

## GVA-84 Performance Data

**NOTE: Use PDF Bookmarks to view DATA at required conditions**

TYPE: MMIC Amplifier

MODEL: GVA-84 Reference Data: RDF-12331

S PARAMETERS are presented in dB/deg Format

TEST CONDITIONS: INPUT POWER = -25dBm, Vd = 5.00V, Icc=106mA @Temperature = +25degC

**Definitions:**

Input Return Loss=-S11(dB)

Gain(Power Gain)=S21(dB)

Reverse Isolation=-S12(dB)

Output Return Loss=-S22(dB)

FREQ	S11		S21		S12		S22		Stability		IP-3 Output	1 dB Compression Output	FREQ	Noise Figure
	(MHz)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	K				
50	-21.65	172.61	24.18	172.24	-31.36	2.31	-24.37	-19.46	1.34	0.43	36.98	20.73	50	5.53
100	-21.72	170.08	24.11	165.43	-31.36	-4.71	-23.67	-46.14	1.35	0.43	36.83	20.77	100	5.65
200	-21.79	166.92	23.98	151.61	-31.07	-7.66	-20.65	-81.31	1.33	0.44	36.80	20.73	200	5.65
400	-21.59	153.31	23.62	124.29	-30.73	-16.97	-16.17	-123.40	1.32	0.44	36.48	20.89	400	5.77
600	-21.19	140.65	23.07	97.82	-30.40	-27.37	-13.38	-154.53	1.31	0.43	36.05	20.71	600	5.70
800	-20.64	126.85	22.44	72.39	-29.97	-36.29	-11.57	178.12	1.31	0.42	36.17	20.74	800	5.78
1000	-20.14	112.63	21.77	48.03	-29.47	-47.37	-10.29	153.36	1.30	0.42	36.37	20.77	1000	5.73
1200	-19.70	97.88	21.08	24.57	-28.90	-59.96	-9.36	130.29	1.28	0.41	36.34	20.59	1200	5.71
1400	-19.28	84.10	20.41	1.92	-28.38	-72.08	-8.68	108.42	1.27	0.41	36.37	20.60	1400	5.73
1600	-18.96	69.51	19.75	-20.12	-27.89	-85.60	-8.17	87.84	1.27	0.40	36.90	20.76	1600	5.75
1800	-18.76	56.10	19.12	-41.56	-27.33	-98.51	-7.80	68.15	1.26	0.40	37.15	20.73	1800	5.69
2000	-18.60	43.02	18.57	-62.56	-26.79	-112.70	-7.50	48.96	1.24	0.39	37.30	20.88	2000	5.67
2200	-18.65	29.70	18.02	-83.39	-26.31	-126.73	-7.36	30.23	1.24	0.39	37.15	21.00	2200	5.66
2400	-18.62	17.17	17.54	-103.94	-26.01	-141.86	-7.23	11.98	1.24	0.38	36.78	21.02	2400	5.63
2600	-18.65	4.56	17.10	-124.32	-25.53	-156.51	-7.15	-6.20	1.23	0.37	36.47	21.08	2600	5.59
2800	-18.75	-8.50	16.70	-144.58	-25.04	-171.83	-7.12	-24.64	1.22	0.37	36.63	21.24	2800	5.59
3000	-18.76	-21.18	16.34	-164.74	-24.75	171.93	-7.05	-42.66	1.22	0.37	36.53	21.18	3000	5.70
3200	-18.96	-35.61	15.99	175.07	-24.48	156.08	-7.09	-61.20	1.22	0.36	36.27	21.06	3200	5.62
3400	-18.90	-49.02	15.73	155.00	-24.11	140.45	-7.08	-79.49	1.21	0.36	36.28	20.92	3400	5.70
3600	-18.89	-65.42	15.45	134.61	-23.78	123.41	-7.04	-98.54	1.20	0.36	36.25	20.85	3600	5.64
3800	-19.03	-81.50	15.20	114.46	-23.55	106.55	-7.07	-117.58	1.20	0.36	35.37	20.59	3800	5.77
4000	-19.18	-99.15	14.97	94.17	-23.32	89.55	-7.09	-137.39	1.21	0.36	34.81	20.24	4000	5.82
4200	-19.27	-119.97	14.73	73.59	-23.13	71.74	-7.05	-157.69	1.21	0.36	34.94	20.08	4200	6.09
4400	-19.34	-142.24	14.51	53.03	-23.02	54.04	-7.00	-178.52	1.22	0.36	35.34	19.97	4400	5.93
4600	-19.13	-164.39	14.33	32.18	-22.84	36.08	-6.90	160.81	1.22	0.36	35.00	19.83	4600	5.93
4800	-18.84	170.31	14.08	11.18	-22.74	17.29	-6.76	139.32	1.23	0.36	34.78	19.38	4800	5.84
5000	-18.86	146.31	13.90	-9.54	-22.80	-1.48	-6.72	117.81	1.26	0.36	34.75	19.02	5000	6.04
5200	-18.20	120.42	13.68	-30.82	-22.78	-20.62	-6.56	96.00	1.27	0.36	34.44	18.79	5200	6.18
5400	-17.65	93.94	13.44	-52.28	-22.73	-39.87	-6.38	74.14	1.28	0.36	34.15	18.55	5400	6.30
5600	-17.20	67.97	13.21	-73.69	-22.78	-59.87	-6.22	51.89	1.31	0.36	33.77	18.36	5600	6.26
5800	-16.26	43.60	12.94	-95.84	-22.83	-79.58	-6.07	29.81	1.34	0.35	34.05	18.10	5800	6.18
6000	-15.66	19.97	12.67	-118.38	-23.02	-100.07	-5.98	7.93	1.38	0.35	33.34	17.40	6000	6.33
6200	-14.85	-6.23	12.29	-140.43	-23.16	-120.23	-5.83	-14.55	1.44	0.34	33.51	15.61	6500	6.30
6400	-14.33	-33.03	11.97	-162.96	-23.14	-141.23	-5.76	-38.05	1.48	0.35	33.17	15.49	7000	6.78
6600	-13.52	-57.59	11.53	174.26	-23.32	-162.14	-5.73	-60.55	1.56	0.34	32.42	15.67	7500	6.99
6800	-12.54	-82.93	11.02	152.00	-23.67	177.57	-5.57	-83.22	1.67	0.33	32.08	15.69	8000	7.42
7000	-11.89	-108.61	10.48	129.29	-23.58	157.79	-5.56	-106.80	1.74	0.34	32.01	15.58	8500	8.07
7200	-11.13	-131.04	9.82	106.89	-23.66	135.53	-5.59	-128.94	1.86	0.33	31.74	15.25	9000	8.51
7500	-10.29	-165.67	8.76	73.98	-23.41	106.68	-5.65	-162.38	2.01	0.33	31.65	13.94	9500	9.06
8000	-8.76	144.21	6.90	22.01	-23.07	54.19	-5.63	145.92	2.26	0.33	30.50	13.46	10000	9.32

TYPE: MMIC Amplifier  
 MODEL: GVA-84 Reference Data: RDF-12331  
 S PARAMETERS are presented in dB/deg Format  
 TEST CONDITIONS: INPUT POWER = -25dBm, Vd = 4.75V, Icc=92mA @Temperature = +25degC

