17	10.83	3.93
5600	10.67	19.14	15.54	15.60	1.47	0.40	27.33	10.65	3.99
5800	10.76	19.22	15.78	15.44	1.46	0.40	27.22	10.97	4.03
6000	10.86	19.22	16.86	15.95	1.46	0.40	27.09	10.99	4.04
6200	11.00	19.11	19.04	16.08	1.43	0.40	27.08	11.42	4.05
6400	11.12	19.10	21.03	16.15	1.42	0.41	27.13	11.99	4.08
6600	11.26	18.92	25.05	15.96	1.39	0.42	27.03	12.46	4.17
6800	11.44	18.84	29.01	15.66	1.36	0.43	27.02	12.58	4.11
7000	11.62	18.67	27.96	14.85	1.32	0.45	26.62	12.66	4.07

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 = 32mA, Vd = 3.73V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	11.99	16.81	25.13	40.12	1.16	0.57	21.89	7.33	3.59
100	11.96	16.79	24.53	37.70	1.16	0.57	21.78	7.13	3.71
200	11.94	16.84	23.76	33.70	1.16	0.57	21.88	7.59	3.68
300	11.92	16.83	24.88	39.23	1.16	0.57	21.81	7.14	3.72
400	11.90	16.83	25.98	49.96	1.16	0.57	21.58	7.60	3.67
500	11.88	16.85	25.73	59.88	1.17	0.56	21.49	7.28	3.61
600	11.83	16.86	25.68	59.86	1.17	0.56	21.38	7.56	3.62
700	11.78	16.88	25.42	53.93	1.17	0.56	21.57	7.49	3.61
800	11.77	16.88	24.57	56.93	1.18	0.56	21.74	7.38	3.63
1000	11.67	16.93	24.21	51.56	1.19	0.55	21.52	6.97	3.61
1200	11.61	16.97	23.95	70.87	1.19	0.54	21.39	6.55	3.60
1400	11.53	17.02	23.71	56.69	1.20	0.53	21.22	6.83	3.60
1600	11.46	17.07	22.63	43.11	1.21	0.52	21.59	6.57	3.58
1800	11.37	17.15	21.90	37.88	1.22	0.51	21.85	7.03	3.51
2000	11.30	17.23	21.03	35.68	1.24	0.51	21.73	7.51	3.53
2200	11.20	17.34	20.39	34.44	1.25	0.50	21.83	7.64	3.51
2400	11.14	17.40	19.48	31.67	1.26	0.49	22.05	7.73	3.60
2600	11.05	17.51	18.63	28.18	1.28	0.48	22.01	7.58	3.57
2800	10.97	17.62	17.77	26.15	1.29	0.47	21.92	7.32	3.57
3000	10.88	17.74	16.98	23.63	1.31	0.46	22.13	7.03	3.51
3200	10.81	17.86	16.59	22.02	1.33	0.45	22.50	7.04	3.58
3400	10.75	17.95	16.09	20.94	1.34	0.45	22.58	6.96	3.67
3600	10.67	18.10	15.72	20.14	1.36	0.44	22.20	6.66	3.64
3800	10.60	18.19	15.30	19.42	1.37	0.43	21.79	6.41	3.73
4000	10.56	18.34	15.07	18.63	1.39	0.43	21.77	7.00	3.72
4200	10.51	18.38	14.86	18.24	1.40	0.42	22.20	7.32	3.76
4400	10.46	18.50	14.78	17.75	1.42	0.42	22.17	7.22	3.79
4600	10.41	18.63	14.59	17.15	1.44	0.41	21.74	7.15	3.88
4800	10.42	18.74	14.23	16.27	1.45	0.41	21.51	7.14	3.87
5000	10.41	18.81	14.34	15.87	1.45	0.41	21.61	7.44	3.86
5200	10.38	18.85	14.33	15.45	1.46	0.41	22.13	7.34	3.93
5400	10.43	18.95	14.24	15.11	1.46	0.41	22.10	7.23	3.91
5600	10.45	18.93	14.52	15.07	1.46	0.41	22.24	6.77	3.97
5800	10.55	18.99	14.68	14.96	1.45	0.41	22.40	7.14	3.97
6000	10.67	18.98	15.65	15.47	1.44	0.41	22.53	7.30	3.98
6200	10.80	18.88	17.54	15.70	1.43	0.41	22.70	7.74	3.97
6400	10.94	18.84	19.04	15.83	1.41	0.42	22.93	8.53	4.02
6600	11.10	18.67	21.71	15.77	1.37	0.43	22.98	9.20	4.10
6800	11.27	18.59	24.29	15.52	1.35	0.44	23.04	9.34	4.06
7000	11.45	18.44	24.92	14.81	1.31	0.46	22.79	9.55	4.01

