

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		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Delta			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	17.98	21.95	27.14	32.83	1.10	0.63	30.81	15.76	3.47
100	17.97	21.85	26.69	31.53	1.10	0.64	30.95	15.88	3.64
200	17.94	21.90	26.23	31.53	1.10	0.63	30.98	15.77	3.48
300	17.89	21.84	26.39	30.54	1.10	0.63	30.98	15.63	3.78
400	17.83	21.93	26.21	29.77	1.11	0.62	30.44	15.89	3.64
500	17.75	21.90	26.20	28.60	1.11	0.62	30.40	15.82	3.65
600	17.68	21.93	25.97	28.14	1.12	0.61	30.40	15.66	3.68
700	17.59	21.93	25.83	27.48	1.12	0.60	30.79	15.84	3.57
800	17.51	21.93	25.09	26.80	1.13	0.60	31.08	15.87	3.65
900	17.43	21.94	24.72	26.28	1.13	0.59	31.18	15.81	3.59
1000	17.34	21.98	24.31	25.65	1.14	0.58	31.00	15.80	3.59
1100	17.25	21.94	23.82	25.10	1.14	0.58	30.86	15.56	3.56
1200	17.14	22.01	23.49	24.59	1.15	0.57	30.81	15.18	3.64
1300	17.03	22.01	22.88	24.03	1.16	0.56	30.74	15.30	3.67
1400	16.93	21.98	22.33	23.53	1.16	0.55	30.39	15.23	3.70
1500	16.82	22.02	21.93	23.02	1.17	0.54	30.36	15.17	3.74
1600	16.72	22.07	21.54	22.57	1.18	0.53	30.65	15.20	3.68
1700	16.59	22.08	21.13	22.20	1.19	0.53	31.20	15.39	3.65
1800	16.49	22.07	20.45	21.72	1.19	0.52	31.18	15.23	3.83
1900	16.39	22.11	20.02	21.46	1.20	0.51	30.84	15.35	3.66
2000	16.27	22.10	19.47	21.11	1.21	0.50	30.62	15.35	3.52
2100	16.16	22.17	19.13	20.91	1.22	0.49	30.45	15.25	3.73
2200	16.05	22.15	18.69	20.70	1.22	0.49	30.36	15.34	3.56
2300	15.94	22.22	18.22	20.55	1.24	0.47	30.39	15.48	3.74
2400	15.82	22.23	17.79	20.43	1.25	0.47	30.29	15.48	3.68
2500	15.72	22.24	17.31	20.19	1.25	0.46	30.22	15.47	3.66
2600	15.61	22.28	16.93	20.07	1.26	0.45	30.20	15.41	3.67
2700	15.50	22.29	16.50	19.83	1.27	0.44	30.19	15.38	3.71
2800	15.38	22.34	16.14	19.77	1.29	0.44	30.12	15.38	3.67
2900	15.29	22.36	15.76	19.55	1.29	0.43	30.04	15.36	3.75
3000	15.19	22.41	15.41	19.43	1.31	0.42	29.89	15.31	3.58
3100	15.08	22.42	15.17	19.25	1.32	0.42	29.67	15.26	3.87
3200	14.99	22.43	14.89	19.16	1.32	0.41	29.52	15.33	3.63
3300	14.90	22.49	14.55	19.02	1.34	0.40	29.48	15.38	3.93
3400	14.84	22.52	14.27	18.80	1.34	0.40	29.30	15.31	3.76
3500	14.74	22.49	13.99	18.64	1.35	0.40	29.08	15.07	3.70
3600	14.66	22.59	13.85	18.73	1.37	0.39	28.74	14.98	3.87
3700	14.60	22.57	13.58	18.54	1.37	0.39	28.52	14.89	3.70
3800	14.53	22.57	13.47	18.42	1.37	0.38	28.38	14.78	3.90
4000	14.39	22.68	13.22	18.81	1.40	0.37	28.27	14.52	3.74

