

MMIC Amplifier

PMA2-252LN+

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 = 4V, Id = 59.59 mA @ Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	19.45	38.31	24.80	10.04	4.01	0.89	31.32	18.52	0.61
1525	19.40	38.06	24.60	10.70	3.98	0.90	31.36	18.45	0.55
1550	19.36	38.10	24.33	11.38	4.07	0.91	30.97	18.18	0.61
1575	19.29	38.05	24.14	12.14	4.13	0.93	31.18	18.31	0.57
1600	19.22	37.61	23.81	12.97	4.00	0.94	31.56	18.67	0.59
1625	19.16	37.72	23.32	13.88	4.12	0.95	30.60	18.05	0.62
1650	19.08	37.64	22.82	14.83	4.14	0.96	31.30	18.39	0.56
1675	19.00	37.53	22.44	15.86	4.16	0.96	31.32	18.35	0.68
1700	18.92	37.52	21.99	16.98	4.21	0.97	30.71	18.02	0.62
1725	18.84	37.42	21.62	18.26	4.22	0.98	31.17	18.39	0.64
1750	18.74	37.48	21.26	19.75	4.31	0.98	30.77	17.93	0.65
1800	18.55	37.46	20.54	23.31	4.41	0.99	30.74	17.96	0.71
1850	18.34	37.41	19.86	27.42	4.49	1.00	30.86	18.00	0.75
1900	18.11	37.32	19.37	27.36	4.55	1.00	30.66	17.80	0.76
1925	17.99	37.39	19.09	25.34	4.64	1.00	30.73	17.97	0.87
1950	17.87	37.37	18.81	23.39	4.68	1.00	30.81	17.92	0.80
1975	17.75	37.24	18.52	21.57	4.66	1.00	30.48	17.66	0.79
2000	17.61	37.31	18.30	20.06	4.75	1.00	30.59	17.78	0.74
2025	17.46	37.23	18.07	18.70	4.76	0.99	30.38	17.71	0.89
2050	17.32	37.36	17.75	17.55	4.89	0.99	30.34	17.52	0.90
2075	17.16	37.26	17.49	16.65	4.89	0.99	29.96	17.40	0.89
2100	17.00	37.11	17.27	15.76	4.87	0.99	30.18	17.49	0.82
2125	16.84	37.55	17.00	15.11	5.17	0.98	29.92	17.31	1.00
2175	16.61	37.45	16.54	14.23	5.20	0.98	29.34	16.93	1.05
2200	16.54	37.17	16.33	13.99	5.06	0.98	30.07	17.45	0.82
2225	16.50	37.34	16.25	13.81	5.17	0.98	28.54	16.48	0.86
2250	16.50	37.08	16.12	13.49	5.00	0.97	29.68	17.08	0.84
2275	16.49	37.02	15.97	13.08	4.95	0.97	28.96	16.73	0.95
2300	16.45	36.76	15.88	12.64	4.79	0.97	29.00	16.69	1.06
2325	16.41	36.83	15.80	12.14	4.81	0.96	28.67	16.52	0.96
2350	16.34	36.87	15.67	11.62	4.82	0.95	29.53	16.82	0.89
2375	16.25	36.82	15.62	11.14	4.80	0.95	28.58	16.39	0.83
2450	15.94	37.14	15.32	9.71	4.96	0.92	28.59	16.36	1.07
2475	15.81	37.04	15.29	9.33	4.93	0.91	28.36	16.21	1.04
2500	15.68	37.19	15.19	8.94	5.01	0.90	28.54	16.24	1.24



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 = 3.5V, Id =50.69 mA @ Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	19.24	36.98	21.62	10.79	3.59	0.90	29.20	17.37	0.58
1525	19.19	36.96	21.27	11.53	3.65	0.91	29.05	17.31	0.55
1550	19.14	37.02	20.92	12.31	3.74	0.93	28.40	17.06	0.58
1575	19.06	36.77	20.68	13.17	3.70	0.94	28.70	17.16	0.54
1600	18.99	36.54	20.43	14.14	3.67	0.95	29.19	17.48	0.63
1625	18.91	36.50	20.07	15.19	3.72	0.96	28.11	16.92	0.59
1650	18.83	36.51	19.68	16.37	3.78	0.97	28.73	17.24	0.57
1675	18.75	36.43	19.40	17.64	3.80	0.97	28.74	17.17	0.70
1700	18.66	36.36	19.08	19.09	3.82	0.98	27.98	16.89	0.63
1725	18.56	36.34	18.83	20.83	3.86	0.99	28.47	17.24	0.80
1750	18.46	36.41	18.59	22.85	3.94	0.99	27.90	16.79	0.66
1800	18.26	36.22	18.10	28.75	3.95	1.00	27.79	16.81	0.72
1850	18.04	36.11	17.66	31.88	3.99	1.00	27.92	16.87	0.76
1900	17.80	36.47	17.32	25.42	4.25	1.00	27.64	16.67	0.77
1925	17.68	36.26	17.12	22.95	4.19	1.00	27.77	16.83	0.86
1950	17.55	36.17	16.93	21.10	4.19	1.00	27.84	16.77	0.82
1975	17.42	36.20	16.74	19.48	4.25	1.00	27.39	16.53	0.81
2000	17.28	36.46	16.59	18.18	4.42	1.00	27.63	16.64	0.75
2025	17.13	36.34	16.41	17.03	4.41	0.99	27.46	16.55	0.89
2050	16.98	36.13	16.20	16.00	4.35	0.99	27.28	16.36	0.93
2075	16.82	36.55	16.01	15.20	4.61	0.99	26.99	16.25	0.92
2100	16.65	36.52	15.85	14.42	4.65	0.98	27.22	16.33	0.81
2125	16.50	36.36	15.61	13.83	4.61	0.98	26.90	16.16	1.03
2175	16.26	36.42	15.25	13.01	4.71	0.98	26.34	15.79	1.07
2200	16.18	36.33	15.11	12.78	4.68	0.97	27.00	16.28	0.83
2225	16.14	36.31	15.05	12.60	4.68	0.97	25.55	15.37	0.87
2250	16.12	36.18	14.98	12.31	4.60	0.97	26.51	15.92	0.84
2275	16.10	36.13	14.89	11.93	4.55	0.96	25.88	15.59	0.94
2300	16.06	36.11	14.84	11.55	4.53	0.96	25.81	15.55	1.09
2325	16.01	35.94	14.80	11.11	4.43	0.95	25.56	15.39	0.99
2350	15.93	36.08	14.70	10.65	4.49	0.94	26.25	15.69	0.86
2375	15.83	36.05	14.70	10.24	4.48	0.94	25.45	15.26	0.86
2450	15.50	36.31	14.52	8.97	4.60	0.91	25.38	15.16	1.15
2475	15.37	36.39	14.48	8.62	4.66	0.90	25.21	15.05	1.05
2500	15.23	36.45	14.41	8.28	4.69	0.89	25.35	15.03	1.25