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 = 48mA, Vd = 3.89V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	12.46	17.10	32.88	31.37	1.14	0.59	31.06	13.98	3.75
100	12.43	17.12	31.23	33.04	1.15	0.58	31.06	13.82	3.89
200	12.42	17.14	29.58	35.53	1.15	0.58	31.26	14.03	3.75
300	12.39	17.15	32.01	31.29	1.15	0.58	31.21	13.69	3.80
400	12.36	17.17	34.45	29.25	1.16	0.57	30.75	14.08	3.71
500	12.32	17.18	33.48	29.08	1.16	0.57	30.30	13.93	3.70
600	12.28	17.18	32.51	29.08	1.16	0.57	30.24	14.11	3.68
700	12.25	17.20	31.54	28.74	1.16	0.56	30.58	13.88	3.70
800	12.21	17.21	30.27	29.21	1.17	0.56	30.83	13.82	3.69
1000	12.13	17.25	29.19	29.22	1.18	0.55	30.70	13.44	3.67
1200	12.06	17.29	28.85	29.11	1.18	0.55	30.64	13.16	3.67
1400	11.97	17.35	27.99	28.98	1.19	0.54	30.37	13.29	3.69
1600	11.89	17.40	26.64	31.06	1.20	0.53	31.31	13.21	3.67
1800	11.80	17.48	25.37	33.74	1.22	0.52	31.69	13.56	3.58
2000	11.72	17.55	24.06	34.46	1.23	0.51	31.37	13.85	3.64
2200	11.63	17.66	23.15	36.34	1.25	0.50	31.58	13.92	3.59
2400	11.55	17.73	22.04	41.10	1.26	0.49	31.69	14.02	3.68
2600	11.46	17.83	21.07	42.15	1.27	0.48	31.32	13.89	3.68
2800	11.37	17.96	20.08	34.52	1.29	0.47	31.28	13.53	3.67
3000	11.28	18.06	19.10	28.83	1.31	0.46	31.55	13.44	3.62
3200	11.20	18.18	18.66	26.10	1.33	0.45	31.66	13.28	3.69
3400	11.13	18.28	18.10	24.34	1.34	0.44	32.07	13.30	3.75
3600	11.05	18.42	17.60	22.97	1.36	0.44	31.31	13.00	3.74
3800	10.97	18.53	17.13	21.82	1.38	0.43	30.34	12.93	3.80
4000	10.92	18.67	16.90	20.81	1.40	0.42	29.84	13.15	3.86
4200	10.86	18.73	16.68	20.29	1.41	0.42	30.14	13.46	3.89
4400	10.80	18.85	16.60	19.55	1.43	0.41	30.38	13.40	3.88
4600	10.76	18.97	16.36	18.68	1.45	0.41	30.06	13.36	3.96
4800	10.76	19.10	15.98	17.65	1.46	0.40	29.78	13.43	3.96
5000	10.73	19.16	16.15	17.07	1.47	0.40	29.67	13.60	3.95
5200	10.71	19.21	16.11	16.50	1.48	0.40	29.74	13.50	4.03
5400	10.74	19.32	16.01	16.04	1.49	0.40	29.71	13.46	4.01
5600	10.76	19.29	16.37	15.94	1.48	0.40	29.76	13.17	4.05
5800	10.85	19.36	16.59	15.74	1.48	0.40	29.41	13.48	4.11
6000	10.95	19.37	17.79	16.25	1.47	0.39	28.98	13.47	4.07
6200	11.08	19.27	20.24	16.34	1.45	0.40	28.66	13.71	4.13
6400	11.19	19.26	22.67	16.38	1.43	0.40	28.63	14.03	4.14
6600	11.33	19.09	27.93	16.17	1.40	0.41	28.39	14.30	4.26
6800	11.51	19.01	34.27	15.83	1.37	0.42	28.11	14.30	4.20
7000	11.69	18.85	28.59	14.99	1.33	0.44	27.63	14.29	4.16

