MMIC Amplifier GALI-4F+

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 = 4.34V @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	14.48	18.87	30.32	34.22	1.13	0.60	32.67	15.82	3.82
100	14.47	18.94	31.15	34.71	1.13	0.60	32.42	15.96	4.04
200	14.44	18.96	31.18	35.04	1.14	0.59	32.60	15.88	3.86
300	14.39	18.96	30.53	35.43	1.14	0.59	32.32	15.79	4.22
400	14.35	18.97	31.06	35.72	1.14	0.59	31.99	15.98	3.96
500	14.30	18.99	29.73	35.65	1.15	0.58	31.67	15.78	4.07
600	14.24	19.01	30.55	35.61	1.15	0.58	31.45	15.83	3.94
700	14.19	19.03	28.45	35.66	1.16	0.57	31.58	15.86	4.05
800	14.14	19.05	29.41	35.35	1.16	0.57	31.65	15.81	4.00
900	14.09	19.07	27.22	34.51	1.17	0.56	31.62	15.90	4.03
1000	14.03	19.08	28.27	34.32	1.17	0.56	31.34	15.77	3.98
1100	13.99	19.12	26.86	33.62	1.18	0.55	31.03	15.64	4.02
1200	13.93	19.17	26.80	32.92	1.19	0.55	30.74	15.51	4.05
1300	13.87	19.21	26.07	32.16	1.19	0.54	30.36	15.41	4.03
1400	13.81	19.25	25.19	31.15	1.20	0.53	29.97	15.41	4.14
1500	13.74	19.29	24.75	30.22	1.21	0.53	29.86	15.30	4.20
1600	13.68	19.35	23.84	29.27	1.22	0.52	30.14	15.27	4.13
1700	13.63	19.41	24.00	28.25	1.22	0.51	30.29	15.27	4.08
1800	13.57	19.47	22.54	27.33	1.23	0.51	29.80	15.14	4.21
1900	13.50	19.49	22.30	26.24	1.24	0.50	29.35	15.04	4.13
2000	13.44	19.57	21.30	25.21	1.25	0.50	29.14	14.97	3.98
2100	13.36	19.65	20.98	24.40	1.26	0.49	28.85	14.80	4.19
2200	13.31	19.71	20.35	23.46	1.27	0.48	28.54	14.66	4.04
2300	13.22	19.78	19.72	22.64	1.29	0.47	28.17	14.44	4.14
2400	13.15	19.87	19.30	21.90	1.30	0.47	27.81	14.19	4.18
2500	13.08	19.92	18.62	21.16	1.31	0.46	27.31	14.05	4.07
2600	13.00	20.03	18.30	20.70	1.33	0.45	27.06	13.83	4.22
2700	12.96	20.08	17.77	20.00	1.33	0.45	26.61	13.72	4.15
2800	12.86	20.18	17.45	19.61	1.35	0.44	26.55	13.56	4.20
2900	12.82	20.23	17.04	19.07	1.36	0.43	26.33	13.40	4.27
3000	12.75	20.33	16.70	18.70	1.37	0.43	26.09	13.18	4.08
3100	12.67	20.42	16.43	18.32	1.39	0.42	25.79	12.79	4.36
3200	12.60	20.52	16.11	17.92	1.41	0.41	25.53	12.63	4.09
3300	12.53	20.62	15.80	17.67	1.42	0.41	25.27	12.48	4.28
3400	12.49	20.69	15.64	17.39	1.44	0.40	25.07	12.26	4.28
3500	12.40	20.76	15.40	17.30	1.45	0.40	24.75	12.06	4.18
3600	12.38	20.85	15.32	16.98	1.47	0.39	24.47	11.75	4.35
3700	12.28	20.98	15.16	16.89	1.49	0.39	24.22	11.55	4.22
3800	12.25	21.05	15.02	16.71	1.51	0.38	23.95	11.29	4.45
4000	12.13	21.26	14.80	16.50	1.55	0.37	23.54	10.84	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 = 4.24V @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	14.32	18.83	27.42	29.76	1.14	0.60	29.22	13.58	3.77
100	14.31	18.81	28.01	29.93	1.14	0.60	28.94	13.79	3.99
200	14.26	18.83	28.15	30.23	1.14	0.59	29.11	13.52	3.84
300	14.22	18.86	27.56	30.38	1.14	0.59	28.94	13.51	4.14
400	14.19	18.86	28.23	30.72	1.15	0.58	28.70	13.75	3.91
500	14.14	18.87	27.20	30.72	1.15	0.58	28.53	13.56	4.01
600	14.08	18.90	28.00	30.74	1.16	0.57	28.38	13.65	3.90
700	14.03	18.92	26.33	30.82	1.16	0.57	28.60	13.78	3.99
800	13.98	18.93	27.12	30.71	1.17	0.57	28.77	13.73	3.96
900	13.93	18.95	25.52	30.23	1.17	0.56	28.82	13.87	3.98
1000	13.88	18.97	26.14	30.11	1.17	0.56	28.60	13.64	3.93
1100	13.82	19.02	25.16	29.68	1.18	0.55	28.36	13.48	3.96
1200	13.77	19.06	24.90	29.27	1.19	0.55	28.12	13.40	4.02
1300	13.71	19.09	24.57	28.90	1.19	0.54	27.85	13.22	3.98
1400	13.66	19.13	23.72	28.19	1.20	0.53	27.52	13.26	4.07
1500	13.59	19.18	23.41	27.56	1.21	0.53	27.47	13.21	4.12
1600	13.53	19.23	22.56	26.86	1.22	0.52	27.72	13.15	4.07
1700	13.48	19.29	22.72	26.08	1.23	0.51	28.04	13.21	4.01
1800	13.41	19.35	21.48	25.39	1.24	0.51	27.69	13.09	4.17
1900	13.35	19.40	21.16	24.51	1.24	0.50	27.36	13.09	4.08
2000	13.28	19.47	20.31	23.63	1.25	0.49	27.26	13.10	3.93
2100	13.20	19.56	19.93	22.97	1.27	0.48	27.03	12.96	4.14
2200	13.15	19.59	19.43	22.18	1.27	0.48	26.81	12.90	3.99
2300	13.07	19.66	18.87	21.47	1.29	0.47	26.59	12.87	4.09
2400	12.99	19.74	18.51	20.86	1.30	0.47	26.32	12.74	4.11
2500	12.93	19.81	17.83	20.19	1.31	0.46	25.87	12.61	4.03
2600	12.83	19.92	17.53	19.78	1.33	0.45	25.66	12.43	4.17
2700	12.80	19.96	17.00	19.15	1.33	0.45	25.25	12.33	4.09
2800	12.70	20.07	16.76	18.82	1.35	0.44	25.24	12.29	4.12
2900	12.67	20.13	16.39	18.34	1.36	0.43	25.05	12.10	4.22
3000	12.58	20.21	16.09	18.01	1.37	0.43	24.86	12.00	4.00
3100	12.52	20.31	15.78	17.66	1.39	0.42	24.59	11.77	4.32
3200	12.45	20.43	15.51	17.31	1.41	0.41	24.36	11.59	4.00
3300	12.37	20.51	15.23	17.08	1.42	0.41	24.11	11.50	4.23
3400	12.34	20.57	15.08	16.81	1.43	0.40	23.92	11.35	4.23
3500	12.24	20.65	14.85	16.74	1.45	0.40	23.60	11.03	4.12
3600	12.22	20.75	14.75	16.44	1.47	0.39	23.32	10.85	4.29
3700	12.13	20.86	14.59	16.36	1.49	0.39	23.05	10.58	4.15
3800	12.10	20.94	14.50	16.23	1.50	0.38	22.80	10.35	4.40
4000	11.97	21.14	14.30	16.02	1.55	0.37	22.41	9.95	4.26