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 = 4.5V, Id = 68.6 mA @ Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	19.57	39.28	26.04	9.55	4.35	0.88	30.51	19.20	0.58
1525	19.54	39.31	26.39	10.16	4.46	0.89	30.49	19.13	0.57
1550	19.50	38.97	26.62	10.80	4.37	0.90	30.44	18.84	0.58
1575	19.44	39.20	26.83	11.48	4.57	0.92	30.33	19.00	0.53
1600	19.37	38.87	26.57	12.24	4.49	0.93	30.57	19.36	0.60
1625	19.31	38.76	26.15	13.05	4.51	0.94	30.02	18.73	0.64
1650	19.24	38.69	25.59	13.90	4.55	0.95	30.31	19.11	0.54
1675	19.17	38.73	25.17	14.80	4.64	0.96	30.40	19.11	0.67
1700	19.09	38.66	24.65	15.78	4.68	0.96	30.17	18.74	0.65
1725	19.01	38.57	24.19	16.87	4.70	0.97	30.35	19.18	0.66
1750	18.92	38.30	23.71	18.07	4.63	0.98	30.21	18.71	0.64
1800	18.73	38.40	22.77	20.83	4.80	0.99	30.18	18.74	0.70
1850	18.54	38.43	21.88	23.96	4.94	0.99	30.17	18.83	0.78
1900	18.31	38.17	21.17	25.89	4.92	1.00	30.08	18.68	0.78
1925	18.19	38.25	20.83	25.36	5.02	1.00	30.16	18.86	0.85
1950	18.08	38.17	20.49	24.12	5.03	1.00	30.19	18.80	0.82
1975	17.96	38.10	20.11	22.60	5.05	1.00	30.07	18.55	0.78
2000	17.82	38.29	19.78	21.14	5.22	1.00	30.12	18.71	0.78
2025	17.68	38.30	19.50	19.75	5.29	0.99	30.01	18.60	0.89
2050	17.53	38.31	19.12	18.60	5.36	0.99	29.96	18.48	0.85
2075	17.37	38.17	18.81	17.60	5.35	0.99	29.77	18.33	0.89
2100	17.21	38.25	18.49	16.66	5.46	0.99	30.00	18.43	0.81
2125	17.06	38.00	18.17	15.99	5.37	0.98	29.82	18.28	0.98
2175	16.83	38.18	17.62	15.10	5.58	0.98	29.56	17.88	1.02
2200	16.77	38.04	17.39	14.88	5.52	0.98	29.84	18.39	0.80
2225	16.73	38.16	17.25	14.70	5.61	0.98	29.36	17.42	0.87
2250	16.73	37.67	17.06	14.36	5.28	0.98	29.74	18.07	0.83
2275	16.73	37.60	16.88	13.90	5.21	0.98	29.61	17.68	0.96
2300	16.70	37.65	16.75	13.42	5.22	0.97	29.71	17.65	1.07
2325	16.66	37.47	16.64	12.87	5.11	0.97	29.55	17.49	0.97
2350	16.60	37.61	16.49	12.27	5.18	0.96	29.76	17.83	0.84
2375	16.51	37.48	16.40	11.76	5.11	0.95	29.63	17.35	0.89
2450	16.22	37.74	16.03	10.22	5.25	0.93	29.54	17.34	1.05
2475	16.09	37.67	15.95	9.80	5.23	0.92	29.44	17.21	1.08
2500	15.97	37.66	15.82	9.38	5.23	0.91	29.61	17.23	1.19

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 = 4V, Id =61.67 mA @ Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	19.93	38.63	23.21	9.44	3.87	0.87	31.93	18.94	0.42
1525	19.89	38.69	23.96	10.04	3.98	0.89	32.11	18.89	0.38
1550	19.86	38.59	24.72	10.66	4.01	0.90	31.80	18.62	0.38
1575	19.80	38.44	25.43	11.34	4.02	0.91	32.03	18.73	0.39
1600	19.74	38.10	25.81	12.06	3.95	0.92	32.41	19.08	0.41
1625	19.68	38.16	26.19	12.84	4.04	0.93	31.59	18.47	0.45
1650	19.61	38.18	26.24	13.65	4.12	0.94	32.20	18.84	0.35
1675	19.53	38.12	26.31	14.52	4.16	0.95	32.12	18.80	0.46
1700	19.46	38.07	26.15	15.45	4.19	0.96	31.59	18.45	0.40
1725	19.38	38.01	25.90	16.51	4.23	0.96	32.08	18.82	0.43
1750	19.29	37.90	25.50	17.65	4.24	0.97	31.83	18.36	0.43
1800	19.12	37.62	24.62	20.48	4.22	0.98	31.87	18.38	0.48
1850	18.92	37.85	23.75	23.76	4.44	0.99	31.93	18.43	0.52
1900	18.70	37.53	23.12	26.10	4.39	0.99	31.82	18.25	0.52
1925	18.59	37.75	22.74	25.72	4.56	0.99	31.73	18.42	0.57
1950	18.47	37.74	22.44	24.50	4.61	0.99	31.88	18.34	0.54
1975	18.35	37.68	22.02	22.88	4.62	0.99	31.55	18.12	0.51
2000	18.21	37.62	21.69	21.37	4.65	0.99	31.78	18.25	0.46
2025	18.08	37.82	21.26	19.90	4.81	0.99	31.61	18.12	0.61
2050	17.93	37.86	20.83	18.67	4.89	0.99	31.45	17.99	0.59
2075	17.76	38.04	20.50	17.60	5.06	0.98	31.09	17.88	0.60
2100	17.59	37.83	20.02	16.57	5.01	0.98	31.30	17.94	0.50
2125	17.43	38.03	19.60	15.80	5.19	0.98	31.08	17.79	0.71
2175	17.17	37.58	18.89	14.78	5.03	0.97	30.56	17.40	0.72
2200	17.09	37.74	18.58	14.56	5.16	0.97	31.14	17.85	0.52
2225	17.05	37.51	18.44	14.43	5.03	0.97	29.68	16.89	0.55
2250	17.06	37.45	18.27	14.16	4.98	0.97	30.84	17.55	0.50
2275	17.07	37.31	18.05	13.76	4.87	0.97	30.09	17.12	0.63
2300	17.06	37.13	17.93	13.31	4.75	0.96	30.19	17.12	0.75
2325	17.02	37.12	17.81	12.76	4.73	0.96	29.80	16.95	0.67
2350	16.97	37.22	17.65	12.19	4.77	0.95	30.85	17.29	0.55
2375	16.88	37.23	17.55	11.66	4.78	0.95	29.68	16.81	0.55
2450	16.58	37.35	17.10	10.10	4.83	0.92	29.73	16.82	0.70
2475	16.46	37.40	16.95	9.66	4.87	0.91	29.49	16.65	0.71
2500	16.33	37.54	16.80	9.26	4.95	0.90	29.73	16.71	0.85

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 = 3.5V, Id =51.58 mA @ Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	19.65	37.75	24.03	9.97	3.68	0.88	30.14	17.56	0.43
1525	19.60	37.70	24.16	10.63	3.74	0.90	30.05	17.52	0.35
1550	19.56	37.56	24.20	11.31	3.74	0.91	29.27	17.28	0.40
1575	19.49	37.34	24.23	12.07	3.72	0.92	29.89	17.40	0.32
1600	19.42	37.19	24.14	12.87	3.73	0.93	30.25	17.71	0.41
1625	19.35	37.08	23.75	13.75	3.75	0.94	29.10	17.18	0.41
1650	19.28	37.09	23.27	14.66	3.81	0.95	29.91	17.51	0.37
1675	19.20	37.08	22.93	15.67	3.87	0.96	29.81	17.46	0.46
1700	19.12	36.86	22.44	16.76	3.82	0.97	28.95	17.15	0.41
1725	19.04	36.98	22.03	18.04	3.93	0.97	29.61	17.49	0.49
1750	18.94	36.96	21.67	19.46	3.98	0.98	28.92	17.08	0.42
1800	18.75	36.91	20.93	23.13	4.06	0.99	28.76	17.09	0.47
1850	18.55	36.67	20.31	27.48	4.04	0.99	29.04	17.16	0.51
1900	18.32	36.74	19.83	27.45	4.17	0.99	28.72	16.99	0.54
1925	18.20	36.73	19.62	25.37	4.22	1.00	28.85	17.16	0.61
1950	18.08	36.66	19.35	23.34	4.23	0.99	28.90	17.07	0.57
1975	17.96	36.79	19.10	21.52	4.33	0.99	28.49	16.86	0.53
2000	17.82	36.86	18.86	19.99	4.42	0.99	28.81	16.99	0.50
2025	17.68	36.80	18.58	18.57	4.44	0.99	28.46	16.87	0.60
2050	17.52	36.82	18.28	17.41	4.50	0.99	28.36	16.74	0.61
2075	17.36	37.13	18.00	16.45	4.72	0.99	28.06	16.61	0.61
2100	17.18	36.88	17.73	15.48	4.64	0.98	28.27	16.66	0.52
2125	17.02	36.91	17.40	14.77	4.71	0.98	27.91	16.52	0.72
2175	16.75	36.95	16.88	13.80	4.83	0.97	27.32	16.16	0.75
2200	16.67	36.89	16.64	13.56	4.82	0.97	27.91	16.58	0.52
2225	16.63	36.76	16.52	13.40	4.76	0.97	26.39	15.71	0.54
2250	16.63	36.55	16.40	13.16	4.63	0.97	27.39	16.27	0.52
2275	16.63	36.61	16.28	12.80	4.64	0.97	26.65	15.92	0.65
2300	16.61	36.41	16.21	12.40	4.51	0.96	26.59	15.91	0.78
2325	16.56	36.42	16.14	11.90	4.50	0.96	26.34	15.75	0.67
2350	16.50	36.44	16.06	11.39	4.50	0.95	27.15	16.05	0.54
2375	16.41	36.38	16.02	10.92	4.47	0.94	26.19	15.64	0.52
2450	16.10	36.61	15.71	9.50	4.58	0.91	26.18	15.57	0.73
2475	15.97	36.59	15.63	9.09	4.57	0.90	25.95	15.43	0.71
2500	15.84	37.03	15.54	8.73	4.81	0.89	26.21	15.46	0.87