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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		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Delta			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	17.73	21.68	23.57	48.45	1.10	0.64	26.99	12.91	3.41
100	17.70	21.64	23.43	49.46	1.10	0.64	27.14	13.10	3.58
200	17.67	21.67	23.05	42.76	1.10	0.63	27.16	12.97	3.47
300	17.60	21.76	23.40	38.23	1.11	0.62	27.12	12.82	3.65
400	17.54	21.68	23.24	35.15	1.11	0.62	26.73	13.13	3.58
500	17.47	21.70	23.26	32.76	1.12	0.61	26.74	13.02	3.58
600	17.42	21.66	23.24	31.67	1.12	0.61	26.73	12.91	3.62
700	17.34	21.69	23.08	30.34	1.12	0.60	27.10	13.00	3.53
800	17.25	21.71	22.76	29.31	1.13	0.60	27.40	13.08	3.63
900	17.17	21.70	22.38	28.52	1.13	0.59	27.47	13.13	3.53
1000	17.09	21.73	22.12	27.48	1.14	0.58	27.32	13.06	3.55
1100	17.00	21.70	21.84	26.65	1.14	0.58	27.17	12.80	3.53
1200	16.90	21.73	21.47	26.05	1.15	0.57	27.14	12.48	3.58
1300	16.80	21.76	20.97	25.21	1.15	0.56	27.08	12.59	3.56
1400	16.70	21.79	20.61	24.46	1.16	0.55	26.83	12.57	3.64
1500	16.58	21.81	20.24	23.87	1.17	0.54	26.83	12.53	3.68
1600	16.49	21.78	20.00	23.17	1.17	0.54	27.10	12.51	3.62
1700	16.37	21.85	19.54	22.70	1.18	0.53	27.54	12.66	3.61
1800	16.28	21.88	19.02	22.08	1.19	0.52	27.53	12.54	3.78
1900	16.17	21.91	18.67	21.62	1.20	0.51	27.28	12.70	3.62
2000	16.06	21.89	18.14	21.22	1.20	0.50	27.13	12.70	3.46
2100	15.94	21.94	17.84	20.91	1.21	0.49	27.04	12.63	3.69
2200	15.83	21.94	17.51	20.64	1.22	0.48	27.03	12.72	3.50
2300	15.71	21.97	17.06	20.38	1.23	0.48	27.15	12.85	3.70
2400	15.62	22.02	16.68	20.18	1.24	0.47	27.23	12.87	3.58
2500	15.50	21.99	16.28	19.94	1.25	0.46	27.31	12.95	3.61
2600	15.41	22.05	15.90	19.74	1.26	0.45	27.37	12.88	3.60
2700	15.31	22.06	15.51	19.50	1.26	0.45	27.47	12.88	3.68
2800	15.19	22.15	15.20	19.38	1.28	0.44	27.48	12.84	3.60
2900	15.09	22.16	14.82	19.05	1.29	0.43	27.49	12.83	3.69
3000	14.99	22.21	14.53	18.92	1.30	0.42	27.45	12.86	3.51
3100	14.89	22.21	14.34	18.74	1.30	0.42	27.34	12.88	3.83
3200	14.80	22.27	14.04	18.61	1.32	0.41	27.35	13.06	3.55
3300	14.72	22.31	13.75	18.47	1.33	0.40	27.40	13.11	3.86
3400	14.64	22.33	13.47	18.19	1.33	0.40	27.35	13.03	3.66
3500	14.55	22.31	13.21	18.00	1.33	0.40	27.08	12.78	3.65
3600	14.46	22.39	13.12	18.08	1.36	0.39	26.76	12.76	3.80
3700	14.41	22.39	12.90	17.88	1.36	0.39	26.45	12.79	3.66
3800	14.34	22.37	12.78	17.78	1.36	0.39	26.32	12.75	3.83
4000	14.21	22.52	12.55	18.13	1.39	0.38	26.38	12.69	3.68

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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		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Delta			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	18.15	21.96	30.30	28.36	1.09	0.64	33.49	17.59	3.53
100	18.14	22.07	29.96	27.78	1.10	0.63	33.65	17.68	3.72
200	18.10	22.06	28.90	27.85	1.10	0.63	33.71	17.61	3.54
300	18.02	22.05	29.20	26.98	1.11	0.63	33.65	17.54	3.85
400	17.98	22.04	28.57	26.60	1.11	0.62	33.06	17.71	3.67
500	17.90	22.07	28.31	25.83	1.11	0.62	33.00	17.60	3.71
600	17.84	22.07	28.02	25.62	1.12	0.61	32.93	17.50	3.68
700	17.75	22.07	27.66	25.30	1.12	0.61	33.37	17.58	3.64
800	17.66	22.05	26.91	24.82	1.12	0.60	33.63	17.60	3.71
900	17.58	22.07	26.16	24.47	1.13	0.59	33.74	17.52	3.64
1000	17.49	22.12	25.74	24.03	1.14	0.58	33.56	17.56	3.63
1100	17.39	22.08	25.12	23.66	1.14	0.58	33.40	17.37	3.63
1200	17.28	22.12	24.71	23.39	1.15	0.57	33.31	17.11	3.68
1300	17.18	22.11	24.05	23.02	1.15	0.56	33.20	17.18	3.66
1400	17.07	22.16	23.52	22.61	1.16	0.55	32.80	17.13	3.76
1500	16.97	22.17	22.99	22.30	1.17	0.54	32.74	17.08	3.81
1600	16.87	22.19	22.55	21.88	1.18	0.54	33.07	17.11	3.75
1700	16.74	22.23	22.10	21.65	1.19	0.53	33.68	17.19	3.68
1800	16.62	22.21	21.45	21.25	1.19	0.52	33.55	17.10	3.90
1900	16.52	22.29	21.00	21.08	1.21	0.51	33.12	17.19	3.71
2000	16.41	22.27	20.31	20.85	1.21	0.50	32.88	17.19	3.58
2100	16.28	22.26	20.00	20.65	1.22	0.49	32.61	17.13	3.78
2200	16.18	22.31	19.50	20.53	1.23	0.48	32.39	17.14	3.63
2300	16.07	22.31	18.94	20.42	1.24	0.48	32.30	17.20	3.79
2400	15.95	22.36	18.52	20.36	1.25	0.47	32.07	17.15	3.77
2500	15.84	22.37	18.01	20.21	1.26	0.46	31.87	17.10	3.70
2600	15.74	22.41	17.60	20.06	1.27	0.45	31.68	17.09	3.73
2700	15.63	22.43	17.18	19.91	1.28	0.44	31.58	17.03	3.77
2800	15.50	22.48	16.83	19.87	1.29	0.43	31.50	16.99	3.73
2900	15.42	22.50	16.37	19.65	1.30	0.43	31.32	16.95	3.78
3000	15.31	22.51	16.05	19.60	1.31	0.42	31.09	16.85	3.63
3100	15.21	22.56	15.76	19.44	1.32	0.41	30.80	16.67	3.91
3200	15.11	22.59	15.45	19.36	1.33	0.41	30.52	16.69	3.69
3300	15.02	22.65	15.16	19.27	1.35	0.40	30.51	16.69	3.98
3400	14.96	22.64	14.82	19.05	1.35	0.40	30.26	16.58	3.81
3500	14.86	22.61	14.53	18.88	1.35	0.40	30.04	16.36	3.76
3600	14.77	22.72	14.41	19.03	1.38	0.39	29.80	16.23	3.93
3700	14.71	22.74	14.11	18.87	1.38	0.38	29.54	16.07	3.75
3800	14.65	22.67	13.95	18.72	1.38	0.38	29.41	15.86	3.97
4000	14.50	22.81	13.75	19.10	1.41	0.37	29.26	15.38	3.81

