MMIC Amplifier GALI-59+

Typical Performance Data

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

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

TEST CONDITIONS: Icc = 65mA, Vd = 4.83V @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	20.87	24.09	23.70	38.54	1.07	0.69	50	35.12	18.41	2.88
100	20.83	24.06	23.79	36.64	1.07	0.69	100	34.82	18.43	3.07
200	20.76	24.17	24.27	33.77	1.08	0.68	200	34.89	18.34	2.93
400	20.59	24.19	24.01	28.76	1.08	0.66	300	34.82	18.29	3.16
600	20.39	24.14	23.82	25.68	1.09	0.65	400	34.24	18.33	3.09
800	20.14	24.14	23.41	23.33	1.10	0.63	500	33.74	18.21	3.08
1000	19.87	24.09	22.98	21.64	1.11	0.61	600	33.56	18.13	3.06
1200	19.56	24.09	22.25	20.34	1.12	0.59	700	33.53	18.13	3.06
1400	19.26	24.05	21.37	19.12	1.13	0.57	800	33.44	18.08	3.10
1600	18.93	24.03	20.61	18.17	1.15	0.54	900	33.35	17.94	3.05
1800	18.60	24.00	19.69	17.37	1.16	0.52	1000	33.11	17.98	3.10
2000	18.28	23.96	18.83	16.72	1.17	0.50	1100	32.85	17.91	3.01
2200	17.95	23.94	18.09	16.15	1.19	0.48	1200	32.58	17.74	3.05
2400	17.62	23.91	17.27	15.65	1.21	0.46	1300	32.26	17.75	3.03
2600	17.32	23.90	16.52	15.24	1.22	0.44	1400	31.91	17.66	3.17
2800	17.00	23.87	15.85	14.94	1.24	0.42	1500	31.67	17.60	3.23
3000	16.74	23.85	15.17	14.60	1.25	0.41	1600	31.83	17.56	3.18
3200	16.47	23.78	14.54	14.37	1.26	0.40	1700	32.00	17.47	3.19
3400	16.24	23.75	13.97	14.10	1.27	0.38	1800	31.74	17.43	3.25
3600	16.00	23.74	13.67	14.14	1.29	0.37	1900	31.33	17.36	3.18
3800	15.81	23.61	13.18	13.98	1.28	0.37	2000	31.16	17.31	3.11
4000	15.64	23.60	12.90	14.04	1.30	0.36	2100	30.93	17.21	3.21
4200	15.44	23.42	12.76	13.90	1.29	0.36	2200	30.56	16.97	3.13
4400	15.31	23.40	12.72	13.96	1.31	0.35	2300	30.22	16.78	3.14
4600	15.21	23.37	12.56	13.98	1.31	0.35	2400	29.92	16.59	3.21
5000	14.96	23.21	12.83	14.19	1.33	0.34	2500	29.76	16.42	3.10
5500	14.75	22.94	12.98	14.11	1.32	0.35	2600	29.57	16.21	3.23
6000	14.65	22.76	12.69	13.84	1.31	0.35	2700	29.46	16.15	3.20
6500	14.44	22.43	12.09	13.10	1.29	0.37	2800	29.35	15.95	3.18
7000	13.82	22.42	10.68	11.43	1.33	0.38	3000	28.97	15.79	3.09
7500	12.54	22.21	9.57	10.03	1.42	0.37	3200	28.20	15.17	3.23
8000	10.79	21.85	8.86	9.09	1.58	0.37	3400	27.70	14.91	3.27
9000	6.79	19.87	7.41	7.67	1.78	0.38	3600	27.32	14.60	3.36
10000	3.43	17.49	6.33	6.81	1.78	0.38	3800	26.86	14.06	3.44
11000	1.63	14.16	6.40	7.06	1.48	0.36	4000	26.30	13.60	3.27
12000	0.82	10.90	8.39	8.94	1.32	0.31	4200	25.89	13.00	3.30
13000	0.50	7.02	12.32	13.46	1.14	0.42	4400	25.49	12.63	3.45
14000	-0.11	4.17	12.30	15.07	1.05	0.61	4600	25.15	12.23	3.72
15000	-2.52	4.39	5.27	5.81	1.03	0.70	4800	24.80	11.81	3.82
16000	-5.12	5.90	3.85	3.83	1.12	0.68	5000	24.44	11.47	3.73

Typical Performance Data

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

TEST CONDITIONS: Icc = 52mA, Vd = 4.75V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability	
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta
50	20.66	24.14	21.54	30.30	1.08	0.67
100	20.62	23.94	21.67	29.24	1.07	0.68
200	20.54	24.05	22.08	28.68	1.08	0.67
400	20.39	24.03	21.92	26.97	1.08	0.66
600	20.21	23.97	21.86	24.79	1.09	0.65
800	19.96	23.94	21.72	22.97	1.10	0.63
1000	19.69	23.91	21.35	21.46	1.10	0.61
1200	19.39	23.90	20.79	20.27	1.12	0.59
1400	19.09	23.86	20.13	19.11	1.13	0.57
1600	18.76	23.86	19.43	18.18	1.14	0.54
1800	18.44	23.81	18.64	17.40	1.15	0.52
2000	18.11	23.77	17.83	16.72	1.17	0.50
2200	17.79	23.80	17.20	16.18	1.19	0.48
2400	17.47	23.74	16.46	15.67	1.20	0.46
2600	17.16	23.73	15.73	15.25	1.21	0.44
2800	16.85	23.72	15.13	14.96	1.23	0.42
3000	16.60	23.67	14.50	14.62	1.24	0.41
3200	16.33	23.64	13.92	14.40	1.25	0.39
3400	16.09	23.58	13.36	14.14	1.26	0.38
3600	15.84	23.61	13.08	14.16	1.28	0.37
3800	15.65	23.49	12.66	14.03	1.28	0.36
4000	15.47	23.45	12.35	14.08	1.29	0.36
4200	15.28	23.31	12.23	13.99	1.29	0.35
4400	15.14	23.29	12.19	14.09	1.30	0.35
4600	15.04	23.25	12.05	14.12	1.31	0.34
5000	14.78	23.10	12.32	14.45	1.33	0.34
5500	14.55	22.88	12.45	14.59	1.33	0.34
6000	14.41	22.71	12.20	14.51	1.33	0.34
6500	14.18	22.38	11.68	13.89	1.31	0.36
7000	13.51	22.35	10.40	12.14	1.36	0.37
7500	12.23	22.15	9.39	10.66	1.46	0.36
8000	10.50	21.79	8.74	9.60	1.62	0.36
9000	6.57	19.83	7.34	8.02	1.82	0.37
10000	3.26	17.51	6.29	7.06	1.82	0.37
11000	1.49	14.20	6.35	7.28	1.51	0.35
12000	0.68	10.97	8.28	9.13	1.34	0.30
13000	0.39	7.08	12.14	13.49	1.15	0.41
14000	-0.18	4.20	12.18	15.23	1.05	0.60
15000	-2.58	4.41	5.24	5.86	1.04	0.70
16000	-5.15	5.90	3.84	3.83	1.12	0.67

FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dBm)	(dBm)	(dB)
50	31.80	16.69	2.82
100	31.55	16.73	2.92
200	31.69	16.60	2.83
300	31.70	16.56	3.10
400	31.28	16.67	2.97
500	31.01	16.60	2.94
600	30.97	16.53	2.95
700	31.15	16.54	2.94
800	31.19	16.57	3.00
900	31.22	16.40	2.91
1000	31.10	16.36	2.96
1100	30.95	16.31	2.89
1200	30.80	16.12	2.99
1300	30.61	16.22	2.91
1400	30.36	16.10	3.06
1500	30.21	16.06	3.12
1600	30.40	16.02	3.06
1700	30.71	15.96	3.11
1800	30.53	16.03	3.14
1900	30.20	15.90	3.04
2000	30.06	15.96	3.05
2100	29.89	15.96	3.08
2200	29.63	15.84	2.98
2300	29.39	15.80	3.01
2400	29.17	15.66	3.07
2500	29.03	15.55	3.02
2600	28.85	15.36	3.09
2700	28.70	15.26	3.09
2800	28.63	15.14	3.05
3000	28.28	14.98	2.93
3200	27.53	14.47	3.02
3400	27.11	14.21	3.09
3600	26.71	13.84	3.20
3800	26.23	13.34	3.28
4000	25.67	12.92	3.10
4200	25.31	12.31	3.18
4400	24.85	11.90	3.27
4600	24.49	11.51	3.56
4800	24.16	11.08	3.63
5000	23.81	10.80	3.57

Typical Performance Data

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

TEST CONDITIONS: Icc = 78mA, Vd = 4.91V @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	21.01	24.05	25.35	50.78	1.06	0.70	50	37.77	19.39	2.96
100	20.95	24.20	25.47	43.54	1.07	0.69	100	37.42	19.43	3.13
200	20.88	24.29	25.86	35.80	1.08	0.68	200	37.22	19.31	2.99
400	20.72	24.27	25.56	29.11	1.08	0.66	300	36.89	19.30	3.27
600	20.52	24.26	25.36	25.65	1.09	0.65	400	36.12	19.28	3.16
800	20.26	24.23	24.81	23.26	1.10	0.63	500	35.31	19.07	3.16
1000	19.98	24.21	24.21	21.52	1.11	0.61	600	34.88	19.00	3.10
1200	19.68	24.22	23.31	20.22	1.12	0.59	700	34.63	18.91	3.13
1400	19.37	24.17	22.30	19.02	1.13	0.57	800	34.36	18.86	3.16
1600	19.04	24.13	21.42	18.07	1.15	0.55	900	34.09	18.65	3.13
1800	18.71	24.12	20.44	17.30	1.16	0.52	1000	33.75	18.73	3.13
2000	18.37	24.05	19.45	16.63	1.17	0.50	1100	33.46	18.66	3.09
2200	18.05	24.08	18.71	16.08	1.19	0.48	1200	33.09	18.46	3.13
2400	17.72	24.04	17.86	15.60	1.21	0.46	1300	32.69	18.42	3.11
2600	17.42	23.99	17.05	15.18	1.22	0.44	1400	32.32	18.29	3.25
2800	17.11	23.96	16.37	14.88	1.24	0.43	1500	32.06	18.24	3.29
3000	16.85	23.92	15.67	14.53	1.25	0.41	1600	32.15	18.16	3.25
3200	16.58	23.90	15.01	14.32	1.26	0.40	1700	32.17	18.01	3.27
3400	16.36	23.83	14.41	14.04	1.27	0.39	1800	31.85	18.00	3.35
3600	16.11	23.79	14.11	14.04	1.29	0.38	1900	31.48	17.89	3.24
3800	15.93	23.70	13.62	13.87	1.29	0.37	2000	31.31	17.82	3.19
4000	15.75	23.69	13.30	13.91	1.30	0.36	2100	31.09	17.70	3.27
4200	15.57	23.48	13.16	13.76	1.29	0.36	2200	30.69	17.43	3.21
4400	15.43	23.48	13.12	13.80	1.31	0.35	2300	30.35	17.20	3.19
4600	15.34	23.43	12.94	13.77	1.31	0.35	2400	30.03	17.00	3.29
5000	15.10	23.27	13.23	13.89	1.32	0.35	2500	29.91	16.87	3.19
5500	14.90	23.00	13.37	13.71	1.31	0.35	2600	29.70	16.67	3.31
6000	14.82	22.81	13.06	13.32	1.29	0.36	2700	29.56	16.58	3.28
6500	14.68	22.45	12.44	12.49	1.27	0.38	2800	29.45	16.47	3.27
7000	14.08	22.42	10.90	10.87	1.29	0.39	3000	29.10	16.26	3.19
7500	12.81	22.25	9.72	9.55	1.38	0.39	3200	28.32	15.65	3.27
8000	11.05	21.89	8.96	8.69	1.54	0.38	3400	27.85	15.41	3.35
9000	6.99	19.89	7.45	7.41	1.74	0.39	3600	27.48	15.09	3.47
10000	3.59	17.48	6.37	6.61	1.74	0.39	3800	27.05	14.57	3.55
11000	1.77	14.13	6.45	6.88	1.46	0.37	4000	26.48	14.09	3.37
12000	0.94	10.86	8.50	8.79	1.30	0.32	4200	26.13	13.55	3.43
13000	0.60	6.98	12.49	13.40	1.13	0.43	4400	25.75	13.19	3.55
14000	-0.04	4.15	12.41	14.91	1.04	0.61	4600	25.43	12.79	3.82
15000	-2.47	4.38	5.29	5.79	1.03	0.70	4800	25.08	12.32	3.90
16000	-5.09	5.89	3.85	3.81	1.12	0.68	5000	24.72	12.04	3.85

