Typical Performance Data

TEST CONDITION: RF IN = +14dBm

Frequency (GHz)				Temperature = -45°C					
				Conversion Loss	Harmonic Output*			Input Return Loss	Output Return Loss
X1 Output	X2 Output	X3 Output	X4 Output	X3 Output	X1 Output	X2 Output	X4 Output	X1 Output	X3 Output
1.8	3.6	5.4	7.2	38.74	63.01	97.96	52.09	27.00	3.48
2	4	6	8	30.89	64.76	87.56	50.54	21.78	8.90
2.2	4.4	6.6	8.8	23.54	69.06	80.97	50.11	19.05	24.05
2.4	4.8	7.2	9.6	19.69	81.62	79.62	48.51	17.26	17.55
2.6	5.2	7.8	10.4	17.88	83.67	81.10	47.55	15.81	16.33
2.8	5.6	8.4	11.2	16.99	89.05	95.10	48.60	14.55	21.55
3	6	9	12	17.11	74.12	79.00	48.97	14.64	14.19
3.2	6.4	9.6	12.8	16.42	61.40	76.37	49.16	15.47	11.02
3.4	6.8	10.2	13.6	16.08	51.09	67.95	52.73	16.54	11.92
3.6	7.2	10.8	14.4	16.15	46.14	61.06	55.43	17.24	15.34
3.8	7.6	11.4	15.2	15.79	44.69	58.48	58.52	18.11	19.84
4	8	12	16	15.93	44.53	56.56	60.66	18.62	22.25
4.2	8.4	12.6	16.8	15.74	43.65	56.89	63.58	19.39	17.67
4.4	8.8	13.2	17.6	15.78	43.26	56.32	67.34	19.97	13.62
4.6	9.2	13.8	18.4	16.42	42.44	55.74	69.02	20.91	11.57
4.8	9.6	14.4	19.2	16.19	41.46	56.27	65.92	21.67	10.63
5	10	15	20	16.37	40.50	57.12	66.73	20.81	11.10
5.2	10.4	15.6	20.8	16.36	40.45	58.45	66.84	19.01	12.37
5.4	10.8	16.2	21.6	16.29	41.35	59.92	64.13	18.16	12.33
5.6	11.2	16.8	22.4	16.93	44.19	62.61	62.36	17.34	10.41
5.8	11.6	17.4	23.2	17.23	37.04	62.39	62.07	17.54	8.55
6	12	18	24	18.68	31.77	60.24	63.70	18.00	7.24
6.2	12.4	18.6	24.8	19.94	29.42	57.34	64.63	18.77	6.69

* Harmonic Output below power level of X3 Output

Frequency (GHz)				Temperature = +25°C					
				Conversion Loss	Harmonic Output*			Input Return Loss	Output Return Loss
X1 Output	X2 Output	X3 Output	X4 Output	X3 Output	X1 Output	X2 Output	X4 Output	X1 Output	X3 Output
1.8	3.6	5.4	7.2	39.75	65.65	95.60	53.45	23.05	3.87
2	4	6	8	30.66	65.78	85.74	51.73	19.32	10.17
2.2	4.4	6.6	8.8	23.77	69.69	80.59	51.26	17.58	22.63
2.4	4.8	7.2	9.6	20.10	86.28	78.86	49.69	16.67	17.12
2.6	5.2	7.8	10.4	18.45	88.44	80.24	48.82	15.69	16.62
2.8	5.6	8.4	11.2	17.66	90.74	90.62	49.80	14.87	22.25
3	6	9	12	17.77	73.63	78.50	50.19	15.20	13.85
3.2	6.4	9.6	12.8	17.22	61.28	73.45	50.59	16.01	11.26
3.4	6.8	10.2	13.6	16.82	51.53	67.19	54.19	17.04	12.18
3.6	7.2	10.8	14.4	16.93	47.07	61.35	56.88	17.69	15.37
3.8	7.6	11.4	15.2	16.61	45.63	59.02	59.60	18.21	19.66
4	8	12	16	16.74	45.34	57.29	61.43	18.60	20.70
4.2	8.4	12.6	16.8	16.66	44.36	57.56	63.85	19.11	16.71
4.4	8.8	13.2	17.6	16.57	43.77	56.97	67.28	19.54	13.27
4.6	9.2	13.8	18.4	17.10	42.88	56.74	67.88	20.13	11.40
4.8	9.6	14.4	19.2	16.75	42.09	57.43	66.24	20.47	10.87
5	10	15	20	17.07	41.34	58.28	67.86	19.46	11.47
5.2	10.4	15.6	20.8	17.38	41.56	59.65	68.08	18.04	12.44
5.4	10.8	16.2	21.6	17.20	42.79	61.31	66.02	17.44	11.81
5.6	11.2	16.8	22.4	17.88	44.50	64.45	64.57	17.16	9.71
5.8	11.6	17.4	23.2	18.22	36.82	65.74	64.80	17.58	8.16
6	12	18	24	19.56	32.44	64.53	66.91	18.35	7.31
6.2	12.4	18.6	24.8	21.06	30.31	61.49	68.16	19.43	6.87