MMIC Amplifier

GALI-51F+

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		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Delta			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	18.09	21.91	26.15	33.35	1.10	0.64	31.42	15.61	3.01
100	18.08	21.86	25.14	34.44	1.09	0.65	31.55	15.73	3.16
200	18.05	21.87	24.05	36.74	1.09	0.64	31.49	15.58	3.01
300	17.98	21.90	25.78	31.18	1.10	0.64	31.59	15.48	3.26
400	17.93	21.94	26.71	28.59	1.10	0.63	31.17	15.84	3.12
500	17.86	21.89	26.70	27.42	1.10	0.63	31.20	15.74	3.11
600	17.80	21.93	26.19	27.47	1.11	0.62	31.17	15.60	3.18
700	17.73	21.90	26.01	26.98	1.11	0.62	31.57	15.73	3.06
800	17.64	21.94	25.64	25.96	1.12	0.61	31.91	15.74	3.15
900	17.57	21.91	25.19	25.79	1.12	0.60	31.95	15.69	3.05
1000	17.47	21.93	24.67	25.52	1.13	0.60	31.82	15.71	3.05
1100	17.39	21.97	24.43	24.83	1.13	0.59	31.71	15.44	3.02
1200	17.29	21.95	24.24	24.22	1.14	0.58	31.67	15.11	3.08
1300	17.19	21.95	23.43	23.80	1.14	0.57	31.62	15.25	3.06
1400	17.10	22.00	22.65	23.45	1.15	0.56	31.35	15.20	3.13
1500	17.00	21.98	22.33	22.99	1.15	0.56	31.31	15.11	3.18
1600	16.88	22.01	21.86	22.53	1.16	0.55	31.58	15.11	3.13
1700	16.77	22.05	21.34	22.33	1.17	0.54	32.13	15.31	3.09
1800	16.66	22.05	20.72	21.85	1.18	0.53	32.10	15.19	3.26
1900	16.56	22.08	20.53	21.51	1.19	0.52	31.83	15.28	3.09
2000	16.47	22.10	20.28	21.11	1.19	0.51	31.73	15.34	2.96
2100	16.34	22.10	20.20	20.71	1.20	0.51	31.63	15.21	3.15
2200	16.24	22.15	19.76	20.41	1.21	0.50	31.58	15.39	2.99
2300	16.12	22.14	19.23	20.23	1.22	0.49	31.62	15.48	3.17
2400	16.01	22.17	18.79	20.12	1.23	0.48	31.58	15.51	3.09
2500	15.90	22.18	18.33	19.90	1.24	0.47	31.49	15.57	3.09
2600	15.81	22.19	17.88	19.68	1.24	0.47	31.67	15.53	3.07
2700	15.70	22.23	17.30	19.51	1.25	0.46	31.50	15.46	3.14
2800	15.58	22.28	16.94	19.57	1.27	0.45	31.48	15.43	3.05
2900	15.50	22.29	16.48	19.43	1.27	0.44	31.45	15.45	3.16
3000	15.39	22.34	16.05	19.47	1.28	0.44	31.28	15.46	3.06
3100	15.29	22.33	15.58	19.43	1.29	0.43	31.17	15.42	3.26
3200	15.20	22.36	15.21	19.55	1.30	0.42	30.98	15.44	3.05
3300	15.12	22.42	15.00	19.56	1.31	0.42	31.04	15.52	3.32
3400	15.06	22.43	14.86	19.17	1.32	0.41	30.89	15.53	3.12
3500	14.97	22.42	14.68	18.87	1.32	0.41	30.72	15.33	3.09
3600	14.86	22.50	14.62	18.94	1.34	0.40	30.45	15.26	3.20
3700	14.82	22.50	14.37	18.65	1.34	0.40	30.11	15.21	3.11
3800	14.75	22.49	14.32	18.51	1.35	0.40	29.80	15.13	3.24
4000	14.62	22.62	14.01	19.08	1.38	0.39	29.77	15.03	3.13

