MMIC Amplifier CMA-183L+

Typical Performance Data

NOTE: Use PDF Bookmarks to view DATA at required conditions

Definitions:

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

TEST CONDITIONS: Vd = 5.00V, Id = 20.36mA @ Temperature = +25°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
10	15.50	18.85	16.05	13.01	1.06	0.46	19.84	7.15	6.22
40	15.56	18.87	16.58	13.69	1.06	0.47	21.71	6.96	5.65
70	15.56	18.87	16.62	13.72	1.06	0.47	20.08	6.99	5.41
100	15.56	18.87	16.71	13.72	1.06	0.47	19.47	6.85	5.28
200	15.56	18.88	16.61	13.72	1.06	0.47	19.37	6.70	5.52
300	15.56	18.90	16.57	13.72	1.06	0.47	19.79	6.67	5.29
400	15.55	18.90	16.54	13.67	1.06	0.48	19.47	6.89	5.17
500	15.55	18.90	16.49	13.61	1.06	0.48	19.24	6.91	5.30
600	15.54	18.92	16.41	13.58	1.06	0.48	19.24	6.95	5.15
700	15.53	18.93	16.30	13.52	1.06	0.48	19.49	6.57	5.20
800	15.52	18.93	16.18	13.45	1.06	0.48	18.90	6.59	5.19
900	15.51	18.95	16.01	13.35	1.05	0.49	19.81	6.84	5.22
1000	15.50	18.95	15.87	13.22	1.05	0.49	19.17	6.56	5.21
2000	15.33	19.06	13.83	11.97	1.02	0.55	19.54	6.26	5.26
3000	15.05	19.20	11.74	10.61	0.95	0.65	18.02	6.07	5.45
4000	14.73	19.33	10.29	9.68	0.88	0.75	17.82	5.83	5.41
5000	14.45	19.40	9.71	9.47	0.89	0.77	17.52	5.59	5.37
6000	14.30	19.33	10.02	10.07	0.97	0.71	17.17	5.75	5.36
7000	14.27	19.16	11.38	11.76	1.07	0.65	16.90	5.96	5.28
8000	14.31	19.01	13.72	14.67	1.11	0.64	15.89	5.86	5.11
9000	14.38	18.87	17.58	18.52	1.12	0.63	15.74	6.62	5.03
10000	14.35	18.84	23.39	19.63	1.13	0.63	15.41	6.42	4.84
11000	14.18	18.80	26.70	17.10	1.12	0.64	15.15	5.81	4.78
11500	14.17	18.91	27.20	16.23	1.13	0.64	14.99	5.65	4.79
12000	14.11	18.92	27.70	15.68	1.13	0.64	14.43	5.08	4.74
12500	13.98	18.91	28.33	15.42	1.14	0.65	13.62	4.79	4.74
13000	13.84	18.88	29.23	15.12	1.15	0.65	13.53	4.29	4.77
13500	13.68	18.84	32.31	14.85	1.16	0.66	13.16	4.17	4.75
14000	13.48	18.85	40.12	14.98	1.17	0.68	12.64	3.73	4.83
14500	13.21	18.82	34.19	15.00	1.19	0.69	12.39	3.48	4.92
15000	12.92	18.75	27.80	14.83	1.20	0.71	12.00	3.05	4.99
15500	12.62	18.71	22.90	14.67	1.22	0.72	11.65	2.67	4.98
16000	12.31	18.69	20.65	14.11	1.25	0.73	11.35	2.25	4.96
16500	12.02	18.70	19.39	13.51	1.27	0.73	11.19	1.96	4.99
17000	11.72	18.68	19.17	12.95	1.29	0.74	10.98	2.04	4.97
17500	11.51	18.71	20.08	12.45	1.30	0.75	10.75	1.58	4.95
18000	11.28	18.74	21.16	11.95	1.31	0.76	10.29	1.40	5.04

