MMIC Amplifier MAV-11SM+

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 = 60mA, Vd = 5.21V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
50	12.48	16.34	30.70	28.83	1.10	0.64	50	34.30	18.28	3.24
100	12.43	16.31	33.59	28.93	1.10	0.64	100	34.26	18.25	3.43
150	12.37	16.25	32.14	27.32	1.10	0.64	150	34.66	18.24	3.32
200	12.33	16.23	31.03	25.56	1.10	0.64	200	33.94	18.11	3.28
250	12.27	16.15	29.60	23.81	1.10	0.64	250	33.40	18.10	3.38
300	12.20	16.10	27.90	22.58	1.09	0.64	300	33.54	17.90	3.66
350	12.12	16.00	26.78	21.35	1.09	0.64	350	33.49	17.95	3.52
400	12.03	15.94	25.61	20.23	1.09	0.63	400	33.15	18.29	3.47
450	11.94	15.85	24.55	19.24	1.09	0.63	450	32.78	18.02	3.49
500	11.84	15.76	23.36	18.42	1.09	0.63	500	32.61	18.00	3.59
550	11.73	15.65	22.54	17.57	1.08	0.63	550	32.36	17.79	3.63
600	11.62	15.54	21.40	16.93	1.08	0.63	600	32.02	18.02	3.58
650	11.50	15.44	20.65	16.28	1.08	0.63	650	31.61	17.99	3.63
700	11.37	15.32	19.92	15.66	1.07	0.63	700	31.35	17.99	3.80
750	11.24	15.22	18.98	15.09	1.07	0.63	750	30.97	18.03	3.85
800	11.11	15.10	18.37	14.61	1.07	0.63	800	30.54	17.89	3.88
850	10.97	14.98	17.64	14.11	1.07	0.63	850	30.28	17.98	3.81
900	10.83	14.87	17.04	13.68	1.06	0.63	900	29.94	17.97	3.89
950	10.67	14.77	16.45	13.25	1.06	0.63	940	29.73	17.83	4.00
1000	10.52	14.64	15.88	12.87	1.06	0.63	1000	29.26	17.72	3.99
1100	10.21	14.41	14.86	12.19	1.06	0.63	1050	28.97	17.71	3.97
1200	9.91	14.21	13.93	11.62	1.05	0.63	1100	28.67	17.53	4.04
1400	9.28	13.79	12.37	10.67	1.05	0.62	1150	28.47	17.41	4.20
1600	8.63	13.46	11.16	10.00	1.05	0.62	1200	28.31	17.28	4.24
1800	8.01	13.14	10.21	9.48	1.05	0.61	1250	27.92	17.19	4.15
2000	7.42	12.83	9.38	9.09	1.05	0.60	1300	27.62	17.01	4.34
2200	6.85	12.60	8.69	8.81	1.05	0.60	1350	27.42	16.83	4.44
2400	6.24	12.42	8.03	8.58	1.06	0.58	1400	27.35	16.84	4.40
2600	5.69	12.28	7.52	8.43	1.08	0.58	1450	27.21	16.72	4.43
2800	5.13	12.18	6.91	8.20	1.09	0.57	1500	26.97	16.59	4.63
3000	4.60	12.07	6.37	7.99	1.09	0.56	1550	26.92	16.49	4.75
3200	4.02	12.07	5.86	7.86	1.11	0.55	1600	26.74	16.33	4.85
3400	3.49	12.04	5.33	7.58	1.11	0.55	1650	26.68	16.38	4.89
3600	2.95	12.08	4.88	7.41	1.12	0.54	1700	26.24	16.39	4.91
3800	2.42	12.10	4.42	7.24	1.12	0.54	1750	26.05	16.12	5.01
4000	1.88	12.14	4.04	7.02	1.12	0.53	1800	25.71	16.02	5.07
4500	0.67	12.20	3.31	6.62	1.11	0.52	1850	25.57	15.86	4.99
5000	-0.45	12.13	2.88	6.25	1.08	0.51	1900	25.55	15.82	5.01
5500	-1.50	12.01	2.68	5.87	1.06	0.50	1950	25.18	15.59	5.26
6000	-2.61	11.88	2.59	5.44	1.07	0.49	2000	25.20	15.60	5.35