**Definitions:**

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

FREQ	S11		S21		S12		S22		Stability		IP-3 Output	1 dB Compression Output	FREQ	Noise Figure
	(MHz)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	K				
50	-23.55	172.05	24.01	172.22	-30.66	-3.57	-22.45	-18.69	1.29	0.46	34.47	19.75	50	5.39
100	-23.43	173.30	23.94	165.47	-30.94	-4.95	-21.88	-40.14	1.33	0.44	34.28	19.78	100	5.51
200	-23.32	169.13	23.80	151.64	-30.69	-10.54	-19.66	-73.59	1.31	0.45	34.34	19.73	200	5.51
400	-22.93	158.82	23.46	124.43	-30.71	-16.66	-15.79	-117.91	1.33	0.43	34.14	19.80	400	5.62
600	-22.08	146.75	22.92	97.98	-30.33	-27.52	-13.18	-150.42	1.32	0.42	33.91	19.66	600	5.55
800	-21.27	133.17	22.29	72.56	-29.85	-37.55	-11.43	-178.89	1.30	0.42	34.24	19.66	800	5.68
1000	-20.55	118.62	21.63	48.14	-29.23	-49.26	-10.18	155.69	1.28	0.42	34.53	19.73	1000	5.60
1200	-19.94	103.28	20.95	24.74	-28.76	-60.30	-9.27	132.26	1.28	0.41	34.53	19.48	1200	5.58
1400	-19.36	88.94	20.28	2.03	-28.20	-72.62	-8.60	110.04	1.26	0.40	34.58	19.56	1400	5.61
1600	-18.97	73.92	19.62	-20.01	-27.69	-86.47	-8.09	89.27	1.25	0.40	35.22	19.70	1600	5.63
1800	-18.65	60.10	19.00	-41.50	-27.16	-100.05	-7.72	69.34	1.24	0.39	35.57	19.73	1800	5.56
2000	-18.45	46.58	18.44	-62.44	-26.64	-113.44	-7.42	50.06	1.23	0.39	35.77	19.89	2000	5.51
2200	-18.43	32.59	17.90	-83.30	-26.30	-128.08	-7.27	31.09	1.24	0.38	35.66	20.05	2200	5.52
2400	-18.40	19.76	17.42	-103.89	-25.79	-142.97	-7.15	12.66	1.22	0.38	35.51	20.12	2400	5.45
2600	-18.40	7.11	16.99	-124.29	-25.40	-157.55	-7.07	-5.54	1.22	0.37	35.22	20.11	2600	5.46
2800	-18.43	-6.29	16.59	-144.54	-24.99	-173.22	-7.05	-24.10	1.21	0.37	35.17	20.27	2800	5.45
3000	-18.40	-19.47	16.22	-164.75	-24.68	171.06	-6.96	-42.19	1.21	0.36	35.20	20.37	3000	5.53
3200	-18.59	-34.00	15.88	175.10	-24.38	154.80	-7.01	-60.87	1.22	0.36	35.12	20.21	3200	5.49
3400	-18.51	-47.90	15.61	154.94	-24.05	138.88	-6.99	-79.15	1.21	0.36	35.11	20.12	3400	5.58
3600	-18.52	-64.45	15.33	134.57	-23.74	122.06	-6.97	-98.35	1.20	0.36	35.04	20.09	3600	5.48
3800	-18.64	-80.92	15.08	114.39	-23.55	105.14	-7.01	-117.51	1.21	0.35	34.06	19.85	3800	5.63
4000	-18.79	-98.84	14.86	94.06	-23.24	88.05	-7.02	-137.42	1.20	0.36	33.57	19.51	4000	5.64
4200	-18.89	-119.53	14.61	73.50	-23.10	70.45	-7.00	-157.76	1.21	0.35	33.60	19.39	4200	5.91
4400	-18.98	-141.58	14.39	52.87	-22.97	52.42	-6.97	-178.64	1.22	0.35	33.88	19.25	4400	5.74
4600	-18.77	-163.89	14.21	32.06	-22.80	34.50	-6.87	160.62	1.22	0.36	33.46	19.13	4600	5.78
4800	-18.53	170.66	13.96	11.02	-22.70	15.86	-6.74	139.07	1.23	0.36	33.49	18.70	4800	5.69
5000	-18.54	146.69	13.76	-9.76	-22.78	-2.79	-6.71	117.54	1.27	0.35	33.31	18.39	5000	5.87
5200	-17.94	120.78	13.54	-31.03	-22.73	-22.13	-6.57	95.60	1.28	0.35	32.92	18.15	5200	6.01
5400	-17.42	94.39	13.29	-52.47	-22.70	-41.35	-6.38	73.74	1.30	0.35	32.74	17.86	5400	6.11
5600	-16.99	68.49	13.05	-73.92	-22.72	-61.39	-6.24	51.45	1.32	0.35	32.27	17.71	5600	6.08
5800	-16.09	43.97	12.78	-96.04	-22.84	-80.85	-6.11	29.38	1.36	0.35	32.08	17.43	5800	6.01
6000	-15.54	20.21	12.50	-118.56	-23.03	-101.64	-6.02	7.43	1.41	0.34	32.02	16.81	6000	6.14
6200	-14.74	-5.85	12.13	-140.57	-23.16	-121.58	-5.88	-15.03	1.46	0.34	32.17	15.01	6500	6.15
6400	-14.23	-32.68	11.80	-163.08	-23.12	-142.50	-5.83	-38.55	1.50	0.34	31.48	14.85	7000	6.57
6600	-13.43	-57.36	11.34	174.20	-23.32	-163.69	-5.79	-61.01	1.59	0.33	31.17	15.02	7500	6.79
6800	-12.50	-82.82	10.84	152.04	-23.67	175.87	-5.64	-83.69	1.71	0.33	30.63	15.09	8000	7.19
7000	-11.85	-108.36	10.31	129.30	-23.56	156.44	-5.63	-107.21	1.77	0.33	30.70	15.01	8500	7.84
7200	-11.11	-130.88	9.64	107.08	-23.67	134.06	-5.68	-129.29	1.90	0.32	30.43	14.76	9000	8.28
7500	-10.27	-165.50	8.59	74.14	-23.39	105.37	-5.74	-162.66	2.05	0.33	30.21	13.37	9500	8.88
8000	-8.75	144.29	6.74	22.29	-23.06	53.05	-5.72	145.69	2.31	0.33	29.19	13.00	10000	8.98

TYPE: MMIC Amplifier  
 MODEL: GVA-84 Reference Data: RDF-1233I  
 S PARAMETERS are presented in dB/deg Format  
 TEST CONDITIONS: INPUT POWER = -25dBm, Vd = 5.25V, Icc=121mA @Temperature = +25degC