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 = 4.44V @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	14.59	18.97	32.55	39.55	1.13	0.60	35.22	17.32	3.89
100	14.58	19.01	33.87	39.71	1.13	0.60	34.99	17.39	4.09
200	14.54	19.03	33.80	40.98	1.14	0.60	35.10	17.31	3.93
300	14.49	19.05	32.75	40.95	1.14	0.59	34.69	17.26	4.26
400	14.44	19.04	33.28	41.35	1.14	0.59	34.24	17.39	3.99
500	14.39	19.07	31.72	40.69	1.15	0.58	33.78	17.19	4.13
600	14.35	19.06	32.69	40.74	1.15	0.58	33.45	17.17	3.99
700	14.30	19.11	30.06	40.24	1.16	0.57	33.44	17.19	4.14
800	14.24	19.13	31.22	39.46	1.16	0.57	33.40	17.09	4.06
900	14.20	19.15	28.58	38.53	1.17	0.57	33.26	17.17	4.09
1000	14.13	19.16	29.76	38.21	1.17	0.56	32.93	17.06	4.05
1100	14.09	19.20	28.00	37.19	1.18	0.56	32.55	16.93	4.07
1200	14.02	19.25	28.03	36.05	1.19	0.55	32.25	16.78	4.10
1300	13.96	19.28	27.15	34.89	1.19	0.54	31.80	16.62	4.09
1400	13.90	19.31	26.31	33.37	1.20	0.54	31.37	16.61	4.18
1500	13.84	19.37	25.76	32.40	1.21	0.53	31.20	16.49	4.23
1600	13.79	19.43	24.74	31.13	1.21	0.52	31.47	16.41	4.18
1700	13.73	19.49	24.91	29.77	1.22	0.52	31.48	16.37	4.13
1800	13.66	19.53	23.36	28.80	1.23	0.51	30.93	16.20	4.28
1900	13.61	19.58	23.07	27.56	1.24	0.50	30.46	16.12	4.17
2000	13.53	19.64	22.00	26.36	1.25	0.50	30.21	15.99	4.06
2100	13.46	19.73	21.65	25.44	1.26	0.49	29.88	15.79	4.27
2200	13.40	19.78	21.01	24.35	1.27	0.48	29.52	15.66	4.13
2300	13.32	19.85	20.36	23.41	1.28	0.47	29.09	15.42	4.18
2400	13.25	19.92	19.94	22.65	1.30	0.47	28.76	15.18	4.24
2500	13.18	20.00	19.19	21.85	1.31	0.46	28.26	14.95	4.15
2600	13.10	20.08	18.86	21.34	1.32	0.45	27.97	14.76	4.30
2700	13.06	20.13	18.26	20.56	1.33	0.45	27.50	14.59	4.21
2800	12.95	20.24	17.95	20.14	1.35	0.44	27.44	14.45	4.27
2900	12.92	20.31	17.54	19.56	1.36	0.43	27.17	14.25	4.30
3000	12.84	20.39	17.19	19.18	1.37	0.43	26.96	14.04	4.14
3100	12.77	20.48	16.87	18.76	1.39	0.42	26.62	13.57	4.43
3200	12.71	20.59	16.55	18.33	1.41	0.41	26.36	13.44	4.19
3300	12.64	20.68	16.24	18.04	1.42	0.41	26.12	13.36	4.39
3400	12.60	20.74	16.07	17.77	1.43	0.40	25.90	13.16	4.42
3500	12.51	20.83	15.81	17.68	1.45	0.40	25.60	12.91	4.35
3600	12.48	20.92	15.71	17.33	1.47	0.39	25.32	12.63	4.44
3700	12.39	21.06	15.55	17.21	1.49	0.38	25.07	12.34	4.30
3800	12.36	21.12	15.42	17.03	1.50	0.38	24.82	12.10	4.56
4000	12.25	21.31	15.19	16.81	1.54	0.37	24.40	11.60	4.42