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 = 48mA, Vd = 5.01V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
50	12.38	16.21	29.67	29.18	1.10	0.64	50	32.59	16.13	3.17
100	12.32	16.20	31.79	29.13	1.10	0.64	100	32.59	16.06	3.32
150	12.28	16.20	31.06	27.43	1.10	0.64	150	33.10	16.11	3.24
200	12.23	16.15	30.39	25.76	1.10	0.64	200	32.58	15.88	3.21
250	12.17	16.08	29.07	23.98	1.10	0.64	250	31.82	15.90	3.29
300	12.10	16.03	27.68	22.73	1.10	0.63	300	32.54	15.70	3.61
350	12.02	15.95	26.71	21.51	1.09	0.63	350	32.37	15.79	3.46
400	11.94	15.86	25.63	20.38	1.09	0.63	400	32.15	16.13	3.39
450	11.85	15.76	24.61	19.39	1.09	0.63	450	31.82	15.81	3.41
500	11.74	15.68	23.45	18.58	1.08	0.63	500	31.96	15.80	3.51
550	11.64	15.57	22.65	17.72	1.08	0.63	550	31.79	15.64	3.55
600	11.53	15.46	21.51	17.06	1.08	0.63	600	31.65	16.00	3.50
650	11.40	15.36	20.76	16.41	1.08	0.63	650	31.45	16.03	3.54
700	11.27	15.24	20.02	15.79	1.07	0.63	700	31.37	16.07	3.69
750	11.14	15.12	19.10	15.23	1.07	0.63	750	31.26	16.15	3.76
800	11.02	15.01	18.47	14.73	1.07	0.63	800	30.99	16.05	3.80
850	10.88	14.90	17.72	14.23	1.06	0.63	850	30.90	16.27	3.73
900	10.74	14.79	17.11	13.78	1.06	0.63	900	30.71	16.38	3.81
950	10.58	14.68	16.51	13.35	1.06	0.63	940	30.56	16.26	3.93
1000	10.43	14.56	15.93	12.98	1.06	0.62	1000	30.13	16.25	3.94
1100	10.12	14.35	14.91	12.28	1.05	0.62	1050	29.92	16.41	3.87
1200	9.82	14.12	13.98	11.68	1.05	0.62	1100	29.65	16.32	3.96
1400	9.19	13.72	12.40	10.69	1.04	0.62	1150	29.54	16.35	4.14
1600	8.54	13.38	11.20	9.99	1.05	0.61	1200	29.33	16.28	4.15
1800	7.93	13.05	10.26	9.43	1.05	0.61	1250	29.03	16.36	4.06
2000	7.36	12.75	9.46	9.00	1.04	0.60	1300	28.65	16.25	4.25
2200	6.78	12.52	8.77	8.70	1.05	0.59	1350	28.44	16.17	4.36
2400	6.20	12.31	8.12	8.42	1.06	0.59	1400	28.41	16.27	4.30
2600	5.65	12.17	7.61	8.21	1.07	0.58	1450	28.24	16.27	4.33
2800	5.09	12.06	7.01	7.96	1.08	0.57	1500	28.01	16.16	4.55
3000	4.58	11.94	6.47	7.72	1.09	0.57	1550	27.91	16.14	4.65
3200	4.01	11.95	5.96	7.56	1.10	0.56	1600	27.81	15.98	4.79
3400	3.50	11.90	5.43	7.29	1.10	0.56	1650	27.75	16.15	4.82
3600	2.95	11.94	4.97	7.11	1.12	0.55	1700	27.41	16.14	4.82
3800	2.43	11.98	4.51	6.91	1.12	0.55	1750	27.09	15.98	4.91
4000	1.91	12.00	4.13	6.69	1.12	0.55	1800	26.77	15.88	4.99
4500	0.72	12.08	3.40	6.30	1.10	0.54	1850	26.67	15.71	4.94
5000	-0.35	12.05	2.97	6.01	1.08	0.52	1900	26.57	15.77	4.92
5500	-1.36	11.97	2.75	5.70	1.07	0.51	1950	26.22	15.56	5.18
6000	-2.41	11.87	2.65	5.36	1.08	0.50	2000	26.23	15.63	5.27

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 = 72mA, Vd = 5.42V @Temperature = +25degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
50	12.53	16.35	30.78	27.91	1.10	0.64	50	35.34	19.83	3.32
100	12.47	16.36	32.53	27.73	1.10	0.64	100	35.22	19.81	3.52
150	12.44	16.30	31.55	26.48	1.10	0.64	150	35.28	19.77	3.42
200	12.38	16.28	30.70	24.92	1.10	0.64	200	34.50	19.74	3.35
250	12.32	16.22	29.43	23.35	1.10	0.64	250	34.23	19.71	3.47
300	12.26	16.17	27.77	22.23	1.10	0.64	300	33.62	19.47	3.76
350	12.18	16.07	26.70	21.08	1.09	0.64	350	33.56	19.46	3.61
400	12.10	15.99	25.59	19.98	1.09	0.64	400	33.03	19.53	3.56
450	12.01	15.91	24.56	19.04	1.09	0.64	450	32.65	19.27	3.58
500	11.90	15.82	23.39	18.26	1.09	0.64	500	32.19	19.15	3.68
550	11.80	15.71	22.56	17.45	1.08	0.64	550	31.81	18.93	3.72
600	11.69	15.60	21.45	16.79	1.08	0.64	600	31.30	18.98	3.67
650	11.57	15.48	20.72	16.17	1.08	0.64	650	30.81	18.87	3.72
700	11.44	15.37	20.00	15.57	1.07	0.64	700	30.40	18.83	3.90
750	11.31	15.26	19.06	15.02	1.07	0.64	750	29.91	18.69	3.94
800	11.18	15.15	18.44	14.53	1.07	0.64	800	29.37	18.47	3.95
850	11.04	15.02	17.72	14.06	1.07	0.64	850	29.04	18.35	3.89
900	10.90	14.91	17.09	13.65	1.06	0.64	900	28.66	18.25	3.98
950	10.75	14.81	16.48	13.21	1.06	0.63	940	28.37	17.99	4.11
1000	10.61	14.67	15.91	12.86	1.06	0.64	1000	27.91	17.75	4.08
1100	10.29	14.46	14.86	12.21	1.06	0.63	1050	27.64	17.58	4.07
1200	9.98	14.24	13.91	11.66	1.05	0.63	1100	27.34	17.34	4.14
1400	9.33	13.84	12.27	10.76	1.05	0.63	1150	27.13	17.15	4.29
1600	8.66	13.52	11.03	10.18	1.05	0.61	1200	26.94	17.00	4.34
1800	8.03	13.21	10.04	9.72	1.05	0.61	1250	26.53	16.84	4.27
2000	7.43	12.94	9.18	9.42	1.06	0.60	1300	26.22	16.59	4.43
2200	6.82	12.73	8.47	9.22	1.07	0.58	1350	26.01	16.37	4.56
2400	6.21	12.56	7.79	9.04	1.08	0.57	1400	25.99	16.34	4.47
2600	5.63	12.45	7.26	8.94	1.09	0.56	1450	25.83	16.24	4.51
2800	5.04	12.36	6.67	8.78	1.10	0.55	1500	25.63	16.02	4.73
3000	4.48	12.28	6.12	8.59	1.11	0.54	1550	25.60	15.93	4.84
3200	3.90	12.29	5.63	8.51	1.13	0.53	1600	25.39	15.74	4.97
3400	3.34	12.26	5.10	8.23	1.13	0.52	1650	25.33	15.76	4.99
3600	2.78	12.30	4.66	8.07	1.14	0.51	1700	24.91	15.67	5.01
3800	2.23	12.33	4.22	7.86	1.14	0.51	1750	24.69	15.44	5.10
4000	1.67	12.34	3.85	7.61	1.14	0.50	1800	24.37	15.32	5.19
4500	0.38	12.36	3.16	7.07	1.11	0.49	1850	24.30	15.15	5.12
5000	-0.80	12.24	2.74	6.52	1.08	0.49	1900	24.27	15.03	5.14
5500	-1.93	12.05	2.56	5.95	1.06	0.48	1950	23.91	14.84	5.37
6000	-3.10	11.87	2.49	5.37	1.07	0.49	2000	23.99	14.84	5.48

