

Typical Performance Data

TEST CONDITION: RF IN = +17dBm

Frequency (GHz)				Temperature = -40°C			
X1 Output	X2 Output	X3 Output	X4 Output	Conversion Loss X3 Output	X1 Output	Harmonic Output* X2 Output	X4 Output
13.3	26.6	39.9	53.2	18.65	52.24	65.39	24.83
13.8	27.6	41.4	55.2	19.03	52.58	56.01	29.50
14.3	28.6	42.9	57.2	18.62	54.37	52.23	38.63
14.8	29.6	44.4	59.2	17.85	55.83	49.87	38.08
15.3	30.6	45.9	61.2	17.32	56.68	48.67	37.81
15.8	31.6	47.4	63.2	17.39	55.96	46.91	40.09
16.3	32.6	48.9	65.2	17.46	52.92	43.60	40.06
16.8	33.6	50.4	67.2	17.65	50.70	39.33	36.35
17.3	34.6	51.9	69.2	17.69	50.01	36.82	35.18
17.8	35.6	53.4	71.2	18.40	47.42	32.20	34.71
18.3	36.6	54.9	73.2	18.74	46.01	32.25	39.45
18.8	37.6	56.4	75.2	20.41	43.28	31.57	40.05
19.3	38.6	57.9	77.2	19.62	42.65	28.58	33.18
19.8	39.6	59.4	79.2	20.58	40.01	26.54	28.80
20.3	40.6	60.9	81.2	20.65	38.49	26.53	27.40
20.8	41.6	62.4	83.2	21.65	36.47	25.90	25.28
21.3	42.6	63.9	85.2	22.37	34.72	25.11	27.33
21.8	43.6	65.4	87.2	22.23	33.97	24.61	30.86
22.3	44.6	66.9	89.2	22.32	32.97	23.75	33.70
22.8	45.6	68.4	91.2	23.11	31.59	22.56	30.93
23.3	46.6	69.9	93.2	23.16	31.10	22.10	31.40
23.8	47.6	71.4	95.2	24.90	30.01	19.94	28.96
24.0	48.0	72.0	96.0	25.62	30.53	17.75	29.02

* Harmonic Output below power level of X3 Output

Frequency (GHz)				Temperature = +25°C			
X1 Output	X2 Output	X3 Output	X4 Output	Conversion Loss X3 Output	X1 Output	Harmonic Output* X2 Output	X4 Output
13.3	26.6	39.9	53.2	19.86	51.07	60.17	26.01
13.8	27.6	41.4	55.2	20.21	51.48	53.89	30.64
14.3	28.6	42.9	57.2	19.89	53.34	50.95	39.70
14.8	29.6	44.4	59.2	19.30	54.57	48.57	38.69
15.3	30.6	45.9	61.2	18.78	55.13	47.96	39.49
15.8	31.6	47.4	63.2	18.66	54.48	46.25	43.57
16.3	32.6	48.9	65.2	18.82	51.35	42.99	42.38
16.8	33.6	50.4	67.2	19.01	49.31	38.63	37.10
17.3	34.6	51.9	69.2	19.24	48.31	36.11	34.65
17.8	35.6	53.4	71.2	19.81	45.80	31.53	34.76
18.3	36.6	54.9	73.2	20.03	44.58	31.23	39.68
18.8	37.6	56.4	75.2	21.45	42.38	30.22	43.99
19.3	38.6	57.9	77.2	21.10	41.37	27.62	34.27
19.8	39.6	59.4	79.2	21.90	38.91	25.87	29.71
20.3	40.6	60.9	81.2	21.90	37.52	26.57	28.57
20.8	41.6	62.4	83.2	23.03	35.30	25.49	26.44
21.3	42.6	63.9	85.2	23.61	33.90	24.55	28.93
21.8	43.6	65.4	87.2	23.53	33.14	24.17	31.68
22.3	44.6	66.9	89.2	23.53	32.53	23.33	33.36
22.8	45.6	68.4	91.2	24.56	30.84	22.24	30.27
23.3	46.6	69.9	93.2	24.64	30.71	21.10	31.12
23.8	47.6	71.4	95.2	26.35	29.73	18.75	28.62
24.0	48.0	72.0	96.0	27.23	30.05	16.89	28.15

