

MMIC Amplifier Die

PMA-545G1-D+

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 = 5V, Id = 159mA @Temperature = +25°C

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)
200	24.23	86.28	1.41	13.74	167.55	1.65	28.03	15.55	5.29
300	30.63	73.60	6.09	17.39	52.19	1.22	34.18	20.57	1.64
350	31.73	68.21	10.83	18.17	30.16	1.06	34.73	21.58	1.36
400	32.09	70.52	16.55	18.32	40.21	1.01	35.81	22.34	1.19
450	32.16	70.69	17.73	18.47	40.93	1.00	37.27	22.79	1.16
500	32.06	70.62	15.11	18.44	40.45	1.02	35.49	22.68	1.16
550	31.94	74.59	13.11	18.47	63.58	1.03	35.64	22.96	1.16
600	31.84	69.14	11.89	18.42	33.76	1.05	35.94	23.10	1.16
650	31.74	67.24	11.09	18.43	27.06	1.06	35.92	23.02	1.08
700	31.65	67.87	10.58	18.51	29.08	1.07	34.71	23.14	1.08
750	31.56	64.40	10.23	18.57	19.53	1.08	36.60	23.22	1.07
800	31.50	63.46	10.03	18.59	17.58	1.08	34.94	23.40	1.03
850	31.45	63.88	9.93	18.64	18.51	1.09	36.86	23.28	0.98
900	31.40	62.44	9.90	18.67	15.76	1.09	36.37	23.41	0.98
950	31.36	64.80	9.90	18.67	20.77	1.09	35.57	23.58	0.99
1000	31.32	63.30	9.99	18.61	17.61	1.09	36.63	23.50	1.01
1050	31.28	60.73	10.08	18.55	13.19	1.08	36.34	23.36	1.02
1100	31.23	59.62	10.24	18.46	11.72	1.08	36.32	23.68	1.02
1150	31.18	58.47	10.43	18.39	10.38	1.07	36.12	23.59	1.01
1200	31.12	58.53	10.67	18.27	10.57	1.07	37.03	23.49	1.01
1250	31.04	57.74	10.93	18.23	9.79	1.06	36.35	23.77	1.04
1300	30.95	57.54	11.23	18.12	9.72	1.06	37.76	23.72	1.06
1350	30.84	56.77	11.59	18.08	9.07	1.05	37.01	23.62	1.03
1400	30.71	56.42	11.98	18.06	8.91	1.05	35.36	23.77	1.06
1450	30.55	57.43	12.35	18.03	10.24	1.04	37.21	23.84	1.00
1500	30.38	55.89	12.82	18.06	8.81	1.03	37.50	23.62	1.06
1600	29.95	56.02	13.75	18.20	9.50	1.03	37.13	23.79	1.11
1700	29.43	54.67	14.82	18.25	8.71	1.02	36.26	23.69	1.08
1800	28.84	53.31	15.94	18.24	8.04	1.01	36.91	23.82	1.12
1900	28.23	53.47	16.98	17.79	8.82	1.00	37.14	23.68	1.12
2000	27.48	53.08	17.92	17.84	9.22	1.00	39.84	23.76	1.14
2100	26.72	52.77	18.76	17.47	9.74	0.99	36.52	23.75	1.18
2200	25.93	53.81	19.42	16.82	11.99	0.99	36.30	23.67	1.23
2300	25.14	52.82	19.81	16.02	11.69	0.98	37.36	23.54	1.24
2400	24.32	54.00	20.01	15.13	14.62	0.98	35.35	23.35	1.28
2500	23.51	53.34	20.00	14.18	14.76	0.97	35.73	23.11	1.32
2600	22.69	53.62	19.90	13.22	16.58	0.96	36.76	22.93	1.39
2700	21.86	53.99	19.72	12.31	18.80	0.95	32.41	22.64	1.54
2800	21.04	54.25	19.51	11.36	20.97	0.94	35.44	22.23	1.56
2900	20.23	55.52	19.19	10.43	26.11	0.92	35.65	21.74	1.63
3000	19.44	55.40	18.82	9.52	27.51	0.90	34.47	21.36	1.68