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 = 4.5V, Id = 72.08 mA @ Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	20.00	39.98	21.73	8.92	4.38	0.86	32.29	19.67	0.42
1525	19.97	39.81	22.44	9.48	4.39	0.88	32.31	19.63	0.38
1550	19.94	39.67	23.22	10.05	4.41	0.89	32.03	19.33	0.41
1575	19.89	39.43	23.98	10.67	4.38	0.90	32.30	19.47	0.40
1600	19.83	39.18	24.45	11.31	4.35	0.92	32.71	19.82	0.44
1625	19.77	39.36	25.12	12.02	4.52	0.93	31.70	19.20	0.43
1650	19.71	38.98	25.63	12.73	4.41	0.94	32.33	19.55	0.36
1675	19.64	39.08	26.14	13.49	4.53	0.94	32.19	19.53	0.46
1700	19.58	39.06	26.35	14.31	4.59	0.95	31.75	19.17	0.44
1725	19.50	38.87	26.53	15.21	4.56	0.96	32.14	19.56	0.44
1750	19.41	38.91	26.43	16.17	4.65	0.97	31.93	19.09	0.42
1800	19.24	38.90	25.91	18.43	4.78	0.98	31.97	19.10	0.48
1850	19.06	38.90	25.24	21.03	4.91	0.98	32.03	19.19	0.54
1900	18.85	38.69	24.55	23.54	4.92	0.99	31.84	18.99	0.52
1925	18.74	38.63	24.18	24.21	4.95	0.99	31.76	19.16	0.60
1950	18.63	38.61	23.85	24.15	5.00	0.99	31.95	19.08	0.58
1975	18.51	38.37	23.41	23.47	4.92	0.99	31.68	18.82	0.54
2000	18.37	38.90	23.05	22.37	5.30	0.99	31.84	18.96	0.51
2025	18.24	38.61	22.55	21.06	5.19	0.99	31.71	18.86	0.63
2050	18.09	38.77	22.05	19.84	5.35	0.99	31.55	18.72	0.58
2075	17.93	38.94	21.67	18.80	5.54	0.99	31.32	18.58	0.61
2100	17.76	38.64	21.18	17.70	5.43	0.98	31.42	18.67	0.54
2125	17.60	38.84	20.69	16.90	5.63	0.98	31.29	18.50	0.69
2175	17.34	38.70	19.87	15.87	5.67	0.98	30.97	18.11	0.73
2200	17.27	38.59	19.59	15.65	5.63	0.98	31.41	18.60	0.54
2225	17.24	38.18	19.38	15.54	5.38	0.98	30.34	17.63	0.60
2250	17.25	38.21	19.16	15.27	5.38	0.98	31.08	18.26	0.55
2275	17.27	37.86	18.89	14.81	5.14	0.97	30.76	17.88	0.66
2300	17.26	37.81	18.74	14.31	5.09	0.97	30.82	17.86	0.76
2325	17.23	37.88	18.54	13.68	5.11	0.97	30.61	17.65	0.68
2350	17.18	37.76	18.34	13.03	5.02	0.96	31.15	18.04	0.60
2375	17.10	37.90	18.21	12.45	5.11	0.95	30.50	17.55	0.55
2450	16.82	38.00	17.67	10.71	5.16	0.93	30.51	17.54	0.85
2475	16.70	37.71	17.48	10.23	5.00	0.92	30.30	17.38	0.71
2500	16.58	37.99	17.34	9.79	5.17	0.91	30.41	17.42	0.88

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 = 4V, Id = 58.6 mA @ Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	19.03	39.03	22.64	9.82	4.53	0.89	30.55	18.22	0.76
1525	18.99	39.06	22.25	10.45	4.63	0.90	30.65	18.21	0.72
1550	18.94	38.87	21.89	11.10	4.61	0.91	30.65	17.96	0.76
1575	18.88	38.63	21.62	11.81	4.58	0.93	30.39	18.02	0.74
1600	18.81	38.52	21.34	12.59	4.60	0.94	30.71	18.41	0.78
1625	18.74	38.73	20.87	13.42	4.79	0.95	30.22	17.81	0.83
1650	18.67	38.49	20.45	14.28	4.74	0.96	30.44	18.14	0.72
1675	18.59	38.23	20.11	15.19	4.67	0.97	30.50	18.11	0.84
1700	18.51	38.44	19.71	16.17	4.85	0.97	30.40	17.81	0.79
1725	18.42	38.17	19.42	17.29	4.77	0.98	30.46	18.17	0.83
1750	18.33	38.27	19.14	18.46	4.90	0.99	30.46	17.73	0.82
1800	18.13	38.09	18.59	21.23	4.92	1.00	30.47	17.77	0.89
1850	17.93	38.17	18.01	24.15	5.09	1.00	30.34	17.81	0.94
1900	17.71	38.09	17.57	25.70	5.17	1.01	30.22	17.61	0.93
1925	17.59	38.00	17.35	25.15	5.17	1.01	30.23	17.78	1.05
1950	17.47	37.93	17.14	23.96	5.19	1.01	30.28	17.76	1.03
1975	17.34	37.91	16.89	22.54	5.24	1.01	30.18	17.47	1.03
2000	17.21	37.97	16.69	21.22	5.34	1.01	30.08	17.59	0.96
2025	17.07	38.23	16.49	19.90	5.56	1.01	30.07	17.51	1.10
2050	16.93	37.98	16.24	18.79	5.46	1.01	29.97	17.36	1.09
2075	16.77	38.28	16.01	17.88	5.73	1.00	29.86	17.19	1.10
2100	16.62	38.17	15.86	17.02	5.72	1.00	29.95	17.31	1.01
2125	16.48	37.94	15.61	16.35	5.64	1.00	29.81	17.15	1.20
2175	16.27	37.80	15.24	15.46	5.64	1.00	29.50	16.75	1.22
2200	16.21	37.86	15.09	15.21	5.70	1.00	29.89	17.30	1.06
2225	16.17	37.66	14.98	14.97	5.58	1.00	29.38	16.29	1.07
2250	16.16	37.64	14.86	14.59	5.55	0.99	29.80	16.95	1.07
2275	16.15	37.50	14.73	14.11	5.44	0.99	29.65	16.55	1.21
2300	16.12	37.49	14.64	13.60	5.42	0.99	29.69	16.54	1.29
2325	16.07	37.36	14.54	13.03	5.32	0.98	29.52	16.33	1.23
2350	16.01	37.40	14.45	12.45	5.34	0.98	29.83	16.68	1.13
2375	15.92	37.23	14.36	11.91	5.24	0.97	29.56	16.21	1.12
2450	15.63	37.51	14.12	10.38	5.41	0.95	29.33	16.18	1.33
2475	15.49	37.67	14.10	9.95	5.53	0.94	29.28	16.04	1.31
2500	15.37	37.54	13.99	9.54	5.46	0.93	29.25	16.02	1.50