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: Vd = 4.75V, Id = 15.94mA @ Temperature = +25°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
10	14.71	18.49	13.72	11.20	1.06	0.47	14.17	3.30	6.17
40	14.78	18.50	14.08	11.71	1.06	0.48	15.97	3.24	5.67
70	14.78	18.51	14.09	11.74	1.06	0.48	15.80	3.20	5.39
100	14.79	18.50	14.21	11.74	1.06	0.48	15.27	3.08	5.23
200	14.79	18.51	14.14	11.74	1.06	0.48	15.13	2.92	5.53
300	14.79	18.53	14.13	11.75	1.06	0.48	15.39	2.96	5.24
400	14.78	18.53	14.11	11.72	1.06	0.48	15.37	3.16	5.14
500	14.78	18.53	14.07	11.65	1.06	0.48	15.51	3.15	5.26
600	14.77	18.55	14.02	11.66	1.06	0.49	15.35	3.17	5.09
700	14.76	18.56	13.95	11.61	1.06	0.49	15.50	2.80	5.14
800	14.75	18.57	13.87	11.56	1.06	0.50	15.09	2.83	5.12
900	14.74	18.58	13.75	11.50	1.06	0.50	15.59	3.11	5.16
1000	14.73	18.59	13.64	11.39	1.05	0.50	15.26	2.81	5.21
2000	14.56	18.72	12.15	10.46	1.00	0.58	15.61	2.53	5.23
3000	14.29	18.90	10.50	9.38	0.91	0.70	14.83	2.42	5.39
4000	14.00	19.03	9.31	8.61	0.83	0.79	14.79	2.22	5.36
5000	13.76	19.09	8.85	8.47	0.85	0.79	15.21	2.00	5.29
6000	13.66	19.00	9.15	9.02	0.96	0.71	15.20	2.34	5.27
7000	13.72	18.79	10.44	10.53	1.06	0.64	15.89	2.65	5.21
8000	13.81	18.61	12.58	13.10	1.11	0.62	15.35	2.89	4.98
9000	13.93	18.40	16.10	16.87	1.12	0.62	16.65	4.50	4.94
10000	13.94	18.32	22.38	20.26	1.12	0.62	17.88	5.10	4.71
11000	13.80	18.26	41.81	19.03	1.12	0.63	17.85	5.06	4.72
11500	13.80	18.39	43.40	18.10	1.13	0.64	17.59	5.04	4.68
12000	13.73	18.42	37.64	17.25	1.13	0.64	16.66	4.55	4.65
12500	13.60	18.44	32.56	17.02	1.14	0.66	15.77	4.30	4.62
13000	13.46	18.44	31.48	16.56	1.15	0.66	15.31	3.86	4.67
13500	13.28	18.41	31.52	16.13	1.15	0.67	14.37	3.78	4.66
14000	13.08	18.47	27.65	16.00	1.17	0.69	13.86	3.36	4.74
14500	12.80	18.49	24.20	15.80	1.19	0.71	13.39	3.11	4.79
15000	12.50	18.42	21.91	15.33	1.21	0.72	12.68	2.70	4.82
15500	12.19	18.43	19.11	14.83	1.24	0.73	12.50	2.35	4.86
16000	11.88	18.43	17.82	14.05	1.26	0.73	12.44	1.99	4.78
16500	11.59	18.43	17.16	13.34	1.29	0.74	12.10	1.87	4.89
17000	11.29	18.45	17.02	12.76	1.31	0.75	11.82	1.94	4.81
17500	11.09	18.47	17.82	12.28	1.31	0.76	11.45	1.52	4.85
18000	10.87	18.48	18.68	11.96	1.32	0.78	11.03	1.33	4.85