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 = 60mA, Vd = 6.04V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
50	12.68	16.41	27.69	27.44	1.09	0.65	50	35.91	18.24	2.87
100	12.64	16.36	28.83	26.94	1.09	0.65	100	35.92	18.18	3.02
150	12.60	16.34	28.33	25.81	1.09	0.65	150	36.46	18.17	2.96
200	12.55	16.30	28.26	24.83	1.09	0.65	200	35.77	18.06	2.96
250	12.50	16.23	27.87	23.60	1.09	0.65	250	35.04	18.04	3.02
300	12.44	16.16	27.20	22.70	1.08	0.65	300	35.48	17.91	3.37
350	12.36	16.09	26.55	21.65	1.08	0.65	350	35.38	17.93	3.16
400	12.28	16.00	25.74	20.61	1.08	0.65	400	35.12	18.25	3.11
450	12.19	15.90	25.03	19.67	1.08	0.65	450	34.79	17.97	3.11
500	12.09	15.81	24.10	18.89	1.07	0.65	500	34.80	17.97	3.17
550	11.99	15.70	23.48	18.07	1.07	0.65	550	34.65	17.83	3.23
600	11.89	15.59	22.33	17.47	1.07	0.65	600	34.47	18.12	3.22
650	11.77	15.48	21.58	16.83	1.06	0.64	650	34.09	18.17	3.23
700	11.64	15.36	20.88	16.24	1.06	0.64	700	34.03	18.16	3.34
750	11.53	15.23	19.92	15.70	1.06	0.65	750	33.78	18.27	3.44
800	11.40	15.12	19.27	15.20	1.05	0.64	800	33.48	18.27	3.50
850	11.27	15.01	18.58	14.72	1.05	0.64	850	33.35	18.48	3.38
900	11.13	14.88	17.93	14.27	1.05	0.64	900	33.17	18.57	3.45
950	10.98	14.77	17.35	13.82	1.05	0.64	940	33.05	18.46	3.54
1000	10.84	14.65	16.76	13.43	1.04	0.64	1000	32.61	18.41	3.61
1100	10.55	14.42	15.70	12.71	1.04	0.64	1050	32.41	18.55	3.53
1200	10.26	14.20	14.70	12.08	1.04	0.64	1100	32.15	18.50	3.54
1400	9.65	13.78	13.10	10.99	1.03	0.64	1150	32.05	18.46	3.74
1600	9.03	13.39	11.96	10.32	1.03	0.63	1200	31.83	18.40	3.80
1800	8.45	13.02	10.95	9.67	1.03	0.63	1250	31.59	18.49	3.71
2000	7.91	12.70	10.16	9.17	1.02	0.63	1300	31.25	18.38	3.85
2200	7.36	12.43	9.45	8.85	1.03	0.63	1350	31.05	18.28	3.96
2400	6.83	12.15	8.67	8.49	1.03	0.63	1400	31.01	18.39	3.93
2600	6.27	12.01	8.05	8.23	1.04	0.62	1450	30.84	18.40	3.96
2800	5.78	11.84	7.40	7.90	1.04	0.62	1500	30.68	18.30	4.14
3000	5.28	11.68	6.75	7.55	1.04	0.62	1550	30.60	18.31	4.25
3200	4.75	11.68	6.18	7.39	1.06	0.61	1600	30.46	18.20	4.38
3400	4.20	11.62	5.54	6.88	1.05	0.62	1650	30.44	18.52	4.39
3600	3.67	11.68	5.02	6.62	1.06	0.61	1700	30.04	18.56	4.39
3800	3.11	11.74	4.51	6.35	1.06	0.61	1750	29.73	18.38	4.46
4000	2.60	11.77	4.08	6.09	1.06	0.61	1800	29.41	18.32	4.57
4500	1.40	11.89	3.34	5.65	1.04	0.60	1850	29.29	18.23	4.50
5000	0.40	11.88	2.87	5.44	1.02	0.59	1900	29.11	18.30	4.49
5500	-0.57	11.84	2.55	5.27	1.00	0.57	1950	28.75	18.11	4.75
6000	-1.60	11.85	2.33	4.96	0.98	0.57	2000	28.73	18.17	4.83

