MMIC Amplifier ERA-5+

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 = 4.77V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	20.59	24.12	23.53	35.10	1.08	0.67	34.78	18.40	2.99
100	20.57	24.01	23.48	36.05	1.08	0.67	35.17	18.36	3.02
200	20.50	23.96	23.10	35.85	1.08	0.67	35.24	18.33	2.97
300	20.40	23.95	23.00	36.69	1.08	0.67	35.12	18.34	3.14
400	20.29	23.89	22.82	38.38	1.08	0.66	34.59	18.25	3.11
500	20.16	23.85	22.60	39.85	1.09	0.66	34.28	18.21	3.13
600	20.02	23.80	22.44	41.51	1.09	0.65	34.13	18.18	3.13
700	19.86	23.69	22.24	45.59	1.09	0.64	34.23	18.15	3.06
800	19.69	23.64	22.15	58.65	1.10	0.63	34.21	18.12	3.03
900	19.50	23.53	21.93	66.50	1.10	0.63	34.10	17.90	3.03
1000	19.31	23.43	21.76	51.14	1.11	0.62	33.81	17.85	3.09
1100	19.11	23.33	21.70	43.98	1.11	0.62	33.62	17.91	3.05
1200	18.90	23.21	21.54	41.24	1.12	0.61	33.38	17.83	3.10
1300	18.69	23.08	21.56	38.94	1.12	0.60	33.01	17.82	3.10
1400	18.48	22.96	21.55	36.76	1.13	0.60	32.69	17.77	3.07
1500	18.27	22.85	21.73	34.28	1.14	0.59	32.56	17.66	3.05
1600	18.05	22.69	21.61	33.61	1.14	0.58	32.72	17.55	3.02
1700	17.83	22.57	21.71	32.62	1.15	0.58	32.81	17.48	3.00
1800	17.62	22.42	21.87	31.37	1.15	0.57	32.25	17.32	3.03
1900	17.40	22.26	21.86	30.62	1.15	0.57	31.79	17.13	3.05
2000	17.19	22.11	21.98	29.59	1.16	0.57	31.50	16.96	3.15
2100	16.96	21.98	22.05	28.85	1.16	0.56	31.10	16.84	3.07
2200	16.75	21.83	21.91	28.36	1.17	0.55	30.67	16.76	2.98
2300	16.53	21.66	21.99	27.70	1.17	0.55	30.39	16.66	3.05
2400	16.31	21.52	21.87	27.41	1.17	0.55	30.08	16.43	3.12
2500	16.12	21.34	21.67	26.71	1.17	0.54	29.85	16.11	3.16
2600	15.92	21.17	21.39	26.29	1.18	0.54	29.65	15.83	3.10
2700	15.71	20.99	21.38	25.54	1.18	0.54	29.66	15.77	3.16
2800	15.47	20.90	21.01	26.05	1.19	0.53	29.50	15.50	3.16
2900	15.30	20.70	20.82	25.15	1.18	0.53	29.27	15.33	3.11
3000	15.10	20.55	20.51	24.92	1.19	0.53	28.98	15.20	3.13
3100	14.92	20.38	20.52	24.23	1.19	0.53	28.56	14.91	3.18
3200	14.72	20.23	20.13	24.19	1.19	0.52	28.24	14.73	3.20
3300	14.54	20.07	19.93	23.91	1.19	0.52	27.95	14.57	3.17
3400	14.37	19.87	19.81	23.26	1.19	0.52	27.64	14.34	3.24
3500	14.19	19.71	19.75	22.93	1.19	0.52	27.56	14.00	3.19
3600	13.96	19.65	19.98	23.34	1.20	0.51	27.36	13.90	3.24
3700	13.85	19.41	19.42	22.64	1.19	0.52	27.11	13.65	3.27
3800	13.67	19.24	19.59	22.12	1.19	0.52	26.90	13.45	3.35
4000	13.39	18.85	19.23	21.31	1.18	0.52	26.20	13.08	3.22