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: Vd = 5.25V, Id = 24.85mA @ Temperature = +25°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
10	15.89	19.08	17.33	14.23	1.05	0.46	19.74	9.75	6.25
40	15.97	19.09	18.29	15.01	1.05	0.47	24.18	9.60	5.87
70	15.97	19.09	18.29	15.06	1.05	0.47	22.94	9.61	5.53
100	15.97	19.09	18.49	15.06	1.05	0.47	21.84	9.47	5.38
200	15.96	19.10	18.32	15.06	1.05	0.47	22.20	9.31	5.58
300	15.96	19.11	18.31	15.03	1.05	0.47	22.71	9.29	5.37
400	15.95	19.12	18.25	14.97	1.05	0.47	23.14	9.51	5.26
500	15.95	19.12	18.16	14.90	1.05	0.47	22.22	9.51	5.39
600	15.94	19.13	18.06	14.85	1.05	0.47	22.30	9.54	5.23
700	15.93	19.13	17.90	14.78	1.05	0.48	22.23	9.17	5.29
800	15.92	19.14	17.74	14.68	1.05	0.48	21.71	9.22	5.26
900	15.91	19.15	17.51	14.57	1.05	0.48	21.95	9.43	5.30
1000	15.89	19.15	17.30	14.42	1.05	0.48	22.36	9.14	5.30
2000	15.71	19.22	14.70	12.91	1.03	0.52	22.18	8.84	5.34
3000	15.40	19.34	12.20	11.29	0.97	0.62	21.03	8.67	5.52
4000	15.03	19.44	10.52	10.22	0.90	0.73	20.48	8.36	5.51
5000	14.67	19.50	9.81	9.92	0.89	0.77	20.41	8.07	5.46
6000	14.44	19.42	10.04	10.44	0.97	0.73	19.38	8.11	5.45
7000	14.34	19.25	11.30	12.03	1.06	0.68	18.61	8.03	5.34
8000	14.29	19.10	13.41	14.46	1.11	0.65	16.89	7.47	5.17
9000	14.30	18.93	16.78	17.00	1.12	0.64	16.23	7.32	5.12
10000	14.21	18.87	21.50	17.30	1.13	0.64	15.40	6.69	4.93
11000	14.02	18.77	25.27	15.63	1.13	0.64	15.04	5.97	4.89
11500	14.00	18.87	26.48	15.02	1.13	0.64	14.80	5.72	4.89
12000	13.92	18.84	27.47	14.57	1.14	0.64	14.17	5.34	4.86
12500	13.78	18.83	29.39	14.52	1.14	0.65	13.46	4.98	4.85
13000	13.63	18.80	30.97	14.33	1.15	0.65	13.04	4.51	4.90
13500	13.44	18.73	33.21	14.08	1.16	0.66	12.89	4.26	4.91
14000	13.24	18.73	49.29	14.12	1.17	0.68	12.27	3.83	4.97
14500	12.96	18.72	33.82	14.17	1.19	0.70	12.02	3.55	5.05
15000	12.67	18.63	27.11	13.94	1.20	0.71	11.71	3.19	5.13
15500	12.35	18.62	22.15	13.73	1.23	0.72	11.34	2.83	5.12
16000	12.04	18.62	20.06	13.18	1.26	0.72	11.02	2.33	5.11
16500	11.74	18.62	18.92	12.65	1.28	0.73	10.82	2.09	5.17
17000	11.45	18.64	18.68	12.19	1.31	0.74	10.50	2.07	5.14
17500	11.24	18.67	19.89	11.77	1.32	0.75	10.30	1.63	5.13
18000	11.02	18.70	21.37	11.47	1.32	0.76	9.95	1.41	5.17