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 = 3.5V, Id = 50.16 mA @ Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	18.81	37.88	19.69	10.26	4.11	0.90	29.17	17.20	0.77
1525	18.76	37.87	19.34	10.93	4.18	0.91	29.13	17.16	0.71
1550	18.71	37.62	19.05	11.63	4.13	0.92	28.51	16.96	0.77
1575	18.64	37.56	18.80	12.41	4.18	0.94	28.74	16.99	0.73
1600	18.57	37.35	18.60	13.24	4.16	0.95	29.25	17.35	0.76
1625	18.49	37.34	18.26	14.15	4.22	0.96	28.13	16.77	0.83
1650	18.42	37.33	17.95	15.14	4.28	0.97	28.82	17.07	0.73
1675	18.33	37.46	17.71	16.14	4.41	0.98	28.84	17.00	0.84
1700	18.25	37.15	17.43	17.29	4.31	0.98	28.08	16.74	0.80
1725	18.16	37.29	17.20	18.58	4.44	0.99	28.60	17.08	0.82
1750	18.06	37.09	17.01	19.97	4.40	1.00	28.07	16.64	0.84
1800	17.86	37.07	16.58	23.43	4.50	1.00	27.97	16.72	0.91
1850	17.65	37.03	16.16	26.96	4.58	1.01	28.11	16.73	0.94
1900	17.42	37.12	15.85	26.88	4.74	1.01	27.78	16.52	0.96
1925	17.30	37.07	15.69	25.22	4.77	1.02	27.95	16.67	1.05
1950	17.17	37.04	15.51	23.39	4.80	1.02	27.99	16.62	1.00
1975	17.05	37.03	15.33	21.70	4.85	1.02	27.61	16.36	1.01
2000	16.91	37.07	15.19	20.31	4.93	1.01	27.78	16.47	0.99
2025	16.77	37.21	15.04	19.00	5.06	1.01	27.59	16.39	1.09
2050	16.62	37.16	14.84	17.89	5.08	1.01	27.42	16.21	1.07
2075	16.47	37.36	14.67	17.02	5.27	1.01	27.14	16.07	1.11
2100	16.32	37.18	14.54	16.18	5.22	1.01	27.36	16.16	1.03
2125	16.17	37.20	14.38	15.53	5.29	1.00	27.06	15.98	1.25
2175	15.96	37.11	14.06	14.66	5.31	1.00	26.51	15.63	1.26
2200	15.89	37.10	13.94	14.42	5.33	1.00	27.22	16.13	1.03
2225	15.85	37.14	13.86	14.18	5.36	1.00	25.77	15.17	1.11
2250	15.84	36.93	13.79	13.84	5.22	1.00	26.74	15.73	1.07
2275	15.82	36.79	13.68	13.38	5.11	0.99	26.11	15.41	1.20
2300	15.79	36.77	13.63	12.90	5.09	0.99	26.02	15.37	1.32
2325	15.73	36.67	13.58	12.39	5.02	0.98	25.74	15.19	1.24
2350	15.66	36.60	13.50	11.86	4.97	0.98	26.45	15.48	1.15
2375	15.57	36.65	13.45	11.38	5.01	0.97	25.63	15.05	1.09
2450	15.26	36.91	13.28	9.92	5.15	0.94	25.56	14.96	1.35
2475	15.13	37.07	13.28	9.54	5.27	0.93	25.44	14.84	1.32
2500	15.01	37.08	13.20	9.14	5.28	0.93	25.51	14.80	1.50

MMIC Amplifier

PMA2-252LN+

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 = 4.5V, Id = 67.05 mA @ Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	19.16	40.21	25.31	9.45	5.05	0.88	29.62	18.81	0.76
1525	19.12	40.09	24.98	10.05	5.08	0.88	29.67	18.77	0.73
1550	19.08	39.79	24.66	10.66	5.01	0.88	29.56	18.51	0.75
1575	19.02	39.82	24.38	11.33	5.12	0.89	29.50	18.59	0.71
1600	18.95	39.49	23.98	12.04	5.03	0.89	29.69	18.98	0.80
1625	18.89	39.35	23.42	12.81	5.03	0.89	29.27	18.36	0.78
1650	18.81	39.47	22.84	13.60	5.19	0.89	29.53	18.72	0.73
1675	18.74	39.16	22.44	14.43	5.09	0.90	29.61	18.72	0.87
1700	18.67	39.26	21.94	15.33	5.22	0.90	29.31	18.42	0.79
1725	18.58	39.09	21.55	16.30	5.19	0.90	29.50	18.82	0.83
1750	18.49	39.02	21.15	17.31	5.23	0.91	29.37	18.33	0.86
1800	18.30	39.00	20.41	19.65	5.36	0.91	29.23	18.42	0.89
1850	18.10	39.03	19.68	22.10	5.51	0.92	29.22	18.52	0.96
1900	17.88	38.85	19.09	23.98	5.54	0.92	29.25	18.32	0.96
1925	17.77	39.01	18.82	24.14	5.71	0.92	29.31	18.56	1.05
1950	17.65	38.92	18.53	23.71	5.72	0.93	29.26	18.53	1.02
1975	17.53	38.93	18.22	22.73	5.79	0.93	29.17	18.24	1.02
2000	17.40	39.08	17.98	21.69	5.96	0.93	29.21	18.41	0.98
2025	17.26	38.77	17.75	20.50	5.83	0.93	29.13	18.31	1.08
2050	17.12	38.91	17.44	19.45	5.99	0.93	29.11	18.18	1.06
2075	16.96	38.97	17.17	18.58	6.11	0.94	29.00	18.05	1.09
2100	16.82	38.94	16.97	17.69	6.17	0.94	29.11	18.16	1.03
2125	16.68	38.82	16.69	17.03	6.16	0.94	28.96	17.99	1.19
2175	16.47	38.54	16.23	16.16	6.07	0.95	28.71	17.61	1.26
2200	16.41	38.61	16.04	15.89	6.14	0.95	28.98	18.17	1.04
2225	16.37	38.36	15.93	15.66	5.98	0.95	28.56	17.13	1.11
2250	16.37	38.07	15.76	15.26	5.76	0.95	28.89	17.82	1.08
2275	16.36	37.93	15.59	14.73	5.64	0.95	28.69	17.40	1.21
2300	16.34	37.98	15.47	14.18	5.66	0.95	28.76	17.39	1.29
2325	16.29	37.93	15.37	13.57	5.62	0.96	28.63	17.20	1.20
2350	16.23	37.83	15.23	12.94	5.54	0.96	28.82	17.60	1.16
2375	16.15	38.05	15.14	12.38	5.69	0.96	28.63	17.09	1.15
2450	15.86	37.89	14.80	10.73	5.59	0.96	28.57	17.10	1.33
2475	15.73	37.85	14.75	10.30	5.58	0.97	28.55	16.96	1.33
2500	15.61	37.87	14.64	9.85	5.60	0.97	28.75	16.96	1.50