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 = 4.69V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	20.40	23.82	21.72	29.33	1.08	0.68	31.38	16.70	2.89
100	20.39	23.89	21.60	29.44	1.08	0.67	31.75	16.69	2.93
200	20.31	23.84	21.40	29.40	1.08	0.67	31.82	16.60	2.86
300	20.22	23.77	21.42	29.94	1.08	0.67	31.73	16.67	3.05
400	20.12	23.75	21.37	30.67	1.09	0.66	31.31	16.62	3.04
500	19.99	23.70	21.27	31.25	1.09	0.65	31.25	16.59	3.00
600	19.86	23.63	21.20	31.99	1.09	0.65	31.25	16.54	3.05
700	19.70	23.55	21.10	33.30	1.10	0.64	31.59	16.46	2.98
800	19.53	23.49	21.11	34.88	1.10	0.64	31.80	16.50	2.90
900	19.35	23.39	20.99	35.82	1.11	0.63	31.87	16.35	2.94
1000	19.16	23.29	20.89	37.44	1.11	0.62	31.80	16.35	2.99
1100	18.97	23.19	20.92	39.13	1.11	0.62	31.68	16.39	2.94
1200	18.76	23.10	20.82	39.85	1.12	0.61	31.57	16.38	2.97
1300	18.56	22.97	20.87	39.87	1.13	0.60	31.40	16.32	3.01
1400	18.36	22.84	20.87	38.77	1.13	0.60	31.19	16.29	2.96
1500	18.16	22.76	21.10	36.69	1.14	0.59	31.16	16.26	2.95
1600	17.93	22.60	20.97	35.68	1.14	0.58	31.41	16.22	2.89
1700	17.71	22.46	21.06	34.39	1.15	0.58	31.76	16.30	2.91
1800	17.50	22.33	21.23	32.91	1.15	0.57	31.29	16.25	2.94
1900	17.29	22.19	21.17	31.87	1.15	0.57	30.82	16.21	2.94
2000	17.08	22.03	21.28	30.58	1.16	0.56	30.64	16.14	3.05
2100	16.86	21.89	21.39	29.63	1.16	0.56	30.32	16.10	2.96
2200	16.64	21.75	21.20	29.32	1.17	0.55	30.01	15.96	2.90
2300	16.44	21.60	21.17	28.39	1.17	0.55	29.81	15.84	2.94
2400	16.22	21.46	21.24	27.79	1.18	0.54	29.59	15.66	3.01
2500	16.02	21.29	20.88	27.12	1.18	0.54	29.44	15.43	3.12
2600	15.82	21.12	20.63	26.72	1.18	0.54	29.18	15.22	2.98
2700	15.62	20.95	20.63	25.88	1.18	0.54	29.22	15.15	3.02
2800	15.38	20.86	20.33	26.32	1.19	0.53	29.07	14.92	3.03
2900	15.20	20.67	20.15	25.46	1.19	0.53	28.79	14.79	2.98
3000	15.02	20.51	19.81	25.05	1.19	0.53	28.52	14.59	3.06
3100	14.84	20.34	19.81	24.37	1.19	0.52	28.10	14.31	3.04
3200	14.63	20.21	19.46	24.52	1.19	0.52	27.83	14.16	3.06
3300	14.47	20.01	19.23	23.88	1.19	0.52	27.49	13.99	3.03
3400	14.27	19.86	19.15	23.55	1.19	0.52	27.31	13.84	3.12
3500	14.10	19.72	19.14	23.25	1.19	0.52	27.16	13.48	3.08
3600	13.90	19.61	19.18	23.30	1.20	0.51	26.93	13.36	3.11
3700	13.78	19.40	18.61	23.00	1.19	0.52	26.73	13.07	3.15
3800	13.59	19.22	18.94	22.15	1.19	0.51	26.46	12.93	3.22
4000	13.30	18.87	18.59	21.67	1.18	0.52	25.77	12.48	3.07

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 = 78mA, Vd = 4.84V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	20.72	24.09	25.12	44.79	1.07	0.68	37.51	19.34	3.07
100	20.70	24.19	24.95	47.10	1.08	0.67	37.90	19.36	3.09
200	20.62	24.09	24.50	47.52	1.08	0.67	37.88	19.32	3.05
300	20.53	24.07	24.29	48.87	1.08	0.67	37.52	19.36	3.23
400	20.42	24.02	24.03	50.48	1.08	0.66	36.86	19.15	3.20
500	20.28	23.95	23.66	48.50	1.09	0.66	36.05	19.11	3.18
600	20.13	23.88	23.39	46.37	1.09	0.65	35.60	19.09	3.21
700	19.97	23.79	23.05	43.10	1.09	0.64	35.32	19.10	3.16
800	19.80	23.73	22.91	39.49	1.10	0.64	34.99	18.97	3.12
900	19.61	23.63	22.59	39.17	1.10	0.63	34.66	18.58	3.12
1000	19.41	23.52	22.32	37.65	1.11	0.62	34.30	18.51	3.17
1100	19.21	23.40	22.23	36.01	1.11	0.62	34.06	18.55	3.12
1200	19.00	23.28	22.00	35.13	1.12	0.61	33.73	18.50	3.18
1300	18.79	23.17	22.03	34.17	1.12	0.60	33.29	18.44	3.20
1400	18.57	23.03	21.97	33.10	1.13	0.60	32.97	18.33	3.16
1500	18.36	22.93	22.15	31.50	1.13	0.59	32.76	18.15	3.14
1600	18.14	22.76	22.04	31.31	1.14	0.59	32.83	18.02	3.12
1700	17.91	22.62	22.13	30.61	1.14	0.58	32.74	17.91	3.10
1800	17.69	22.48	22.34	29.77	1.15	0.57	32.22	17.69	3.11
1900	17.48	22.32	22.33	29.24	1.15	0.57	31.80	17.46	3.12
2000	17.26	22.17	22.48	28.52	1.15	0.57	31.55	17.28	3.20
2100	17.03	22.03	22.55	27.91	1.16	0.56	31.19	17.17	3.18
2200	16.82	21.86	22.42	27.62	1.16	0.56	30.72	17.11	3.09
2300	16.61	21.71	22.53	26.98	1.17	0.55	30.38	17.03	3.19
2400	16.39	21.57	22.43	26.79	1.17	0.55	30.13	16.82	3.25
2500	16.19	21.39	22.26	26.21	1.17	0.55	29.81	16.46	3.27
2600	15.99	21.21	22.04	25.85	1.17	0.54	29.67	16.19	3.17
2700	15.79	21.03	22.00	25.16	1.18	0.54	29.63	16.15	3.23
2800	15.54	20.92	21.61	25.65	1.18	0.53	29.47	15.87	3.26
2900	15.37	20.74	21.39	24.88	1.18	0.53	29.28	15.73	3.20
3000	15.17	20.57	21.11	24.61	1.18	0.53	29.03	15.63	3.24
3100	14.99	20.38	21.13	23.94	1.18	0.53	28.59	15.36	3.27
3200	14.79	20.26	20.73	23.94	1.19	0.53	28.34	15.13	3.29
3300	14.61	20.08	20.56	23.69	1.19	0.53	28.00	14.98	3.27
3400	14.44	19.87	20.42	22.98	1.18	0.53	27.76	14.78	3.33
3500	14.26	19.73	20.32	22.70	1.18	0.53	27.60	14.41	3.31
3600	14.02	19.65	20.59	23.00	1.20	0.52	27.44	14.28	3.35
3700	13.92	19.42	19.93	22.34	1.18	0.52	27.22	14.06	3.39
3800	13.73	19.26	20.30	21.84	1.19	0.52	26.94	13.85	3.45
4000	13.45	18.87	19.81	21.17	1.18	0.53	26.27	13.49	3.37