**Definitions:**

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

FREQ	S11		S21		S12		S22		Stability		IP-3 Output (dBm)	1 dB Compression Output (dBm)	FREQ (MHz)	Noise Figure (dB)
	(MHz)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	K				
50	-20.87	173.87	24.30	172.17	-31.09	-2.25	-26.72	-24.00	1.31	0.45	39.25	21.50	50	5.65
100	-20.63	169.50	24.23	165.41	-30.81	-3.37	-25.17	-52.58	1.28	0.47	39.11	21.55	100	5.77
200	-20.75	164.21	24.09	151.54	-31.45	-8.93	-21.34	-88.32	1.36	0.43	38.96	21.53	200	5.78
400	-20.72	150.17	23.74	124.20	-31.14	-17.31	-16.43	-127.41	1.35	0.43	38.46	21.65	400	5.88
600	-20.46	137.17	23.18	97.72	-30.63	-26.03	-13.52	-157.35	1.33	0.43	37.68	21.51	600	5.83
800	-20.16	122.92	22.55	72.27	-30.13	-36.30	-11.67	175.96	1.32	0.42	37.47	21.52	800	5.92
1000	-19.81	108.71	21.87	47.89	-29.60	-47.92	-10.38	151.55	1.30	0.42	37.58	21.52	1000	5.87
1200	-19.48	94.26	21.18	24.49	-29.05	-59.13	-9.43	128.86	1.29	0.41	37.44	21.41	1200	5.86
1400	-19.17	80.71	20.50	1.79	-28.51	-71.35	-8.76	107.27	1.28	0.41	37.34	21.40	1400	5.88
1600	-18.93	66.71	19.83	-20.22	-27.90	-84.45	-8.25	86.79	1.27	0.41	37.72	21.52	1600	5.88
1800	-18.78	53.40	19.22	-41.65	-27.46	-97.44	-7.88	67.32	1.27	0.40	37.83	21.48	1800	5.82
2000	-18.68	40.68	18.66	-62.60	-26.99	-111.64	-7.58	48.31	1.26	0.39	38.02	21.61	2000	5.77
2200	-18.75	27.26	18.11	-83.41	-26.45	-126.09	-7.42	29.57	1.25	0.39	37.65	21.73	2200	5.80
2400	-18.77	14.85	17.63	-103.99	-26.03	-140.72	-7.31	11.51	1.25	0.38	37.36	21.74	2400	5.75
2600	-18.82	2.96	17.19	-124.32	-25.59	-155.35	-7.22	-6.60	1.24	0.38	36.99	21.77	2600	5.73
2800	-18.92	-10.07	16.79	-144.60	-25.21	-171.23	-7.18	-24.88	1.23	0.37	37.21	21.90	2800	5.75
3000	-18.96	-22.51	16.42	-164.74	-24.80	172.98	-7.12	-42.88	1.22	0.37	37.11	21.88	3000	5.83
3200	-19.18	-36.74	16.08	175.08	-24.53	156.87	-7.15	-61.38	1.23	0.36	36.82	21.67	3200	5.77
3400	-19.12	-49.87	15.81	155.04	-24.14	140.81	-7.14	-79.52	1.21	0.37	36.72	21.44	3400	5.86
3600	-19.17	-66.09	15.53	134.67	-23.86	124.11	-7.10	-98.59	1.21	0.36	36.74	21.18	3600	5.78
3800	-19.31	-82.03	15.28	114.50	-23.64	107.68	-7.12	-117.52	1.21	0.36	36.04	20.90	3800	5.91
4000	-19.44	-99.67	15.05	94.24	-23.40	90.37	-7.13	-137.27	1.21	0.36	35.41	20.53	4000	5.96
4200	-19.53	-120.22	14.82	73.69	-23.18	72.83	-7.10	-157.58	1.21	0.36	35.26	20.39	4200	6.26
4400	-19.60	-142.31	14.60	53.09	-23.09	54.73	-7.05	-178.32	1.23	0.36	35.66	20.25	4400	6.08
4600	-19.34	-164.65	14.43	32.30	-22.92	36.97	-6.95	161.16	1.22	0.36	35.67	20.11	4600	6.09
4800	-19.07	169.92	14.18	11.29	-22.79	18.37	-6.78	139.63	1.23	0.37	35.31	19.62	4800	6.00
5000	-19.05	145.94	14.00	-9.42	-22.79	-0.45	-6.74	118.18	1.25	0.36	35.36	19.26	5000	6.20
5200	-18.38	119.98	13.78	-30.70	-22.74	-19.65	-6.58	96.38	1.26	0.36	35.18	19.03	5200	6.36
5400	-17.78	93.57	13.54	-52.14	-22.80	-38.97	-6.38	74.62	1.28	0.36	35.06	18.81	5400	6.48
5600	-17.31	67.67	13.31	-73.57	-22.77	-58.76	-6.22	52.33	1.30	0.36	34.40	18.59	5600	6.44
5800	-16.37	43.37	13.05	-95.73	-22.90	-78.33	-6.05	30.31	1.33	0.36	34.73	18.31	5800	6.38
6000	-15.76	19.70	12.79	-118.28	-23.08	-98.98	-5.96	8.39	1.38	0.35	34.37	17.62	6000	6.52
6200	-14.91	-6.29	12.42	-140.32	-23.17	-118.96	-5.78	-14.03	1.42	0.35	34.52	16.09	6500	6.53
6400	-14.38	-33.31	12.11	-162.94	-23.15	-139.84	-5.70	-37.55	1.46	0.35	34.25	15.90	7000	6.99
6600	-13.56	-57.66	11.66	174.27	-23.35	-161.30	-5.67	-60.06	1.54	0.34	33.24	16.18	7500	7.21
6800	-12.57	-83.15	11.15	152.00	-23.67	178.53	-5.52	-82.71	1.65	0.34	33.37	16.18	8000	7.64
7000	-11.90	-108.69	10.62	129.19	-23.60	159.33	-5.49	-106.39	1.72	0.34	33.32	15.98	8500	8.28
7200	-11.15	-131.07	9.96	106.82	-23.70	136.58	-5.53	-128.58	1.84	0.33	33.07	15.50	9000	8.77
7500	-10.30	-165.75	8.91	73.79	-23.46	107.55	-5.60	-162.08	1.99	0.34	33.18	14.14	9500	9.34
8000	-8.76	144.11	7.03	21.81	-23.08	55.24	-5.57	146.23	2.23	0.34	31.20	13.73	10000	9.56

TYPE: MMIC Amplifier  
 MODEL: GVA-84 Reference Data: RDF-1233I  
 S PARAMETERS are presented in dB/deg Format  
 TEST CONDITIONS: INPUT POWER = -25dBm, Vd = 5.00V, Icc=101mA @Temperature = -45degC