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 = 4.56V @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	14.62	18.98	29.97	34.96	1.13	0.61	33.39	15.98	3.19
100	14.61	19.02	29.02	32.35	1.13	0.60	33.10	16.05	3.37
200	14.58	18.99	28.48	31.55	1.13	0.60	33.24	15.89	3.29
300	14.54	19.01	31.28	37.67	1.14	0.60	33.08	15.90	3.52
400	14.50	18.99	33.29	43.35	1.14	0.60	32.85	16.14	3.31
500	14.45	19.01	30.87	38.99	1.14	0.59	32.56	15.91	3.38
600	14.42	19.04	31.91	39.84	1.14	0.59	32.33	15.97	3.29
700	14.37	19.04	29.72	40.45	1.15	0.58	32.50	16.06	3.38
800	14.31	19.08	30.60	37.41	1.15	0.58	32.58	16.05	3.34
900	14.27	19.08	27.38	35.60	1.16	0.57	32.59	16.15	3.35
1000	14.21	19.09	28.03	35.23	1.16	0.57	32.34	15.96	3.32
1100	14.18	19.13	27.14	35.00	1.17	0.57	32.07	15.80	3.32
1200	14.12	19.17	27.46	34.92	1.17	0.56	31.83	15.73	3.35
1300	14.07	19.20	26.83	35.13	1.18	0.55	31.49	15.61	3.34
1400	14.00	19.24	26.25	34.24	1.18	0.55	31.12	15.63	3.42
1500	13.95	19.27	25.84	33.42	1.19	0.54	31.02	15.57	3.48
1600	13.90	19.33	24.77	32.48	1.20	0.54	31.29	15.54	3.42
1700	13.84	19.38	25.02	30.85	1.21	0.53	31.50	15.58	3.38
1800	13.79	19.43	23.44	29.40	1.21	0.52	31.05	15.46	3.50
1900	13.73	19.46	23.19	28.29	1.22	0.52	30.66	15.39	3.38
2000	13.67	19.53	22.11	27.48	1.23	0.51	30.50	15.37	3.27
2100	13.60	19.59	21.78	26.60	1.24	0.50	30.23	15.21	3.44
2200	13.55	19.65	21.08	25.18	1.25	0.50	29.97	15.18	3.30
2300	13.47	19.71	20.42	24.15	1.26	0.49	29.61	15.03	3.39
2400	13.40	19.77	20.02	23.45	1.27	0.48	29.25	14.87	3.40
2500	13.34	19.86	19.19	22.38	1.28	0.48	28.83	14.77	3.34
2600	13.26	19.94	18.72	21.76	1.29	0.47	28.53	14.55	3.46
2700	13.22	20.00	18.04	20.74	1.30	0.46	28.41	14.39	3.40
2800	13.13	20.06	17.74	20.23	1.31	0.46	28.19	14.26	3.44
2900	13.10	20.14	17.30	19.41	1.32	0.45	27.72	14.16	3.50
3000	13.03	20.23	16.91	19.00	1.33	0.45	27.57	14.02	3.32
3100	12.96	20.31	16.73	18.76	1.35	0.44	27.32	13.60	3.58
3200	12.89	20.41	16.63	18.43	1.37	0.43	27.05	13.42	3.31
3300	12.83	20.48	16.37	18.19	1.38	0.43	26.78	13.33	3.54
3400	12.80	20.53	16.31	18.01	1.39	0.42	26.61	13.22	3.50
3500	12.74	20.60	15.99	17.89	1.40	0.42	26.26	12.93	3.42
3600	12.71	20.71	15.97	17.40	1.41	0.41	26.03	12.64	3.53
3700	12.60	20.73	16.03	17.57	1.43	0.41	25.80	12.46	3.45
3800	12.59	20.85	15.78	17.15	1.44	0.40	25.47	12.22	3.66
4000	12.47	21.06	15.76	17.08	1.49	0.39	25.05	11.72	3.52