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 = 48mA, Vd = 5.84V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
50	12.58	16.29	25.65	25.52	1.09	0.65	50	33.42	16.00	2.80
100	12.54	16.32	26.33	24.96	1.09	0.65	100	33.40	15.95	2.93
150	12.50	16.27	26.14	24.28	1.09	0.65	150	33.92	15.97	2.88
200	12.45	16.23	26.18	23.61	1.09	0.65	200	33.45	15.85	2.89
250	12.40	16.14	26.03	22.73	1.09	0.65	250	32.72	15.81	2.92
300	12.33	16.10	25.80	22.06	1.09	0.65	300	33.47	15.71	3.26
350	12.26	16.00	25.41	21.18	1.08	0.65	350	33.29	15.74	3.08
400	12.18	15.92	24.87	20.32	1.08	0.65	400	33.13	16.11	3.07
450	12.09	15.83	24.39	19.46	1.08	0.64	450	32.83	15.74	3.04
500	12.01	15.74	23.65	18.77	1.07	0.64	500	32.99	15.77	3.08
550	11.91	15.61	23.17	17.97	1.07	0.64	550	32.91	15.63	3.14
600	11.80	15.51	22.17	17.41	1.06	0.64	600	32.85	15.99	3.19
650	11.68	15.40	21.46	16.82	1.06	0.64	650	32.76	16.04	3.16
700	11.57	15.27	20.82	16.26	1.06	0.64	700	32.64	16.01	3.24
750	11.44	15.16	19.91	15.72	1.05	0.64	750	32.75	16.13	3.36
800	11.32	15.03	19.27	15.25	1.05	0.64	800	32.51	16.08	3.40
850	11.19	14.91	18.59	14.77	1.05	0.64	850	32.51	16.38	3.32
900	11.05	14.79	17.98	14.33	1.04	0.64	900	32.40	16.56	3.38
950	10.91	14.69	17.39	13.88	1.04	0.64	940	32.44	16.41	3.47
1000	10.77	14.55	16.82	13.49	1.04	0.64	1000	32.05	16.37	3.53
1100	10.48	14.33	15.74	12.78	1.04	0.64	1050	31.95	16.58	3.45
1200	10.18	14.10	14.74	12.15	1.03	0.64	1100	31.66	16.57	3.44
1400	9.57	13.69	13.12	11.04	1.03	0.64	1150	31.61	16.67	3.67
1600	8.96	13.31	11.98	10.36	1.02	0.63	1200	31.46	16.64	3.74
1800	8.38	12.95	10.95	9.70	1.02	0.63	1250	31.32	16.76	3.64
2000	7.84	12.63	10.17	9.18	1.02	0.63	1300	30.95	16.67	3.78
2200	7.29	12.36	9.44	8.86	1.03	0.62	1350	30.78	16.70	3.88
2400	6.76	12.09	8.67	8.48	1.02	0.62	1400	30.76	16.84	3.85
2600	6.21	11.95	8.06	8.22	1.04	0.62	1450	30.63	16.94	3.90
2800	5.72	11.79	7.41	7.88	1.04	0.62	1500	30.39	16.84	4.05
3000	5.22	11.62	6.76	7.53	1.04	0.62	1550	30.39	16.90	4.15
3200	4.69	11.62	6.20	7.35	1.05	0.61	1600	30.28	16.77	4.32
3400	4.14	11.58	5.55	6.85	1.05	0.61	1650	30.33	17.08	4.32
3600	3.61	11.63	5.03	6.58	1.06	0.61	1700	29.87	17.16	4.30
3800	3.05	11.68	4.53	6.30	1.06	0.61	1750	29.60	17.12	4.39
4000	2.53	11.72	4.10	6.03	1.06	0.61	1800	29.35	17.03	4.50
4500	1.36	11.85	3.35	5.58	1.04	0.60	1850	29.24	16.94	4.40
5000	0.35	11.85	2.89	5.37	1.02	0.59	1900	29.07	17.17	4.42
5500	-0.60	11.81	2.57	5.19	1.00	0.58	1950	28.70	16.95	4.64
6000	-1.62	11.84	2.35	4.89	0.99	0.57	2000	28.64	17.20	4.75

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 = 72mA, Vd = 6.24V @Temperature = -45degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
50	12.76	16.41	29.51	28.98	1.09	0.66	50	37.15	19.94	2.97
100	12.71	16.43	31.13	28.63	1.09	0.65	100	37.00	19.91	3.13
150	12.67	16.41	30.37	27.06	1.09	0.65	150	37.41	19.88	3.05
200	12.63	16.35	30.17	25.70	1.09	0.65	200	36.65	19.75	3.03
250	12.57	16.29	29.35	24.16	1.09	0.65	250	36.10	19.73	3.08
300	12.51	16.21	28.24	23.07	1.08	0.65	300	36.07	19.54	3.40
350	12.43	16.14	27.20	21.86	1.08	0.65	350	36.07	19.63	3.25
400	12.35	16.07	26.21	20.76	1.08	0.65	400	35.57	19.93	3.20
450	12.26	15.97	25.36	19.75	1.08	0.65	450	35.30	19.69	3.19
500	12.16	15.88	24.25	18.95	1.07	0.65	500	35.12	19.65	3.27
550	12.06	15.77	23.59	18.08	1.07	0.65	550	34.95	19.49	3.32
600	11.96	15.66	22.37	17.45	1.07	0.65	600	34.64	19.75	3.30
650	11.84	15.55	21.55	16.80	1.07	0.65	650	34.22	19.75	3.29
700	11.72	15.43	20.84	16.22	1.06	0.65	700	34.02	19.79	3.43
750	11.60	15.30	19.86	15.66	1.06	0.65	750	33.60	19.85	3.52
800	11.47	15.19	19.21	15.16	1.06	0.65	800	33.16	19.73	3.56
850	11.33	15.07	18.52	14.67	1.05	0.65	850	32.94	19.87	3.47
900	11.20	14.94	17.88	14.21	1.05	0.65	900	32.67	19.84	3.54
950	11.05	14.84	17.28	13.77	1.05	0.65	940	32.41	19.72	3.64
1000	10.91	14.71	16.71	13.38	1.05	0.65	1000	32.04	19.66	3.67
1100	10.61	14.48	15.64	12.66	1.04	0.65	1050	31.80	19.66	3.60
1200	10.31	14.26	14.65	12.05	1.04	0.65	1100	31.46	19.52	3.62
1400	9.70	13.83	13.05	10.97	1.03	0.64	1150	31.31	19.44	3.82
1600	9.09	13.45	11.91	10.32	1.03	0.64	1200	31.11	19.31	3.87
1800	8.51	13.09	10.89	9.69	1.03	0.64	1250	30.77	19.23	3.78
2000	7.95	12.75	10.11	9.22	1.03	0.63	1300	30.45	19.08	3.93
2200	7.41	12.49	9.38	8.94	1.03	0.63	1350	30.26	18.94	4.06
2400	6.86	12.24	8.61	8.59	1.03	0.62	1400	30.28	18.92	3.99
2600	6.30	12.09	7.99	8.35	1.05	0.62	1450	30.09	18.86	4.04
2800	5.81	11.93	7.32	8.05	1.05	0.61	1500	29.90	18.68	4.20
3000	5.30	11.78	6.66	7.73	1.05	0.62	1550	29.84	18.61	4.34
3200	4.76	11.79	6.10	7.57	1.06	0.61	1600	29.63	18.52	4.45
3400	4.22	11.73	5.46	7.09	1.06	0.61	1650	29.59	18.81	4.48
3600	3.68	11.78	4.95	6.83	1.06	0.61	1700	29.11	18.82	4.49
3800	3.12	11.86	4.44	6.58	1.07	0.60	1750	28.83	18.51	4.55
4000	2.59	11.87	4.01	6.31	1.06	0.60	1800	28.56	18.39	4.66
4500	1.38	12.00	3.26	5.90	1.05	0.59	1850	28.45	18.21	4.57
5000	0.35	11.96	2.80	5.67	1.02	0.58	1900	28.35	18.23	4.58
5500	-0.65	11.90	2.48	5.44	0.99	0.56	1950	27.97	18.08	4.82
6000	-1.72	11.89	2.25	5.08	0.97	0.56	2000	27.96	18.06	4.91