* Harmonic Output below power level of X3 Output

Frequency (GHz)				Temperature = +105°C					
				Conversion Loss	Harmonic Output*			Input Return Loss	Output Return Loss
X1 Output	X2 Output	X3 Output	X4 Output	X3 Output	X1 Output	X2 Output	X4 Output	X1 Output	X3 Output
1.8	3.6	5.4	7.2	41.08	66.92	90.60	55.07	24.40	4.20
2	4	6	8	30.88	68.14	83.78	53.03	20.46	11.83
2.2	4.4	6.6	8.8	24.36	74.35	79.54	52.45	18.35	21.87
2.4	4.8	7.2	9.6	20.81	83.02	77.32	50.92	16.88	17.37
2.6	5.2	7.8	10.4	19.26	84.12	78.38	50.08	15.65	17.00
2.8	5.6	8.4	11.2	18.57	83.30	83.90	51.07	14.79	22.04
3	6	9	12	18.70	72.74	74.56	51.61	14.92	13.58
3.2	6.4	9.6	12.8	18.15	61.33	69.35	51.96	15.53	11.38
3.4	6.8	10.2	13.6	17.77	52.13	65.39	55.43	16.33	12.47
3.6	7.2	10.8	14.4	17.87	48.09	60.63	57.71	16.90	15.53
3.8	7.6	11.4	15.2	17.58	46.51	58.45	59.83	17.48	18.53
4	8	12	16	17.76	46.02	56.87	61.22	18.01	18.56
4.2	8.4	12.6	16.8	17.68	44.91	56.97	63.29	18.79	15.16
4.4	8.8	13.2	17.6	17.61	44.24	56.56	65.92	19.54	12.45
4.6	9.2	13.8	18.4	18.03	43.29	56.72	66.47	20.37	11.37
4.8	9.6	14.4	19.2	17.69	42.64	57.53	65.97	20.70	11.23
5	10	15	20	18.17	42.09	58.56	67.89	19.96	12.07
5.2	10.4	15.6	20.8	18.52	42.55	59.97	68.68	18.85	12.65
5.4	10.8	16.2	21.6	18.39	43.95	61.87	67.55	18.46	11.13
5.6	11.2	16.8	22.4	19.16	43.65	65.29	66.60	18.14	9.02
5.8	11.6	17.4	23.2	19.53	36.59	67.56	67.37	18.73	7.61
6	12	18	24	20.92	33.05	68.13	70.08	19.81	6.95
6.2	12.4	18.6	24.8	22.25	31.06	67.49	72.72	20.81	6.82

* Harmonic Output below power level of X3 Output

Typical Performance Data

TEST CONDITION: RF IN = +15dBm

Frequency (GHz)				Temperature = -45°C					
				Conversion Loss	Harmonic Output*			Input Return Loss	Output Return Loss
X1 Output	X2 Output	X3 Output	X4 Output	X3 Output	X1 Output	X2 Output	X4 Output	X1 Output	X3 Output
1.8	3.6	5.4	7.2	37.79	62.41	83.29	48.46	28.12	3.48
2	4	6	8	29.48	64.82	82.26	49.11	22.60	8.91
2.2	4.4	6.6	8.8	22.12	69.45	77.37	48.71	19.37	24.08
2.4	4.8	7.2	9.6	18.38	78.23	75.72	47.14	17.44	17.53
2.6	5.2	7.8	10.4	16.68	81.70	76.87	46.17	15.96	16.32
2.8	5.6	8.4	11.2	15.93	85.08	88.37	47.10	14.75	21.54
3	6	9	12	16.14	73.14	75.99	47.30	14.85	14.18
3.2	6.4	9.6	12.8	15.47	61.18	72.14	47.39	15.56	11.02
3.4	6.8	10.2	13.6	15.10	50.92	65.39	50.79	16.52	11.93
3.6	7.2	10.8	14.4	15.18	45.89	59.08	53.50	17.16	15.35
3.8	7.6	11.4	15.2	14.86	44.41	56.74	56.47	17.87	19.82
4	8	12	16	14.98	44.18	54.99	58.35	18.33	22.20
4.2	8.4	12.6	16.8	14.79	43.27	55.32	60.57	19.03	17.62
4.4	8.8	13.2	17.6	14.78	42.84	54.87	63.45	19.62	13.60
4.6	9.2	13.8	18.4	15.34	41.99	54.19	65.38	20.60	11.58
4.8	9.6	14.4	19.2	15.11	41.10	54.75	63.34	21.34	10.67
5	10	15	20	15.34	40.26	55.62	64.84	20.70	11.17
5.2	10.4	15.6	20.8	15.34	40.29	57.04	65.89	19.08	12.48
5.4	10.8	16.2	21.6	15.35	41.25	58.87	63.31	18.18	12.45
5.6	11.2	16.8	22.4	16.06	44.17	62.33	61.28	17.34	10.50
5.8	11.6	17.4	23.2	16.33	36.90	63.17	60.74	17.41	8.60
6	12	18	24	17.66	31.65	61.78	62.80	17.79	7.25
6.2	12.4	18.6	24.8	18.66	29.27	58.74	63.42	18.49	6.67