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 = 4.45V @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	14.48	18.92	27.83	30.66	1.13	0.60	29.77	13.59	3.15
100	14.47	18.89	27.03	29.12	1.13	0.60	29.49	13.73	3.33
200	14.44	18.89	26.57	28.54	1.13	0.60	29.60	13.49	3.25
300	14.40	18.90	28.66	32.39	1.14	0.60	29.54	13.50	3.51
400	14.37	18.91	30.27	35.02	1.14	0.59	29.41	13.76	3.28
500	14.33	18.93	28.47	33.40	1.14	0.59	29.26	13.55	3.34
600	14.28	18.93	29.43	33.84	1.15	0.59	29.10	13.64	3.26
700	14.23	18.95	27.83	34.61	1.15	0.58	29.32	13.77	3.32
800	14.19	18.97	28.43	33.00	1.15	0.58	29.52	13.77	3.29
900	14.14	18.99	25.87	31.53	1.16	0.57	29.58	13.92	3.29
1000	14.08	19.00	26.41	31.25	1.16	0.57	29.40	13.63	3.27
1100	14.05	19.03	25.68	31.08	1.17	0.56	29.15	13.51	3.27
1200	13.99	19.07	25.82	31.18	1.17	0.56	28.97	13.39	3.32
1300	13.94	19.12	25.44	31.17	1.18	0.55	28.73	13.28	3.28
1400	13.88	19.13	24.85	30.81	1.19	0.55	28.44	13.38	3.38
1500	13.83	19.18	24.62	30.36	1.19	0.54	28.39	13.26	3.42
1600	13.78	19.24	23.57	29.57	1.20	0.53	28.63	13.29	3.35
1700	13.73	19.28	23.86	28.49	1.21	0.53	28.96	13.37	3.30
1800	13.67	19.34	22.46	27.35	1.21	0.52	28.68	13.25	3.44
1900	13.60	19.37	22.22	26.45	1.22	0.52	28.44	13.27	3.35
2000	13.54	19.45	21.24	25.78	1.23	0.51	28.37	13.23	3.23
2100	13.47	19.50	20.89	25.09	1.24	0.50	28.19	13.18	3.38
2200	13.43	19.55	20.22	23.84	1.25	0.50	28.03	13.22	3.26
2300	13.35	19.62	19.62	22.99	1.26	0.49	27.84	13.18	3.33
2400	13.27	19.69	19.28	22.36	1.27	0.48	27.60	13.15	3.35
2500	13.21	19.77	18.51	21.45	1.28	0.47	27.26	13.05	3.30
2600	13.13	19.85	18.06	20.87	1.29	0.47	27.03	12.95	3.39
2700	13.10	19.90	17.41	19.96	1.30	0.46	26.97	12.84	3.35
2800	13.01	19.97	17.10	19.49	1.31	0.46	26.66	12.77	3.39
2900	12.97	20.06	16.69	18.75	1.32	0.45	26.41	12.73	3.45
3000	12.90	20.15	16.35	18.38	1.34	0.45	26.29	12.75	3.25
3100	12.84	20.23	16.16	18.14	1.35	0.44	26.04	12.40	3.54
3200	12.77	20.33	16.05	17.86	1.37	0.43	25.86	12.36	3.26
3300	12.71	20.40	15.84	17.65	1.38	0.43	25.60	12.34	3.48
3400	12.68	20.45	15.79	17.51	1.39	0.42	25.43	12.21	3.45
3500	12.61	20.51	15.50	17.37	1.40	0.42	25.10	12.00	3.36
3600	12.60	20.61	15.46	16.92	1.41	0.41	24.87	11.74	3.46
3700	12.48	20.65	15.51	17.07	1.43	0.41	24.61	11.54	3.40
3800	12.47	20.78	15.27	16.68	1.45	0.40	24.30	11.23	3.58
4000	12.34	20.96	15.25	16.65	1.48	0.39	23.93	10.89	3.44

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 = 60mA, Vd = 4.63V @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	14.71	19.04	32.06	39.02	1.13	0.61	35.98	17.42	3.24
100	14.70	19.06	30.64	35.52	1.13	0.61	35.75	17.49	3.43
200	14.66	19.04	30.13	34.24	1.13	0.60	35.89	17.44	3.33
300	14.62	19.07	33.40	45.06	1.13	0.60	35.58	17.40	3.60
400	14.58	19.07	35.59	52.10	1.14	0.60	35.24	17.58	3.36
500	14.54	19.07	32.73	43.76	1.14	0.59	34.78	17.38	3.43
600	14.50	19.09	33.80	45.27	1.14	0.59	34.47	17.41	3.33
700	14.45	19.09	31.20	43.02	1.15	0.59	34.49	17.44	3.42
800	14.40	19.13	32.17	40.25	1.15	0.58	34.51	17.36	3.39
900	14.35	19.14	28.41	39.10	1.15	0.58	34.38	17.45	3.43
1000	14.30	19.15	29.26	39.31	1.16	0.57	34.10	17.38	3.35
1100	14.27	19.18	28.15	38.66	1.16	0.57	33.78	17.25	3.37
1200	14.20	19.23	28.63	38.69	1.17	0.56	33.50	17.13	3.39
1300	14.14	19.26	27.70	38.51	1.18	0.55	33.09	17.01	3.37
1400	14.09	19.29	27.17	36.96	1.18	0.55	32.71	17.01	3.45
1500	14.04	19.32	26.67	35.83	1.19	0.54	32.56	16.92	3.52
1600	13.98	19.39	25.53	34.70	1.20	0.54	32.82	16.85	3.48
1700	13.93	19.43	25.80	32.68	1.20	0.53	32.85	16.87	3.40
1800	13.86	19.48	24.11	30.82	1.21	0.52	32.35	16.73	3.55
1900	13.81	19.52	23.90	29.72	1.22	0.52	31.91	16.68	3.43
2000	13.75	19.59	22.76	28.76	1.23	0.51	31.72	16.60	3.33
2100	13.68	19.66	22.42	27.79	1.24	0.50	31.40	16.47	3.50
2200	13.63	19.70	21.65	26.11	1.25	0.50	31.07	16.28	3.37
2300	13.55	19.77	20.96	25.01	1.26	0.49	30.68	16.11	3.42
2400	13.48	19.84	20.56	24.17	1.27	0.48	30.24	15.88	3.46
2500	13.43	19.90	19.69	23.07	1.28	0.48	29.79	15.66	3.39
2600	13.35	20.00	19.24	22.41	1.29	0.47	29.48	15.45	3.51
2700	13.30	20.05	18.50	21.33	1.30	0.46	29.31	15.27	3.46
2800	13.21	20.11	18.19	20.73	1.31	0.46	29.14	15.14	3.50
2900	13.18	20.19	17.70	19.84	1.32	0.45	28.61	14.97	3.55
3000	13.12	20.27	17.31	19.41	1.33	0.45	28.44	14.80	3.38
3100	13.04	20.36	17.15	19.20	1.35	0.44	28.14	14.40	3.64
3200	12.97	20.47	17.02	18.81	1.37	0.43	27.90	14.17	3.38
3300	12.92	20.52	16.76	18.55	1.38	0.43	27.60	14.08	3.58
3400	12.89	20.59	16.69	18.36	1.39	0.42	27.46	13.92	3.55
3500	12.83	20.67	16.39	18.24	1.40	0.42	27.13	13.67	3.47
3600	12.80	20.76	16.36	17.71	1.41	0.41	26.87	13.44	3.60
3700	12.68	20.78	16.41	17.90	1.43	0.41	26.64	13.10	3.52
3800	12.67	20.90	16.13	17.43	1.44	0.40	26.33	12.90	3.72
4000	12.55	21.11	16.12	17.37	1.48	0.39	25.91	12.38	3.60