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 = 60mA, Vd = 4.70V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
50	12.28	16.22	30.17	26.86	1.10	0.63	50	32.85	18.19	3.60
100	12.23	16.19	31.25	26.44	1.10	0.63	100	32.74	18.15	3.79
150	12.18	16.18	30.18	25.27	1.10	0.63	150	32.87	18.14	3.68
200	12.13	16.14	28.91	23.85	1.10	0.63	200	32.17	18.07	3.61
250	12.07	16.08	27.89	22.50	1.10	0.63	250	31.79	18.05	3.72
300	12.00	16.02	26.51	21.48	1.10	0.63	300	31.42	17.80	3.98
350	11.92	15.94	25.57	20.46	1.10	0.63	350	31.26	17.76	3.88
400	11.84	15.86	24.61	19.45	1.10	0.63	400	30.77	17.84	3.80
450	11.74	15.77	23.70	18.59	1.09	0.63	450	30.38	17.57	3.88
500	11.64	15.67	22.63	17.84	1.09	0.63	500	29.93	17.43	3.99
550	11.54	15.57	21.86	17.05	1.09	0.63	550	29.48	17.21	4.01
600	11.42	15.44	20.80	16.44	1.08	0.63	600	28.98	17.28	3.96
650	11.30	15.34	20.07	15.81	1.08	0.63	650	28.54	17.18	4.00
700	11.17	15.22	19.39	15.22	1.08	0.63	700	28.16	17.12	4.18
750	11.03	15.10	18.49	14.68	1.08	0.63	750	27.70	16.97	4.25
800	10.91	15.00	17.88	14.20	1.07	0.63	800	27.17	16.77	4.27
850	10.75	14.87	17.25	13.75	1.07	0.63	850	26.83	16.61	4.20
900	10.61	14.75	16.63	13.35	1.07	0.63	900	26.46	16.57	4.31
950	10.45	14.65	16.06	12.94	1.07	0.62	940	26.20	16.29	4.41
1000	10.31	14.54	15.52	12.60	1.06	0.62	1000	25.79	16.06	4.41
1100	9.98	14.31	14.50	11.97	1.06	0.62	1050	25.49	15.91	4.38
1200	9.67	14.09	13.58	11.47	1.06	0.62	1100	25.19	15.63	4.45
1400	9.00	13.72	12.00	10.65	1.05	0.61	1150	24.99	15.47	4.64
1600	8.30	13.41	10.72	10.07	1.06	0.60	1200	24.77	15.34	4.65
1800	7.63	13.15	9.65	9.66	1.07	0.59	1250	24.41	15.18	4.58
2000	6.99	12.90	8.77	9.46	1.07	0.58	1300	24.13	14.91	4.78
2200	6.36	12.74	8.08	9.34	1.09	0.56	1350	23.90	14.69	4.90
2400	5.69	12.61	7.34	9.18	1.10	0.55	1400	23.89	14.66	4.81
2600	5.04	12.60	6.85	9.19	1.13	0.52	1450	23.74	14.58	4.85
2800	4.50	12.47	6.26	9.10	1.13	0.52	1500	23.56	14.36	5.05
3000	3.94	12.37	5.75	8.96	1.14	0.51	1550	23.47	14.27	5.21
3200	3.35	12.39	5.31	8.93	1.16	0.49	1600	23.31	14.05	5.34
3400	2.78	12.36	4.85	8.66	1.16	0.48	1650	23.27	14.02	5.31
3600	2.24	12.38	4.48	8.54	1.17	0.47	1700	22.91	13.97	5.35
3800	1.67	12.39	4.10	8.33	1.17	0.47	1750	22.70	13.78	5.46
4000	1.10	12.41	3.77	8.06	1.17	0.46	1800	22.42	13.67	5.59
4500	-0.23	12.39	3.18	7.38	1.15	0.45	1850	22.34	13.44	5.47
5000	-1.48	12.27	2.84	6.66	1.13	0.45	1900	22.32	13.37	5.47
5500	-2.64	12.05	2.70	6.00	1.12	0.45	1950	21.99	13.16	5.72
6000	-3.83	11.81	2.61	5.42	1.14	0.46	2000	22.08	13.26	5.84