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: Vd = 5.00V, Id = 16.33mA @ Temperature = -55°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
10	15.17	18.70	14.80	11.98	1.06	0.46	14.86	3.51	5.40
40	15.20	18.70	14.95	12.44	1.06	0.47	17.02	3.34	4.74
70	15.21	18.71	14.91	12.42	1.06	0.47	15.74	3.28	4.50
100	15.21	18.71	14.98	12.35	1.06	0.47	15.51	3.19	4.36
200	15.21	18.71	14.67	12.21	1.06	0.47	15.50	3.07	4.70
300	15.22	18.72	14.76	12.28	1.06	0.47	15.32	3.04	4.36
400	15.23	18.71	14.91	12.37	1.06	0.47	15.49	3.27	4.20
500	15.23	18.71	14.92	12.33	1.05	0.47	15.90	3.29	4.37
600	15.23	18.72	14.83	12.30	1.05	0.47	15.75	3.27	4.14
700	15.22	18.72	14.76	12.26	1.05	0.47	15.76	2.97	4.22
800	15.22	18.73	14.75	12.25	1.05	0.48	15.44	3.04	4.17
900	15.22	18.73	14.65	12.20	1.05	0.48	15.71	3.26	4.20
1000	15.21	18.74	14.55	12.09	1.05	0.48	15.55	2.96	4.22
2000	15.08	18.83	12.97	11.10	1.00	0.55	15.95	2.76	4.20
3000	14.84	18.98	11.16	9.84	0.92	0.66	15.10	2.62	4.37
4000	14.56	19.10	9.78	8.89	0.84	0.75	15.22	2.50	4.31
5000	14.38	19.11	9.59	8.95	0.87	0.74	15.42	2.19	4.21
6000	14.33	18.99	10.15	9.71	0.97	0.66	15.74	2.45	4.18
7000	14.37	18.82	11.29	11.09	1.05	0.58	16.03	2.60	4.11
8000	14.44	18.71	13.00	13.11	1.09	0.57	15.06	2.91	3.98
9000	14.56	18.56	16.55	16.79	1.10	0.58	16.36	4.48	3.92
10000	14.65	18.49	25.83	21.74	1.09	0.58	17.72	5.40	3.70
11000	14.59	18.47	24.02	18.10	1.08	0.59	19.08	5.84	3.63
11500	14.64	18.59	25.34	17.62	1.08	0.59	20.59	5.96	3.63
12000	14.67	18.62	29.44	17.28	1.09	0.58	19.05	5.90	3.63
12500	14.64	18.69	34.65	17.47	1.10	0.59	19.01	5.78	3.58
13000	14.49	18.68	30.50	16.61	1.10	0.59	19.18	5.30	3.62
13500	14.33	18.64	25.37	15.15	1.11	0.59	17.90	5.26	3.57
14000	14.18	18.65	23.56	13.99	1.11	0.59	17.11	4.87	3.63
14500	13.96	18.64	22.37	13.61	1.12	0.61	16.02	4.70	3.70
15000	13.75	18.50	23.30	13.83	1.13	0.61	15.20	4.29	3.69
15500	13.51	18.42	21.86	14.64	1.14	0.64	14.68	3.90	3.74
16000	13.25	18.40	18.76	14.83	1.16	0.65	14.86	3.41	3.77
16500	12.98	18.36	16.55	13.63	1.17	0.66	14.34	3.51	3.79
17000	12.66	18.44	16.04	12.60	1.19	0.67	14.06	3.36	3.72
17500	12.48	18.45	18.37	12.00	1.20	0.67	13.63	3.02	3.70
18000	12.29	18.45	24.25	11.49	1.19	0.68	12.93	2.88	3.69