**Definitions:**

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

FREQ	S11		S21		S12		S22		Stability		IP-3 Output	1 dB Compression Output	FREQ	Noise Figure
	(MHz)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	K				
50	-22.32	175.17	24.17	172.19	-31.37	-6.55	-23.56	-18.87	1.35	0.43	36.76	19.39	50	4.90
100	-22.84	171.70	24.11	165.38	-31.15	-4.93	-21.96	-40.41	1.33	0.44	36.50	19.41	100	5.01
200	-23.08	163.83	23.99	151.37	-31.13	-9.63	-19.94	-71.56	1.34	0.44	36.49	19.30	200	4.98
400	-21.49	151.56	23.67	123.62	-30.79	-18.77	-16.36	-121.74	1.32	0.44	36.36	19.36	400	5.08
600	-20.93	137.94	23.15	96.65	-30.52	-28.07	-13.44	-154.79	1.32	0.43	35.99	19.17	600	5.02
800	-20.71	123.27	22.55	70.72	-29.90	-39.50	-11.62	177.84	1.29	0.43	36.13	19.18	800	5.14
1000	-20.36	107.41	21.91	45.72	-29.37	-51.99	-10.36	152.31	1.28	0.43	36.46	19.22	1000	5.04
1200	-19.68	91.56	21.25	21.65	-28.87	-63.93	-9.48	127.41	1.27	0.42	36.54	18.88	1200	5.00
1400	-19.21	75.25	20.59	-1.72	-28.31	-77.55	-8.73	104.42	1.25	0.42	36.67	19.02	1400	5.04
1600	-18.94	60.39	19.94	-24.34	-27.79	-91.38	-8.20	82.95	1.24	0.42	37.31	19.16	1600	5.05
1800	-18.60	44.94	19.34	-46.48	-27.29	-106.02	-7.78	62.16	1.23	0.41	37.73	19.24	1800	4.99
2000	-18.70	30.95	18.80	-68.07	-26.70	-120.80	-7.49	42.24	1.21	0.41	38.26	19.40	2000	4.94
2200	-18.73	14.87	18.24	-89.60	-26.41	-135.70	-7.33	22.20	1.23	0.40	38.29	19.58	2200	4.95
2400	-18.84	1.79	17.78	-110.81	-25.90	-151.37	-7.13	3.24	1.21	0.40	38.07	19.66	2400	4.89
2600	-19.43	-13.22	17.30	-131.54	-25.65	-166.03	-7.12	-15.47	1.23	0.39	37.47	19.69	2600	4.84
2800	-19.60	-27.77	16.92	-152.69	-25.28	176.70	-7.02	-35.02	1.23	0.38	37.70	19.85	2800	4.85
3000	-19.64	-38.01	16.63	-173.24	-24.68	160.70	-6.89	-52.59	1.18	0.39	37.38	20.22	3000	4.95
3200	-20.43	-53.15	16.29	166.03	-24.43	144.38	-6.97	-71.68	1.20	0.38	37.43	20.37	3200	4.88
3400	-20.21	-69.68	16.02	145.17	-24.09	127.04	-6.88	-91.29	1.18	0.38	37.62	20.40	3400	4.95
3600	-19.90	-83.38	15.81	124.36	-23.68	109.78	-6.84	-110.42	1.16	0.39	37.41	20.43	3600	4.85
3800	-20.01	-102.06	15.51	103.25	-23.46	91.53	-6.92	-131.71	1.17	0.39	36.56	20.23	3800	4.97
4000	-20.45	-113.96	15.37	82.92	-23.28	74.82	-6.98	-150.95	1.17	0.38	35.80	19.98	4000	4.99
4200	-20.39	-138.22	15.13	61.32	-23.00	55.45	-6.88	-173.23	1.16	0.39	36.17	19.87	4200	5.28
4400	-20.25	-159.71	14.92	40.20	-22.95	37.13	-6.74	164.64	1.17	0.39	36.46	19.68	4400	5.10
4600	-20.59	175.08	14.73	18.76	-22.72	18.29	-6.46	144.20	1.15	0.39	36.45	19.62	4600	5.11
4800	-20.02	151.31	14.55	-2.77	-22.58	-0.40	-6.30	122.85	1.15	0.39	36.00	19.37	4800	4.96
5000	-20.69	126.27	14.39	-23.91	-22.63	-19.60	-6.19	101.15	1.17	0.39	35.66	19.14	5000	5.16
5200	-20.00	96.38	14.19	-45.38	-22.56	-39.57	-6.03	79.44	1.17	0.39	35.48	18.89	5200	5.26
5400	-19.47	71.38	14.03	-67.39	-22.53	-59.69	-5.82	56.63	1.17	0.39	35.29	18.59	5400	5.44
5600	-19.79	38.70	13.88	-88.71	-22.54	-80.41	-5.64	35.10	1.18	0.40	34.56	18.50	5600	5.40
5800	-18.19	13.39	13.70	-111.41	-22.45	-100.61	-5.53	12.38	1.19	0.40	34.26	18.32	5800	5.28
6000	-17.12	-6.04	13.52	-135.26	-22.67	-120.99	-5.34	-10.51	1.21	0.39	33.90	17.83	6000	5.39
6200	-16.17	-32.57	13.28	-158.18	-22.71	-142.77	-5.19	-33.97	1.23	0.39	33.52	16.40	6200	5.35
6400	-14.77	-59.50	12.98	178.55	-22.68	-163.83	-5.01	-58.96	1.24	0.40	33.34	16.11	6400	5.82
6600	-13.69	-81.06	12.57	154.39	-22.97	173.47	-4.93	-83.16	1.30	0.39	33.51	16.20	6600	5.96
6800	-12.59	-106.72	12.10	131.25	-23.34	152.05	-4.61	-107.07	1.37	0.39	33.35	16.16	6800	6.57
7000	-11.85	-133.51	11.66	107.34	-23.12	132.00	-4.57	-132.25	1.39	0.40	32.94	16.10	7000	7.05
7200	-11.11	-155.05	11.02	84.09	-23.45	107.79	-4.53	-154.98	1.50	0.38	31.91	15.79	7200	7.50
7500	-10.47	167.60	10.01	49.30	-23.03	78.72	-4.59	170.73	1.60	0.39	30.91	14.51	7500	8.09
8000	-9.01	113.75	8.22	-5.18	-22.47	24.23	-4.74	117.45	1.77	0.38	30.99	14.58	8000	8.32

TYPE: MMIC Amplifier  
 MODEL: GVA-84 Reference Data: RDF-12331  
 S PARAMETERS are presented in dB/deg Format  
 TEST CONDITIONS: INPUT POWER = -25dBm, Vd = 4.75V, Icc=88mA @Temperature = -45degC