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 = 3V, Id = 40.82 mA @ Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	18.80	36.26	17.82	10.78	3.47	0.90	27.06	16.30	0.60
1525	18.75	36.32	17.52	11.51	3.54	0.92	26.98	16.31	0.65
1550	18.69	36.16	17.28	12.31	3.51	0.93	26.47	16.19	0.64
1575	18.62	36.10	17.03	13.15	3.57	0.95	26.61	16.15	0.70
1600	18.54	35.88	16.83	14.06	3.55	0.96	26.94	16.49	0.66
1625	18.46	35.81	16.65	15.11	3.58	0.97	26.00	16.08	0.69
1650	18.38	35.71	16.42	16.23	3.61	0.97	26.48	16.32	0.74
1675	18.29	35.78	16.25	17.47	3.70	0.98	26.32	16.27	0.69
1700	18.20	35.70	16.06	18.92	3.70	0.99	25.85	16.03	0.74
1725	18.11	35.67	15.87	20.58	3.65	1.00	26.32	16.35	0.71
1750	18.01	35.54	15.72	22.62	3.72	1.00	25.73	15.90	0.72
1800	17.80	35.50	15.39	28.53	3.86	1.01	25.60	15.98	0.76
1850	17.58	35.38	15.11	34.15	3.94	1.02	25.67	15.92	0.78
1900	17.34	35.50	14.90	26.47	3.94	1.02	25.38	15.76	0.86
1925	17.22	35.58	14.74	23.77	4.07	1.02	25.47	15.80	0.80
1950	17.09	35.57	14.62	21.63	4.07	1.02	25.61	15.90	0.86
1975	16.96	35.58	14.49	20.03	4.19	1.02	25.18	15.62	0.90
2000	16.82	35.69	14.38	18.57	4.16	1.01	25.29	15.66	0.92
2025	16.66	35.77	14.30	17.37	4.27	1.01	25.16	15.69	0.89
2050	16.51	35.80	14.16	16.33	4.32	1.01	25.07	15.58	0.90
2075	16.35	35.74	14.01	15.43	4.39	1.00	24.78	15.33	0.93
2100	16.19	35.82	13.87	14.69	4.55	1.00	24.95	15.41	0.95
2125	16.04	35.95	13.75	14.04	4.48	1.00	24.73	15.26	0.98
2175	15.79	35.85	13.47	13.23	4.59	0.99	24.12	14.85	0.95
2200	15.73	35.87	13.37	12.97	4.57	0.99	24.77	15.25	1.05
2225	15.69	35.80	13.30	12.78	4.58	0.99	23.59	14.48	0.98
2250	15.67	35.74	13.28	12.52	4.48	0.99	24.27	14.86	0.95
2275	15.65	35.69	13.25	12.18	4.46	0.98	23.82	14.63	1.08
2300	15.62	35.59	13.21	11.77	4.43	0.98	23.80	14.56	1.01
2325	15.55	35.60	13.21	11.34	4.40	0.97	23.41	14.30	0.98
2350	15.48	35.62	13.20	10.88	4.43	0.96	24.09	14.67	1.03
2375	15.39	35.79	13.16	10.42	4.38	0.96	23.37	14.28	1.10
2450	15.07	35.79	13.07	9.14	4.56	0.93	23.37	14.15	1.09
2475	14.93	35.95	13.07	8.80	4.66	0.92	23.07	13.95	1.18
2500	14.81	36.12	13.03	8.44	4.68	0.91	23.19	13.93	1.08

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: Vd = 2.7V, Id =35.73 mA @ Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	18.50	35.76	15.76	11.21	3.38	0.92	26.26	15.20	0.66
1525	18.45	35.68	15.51	11.99	3.41	0.93	26.20	15.20	0.68
1550	18.38	35.59	15.32	12.85	3.44	0.95	25.73	15.10	0.64
1575	18.31	35.46	15.13	13.76	3.44	0.96	25.84	15.09	0.72
1600	18.23	35.40	14.99	14.75	3.47	0.97	26.17	15.40	0.67
1625	18.14	35.20	14.84	15.93	3.45	0.98	25.30	15.02	0.70
1650	18.06	35.30	14.65	17.13	3.54	0.99	25.71	15.29	0.68
1675	17.96	35.24	14.51	18.56	3.56	1.00	25.60	15.24	0.75
1700	17.87	35.15	14.36	20.24	3.57	1.00	25.17	14.99	0.76
1725	17.77	35.12	14.22	22.27	3.60	1.01	25.56	15.30	0.72
1750	17.67	35.10	14.12	24.83	3.64	1.02	25.04	14.92	0.74
1800	17.46	34.99	13.89	33.78	3.68	1.02	24.90	14.96	0.80
1850	17.23	35.06	13.66	32.04	3.78	1.03	24.93	14.91	0.82
1900	16.98	34.97	13.50	24.25	3.83	1.03	24.65	14.74	0.86
1925	16.86	34.96	13.39	22.01	3.86	1.03	24.67	14.82	0.84
1950	16.73	35.09	13.30	20.21	3.95	1.03	24.85	14.90	0.88
1975	16.60	35.14	13.18	18.77	4.01	1.03	24.46	14.61	0.91
2000	16.45	35.17	13.13	17.46	4.07	1.02	24.50	14.65	0.93
2025	16.29	35.38	13.05	16.40	4.21	1.02	24.38	14.68	0.94
2050	16.14	35.22	12.93	15.44	4.17	1.02	24.29	14.56	0.94
2075	15.98	35.37	12.82	14.61	4.28	1.01	23.97	14.31	1.00
2100	15.81	35.27	12.73	13.93	4.28	1.01	24.15	14.38	1.00
2125	15.66	35.31	12.61	13.34	4.34	1.00	23.93	14.24	0.97
2175	15.41	35.48	12.41	12.56	4.49	1.00	23.35	13.84	0.97
2200	15.35	35.39	12.31	12.31	4.45	1.00	24.00	14.22	1.07
2225	15.30	35.36	12.26	12.10	4.44	0.99	22.82	13.47	1.00
2250	15.28	35.40	12.27	11.86	4.46	0.99	23.50	13.82	0.99
2275	15.25	35.29	12.25	11.54	4.39	0.99	23.05	13.61	1.08
2300	15.21	35.07	12.22	11.15	4.26	0.98	23.04	13.55	1.01
2325	15.14	35.04	12.25	10.74	4.24	0.97	22.66	13.30	1.00
2350	15.07	35.31	12.23	10.32	4.37	0.97	23.28	13.61	1.07
2375	14.98	35.10	12.23	9.89	4.26	0.96	22.59	13.28	1.07
2450	14.64	35.52	12.16	8.70	4.45	0.93	22.54	13.07	1.12
2475	14.50	35.71	12.18	8.37	4.57	0.91	22.25	12.89	1.13
2500	14.37	35.63	12.15	8.03	4.52	0.90	22.38	12.86	1.18