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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		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Delta			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	17.85	21.64	23.44	55.81	1.09	0.65	27.43	12.77	2.97
100	17.84	21.76	22.40	43.69	1.10	0.64	27.55	12.85	3.10
200	17.81	21.73	21.68	39.90	1.10	0.64	27.50	12.76	2.98
300	17.76	21.77	23.08	42.49	1.10	0.63	27.54	12.67	3.21
400	17.70	21.72	23.72	34.59	1.10	0.63	27.25	13.02	3.10
500	17.63	21.72	23.82	31.41	1.11	0.62	27.30	12.91	3.06
600	17.57	21.72	23.65	31.04	1.11	0.62	27.29	12.81	3.14
700	17.49	21.74	23.58	29.91	1.12	0.61	27.70	12.91	3.00
800	17.43	21.75	23.21	28.40	1.12	0.61	27.97	12.90	3.11
900	17.34	21.71	22.79	27.73	1.12	0.60	28.07	12.87	2.99
1000	17.26	21.71	22.59	27.23	1.12	0.60	27.94	12.93	3.04
1100	17.18	21.75	22.52	26.56	1.13	0.59	27.78	12.65	2.98
1200	17.07	21.75	22.40	25.81	1.14	0.58	27.75	12.32	3.04
1300	16.99	21.78	21.86	25.16	1.14	0.57	27.71	12.48	3.02
1400	16.89	21.77	21.19	24.68	1.15	0.56	27.49	12.38	3.10
1500	16.79	21.79	20.82	24.02	1.15	0.56	27.49	12.40	3.12
1600	16.68	21.80	20.48	23.39	1.16	0.55	27.71	12.40	3.08
1700	16.56	21.86	20.04	22.99	1.17	0.54	28.12	12.46	3.05
1800	16.47	21.86	19.56	22.33	1.18	0.53	28.14	12.45	3.21
1900	16.37	21.88	19.23	21.86	1.18	0.52	27.97	12.59	3.06
2000	16.28	21.90	18.97	21.35	1.19	0.51	27.86	12.57	2.92
2100	16.17	21.91	18.93	20.95	1.20	0.51	27.78	12.53	3.10
2200	16.05	21.96	18.55	20.55	1.21	0.50	27.82	12.62	2.92
2300	15.94	21.93	18.03	20.27	1.21	0.49	27.94	12.77	3.13
2400	15.83	21.96	17.74	20.07	1.22	0.48	28.07	12.85	3.10
2500	15.72	22.02	17.35	19.82	1.23	0.47	28.17	12.91	3.04
2600	15.62	21.98	16.90	19.56	1.23	0.47	28.42	12.83	3.03
2700	15.52	22.05	16.42	19.32	1.25	0.46	28.39	12.74	3.09
2800	15.40	22.11	16.09	19.32	1.26	0.45	28.42	12.82	3.01
2900	15.32	22.08	15.62	19.13	1.26	0.45	28.45	12.80	3.11
3000	15.22	22.17	15.22	19.09	1.28	0.44	28.46	12.85	3.06
3100	15.11	22.16	14.82	19.01	1.28	0.43	28.43	12.89	3.22
3200	15.03	22.18	14.49	19.09	1.29	0.43	28.52	12.96	2.96
3300	14.95	22.26	14.32	19.07	1.31	0.42	28.64	13.03	3.27
3400	14.89	22.26	14.11	18.71	1.31	0.42	28.59	13.05	3.06
3500	14.81	22.25	13.94	18.44	1.31	0.41	28.44	12.80	3.04
3600	14.71	22.32	13.89	18.45	1.33	0.40	28.07	12.77	3.14
3700	14.67	22.32	13.63	18.14	1.33	0.40	27.70	12.77	3.05
3800	14.59	22.31	13.63	18.03	1.34	0.40	27.50	12.70	3.18
4000	14.47	22.42	13.38	18.54	1.36	0.39	27.53	12.70	3.08

MMIC Amplifier

GALI-51F+

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		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Delta			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	18.22	21.84	28.64	29.03	1.08	0.66	34.24	17.67	3.07
100	18.22	21.97	27.02	29.62	1.09	0.65	34.41	17.76	3.22
200	18.18	22.09	25.78	31.22	1.10	0.64	34.44	17.64	3.05
300	18.13	22.05	27.96	27.77	1.10	0.63	34.48	17.58	3.30
400	18.07	22.04	28.91	25.92	1.10	0.63	33.96	17.84	3.17
500	18.00	22.04	28.87	25.26	1.11	0.63	33.93	17.76	3.19
600	17.94	22.04	28.10	25.35	1.11	0.62	33.91	17.63	3.19
700	17.85	22.07	27.82	24.97	1.11	0.61	34.31	17.69	3.12
800	17.78	22.05	27.31	24.36	1.12	0.61	34.72	17.74	3.20
900	17.70	22.04	26.70	24.27	1.12	0.60	34.77	17.68	3.11
1000	17.61	22.05	26.07	24.12	1.12	0.60	34.60	17.69	3.09
1100	17.53	22.07	25.73	23.59	1.13	0.59	34.49	17.47	3.07
1200	17.42	22.08	25.45	23.05	1.14	0.58	34.46	17.16	3.15
1300	17.31	22.09	24.45	22.79	1.14	0.57	34.32	17.32	3.12
1400	17.21	22.11	23.65	22.52	1.15	0.56	34.02	17.24	3.19
1500	17.11	22.10	23.27	22.17	1.16	0.56	33.99	17.16	3.22
1600	17.01	22.12	22.80	21.80	1.16	0.55	34.27	17.19	3.17
1700	16.89	22.14	22.24	21.69	1.17	0.54	34.86	17.29	3.15
1800	16.78	22.20	21.62	21.35	1.18	0.53	34.86	17.20	3.32
1900	16.68	22.17	21.41	21.15	1.19	0.52	34.56	17.31	3.14
2000	16.57	22.19	21.12	20.79	1.19	0.52	34.34	17.36	3.03
2100	16.45	22.25	21.04	20.41	1.21	0.50	34.15	17.24	3.19
2200	16.35	22.25	20.60	20.16	1.21	0.50	33.99	17.35	3.05
2300	16.24	22.28	19.98	20.02	1.22	0.49	33.86	17.41	3.20
2400	16.13	22.25	19.56	19.97	1.23	0.48	33.74	17.41	3.15
2500	16.01	22.31	19.06	19.82	1.24	0.47	33.46	17.42	3.12
2600	15.92	22.33	18.56	19.62	1.25	0.47	33.53	17.36	3.11
2700	15.80	22.32	17.96	19.50	1.25	0.46	33.25	17.31	3.18
2800	15.68	22.42	17.59	19.64	1.27	0.45	33.22	17.28	3.11
2900	15.60	22.40	17.11	19.53	1.28	0.44	33.00	17.30	3.20
3000	15.49	22.46	16.65	19.59	1.29	0.43	32.78	17.24	3.15
3100	15.39	22.49	16.14	19.61	1.30	0.43	32.59	17.09	3.32
3200	15.30	22.51	15.74	19.76	1.31	0.42	32.39	17.11	3.14
3300	15.22	22.54	15.55	19.75	1.32	0.42	32.36	17.14	3.36
3400	15.16	22.55	15.40	19.37	1.32	0.41	32.08	17.12	3.17
3500	15.07	22.54	15.19	19.07	1.33	0.41	31.86	16.91	3.15
3600	14.97	22.60	15.14	19.15	1.35	0.40	31.64	16.82	3.28
3700	14.93	22.62	14.89	18.90	1.35	0.40	31.21	16.72	3.17
3800	14.86	22.62	14.82	18.72	1.36	0.40	31.02	16.55	3.30
4000	14.71	22.72	14.51	19.33	1.39	0.39	30.92	16.21	3.20