Typical Performance Data

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

TEST CONDITIONS: Icc = 65mA, Vd = 5.06V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability	
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta
50	21.01	24.16	23.56	39.73	1.06	0.70
100	20.97	24.24	22.79	34.36	1.07	0.69
200	20.89	24.31	23.21	32.70	1.08	0.68
400	20.75	24.21	24.56	29.40	1.08	0.67
600	20.57	24.20	24.62	25.87	1.08	0.66
800	20.34	24.18	23.96	23.38	1.09	0.64
1000	20.07	24.14	23.75	21.63	1.10	0.62
1200	19.77	24.10	22.84	20.41	1.11	0.60
1400	19.48	24.07	21.89	19.18	1.12	0.58
1600	19.16	24.02	20.86	18.36	1.13	0.56
1800	18.84	24.00	20.00	17.64	1.14	0.54
2000	18.53	23.95	19.40	16.90	1.16	0.52
2200	18.21	23.92	18.75	16.18	1.17	0.50
2400	17.88	23.87	18.00	15.54	1.18	0.48
2600	17.59	23.86	17.20	15.12	1.20	0.46
2800	17.28	23.80	16.39	14.87	1.21	0.44
3000	17.03	23.76	15.63	14.60	1.22	0.43
3200	16.78	23.71	14.84	14.51	1.23	0.42
3400	16.56	23.62	14.41	14.14	1.23	0.41
3600	16.32	23.62	14.21	13.99	1.25	0.39
3800	16.15	23.48	13.76	13.84	1.24	0.39
4000	15.98	23.45	13.48	13.86	1.25	0.38
4200	15.80	23.30	13.26	13.65	1.25	0.38
4400	15.66	23.27	13.09	13.81	1.26	0.37
4600	15.58	23.24	12.75	13.91	1.26	0.37
5000	15.35	23.11	13.06	13.90	1.27	0.36
5500	15.20	22.77	13.35	13.80	1.26	0.37
6000	15.24	22.51	13.09	13.99	1.23	0.39
6500	15.14	22.20	12.15	12.14	1.19	0.42
7000	14.62	22.21	10.24	10.40	1.20	0.43
7500	13.45	22.03	9.19	9.22	1.26	0.42
8000	11.84	21.62	8.71	8.70	1.39	0.42
9000	7.73	19.74	6.97	7.16	1.57	0.43
10000	4.07	17.62	5.77	6.05	1.60	0.43
11000	2.26	14.19	5.99	6.44	1.34	0.40
12000	1.60	10.78	8.12	8.82	1.21	0.35
13000	1.13	6.94	11.18	12.53	1.06	0.47
14000	0.48	3.97	12.59	14.68	0.99	0.64
15000	-1.67	3.77	5.18	5.74	0.97	0.78
16000	-5.59	6.47	2.68	2.70	1.02	0.76

FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dBm)	(dBm)	(dB)
50	35.70	18.65	2.34
100	35.45	18.72	2.51
200	35.53	18.57	2.41
300	35.63	18.57	2.67
400	35.13	18.65	2.56
500	34.66	18.57	2.51
600	34.57	18.48	2.50
700	34.60	18.47	2.48
800	34.53	18.46	2.53
900	34.44	18.33	2.44
1000	34.21	18.35	2.50
1100	34.02	18.27	2.39
1200	33.78	18.15	2.44
1300	33.49	18.18	2.44
1400	33.13	18.09	2.57
1500	32.93	18.06	2.60
1600	33.07	18.03	2.54
1700	33.25	17.98	2.57
1800	33.02	17.93	2.65
1900	32.69	17.91	2.53
2000	32.54	17.89	2.51
2100	32.32	17.85	2.56
2200	31.94	17.66	2.50
2300	31.66	17.48	2.49
2400	31.32	17.30	2.53
2500	31.07	17.12	2.46
2600	30.83	16.91	2.57
2700	30.71	16.85	2.56
2800	30.63	16.70	2.50
3000	30.34	16.54	2.46
3200	29.60	15.97	2.52
3400	29.10	15.72	2.55
3600	28.76	15.38	2.62
3800	28.28	14.90	2.70
4000	27.70	14.58	2.54
4200	27.37	14.02	2.61
4400	26.97	13.60	2.69
4600	26.68	13.18	2.93
4800	26.36	12.77	2.99
5000	26.01	12.44	2.98