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 = 3.3V, Id = 46.05 mA @ Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	19.04	37.00	20.02	10.44	3.65	0.90	28.03	17.26	0.62
1525	18.99	36.78	19.66	11.14	3.63	0.91	27.98	17.25	0.65
1550	18.93	36.73	19.36	11.89	3.68	0.92	27.38	17.14	0.61
1575	18.87	36.67	19.08	12.69	3.71	0.94	27.58	17.06	0.64
1600	18.79	36.67	18.83	13.53	3.78	0.95	27.90	17.41	0.61
1625	18.72	36.37	18.58	14.52	3.71	0.96	26.95	16.97	0.69
1650	18.64	36.35	18.28	15.55	3.76	0.97	27.45	17.24	0.71
1675	18.55	36.37	18.02	16.68	3.82	0.97	27.30	17.16	0.69
1700	18.47	36.25	17.76	17.98	3.82	0.98	26.82	16.89	0.70
1725	18.38	36.23	17.55	19.44	3.87	0.99	27.32	17.26	0.67
1750	18.28	36.19	17.36	21.13	3.90	0.99	26.65	16.77	0.72
1800	18.08	36.03	16.92	25.76	3.92	1.00	26.53	16.85	0.76
1850	17.87	36.24	16.55	31.51	4.11	1.01	26.63	16.79	0.76
1900	17.63	36.18	16.27	27.88	4.18	1.01	26.37	16.62	0.83
1925	17.51	36.12	16.09	25.15	4.19	1.01	26.40	16.68	0.81
1950	17.39	36.08	15.93	22.79	4.22	1.01	26.58	16.75	0.85
1975	17.26	36.09	15.76	21.04	4.26	1.01	26.17	16.47	0.89
2000	17.12	36.42	15.63	19.46	4.47	1.01	26.30	16.51	0.88
2025	16.96	36.22	15.50	18.17	4.43	1.00	26.13	16.57	0.88
2050	16.81	36.36	15.33	17.03	4.55	1.00	26.09	16.44	0.90
2075	16.65	36.34	15.15	16.06	4.59	1.00	25.72	16.19	0.92
2100	16.50	36.19	14.97	15.28	4.56	1.00	25.93	16.29	0.97
2125	16.35	36.35	14.82	14.62	4.69	0.99	25.72	16.13	0.94
2175	16.10	36.36	14.49	13.76	4.77	0.99	25.05	15.70	0.96
2200	16.04	36.21	14.34	13.51	4.71	0.99	25.78	16.17	1.02
2225	16.00	36.25	14.26	13.31	4.73	0.99	24.47	15.34	0.99
2250	15.98	36.11	14.22	13.05	4.65	0.98	25.20	15.75	0.96
2275	15.97	35.92	14.18	12.70	4.54	0.98	24.73	15.49	1.06
2300	15.94	35.87	14.10	12.27	4.49	0.98	24.73	15.44	1.00
2325	15.88	35.91	14.10	11.80	4.51	0.97	24.31	15.18	0.98
2350	15.82	36.07	14.05	11.33	4.58	0.96	25.04	15.58	1.00
2375	15.73	36.03	14.01	10.85	4.56	0.96	24.29	15.20	1.03
2450	15.41	36.19	13.86	9.51	4.64	0.93	24.30	15.05	1.10
2475	15.28	36.33	13.85	9.14	4.73	0.92	23.98	14.88	1.07
2500	15.16	36.42	13.79	8.75	4.77	0.91	24.14	14.89	1.04

MMIC Amplifier

PMA2-252LN+

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 = 3V, Id =41.95 mA @ Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	19.32	36.16	20.58	10.20	3.21	0.88	26.51	15.98	0.42
1525	19.28	35.96	20.23	10.84	3.20	0.90	26.45	16.00	0.47
1550	19.22	36.09	19.97	11.53	3.30	0.91	25.94	15.89	0.42
1575	19.15	35.80	19.69	12.29	3.26	0.92	26.22	15.87	0.46
1600	19.09	35.71	19.42	13.08	3.28	0.93	26.42	16.18	0.39
1625	19.01	35.58	19.23	13.99	3.29	0.94	25.60	15.82	0.46
1650	18.94	35.47	18.90	14.95	3.30	0.95	26.05	16.07	0.47
1675	18.85	35.49	18.69	16.01	3.35	0.96	25.87	16.03	0.47
1700	18.77	35.52	18.46	17.21	3.41	0.97	25.45	15.76	0.49
1725	18.69	35.40	18.23	18.57	3.41	0.98	25.88	16.11	0.58
1750	18.59	35.45	18.04	20.14	3.48	0.98	25.32	15.72	0.48
1800	18.40	35.28	17.64	24.36	3.50	0.99	25.20	15.77	0.51
1850	18.19	35.25	17.27	31.39	3.57	1.00	25.28	15.76	0.54
1900	17.96	35.32	17.00	31.22	3.68	1.00	25.06	15.59	0.61
1925	17.84	35.28	16.84	27.32	3.70	1.00	25.06	15.68	0.55
1950	17.73	35.29	16.69	24.37	3.74	1.00	25.20	15.73	0.62
1975	17.60	35.33	16.52	22.16	3.79	1.00	24.85	15.52	0.63
2000	17.46	35.53	16.38	20.30	3.92	1.00	24.99	15.55	0.62
2025	17.31	35.51	16.26	18.82	3.96	1.00	24.81	15.59	0.64
2050	17.16	35.51	16.09	17.56	4.00	1.00	24.77	15.48	0.61
2075	17.00	35.60	15.92	16.49	4.09	0.99	24.49	15.25	0.65
2100	16.83	35.46	15.73	15.54	4.07	0.99	24.65	15.32	0.67
2125	16.67	35.58	15.55	14.80	4.18	0.99	24.47	15.17	0.65
2175	16.40	35.70	15.18	13.81	4.31	0.98	23.88	14.81	0.63
2200	16.32	35.75	15.00	13.55	4.35	0.98	24.44	15.12	0.75
2225	16.29	35.51	14.92	13.36	4.24	0.98	23.33	14.41	0.68
2250	16.28	35.60	14.86	13.16	4.28	0.98	23.95	14.80	0.64
2275	16.28	35.28	14.82	12.87	4.11	0.97	23.50	14.59	0.73
2300	16.26	35.35	14.77	12.46	4.12	0.97	23.51	14.51	0.68
2325	16.21	35.38	14.76	12.03	4.13	0.97	23.18	14.25	0.67
2350	16.16	35.24	14.69	11.52	4.05	0.96	23.81	14.65	0.67
2375	16.08	35.47	14.65	11.05	4.15	0.95	23.12	14.28	0.71
2450	15.77	35.57	14.45	9.66	4.19	0.93	23.11	14.15	0.76
2475	15.63	35.82	14.47	9.28	4.33	0.92	22.77	13.93	0.76
2500	15.50	35.96	14.39	8.88	4.40	0.91	23.01	13.96	0.75

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: Vd = 2.7V, Id =36.04 mA @ Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	18.80	35.85	16.79	10.40	3.27	0.90	25.31	14.61	0.39
1525	18.75	35.62	16.51	11.06	3.25	0.91	25.28	14.64	0.43
1550	18.69	35.50	16.29	11.79	3.26	0.93	24.88	14.59	0.42
1575	18.62	35.53	16.07	12.57	3.33	0.94	25.15	14.56	0.43
1600	18.55	35.40	15.88	13.39	3.33	0.95	25.31	14.82	0.38
1625	18.47	35.30	15.75	14.35	3.35	0.96	24.61	14.54	0.44
1650	18.39	35.09	15.52	15.37	3.32	0.97	25.01	14.76	0.49
1675	18.31	35.14	15.39	16.50	3.39	0.98	24.87	14.71	0.44
1700	18.22	35.00	15.21	17.81	3.38	0.99	24.52	14.47	0.49
1725	18.13	35.05	15.06	19.26	3.44	0.99	24.88	14.79	0.42
1750	18.03	35.15	14.93	20.97	3.52	1.00	24.45	14.45	0.48
1800	17.83	35.00	14.64	25.77	3.55	1.01	24.31	14.48	0.48
1850	17.62	35.07	14.41	33.54	3.66	1.02	24.38	14.45	0.51
1900	17.38	34.93	14.24	28.88	3.68	1.02	24.18	14.34	0.57
1925	17.27	34.91	14.12	25.49	3.71	1.02	24.16	14.34	0.56
1950	17.15	35.03	14.04	22.96	3.79	1.02	24.31	14.40	0.56
1975	17.02	34.94	13.91	21.06	3.79	1.02	24.00	14.15	0.62
2000	16.88	35.12	13.83	19.35	3.91	1.02	24.09	14.17	0.63
2025	16.72	35.17	13.76	18.01	3.98	1.02	23.94	14.23	0.61
2050	16.57	35.11	13.65	16.86	3.99	1.01	23.85	14.08	0.61
2075	16.41	35.18	13.53	15.85	4.07	1.01	23.59	13.85	0.64
2100	16.24	35.32	13.40	14.98	4.18	1.01	23.75	13.94	0.69
2125	16.08	35.30	13.27	14.28	4.21	1.00	23.54	13.75	0.67
2175	15.80	35.41	13.00	13.33	4.34	1.00	23.03	13.39	0.64
2200	15.73	35.35	12.90	13.07	4.33	1.00	23.54	13.75	0.72
2225	15.69	35.43	12.81	12.88	4.37	1.00	22.51	13.06	0.69
2250	15.68	35.18	12.77	12.68	4.24	0.99	23.11	13.37	0.66
2275	15.67	35.15	12.76	12.38	4.21	0.99	22.71	13.19	0.72
2300	15.66	35.07	12.73	11.99	4.15	0.99	22.73	13.10	0.68
2325	15.60	35.14	12.72	11.55	4.17	0.98	22.37	12.85	0.66
2350	15.54	35.22	12.68	11.08	4.20	0.97	22.99	13.15	0.72
2375	15.46	35.16	12.68	10.61	4.16	0.96	22.31	12.83	0.68
2450	15.14	35.41	12.58	9.27	4.27	0.94	22.31	12.59	0.76
2475	15.00	35.69	12.60	8.91	4.43	0.93	21.97	12.44	0.69
2500	14.88	35.82	12.53	8.50	4.48	0.91	22.19	12.35	0.75