MMIC Amplifier

GALI-51F+

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		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Delta			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	17.87	21.94	26.87	35.09	1.11	0.62	30.55	15.83	3.87
100	17.84	21.84	27.54	31.12	1.10	0.63	30.69	15.98	4.05
200	17.81	21.77	28.80	29.31	1.10	0.63	30.83	15.90	3.90
300	17.74	21.84	27.70	29.10	1.11	0.62	30.75	15.73	4.19
400	17.68	21.83	25.84	29.92	1.11	0.62	30.15	15.98	4.05
500	17.61	21.86	25.16	29.52	1.12	0.61	30.06	15.85	4.09
600	17.54	21.82	24.76	29.48	1.12	0.61	30.03	15.72	4.09
700	17.44	21.85	24.48	28.80	1.13	0.60	30.38	15.84	4.04
800	17.37	21.84	23.73	28.08	1.13	0.59	30.65	15.86	4.11
900	17.29	21.88	23.11	27.60	1.13	0.59	30.66	15.78	4.05
1000	17.19	21.85	22.75	26.95	1.14	0.58	30.48	15.83	4.03
1100	17.10	21.90	22.36	26.30	1.15	0.57	30.31	15.56	4.03
1200	16.98	21.91	22.02	25.63	1.15	0.56	30.24	15.22	4.09
1300	16.87	21.92	21.70	24.89	1.16	0.55	30.14	15.31	4.08
1400	16.77	21.95	21.31	24.21	1.17	0.55	29.83	15.28	4.16
1500	16.66	21.95	21.01	23.53	1.17	0.54	29.80	15.19	4.22
1600	16.55	21.98	20.57	22.90	1.18	0.53	30.10	15.20	4.17
1700	16.43	22.02	20.26	22.46	1.19	0.52	30.66	15.38	4.14
1800	16.32	22.06	19.72	21.87	1.20	0.51	30.52	15.21	4.32
1900	16.21	22.05	19.32	21.56	1.21	0.50	30.17	15.32	4.18
2000	16.10	22.05	18.76	21.18	1.21	0.49	29.96	15.31	3.99
2100	15.98	22.09	18.42	20.97	1.23	0.48	29.79	15.28	4.23
2200	15.87	22.13	17.91	20.78	1.24	0.48	29.66	15.28	4.02
2300	15.75	22.18	17.43	20.58	1.25	0.47	29.54	15.44	4.23
2400	15.64	22.17	16.99	20.42	1.25	0.46	29.47	15.42	4.17
2500	15.52	22.19	16.50	20.17	1.26	0.45	29.23	15.37	4.16
2600	15.41	22.25	16.13	20.00	1.28	0.44	29.29	15.32	4.19
2700	15.29	22.23	15.79	19.78	1.28	0.44	29.00	15.27	4.23
2800	15.17	22.33	15.46	19.65	1.30	0.42	28.96	15.24	4.18
2900	15.07	22.32	15.10	19.37	1.31	0.42	28.88	15.22	4.24
3000	14.98	22.37	14.79	19.17	1.32	0.41	28.71	15.13	4.09
3100	14.85	22.43	14.50	18.92	1.33	0.40	28.47	14.98	4.42
3200	14.75	22.43	14.20	18.70	1.34	0.40	28.30	15.06	4.14
3300	14.66	22.52	13.90	18.49	1.36	0.39	28.23	15.09	4.45
3400	14.59	22.54	13.58	18.26	1.36	0.39	28.10	14.98	4.29
3500	14.49	22.51	13.32	18.09	1.37	0.38	27.86	14.68	4.22
3600	14.40	22.59	13.16	18.18	1.39	0.38	27.62	14.53	4.41
3700	14.34	22.61	12.82	18.03	1.39	0.37	27.39	14.42	4.24
3800	14.27	22.62	12.67	17.92	1.40	0.37	27.20	14.26	4.47
4000	14.12	22.74	12.41	18.29	1.43	0.36	26.94	13.92	4.31