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: Vd = 4.75V, Id = 12.13mA @ Temperature = -55°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
10	13.57	17.97	11.22	8.87	1.07	0.45	10.32	-2.21	5.35
40	13.60	18.00	11.39	9.32	1.07	0.47	10.88	-2.41	4.87
70	13.60	18.01	11.36	9.32	1.07	0.48	10.31	-2.41	4.50
100	13.59	18.01	11.36	9.24	1.07	0.47	9.77	-2.54	4.37
200	13.59	18.02	11.19	9.15	1.07	0.47	9.69	-2.69	4.77
300	13.61	18.03	11.24	9.25	1.07	0.48	9.94	-2.68	4.41
400	13.63	18.02	11.36	9.30	1.07	0.48	9.82	-2.44	4.23
500	13.63	18.00	11.35	9.22	1.06	0.48	10.05	-2.47	4.40
600	13.63	18.04	11.30	9.28	1.06	0.49	9.84	-2.45	4.19
700	13.62	18.03	11.25	9.22	1.06	0.49	9.98	-2.78	4.23
800	13.63	18.04	11.27	9.25	1.05	0.50	9.68	-2.69	4.23
900	13.63	18.05	11.22	9.23	1.05	0.50	9.91	-2.46	4.25
1000	13.62	18.05	11.15	9.12	1.04	0.51	9.82	-2.71	4.25
2000	13.49	18.19	10.17	8.56	0.95	0.61	10.05	-2.97	4.25
3000	13.25	18.39	8.94	7.70	0.82	0.75	9.29	-3.07	4.39
4000	12.98	18.50	7.96	6.93	0.72	0.83	9.16	-3.27	4.35
5000	12.87	18.48	7.85	6.98	0.77	0.79	8.88	-3.62	4.25
6000	12.93	18.31	8.26	7.60	0.92	0.66	8.98	-3.43	4.19
7000	13.09	18.05	9.16	8.59	1.04	0.55	9.20	-3.21	4.12
8000	13.25	17.86	10.45	10.08	1.09	0.53	8.06	-2.83	3.96
9000	13.47	17.50	13.03	12.45	1.07	0.54	9.03	-1.19	3.90
10000	13.72	17.17	19.53	18.17	1.06	0.54	9.80	0.12	3.69
11000	13.70	17.10	25.76	25.18	1.07	0.55	11.64	1.25	3.57
11500	13.74	17.32	23.13	24.23	1.08	0.57	12.70	1.44	3.64
12000	13.72	17.41	22.29	21.65	1.08	0.58	13.36	2.57	3.59
12500	13.69	17.50	21.04	21.04	1.08	0.59	12.78	3.13	3.54
13000	13.57	17.50	22.42	20.16	1.09	0.60	14.67	2.76	3.60
13500	13.44	17.48	24.37	19.50	1.09	0.60	17.55	2.96	3.56
14000	13.29	17.63	22.00	17.41	1.11	0.62	16.98	2.76	3.58
14500	13.07	17.69	18.73	16.68	1.12	0.64	19.83	2.70	3.63
15000	12.80	17.68	16.97	16.49	1.14	0.66	16.68	2.41	3.63
15500	12.52	17.72	15.07	15.78	1.16	0.67	15.91	2.21	3.64
16000	12.24	17.77	13.87	14.35	1.18	0.68	16.61	1.80	3.68
16500	11.96	17.78	13.27	12.56	1.18	0.68	15.38	2.31	3.72
17000	11.69	17.84	13.43	11.55	1.19	0.69	15.47	2.34	3.65
17500	11.57	17.83	15.25	11.30	1.19	0.70	14.81	1.93	3.64
18000	11.43	17.79	17.69	11.36	1.18	0.72	13.32	1.98	3.59

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: Vd = 5.25V, Id = 20.80mA @ Temperature = -55°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
10	15.80	19.00	16.87	13.71	1.05	0.46	16.19	7.19	5.44
40	15.85	19.02	17.30	14.29	1.05	0.46	20.05	7.07	4.78
70	15.86	19.03	17.28	14.26	1.05	0.46	19.98	7.05	4.52
100	15.86	19.03	17.32	14.19	1.05	0.46	19.84	6.91	4.37
200	15.86	19.04	16.89	14.00	1.05	0.46	19.78	6.77	4.66
300	15.87	19.04	17.01	14.08	1.05	0.46	20.35	6.76	4.39
400	15.87	19.04	17.22	14.21	1.05	0.46	19.94	6.97	4.24
500	15.87	19.04	17.22	14.16	1.05	0.46	20.32	6.99	4.39
600	15.87	19.05	17.09	14.08	1.05	0.46	19.84	7.03	4.19
700	15.86	19.05	17.00	14.04	1.05	0.47	20.12	6.69	4.26
800	15.86	19.05	16.98	14.03	1.05	0.47	19.71	6.73	4.20
900	15.86	19.06	16.85	13.96	1.05	0.47	19.99	6.94	4.24
1000	15.85	19.06	16.71	13.82	1.05	0.47	20.09	6.63	4.28
2000	15.73	19.13	14.68	12.54	1.01	0.52	20.07	6.41	4.26
3000	15.49	19.26	12.43	11.00	0.95	0.61	19.13	6.27	4.43
4000	15.21	19.38	10.80	9.89	0.88	0.70	18.84	6.05	4.36
5000	15.01	19.40	10.59	9.94	0.91	0.70	18.76	5.78	4.29
6000	14.93	19.30	11.24	10.80	0.99	0.64	18.78	5.98	4.24
7000	14.94	19.18	12.53	12.37	1.06	0.59	18.54	6.01	4.16
8000	14.97	19.10	14.45	14.75	1.09	0.58	17.31	6.12	4.01
9000	15.05	19.02	18.38	19.12	1.10	0.59	17.54	7.43	3.99
10000	15.11	19.04	22.75	20.64	1.09	0.60	17.31	7.78	3.76
11000	15.03	19.07	18.91	16.03	1.06	0.61	17.18	7.53	3.72
11500	15.10	19.18	19.75	15.64	1.07	0.61	17.29	7.31	3.70
12000	15.16	19.19	21.14	15.56	1.08	0.59	16.69	6.93	3.68
12500	15.16	19.25	22.68	15.88	1.09	0.58	16.14	6.65	3.65
13000	15.02	19.23	21.52	15.15	1.10	0.58	16.16	6.11	3.71
13500	14.85	19.16	19.39	13.76	1.10	0.57	15.54	5.98	3.64
14000	14.71	19.15	18.84	12.85	1.10	0.57	14.79	5.59	3.72
14500	14.51	19.06	19.41	12.40	1.11	0.57	14.71	5.33	3.75
15000	14.33	18.92	22.27	12.82	1.11	0.59	14.14	4.90	3.84
15500	14.13	18.75	29.00	13.88	1.12	0.61	13.64	4.45	3.87
16000	13.90	18.66	23.22	14.77	1.13	0.63	13.36	3.90	3.86
16500	13.65	18.61	18.57	14.29	1.14	0.64	13.20	3.80	3.90
17000	13.32	18.68	17.36	13.28	1.16	0.65	12.92	3.73	3.86
17500	13.12	18.69	19.84	12.50	1.17	0.65	12.66	3.28	3.85
18000	12.93	18.71	30.50	11.79	1.17	0.66	12.03	3.13	3.76