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 = 48mA, Vd = 4.48V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
50	12.19	16.11	30.64	28.39	1.10	0.64	50	31.46	16.13	3.52
100	12.13	16.11	32.83	28.19	1.10	0.63	100	31.41	16.09	3.74
150	12.08	16.10	31.31	26.60	1.11	0.63	150	31.85	16.16	3.61
200	12.03	16.06	29.88	24.84	1.11	0.63	200	31.27	15.98	3.57
250	11.98	15.98	28.34	23.17	1.10	0.63	250	30.67	15.97	3.66
300	11.90	15.93	26.76	21.98	1.10	0.63	300	31.05	15.82	3.96
350	11.82	15.85	25.67	20.84	1.10	0.63	350	30.93	15.84	3.84
400	11.73	15.78	24.63	19.77	1.10	0.62	400	30.64	16.18	3.77
450	11.64	15.69	23.66	18.82	1.09	0.62	450	30.30	15.86	3.81
500	11.54	15.59	22.56	18.05	1.09	0.62	500	30.25	15.86	3.94
550	11.43	15.47	21.75	17.24	1.09	0.62	550	29.96	15.69	3.96
600	11.31	15.37	20.68	16.59	1.08	0.62	600	29.66	15.92	3.90
650	11.20	15.27	19.92	15.95	1.08	0.62	650	29.36	15.94	3.94
700	11.05	15.15	19.25	15.33	1.08	0.62	700	29.15	15.92	4.12
750	10.92	15.05	18.36	14.77	1.08	0.62	750	28.86	15.97	4.19
800	10.79	14.92	17.76	14.28	1.07	0.62	800	28.40	15.85	4.21
850	10.64	14.81	17.14	13.80	1.07	0.62	850	28.14	15.93	4.16
900	10.50	14.70	16.53	13.39	1.07	0.62	900	27.86	15.99	4.26
950	10.34	14.60	15.97	12.97	1.07	0.62	940	27.63	15.83	4.36
1000	10.18	14.48	15.45	12.62	1.06	0.62	1000	27.23	15.74	4.35
1100	9.87	14.25	14.46	11.95	1.06	0.62	1050	26.96	15.76	4.32
1200	9.56	14.04	13.56	11.43	1.06	0.61	1100	26.62	15.60	4.40
1400	8.90	13.66	12.04	10.52	1.05	0.61	1150	26.45	15.48	4.57
1600	8.22	13.34	10.80	9.88	1.06	0.60	1200	26.26	15.40	4.59
1800	7.57	13.06	9.78	9.39	1.06	0.59	1250	25.92	15.32	4.52
2000	6.96	12.79	8.95	9.11	1.06	0.58	1300	25.58	15.13	4.72
2200	6.34	12.61	8.25	8.91	1.08	0.57	1350	25.34	14.96	4.83
2400	5.71	12.44	7.54	8.69	1.09	0.56	1400	25.30	14.97	4.74
2600	5.09	12.42	7.05	8.63	1.12	0.54	1450	25.17	14.91	4.80
2800	4.56	12.26	6.45	8.50	1.12	0.54	1500	24.92	14.76	5.01
3000	4.02	12.16	5.95	8.31	1.12	0.53	1550	24.88	14.67	5.14
3200	3.47	12.17	5.52	8.28	1.14	0.52	1600	24.72	14.44	5.27
3400	2.90	12.13	5.04	8.00	1.14	0.51	1650	24.68	14.47	5.26
3600	2.40	12.16	4.65	7.90	1.15	0.50	1700	24.31	14.42	5.30
3800	1.84	12.19	4.25	7.70	1.15	0.49	1750	24.13	14.31	5.39
4000	1.29	12.21	3.93	7.50	1.15	0.49	1800	23.77	14.13	5.49
4500	0.03	12.25	3.30	7.00	1.14	0.48	1850	23.67	13.97	5.38
5000	-1.15	12.20	2.95	6.49	1.13	0.47	1900	23.66	13.91	5.42
5500	-2.25	12.04	2.81	6.00	1.13	0.46	1950	23.28	13.69	5.65
6000	-3.37	11.84	2.71	5.55	1.14	0.46	2000	23.33	13.86	5.79

Typical Performance Data

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

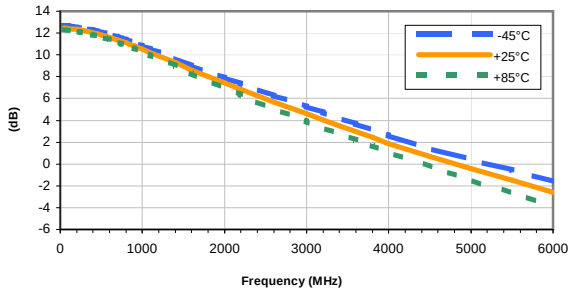
TEST CONDITIONS: Icc = 72mA, Vd = 4.92V @Temperature = +85degC