MMIC Amplifier Die

PMA-545G1-D+

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 = 150mA @Temperature = +25°C

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)
200	24.08	73.44	1.38	13.69	38.15	1.65	27.73	15.44	5.32
300	30.47	69.88	6.07	17.08	34.52	1.22	34.00	20.72	1.65
350	31.58	71.93	10.79	17.90	46.96	1.06	35.62	21.60	1.37
400	31.94	71.11	16.46	17.96	43.74	1.01	37.37	22.12	1.21
450	31.98	66.75	17.62	18.02	26.48	1.00	34.70	22.53	1.17
500	31.90	73.51	15.02	17.98	57.36	1.02	35.40	22.31	1.16
550	31.79	66.10	13.07	18.01	24.30	1.03	33.04	22.45	1.16
600	31.69	66.47	11.84	18.00	25.20	1.05	35.42	22.64	1.18
650	31.58	67.18	11.04	18.00	27.30	1.06	35.70	22.49	1.10
700	31.50	67.15	10.54	18.11	27.19	1.07	34.08	22.61	1.07
750	31.42	64.65	10.20	18.17	20.41	1.08	34.90	22.69	1.09
800	31.36	61.07	9.99	18.20	13.52	1.08	34.66	22.94	1.01
850	31.32	63.06	9.89	18.26	17.06	1.09	35.70	22.82	1.05
900	31.27	60.20	9.84	18.29	12.32	1.09	36.25	22.96	0.99
950	31.23	63.11	9.86	18.32	17.32	1.09	34.76	23.13	0.98
1000	31.19	61.96	9.94	18.27	15.26	1.09	35.61	22.99	1.00
1050	31.16	60.75	10.04	18.24	13.37	1.08	34.70	22.92	1.01
1100	31.11	60.74	10.20	18.17	13.48	1.08	36.65	23.25	1.03
1150	31.06	58.30	10.39	18.13	10.29	1.08	35.22	23.15	1.03
1200	31.00	58.58	10.63	18.01	10.75	1.07	37.09	23.05	1.03
1250	30.93	56.80	10.90	17.97	8.89	1.06	36.99	23.34	1.04
1300	30.84	57.38	11.19	17.84	9.64	1.06	36.22	23.29	1.06
1350	30.73	56.89	11.55	17.82	9.29	1.05	36.06	23.14	1.03
1400	30.60	55.90	11.94	17.82	8.49	1.05	35.66	23.35	1.06
1450	30.45	54.31	12.36	17.78	7.23	1.04	36.31	23.43	1.02
1500	30.28	55.63	12.78	17.77	8.64	1.03	35.23	23.19	1.08
1600	29.86	54.60	13.73	17.88	8.14	1.02	36.25	23.38	1.12
1700	29.35	53.40	14.82	17.85	7.60	1.01	35.96	23.27	1.10
1800	28.77	53.93	15.94	17.75	8.69	1.01	35.99	23.41	1.10
1900	28.14	53.60	16.98	17.47	9.04	1.00	35.25	23.28	1.12
2000	27.41	53.41	18.01	17.47	9.66	1.00	36.67	23.36	1.14
2100	26.66	53.21	18.85	17.07	10.30	0.99	35.26	23.30	1.17
2200	25.88	53.42	19.56	16.41	11.51	0.99	36.67	23.28	1.23
2300	25.08	52.11	19.95	15.68	10.83	0.98	35.12	23.14	1.26
2400	24.27	53.26	20.16	14.88	13.48	0.98	36.46	22.97	1.30
2500	23.46	53.17	20.22	13.99	14.53	0.97	35.20	22.73	1.32
2600	22.65	54.55	20.08	13.07	18.52	0.96	35.57	22.55	1.38
2700	21.82	53.35	19.91	12.18	17.53	0.95	36.91	22.27	1.57
2800	21.00	54.16	19.72	11.25	20.82	0.94	32.34	21.79	1.58
2900	20.19	55.53	19.38	10.33	26.22	0.92	34.17	21.37	1.61
3000	19.41	55.38	19.03	9.45	27.49	0.90	33.63	20.98	1.68