* Harmonic Output below power level of X3 Output

Frequency (GHz)				Temperature = +25°C					
				Conversion Loss	Harmonic Output*			Input Return Loss	Output Return Loss
X1 Output	X2 Output	X3 Output	X4 Output	X3 Output	X1 Output	X2 Output	X4 Output	X1 Output	X3 Output
1.8	3.6	5.4	7.2	39.00	65.34	83.15	49.50	23.91	3.87
2	4	6	8	29.61	65.83	81.95	50.16	19.88	10.17
2.2	4.4	6.6	8.8	22.70	69.98	77.31	49.75	17.89	22.63
2.4	4.8	7.2	9.6	19.05	82.21	75.29	48.22	16.89	17.12
2.6	5.2	7.8	10.4	17.44	87.69	76.43	47.35	15.90	16.62
2.8	5.6	8.4	11.2	16.77	85.78	85.59	48.24	15.12	22.26
3	6	9	12	16.95	72.78	74.11	48.54	15.42	13.84
3.2	6.4	9.6	12.8	16.38	60.96	69.26	48.85	16.12	11.26
3.4	6.8	10.2	13.6	15.95	51.30	64.50	52.29	17.04	12.18
3.6	7.2	10.8	14.4	16.05	46.78	59.19	54.83	17.62	15.37
3.8	7.6	11.4	15.2	15.76	45.30	57.06	57.32	18.00	19.66
4	8	12	16	15.89	44.95	55.52	58.86	18.34	20.69
4.2	8.4	12.6	16.8	15.79	43.93	55.83	60.91	18.80	16.71
4.4	8.8	13.2	17.6	15.67	43.34	55.42	63.83	19.24	13.27
4.6	9.2	13.8	18.4	16.12	42.46	55.18	64.93	19.90	11.40
4.8	9.6	14.4	19.2	15.79	41.73	55.94	64.00	20.26	10.87
5	10	15	20	16.14	41.08	56.97	65.81	19.45	11.47
5.2	10.4	15.6	20.8	16.47	41.37	58.54	66.77	18.14	12.44
5.4	10.8	16.2	21.6	16.34	42.66	60.56	64.97	17.47	11.80
5.6	11.2	16.8	22.4	17.07	44.42	64.48	63.37	17.13	9.70
5.8	11.6	17.4	23.2	17.36	36.66	66.77	63.37	17.43	8.16
6	12	18	24	18.60	32.30	66.34	65.79	18.11	7.30
6.2	12.4	18.6	24.8	19.84	30.14	63.13	66.99	19.21	6.87