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		FREQ	IP3 Output	1dB Comp. Output	Noise Figure
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Delta	(MHz)	(dBm)	(dBm)	(dB)
50	12.31	16.29	29.22	25.47	1.10	0.63	50	35.74	19.60	3.65
100	12.25	16.24	30.12	25.13	1.10	0.63	100	35.33	19.58	3.87
150	12.22	16.24	29.36	24.14	1.11	0.63	150	34.72	19.51	3.74
200	12.17	16.18	28.47	23.03	1.10	0.63	200	33.68	19.41	3.67
250	12.12	16.13	27.75	21.85	1.10	0.63	250	33.32	19.15	3.78
300	12.04	16.08	26.65	21.00	1.10	0.63	300	31.95	18.78	4.07
350	11.97	15.99	25.95	20.11	1.10	0.63	350	31.65	18.61	3.96
400	11.89	15.90	25.08	19.20	1.10	0.63	400	30.96	18.52	3.86
450	11.81	15.80	24.23	18.39	1.09	0.63	450	30.47	18.19	3.93
500	11.71	15.70	23.15	17.70	1.09	0.63	500	29.81	17.96	4.05
550	11.60	15.59	22.40	16.96	1.09	0.63	550	29.24	17.64	4.08
600	11.49	15.48	21.27	16.36	1.08	0.63	600	28.61	17.51	4.01
650	11.37	15.37	20.51	15.77	1.08	0.63	650	28.06	17.23	4.06
700	11.24	15.24	19.77	15.18	1.08	0.63	700	27.61	17.11	4.24
750	11.11	15.12	18.83	14.67	1.07	0.63	750	27.06	16.77	4.29
800	10.98	15.00	18.15	14.22	1.07	0.63	800	26.51	16.46	4.32
850	10.83	14.89	17.45	13.80	1.07	0.63	850	26.13	16.22	4.28
900	10.69	14.76	16.78	13.43	1.06	0.63	900	25.73	16.12	4.37
950	10.53	14.66	16.18	13.04	1.06	0.63	940	25.42	15.77	4.48
1000	10.37	14.54	15.55	12.73	1.06	0.63	1000	24.96	15.50	4.50
1100	10.04	14.31	14.43	12.16	1.06	0.62	1050	24.70	15.26	4.45
1200	9.70	14.12	13.42	11.72	1.06	0.62	1100	24.37	14.97	4.52
1400	8.99	13.77	11.69	11.02	1.06	0.61	1150	24.19	14.77	4.71
1600	8.24	13.50	10.33	10.58	1.07	0.59	1200	23.93	14.60	4.75
1800	7.52	13.28	9.23	10.30	1.08	0.57	1250	23.59	14.37	4.63
2000	6.82	13.09	8.32	10.26	1.09	0.55	1300	23.28	14.10	4.83
2200	6.13	12.98	7.61	10.24	1.11	0.53	1350	23.07	13.86	4.98
2400	5.43	12.86	6.89	10.18	1.13	0.51	1400	23.02	13.82	4.91
2600	4.73	12.90	6.42	10.23	1.17	0.48	1450	22.88	13.68	4.92
2800	4.14	12.79	5.87	10.18	1.17	0.47	1500	22.70	13.47	5.14
3000	3.55	12.69	5.37	10.00	1.17	0.46	1550	22.67	13.35	5.32
3200	2.94	12.71	4.97	9.97	1.20	0.44	1600	22.49	13.15	5.43
3400	2.32	12.66	4.53	9.58	1.20	0.44	1650	22.47	13.11	5.42
3600	1.75	12.65	4.18	9.38	1.20	0.43	1700	22.08	13.00	5.43
3800	1.16	12.64	3.83	9.02	1.20	0.42	1750	21.91	12.86	5.59
4000	0.55	12.61	3.54	8.62	1.19	0.42	1800	21.63	12.66	5.69
4500	-0.85	12.50	2.97	7.58	1.16	0.42	1850	21.54	12.49	5.58
5000	-2.15	12.28	2.69	6.58	1.14	0.44	1900	21.49	12.41	5.56
5500	-3.38	11.98	2.58	5.74	1.13	0.45	1950	21.23	12.23	5.84
6000	-4.61	11.70	2.52	5.09	1.15	0.47	2000	21.28	12.34	5.99

Typical Performance Curves

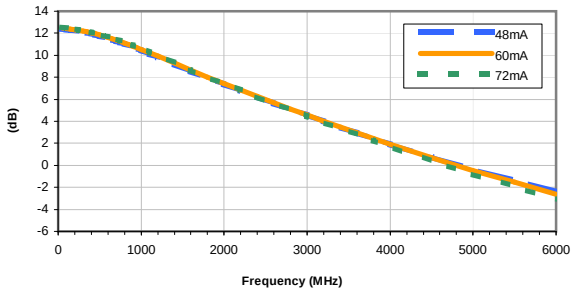
GAIN vs. TEMPERATURE

INPUT POWER = -15dBm, CURRENT = 60mA



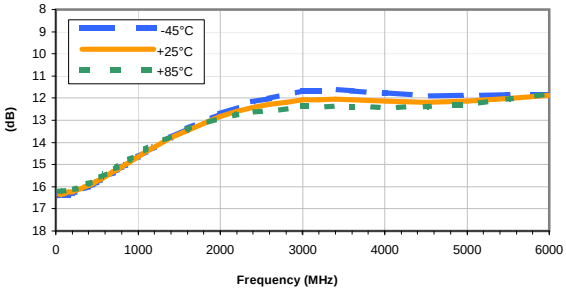
GAIN vs. CURRENT

INPUT POWER = -15dBm, Temperature = +25°C



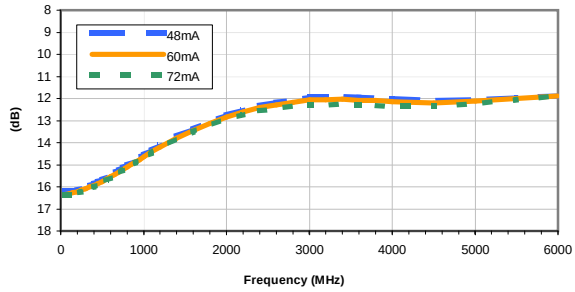
ISOLATION vs. TEMPERATURE

INPUT POWER = -15dBm, CURRENT = 60mA



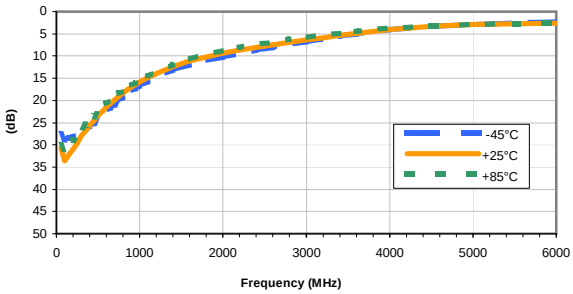
ISOLATION vs. CURRENT

INPUT POWER = -15dBm, Temperature = +25°C



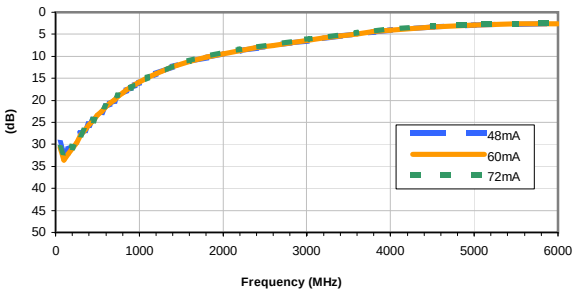
INPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -15dBm, CURRENT = 60mA