MMIC Amplifier

GALI-51F+

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		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Delta			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	17.58	21.50	23.24	39.73	1.10	0.64	26.94	13.17	3.83
100	17.55	21.54	23.76	52.29	1.10	0.63	27.11	13.32	3.98
200	17.51	21.54	24.33	41.51	1.11	0.63	27.20	13.25	3.87
300	17.44	21.58	23.86	36.71	1.11	0.62	27.12	13.14	4.11
400	17.37	21.64	22.62	33.01	1.12	0.61	26.61	13.36	4.03
500	17.30	21.60	22.25	31.48	1.12	0.61	26.58	13.21	4.03
600	17.25	21.58	22.15	31.05	1.12	0.61	26.56	13.12	4.06
700	17.16	21.59	21.98	30.02	1.13	0.60	26.92	13.20	3.96
800	17.08	21.60	21.33	29.03	1.13	0.59	27.19	13.24	4.07
900	16.99	21.62	20.87	28.26	1.14	0.58	27.22	13.18	4.00
1000	16.90	21.62	20.70	27.51	1.14	0.58	27.09	13.20	4.00
1100	16.82	21.64	20.45	26.85	1.15	0.57	26.89	12.92	3.98
1200	16.71	21.67	20.18	26.11	1.15	0.56	26.86	12.59	4.05
1300	16.62	21.68	19.91	25.20	1.16	0.55	26.79	12.68	4.02
1400	16.52	21.66	19.56	24.50	1.16	0.55	26.56	12.67	4.14
1500	16.40	21.70	19.28	23.82	1.17	0.54	26.56	12.63	4.16
1600	16.31	21.73	19.01	23.08	1.18	0.53	26.82	12.67	4.09
1700	16.18	21.77	18.75	22.53	1.19	0.52	27.31	12.82	4.09
1800	16.08	21.77	18.30	21.86	1.19	0.51	27.29	12.71	4.27
1900	15.97	21.79	17.91	21.50	1.20	0.50	27.02	12.85	4.11
2000	15.86	21.82	17.41	21.00	1.21	0.49	26.86	12.88	3.95
2100	15.73	21.88	17.11	20.72	1.22	0.48	26.76	12.66	4.20
2200	15.62	21.88	16.68	20.45	1.23	0.48	26.75	12.78	3.97
2300	15.51	21.94	16.26	20.22	1.24	0.47	26.82	12.96	4.20
2400	15.40	21.96	15.94	19.98	1.25	0.46	26.87	13.02	4.10
2500	15.29	21.96	15.52	19.73	1.26	0.45	26.82	12.98	4.10
2600	15.19	22.00	15.17	19.51	1.27	0.44	27.04	12.96	4.12
2700	15.08	22.03	14.88	19.27	1.27	0.44	26.79	12.94	4.18
2800	14.96	22.08	14.55	19.15	1.29	0.43	26.85	12.92	4.08
2900	14.86	22.12	14.17	18.80	1.30	0.42	26.80	12.96	4.20
3000	14.74	22.15	13.90	18.54	1.31	0.41	26.74	12.91	4.01
3100	14.64	22.15	13.67	18.32	1.32	0.41	26.66	12.88	4.37
3200	14.55	22.24	13.42	18.07	1.33	0.40	26.60	13.05	4.08
3300	14.46	22.31	13.12	17.84	1.34	0.39	26.61	13.06	4.41
3400	14.38	22.31	12.80	17.58	1.35	0.39	26.51	13.02	4.21
3500	14.28	22.29	12.56	17.37	1.35	0.39	26.26	12.74	4.15
3600	14.18	22.41	12.40	17.41	1.38	0.38	25.96	12.69	4.36
3700	14.12	22.41	12.11	17.23	1.38	0.38	25.74	12.64	4.17
3800	14.05	22.42	11.99	17.13	1.39	0.37	25.57	12.60	4.40
4000	13.92	22.49	11.75	17.51	1.41	0.37	25.54	12.46	4.23

MMIC Amplifier

GALI-51F+

Typical Performance Data

Definitions:

Input Return Loss = -S11 (dB)

Gain(Power Gain) = S21 (dB)

Reverse Isolation = -S12 (dB)

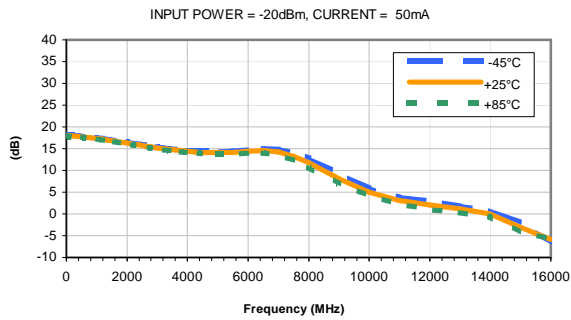
Output Return Loss = -S22 (dB)