Typical Performance Data

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

TEST CONDITIONS: Vd = 5.00V, Id = 24.20mA @ Temperature = +85°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
10	15.61	18.91	16.46	13.52	1.06	0.47	18.01	9.45	6.75
40	15.69	18.93	17.52	14.32	1.06	0.47	23.37	9.32	6.41
70	15.69	18.94	17.56	14.41	1.06	0.47	22.21	9.31	6.21
100	15.68	18.93	17.66	14.50	1.06	0.47	21.29	9.14	6.10
200	15.69	18.93	18.16	14.84	1.06	0.48	21.81	9.07	6.35
300	15.69	18.94	18.21	14.92	1.06	0.48	21.94	9.06	6.13
400	15.68	18.95	17.92	14.69	1.06	0.48	22.01	9.25	6.05
500	15.66	18.96	17.39	14.35	1.06	0.48	21.85	9.21	6.17
600	15.64	18.98	16.93	14.09	1.06	0.48	22.19	9.21	6.05
700	15.62	18.99	16.72	13.98	1.06	0.48	21.78	8.81	6.11
800	15.61	18.99	16.61	13.90	1.06	0.48	21.37	8.88	6.08
900	15.60	19.00	16.35	13.76	1.06	0.49	21.66	9.11	6.11
1000	15.58	19.01	16.03	13.53	1.06	0.49	21.71	8.76	6.13
2000	15.32	19.09	13.15	11.87	1.03	0.54	21.30	8.42	6.24
3000	14.96	19.16	11.16	10.69	0.96	0.64	20.81	8.29	6.37
4000	14.50	19.23	9.55	9.69	0.87	0.77	20.38	7.95	6.37
5000	14.04	19.27	8.78	9.32	0.86	0.83	19.88	7.72	6.36
6000	13.66	19.20	8.82	9.50	0.93	0.79	18.25	7.56	6.38
7000	13.44	19.01	9.89	10.65	1.04	0.73	17.12	7.06	6.29
8000	13.37	18.75	12.35	13.03	1.12	0.69	15.33	6.25	6.06
9000	13.29	18.48	16.54	15.04	1.15	0.67	14.75	5.82	5.96
10000	13.11	18.38	20.58	15.47	1.17	0.67	13.89	5.06	5.82
11000	12.78	18.29	23.79	15.63	1.19	0.69	13.19	4.29	5.81
11500	12.65	18.36	25.67	15.15	1.20	0.70	13.13	3.99	5.86
12000	12.49	18.36	27.86	14.84	1.20	0.71	12.40	3.52	5.84
12500	12.31	18.37	29.38	14.61	1.21	0.72	11.83	3.20	5.76
13000	12.06	18.41	26.31	14.62	1.23	0.74	11.58	2.77	5.86
13500	11.79	18.35	23.70	14.48	1.25	0.76	11.40	2.55	5.89
14000	11.51	18.34	21.34	14.18	1.27	0.77	11.00	2.16	6.00
14500	11.17	18.42	19.73	13.54	1.30	0.78	10.78	1.92	6.12
15000	10.80	18.43	19.57	12.96	1.34	0.78	10.40	1.57	6.16
15500	10.47	18.42	19.73	12.43	1.38	0.78	10.20	1.32	6.14
16000	10.13	18.44	20.23	11.97	1.42	0.78	10.06	1.01	6.12
16500	9.84	18.45	19.61	11.73	1.45	0.79	9.81	0.65	6.20
17000	9.55	18.45	18.02	11.77	1.47	0.81	9.60	0.80	6.14
17500	9.33	18.45	16.61	11.68	1.48	0.83	9.31	0.40	6.23
18000	9.11	18.48	15.74	11.72	1.49	0.85	9.24	0.28	6.32