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 = 4.16V @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	14.38	18.82	30.13	33.23	1.13	0.60	32.12	15.71	4.37
100	14.37	18.83	32.81	36.07	1.13	0.60	31.91	15.80	4.58
200	14.33	18.88	35.31	41.41	1.14	0.59	32.15	15.74	4.43
300	14.27	18.90	31.79	37.06	1.14	0.59	31.79	15.68	4.76
400	14.22	18.91	30.60	34.07	1.15	0.58	31.40	15.84	4.51
500	14.17	18.92	29.25	33.65	1.15	0.58	31.05	15.61	4.65
600	14.12	18.94	29.82	33.40	1.16	0.57	30.78	15.63	4.49
700	14.07	18.96	27.32	32.27	1.16	0.57	30.88	15.67	4.62
800	14.00	18.99	27.69	31.11	1.17	0.56	30.93	15.58	4.56
900	13.95	19.03	25.83	30.32	1.17	0.56	30.83	15.68	4.63
1000	13.89	19.03	26.58	30.28	1.18	0.55	30.55	15.52	4.55
1100	13.85	19.08	25.39	29.55	1.18	0.55	30.20	15.36	4.59
1200	13.78	19.13	25.06	29.02	1.19	0.54	29.89	15.26	4.64
1300	13.72	19.17	24.58	28.58	1.20	0.53	29.49	15.14	4.62
1400	13.65	19.21	23.76	28.07	1.21	0.53	29.09	15.11	4.72
1500	13.59	19.26	23.38	27.48	1.22	0.52	28.97	15.01	4.77
1600	13.53	19.32	22.61	26.96	1.22	0.52	29.26	14.93	4.72
1700	13.47	19.38	22.87	26.40	1.23	0.51	29.34	14.90	4.68
1800	13.41	19.43	21.68	25.82	1.24	0.50	28.78	14.72	4.81
1900	13.35	19.48	21.50	24.99	1.25	0.50	28.32	14.66	4.75
2000	13.28	19.57	20.66	24.11	1.26	0.49	28.08	14.48	4.59
2100	13.19	19.63	20.42	23.56	1.28	0.48	27.71	14.32	4.82
2200	13.14	19.70	19.91	22.69	1.29	0.47	27.38	14.17	4.63
2300	13.04	19.77	19.38	21.99	1.30	0.46	26.99	13.91	4.75
2400	12.97	19.84	18.99	21.34	1.31	0.46	26.60	13.65	4.81
2500	12.91	19.91	18.32	20.64	1.32	0.45	26.11	13.51	4.69
2600	12.82	20.02	18.02	20.22	1.34	0.44	25.83	13.28	4.87
2700	12.77	20.08	17.45	19.48	1.35	0.44	25.67	13.05	4.76
2800	12.66	20.18	17.18	19.17	1.37	0.43	25.20	12.89	4.83
2900	12.62	20.26	16.69	18.56	1.38	0.42	25.09	12.70	4.92
3000	12.56	20.36	16.29	18.12	1.39	0.42	24.87	12.54	4.70
3100	12.47	20.44	15.97	17.81	1.41	0.41	24.59	12.16	5.00
3200	12.38	20.57	15.65	17.44	1.43	0.40	24.32	11.89	4.72
3300	12.30	20.66	15.22	17.07	1.45	0.40	24.05	11.81	4.94
3400	12.26	20.73	14.96	16.77	1.46	0.39	23.85	11.55	4.95
3500	12.18	20.81	14.57	16.58	1.48	0.39	23.52	11.24	4.81
3600	12.14	20.91	14.40	16.23	1.49	0.38	23.24	11.04	5.05
3700	12.00	21.01	14.29	16.27	1.52	0.38	23.01	10.80	4.84
3800	11.98	21.11	14.05	15.96	1.54	0.37	22.73	10.59	5.16
4000	11.84	21.35	13.88	15.77	1.59	0.36	22.29	10.15	4.97