Typical Performance Data

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

TEST CONDITIONS: Icc = 52mA, Vd = 4.97V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability	
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta
50	20.84	24.24	21.90	31.78	1.07	0.68
100	20.78	24.25	21.15	29.05	1.08	0.67
200	20.71	24.14	21.52	28.33	1.08	0.68
400	20.57	24.09	22.64	28.44	1.08	0.67
600	20.40	24.04	22.66	25.55	1.08	0.66
800	20.18	24.02	22.31	23.32	1.09	0.64
1000	19.91	23.95	22.18	21.66	1.10	0.62
1200	19.62	23.96	21.55	20.51	1.11	0.60
1400	19.33	23.89	20.73	19.28	1.11	0.58
1600	19.00	23.89	19.81	18.43	1.13	0.56
1800	18.70	23.85	19.01	17.71	1.14	0.54
2000	18.38	23.77	18.50	16.97	1.15	0.52
2200	18.07	23.76	17.95	16.26	1.17	0.50
2400	17.75	23.71	17.20	15.60	1.18	0.48
2600	17.45	23.69	16.47	15.18	1.19	0.46
2800	17.15	23.68	15.71	14.90	1.21	0.44
3000	16.90	23.62	14.94	14.62	1.21	0.43
3200	16.64	23.57	14.25	14.53	1.22	0.42
3400	16.43	23.49	13.82	14.19	1.22	0.40
3600	16.18	23.50	13.64	14.04	1.24	0.39
3800	16.01	23.38	13.21	13.90	1.24	0.39
4000	15.84	23.36	12.95	13.94	1.25	0.38
4200	15.65	23.19	12.74	13.75	1.24	0.37
4400	15.52	23.18	12.56	13.94	1.26	0.37
4600	15.42	23.16	12.27	14.08	1.26	0.36
5000	15.18	23.03	12.57	14.14	1.28	0.36
5500	15.02	22.68	12.82	14.18	1.26	0.37
6000	15.03	22.48	12.57	14.56	1.25	0.38
6500	14.89	22.15	11.71	12.78	1.21	0.41
7000	14.33	22.14	9.97	11.02	1.22	0.42
7500	13.15	22.00	9.00	9.77	1.30	0.41
8000	11.54	21.57	8.58	9.18	1.43	0.40
9000	7.49	19.73	6.90	7.47	1.62	0.42
10000	3.90	17.64	5.74	6.28	1.64	0.42
11000	2.11	14.23	5.93	6.65	1.36	0.38
12000	1.46	10.85	8.01	9.01	1.23	0.34
13000	1.01	6.99	11.02	12.64	1.07	0.46
14000	0.39	4.00	12.49	14.80	0.99	0.63
15000	-1.74	3.80	5.14	5.78	0.98	0.78
16000	-5.62	6.48	2.68	2.72	1.02	0.76

FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dBm)	(dBm)	(dB)
50	32.29	16.81	2.29
100	32.00	16.91	2.45
200	32.15	16.62	2.38
300	32.33	16.66	2.61
400	31.98	16.76	2.51
500	31.72	16.75	2.44
600	31.75	16.67	2.46
700	31.93	16.71	2.42
800	32.01	16.71	2.48
900	32.03	16.59	2.39
1000	31.93	16.51	2.47
1100	31.81	16.41	2.34
1200	31.72	16.27	2.42
1300	31.56	16.36	2.39
1400	31.36	16.28	2.51
1500	31.24	16.19	2.55
1600	31.42	16.20	2.52
1700	31.72	16.16	2.52
1800	31.55	16.20	2.59
1900	31.32	16.14	2.49
2000	31.21	16.18	2.46
2100	31.09	16.26	2.49
2200	30.87	16.18	2.43
2300	30.64	16.23	2.43
2400	30.41	16.16	2.47
2500	30.21	16.08	2.40
2600	29.99	15.88	2.51
2700	29.84	15.82	2.49
2800	29.77	15.69	2.45
3000	29.54	15.65	2.38
3200	28.83	15.14	2.40
3400	28.41	14.95	2.48
3600	28.03	14.65	2.56
3800	27.53	14.20	2.62
4000	27.03	13.84	2.46
4200	26.74	13.25	2.52
4400	26.26	12.87	2.62
4600	25.94	12.49	2.86
4800	25.57	12.02	2.93
5000	25.24	11.70	2.89

