Typical Performance Data

NOTE: Use PDF Bookmarks to view DATA at required conditions

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

TEST CONDITIONS: V_{DD} = +5 V, I_{DD} = 160 mA @ Temperature = +25°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		1dB Comp. Output	Psat Output	IP-3 Output	Noise Figure
(GHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dBm)	(dB)
16.0	19.25	53.20	5.32	12.70	16.71	1.22	22.24	24.67	29.22	7.04
16.5	19.92	51.70	6.46	13.10	14.47	1.16	22.00	24.54	29.41	6.47
17.0	20.23	51.90	7.43	12.50	14.86	1.11	21.72	24.01	29.27	6.13
17.2	20.30	51.60	7.83	12.30	14.51	1.09	21.60	23.74	29.00	6.02
17.4	20.33	51.30	8.18	11.90	14.14	1.07	21.52	23.54	29.19	5.95
17.6	20.38	50.70	8.64	11.60	13.32	1.05	21.48	23.38	28.82	5.87
17.8	20.37	50.80	9.06	11.30	13.64	1.03	21.42	23.21	28.85	5.80
18.0	20.38	50.20	9.57	11.10	12.87	1.02	21.44	23.16	29.33	5.71
18.2	20.39	50.30	10.20	10.90	13.11	1.00	21.44	23.09	29.09	5.59
18.4	20.37	50.20	10.80	10.80	13.09	0.99	21.46	23.05	29.13	5.50
18.6	20.31	50.20	11.30	10.80	13.35	0.98	21.54	23.09	29.15	5.40
18.8	20.26	50.30	11.80	10.70	13.56	0.97	21.57	23.06	28.94	5.29
19.0	20.19	50.20	12.20	10.90	13.63	0.97	21.66	23.12	29.34	5.14
19.2	20.09	50.40	12.40	10.80	14.18	0.97	21.74	23.18	29.52	5.00
19.4	20.04	51.00	12.40	10.70	15.17	0.97	21.77	23.18	29.71	4.87
19.6	20.04	50.80	12.60	10.80	14.92	0.97	21.85	23.26	29.99	4.73
19.8	19.98	50.80	12.60	10.80	15.04	0.97	21.85	23.26	29.97	4.60
20.0	19.96	50.10	12.70	11.00	14.00	0.97	21.86	23.26	30.66	4.48
20.2	19.84	50.10	12.30	10.90	14.12	0.98	21.90	23.31	30.98	4.37
20.4	19.82	50.20	12.20	10.90	14.23	0.98	21.87	23.27	31.06	4.24
20.6	19.84	50.50	11.80	10.80	14.55	0.98	21.89	23.30	31.49	4.14
20.8	19.89	51.20	11.70	10.90	15.64	0.98	21.93	23.34	31.69	4.05
21.0	19.85	50.90	11.50	10.80	15.21	0.99	21.95	23.34	31.84	3.99
21.2	19.91	52.20	11.30	10.80	17.38	0.99	22.04	23.42	32.35	3.93
21.4	19.95	52.50	11.20	11.10	18.00	1.00	22.11	23.48	32.22	3.86
21.6	19.98	52.50	10.80	11.20	17.85	1.00	22.15	23.52	32.08	3.80
21.8	19.97	52.20	10.80	11.50	17.35	1.01	22.25	23.61	32.50	3.72
22.0	19.97	52.50	10.30	11.30	17.70	1.01	22.25	23.60	32.24	3.66
22.2	20.02	52.80	10.40	11.60	18.49	1.02	22.28	23.61	32.13	3.63
22.4	20.06	52.60	10.20	11.60	17.89	1.02	22.32	23.63	32.57	3.59
22.6	20.05	52.80	10.10	12.00	18.26	1.03	22.25	23.53	32.67	3.54
22.8	20.05	52.70	9.98	12.00	18.02	1.03	22.29	23.53	32.90	3.51
23.0	20.13	53.70	9.85	12.30	20.16	1.04	22.26	23.49	32.44	3.47
23.2	20.19	53.80	9.89	12.60	20.39	1.04	22.22	23.42	32.59	3.42