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 = 3.48V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	12.25	17.08	34.53	30.54	1.16	0.57	26.45	11.86	4.56
100	12.23	17.06	37.04	28.80	1.16	0.57	26.44	11.66	4.74
200	12.20	17.10	42.57	27.44	1.16	0.57	26.71	12.02	4.68
300	12.16	17.09	36.99	28.42	1.16	0.57	26.49	11.62	4.77
400	12.12	17.11	32.62	30.61	1.17	0.56	25.98	12.01	4.71
500	12.10	17.12	30.83	31.06	1.17	0.56	25.70	11.70	4.73
600	12.05	17.14	30.27	30.79	1.17	0.56	25.59	12.04	4.70
700	12.01	17.16	29.61	30.68	1.18	0.55	25.79	11.80	4.75
800	11.96	17.17	28.78	31.74	1.18	0.55	25.97	11.68	4.72
1000	11.88	17.22	27.41	32.37	1.19	0.54	25.82	11.32	4.72
1200	11.78	17.28	26.46	33.39	1.20	0.53	25.69	10.93	4.74
1400	11.71	17.33	25.46	33.84	1.21	0.52	25.46	11.11	4.75
1600	11.61	17.40	24.62	35.01	1.23	0.51	26.01	11.04	4.76
1800	11.53	17.50	23.55	36.61	1.24	0.50	26.41	11.41	4.74
2000	11.44	17.57	22.56	41.60	1.25	0.49	26.18	11.68	4.72
2200	11.35	17.67	21.60	56.66	1.27	0.48	26.25	11.79	4.71
2400	11.27	17.77	20.69	39.00	1.29	0.47	26.35	11.91	4.79
2600	11.17	17.89	19.85	33.20	1.30	0.46	26.26	11.66	4.84
2800	11.09	18.01	19.05	29.56	1.32	0.45	26.19	11.31	4.82
3000	11.01	18.12	17.94	26.63	1.34	0.45	26.35	11.15	4.76
3200	10.91	18.27	16.98	24.08	1.36	0.44	26.59	11.02	4.84
3400	10.84	18.41	16.05	22.07	1.38	0.43	26.51	11.05	4.91
3600	10.76	18.55	15.26	20.55	1.40	0.42	25.84	10.69	4.98
3800	10.70	18.69	14.66	19.27	1.42	0.42	25.51	10.77	5.04
4000	10.62	18.84	14.30	18.30	1.44	0.41	25.24	11.19	5.07
4200	10.58	18.93	14.09	17.75	1.45	0.41	25.55	11.39	5.05
4400	10.55	19.06	14.11	17.48	1.47	0.40	25.56	11.24	5.13
4600	10.52	19.17	14.11	17.27	1.49	0.40	25.35	11.29	5.23
4800	10.54	19.31	14.13	17.06	1.50	0.39	25.01	11.36	5.28
5000	10.51	19.33	14.57	17.10	1.51	0.39	25.13	11.39	5.17
5200	10.51	19.36	14.79	17.16	1.52	0.39	25.44	11.13	5.28
5400	10.58	19.48	14.86	17.09	1.53	0.38	25.36	11.05	5.25
5600	10.61	19.49	15.38	17.24	1.53	0.38	25.26	10.90	5.33
5800	10.69	19.53	15.87	16.99	1.52	0.38	24.94	11.31	5.35
6000	10.77	19.54	16.34	16.74	1.51	0.38	24.59	11.33	5.36
6200	10.87	19.47	17.17	16.68	1.49	0.39	24.44	11.49	5.39
6400	10.97	19.52	17.61	16.38	1.49	0.39	24.33	11.79	5.39
6600	11.06	19.43	18.48	16.02	1.47	0.40	24.16	12.06	5.50
6800	11.22	19.28	19.20	15.16	1.43	0.41	23.83	11.98	5.45
7000	11.35	19.23	19.52	14.52	1.40	0.42	23.52	11.95	5.48