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 = 4.05V @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	14.20	18.82	27.00	28.73	1.14	0.59	28.81	13.72	4.34
100	14.19	18.70	28.81	30.44	1.14	0.60	28.57	13.92	4.53
200	14.13	18.74	30.63	32.88	1.14	0.59	28.79	13.76	4.39
300	14.09	18.75	28.47	31.18	1.15	0.59	28.54	13.68	4.68
400	14.03	18.79	27.58	29.39	1.15	0.58	28.28	13.89	4.47
500	13.99	18.80	26.55	29.04	1.16	0.58	28.06	13.69	4.58
600	13.94	18.82	27.08	29.08	1.16	0.57	27.89	13.76	4.43
700	13.88	18.83	25.25	28.49	1.16	0.57	28.08	13.84	4.58
800	13.83	18.87	25.42	27.56	1.17	0.56	28.21	13.75	4.53
900	13.77	18.91	23.95	27.11	1.18	0.56	28.25	13.94	4.59
1000	13.72	18.91	24.62	27.16	1.18	0.55	28.01	13.63	4.53
1100	13.66	18.96	23.74	26.72	1.19	0.55	27.73	13.48	4.56
1200	13.60	18.99	23.44	26.31	1.19	0.54	27.49	13.44	4.59
1300	13.53	19.04	23.02	25.92	1.20	0.53	27.22	13.29	4.59
1400	13.48	19.08	22.27	25.52	1.21	0.53	26.83	13.33	4.68
1500	13.42	19.13	21.99	25.19	1.22	0.52	26.80	13.20	4.73
1600	13.34	19.19	21.31	24.79	1.23	0.51	27.08	13.16	4.68
1700	13.30	19.26	21.53	24.33	1.24	0.51	27.34	13.22	4.63
1800	13.23	19.31	20.50	23.94	1.25	0.50	26.92	13.05	4.75
1900	13.17	19.36	20.37	23.36	1.25	0.49	26.55	12.98	4.69
2000	13.10	19.42	19.63	22.66	1.26	0.49	26.40	12.94	4.55
2100	13.02	19.50	19.44	22.17	1.28	0.48	26.12	12.78	4.78
2200	12.95	19.57	18.91	21.40	1.29	0.47	25.87	12.72	4.60
2300	12.87	19.65	18.41	20.79	1.30	0.46	25.58	12.58	4.72
2400	12.80	19.72	18.07	20.24	1.31	0.46	25.27	12.38	4.81
2500	12.73	19.80	17.50	19.67	1.32	0.45	24.83	12.27	4.64
2600	12.64	19.90	17.24	19.31	1.34	0.44	24.58	12.03	4.81
2700	12.60	19.97	16.72	18.62	1.35	0.44	24.42	11.92	4.72
2800	12.48	20.04	16.43	18.35	1.37	0.43	24.01	11.84	4.74
2900	12.46	20.14	15.98	17.78	1.38	0.42	23.93	11.71	4.86
3000	12.38	20.22	15.61	17.43	1.39	0.42	23.76	11.53	4.64
3100	12.28	20.33	15.32	17.12	1.41	0.41	23.47	11.10	4.95
3200	12.20	20.46	15.01	16.78	1.44	0.40	23.24	10.99	4.67
3300	12.13	20.52	14.60	16.43	1.45	0.40	22.97	10.93	4.88
3400	12.09	20.60	14.37	16.19	1.46	0.40	22.77	10.65	4.88
3500	11.99	20.69	14.03	16.04	1.48	0.39	22.44	10.40	4.78
3600	11.95	20.79	13.88	15.71	1.49	0.39	22.17	10.17	4.97
3700	11.81	20.89	13.78	15.72	1.53	0.38	21.94	9.95	4.78
3800	11.80	20.98	13.54	15.45	1.54	0.37	21.65	9.66	5.09
4000	11.64	21.21	13.41	15.32	1.59	0.36	21.25	9.30	4.92

Typical Performance Data

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

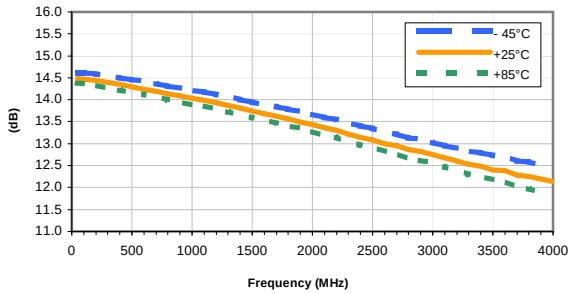
TEST CONDITIONS: Icc = 60mA, Vd = 4.26V @Temperature = +85degC