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 = 5.01V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	20.77	24.17	24.15	41.36	1.07	0.68	35.57	18.65	2.50
100	20.76	24.13	24.00	42.05	1.07	0.68	35.98	18.62	2.53
200	20.68	24.09	23.32	40.19	1.07	0.68	36.04	18.57	2.46
300	20.59	24.04	23.62	43.61	1.08	0.67	36.05	18.61	2.63
400	20.49	24.04	23.70	46.55	1.08	0.66	35.74	18.53	2.59
500	20.36	23.95	23.31	46.69	1.08	0.66	35.56	18.53	2.60
600	20.22	23.87	23.07	44.89	1.09	0.66	35.53	18.45	2.62
700	20.06	23.78	22.88	42.27	1.09	0.65	35.75	18.44	2.55
800	19.90	23.71	22.63	41.35	1.09	0.64	35.81	18.41	2.51
900	19.71	23.61	22.34	40.11	1.10	0.64	35.70	18.26	2.52
1000	19.52	23.50	22.25	38.14	1.10	0.63	35.50	18.23	2.55
1100	19.33	23.40	22.18	36.64	1.11	0.62	35.26	18.27	2.53
1200	19.12	23.28	21.85	36.32	1.11	0.62	35.10	18.23	2.59
1300	18.92	23.15	21.88	35.50	1.11	0.61	34.68	18.18	2.57
1400	18.71	23.02	21.94	34.25	1.12	0.61	34.31	18.17	2.56
1500	18.51	22.89	22.12	33.06	1.12	0.60	34.16	18.12	2.53
1600	18.29	22.74	21.96	32.65	1.13	0.60	34.35	18.06	2.46
1700	18.07	22.60	22.20	31.67	1.13	0.59	34.49	18.08	2.44
1800	17.86	22.45	22.45	30.74	1.14	0.59	33.94	17.95	2.49
1900	17.65	22.31	22.41	30.48	1.14	0.58	33.44	17.83	2.49
2000	17.44	22.15	22.41	30.21	1.14	0.58	33.10	17.69	2.57
2100	17.22	22.02	22.57	29.45	1.15	0.57	32.69	17.58	2.51
2200	17.02	21.86	22.85	28.63	1.15	0.57	32.22	17.50	2.43
2300	16.80	21.68	22.95	28.14	1.15	0.57	31.81	17.42	2.49
2400	16.61	21.53	23.24	27.34	1.16	0.56	31.55	17.20	2.55
2500	16.40	21.33	22.72	27.41	1.16	0.56	31.27	16.90	2.60
2600	16.20	21.19	22.61	26.99	1.16	0.56	31.13	16.66	2.56
2700	15.99	21.04	22.76	26.47	1.16	0.56	31.08	16.58	2.57
2800	15.76	20.91	22.45	26.72	1.17	0.55	30.99	16.31	2.61
2900	15.60	20.71	22.24	25.93	1.17	0.55	30.75	16.16	2.53
3000	15.40	20.56	22.08	25.67	1.17	0.55	30.46	16.01	2.57
3100	15.23	20.37	21.73	25.25	1.17	0.55	30.06	15.70	2.55
3200	15.02	20.25	21.43	25.29	1.17	0.54	29.63	15.55	2.63
3300	14.87	20.03	21.24	24.48	1.17	0.55	29.36	15.36	2.59
3400	14.69	19.86	21.29	23.83	1.17	0.55	29.07	15.19	2.66
3500	14.49	19.75	21.50	23.71	1.17	0.54	28.94	14.80	2.63
3600	14.32	19.58	21.49	23.18	1.17	0.54	28.74	14.67	2.72
3700	14.18	19.40	20.67	23.53	1.17	0.54	28.48	14.44	2.65
3800	14.02	19.20	20.96	22.32	1.16	0.54	28.28	14.27	2.72
4000	13.71	18.90	20.76	21.92	1.16	0.54	27.58	13.94	2.63