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 = 32mA, Vd = 3.40V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	11.89	16.75	27.12	43.76	1.16	0.57	21.79	8.07	4.51
100	11.88	16.76	28.37	41.02	1.16	0.57	21.74	8.10	4.69
200	11.86	16.82	30.41	37.16	1.17	0.57	21.95	8.46	4.65
300	11.81	16.83	28.66	40.16	1.17	0.56	21.75	7.95	4.71
400	11.77	16.86	26.60	48.53	1.17	0.56	21.34	8.45	4.70
500	11.72	16.88	25.63	54.19	1.18	0.55	21.19	8.13	4.71
600	11.70	16.90	25.65	48.09	1.18	0.55	21.06	8.49	4.67
700	11.66	16.91	25.29	45.91	1.19	0.55	21.28	8.29	4.71
800	11.60	16.92	24.54	46.03	1.19	0.54	21.43	8.11	4.71
1000	11.53	16.97	23.91	46.12	1.20	0.53	21.21	7.57	4.70
1200	11.44	17.02	23.18	43.65	1.21	0.53	21.09	7.26	4.71
1400	11.35	17.09	22.52	44.73	1.22	0.52	20.88	7.48	4.74
1600	11.27	17.17	21.95	42.64	1.23	0.51	21.31	7.57	4.72
1800	11.20	17.25	21.26	40.18	1.25	0.50	21.63	7.84	4.68
2000	11.13	17.31	20.52	35.35	1.26	0.49	21.44	8.33	4.68
2200	11.03	17.43	19.66	32.32	1.27	0.48	21.53	8.48	4.68
2400	10.96	17.52	18.94	28.98	1.29	0.47	21.71	8.42	4.77
2600	10.85	17.64	18.10	26.60	1.31	0.46	21.62	8.25	4.78
2800	10.76	17.77	17.38	25.00	1.32	0.45	21.56	7.90	4.78
3000	10.69	17.90	16.52	23.24	1.34	0.44	21.78	7.65	4.68
3200	10.60	18.03	15.64	21.35	1.36	0.44	22.07	7.50	4.75
3400	10.52	18.18	14.80	20.03	1.38	0.43	21.96	7.62	4.89
3600	10.44	18.32	14.10	18.83	1.40	0.42	21.50	7.31	4.94
3800	10.39	18.46	13.63	17.87	1.41	0.42	21.27	7.23	5.01
4000	10.33	18.60	13.29	17.02	1.43	0.42	21.36	7.95	5.02
4200	10.28	18.70	13.05	16.57	1.45	0.41	21.70	8.15	4.98
4400	10.24	18.82	13.05	16.42	1.47	0.41	21.49	7.91	5.09
4600	10.24	18.91	13.14	16.26	1.48	0.40	21.12	7.98	5.19
4800	10.27	19.04	13.17	16.13	1.49	0.40	21.02	8.04	5.25
5000	10.23	19.07	13.45	16.24	1.50	0.39	21.23	8.08	5.14
5200	10.23	19.11	13.65	16.31	1.51	0.39	21.70	7.78	5.20
5400	10.32	19.22	13.75	16.28	1.51	0.39	21.65	7.67	5.20
5600	10.36	19.21	14.23	16.43	1.51	0.39	21.68	7.48	5.29
5800	10.45	19.24	14.58	16.28	1.51	0.39	21.78	8.14	5.29
6000	10.53	19.26	14.93	16.09	1.50	0.39	21.82	8.30	5.30
6200	10.63	19.18	15.66	16.11	1.48	0.40	22.01	8.85	5.30
6400	10.75	19.20	16.04	15.91	1.47	0.40	22.15	9.36	5.30
6600	10.81	19.14	16.55	15.66	1.45	0.41	22.31	9.80	5.41
6800	10.97	18.99	17.12	14.92	1.42	0.42	22.21	9.77	5.39
7000	11.10	18.93	17.57	14.38	1.39	0.43	22.12	9.93	5.40