TEST CONDITIONS: Icc = 60mA, Vd = 4.33V @Temperature = +85degC

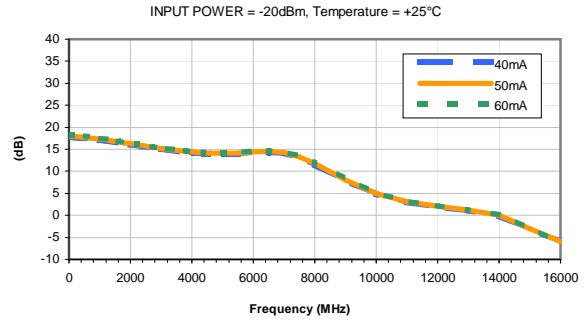
FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Delta			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	18.04	21.85	30.22	29.06	1.09	0.64	33.16	17.51	3.91
100	18.04	21.96	31.09	27.00	1.10	0.64	33.34	17.57	4.13
200	17.99	21.99	32.64	25.90	1.10	0.63	33.43	17.55	3.93
300	17.91	21.98	30.87	25.84	1.11	0.62	33.34	17.43	4.25
400	17.85	22.01	28.29	26.79	1.11	0.62	32.70	17.60	4.11
500	17.77	22.01	27.40	26.86	1.12	0.61	32.50	17.46	4.18
600	17.71	21.99	27.01	26.77	1.12	0.61	32.40	17.35	4.14
700	17.62	22.02	26.47	26.50	1.13	0.60	32.78	17.39	4.09
800	17.53	22.02	25.47	26.10	1.13	0.59	32.98	17.43	4.16
900	17.45	22.04	24.69	25.90	1.14	0.59	33.01	17.33	4.13
1000	17.34	22.03	24.29	25.55	1.14	0.58	32.74	17.35	4.09
1100	17.24	22.04	23.80	24.95	1.15	0.57	32.59	17.23	4.10
1200	17.14	22.06	23.42	24.49	1.15	0.56	32.47	16.98	4.16
1300	17.03	22.08	22.95	24.01	1.16	0.56	32.33	17.03	4.13
1400	16.92	22.08	22.49	23.44	1.17	0.55	31.97	17.00	4.23
1500	16.82	22.12	22.13	22.95	1.18	0.54	31.86	16.97	4.28
1600	16.71	22.13	21.72	22.36	1.18	0.53	32.24	16.96	4.22
1700	16.58	22.18	21.32	22.02	1.20	0.52	32.75	17.03	4.18
1800	16.47	22.19	20.72	21.53	1.20	0.51	32.49	16.92	4.38
1900	16.36	22.21	20.27	21.28	1.21	0.50	32.05	16.96	4.22
2000	16.26	22.24	19.60	21.04	1.22	0.49	31.83	17.01	4.06
2100	16.12	22.27	19.23	20.86	1.23	0.48	31.49	16.93	4.29
2200	16.01	22.27	18.73	20.70	1.24	0.48	31.25	16.91	4.10
2300	15.89	22.30	18.16	20.57	1.25	0.47	31.00	16.92	4.31
2400	15.77	22.34	17.75	20.47	1.26	0.46	30.71	16.83	4.22
2500	15.65	22.33	17.24	20.26	1.27	0.45	30.40	16.74	4.21
2600	15.56	22.39	16.84	20.13	1.28	0.44	30.31	16.74	4.26
2700	15.43	22.39	16.44	19.93	1.29	0.44	29.96	16.65	4.28
2800	15.31	22.47	16.11	19.84	1.31	0.42	29.90	16.57	4.26
2900	15.21	22.47	15.67	19.58	1.31	0.42	29.74	16.50	4.32
3000	15.09	22.51	15.38	19.41	1.33	0.41	29.48	16.38	4.15
3100	14.99	22.55	15.07	19.18	1.34	0.40	29.28	16.17	4.45
3200	14.89	22.62	14.78	18.99	1.35	0.40	28.99	16.15	4.22
3300	14.80	22.65	14.44	18.82	1.36	0.39	28.86	16.12	4.50
3400	14.73	22.65	14.08	18.62	1.37	0.39	28.73	15.98	4.35
3500	14.63	22.66	13.81	18.43	1.37	0.38	28.46	15.69	4.30
3600	14.52	22.71	13.64	18.57	1.39	0.38	28.29	15.52	4.49
3700	14.46	22.72	13.31	18.43	1.40	0.37	28.03	15.30	4.31
3800	14.39	22.76	13.13	18.33	1.41	0.37	27.79	15.15	4.56
4000	14.25	22.85	12.86	18.75	1.44	0.36	27.48	14.70	4.39