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 = 4.93V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	20.62	23.98	22.54	32.90	1.07	0.68	31.99	16.82	2.38
100	20.60	23.95	22.36	33.02	1.07	0.68	32.30	16.67	2.45
200	20.53	24.00	21.88	32.04	1.08	0.67	32.30	16.62	2.40
300	20.44	23.94	22.20	33.86	1.08	0.67	32.36	16.69	2.55
400	20.34	23.90	22.33	36.24	1.08	0.66	32.09	16.71	2.56
500	20.22	23.83	22.11	36.71	1.08	0.66	32.13	16.68	2.53
600	20.08	23.75	22.01	37.47	1.09	0.66	32.18	16.58	2.57
700	19.93	23.68	21.92	39.64	1.09	0.65	32.61	16.53	2.51
800	19.77	23.60	21.76	42.52	1.09	0.64	32.89	16.57	2.42
900	19.59	23.50	21.59	43.67	1.10	0.64	32.98	16.42	2.42
1000	19.39	23.40	21.58	47.60	1.10	0.63	32.94	16.48	2.49
1100	19.21	23.28	21.56	52.10	1.11	0.63	32.82	16.53	2.43
1200	19.01	23.16	21.31	50.85	1.11	0.62	32.82	16.47	2.50
1300	18.81	23.04	21.38	46.06	1.11	0.61	32.67	16.41	2.52
1400	18.61	22.92	21.46	41.56	1.12	0.61	32.52	16.34	2.47
1500	18.41	22.79	21.64	38.11	1.12	0.60	32.47	16.36	2.45
1600	18.19	22.66	21.55	37.18	1.13	0.60	32.75	16.33	2.41
1700	17.97	22.53	21.76	35.22	1.13	0.59	33.11	16.50	2.39
1800	17.77	22.38	22.00	33.50	1.14	0.59	32.69	16.48	2.40
1900	17.56	22.22	21.94	32.86	1.14	0.58	32.28	16.48	2.46
2000	17.35	22.08	21.96	32.11	1.14	0.58	32.06	16.51	2.49
2100	17.13	21.95	22.12	31.21	1.15	0.57	31.75	16.55	2.45
2200	16.93	21.80	22.34	30.04	1.15	0.57	31.40	16.40	2.37
2300	16.72	21.63	22.40	29.39	1.16	0.57	31.22	16.26	2.41
2400	16.52	21.48	22.62	28.33	1.16	0.56	30.96	16.14	2.49
2500	16.32	21.30	22.10	28.24	1.16	0.56	30.72	16.05	2.54
2600	16.12	21.15	21.97	27.71	1.16	0.56	30.53	15.89	2.49
2700	15.91	21.00	22.06	27.11	1.17	0.55	30.57	15.87	2.49
2800	15.69	20.89	21.81	27.36	1.17	0.55	30.38	15.63	2.52
2900	15.53	20.68	21.59	26.40	1.17	0.55	30.19	15.47	2.48
3000	15.33	20.54	21.38	26.12	1.17	0.54	29.95	15.35	2.51
3100	15.15	20.35	21.04	25.61	1.17	0.55	29.53	15.08	2.49
3200	14.95	20.21	20.80	25.69	1.17	0.54	29.16	14.95	2.53
3300	14.79	20.01	20.60	24.83	1.17	0.54	28.89	14.78	2.52
3400	14.62	19.83	20.62	24.09	1.17	0.54	28.54	14.59	2.56
3500	14.42	19.72	20.83	24.00	1.18	0.54	28.42	14.22	2.55
3600	14.25	19.55	20.83	23.47	1.17	0.54	28.22	14.09	2.62
3700	14.11	19.40	20.04	23.79	1.17	0.54	28.03	13.88	2.57
3800	13.95	19.20	20.29	22.57	1.17	0.54	27.79	13.69	2.62
4000	13.63	18.89	20.10	22.19	1.17	0.54	27.09	13.33	2.56

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 = 5.08V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	20.88	24.22	25.68	45.24	1.07	0.68	38.35	19.76	2.54
100	20.86	24.27	25.39	47.02	1.08	0.68	38.92	19.77	2.59
200	20.79	24.20	24.53	48.64	1.08	0.68	38.87	19.72	2.54
300	20.70	24.15	24.83	41.77	1.08	0.67	38.78	19.77	2.68
400	20.59	24.11	24.79	38.41	1.08	0.67	38.34	19.60	2.69
500	20.46	24.06	24.25	38.38	1.08	0.66	37.74	19.56	2.65
600	20.32	23.97	23.87	37.56	1.09	0.66	37.37	19.56	2.67
700	20.16	23.88	23.58	35.72	1.09	0.65	37.18	19.55	2.63
800	19.99	23.80	23.22	35.00	1.09	0.64	36.84	19.49	2.55
900	19.80	23.69	22.84	34.55	1.10	0.64	36.55	19.21	2.57
1000	19.61	23.59	22.67	33.36	1.10	0.63	36.15	19.15	2.63
1100	19.41	23.46	22.57	32.53	1.10	0.63	35.89	19.19	2.57
1200	19.20	23.35	22.20	32.38	1.11	0.62	35.54	19.14	2.65
1300	19.00	23.22	22.18	32.01	1.11	0.61	35.10	19.14	2.64
1400	18.79	23.09	22.22	31.24	1.12	0.61	34.73	19.04	2.60
1500	18.59	22.94	22.38	30.47	1.12	0.60	34.51	18.88	2.60
1600	18.37	22.80	22.21	30.34	1.13	0.60	34.63	18.78	2.56
1700	18.14	22.67	22.42	29.63	1.13	0.59	34.52	18.67	2.54
1800	17.93	22.49	22.72	29.04	1.13	0.59	34.06	18.46	2.57
1900	17.72	22.35	22.67	28.94	1.14	0.58	33.60	18.27	2.60
2000	17.51	22.18	22.71	28.83	1.14	0.58	33.29	18.06	2.65
2100	17.28	22.05	22.85	28.24	1.15	0.57	32.86	17.98	2.61
2200	17.08	21.90	23.19	27.58	1.15	0.57	32.39	17.92	2.53
2300	16.87	21.73	23.33	27.21	1.15	0.57	31.94	17.86	2.59
2400	16.67	21.56	23.67	26.55	1.15	0.57	31.63	17.64	2.64
2500	16.47	21.36	23.17	26.74	1.15	0.57	31.35	17.32	2.70
2600	16.26	21.21	23.10	26.38	1.16	0.56	31.18	17.06	2.61
2700	16.05	21.08	23.27	25.93	1.16	0.56	31.20	17.00	2.65
2800	15.83	20.94	22.94	26.18	1.17	0.55	31.05	16.73	2.68
2900	15.66	20.73	22.76	25.45	1.16	0.55	30.90	16.60	2.64
3000	15.47	20.58	22.59	25.23	1.17	0.55	30.63	16.47	2.66
3100	15.29	20.38	22.24	24.87	1.16	0.55	30.24	16.22	2.63
3200	15.09	20.27	21.97	24.96	1.17	0.55	29.83	16.05	2.70
3300	14.93	20.05	21.75	24.21	1.16	0.55	29.54	15.83	2.67
3400	14.76	19.87	21.84	23.54	1.16	0.55	29.22	15.64	2.74
3500	14.55	19.77	22.06	23.44	1.17	0.54	29.19	15.30	2.69
3600	14.39	19.58	22.09	22.90	1.17	0.54	28.97	15.21	2.83
3700	14.24	19.40	21.19	23.30	1.16	0.55	28.79	14.89	2.76
3800	14.08	19.21	21.52	22.08	1.16	0.55	28.59	14.74	2.80
4000	13.78	18.89	21.30	21.71	1.16	0.55	27.88	14.43	2.75