Typical Performance Data

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

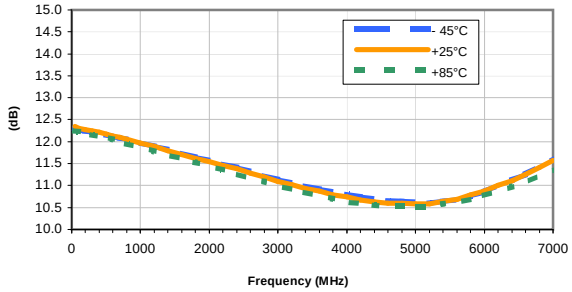
TEST CONDITIONS: Icc = 48mA, Vd = 3.55V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	12.46	17.21	44.11	26.80	1.15	0.58	29.89	13.77	4.63
100	12.42	17.19	55.95	25.81	1.15	0.58	30.01	13.73	4.82
200	12.39	17.24	42.25	24.62	1.16	0.57	30.27	13.77	4.71
300	12.35	17.24	40.74	25.31	1.16	0.57	29.94	13.73	4.83
400	12.32	17.26	36.60	26.73	1.16	0.57	29.30	13.80	4.74
500	12.28	17.27	34.37	27.28	1.17	0.56	28.86	13.72	4.81
600	12.24	17.28	33.76	27.16	1.17	0.56	28.76	13.84	4.73
700	12.19	17.30	32.78	27.24	1.18	0.55	28.93	13.75	4.80
800	12.15	17.31	31.46	27.75	1.18	0.55	29.09	13.67	4.74
1000	12.06	17.36	29.88	28.47	1.19	0.54	28.82	13.48	4.75
1200	11.97	17.42	28.47	28.74	1.20	0.53	28.74	13.20	4.80
1400	11.89	17.48	27.32	29.19	1.21	0.53	28.44	13.27	4.80
1600	11.79	17.56	26.14	29.66	1.22	0.51	29.28	13.22	4.80
1800	11.70	17.63	25.02	30.95	1.24	0.51	29.14	13.42	4.77
2000	11.61	17.71	23.88	32.96	1.25	0.49	28.93	13.66	4.77
2200	11.52	17.81	22.85	37.48	1.27	0.48	28.82	13.72	4.78
2400	11.43	17.91	21.84	49.61	1.28	0.47	28.51	13.77	4.88
2600	11.35	18.03	20.91	41.84	1.30	0.46	28.26	13.69	4.89
2800	11.25	18.15	20.03	33.72	1.32	0.45	27.86	13.46	4.88
3000	11.17	18.26	18.88	29.26	1.34	0.44	27.73	13.38	4.82
3200	11.08	18.42	17.78	25.97	1.36	0.43	27.54	13.20	4.89
3400	11.00	18.54	16.78	23.52	1.38	0.43	27.31	13.15	4.95
3600	10.92	18.69	15.98	21.61	1.40	0.42	26.71	12.95	5.05
3800	10.84	18.83	15.34	20.12	1.42	0.41	26.07	12.92	5.09
4000	10.77	18.98	14.92	19.06	1.44	0.41	25.65	13.17	5.17
4200	10.73	19.08	14.72	18.48	1.46	0.40	25.84	13.38	5.09
4400	10.69	19.21	14.74	18.06	1.48	0.40	25.89	13.39	5.17
4600	10.66	19.31	14.79	17.79	1.49	0.39	25.52	13.45	5.25
4800	10.67	19.46	14.79	17.59	1.51	0.39	25.11	13.45	5.34
5000	10.64	19.49	15.25	17.60	1.52	0.38	24.82	13.42	5.26
5200	10.64	19.52	15.55	17.60	1.53	0.38	24.70	13.23	5.34
5400	10.70	19.64	15.64	17.48	1.54	0.38	24.61	13.22	5.33
5600	10.73	19.65	16.24	17.66	1.54	0.38	24.27	13.01	5.44
5800	10.81	19.70	16.71	17.38	1.53	0.38	23.80	13.19	5.45
6000	10.89	19.71	17.28	17.09	1.53	0.38	23.25	13.01	5.44
6200	10.98	19.64	18.29	16.94	1.51	0.38	22.90	12.99	5.51
6400	11.08	19.68	18.79	16.63	1.50	0.39	22.64	13.06	5.48
6600	11.17	19.60	19.76	16.22	1.48	0.39	22.60	13.21	5.62
6800	11.33	19.45	20.71	15.29	1.44	0.41	22.25	13.06	5.56
7000	11.44	19.39	20.96	14.62	1.41	0.42	22.01	13.00	5.59