* Harmonic Output below power level of X3 Output

Frequency (GHz)				Temperature = +85°C			
X1 Output	X2 Output	X3 Output	X4 Output	Conversion Loss X3 Output	X1 Output	Harmonic Output* X2 Output	X4 Output
13.3	26.6	39.9	53.2	21.01	50.18	56.97	26.89
13.8	27.6	41.4	55.2	21.34	50.61	51.95	31.52
14.3	28.6	42.9	57.2	21.06	52.51	49.40	40.06
14.8	29.6	44.4	59.2	20.71	53.44	47.26	39.05
15.3	30.6	45.9	61.2	20.10	54.03	46.96	41.85
15.8	31.6	47.4	63.2	19.91	53.17	45.11	47.74
16.3	32.6	48.9	65.2	20.09	49.92	42.01	44.64
16.8	33.6	50.4	67.2	20.28	47.95	37.83	37.19
17.3	34.6	51.9	69.2	20.69	46.57	35.09	33.71
17.8	35.6	53.4	71.2	21.14	44.18	30.77	34.30
18.3	36.6	54.9	73.2	21.29	43.13	30.28	39.03
18.8	37.6	56.4	75.2	22.51	41.28	29.08	47.49
19.3	38.6	57.9	77.2	22.41	40.06	27.00	35.46
19.8	39.6	59.4	79.2	23.17	37.68	25.28	30.75
20.3	40.6	60.9	81.2	23.25	36.29	26.07	29.40
20.8	41.6	62.4	83.2	24.34	34.12	24.92	27.60
21.3	42.6	63.9	85.2	24.86	32.93	23.89	30.33
21.8	43.6	65.4	87.2	24.86	32.15	23.53	32.17
22.3	44.6	66.9	89.2	24.83	31.79	22.85	33.18
22.8	45.6	68.4	91.2	25.99	30.04	21.61	29.97
23.3	46.6	69.9	93.2	26.01	30.28	20.26	30.78
23.8	47.6	71.4	95.2	27.72	29.39	17.80	28.39
24.0	48.0	72.0	96.0	28.67	29.60	16.27	27.47

* Harmonic Output below power level of X3 Output

Typical Performance Data

TEST CONDITION: RF IN = +18dBm

Frequency (GHz)				Temperature = -40°C			
X1 Output	X2 Output	X3 Output	X4 Output	Conversion Loss X3 Output	X1 Output	Harmonic Output* X2 Output	X4 Output
13.3	26.6	39.9	53.2	19.11	52.60	61.27	24.60
13.8	27.6	41.4	55.2	19.47	53.22	53.49	28.38
14.3	28.6	42.9	57.2	19.05	55.09	50.89	38.14
14.8	29.6	44.4	59.2	18.22	56.78	48.32	38.20
15.3	30.6	45.9	61.2	17.72	57.13	47.40	38.52
15.8	31.6	47.4	63.2	17.81	55.74	46.05	40.54
16.3	32.6	48.9	65.2	17.87	52.41	42.61	41.15
16.8	33.6	50.4	67.2	18.03	49.89	38.10	36.31
17.3	34.6	51.9	69.2	18.05	48.95	35.63	34.13
17.8	35.6	53.4	71.2	18.77	46.40	30.84	32.56
18.3	36.6	54.9	73.2	19.08	45.14	30.55	36.28
18.8	37.6	56.4	75.2	20.74	42.49	30.53	53.69
19.3	38.6	57.9	77.2	19.98	41.98	28.30	38.81
19.8	39.6	59.4	79.2	20.97	39.45	26.58	32.09
20.3	40.6	60.9	81.2	21.10	38.03	26.48	29.16
20.8	41.6	62.4	83.2	22.06	36.02	25.58	26.61
21.3	42.6	63.9	85.2	22.81	34.34	24.87	28.30
21.8	43.6	65.4	87.2	22.65	33.71	24.54	31.72
22.3	44.6	66.9	89.2	22.74	32.85	23.70	34.08
22.8	45.6	68.4	91.2	23.52	31.52	22.51	30.82
23.3	46.6	69.9	93.2	23.48	31.20	22.00	31.13
23.8	47.6	71.4	95.2	25.05	30.20	20.29	28.76
24.0	48.0	72.0	96.0	25.70	30.79	18.32	28.93