MMIC Amplifier

PMA2-252LN+

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 = 3.3V, Id = 46.43 mA @ Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	19.53	36.77	22.78	10.03	3.35	0.88	27.81	16.97	0.42
1525	19.48	36.68	22.54	10.65	3.38	0.89	27.75	16.99	0.45
1550	19.43	36.65	22.29	11.34	3.43	0.91	27.17	16.85	0.43
1575	19.37	36.57	22.04	12.07	3.46	0.92	27.48	16.83	0.46
1600	19.30	36.46	21.74	12.84	3.48	0.93	27.68	17.14	0.38
1625	19.23	36.34	21.52	13.72	3.50	0.94	26.81	16.75	0.48
1650	19.16	36.09	21.11	14.68	3.45	0.95	27.27	17.04	0.49
1675	19.08	36.06	20.87	15.69	3.49	0.96	27.12	16.99	0.46
1700	19.00	36.10	20.55	16.86	3.56	0.97	26.62	16.69	0.49
1725	18.92	35.94	20.27	18.15	3.54	0.97	27.11	17.04	0.44
1750	18.82	36.00	20.01	19.59	3.61	0.98	26.51	16.61	0.45
1800	18.63	35.87	19.47	23.45	3.66	0.99	26.35	16.64	0.49
1850	18.42	35.92	19.03	29.21	3.77	0.99	26.44	16.65	0.51
1900	18.19	35.91	18.62	30.46	3.85	1.00	26.22	16.51	0.59
1925	18.08	35.91	18.41	27.39	3.89	1.00	26.26	16.57	0.53
1950	17.96	35.88	18.20	24.58	3.92	1.00	26.42	16.64	0.58
1975	17.84	36.06	18.00	22.43	4.04	1.00	26.03	16.39	0.61
2000	17.70	36.02	17.80	20.54	4.06	1.00	26.19	16.45	0.59
2025	17.55	35.96	17.62	19.08	4.09	0.99	26.01	16.47	0.63
2050	17.40	36.05	17.39	17.76	4.17	0.99	25.95	16.37	0.64
2075	17.23	36.12	17.19	16.69	4.26	0.99	25.65	16.14	0.65
2100	17.07	36.12	16.95	15.75	4.31	0.99	25.82	16.21	0.65
2125	16.91	36.22	16.73	15.00	4.41	0.98	25.63	16.06	0.62
2175	16.63	36.13	16.25	14.00	4.45	0.98	24.98	15.67	0.63
2200	16.56	36.23	16.09	13.73	4.52	0.98	25.62	16.03	0.73
2225	16.53	36.14	15.95	13.55	4.48	0.98	24.35	15.29	0.66
2250	16.52	35.79	15.88	13.35	4.30	0.97	25.03	15.69	0.61
2275	16.52	35.81	15.83	13.06	4.29	0.97	24.56	15.46	0.72
2300	16.50	35.91	15.73	12.65	4.32	0.97	24.54	15.40	0.63
2325	16.45	35.88	15.70	12.19	4.30	0.96	24.17	15.17	0.64
2350	16.40	35.77	15.59	11.69	4.23	0.96	24.88	15.55	0.68
2375	16.32	35.95	15.54	11.19	4.31	0.95	24.12	15.19	0.73
2450	16.01	36.06	15.27	9.77	4.36	0.92	24.13	15.07	0.84
2475	15.87	36.17	15.28	9.39	4.44	0.91	23.79	14.83	0.72
2500	15.75	36.51	15.14	8.99	4.61	0.90	24.01	14.90	0.69



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 = 3V, Id = 40.58 mA @ Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	18.41	36.75	16.38	10.74	3.79	0.91	26.97	16.17	0.77
1525	18.35	36.69	16.15	11.46	3.83	0.93	26.91	16.19	0.81
1550	18.29	36.67	15.96	12.26	3.89	0.94	26.41	16.08	0.79
1575	18.22	36.43	15.78	13.09	3.85	0.95	26.47	15.99	0.81
1600	18.14	36.38	15.59	13.98	3.90	0.97	26.87	16.36	0.78
1625	18.06	36.28	15.45	14.96	3.91	0.98	25.90	15.94	0.79
1650	17.98	36.26	15.24	16.05	3.96	0.98	26.36	16.21	0.89
1675	17.89	36.31	15.10	17.20	4.04	0.99	26.27	16.14	0.87
1700	17.80	36.19	14.93	18.56	4.04	1.00	25.78	15.89	0.90
1725	17.71	36.22	14.76	20.03	4.10	1.01	26.23	16.21	0.84
1750	17.61	36.15	14.63	21.72	4.12	1.01	25.65	15.79	0.89
1800	17.40	36.07	14.36	25.93	4.18	1.02	25.56	15.85	0.96
1850	17.18	36.23	14.09	29.20	4.36	1.03	25.58	15.78	0.95
1900	16.94	36.15	13.88	25.99	4.41	1.03	25.31	15.60	1.04
1925	16.82	36.26	13.75	23.93	4.51	1.03	25.34	15.65	1.03
1950	16.70	36.35	13.65	22.12	4.60	1.03	25.56	15.77	1.06
1975	16.57	36.24	13.52	20.56	4.59	1.03	25.10	15.46	1.09
2000	16.43	36.21	13.41	19.13	4.63	1.03	25.19	15.48	1.13
2025	16.28	36.17	13.30	18.02	4.66	1.03	25.10	15.52	1.15
2050	16.13	36.28	13.18	16.98	4.77	1.02	24.97	15.39	1.15
2075	15.98	36.45	13.06	16.10	4.91	1.02	24.65	15.14	1.15
2100	15.83	36.50	12.91	15.38	4.99	1.02	24.84	15.23	1.16
2125	15.69	36.38	12.81	14.77	4.97	1.02	24.64	15.08	1.18
2175	15.46	36.36	12.55	13.98	5.04	1.01	23.97	14.67	1.20
2200	15.40	36.32	12.46	13.69	5.02	1.01	24.73	15.12	1.26
2225	15.36	36.40	12.39	13.45	5.07	1.01	23.48	14.30	1.23
2250	15.34	36.28	12.34	13.14	4.99	1.01	24.16	14.68	1.21
2275	15.31	36.07	12.31	12.77	4.86	1.00	23.70	14.45	1.35
2300	15.28	36.09	12.26	12.31	4.86	1.00	23.70	14.40	1.21
2325	15.21	36.02	12.24	11.83	4.81	0.99	23.30	14.11	1.24
2350	15.14	35.98	12.20	11.35	4.78	0.98	23.96	14.47	1.29
2375	15.05	36.03	12.17	10.87	4.81	0.98	23.22	14.09	1.31
2450	14.73	36.20	12.06	9.53	4.90	0.95	23.21	13.94	1.36
2475	14.58	36.59	12.10	9.23	5.17	0.94	22.95	13.76	1.37
2500	14.48	36.34	11.98	8.73	4.98	0.93	23.02	13.72	1.39