* Harmonic Output below power level of X3 Output

Frequency (GHz)				Temperature = +105°C					
				Conversion Loss	Harmonic Output*			Input Return Loss	Output Return Loss
X1 Output	X2 Output	X3 Output	X4 Output	X3 Output	X1 Output	X2 Output	X4 Output	X1 Output	X3 Output
1.8	3.6	5.4	7.2	40.48	66.85	81.78	50.43	25.04	4.20
2	4	6	8	30.09	68.47	80.66	51.22	21.03	11.83
2.2	4.4	6.6	8.8	23.55	74.94	76.54	50.69	18.74	21.85
2.4	4.8	7.2	9.6	19.97	79.18	74.22	49.16	17.20	17.38
2.6	5.2	7.8	10.4	18.44	81.39	75.11	48.41	15.95	16.99
2.8	5.6	8.4	11.2	17.81	80.16	80.52	49.36	15.10	22.02
3	6	9	12	18.01	71.96	70.84	49.93	15.18	13.58
3.2	6.4	9.6	12.8	17.43	61.03	65.97	50.18	15.68	11.38
3.4	6.8	10.2	13.6	17.03	51.86	62.60	53.47	16.34	12.47
3.6	7.2	10.8	14.4	17.10	47.76	58.31	55.53	16.84	15.53
3.8	7.6	11.4	15.2	16.82	46.13	56.29	57.40	17.33	18.54
4	8	12	16	17.04	45.55	54.95	58.62	17.81	18.55
4.2	8.4	12.6	16.8	17.09	44.41	55.15	60.57	18.54	15.16
4.4	8.8	13.2	17.6	17.19	43.77	54.94	63.15	19.33	12.45
4.6	9.2	13.8	18.4	17.28	42.82	55.20	64.09	20.21	11.38
4.8	9.6	14.4	19.2	16.91	42.23	56.16	63.96	20.58	11.23
5	10	15	20	17.39	41.75	57.41	66.00	20.02	12.07
5.2	10.4	15.6	20.8	17.73	42.27	59.15	67.26	18.95	12.65
5.4	10.8	16.2	21.6	17.57	43.74	61.46	66.41	18.50	11.12
5.6	11.2	16.8	22.4	18.37	43.42	65.77	65.46	18.12	9.01
5.8	11.6	17.4	23.2	18.72	36.43	68.98	65.97	18.67	7.61
6	12	18	24	20.03	32.88	70.12	68.50	19.60	6.96
6.2	12.4	18.6	24.8	21.12	30.85	70.12	71.41	20.61	6.83

* Harmonic Output below power level of X3 Output

Typical Performance Data

TEST CONDITION: RF IN = +16dBm

Frequency (GHz)				Temperature = -45°C					
				Conversion Loss	Harmonic Output*			Input Return Loss	Output Return Loss
X1 Output	X2 Output	X3 Output	X4 Output	X3 Output	X1 Output	X2 Output	X4 Output	X1 Output	X3 Output
1.8	3.6	5.4	7.2	37.16	59.53	79.27	46.70	28.26	3.48
2	4	6	8	28.57	66.07	78.33	47.44	23.27	9.00
2.2	4.4	6.6	8.8	21.20	69.72	74.10	47.07	19.73	24.34
2.4	4.8	7.2	9.6	17.45	75.68	71.92	45.60	17.63	17.60
2.6	5.2	7.8	10.4	15.77	79.78	72.97	44.67	16.11	16.28
2.8	5.6	8.4	11.2	15.12	81.69	83.01	45.51	14.94	21.42
3	6	9	12	15.42	72.12	71.16	45.63	14.98	14.15
3.2	6.4	9.6	12.8	14.74	60.83	66.61	45.59	15.55	11.01
3.4	6.8	10.2	13.6	14.32	50.63	61.72	48.82	16.40	11.96
3.6	7.2	10.8	14.4	14.37	45.57	56.35	51.30	16.94	15.43
3.8	7.6	11.4	15.2	14.08	44.01	54.26	54.06	17.55	19.94
4	8	12	16	14.21	43.72	52.84	55.68	17.99	22.34
4.2	8.4	12.6	16.8	14.03	42.72	53.24	57.50	18.66	17.66
4.4	8.8	13.2	17.6	13.97	42.22	53.11	59.85	19.32	13.59
4.6	9.2	13.8	18.4	14.45	41.43	52.44	62.05	20.39	11.53
4.8	9.6	14.4	19.2	14.22	40.67	53.07	60.97	21.20	10.61
5	10	15	20	14.52	39.95	54.13	62.68	20.65	11.11
5.2	10.4	15.6	20.8	14.49	40.06	55.72	64.27	19.17	12.40
5.4	10.8	16.2	21.6	14.53	41.08	58.03	62.12	18.16	12.36
5.6	11.2	16.8	22.4	15.31	44.08	62.56	60.07	17.24	10.42
5.8	11.6	17.4	23.2	15.56	36.73	64.21	59.35	17.13	8.57
6	12	18	24	16.83	31.51	63.48	61.75	17.41	7.26
6.2	12.4	18.6	24.8	17.63	29.11	60.45	62.42	18.11	6.68