* Harmonic Output below power level of X3 Output

Frequency (GHz)				Temperature = +25°C			
X1 Output	X2 Output	X3 Output	X4 Output	Conversion Loss X3 Output	X1 Output	Harmonic Output* X2 Output	X4 Output
13.3	26.6	39.9	53.2	20.35	51.34	57.18	25.73
13.8	27.6	41.4	55.2	20.69	51.93	51.74	29.46
14.3	28.6	42.9	57.2	20.37	53.89	49.38	38.94
14.8	29.6	44.4	59.2	19.72	55.21	46.98	38.51
15.3	30.6	45.9	61.2	19.23	55.48	46.59	40.49
15.8	31.6	47.4	63.2	19.12	54.25	45.40	44.43
16.3	32.6	48.9	65.2	19.27	50.78	42.03	42.92
16.8	33.6	50.4	67.2	19.44	48.47	37.50	36.29
17.3	34.6	51.9	69.2	19.65	47.28	34.97	33.30
17.8	35.6	53.4	71.2	20.23	44.81	30.33	32.71
18.3	36.6	54.9	73.2	20.43	43.71	29.99	36.15
18.8	37.6	56.4	75.2	21.85	41.60	29.74	48.84
19.3	38.6	57.9	77.2	21.53	40.67	27.57	39.01
19.8	39.6	59.4	79.2	22.36	38.33	25.92	32.72
20.3	40.6	60.9	81.2	22.41	37.04	26.46	30.13
20.8	41.6	62.4	83.2	23.51	34.82	25.24	27.59
21.3	42.6	63.9	85.2	24.10	33.47	24.35	29.77
21.8	43.6	65.4	87.2	24.01	32.82	24.07	32.28
22.3	44.6	66.9	89.2	24.01	32.35	23.32	33.65
22.8	45.6	68.4	91.2	25.03	30.73	22.20	30.20
23.3	46.6	69.9	93.2	25.00	30.74	21.22	31.02
23.8	47.6	71.4	95.2	26.55	29.87	19.22	28.43
24.0	48.0	72.0	96.0	27.37	30.23	17.41	28.03

* Harmonic Output below power level of X3 Output

Frequency (GHz)				Temperature = +85°C			
X1 Output	X2 Output	X3 Output	X4 Output	Conversion Loss X3 Output	X1 Output	Harmonic Output* X2 Output	X4 Output
13.3	26.6	39.9	53.2	21.60	50.27	54.27	26.57
13.8	27.6	41.4	55.2	21.93	50.84	49.93	30.35
14.3	28.6	42.9	57.2	21.64	52.83	47.90	39.26
14.8	29.6	44.4	59.2	21.26	53.85	45.50	38.78
15.3	30.6	45.9	61.2	20.66	54.03	45.53	43.37
15.8	31.6	47.4	63.2	20.45	52.74	44.39	49.49
16.3	32.6	48.9	65.2	20.63	49.20	41.04	43.61
16.8	33.6	50.4	67.2	20.79	47.03	36.78	36.08
17.3	34.6	51.9	69.2	21.19	45.58	34.08	32.45
17.8	35.6	53.4	71.2	21.66	43.18	29.78	32.51
18.3	36.6	54.9	73.2	21.78	42.25	29.49	35.89
18.8	37.6	56.4	75.2	22.98	40.49	29.00	47.01
19.3	38.6	57.9	77.2	22.92	39.35	27.02	39.55
19.8	39.6	59.4	79.2	23.70	37.08	25.30	33.75
20.3	40.6	60.9	81.2	23.84	35.76	25.93	30.89
20.8	41.6	62.4	83.2	24.89	33.62	24.68	28.73
21.3	42.6	63.9	85.2	25.43	32.45	23.71	31.17
21.8	43.6	65.4	87.2	25.41	31.78	23.42	32.75
22.3	44.6	66.9	89.2	25.39	31.53	22.83	33.46
22.8	45.6	68.4	91.2	26.50	29.87	21.62	30.03
23.3	46.6	69.9	93.2	26.43	30.25	20.45	30.70
23.8	47.6	71.4	95.2	27.98	29.47	18.26	28.23
24.0	48.0	72.0	96.0	28.87	29.72	16.75	27.47