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 = 4.61V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	20.47	24.00	22.77	32.26	1.08	0.67	34.16	18.14	3.37
100	20.45	23.93	22.96	33.23	1.08	0.67	34.62	18.12	3.43
200	20.37	23.92	22.83	33.46	1.08	0.67	34.69	18.09	3.33
300	20.28	23.87	22.63	33.94	1.08	0.66	34.49	18.11	3.54
400	20.17	23.86	22.31	34.48	1.09	0.66	33.87	17.95	3.50
500	20.03	23.74	22.10	35.14	1.09	0.65	33.49	17.91	3.51
600	19.89	23.72	21.95	36.13	1.10	0.64	33.28	17.90	3.54
700	19.72	23.64	21.76	37.89	1.10	0.64	33.28	17.86	3.49
800	19.55	23.58	21.61	39.67	1.10	0.63	33.20	17.78	3.45
900	19.36	23.47	21.39	40.64	1.11	0.62	33.05	17.52	3.41
1000	19.16	23.39	21.23	41.76	1.12	0.62	32.76	17.44	3.52
1100	18.96	23.27	21.17	41.31	1.12	0.61	32.55	17.50	3.46
1200	18.74	23.16	20.99	39.98	1.13	0.60	32.31	17.44	3.48
1300	18.53	23.05	20.98	38.27	1.13	0.59	31.94	17.38	3.52
1400	18.32	22.92	20.95	36.54	1.14	0.59	31.64	17.31	3.49
1500	18.11	22.82	21.14	34.55	1.14	0.58	31.49	17.12	3.45
1600	17.88	22.66	20.99	33.43	1.15	0.58	31.64	17.02	3.43
1700	17.65	22.52	21.09	32.30	1.15	0.57	31.64	16.94	3.44
1800	17.43	22.40	21.23	31.11	1.16	0.56	31.06	16.71	3.45
1900	17.22	22.23	21.21	30.19	1.16	0.56	30.59	16.52	3.47
2000	17.00	22.08	21.33	29.01	1.17	0.56	30.28	16.30	3.53
2100	16.77	21.97	21.40	28.32	1.17	0.55	29.88	16.18	3.50
2200	16.55	21.80	21.22	27.87	1.18	0.54	29.48	16.07	3.43
2300	16.33	21.65	21.21	27.12	1.18	0.54	29.16	15.99	3.49
2400	16.11	21.50	21.18	26.68	1.19	0.53	28.90	15.73	3.55
2500	15.92	21.32	20.95	25.97	1.19	0.53	28.63	15.38	3.59
2600	15.71	21.16	20.77	25.43	1.19	0.53	28.46	15.12	3.52
2700	15.50	20.99	20.74	24.73	1.19	0.53	28.40	15.04	3.58
2800	15.26	20.89	20.43	24.99	1.20	0.52	28.19	14.78	3.58
2900	15.08	20.70	20.20	24.28	1.20	0.52	27.99	14.61	3.53
3000	14.88	20.53	19.89	23.89	1.20	0.52	27.70	14.45	3.59
3100	14.69	20.38	19.90	23.32	1.20	0.51	27.27	14.17	3.58
3200	14.49	20.23	19.56	23.28	1.20	0.51	26.99	14.01	3.64
3300	14.31	20.04	19.36	22.78	1.20	0.51	26.66	13.84	3.59
3400	14.13	19.87	19.28	22.30	1.20	0.51	26.40	13.62	3.69
3500	13.94	19.70	19.22	22.03	1.20	0.51	26.27	13.22	3.64
3600	13.74	19.59	19.29	22.05	1.21	0.50	26.12	13.13	3.70
3700	13.61	19.38	18.65	21.83	1.20	0.50	25.84	12.88	3.72
3800	13.41	19.26	19.12	21.19	1.21	0.50	25.56	12.69	3.79
4000	13.11	18.89	18.68	20.75	1.20	0.50	24.87	12.36	3.70