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	14.49	18.97	32.95	37.78	1.14	0.60	34.56	17.00	4.41
100	14.49	18.95	36.74	43.89	1.13	0.60	34.39	17.07	4.64
200	14.44	18.95	40.17	56.16	1.14	0.59	34.57	17.03	4.48
300	14.38	18.99	34.82	44.33	1.14	0.59	34.07	16.96	4.79
400	14.33	18.99	33.12	38.76	1.15	0.58	33.60	17.07	4.56
500	14.28	19.00	31.36	37.72	1.15	0.58	33.05	16.84	4.70
600	14.23	19.03	32.04	37.47	1.16	0.58	32.67	16.79	4.53
700	14.17	19.06	28.95	35.69	1.16	0.57	32.66	16.81	4.70
800	14.12	19.07	29.36	33.94	1.17	0.57	32.57	16.66	4.61
900	14.05	19.10	27.17	33.07	1.17	0.56	32.38	16.75	4.68
1000	14.00	19.12	28.09	33.01	1.18	0.56	32.01	16.61	4.61
1100	13.96	19.16	26.61	32.19	1.18	0.55	31.64	16.45	4.65
1200	13.89	19.21	26.34	31.28	1.19	0.54	31.30	16.33	4.69
1300	13.83	19.25	25.68	30.69	1.20	0.54	30.83	16.10	4.69
1400	13.76	19.29	24.83	29.94	1.21	0.53	30.39	16.12	4.77
1500	13.70	19.33	24.37	29.32	1.21	0.52	30.23	15.96	4.85
1600	13.64	19.40	23.53	28.66	1.22	0.52	30.48	15.85	4.78
1700	13.59	19.46	23.82	27.88	1.23	0.51	30.42	15.75	4.72
1800	13.51	19.53	22.51	27.22	1.24	0.50	29.79	15.58	4.88
1900	13.45	19.56	22.34	26.30	1.25	0.50	29.28	15.48	4.80
2000	13.39	19.64	21.41	25.25	1.26	0.49	29.03	15.34	4.64
2100	13.30	19.70	21.20	24.58	1.27	0.48	28.65	15.11	4.87
2200	13.24	19.77	20.63	23.58	1.28	0.47	28.27	14.92	4.71
2300	13.15	19.85	20.04	22.79	1.30	0.47	27.83	14.71	4.81
2400	13.09	19.92	19.63	22.09	1.31	0.46	27.43	14.40	4.90
2500	13.02	20.00	18.94	21.35	1.32	0.45	26.94	14.24	4.73
2600	12.93	20.09	18.63	20.90	1.34	0.44	26.65	13.98	4.93
2700	12.88	20.16	18.01	20.05	1.35	0.44	26.46	13.84	4.82
2800	12.77	20.23	17.72	19.73	1.37	0.43	26.03	13.69	4.88
2900	12.74	20.35	17.21	19.06	1.38	0.42	25.88	13.51	4.96
3000	12.66	20.42	16.78	18.61	1.39	0.42	25.66	13.25	4.77
3100	12.57	20.50	16.44	18.27	1.41	0.41	25.36	12.76	5.05
3200	12.49	20.66	16.09	17.85	1.43	0.40	25.09	12.63	4.82
3300	12.43	20.73	15.64	17.46	1.45	0.40	24.82	12.51	4.99
3400	12.38	20.81	15.38	17.16	1.46	0.39	24.65	12.32	5.02
3500	12.29	20.88	14.97	16.96	1.48	0.39	24.30	11.99	4.88
3600	12.26	20.99	14.80	16.59	1.49	0.38	24.02	11.71	5.13
3700	12.12	21.10	14.69	16.60	1.52	0.38	23.79	11.51	4.93
3800	12.11	21.19	14.43	16.27	1.53	0.37	23.50	11.28	5.23
4000	11.96	21.42	14.24	16.09	1.59	0.36	23.07	10.80	5.07

Typical Performance Curves

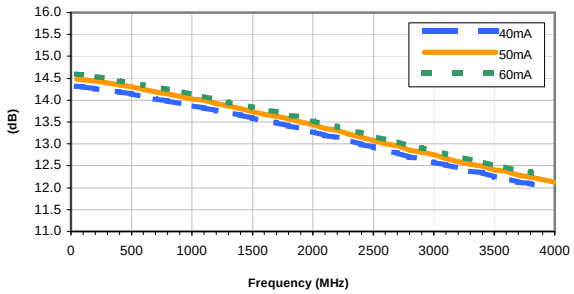
GAIN vs. TEMPERATURE

INPUT POWER = -15dBm,, CURRENT = 50mA



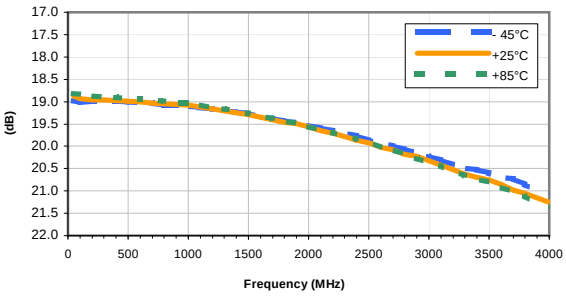
GAIN vs. CURRENT

INPUT POWER = -15dBm,, Temperature = +25°C



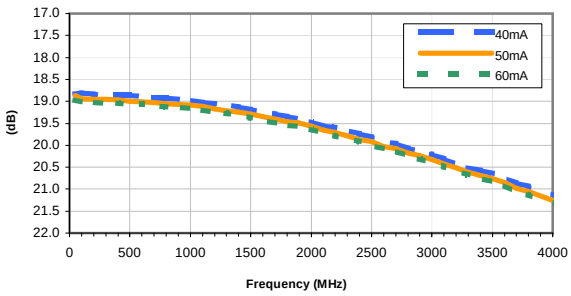
ISOLATION vs. TEMPERATURE

INPUT POWER = -15dBm,, CURRENT = 50mA



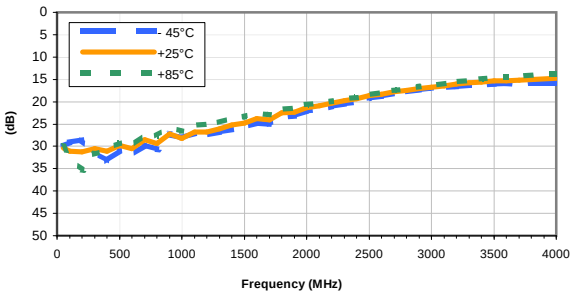
ISOLATION vs. CURRENT

INPUT POWER = -15dBm,, Temperature = +25°C



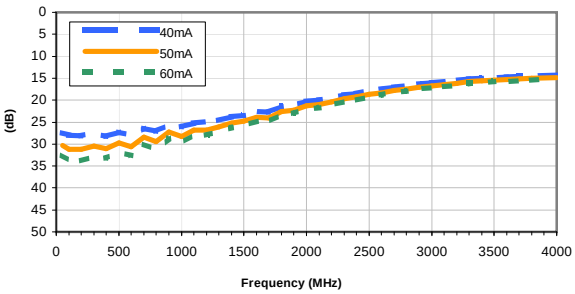
INPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -15dBm,, CURRENT = 50mA