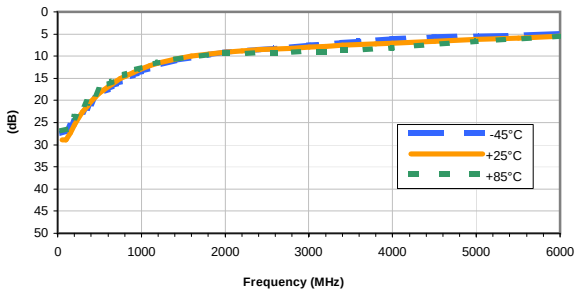
INPUT RETURN LOSS vs. CURRENT

INPUT POWER = -15dBm, Temperature = +25°C



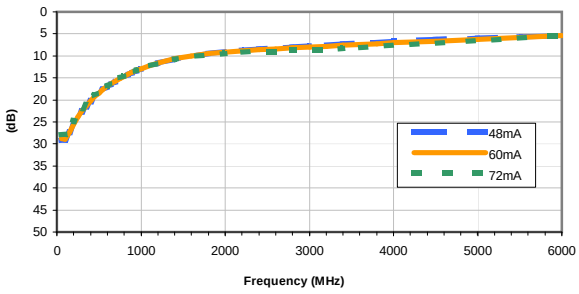
OUTPUT RETURN LOSS vs. TEMPERATURE

INPUT POWER = -15dBm, CURRENT = 60mA



OUTPUT RETURN LOSS vs. CURRENT

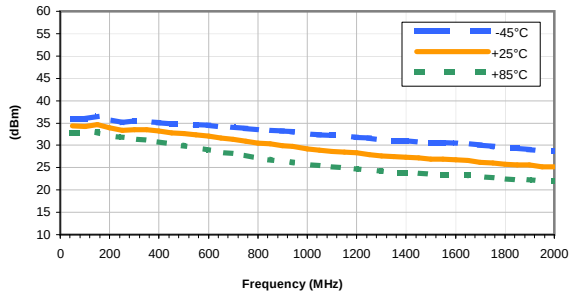
INPUT POWER = -15dBm, Temperature = +25°C



Typical Performance Curves

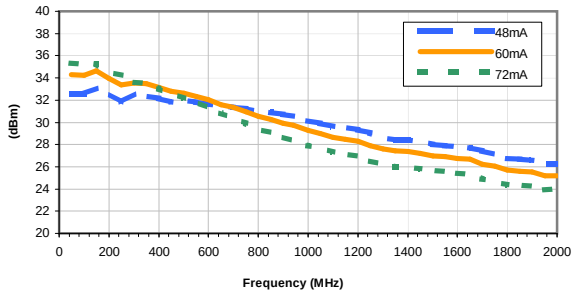
OUTPUT IP3 vs. TEMPERATURE

INPUT POWER = -15dBm, CURRENT = 60mA



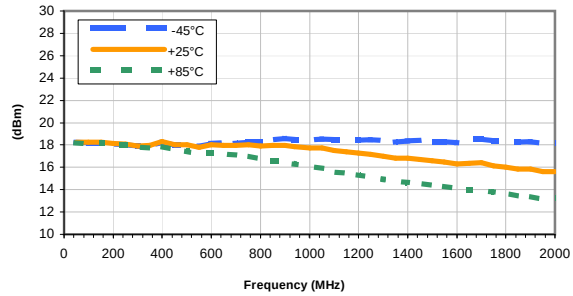
OUTPUT IP-3 vs. CURRENT

INPUT POWER = -15dBm, Temperature = +25°C



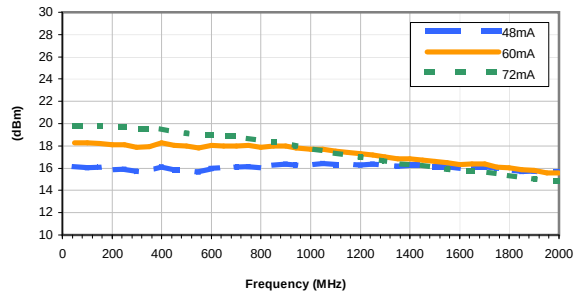
OUTPUT POWER at 1dB Compression vs. TEMPERATURE

CURRENT = 60mA



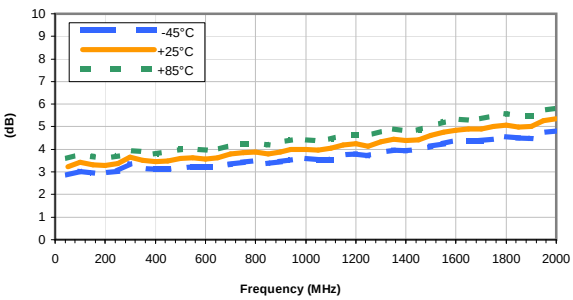
OUTPUT POWER at 1dB Compression vs. CURRENT

Temperature = +25°C



Noise Figure vs. TEMPERATURE

CURRENT = 60mA



Noise Figure vs. CURRENT

Temperature = +25°C