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 = 4.54V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	20.27	23.73	21.10	27.11	1.08	0.67	30.98	16.58	3.32
100	20.25	23.75	21.17	27.62	1.08	0.67	31.35	16.54	3.37
200	20.18	23.73	21.05	27.89	1.08	0.67	31.51	16.50	3.28
300	20.09	23.71	21.02	28.19	1.08	0.66	31.35	16.53	3.45
400	19.98	23.69	20.85	28.53	1.09	0.66	30.84	16.45	3.46
500	19.85	23.63	20.75	28.90	1.09	0.65	30.72	16.46	3.44
600	19.71	23.57	20.68	29.40	1.10	0.64	30.71	16.38	3.47
700	19.55	23.49	20.57	30.38	1.10	0.64	30.97	16.35	3.41
800	19.38	23.42	20.55	31.27	1.10	0.63	31.10	16.35	3.37
900	19.19	23.33	20.41	31.81	1.11	0.62	31.15	16.19	3.39
1000	19.00	23.24	20.31	32.60	1.12	0.62	31.01	16.17	3.44
1100	18.81	23.13	20.31	33.55	1.12	0.61	30.90	16.20	3.39
1200	18.60	23.02	20.20	34.01	1.13	0.60	30.77	16.19	3.42
1300	18.39	22.93	20.23	34.07	1.13	0.59	30.60	16.14	3.45
1400	18.18	22.81	20.22	33.92	1.14	0.59	30.36	16.12	3.42
1500	17.97	22.70	20.40	33.74	1.14	0.58	30.34	16.04	3.39
1600	17.76	22.56	20.29	32.78	1.15	0.58	30.56	15.95	3.33
1700	17.53	22.41	20.38	32.08	1.15	0.57	30.87	16.02	3.34
1800	17.32	22.29	20.49	31.19	1.16	0.56	30.35	15.90	3.36
1900	17.10	22.15	20.46	30.26	1.16	0.56	29.87	15.80	3.39
2000	16.89	22.00	20.57	29.22	1.17	0.55	29.63	15.68	3.48
2100	16.66	21.87	20.64	28.66	1.17	0.55	29.30	15.61	3.42
2200	16.44	21.73	20.46	28.16	1.18	0.54	28.97	15.45	3.35
2300	16.23	21.57	20.44	27.42	1.18	0.54	28.76	15.34	3.39
2400	16.01	21.42	20.38	26.95	1.19	0.53	28.53	15.10	3.46
2500	15.81	21.25	20.16	26.12	1.19	0.53	28.28	14.80	3.49
2600	15.61	21.11	19.98	25.59	1.19	0.53	28.17	14.59	3.45
2700	15.41	20.94	19.94	24.91	1.19	0.52	28.05	14.49	3.49
2800	15.17	20.83	19.69	25.16	1.20	0.52	27.89	14.23	3.53
2900	14.99	20.65	19.47	24.44	1.20	0.52	27.59	14.07	3.46
3000	14.79	20.49	19.17	24.02	1.20	0.51	27.36	13.90	3.51
3100	14.60	20.33	19.15	23.48	1.20	0.51	26.94	13.64	3.50
3200	14.40	20.20	18.88	23.44	1.21	0.51	26.63	13.43	3.51
3300	14.22	20.01	18.71	22.93	1.20	0.51	26.42	13.31	3.52
3400	14.03	19.84	18.61	22.45	1.20	0.50	26.14	13.10	3.62
3500	13.86	19.70	18.56	22.19	1.21	0.50	26.01	12.74	3.52
3600	13.65	19.58	18.60	22.26	1.21	0.50	25.85	12.67	3.58
3700	13.52	19.36	18.05	22.00	1.20	0.50	25.57	12.35	3.64
3800	13.32	19.22	18.48	21.40	1.21	0.50	25.26	12.18	3.65
4000	13.03	18.88	18.07	20.98	1.20	0.50	24.59	11.86	3.56