Typical Performance Curves

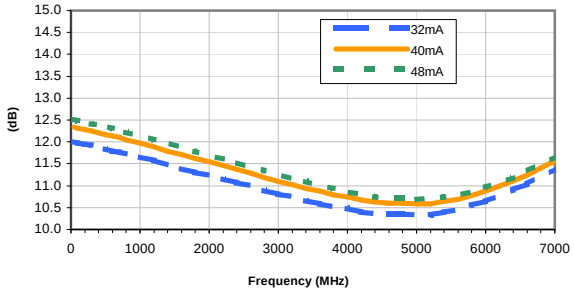
GAIN vs. TEMPERATURE

INPUT POWER = -20dBm,, CURRENT = 40mA



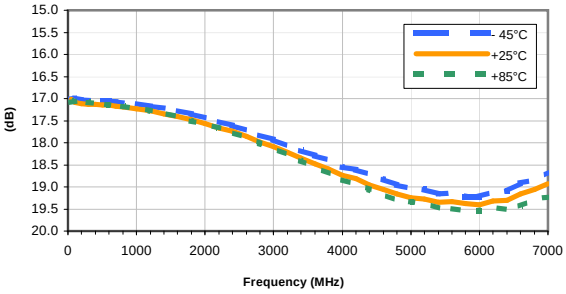
GAIN vs. CURRENT

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



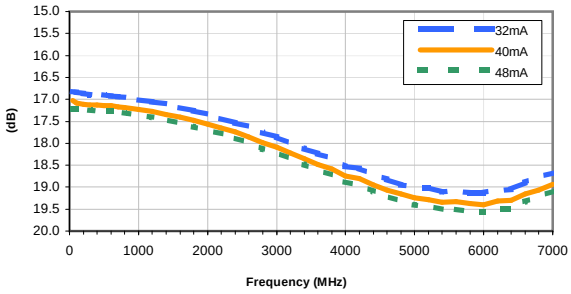
ISOLATION vs. TEMPERATURE

INPUT POWER = -20dBm,, CURRENT = 40mA



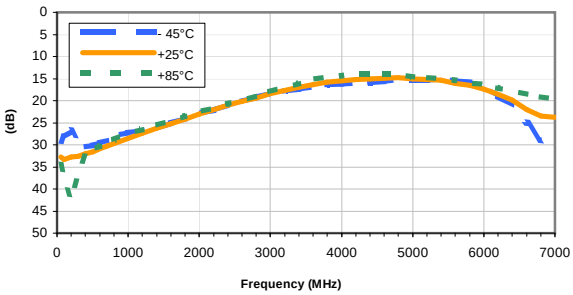
ISOLATION vs. CURRENT

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



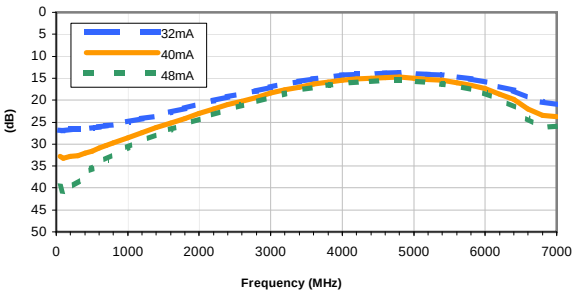
INPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -20dBm,, CURRENT = 40mA



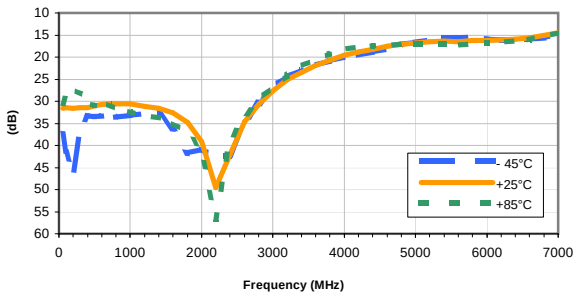
INPUT RETURN LOSS vs. CURRENT

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



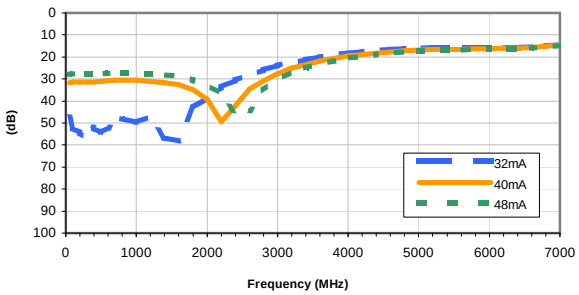
OUTPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -20dBm,, CURRENT = 40mA