Typical Performance Curves

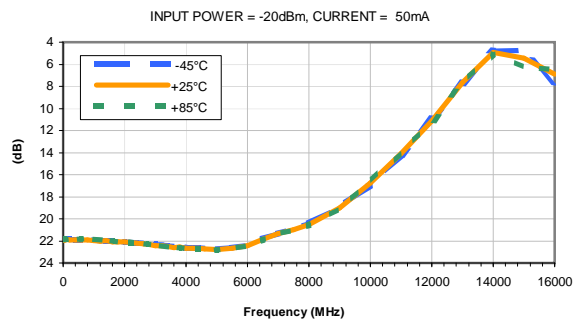
GAIN vs. TEMPERATURE



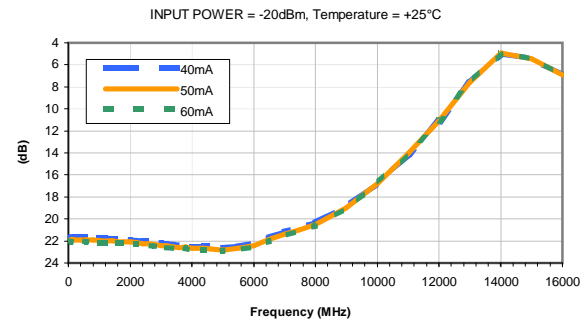
GAIN vs. CURRENT



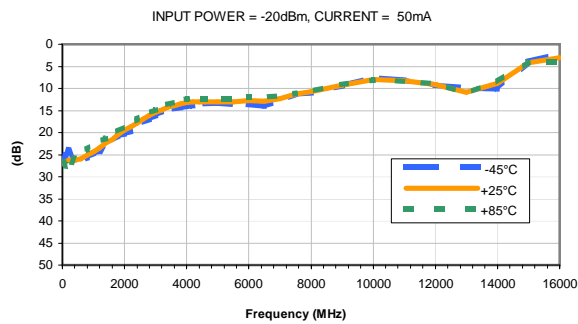
ISOLATION vs. TEMPERATURE



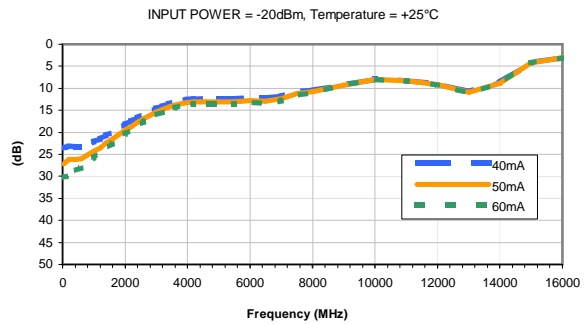
ISOLATION vs. CURRENT



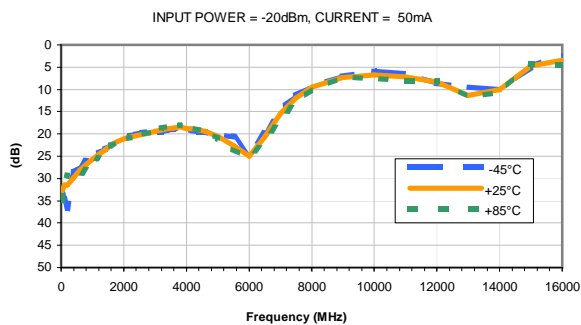
INPUT RETURN LOSS vs. TEMPERATURE



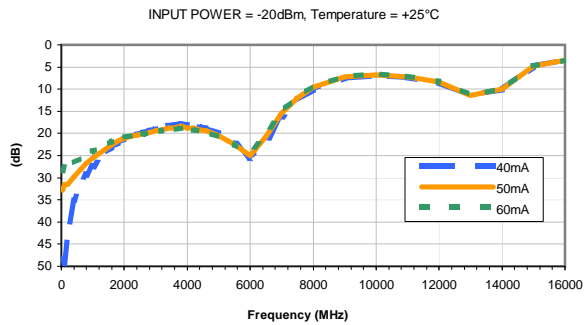
INPUT RETURN LOSS vs. CURRENT



OUTPUT RETURN LOSS vs. TEMPERATURE



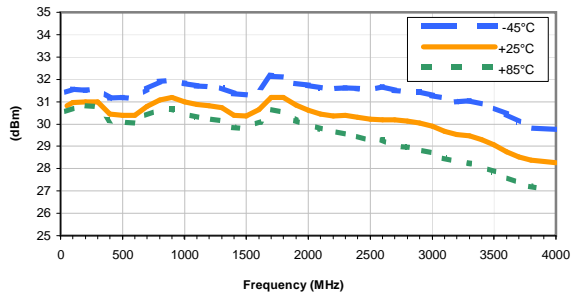
OUTPUT RETURN LOSS vs. CURRENT



Typical Performance Curves

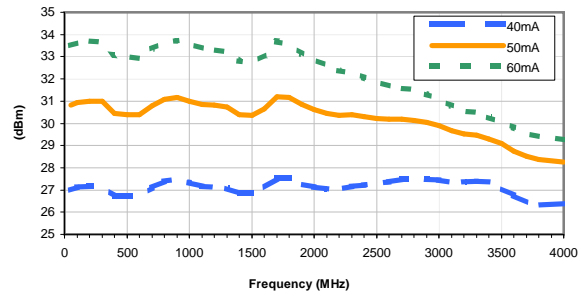
OUTPUT IP-3 vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 50mA



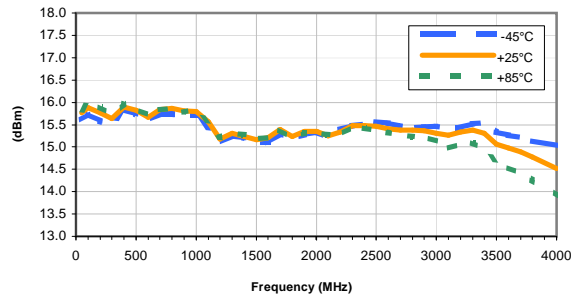
OUTPUT IP-3 vs. CURRENT

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



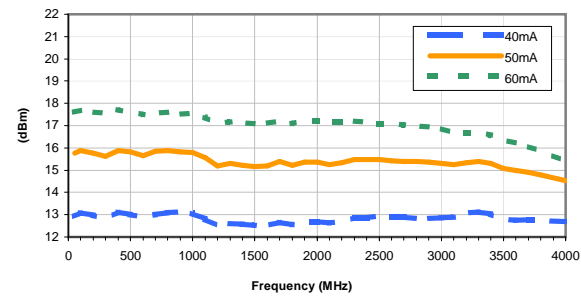
OUTPUT POWER at 1dB Compression vs. TEMPERATURE

CURRENT = 50mA



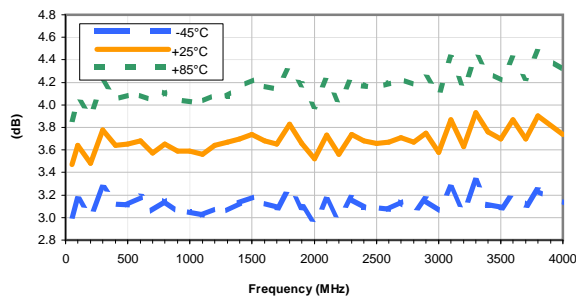
OUTPUT POWER at 1dB Compression vs. CURRENT

Temperature = +25°C



Noise Figure vs. TEMPERATURE

CURRENT = 50mA



Noise Figure vs. CURRENT

Temperature = +25°C