Typical Performance Data

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

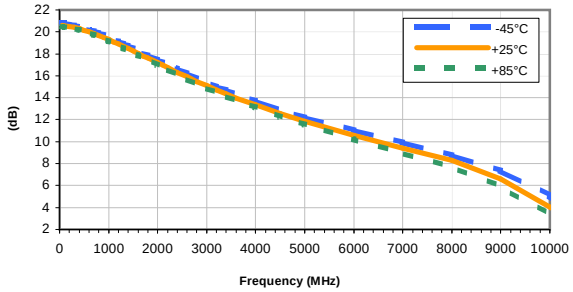
TEST CONDITIONS: Icc = 78mA, Vd = 4.68V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(dBm)	(dBm)	(dB)
50	20.61	24.13	24.52	38.71	1.08	0.67	36.92	18.94	3.46
100	20.58	24.09	24.52	40.99	1.08	0.67	37.47	18.98	3.48
200	20.51	24.02	24.22	42.28	1.08	0.67	37.31	18.95	3.42
300	20.41	24.01	23.98	43.42	1.08	0.66	36.72	19.00	3.61
400	20.29	23.95	23.56	45.69	1.09	0.66	36.02	18.76	3.59
500	20.16	23.89	23.18	47.24	1.09	0.65	35.19	18.67	3.59
600	20.01	23.82	22.93	51.38	1.09	0.65	34.66	18.65	3.60
700	19.84	23.74	22.60	63.49	1.10	0.64	34.31	18.66	3.58
800	19.67	23.67	22.39	48.67	1.10	0.63	33.90	18.51	3.51
900	19.47	23.57	22.10	46.82	1.11	0.62	33.60	18.08	3.55
1000	19.27	23.47	21.85	43.28	1.11	0.62	33.17	17.96	3.57
1100	19.06	23.35	21.77	39.58	1.12	0.61	32.94	17.99	3.53
1200	18.84	23.26	21.52	38.01	1.13	0.60	32.62	17.93	3.57
1300	18.63	23.13	21.50	36.37	1.13	0.60	32.17	17.87	3.62
1400	18.41	23.00	21.47	34.85	1.14	0.59	31.88	17.72	3.55
1500	18.19	22.91	21.62	32.88	1.14	0.58	31.68	17.53	3.54
1600	17.97	22.73	21.49	32.25	1.15	0.58	31.78	17.39	3.52
1700	17.73	22.60	21.57	31.25	1.15	0.57	31.51	17.28	3.52
1800	17.51	22.46	21.74	30.23	1.16	0.56	30.96	17.04	3.51
1900	17.30	22.30	21.71	29.50	1.16	0.56	30.57	16.83	3.54
2000	17.07	22.14	21.89	28.49	1.17	0.56	30.24	16.62	3.64
2100	16.84	22.01	21.95	27.84	1.17	0.55	29.87	16.48	3.62
2200	16.62	21.87	21.79	27.47	1.18	0.54	29.42	16.41	3.52
2300	16.40	21.69	21.80	26.77	1.18	0.54	29.11	16.33	3.57
2400	16.18	21.54	21.77	26.38	1.18	0.54	28.82	16.10	3.67
2500	15.98	21.36	21.53	25.78	1.19	0.53	28.55	15.74	3.68
2600	15.77	21.20	21.38	25.24	1.19	0.53	28.34	15.46	3.58
2700	15.56	21.03	21.35	24.57	1.19	0.53	28.35	15.39	3.69
2800	15.32	20.91	21.01	24.84	1.20	0.52	28.16	15.10	3.71
2900	15.14	20.72	20.77	24.15	1.20	0.52	27.92	14.95	3.66
3000	14.94	20.56	20.43	23.78	1.20	0.52	27.66	14.82	3.69
3100	14.75	20.40	20.46	23.19	1.20	0.52	27.23	14.54	3.72
3200	14.54	20.25	20.09	23.20	1.20	0.51	26.95	14.36	3.75
3300	14.37	20.06	19.91	22.67	1.20	0.51	26.62	14.20	3.71
3400	14.18	19.87	19.79	22.20	1.20	0.51	26.35	13.99	3.82
3500	14.00	19.72	19.72	21.91	1.20	0.51	26.21	13.63	3.79
3600	13.79	19.60	19.76	21.95	1.21	0.50	26.02	13.45	3.81
3700	13.67	19.39	19.14	21.72	1.20	0.51	25.76	13.30	3.85
3800	13.46	19.24	19.61	21.04	1.20	0.51	25.45	13.05	3.89
4000	13.17	18.89	19.13	20.64	1.19	0.51	24.80	12.68	3.83

Typical Performance Curves

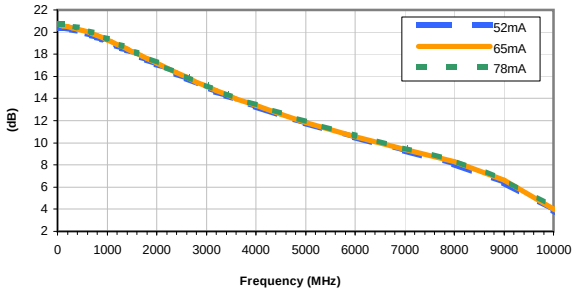
GAIN vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 65mA



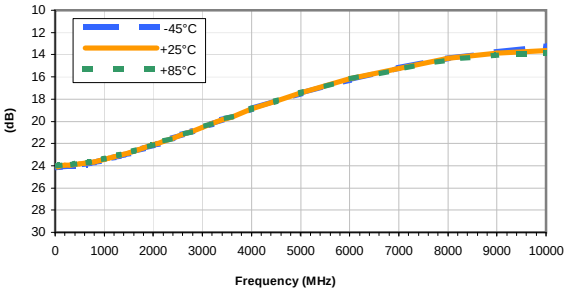
GAIN vs. CURRENT

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



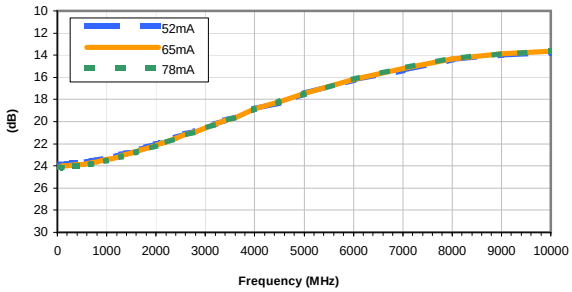
ISOLATION vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 65mA