**Definitions:**

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

FREQ	S11		S21		S12		S22		Stability		IP-3 Output	1 dB Compression Output	FREQ	Noise Figure
	(MHz)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	K				
50	-23.85	172.44	24.02	172.22	-30.92	-4.45	-21.46	-18.79	1.31	0.45	34.14	17.94	50	4.80
100	-24.52	171.03	23.95	165.39	-31.12	-2.45	-20.46	-35.06	1.34	0.43	33.89	18.01	100	4.93
200	-24.66	167.44	23.84	151.44	-30.80	-11.30	-19.09	-66.35	1.32	0.44	33.92	17.80	200	4.91
400	-22.61	156.15	23.53	123.72	-30.58	-18.06	-15.98	-117.18	1.31	0.44	33.96	17.85	400	5.02
600	-21.77	142.99	23.01	96.71	-30.22	-29.59	-13.22	-151.29	1.30	0.43	33.78	17.66	600	4.94
800	-21.31	129.19	22.42	70.84	-29.81	-40.61	-11.46	-179.51	1.29	0.42	34.15	17.68	800	5.04
1000	-20.84	112.74	21.78	45.84	-29.22	-52.76	-10.24	-154.45	1.27	0.42	34.52	17.74	1000	4.97
1200	-19.95	96.46	21.12	21.73	-28.70	-64.97	-9.37	129.19	1.26	0.42	34.65	17.32	1200	4.94
1400	-19.38	79.49	20.46	-1.67	-28.14	-78.58	-8.61	105.87	1.24	0.42	34.89	17.51	1400	4.97
1600	-19.00	64.32	19.82	-24.29	-27.58	-92.44	-8.11	84.20	1.23	0.42	35.66	17.66	1600	4.97
1800	-18.61	48.62	19.22	-46.49	-27.14	-106.73	-7.69	63.27	1.22	0.41	36.11	17.81	1800	4.89
2000	-18.64	34.47	18.67	-68.06	-26.61	-121.71	-7.40	43.16	1.21	0.41	36.54	18.00	2000	4.86
2200	-18.62	17.92	18.12	-89.62	-26.16	-136.59	-7.24	22.98	1.21	0.40	36.85	18.21	2200	4.87
2400	-18.65	4.55	17.66	-110.81	-25.82	-152.05	-7.04	3.82	1.21	0.39	36.74	18.42	2400	4.80
2600	-19.23	-10.22	17.19	-131.61	-25.54	-167.39	-7.03	-14.97	1.22	0.38	35.70	18.38	2600	4.75
2800	-19.34	-25.08	16.81	-152.75	-25.17	175.26	-6.94	-34.52	1.22	0.38	35.73	18.57	2800	4.75
3000	-19.31	-35.76	16.51	-173.33	-24.57	159.40	-6.81	-52.31	1.17	0.38	35.70	18.94	3000	4.83
3200	-20.11	-51.09	16.18	165.95	-24.33	143.03	-6.89	-71.38	1.19	0.38	35.65	18.97	3200	4.78
3400	-19.86	-67.93	15.90	145.05	-24.00	125.40	-6.81	-91.14	1.18	0.38	35.76	19.08	3400	4.85
3600	-19.55	-82.17	15.69	124.23	-23.59	108.74	-6.75	-110.31	1.15	0.39	35.44	19.27	3600	4.74
3800	-19.65	-100.95	15.40	103.12	-23.41	90.36	-6.84	-131.63	1.17	0.38	34.92	19.00	3800	4.87
4000	-20.04	-113.11	15.25	82.72	-23.22	73.69	-6.90	-151.00	1.16	0.38	34.01	18.73	4000	4.84
4200	-20.01	-137.24	15.01	61.12	-22.98	54.53	-6.81	-173.36	1.16	0.38	34.39	18.72	4200	5.17
4400	-19.91	-159.03	14.79	39.99	-22.87	36.05	-6.69	164.39	1.17	0.38	34.48	18.55	4400	5.01
4600	-20.21	176.04	14.61	18.53	-22.70	17.15	-6.40	143.97	1.15	0.39	34.24	18.48	4600	4.99
4800	-19.72	152.13	14.43	-3.01	-22.55	-1.58	-6.26	122.55	1.15	0.39	33.89	18.18	4800	4.85
5000	-20.38	127.34	14.26	-24.18	-22.58	-20.96	-6.16	100.78	1.17	0.38	33.68	17.98	5000	5.05
5200	-19.71	97.20	14.05	-45.69	-22.54	-40.65	-6.01	79.05	1.18	0.39	33.09	17.75	5200	5.14
5400	-19.21	72.42	13.88	-67.68	-22.46	-61.01	-5.80	56.15	1.18	0.39	32.93	17.41	5400	5.32
5600	-19.55	40.06	13.73	-89.05	-22.53	-81.79	-5.65	34.56	1.19	0.39	32.45	17.27	5600	5.27
5800	-17.98	14.39	13.54	-111.76	-22.43	-101.90	-5.54	11.81	1.20	0.40	31.97	17.15	5800	5.18
6000	-16.94	-5.32	13.35	-135.59	-22.64	-122.49	-5.36	-11.05	1.22	0.39	31.69	16.70	6000	5.23
6200	-16.01	-32.08	13.11	-158.47	-22.68	-144.09	-5.24	-34.53	1.24	0.39	31.29	15.73	6500	5.23
6400	-14.68	-59.16	12.80	178.27	-22.67	-165.25	-5.06	-59.63	1.26	0.40	31.10	15.43	7000	5.68
6600	-13.61	-80.96	12.39	154.18	-22.94	172.04	-4.98	-83.75	1.33	0.38	31.02	15.52	7500	5.80
6800	-12.54	-106.54	11.92	131.06	-23.35	150.65	-4.67	-107.67	1.39	0.38	30.65	15.48	8000	6.39
7000	-11.83	-133.31	11.47	107.24	-23.10	130.62	-4.64	-132.82	1.42	0.39	30.33	15.44	8500	6.89
7200	-11.06	-155.12	10.83	84.07	-23.44	106.18	-4.59	-155.44	1.53	0.38	29.63	15.10	9000	7.31
7500	-10.46	167.77	9.82	49.34	-22.99	77.15	-4.68	170.31	1.63	0.38	29.44	13.78	9500	7.88
8000	-8.99	113.74	8.04	-5.10	-22.46	23.10	-4.80	117.11	1.80	0.38	29.03	14.01	10000	8.06

TYPE: MMIC Amplifier  
 MODEL: GVA-84 Reference Data: RDF-1233I  
 S PARAMETERS are presented in dB/deg Format  
 TEST CONDITIONS: INPUT POWER = -25dBm, Vd = 5.25V, Icc=115mA @Temperature = -45degC

**Definitions:**

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

FREQ	S11		S21		S12		S22		Stability		IP-3 Output	1 dB Compression Output	FREQ	Noise Figure
	(MHz)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	K				
50	-21.09	173.22	24.29	172.16	-32.49	-5.52	-24.75	-23.72	1.46	0.38	38.90	20.00	50	5.01
100	-21.78	171.57	24.22	165.34	-31.58	-2.37	-23.25	-44.21	1.36	0.42	38.62	20.05	100	5.15
200	-21.86	162.69	24.10	151.34	-31.61	-7.71	-20.71	-76.05	1.38	0.42	38.54	19.96	200	5.08
400	-20.69	149.43	23.78	123.55	-31.01	-18.97	-16.62	-125.83	1.33	0.43	38.26	20.05	400	5.21
600	-20.29	134.28	23.25	96.60	-30.61	-28.77	-13.58	-157.35	1.32	0.43	37.67	19.85	600	5.12
800	-20.21	119.82	22.65	70.65	-30.10	-39.48	-11.72	175.95	1.30	0.43	37.62	19.87	800	5.23
1000	-20.06	103.93	22.01	45.69	-29.61	-51.36	-10.45	150.75	1.29	0.42	37.95	19.88	1000	5.15
1200	-19.47	88.04	21.35	21.60	-29.07	-63.61	-9.57	126.16	1.28	0.42	38.01	19.62	1200	5.13
1400	-19.04	72.02	20.68	-1.74	-28.43	-76.77	-8.80	103.36	1.26	0.42	38.24	19.83	1400	5.15
1600	-18.86	57.51	20.04	-24.39	-27.92	-90.89	-8.29	82.08	1.25	0.42	38.93	20.02	1600	5.15
1800	-18.57	42.24	19.43	-46.50	-27.37	-105.23	-7.86	61.50	1.24	0.42	39.43	20.07	1800	5.08
2000	-18.70	28.41	18.89	-68.10	-26.85	-119.99	-7.57	41.60	1.23	0.41	39.77	20.17	2000	5.05
2200	-18.78	12.62	18.33	-89.58	-26.43	-134.79	-7.40	21.73	1.23	0.41	39.71	20.39	2200	5.05
2400	-18.93	-0.24	17.87	-110.76	-25.99	-150.23	-7.20	2.72	1.22	0.40	39.52	20.42	2400	4.99
2600	-19.56	-15.20	17.39	-131.56	-25.60	-165.28	-7.19	-15.83	1.23	0.39	38.74	20.47	2600	4.96
2800	-19.74	-29.70	17.01	-152.69	-25.34	177.59	-7.10	-35.23	1.23	0.39	38.82	20.56	2800	4.98
3000	-19.83	-39.59	16.72	-173.24	-24.69	161.46	-6.96	-52.84	1.18	0.39	39.03	20.81	3000	5.04
3200	-20.64	-54.59	16.38	166.14	-24.49	145.07	-7.06	-71.77	1.20	0.39	38.47	21.33	3200	5.00
3400	-20.45	-71.29	16.11	145.21	-24.13	127.57	-6.96	-91.37	1.18	0.39	39.01	21.20	3400	5.09
3600	-20.12	-84.74	15.90	124.44	-23.75	110.71	-6.89	-110.38	1.16	0.39	39.02	21.16	3600	4.94
3800	-20.27	-103.15	15.59	103.35	-23.54	92.40	-6.98	-131.62	1.17	0.39	37.98	20.95	3800	5.06
4000	-20.73	-114.72	15.45	82.99	-23.32	75.59	-7.05	-150.83	1.17	0.39	37.21	20.43	4000	5.09
4200	-20.67	-138.88	15.22	61.45	-23.07	56.62	-6.93	-173.07	1.16	0.39	37.76	20.31	4200	5.40
4400	-20.52	-160.20	15.01	40.35	-22.95	38.14	-6.80	164.89	1.17	0.39	38.51	20.11	4400	5.22
4600	-20.82	174.61	14.83	18.92	-22.77	19.39	-6.50	144.51	1.15	0.40	38.39	20.05	4600	5.22
4800	-20.27	150.88	14.65	-2.56	-22.63	0.59	-6.35	123.19	1.15	0.40	38.08	19.80	4800	5.09
5000	-20.90	125.83	14.49	-23.76	-22.65	-18.74	-6.23	101.46	1.16	0.39	38.07	19.55	5000	5.28
5200	-20.19	95.52	14.30	-45.19	-22.56	-38.78	-6.06	79.88	1.17	0.40	37.82	19.28	5200	5.41
5400	-19.64	70.80	14.13	-67.16	-22.56	-58.80	-5.83	57.05	1.17	0.40	37.88	19.01	5400	5.58
5600	-19.92	37.91	13.99	-88.49	-22.57	-79.46	-5.66	35.51	1.18	0.40	36.98	18.90	5600	5.55
5800	-18.31	12.62	13.81	-111.16	-22.51	-99.56	-5.54	12.90	1.19	0.41	36.31	18.74	5800	5.43
6000	-17.20	-6.34	13.65	-135.08	-22.67	-119.94	-5.33	-9.95	1.20	0.40	35.99	18.20	6000	5.49
6200	-16.21	-32.97	13.41	-158.02	-22.74	-141.65	-5.18	-33.33	1.22	0.40	36.08	17.01	6500	5.51
6400	-14.80	-59.82	13.11	178.73	-22.71	-162.70	-4.99	-58.40	1.23	0.41	35.90	16.76	7000	5.98
6600	-13.74	-81.29	12.71	154.52	-23.03	174.53	-4.90	-82.62	1.29	0.39	36.40	16.85	7500	6.12
6800	-12.61	-106.78	12.24	131.33	-23.42	153.14	-4.57	-106.58	1.35	0.39	35.37	16.80	8000	6.71
7000	-11.87	-133.53	11.81	107.39	-23.14	133.06	-4.53	-131.81	1.38	0.41	35.36	16.72	8500	7.23
7200	-11.12	-155.21	11.17	84.07	-23.47	108.76	-4.48	-154.51	1.48	0.39	33.81	16.42	9000	7.64
7500	-10.48	167.60	10.15	49.20	-23.05	79.49	-4.56	171.11	1.57	0.39	33.32	15.04	9500	8.29
8000	-9.02	113.63	8.36	-5.34	-22.48	25.12	-4.69	117.76	1.74	0.39	32.48	15.04	10000	8.52