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 = 78mA, Vd = 5.13V @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	21.12	24.45	25.14	49.16	1.07	0.68	50	38.24	19.78	2.39
100	21.08	24.36	24.12	39.53	1.07	0.69	100	37.95	19.85	2.57
200	21.01	24.36	24.39	35.71	1.07	0.68	200	38.00	19.70	2.44
400	20.87	24.36	26.13	29.04	1.08	0.67	300	37.78	19.71	2.71
600	20.69	24.30	25.97	25.54	1.08	0.66	400	37.12	19.71	2.58
800	20.44	24.28	25.23	23.13	1.09	0.64	500	36.34	19.60	2.54
1000	20.18	24.24	24.86	21.43	1.10	0.62	600	36.08	19.49	2.53
1200	19.88	24.21	23.83	20.23	1.11	0.60	700	35.87	19.44	2.55
1400	19.58	24.16	22.73	18.99	1.12	0.58	800	35.64	19.41	2.59
1600	19.25	24.12	21.59	18.22	1.13	0.56	900	35.42	19.25	2.50
1800	18.93	24.11	20.65	17.52	1.15	0.54	1000	35.13	19.32	2.54
2000	18.62	24.02	19.97	16.78	1.16	0.52	1100	34.85	19.23	2.47
2200	18.30	24.00	19.36	16.06	1.17	0.50	1200	34.55	19.09	2.50
2400	17.98	23.98	18.56	15.45	1.19	0.48	1300	34.15	19.07	2.48
2600	17.68	23.95	17.72	15.03	1.20	0.46	1400	33.76	18.96	2.62
2800	17.38	23.89	16.89	14.78	1.21	0.45	1500	33.53	18.93	2.64
3000	17.12	23.83	16.09	14.52	1.22	0.43	1600	33.58	18.86	2.61
3200	16.88	23.77	15.32	14.42	1.23	0.42	1700	33.64	18.75	2.62
3400	16.66	23.71	14.83	14.05	1.23	0.41	1800	33.40	18.70	2.71
3600	16.42	23.73	14.64	13.89	1.25	0.39	1900	33.06	18.63	2.59
3800	16.25	23.55	14.21	13.72	1.24	0.39	2000	32.94	18.58	2.57
4000	16.08	23.52	13.89	13.74	1.25	0.38	2100	32.71	18.46	2.60
4200	15.91	23.36	13.69	13.50	1.25	0.38	2200	32.28	18.19	2.55
4400	15.77	23.35	13.50	13.65	1.26	0.37	2300	31.95	17.97	2.55
4600	15.69	23.32	13.16	13.71	1.26	0.37	2400	31.59	17.75	2.60
5000	15.47	23.18	13.47	13.65	1.27	0.37	2500	31.37	17.64	2.51
5500	15.34	22.83	13.76	13.44	1.25	0.38	2600	31.15	17.41	2.61
6000	15.41	22.56	13.52	13.49	1.22	0.40	2700	31.03	17.35	2.62
6500	15.34	22.23	12.54	11.61	1.17	0.43	2800	30.94	17.23	2.58
7000	14.87	22.21	10.50	9.92	1.17	0.44	3000	30.63	17.07	2.51
7500	13.73	22.04	9.34	8.78	1.22	0.44	3200	29.90	16.52	2.59
8000	12.12	21.65	8.82	8.31	1.35	0.43	3400	29.41	16.26	2.62
9000	7.95	19.75	7.01	6.91	1.54	0.44	3600	29.10	15.98	2.69
10000	4.24	17.62	5.81	5.85	1.57	0.44	3800	28.59	15.51	2.76
11000	2.42	14.16	6.03	6.27	1.31	0.41	4000	28.05	15.19	2.66
12000	1.73	10.74	8.23	8.66	1.19	0.36	4200	27.75	14.62	2.70
13000	1.23	6.91	11.36	12.43	1.05	0.48	4400	27.35	14.21	2.77
14000	0.55	3.95	12.71	14.57	0.99	0.65	4600	27.08	13.79	3.02
15000	-1.61	3.76	5.20	5.71	0.97	0.79	4800	26.78	13.37	3.09
16000	-5.55	6.45	2.68	2.69	1.02	0.77	5000	26.45	13.07	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 = 65mA, Vd = 4.64V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability	
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta
50	20.73	24.03	23.60	35.14	1.07	0.69
100	20.69	23.96	24.23	35.96	1.07	0.69
200	20.61	24.06	25.76	35.35	1.08	0.67
400	20.44	24.05	23.66	27.54	1.08	0.66
600	20.24	24.10	22.95	25.26	1.09	0.64
800	19.98	24.06	22.27	22.80	1.10	0.62
1000	19.69	24.05	21.61	21.46	1.11	0.60
1200	19.38	24.01	20.95	20.25	1.12	0.58
1400	19.07	23.99	20.25	19.12	1.14	0.56
1600	18.73	23.98	19.72	18.11	1.15	0.54
1800	18.40	23.97	19.03	17.27	1.17	0.51
2000	18.06	23.96	18.25	16.56	1.19	0.49
2200	17.72	23.94	17.48	15.93	1.20	0.47
2400	17.38	23.88	16.64	15.45	1.22	0.45
2600	17.06	23.90	15.81	15.08	1.24	0.43
2800	16.74	23.83	15.08	14.79	1.25	0.41
3000	16.46	23.85	14.41	14.55	1.27	0.39
3200	16.18	23.83	13.75	14.29	1.28	0.38
3400	15.93	23.77	13.20	14.12	1.29	0.37
3600	15.66	23.74	12.92	14.21	1.31	0.36
3800	15.47	23.64	12.49	14.11	1.31	0.35
4000	15.26	23.64	12.37	14.20	1.34	0.34
4200	15.07	23.45	12.29	13.98	1.33	0.34
4400	14.91	23.43	12.43	14.07	1.35	0.33
4600	14.79	23.41	12.45	14.21	1.37	0.33
5000	14.51	23.26	12.68	14.44	1.39	0.32
5500	14.23	23.06	12.42	14.62	1.39	0.32
6000	14.02	22.98	12.07	14.49	1.40	0.31
6500	13.68	22.61	11.94	14.24	1.41	0.33
7000	12.89	22.60	11.17	12.70	1.49	0.33
7500	11.51	22.33	10.07	11.02	1.62	0.33
8000	9.71	21.92	9.11	9.77	1.79	0.33
9000	5.75	19.88	7.54	8.02	1.99	0.34
10000	2.66	17.44	6.71	7.39	1.97	0.34
11000	1.01	14.02	6.90	7.80	1.63	0.32
12000	0.03	10.96	8.36	8.98	1.43	0.29
13000	-0.27	7.18	12.20	13.83	1.23	0.38
14000	-0.63	4.35	12.77	16.44	1.11	0.57
15000	-3.32	5.04	5.09	5.44	1.10	0.66
16000	-5.15	5.82	4.58	4.55	1.19	0.61

FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dBm)	(dBm)	(dB)
50	34.48	18.18	3.21
100	34.32	18.21	3.39
200	34.39	18.05	3.26
300	34.26	18.08	3.52
400	33.64	18.07	3.41
500	33.12	17.90	3.44
600	32.91	17.82	3.40
700	32.88	17.77	3.42
800	32.77	17.73	3.46
900	32.64	17.56	3.40
1000	32.37	17.60	3.42
1100	32.14	17.54	3.36
1200	31.85	17.36	3.41
1300	31.50	17.36	3.42
1400	31.15	17.21	3.55
1500	30.92	17.13	3.60
1600	31.12	17.05	3.57
1700	31.22	16.94	3.57
1800	30.87	16.94	3.64
1900	30.45	16.82	3.59
2000	30.24	16.71	3.49
2100	29.97	16.63	3.60
2200	29.56	16.32	3.51
2300	29.23	16.12	3.54
2400	28.88	15.91	3.62
2500	28.67	15.76	3.49
2600	28.53	15.56	3.63
2700	28.35	15.50	3.62
2800	28.21	15.31	3.60
3000	27.76	15.08	3.52
3200	27.01	14.45	3.56
3400	26.48	14.11	3.68
3600	26.11	13.75	3.83
3800	25.53	13.17	3.90
4000	24.90	12.70	3.73
4200	24.48	12.17	3.78
4400	24.03	11.82	3.93
4600	23.71	11.34	4.19
4800	23.36	10.90	4.31
5000	22.91	10.51	4.21