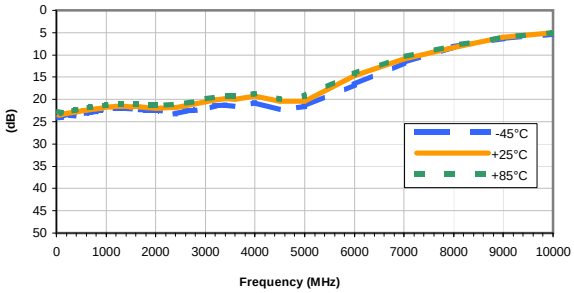
ISOLATION vs. CURRENT

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



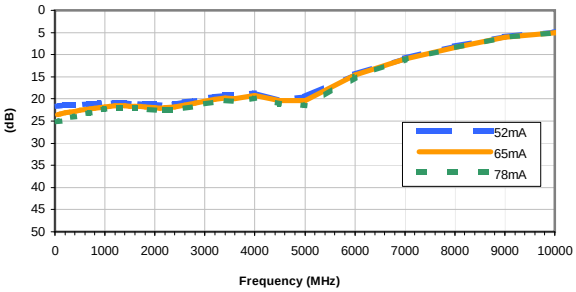
INPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 65mA



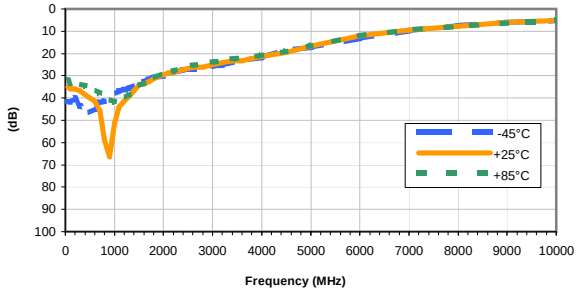
INPUT RETURN LOSS vs. CURRENT

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



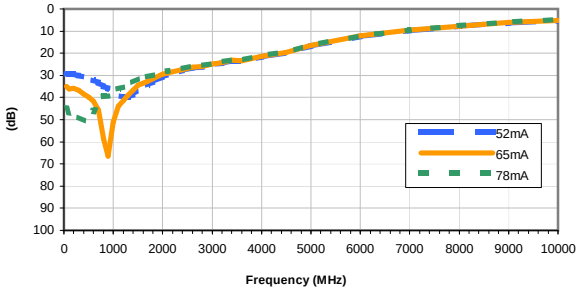
OUTPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 65mA



OUTPUT RETURN LOSS vs. CURRENT

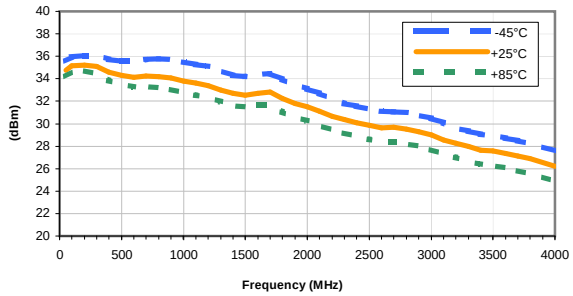
INPUT POWER = -20dBm, Temperature = +25°C



Typical Performance Curves

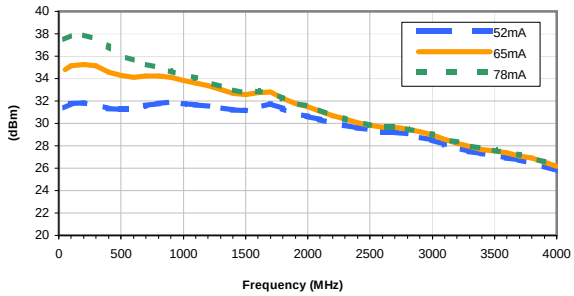
OUTPUT IP-3 vs. TEMPERATURE

INPUT POWER = -20dBm, CURRENT = 65mA



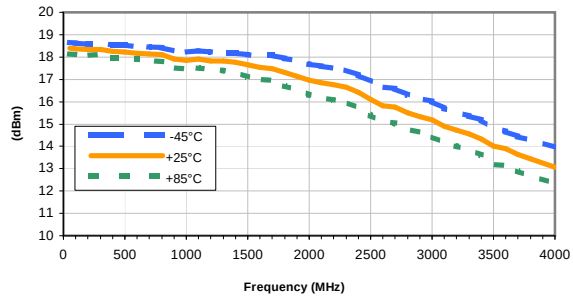
OUTPUT IP-3 vs. CURRENT

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



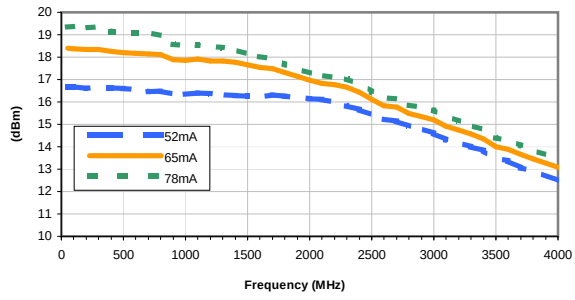
OUTPUT POWER at 1dB Compression vs. TEMPERATURE

CURRENT = 65mA



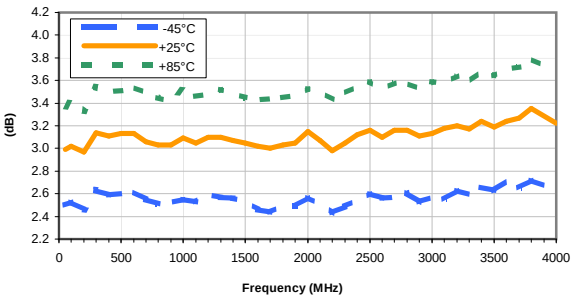
OUTPUT POWER at 1dB Compression vs. CURRENT

Temperature = +25°C



Noise Figure vs. TEMPERATURE

CURRENT = 65mA



Noise Figure vs. CURRENT

Temperature = +25°C