TYPE: MMIC Amplifier  
 MODEL: GVA-84 Reference Data: RDF-1233I  
 S PARAMETERS are presented in dB/deg Format  
 TEST CONDITIONS: INPUT POWER = -25dBm, Vd = 5.00V, Icc=109mA @Temperature = +85degC

**Definitions:**

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

FREQ	S11		S21		S12		S22		Stability		IP-3 Output	1 dB Compression Output	FREQ	Noise Figure
(MHz)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	K	Delta	(dBm)	(dBm)	(MHz)	(dB)
50	-21.72	168.79	24.12	172.27	-31.28	-0.26	-24.85	-22.78	1.34	0.43	37.04	20.75	50	5.97
100	-21.39	169.39	24.05	165.55	-30.81	-5.55	-24.29	-48.09	1.30	0.45	36.88	20.80	100	6.10
200	-20.94	168.33	23.91	151.84	-31.03	-10.63	-20.96	-88.14	1.33	0.44	36.87	20.74	200	6.08
400	-21.70	157.31	23.52	124.92	-30.83	-16.20	-15.82	-123.51	1.33	0.43	36.26	20.89	400	6.22
600	-21.46	146.27	22.96	98.82	-30.49	-25.51	-13.22	-152.76	1.33	0.42	35.62	20.71	600	6.16
800	-21.18	134.22	22.31	73.92	-29.94	-33.83	-11.43	-179.02	1.31	0.41	35.49	20.75	800	6.28
1000	-20.77	121.39	21.63	49.95	-29.41	-45.10	-10.24	156.86	1.30	0.41	35.54	20.78	1000	6.21
1200	-20.36	106.91	20.93	27.00	-28.80	-55.95	-9.36	134.30	1.29	0.41	35.32	20.63	1200	6.18
1400	-19.77	93.52	20.24	4.78	-28.32	-67.56	-8.69	112.88	1.28	0.40	35.10	20.61	1400	6.21
1600	-19.34	79.83	19.58	-16.77	-27.77	-80.65	-8.19	92.69	1.27	0.39	35.39	20.75	1600	6.26
1800	-18.77	66.41	18.94	-37.82	-27.28	-93.54	-7.82	73.16	1.27	0.39	35.40	20.70	1800	6.20
2000	-18.41	54.66	18.38	-58.34	-26.76	-106.21	-7.53	54.47	1.25	0.38	35.28	20.82	2000	6.14
2200	-18.20	41.76	17.80	-78.72	-26.38	-120.24	-7.41	35.97	1.26	0.37	34.93	20.90	2200	6.15
2400	-17.94	29.69	17.31	-98.83	-25.95	-134.28	-7.27	18.06	1.26	0.36	34.63	20.92	2400	6.12
2600	-17.90	18.82	16.85	-118.61	-25.53	-148.25	-7.25	0.60	1.25	0.36	34.42	20.94	2600	6.11
2800	-17.95	6.00	16.42	-138.36	-25.14	-163.17	-7.25	-17.41	1.25	0.35	34.51	21.03	2800	6.12
3000	-17.57	-7.09	16.06	-158.17	-24.71	-178.89	-7.11	-34.78	1.23	0.35	34.24	20.98	3000	6.22
3200	-17.82	-20.13	15.69	-177.68	-24.47	166.37	-7.21	-52.55	1.25	0.34	34.01	20.77	3200	6.16
3400	-17.73	-34.11	15.40	162.59	-24.17	150.76	-7.21	-70.09	1.24	0.34	33.98	20.58	3400	6.25
3600	-17.68	-49.64	15.13	142.77	-23.83	134.49	-7.18	-88.26	1.23	0.34	33.71	20.49	3600	6.20
3800	-17.92	-66.41	14.83	123.00	-23.61	118.29	-7.31	-106.92	1.25	0.34	33.10	20.16	3800	6.35
4000	-17.96	-82.23	14.62	103.38	-23.40	101.98	-7.39	-125.67	1.26	0.33	32.49	19.71	4000	6.37
4200	-18.20	-103.73	14.35	83.19	-23.18	84.40	-7.41	-145.93	1.27	0.34	32.67	19.55	4200	6.66
4400	-18.12	-125.46	14.13	63.02	-23.11	67.51	-7.41	-166.28	1.29	0.33	32.42	19.42	4400	6.51
4600	-17.84	-150.86	13.89	42.40	-22.88	49.43	-7.29	172.84	1.29	0.34	32.26	19.18	4600	6.50
4800	-17.40	-174.49	13.62	21.82	-22.81	31.68	-7.20	151.68	1.30	0.34	32.00	18.62	4800	6.45
5000	-17.12	161.59	13.38	1.38	-22.88	13.53	-7.14	130.24	1.34	0.33	32.07	18.22	5000	6.68
5200	-16.59	137.05	13.13	-19.30	-22.95	-5.51	-7.08	108.81	1.38	0.33	31.51	18.01	5200	6.79
5400	-15.86	111.27	12.79	-40.20	-22.92	-24.31	-6.90	86.91	1.41	0.33	31.07	17.75	5400	6.92
5600	-15.70	88.20	12.51	-61.03	-22.98	-43.74	-6.83	65.10	1.45	0.32	30.88	17.57	5600	6.88
5800	-15.03	64.43	12.19	-82.55	-23.08	-62.81	-6.74	43.74	1.50	0.32	30.62	17.29	5800	6.80
6000	-14.46	42.23	11.82	-104.50	-23.32	-82.41	-6.67	22.61	1.58	0.31	30.29	16.60	6000	7.02
6200	-14.08	16.82	11.42	-125.80	-23.46	-102.37	-6.58	0.55	1.66	0.30	30.42	14.82	6500	7.04
6400	-13.63	-9.17	10.97	-147.44	-23.57	-122.16	-6.53	-21.12	1.75	0.30	29.79	14.87	7000	7.46
6600	-13.21	-34.85	10.48	-169.26	-23.81	-142.71	-6.51	-42.51	1.88	0.29	29.54	15.14	7500	7.68
6800	-12.27	-60.43	9.94	169.47	-24.19	-162.66	-6.36	-64.00	2.04	0.28	29.74	15.14	8000	8.23
7000	-11.82	-86.25	9.38	147.38	-23.71	178.93	-6.54	-86.94	2.08	0.29	29.38	14.76	8500	8.84
7200	-10.86	-108.30	8.73	126.41	-24.18	157.22	-6.46	-107.89	2.29	0.29	29.13	14.27	9000	9.26
7500	-10.07	-141.07	7.66	94.94	-23.98	128.91	-6.57	-140.06	2.50	0.29	29.09	12.99	9500	9.94
8000	-8.75	171.73	5.76	45.20	-23.12	79.54	-6.59	168.90	2.70	0.29	28.51	12.11	10000	10.15