Typical Performance Data

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

TEST CONDITIONS: Icc = 52mA, Vd = 4.55V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability	
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta
50	20.49	23.92	21.27	27.46	1.08	0.68
100	20.45	23.91	21.68	28.51	1.08	0.67
200	20.38	23.88	22.94	29.64	1.08	0.67
400	20.22	23.88	21.62	25.34	1.08	0.66
600	20.02	23.90	21.03	23.86	1.09	0.64
800	19.76	23.88	20.49	21.99	1.10	0.62
1000	19.48	23.87	19.93	20.87	1.11	0.60
1200	19.18	23.85	19.48	19.83	1.12	0.58
1400	18.88	23.80	18.92	18.87	1.13	0.56
1600	18.55	23.76	18.58	17.96	1.15	0.54
1800	18.22	23.78	17.96	17.17	1.16	0.51
2000	17.88	23.76	17.27	16.47	1.18	0.49
2200	17.55	23.76	16.61	15.87	1.20	0.47
2400	17.22	23.70	15.82	15.41	1.21	0.45
2600	16.89	23.74	15.08	15.03	1.23	0.43
2800	16.58	23.69	14.43	14.76	1.24	0.41
3000	16.28	23.69	13.76	14.49	1.26	0.39
3200	16.01	23.63	13.15	14.25	1.27	0.38
3400	15.75	23.63	12.62	14.06	1.29	0.36
3600	15.48	23.60	12.38	14.17	1.31	0.35
3800	15.29	23.50	11.97	14.09	1.31	0.35
4000	15.08	23.49	11.87	14.20	1.33	0.34
4200	14.89	23.31	11.82	14.03	1.33	0.34
4400	14.73	23.30	11.93	14.15	1.35	0.33
4600	14.61	23.31	11.97	14.35	1.37	0.32
5000	14.31	23.17	12.19	14.69	1.39	0.32
5500	14.01	22.97	11.96	15.09	1.41	0.31
6000	13.77	22.89	11.67	15.16	1.42	0.31
6500	13.41	22.54	11.61	15.12	1.44	0.32
7000	12.61	22.53	10.94	13.53	1.53	0.32
7500	11.22	22.22	9.92	11.68	1.66	0.32
8000	9.44	21.81	9.02	10.26	1.84	0.32
9000	5.54	19.84	7.50	8.35	2.04	0.33
10000	2.50	17.45	6.68	7.66	2.02	0.33
11000	0.88	14.06	6.86	8.04	1.66	0.31
12000	-0.10	11.04	8.28	9.17	1.46	0.28
13000	-0.37	7.25	12.06	13.81	1.24	0.37
14000	-0.70	4.38	12.64	16.62	1.11	0.56
15000	-3.38	5.06	5.06	5.47	1.10	0.65
16000	-5.18	5.82	4.57	4.58	1.20	0.61

FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dBm)	(dBm)	(dB)
50	31.34	16.63	3.18
100	31.18	16.68	3.34
200	31.38	16.56	3.22
300	31.31	16.53	3.45
400	30.83	16.62	3.39
500	30.54	16.46	3.36
600	30.51	16.44	3.33
700	30.64	16.39	3.37
800	30.67	16.40	3.39
900	30.69	16.28	3.33
1000	30.55	16.21	3.37
1100	30.37	16.15	3.32
1200	30.24	15.99	3.37
1300	30.03	16.03	3.34
1400	29.75	15.93	3.49
1500	29.63	15.87	3.53
1600	29.85	15.86	3.49
1700	30.14	15.78	3.49
1800	29.88	15.78	3.58
1900	29.54	15.71	3.52
2000	29.37	15.69	3.43
2100	29.17	15.64	3.54
2200	28.87	15.44	3.43
2300	28.60	15.34	3.46
2400	28.36	15.16	3.55
2500	28.13	15.00	3.42
2600	27.96	14.84	3.54
2700	27.82	14.70	3.54
2800	27.57	14.55	3.50
3000	27.30	14.35	3.44
3200	26.49	13.79	3.59
3400	26.05	13.41	3.58
3600	25.56	13.05	3.74
3800	25.10	12.48	3.80
4000	24.48	12.07	3.63
4200	24.10	11.46	3.68
4400	23.59	11.15	3.82
4600	23.17	10.62	4.11
4800	22.85	10.18	4.19
5000	22.47	9.94	4.12