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: Vd = 4.75V, Id = 19.65mA @ Temperature = +85°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
10	15.11	18.69	14.69	12.25	1.06	0.48	17.56	6.74	6.74
40	15.19	18.69	15.54	12.90	1.06	0.48	21.11	6.58	6.38
70	15.20	18.69	15.68	12.99	1.06	0.48	19.17	6.57	6.18
100	15.20	18.69	15.82	13.07	1.06	0.48	18.32	6.43	6.05
200	15.21	18.68	16.19	13.36	1.06	0.48	18.73	6.34	6.31
300	15.21	18.69	16.25	13.42	1.06	0.49	19.24	6.34	6.05
400	15.19	18.70	15.98	13.21	1.06	0.49	19.22	6.53	5.98
500	15.17	18.72	15.57	12.92	1.06	0.49	19.18	6.50	6.09
600	15.16	18.74	15.29	12.76	1.06	0.49	18.80	6.50	5.99
700	15.14	18.75	15.15	12.67	1.06	0.49	18.85	6.13	6.03
800	15.13	18.76	15.06	12.60	1.06	0.49	18.37	6.18	5.99
900	15.12	18.77	14.86	12.48	1.06	0.50	18.89	6.40	6.05
1000	15.10	18.78	14.60	12.28	1.06	0.50	18.58	6.11	6.05
2000	14.87	18.92	12.43	10.98	1.02	0.57	18.66	5.73	6.12
3000	14.59	19.03	10.86	10.07	0.94	0.68	17.53	5.59	6.29
4000	14.24	19.14	9.50	9.26	0.86	0.78	17.09	5.32	6.30
5000	13.88	19.20	8.84	9.02	0.86	0.82	17.06	5.16	6.25
6000	13.63	19.14	8.92	9.34	0.94	0.77	16.28	5.30	6.25
7000	13.53	18.95	10.06	10.72	1.06	0.70	16.16	5.45	6.18
8000	13.55	18.70	12.72	13.79	1.13	0.67	14.99	5.22	5.93
9000	13.55	18.47	17.31	16.89	1.15	0.66	14.75	5.43	5.84
10000	13.41	18.39	21.70	17.56	1.16	0.66	14.08	4.94	5.69
11000	13.11	18.30	25.16	17.50	1.17	0.68	13.64	4.21	5.70
11500	13.02	18.42	27.13	16.82	1.18	0.69	13.50	4.05	5.69
12000	12.88	18.42	30.13	16.22	1.19	0.70	12.84	3.47	5.64
12500	12.69	18.44	30.55	15.80	1.20	0.71	12.25	3.17	5.59
13000	12.45	18.48	26.67	15.70	1.21	0.73	12.05	2.78	5.67
13500	12.19	18.42	24.03	15.51	1.23	0.75	11.86	2.61	5.70
14000	11.92	18.42	21.70	15.29	1.25	0.76	11.43	2.26	5.80
14500	11.58	18.48	19.97	14.65	1.28	0.77	11.11	2.06	5.87
15000	11.20	18.46	19.83	13.92	1.32	0.78	10.71	1.71	5.90
15500	10.86	18.46	20.12	13.32	1.36	0.78	10.58	1.40	5.92
16000	10.52	18.48	20.71	12.70	1.39	0.78	10.47	1.11	5.91
16500	10.22	18.47	19.95	12.33	1.42	0.78	10.12	0.77	5.90
17000	9.91	18.47	18.01	12.29	1.44	0.80	10.00	0.84	5.84
17500	9.68	18.48	16.43	12.13	1.45	0.83	9.84	0.55	5.92
18000	9.45	18.49	15.54	12.07	1.45	0.85	9.65	0.38	6.01