* Harmonic Output below power level of X3 Output

Typical Performance Data

TEST CONDITION: RF IN = +19dBm

Frequency (GHz)				Temperature = -40°C			
X1 Output	X2 Output	X3 Output	X4 Output	Conversion Loss X3 Output	X1 Output	Harmonic Output* X2 Output	X4 Output
13.3	26.6	39.9	53.2	19.69	52.83	57.81	24.88
13.8	27.6	41.4	55.2	20.04	53.68	51.65	27.99
14.3	28.6	42.9	57.2	19.62	55.72	49.57	38.09
14.8	29.6	44.4	59.2	18.75	57.43	46.88	37.99
15.3	30.6	45.9	61.2	18.29	57.29	46.44	38.89
15.8	31.6	47.4	63.2	18.40	55.31	45.50	40.98
16.3	32.6	48.9	65.2	18.46	51.71	41.88	41.31
16.8	33.6	50.4	67.2	18.59	49.03	37.29	34.84
17.3	34.6	51.9	69.2	18.62	47.96	34.75	32.55
17.8	35.6	53.4	71.2	19.34	45.47	29.80	30.93
18.3	36.6	54.9	73.2	19.62	44.28	29.47	33.58
18.8	37.6	56.4	75.2	21.27	41.75	29.90	39.66
19.3	38.6	57.9	77.2	20.54	41.30	28.19	44.13
19.8	39.6	59.4	79.2	21.56	38.88	26.64	34.91
20.3	40.6	60.9	81.2	21.73	37.50	26.35	30.34
20.8	41.6	62.4	83.2	22.66	35.51	25.26	27.49
21.3	42.6	63.9	85.2	23.43	33.86	24.66	28.90
21.8	43.6	65.4	87.2	23.27	33.36	24.53	32.28
22.3	44.6	66.9	89.2	23.34	32.62	23.81	34.32
22.8	45.6	68.4	91.2	24.08	31.39	22.67	30.76
23.3	46.6	69.9	93.2	24.03	31.20	22.04	30.95
23.8	47.6	71.4	95.2	25.44	30.31	20.56	28.50
24.0	48.0	72.0	96.0	26.01	30.94	18.67	28.72

* Harmonic Output below power level of X3 Output

Frequency (GHz)				Temperature = +25°C			
X1 Output	X2 Output	X3 Output	X4 Output	Conversion Loss X3 Output	X1 Output	Harmonic Output* X2 Output	X4 Output
13.3	26.6	39.9	53.2	21.00	51.42	54.78	25.97
13.8	27.6	41.4	55.2	21.33	52.19	49.88	29.00
14.3	28.6	42.9	57.2	21.01	54.22	48.16	38.76
14.8	29.6	44.4	59.2	20.34	55.66	45.51	38.19
15.3	30.6	45.9	61.2	19.87	55.50	45.57	40.99
15.8	31.6	47.4	63.2	19.75	53.76	44.82	44.83
16.3	32.6	48.9	65.2	19.89	50.03	41.28	41.69
16.8	33.6	50.4	67.2	20.05	47.52	36.80	34.74
17.3	34.6	51.9	69.2	20.27	46.28	34.20	31.86
17.8	35.6	53.4	71.2	20.86	43.85	29.49	31.19
18.3	36.6	54.9	73.2	21.03	42.83	29.33	33.70
18.8	37.6	56.4	75.2	22.43	40.82	29.63	39.23
19.3	38.6	57.9	77.2	22.14	39.96	27.63	43.19
19.8	39.6	59.4	79.2	22.98	37.76	26.02	35.39
20.3	40.6	60.9	81.2	23.08	36.50	26.35	31.22
20.8	41.6	62.4	83.2	24.15	34.28	24.96	28.50
21.3	42.6	63.9	85.2	24.77	32.98	24.19	30.46
21.8	43.6	65.4	87.2	24.67	32.45	24.08	32.89
22.3	44.6	66.9	89.2	24.65	32.09	23.43	33.89
22.8	45.6	68.4	91.2	25.61	30.55	22.35	30.23
23.3	46.6	69.9	93.2	25.59	30.71	21.38	30.91
23.8	47.6	71.4	95.2	26.97	29.91	19.63	28.28
24.0	48.0	72.0	96.0	27.73	30.32	17.86	27.87

* Harmonic Output below power level of X3 Output

Frequency (GHz)				Temperature = +85°C			
X1 Output	X2 Output	X3 Output	X4 Output	Conversion Loss X3 Output	X1 Output	Harmonic Output* X2 Output	X4 Output
13.3	26.6	39.9	53.2	22.37	50.14	52.08	26.82
13.8	27.6	41.4	55.2	22.70	50.84	48.02	29.89
14.3	28.6	42.9	57.2	22.41	52.98	46.51	39.04
14.8	29.6	44.4	59.2	22.03	53.96	43.81	38.52
15.3	30.6	45.9	61.2	21.45	53.74	44.30	44.09
15.8	31.6	47.4	63.2	21.19	52.10	43.75	49.61
16.3	32.6	48.9	65.2	21.35	48.45	40.34	41.22
16.8	33.6	50.4	67.2	21.50	46.08	36.16	34.74
17.3	34.6	51.9	69.2	21.90	44.58	33.44	31.27
17.8	35.6	53.4	71.2	22.38	42.19	29.04	31.21
18.3	36.6	54.9	73.2	22.48	41.32	28.99	33.80
18.8	37.6	56.4	75.2	23.65	39.69	28.99	39.44
19.3	38.6	57.9	77.2	23.61	38.57	27.02	43.23
19.8	39.6	59.4	79.2	24.41	36.45	25.30	36.56
20.3	40.6	60.9	81.2	24.58	35.17	25.75	32.21
20.8	41.6	62.4	83.2	25.63	33.01	24.34	29.75
21.3	42.6	63.9	85.2	26.18	31.91	23.48	32.07
21.8	43.6	65.4	87.2	26.14	31.35	23.33	33.51
22.3	44.6	66.9	89.2	26.09	31.21	22.82	33.75
22.8	45.6	68.4	91.2	27.15	29.62	21.63	30.15
23.3	46.6	69.9	93.2	27.07	30.15	20.56	30.60
23.8	47.6	71.4	95.2	28.45	29.45	18.62	28.15
24.0	48.0	72.0	96.0	29.29	29.74	17.11	27.34