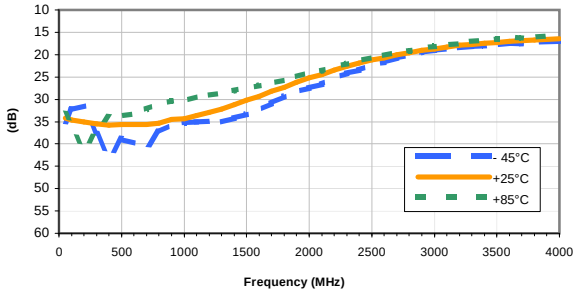
INPUT RETURN LOSS vs. CURRENT

INPUT POWER = -15dBm,, Temperature = +25°C



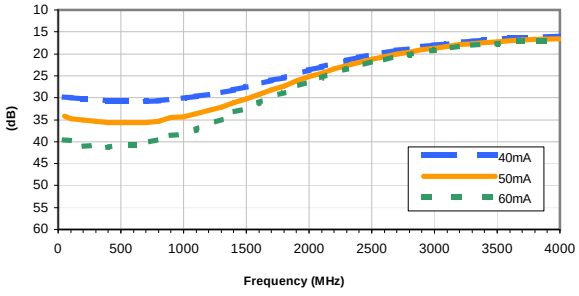
OUTPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -15dBm,, CURRENT = 50mA



OUTPUT RETURN LOSS vs. CURRENT

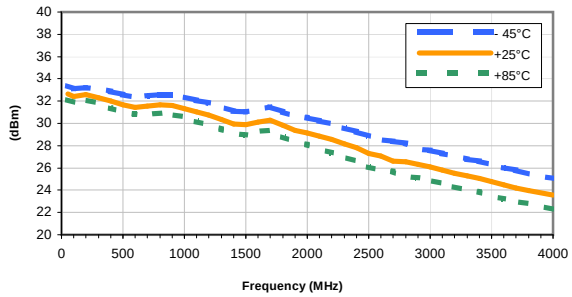
INPUT POWER = -15dBm,, Temperature = +25°C



Typical Performance Curves

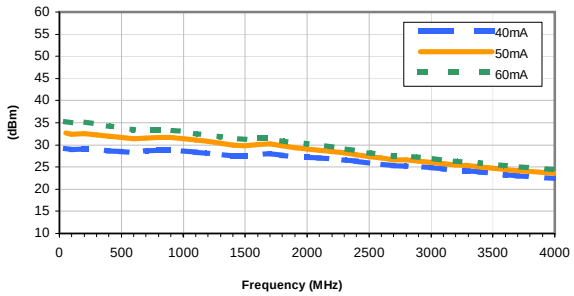
OUTPUT IP3 vs. TEMPERATURE

INPUT POWER = -15dBm,, CURRENT = 50mA



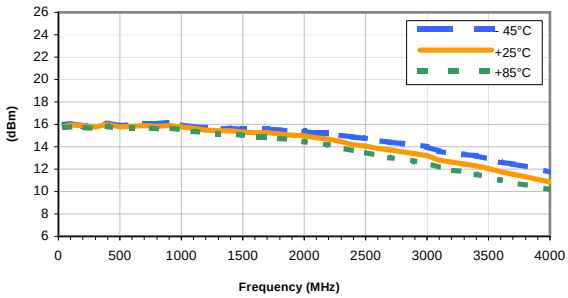
OUTPUT IP3 vs. CURRENT

INPUT POWER = -15dBm,, Temperature = +25°C



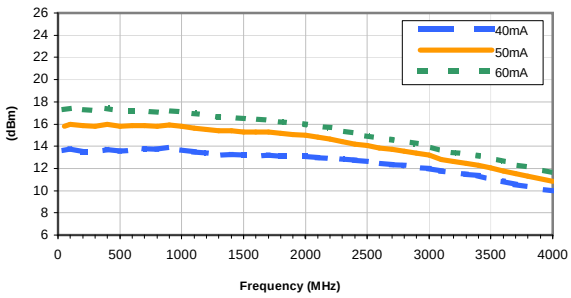
OUTPUT POWER at 1dB Compression vs. TEMPERATURE

CURRENT = 50mA



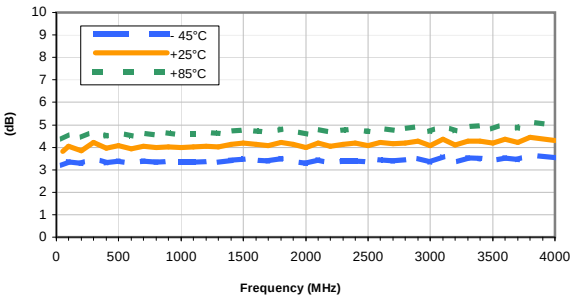
OUTPUT POWER at 1dB Compression vs. CURRENT

Temperature = +25°C



Noise Figure vs. TEMPERATURE

CURRENT = 50mA



Noise Figure vs. CURRENT

Temperature = +25°C