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PMA-545G1-D+

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 = 167mA @Temperature = +25°C

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)
200	24.38	81.14	1.44	13.71	93.05	1.64	27.63	15.37	5.27
300	30.78	86.66	6.12	17.81	231.18	1.22	34.59	20.19	1.64
350	31.90	72.70	10.84	18.74	49.64	1.07	34.24	21.46	1.38
400	32.27	70.91	16.59	18.98	41.28	1.01	35.41	22.29	1.23
450	32.34	71.97	17.85	19.20	46.56	1.00	36.13	22.90	1.18
500	32.25	67.00	15.17	19.19	26.18	1.02	35.49	22.89	1.17
550	32.13	68.82	13.17	19.19	32.09	1.04	36.62	23.17	1.17
600	32.02	66.28	11.91	19.21	23.86	1.05	36.83	23.32	1.18
650	31.91	66.00	11.11	19.16	23.04	1.07	36.63	23.30	1.10
700	31.82	64.06	10.61	19.22	18.46	1.07	36.97	23.42	1.08
750	31.73	69.00	10.28	19.25	32.66	1.08	35.55	23.50	1.09
800	31.67	65.32	10.07	19.29	21.44	1.09	36.64	23.73	1.03
850	31.61	64.87	9.97	19.28	20.43	1.09	36.40	23.56	1.03
900	31.56	62.13	9.92	19.29	14.97	1.09	36.65	23.69	0.98
950	31.51	60.59	9.94	19.24	12.61	1.09	37.12	23.90	1.00
1000	31.47	60.97	10.01	19.14	13.26	1.09	36.32	23.77	1.01
1050	31.42	60.70	10.12	19.07	12.97	1.08	35.39	23.69	1.03
1100	31.37	59.96	10.28	18.93	12.02	1.08	35.99	23.99	1.03
1150	31.32	60.53	10.47	18.88	12.97	1.08	36.72	23.91	1.05
1200	31.25	58.28	10.70	18.70	10.13	1.07	36.33	23.81	0.99
1250	31.17	58.93	10.96	18.62	11.08	1.07	36.04	24.02	1.05
1300	31.08	57.78	11.26	18.55	9.88	1.06	36.85	24.02	1.06
1350	30.97	57.32	11.62	18.47	9.54	1.05	35.05	23.88	1.03
1400	30.83	56.83	12.01	18.50	9.22	1.05	37.42	24.02	1.07
1450	30.68	56.58	12.41	18.50	9.17	1.04	36.93	24.08	1.01
1500	30.50	55.14	12.83	18.52	7.98	1.04	37.70	23.92	1.09
1600	30.07	54.73	13.77	18.69	8.10	1.03	37.57	24.03	1.12
1700	29.55	54.45	14.82	18.81	8.40	1.02	38.18	23.98	1.13
1800	28.95	53.89	15.92	18.89	8.50	1.01	37.22	24.05	1.12
1900	28.33	53.41	16.96	18.52	8.69	1.00	38.04	23.96	1.14
2000	27.57	53.48	17.84	18.60	9.58	1.00	36.54	24.04	1.15
2100	26.80	54.15	18.62	18.15	11.32	1.00	37.45	23.97	1.20
2200	26.01	53.59	19.24	17.44	11.61	0.99	37.49	23.95	1.24
2300	25.21	53.45	19.60	16.53	12.49	0.99	37.33	23.81	1.25
2400	24.39	53.14	19.79	15.57	13.16	0.98	34.48	23.63	1.33
2500	23.57	54.55	19.82	14.56	16.90	0.98	37.26	23.39	1.34
2600	22.75	53.50	19.65	13.53	16.28	0.97	36.83	23.20	1.41
2700	21.92	54.77	19.48	12.56	20.48	0.96	31.82	22.90	1.59
2800	21.10	54.65	19.26	11.57	21.86	0.94	36.60	22.43	1.59
2900	20.28	55.59	18.92	10.62	26.24	0.93	35.34	21.94	1.65
3000	19.50	55.12	18.60	9.68	26.56	0.91	35.34	21.55	1.72