TYPE: MMIC Amplifier  
 MODEL: GVA-84 Reference Data: RDF-12331  
 S PARAMETERS are presented in dB/deg Format  
 TEST CONDITIONS: INPUT POWER = -25dBm, Vd = 4.75V, Icc=94mA @Temperature = +85degC

**Definitions:**

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

FREQ (MHz)	S11		S21		S12		S22		Stability		IP-3 Output (dBm)	1 dB Compression Output (dBm)	FREQ (MHz)	Noise Figure (dB)
	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	K	Delta				
50	-24.08	171.53	23.93	172.31	-31.24	-0.67	-22.20	-17.88	1.36	0.43	34.63	19.79	50	5.83
100	-23.17	170.53	23.87	165.61	-30.74	-7.24	-22.26	-40.47	1.31	0.45	34.49	19.81	100	5.97
200	-22.46	170.46	23.72	151.92	-30.90	-7.98	-20.02	-77.77	1.34	0.43	34.55	19.76	200	5.97
400	-23.05	163.52	23.35	125.04	-30.43	-16.96	-15.47	-117.55	1.31	0.44	34.11	19.84	400	6.09
600	-22.42	154.08	22.80	99.05	-30.17	-25.43	-13.01	-148.49	1.31	0.42	33.73	19.69	600	6.05
800	-21.79	141.95	22.16	74.12	-29.64	-35.07	-11.29	-175.82	1.29	0.42	33.89	19.72	800	6.17
1000	-21.15	128.39	21.48	50.18	-29.13	-45.87	-10.14	159.41	1.28	0.41	34.04	19.78	1000	6.09
1200	-20.55	113.58	20.79	27.23	-28.68	-56.65	-9.26	136.48	1.28	0.40	33.93	19.55	1200	6.07
1400	-19.82	99.06	20.11	4.98	-28.02	-69.11	-8.60	114.74	1.26	0.40	33.81	19.58	1400	6.10
1600	-19.27	84.48	19.45	-16.60	-27.55	-81.53	-8.11	94.23	1.25	0.39	34.25	19.74	1600	6.13
1800	-18.64	70.61	18.82	-37.69	-27.08	-94.34	-7.72	74.54	1.25	0.38	34.36	19.73	1800	6.08
2000	-18.20	57.89	18.26	-58.20	-26.63	-108.07	-7.45	55.62	1.24	0.38	34.35	19.86	2000	6.01
2200	-17.97	44.78	17.69	-78.60	-26.19	-121.48	-7.32	36.96	1.24	0.37	34.10	19.98	2200	6.05
2400	-17.68	32.18	17.19	-98.79	-25.77	-135.88	-7.19	18.94	1.24	0.36	33.87	20.02	2400	5.99
2600	-17.61	21.04	16.73	-118.54	-25.45	-149.65	-7.18	1.39	1.25	0.35	33.18	20.04	2600	6.00
2800	-17.64	7.88	16.31	-138.27	-25.08	-164.63	-7.17	-16.81	1.25	0.35	33.19	20.16	2800	6.01
3000	-17.24	-5.67	15.95	-158.13	-24.62	180.00	-7.03	-34.22	1.22	0.34	33.10	20.10	3000	6.09
3200	-17.47	-18.96	15.58	-177.69	-24.39	164.82	-7.13	-52.07	1.24	0.34	32.93	19.94	3200	6.03
3400	-17.36	-33.27	15.29	-162.56	-24.07	149.24	-7.14	-69.86	1.24	0.33	33.02	19.81	3400	6.10
3600	-17.30	-49.17	15.01	-142.76	-23.72	133.26	-7.12	-87.97	1.22	0.33	32.68	19.76	3600	6.05
3800	-17.58	-65.83	14.71	-123.03	-23.53	116.79	-7.24	-106.74	1.25	0.33	31.94	19.45	3800	6.22
4000	-17.61	-81.85	14.51	-103.34	-23.32	100.60	-7.34	-125.57	1.25	0.33	31.46	19.00	4000	6.23
4200	-17.85	-103.55	14.23	-83.10	-23.18	83.20	-7.37	-146.01	1.27	0.33	31.64	18.90	4200	6.50
4400	-17.78	-125.12	14.01	-62.95	-23.04	65.86	-7.39	-166.27	1.29	0.33	31.59	18.72	4400	6.33
4600	-17.54	-150.38	13.77	-42.24	-22.82	47.99	-7.27	-172.74	1.29	0.34	31.31	18.51	4600	6.36
4800	-17.12	-174.13	13.49	-21.69	-22.80	30.48	-7.19	151.49	1.31	0.33	31.01	17.92	4800	6.31
5000	-16.89	-161.73	13.25	1.21	-22.87	11.74	-7.15	130.00	1.35	0.33	30.79	17.55	5000	6.51
5200	-16.35	-137.31	12.98	-19.46	-22.93	-7.13	-7.09	108.47	1.39	0.32	30.62	17.38	5200	6.64
5400	-15.69	-111.62	12.65	-40.32	-22.93	-25.80	-6.93	86.55	1.43	0.32	30.14	17.07	5400	6.75
5600	-15.52	-88.50	12.37	-61.13	-22.98	-45.46	-6.88	64.80	1.47	0.32	29.92	16.82	5600	6.71
5800	-14.86	-64.76	12.04	-82.70	-23.08	-64.51	-6.80	43.32	1.52	0.31	29.63	16.52	5800	6.66
6000	-14.36	-42.46	11.66	-104.59	-23.35	-84.23	-6.75	22.23	1.61	0.30	29.40	15.86	6000	6.83
6200	-13.98	-17.04	11.26	-125.84	-23.45	-104.07	-6.67	0.21	1.69	0.29	29.89	14.32	6500	6.83
6400	-13.56	-8.89	10.80	-147.49	-23.59	-123.92	-6.61	-21.50	1.79	0.29	29.39	14.37	7000	7.30
6600	-13.14	-34.75	10.32	-169.23	-23.79	-144.58	-6.61	-42.84	1.92	0.28	29.41	14.67	7500	7.45
6800	-12.24	-60.41	9.78	-169.53	-24.24	-164.51	-6.46	-64.34	2.09	0.28	29.09	14.67	8000	8.00
7000	-11.78	-86.16	9.21	-147.46	-23.73	177.22	-6.64	-87.26	2.13	0.29	28.67	14.48	8500	8.63
7200	-10.85	-108.39	8.57	-126.52	-24.20	155.45	-6.56	-108.19	2.35	0.28	28.25	14.00	9000	9.07
7500	-10.06	-141.10	7.50	-95.11	-23.94	127.19	-6.67	-140.31	2.54	0.28	28.61	12.75	9500	9.73
8000	-8.73	-171.59	5.62	-45.42	-23.08	77.97	-6.69	168.68	2.74	0.29	27.75	11.74	10000	9.87