Typical Performance Data

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

TEST CONDITIONS: Icc = 78mA, Vd = 4.71V @Temperature = +85degC

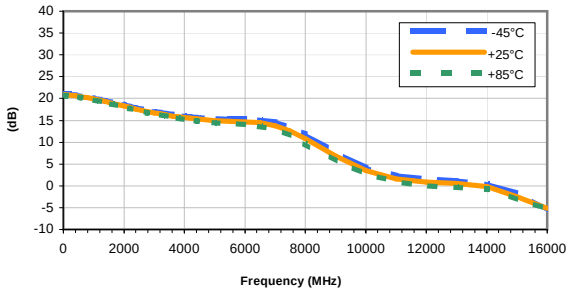
FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability	
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta
50	20.87	24.07	25.12	48.09	1.07	0.69
100	20.82	24.11	26.14	46.78	1.07	0.69
200	20.75	24.20	27.95	35.75	1.08	0.67
400	20.58	24.18	25.51	28.23	1.08	0.66
600	20.36	24.18	24.49	25.71	1.09	0.64
800	20.10	24.20	23.61	23.10	1.10	0.62
1000	19.82	24.15	22.73	21.69	1.11	0.60
1200	19.51	24.18	21.92	20.38	1.13	0.58
1400	19.19	24.13	21.20	19.21	1.14	0.56
1600	18.85	24.12	20.58	18.15	1.16	0.53
1800	18.50	24.11	19.84	17.29	1.17	0.51
2000	18.17	24.05	18.88	16.56	1.19	0.49
2200	17.82	24.06	18.12	15.96	1.21	0.47
2400	17.48	24.02	17.22	15.50	1.22	0.45
2600	17.17	23.99	16.32	15.11	1.24	0.43
2800	16.85	23.97	15.57	14.83	1.26	0.41
3000	16.56	23.95	14.88	14.56	1.27	0.39
3200	16.28	23.90	14.18	14.34	1.29	0.38
3400	16.03	23.89	13.59	14.13	1.30	0.37
3600	15.77	23.85	13.30	14.22	1.32	0.36
3800	15.57	23.75	12.87	14.12	1.32	0.35
4000	15.38	23.72	12.71	14.19	1.34	0.34
4200	15.18	23.54	12.65	13.96	1.34	0.34
4400	15.03	23.52	12.80	14.01	1.36	0.33
4600	14.91	23.49	12.82	14.13	1.37	0.33
5000	14.64	23.34	13.03	14.27	1.39	0.32
5500	14.38	23.12	12.75	14.31	1.39	0.32
6000	14.18	23.02	12.37	14.10	1.39	0.32
6500	13.86	22.67	12.19	13.77	1.39	0.34
7000	13.10	22.65	11.34	12.27	1.47	0.33
7500	11.72	22.38	10.16	10.65	1.59	0.34
8000	9.91	21.97	9.16	9.47	1.76	0.34
9000	5.89	19.91	7.57	7.83	1.96	0.35
10000	2.77	17.44	6.73	7.23	1.94	0.34
11000	1.11	14.00	6.94	7.65	1.61	0.32
12000	0.12	10.93	8.42	8.86	1.42	0.30
13000	-0.20	7.14	12.31	13.81	1.22	0.38
14000	-0.58	4.33	12.85	16.31	1.10	0.58
15000	-3.29	5.03	5.09	5.41	1.09	0.66
16000	-5.12	5.81	4.57	4.55	1.19	0.61

FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dBm)	(dBm)	(dB)
50	37.12	18.91	3.29
100	36.93	19.08	3.48
200	36.74	18.89	3.29
300	36.26	18.77	3.59
400	35.52	18.67	3.47
500	34.66	18.65	3.52
600	34.20	18.56	3.43
700	33.90	18.45	3.50
800	33.59	18.39	3.50
900	33.32	18.15	3.48
1000	32.95	18.23	3.47
1100	32.61	18.14	3.45
1200	32.28	17.92	3.49
1300	31.84	17.89	3.48
1400	31.48	17.75	3.62
1500	31.24	17.64	3.67
1600	31.33	17.59	3.65
1700	31.20	17.40	3.64
1800	30.80	17.35	3.72
1900	30.45	17.24	3.65
2000	30.24	17.15	3.58
2100	29.97	17.05	3.68
2200	29.57	16.74	3.59
2300	29.21	16.50	3.60
2400	28.88	16.28	3.70
2500	28.67	16.13	3.58
2600	28.44	15.94	3.72
2700	28.25	15.85	3.70
2800	28.08	15.71	3.70
3000	27.67	15.47	3.60
3200	26.89	14.87	3.64
3400	26.44	14.52	3.77
3600	25.97	14.20	3.93
3800	25.43	13.63	4.01
4000	24.86	13.17	3.83
4200	24.50	12.64	3.87
4400	24.11	12.25	4.01
4600	23.73	11.80	4.29
4800	23.30	11.42	4.39
5000	22.89	11.03	4.32

Typical Performance Curves

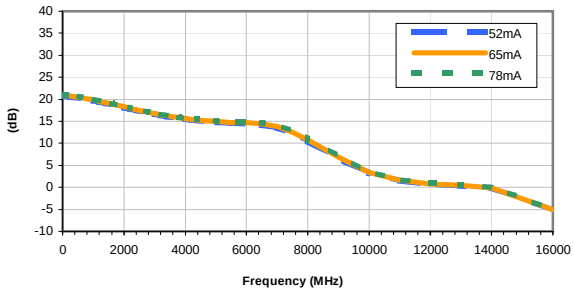
GAIN vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 65mA



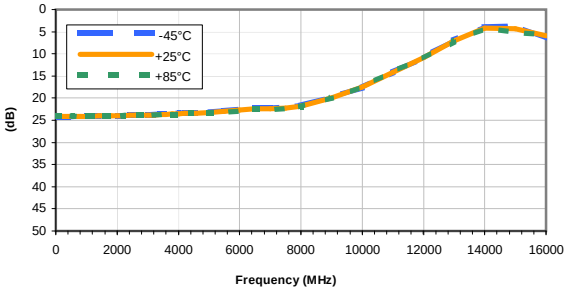
GAIN vs. CURRENT

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



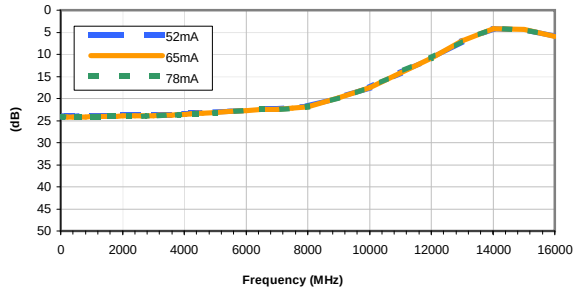
ISOLATION vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 65mA