OUTPUT RETURN LOSS vs. CURRENT

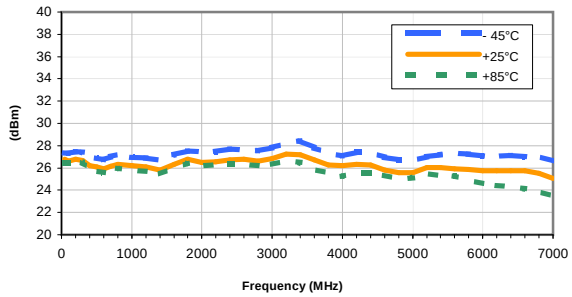
INPUT POWER = -20dBm,, Temperature = +25°C



Typical Performance Curves

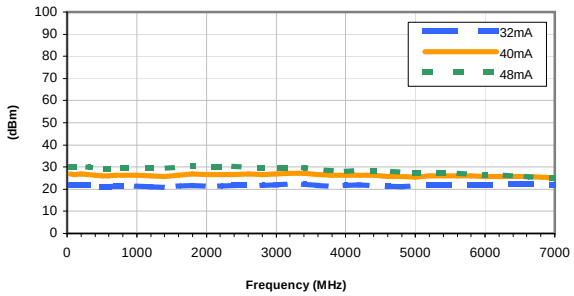
OUTPUT IP3 vs. TEMPERATURE

INPUT POWER = -20dBm,, CURRENT = 40mA



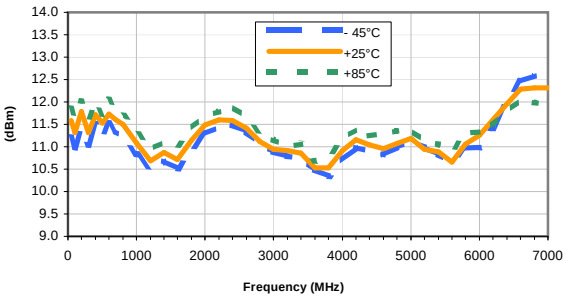
OUTPUT IP3 vs. CURRENT

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



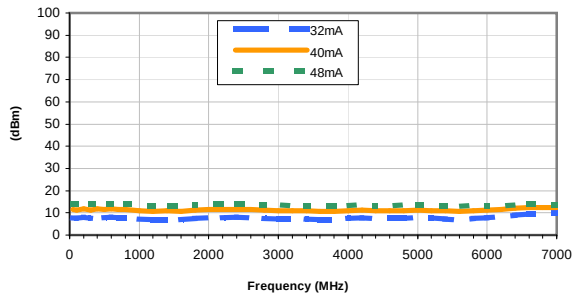
OUTPUT POWER at 1dB Compression vs. TEMPERATURE

CURRENT = 40mA



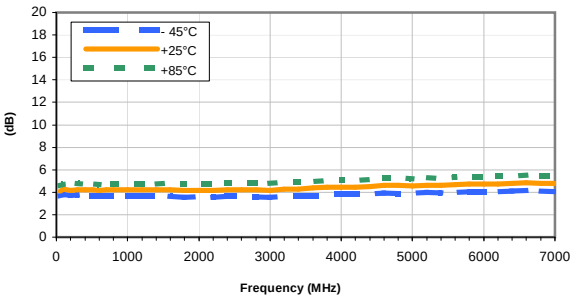
OUTPUT POWER at 1dB Compression vs. CURRENT

Temperature = +25°C



Noise Figure vs. TEMPERATURE

CURRENT = 40mA



Noise Figure vs. CURRENT

Temperature = +25°C