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 = 2.7V, Id = 35.35 mA @ Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	18.10	35.99	14.54	11.30	3.61	0.93	26.12	15.02	0.79
1525	18.04	35.86	14.35	12.07	3.62	0.95	26.07	15.04	0.82
1550	17.97	35.98	14.20	12.96	3.73	0.96	25.60	14.95	0.82
1575	17.90	35.92	14.07	13.87	3.76	0.97	25.66	14.88	0.87
1600	17.82	35.81	13.92	14.90	3.78	0.98	26.06	15.24	0.82
1625	17.73	35.60	13.81	16.01	3.74	0.99	25.11	14.86	0.91
1650	17.64	35.64	13.64	17.25	3.81	1.00	25.57	15.09	0.89
1675	17.55	35.59	13.53	18.62	3.84	1.01	25.44	15.03	0.91
1700	17.45	35.78	13.41	20.24	3.97	1.02	25.02	14.81	0.93
1725	17.36	35.44	13.29	22.15	3.87	1.02	25.44	15.13	0.89
1750	17.25	35.57	13.18	24.39	3.98	1.03	24.86	14.72	0.95
1800	17.04	35.54	12.96	30.11	4.05	1.04	24.77	14.79	0.96
1850	16.81	35.52	12.77	29.39	4.13	1.04	24.81	14.71	0.98
1900	16.56	35.47	12.60	23.96	4.19	1.04	24.48	14.55	1.09
1925	16.44	35.47	12.51	21.98	4.23	1.04	24.51	14.59	1.06
1950	16.31	35.58	12.42	20.35	4.33	1.04	24.69	14.69	1.10
1975	16.18	35.34	12.31	18.99	4.25	1.04	24.26	14.41	1.14
2000	16.03	35.66	12.24	17.74	4.45	1.04	24.31	14.44	1.17
2025	15.88	35.55	12.17	16.73	4.45	1.03	24.20	14.47	1.15
2050	15.73	35.73	12.06	15.79	4.58	1.03	24.09	14.34	1.15
2075	15.57	35.83	11.97	15.02	4.68	1.03	23.78	14.10	1.17
2100	15.42	35.79	11.85	14.36	4.70	1.03	23.94	14.17	1.22
2125	15.28	35.82	11.76	13.81	4.76	1.02	23.74	14.02	1.22
2175	15.05	35.90	11.55	13.04	4.87	1.02	23.11	13.61	1.21
2200	14.98	35.83	11.48	12.78	4.85	1.02	23.81	14.03	1.35
2225	14.94	35.86	11.43	12.54	4.86	1.01	22.65	13.25	1.27
2250	14.91	35.64	11.39	12.23	4.74	1.01	23.32	13.62	1.23
2275	14.88	35.56	11.38	11.88	4.68	1.01	22.87	13.37	1.38
2300	14.83	35.67	11.34	11.48	4.72	1.00	22.84	13.34	1.31
2325	14.76	35.46	11.34	11.04	4.61	0.99	22.45	13.03	1.26
2350	14.69	35.74	11.32	10.61	4.75	0.99	23.04	13.36	1.32
2375	14.60	35.57	11.29	10.15	4.65	0.98	22.35	13.01	1.34
2450	14.25	35.80	11.23	8.92	4.77	0.95	22.29	12.79	1.42
2475	14.09	36.17	11.28	8.65	5.02	0.94	22.05	12.63	1.44
2500	13.99	36.08	11.18	8.19	4.92	0.92	22.10	12.60	1.45

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 = 3.3V, Id = 45.53 mA @ Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
1500	18.63	37.39	18.16	10.39	3.97	0.90	27.98	17.11	0.75
1525	18.59	37.56	17.86	11.07	4.11	0.92	27.92	17.11	0.82
1550	18.52	37.30	17.65	11.82	4.07	0.93	27.38	17.01	0.80
1575	18.46	37.27	17.43	12.59	4.13	0.94	27.51	16.88	0.82
1600	18.39	37.18	17.19	13.42	4.15	0.95	27.93	17.30	0.76
1625	18.31	36.94	17.01	14.33	4.11	0.96	26.87	16.85	0.84
1650	18.23	36.96	16.74	15.30	4.18	0.97	27.42	17.10	0.87
1675	18.15	36.87	16.56	16.35	4.20	0.98	27.27	17.03	0.89
1700	18.06	36.71	16.34	17.54	4.18	0.99	26.77	16.78	0.89
1725	17.97	36.78	16.17	18.84	4.26	1.00	27.27	17.09	0.96
1750	17.87	36.74	15.99	20.28	4.30	1.00	26.66	16.64	0.88
1800	17.67	36.84	15.62	23.74	4.46	1.01	26.55	16.71	0.92
1850	17.46	36.76	15.31	27.21	4.52	1.02	26.62	16.65	0.94
1900	17.22	36.77	15.05	26.59	4.63	1.02	26.35	16.45	1.01
1925	17.11	36.62	14.89	24.90	4.60	1.02	26.41	16.49	1.02
1950	16.98	36.65	14.75	23.09	4.67	1.02	26.61	16.63	1.05
1975	16.86	36.78	14.59	21.58	4.78	1.02	26.14	16.31	1.09
2000	16.72	36.71	14.45	20.06	4.80	1.02	26.22	16.34	1.14
2025	16.57	36.72	14.33	18.89	4.87	1.02	26.11	16.40	1.11
2050	16.42	36.92	14.19	17.77	5.04	1.02	26.04	16.29	1.13
2075	16.27	36.91	14.03	16.86	5.08	1.01	25.71	16.01	1.15
2100	16.12	36.80	13.87	16.08	5.07	1.01	25.90	16.14	1.16
2125	15.98	36.97	13.72	15.46	5.23	1.01	25.69	15.98	1.18
2175	15.77	36.87	13.43	14.64	5.25	1.01	24.96	15.54	1.13
2200	15.71	36.67	13.32	14.34	5.14	1.01	25.81	16.03	1.28
2225	15.67	36.85	13.22	14.10	5.25	1.01	24.43	15.17	1.21
2250	15.65	36.71	13.16	13.77	5.15	1.00	25.20	15.60	1.17
2275	15.63	36.61	13.11	13.38	5.09	1.00	24.69	15.34	1.31
2300	15.60	36.53	13.03	12.89	5.02	1.00	24.69	15.27	1.24
2325	15.53	36.51	13.00	12.39	5.01	0.99	24.27	15.00	1.25
2350	15.47	36.58	12.94	11.87	5.03	0.98	24.99	15.42	1.27
2375	15.39	36.67	12.90	11.34	5.08	0.98	24.23	14.98	1.28
2450	15.07	36.79	12.75	9.94	5.16	0.95	24.23	14.87	1.36
2475	14.92	36.89	12.81	9.60	5.27	0.94	23.93	14.71	1.38
2500	14.83	36.83	12.64	9.10	5.19	0.93	24.02	14.66	1.38