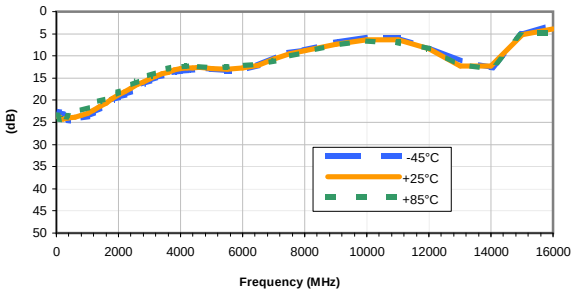
ISOLATION vs. CURRENT

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



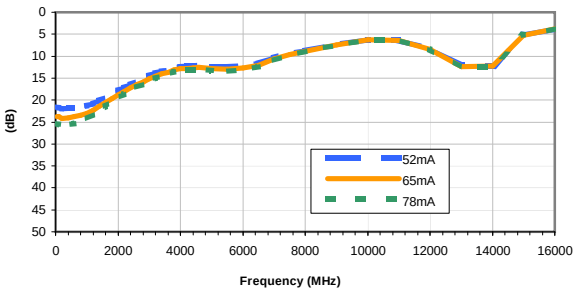
INPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 65mA



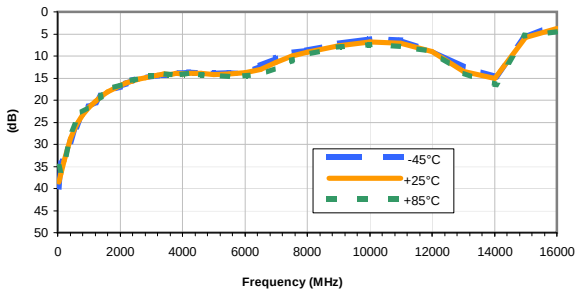
INPUT RETURN LOSS vs. CURRENT

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



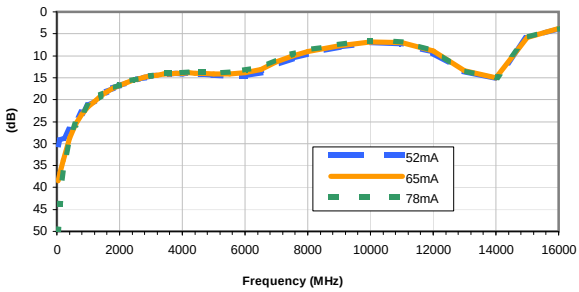
OUTPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 65mA



OUTPUT RETURN LOSS vs. CURRENT

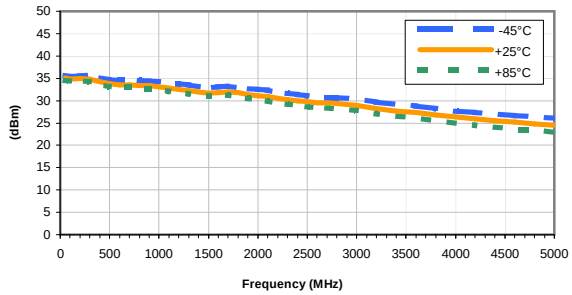
INPUT POWER = -20dBm, Temperature = +25°C



Typical Performance Curves

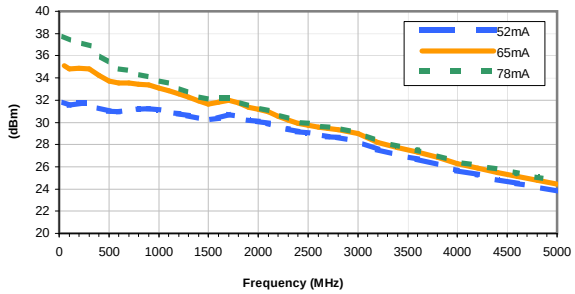
OUTPUT IP3 vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 65mA



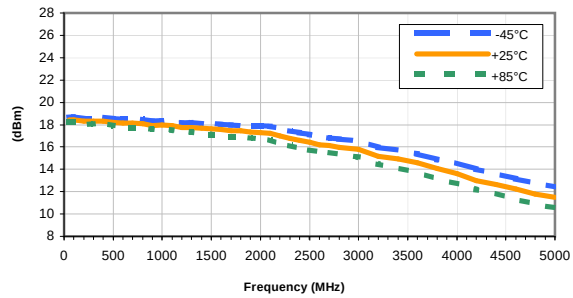
OUTPUT IP3 vs. CURRENT

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



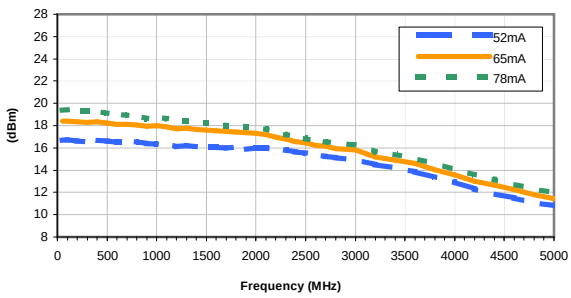
OUTPUT POWER at 1dB Compression vs. TEMPERATURE

CURRENT = 65mA



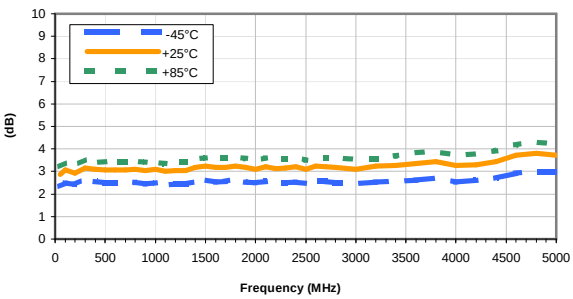
OUTPUT POWER at 1dB Compression vs. CURRENT

Temperature = +25°C



Noise Figure vs. TEMPERATURE

CURRENT = 65mA



Noise Figure vs. CURRENT

Temperature = +25°C