* Harmonic Output below power level of X3 Output

Typical Performance Data

TEST CONDITION: RF IN = +12 to 16dBm

Frequency (GHz)				Temperature = +25°C		
X1 Output	X2 Output	X3 Output	X4 Output	Conversion Loss		
				12dBm	13dBm	14dBm
13.3	26.6	39.9	53.2	20.34	19.92	19.74
13.8	27.6	41.4	55.2	20.69	20.24	20.06
14.3	28.6	42.9	57.2	21.13	20.48	20.15
14.8	29.6	44.4	59.2	21.16	20.24	19.75
15.3	30.6	45.9	61.2	20.81	19.78	19.23
15.8	31.6	47.4	63.2	21.80	20.31	19.51
16.3	32.6	48.9	65.2	21.89	20.32	19.50
16.8	33.6	50.4	67.2	22.68	20.84	19.82
17.3	34.6	51.9	69.2	23.67	21.52	20.23
17.8	35.6	53.4	71.2	24.80	22.43	20.98
18.3	36.6	54.9	73.2	26.49	23.91	22.13
18.8	37.6	56.4	75.2	28.08	25.20	23.37
19.3	38.6	57.9	77.2	26.99	24.30	22.65
19.8	39.6	59.4	79.2	27.53	25.05	23.40
20.3	40.6	60.9	81.2	26.99	24.75	23.38
20.8	41.6	62.4	83.2	28.41	26.14	24.72
21.3	42.6	63.9	85.2	28.40	26.43	25.18
21.8	43.6	65.4	87.2	28.18	26.37	25.18
22.3	44.6	66.9	89.2	27.90	26.45	25.45
22.8	45.6	68.4	91.2	28.48	27.31	26.45
23.3	46.6	69.9	93.2	29.79	28.67	27.75
23.8	47.6	71.4	95.2	31.58	30.54	29.63
24.0	48.0	72.0	96.0	32.83	31.77	30.83

* Harmonic Output below power level of X3 Output

Frequency (GHz)				Temperature = +25°C	
X1 Output	X2 Output	X3 Output	X4 Output	Conversion Loss	
				15dBm	16dBm
13.3	26.6	39.9	53.2	19.76	19.92
13.8	27.6	41.4	55.2	20.08	20.24
14.3	28.6	42.9	57.2	20.08	20.20
14.8	29.6	44.4	59.2	19.55	19.58
15.3	30.6	45.9	61.2	19.02	19.05
15.8	31.6	47.4	63.2	19.16	19.10
16.3	32.6	48.9	65.2	19.09	19.03
16.8	33.6	50.4	67.2	19.34	19.25
17.3	34.6	51.9	69.2	19.63	19.48
17.8	35.6	53.4	71.2	20.30	20.10
18.3	36.6	54.9	73.2	21.16	20.76
18.8	37.6	56.4	75.2	22.40	21.99
19.3	38.6	57.9	77.2	21.79	21.45
19.8	39.6	59.4	79.2	22.51	22.17
20.3	40.6	60.9	81.2	22.64	22.39
20.8	41.6	62.4	83.2	23.91	23.59
21.3	42.6	63.9	85.2	24.46	24.18
21.8	43.6	65.4	87.2	24.47	24.21
22.3	44.6	66.9	89.2	24.84	24.61
22.8	45.6	68.4	91.2	25.88	25.64
23.3	46.6	69.9	93.2	27.11	26.82
23.8	47.6	71.4	95.2	28.94	28.49
24.0	48.0	72.0	96.0	30.03	29.46

* Harmonic Output below power level of X3 Output