Typical Performance Data

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

TEST CONDITIONS: Vd = 5.25V, Id = 28.82mA @ Temperature = +85°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
10	15.91	19.04	18.11	14.42	1.05	0.46	17.71	11.68	6.84
40	15.99	19.09	18.81	15.37	1.05	0.47	23.74	11.48	6.53
70	15.98	19.10	18.97	15.49	1.05	0.47	23.52	11.50	6.33
100	15.98	19.09	19.28	15.61	1.06	0.47	23.59	11.35	6.22
200	15.99	19.09	19.75	16.00	1.06	0.47	22.58	11.26	6.44
300	15.98	19.09	19.74	16.02	1.06	0.47	21.96	11.26	6.24
400	15.97	19.10	19.23	15.68	1.06	0.47	24.34	11.43	6.18
500	15.95	19.11	18.60	15.31	1.06	0.47	23.22	11.37	6.29
600	15.93	19.12	18.13	15.07	1.06	0.48	23.85	11.41	6.16
700	15.91	19.13	17.83	14.94	1.06	0.48	24.36	11.03	6.23
800	15.90	19.13	17.60	14.79	1.06	0.48	23.07	11.07	6.20
900	15.88	19.14	17.20	14.59	1.06	0.48	24.04	11.26	6.23
1000	15.85	19.14	16.77	14.30	1.06	0.48	24.58	10.96	6.27
2000	15.53	19.16	13.21	12.28	1.04	0.52	23.28	10.64	6.36
3000	15.09	19.17	10.92	10.86	0.97	0.62	23.85	10.42	6.51
4000	14.51	19.20	9.20	9.68	0.87	0.77	21.93	9.91	6.53
5000	13.90	19.21	8.36	9.14	0.83	0.85	20.41	9.26	6.52
6000	13.39	19.13	8.33	9.11	0.89	0.83	18.46	8.27	6.56
7000	13.05	18.92	9.32	9.93	1.02	0.76	16.89	7.12	6.49
8000	12.90	18.61	11.65	11.71	1.12	0.71	15.25	6.10	6.28
9000	12.78	18.31	15.45	13.09	1.16	0.67	14.21	5.43	6.20
10000	12.53	18.18	18.76	13.43	1.19	0.67	13.42	4.54	6.10
11000	12.13	18.02	20.97	13.66	1.20	0.70	12.70	3.69	6.13
11500	12.00	18.14	22.14	13.47	1.21	0.71	12.65	3.42	6.19
12000	11.82	18.11	23.88	13.29	1.22	0.73	11.90	3.04	6.16
12500	11.61	18.11	25.24	13.26	1.23	0.74	11.44	2.75	6.13
13000	11.36	18.15	23.30	13.27	1.25	0.76	11.21	2.34	6.22
13500	11.07	18.10	21.04	13.12	1.27	0.77	11.03	2.14	6.29
14000	10.78	18.14	19.05	12.69	1.29	0.78	10.65	1.74	6.44
14500	10.42	18.25	17.85	12.06	1.34	0.79	10.34	1.53	6.58
15000	10.05	18.24	17.95	11.52	1.38	0.78	10.15	1.28	6.65
15500	9.72	18.25	18.48	11.13	1.43	0.78	9.87	1.05	6.64
16000	9.40	18.28	19.37	10.81	1.47	0.78	9.71	0.71	6.62
16500	9.11	18.29	18.94	10.70	1.50	0.79	9.49	0.46	6.73
17000	8.83	18.30	17.31	10.85	1.52	0.81	9.28	0.57	6.77
17500	8.63	18.34	15.87	10.89	1.53	0.84	9.13	0.17	6.81
18000	8.42	18.32	15.08	11.02	1.53	0.86	8.96	0.03	6.94