TYPE: MMIC Amplifier  
 MODEL: GVA-84 Reference Data: RDF-1233I  
 S PARAMETERS are presented in dB/deg Format  
 TEST CONDITIONS: INPUT POWER = -25dBm, Vd = 5.25V, Icc=125mA @Temperature = +85degC

**Definitions:**

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

FREQ	S11		S21		S12		S22		Stability		IP-3 Output	1 dB Compression Output	FREQ	Noise Figure
(MHz)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	(dB)	(deg)	K	Delta	(dBm)	(dBm)	(MHz)	(dB)
50	-20.42	173.42	24.25	172.23	-30.88	-3.53	-27.05	-29.15	1.29	0.46	39.10	21.50	50	6.08
100	-20.47	169.52	24.18	165.50	-31.29	-2.49	-26.23	-57.67	1.34	0.44	39.01	21.53	100	6.22
200	-19.93	165.38	24.02	151.74	-31.27	-7.66	-21.51	-95.53	1.35	0.43	38.87	21.49	200	6.20
400	-20.74	153.95	23.65	124.78	-30.91	-16.25	-16.05	-127.81	1.33	0.43	38.03	21.65	400	6.34
600	-20.80	142.04	23.06	98.69	-30.53	-24.34	-13.39	-155.97	1.33	0.42	37.13	21.48	600	6.29
800	-20.70	129.51	22.42	73.73	-30.10	-33.85	-11.53	178.49	1.32	0.41	36.70	21.50	800	6.39
1000	-20.48	116.64	21.73	49.83	-29.61	-44.04	-10.35	154.97	1.32	0.41	36.65	21.50	1000	6.34
1200	-20.22	102.74	21.03	26.86	-28.92	-55.58	-9.43	132.80	1.29	0.41	36.30	21.36	1200	6.32
1400	-19.71	89.91	20.34	4.61	-28.47	-67.41	-8.76	111.61	1.29	0.40	36.03	21.36	1400	6.37
1600	-19.33	76.42	19.66	-16.96	-27.89	-79.48	-8.27	91.60	1.28	0.39	36.15	21.42	1600	6.39
1800	-18.85	63.81	19.04	-37.97	-27.41	-92.11	-7.89	72.24	1.28	0.39	36.12	21.36	1800	6.34
2000	-18.52	52.00	18.45	-58.47	-26.83	-105.26	-7.61	53.66	1.26	0.38	35.97	21.51	2000	6.26
2200	-18.31	39.37	17.89	-78.84	-26.42	-119.33	-7.47	35.34	1.26	0.38	35.52	21.58	2200	6.29
2400	-18.10	27.63	17.39	-98.98	-25.94	-133.52	-7.34	17.43	1.25	0.37	35.13	21.54	2400	6.25
2600	-18.12	17.32	16.94	-118.69	-25.53	-147.62	-7.32	0.17	1.25	0.36	34.90	21.62	2600	6.25
2800	-18.15	4.61	16.50	-138.41	-25.29	-162.38	-7.33	-17.89	1.27	0.35	34.92	21.66	2800	6.27
3000	-17.78	-8.04	16.15	-158.23	-24.78	-177.80	-7.19	-35.09	1.24	0.35	34.65	21.61	3000	6.38
3200	-18.05	-20.90	15.77	-177.75	-24.58	167.26	-7.27	-52.79	1.26	0.34	34.26	21.31	3200	6.31
3400	-17.96	-34.87	15.47	162.58	-24.15	151.34	-7.27	-70.34	1.24	0.34	34.32	21.10	3400	6.41
3600	-17.86	-50.34	15.21	142.75	-23.91	135.31	-7.24	-88.34	1.24	0.34	34.10	20.99	3600	6.34
3800	-18.14	-66.93	14.90	123.00	-23.68	119.18	-7.37	-106.96	1.26	0.34	33.49	20.62	3800	6.51
4000	-18.19	-82.47	14.69	103.39	-23.44	103.18	-7.45	-125.65	1.26	0.34	32.79	20.16	4000	6.55
4200	-18.43	-104.13	14.42	83.22	-23.24	85.80	-7.46	-145.80	1.27	0.34	32.81	19.99	4200	6.80
4400	-18.31	-125.74	14.21	63.09	-23.12	68.35	-7.45	-166.04	1.28	0.34	32.84	19.84	4400	6.65
4600	-18.00	-151.12	13.97	42.46	-22.92	50.70	-7.32	173.10	1.28	0.34	32.48	19.61	4600	6.67
4800	-17.54	-174.80	13.70	21.90	-22.80	33.01	-7.22	151.95	1.30	0.34	32.18	19.05	4800	6.61
5000	-17.25	161.06	13.47	1.46	-22.89	14.53	-7.16	130.63	1.33	0.34	31.98	18.65	5000	6.84
5200	-16.71	136.62	13.21	-19.23	-22.97	-4.27	-7.09	109.26	1.37	0.33	31.69	18.44	5200	6.99
5400	-15.94	110.84	12.88	-40.11	-22.94	-23.04	-6.90	87.33	1.40	0.33	31.26	18.23	5400	7.10
5600	-15.78	87.78	12.62	-60.90	-22.97	-42.30	-6.81	65.58	1.44	0.33	30.91	18.02	5600	7.07
5800	-15.08	64.31	12.29	-82.50	-23.09	-61.81	-6.72	44.12	1.49	0.32	30.69	17.67	5800	7.00
6000	-14.50	42.03	11.92	-104.47	-23.33	-81.29	-6.65	23.09	1.57	0.31	30.72	17.00	6000	7.21
6200	-14.10	16.64	11.52	-125.79	-23.43	-100.91	-6.54	1.08	1.64	0.31	30.31	15.30	6500	7.22
6400	-13.65	-9.21	11.07	-147.42	-23.60	-120.73	-6.48	-20.59	1.74	0.30	30.18	15.34	7000	7.69
6600	-13.21	-34.93	10.58	-169.29	-23.82	-141.52	-6.47	-41.99	1.86	0.29	29.72	15.61	7500	7.91
6800	-12.26	-60.53	10.05	169.44	-24.22	-161.09	-6.31	-63.51	2.02	0.29	29.41	15.48	8000	8.46
7000	-11.81	-86.39	9.48	147.28	-23.75	-179.77	-6.50	-86.40	2.06	0.30	29.23	14.98	8500	9.09
7200	-10.86	-108.36	8.82	126.30	-24.23	158.61	-6.40	-107.38	2.28	0.29	29.27	14.48	9000	9.51
7500	-10.07	-141.02	7.76	94.74	-23.95	130.16	-6.52	-139.62	2.46	0.29	29.28	13.16	9500	10.19
8000	-8.74	171.73	5.85	45.06	-23.16	80.61	-6.55	169.35	2.68	0.29	28.10	12.37	10000	10.47