* Harmonic Output below power level of X3 Output

Frequency (GHz)				Temperature = +25°C					
				Conversion Loss	Harmonic Output*			Input Return Loss	Output Return Loss
X1 Output	X2 Output	X3 Output	X4 Output	X3 Output	X1 Output	X2 Output	X4 Output	X1 Output	X3 Output
1.8	3.6	5.4	7.2	38.46	60.51	79.34	47.66	24.47	3.87
2	4	6	8	28.88	65.92	78.22	48.39	20.36	10.17
2.2	4.4	6.6	8.8	21.96	70.14	74.19	47.98	18.23	22.62
2.4	4.8	7.2	9.6	18.27	79.09	71.91	46.50	17.12	17.12
2.6	5.2	7.8	10.4	16.66	83.92	72.66	45.69	16.10	16.62
2.8	5.6	8.4	11.2	16.07	82.19	81.46	46.52	15.34	22.26
3	6	9	12	16.32	71.90	69.57	46.84	15.55	13.84
3.2	6.4	9.6	12.8	15.73	60.71	64.75	47.04	16.12	11.25
3.4	6.8	10.2	13.6	15.27	51.03	61.10	50.27	16.93	12.18
3.6	7.2	10.8	14.4	15.33	46.44	56.45	52.55	17.40	15.37
3.8	7.6	11.4	15.2	15.06	44.88	54.51	54.77	17.72	19.66
4	8	12	16	15.19	44.47	53.27	56.11	18.03	20.69
4.2	8.4	12.6	16.8	15.10	43.41	53.67	57.95	18.48	16.70
4.4	8.8	13.2	17.6	14.94	42.74	53.54	60.54	19.01	13.27
4.6	9.2	13.8	18.4	15.32	41.89	53.41	62.11	19.75	11.40
4.8	9.6	14.4	19.2	15.01	41.23	54.33	61.76	20.18	10.87
5	10	15	20	15.40	40.69	55.64	63.60	19.48	11.47
5.2	10.4	15.6	20.8	15.71	41.06	57.46	65.11	18.27	12.44
5.4	10.8	16.2	21.6	15.59	42.42	60.07	63.65	17.48	11.80
5.6	11.2	16.8	22.4	16.36	44.26	65.26	62.13	17.00	9.70
5.8	11.6	17.4	23.2	16.64	36.43	68.68	61.92	17.12	8.15
6	12	18	24	17.81	32.10	68.45	64.33	17.73	7.30
6.2	12.4	18.6	24.8	18.85	29.91	65.10	65.83	18.83	6.87

* Harmonic Output below power level of X3 Output

Frequency (GHz)				Temperature = +105°C					
				Conversion Loss	Harmonic Output*			Input Return Loss	Output Return Loss
X1 Output	X2 Output	X3 Output	X4 Output	X3 Output	X1 Output	X2 Output	X4 Output	X1 Output	X3 Output
1.8	3.6	5.4	7.2	40.03	59.63	78.46	48.45	25.48	4.20
2	4	6	8	29.51	68.75	77.45	49.25	21.63	11.83
2.2	4.4	6.6	8.8	22.95	75.41	73.61	48.70	19.13	21.84
2.4	4.8	7.2	9.6	19.32	76.61	71.10	47.13	17.47	17.41
2.6	5.2	7.8	10.4	17.77	78.67	71.75	46.50	16.17	17.02
2.8	5.6	8.4	11.2	17.21	77.93	77.20	47.45	15.32	22.06
3	6	9	12	17.46	71.28	66.95	48.08	15.30	13.58
3.2	6.4	9.6	12.8	16.85	60.78	62.33	48.29	15.67	11.38
3.4	6.8	10.2	13.6	16.43	51.55	59.51	51.40	16.25	12.46
3.6	7.2	10.8	14.4	16.47	47.37	55.57	53.21	16.64	15.53
3.8	7.6	11.4	15.2	16.19	45.65	53.76	54.86	17.08	18.56
4	8	12	16	16.40	45.03	52.63	55.97	17.55	18.57
4.2	8.4	12.6	16.8	16.45	43.85	52.95	57.80	18.31	15.17
4.4	8.8	13.2	17.6	16.54	43.14	52.99	60.33	19.19	12.45
4.6	9.2	13.8	18.4	16.59	42.23	53.45	61.68	20.14	11.38
4.8	9.6	14.4	19.2	16.25	41.68	54.64	61.81	20.62	11.23
5	10	15	20	16.75	41.29	56.28	64.02	20.15	12.08
5.2	10.4	15.6	20.8	17.05	41.89	58.45	65.67	19.16	12.66
5.4	10.8	16.2	21.6	16.90	43.45	61.47	65.13	18.61	11.12
5.6	11.2	16.8	22.4	17.72	43.13	67.36	64.30	18.15	9.02
5.8	11.6	17.4	23.2	18.04	36.13	71.78	64.60	18.58	7.62
6	12	18	24	19.28	32.63	73.29	66.84	19.40	6.96
6.2	12.4	18.6	24.8	20.19	30.57	75.08	69.76	20.38	6.83

* Harmonic Output below power level of X3 Output