23.4	20.21	54.40	9.56	12.80	21.69	1.05	22.28	23.46	32.65	3.40
23.5	20.22	54.50	9.62	13.00	22.01	1.05	22.29	23.44	32.62	3.37
23.6	20.29	54.60	9.39	13.10	22.00	1.06	22.38	23.51	32.57	3.36
23.8	20.38	54.60	9.46	13.50	21.91	1.06	22.52	23.62	32.30	3.37
24.0	20.47	54.60	9.24	13.70	21.54	1.07	22.63	23.70	32.32	3.37
24.2	20.58	54.20	9.25	13.90	20.28	1.07	22.87	23.89	32.49	3.37
24.4	20.63	54.30	9.24	13.90	20.44	1.07	22.97	23.97	32.44	3.38
24.6	20.67	54.30	9.15	13.90	20.30	1.07	23.06	24.02	32.63	3.39
24.8	20.73	54.10	9.07	13.70	19.64	1.07	23.25	24.16	32.26	3.35
25.0	20.87	54.80	9.10	13.60	20.91	1.07	23.47	24.32	32.77	3.35
25.2	21.03	54.50	9.05	13.40	19.85	1.07	23.57	24.38	32.12	3.34
25.4	21.16	55.20	9.13	13.20	21.16	1.07	23.61	24.40	32.49	3.31
25.6	21.36	54.90	9.12	12.90	19.96	1.06	23.65	24.41	31.43	3.28
25.8	21.52	55.90	9.22	12.70	21.87	1.06	23.54	24.32	32.20	3.21
26.0	21.72	57.00	9.26	12.50	24.29	1.05	23.49	24.26	32.11	3.14
26.2	21.90	57.30	9.36	12.50	24.73	1.05	23.48	24.24	31.90	3.06
26.4	22.07	59.10	9.49	12.40	29.94	1.05	23.40	24.16	32.53	2.98
26.6	22.27	57.80	9.53	12.30	25.04	1.04	23.49	24.20	31.42	2.90
26.8	22.51	59.10	9.69	12.40	28.58	1.04	23.57	24.23	32.64	2.81
27.0	22.71	57.60	9.71	12.60	23.59	1.04	23.61	24.24	32.55	2.79
27.5	23.21	60.30	9.85	13.50	30.50	1.05	23.93	24.40	32.30	2.68
28.0	23.76	60.70	10.00	15.10	30.70	1.07	24.02	24.45	33.42	2.60
28.5	24.22	58.50	10.20	17.90	22.97	1.08	23.62	24.21	32.66	2.62
29.0	24.34	57.60	10.60	18.80	20.64	1.07	22.88	23.58	32.77	2.67
29.5	23.88	59.20	11.30	17.80	26.45	1.06	22.13	22.86	32.44	2.67
30.0	22.96	57.20	12.70	17.40	24.12	1.03	21.43	22.15	32.00	2.79
30.5	21.67	55.60	14.40	17.30	23.46	1.02	20.67	21.39	31.08	2.87
31.0	20.30	54.70	14.30	18.30	24.89	1.02	19.90	20.62	28.79	2.98
31.5	18.74	52.90	12.30	18.90	23.78	1.04	19.22	19.89	27.03	3.15
32.0	16.92	53.70	11.30	15.60	31.12	1.04	18.79	19.40	25.12	3.39
32.5	14.81	52.90	11.60	11.10	34.69	0.99				
33.0	12.50	51.80	13.50	8.01	37.26	0.88				
33.5	10.22	52.00	17.50	6.17	45.79	0.77				
34.0	8.04	51.00	29.40	5.22	49.16	0.70				

Typical Performance Data

NOTE: Use PDF Bookmarks to view DATA at required conditions

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

TEST CONDITIONS: V_{DD} = +6 V, I_{DD} = 160 mA @ Temperature = +25°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		1dB Comp. Output	Psat Output	IP-3 Output	Noise Figure
(GHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dBm)	(dB)
16.0	18.79	53.00	5.59	14.10	17.95	1.22	25.46	25.99	31.11	7.40
16.5	19.40	51.80	6.81	14.50	15.94	1.16	24.51	25.56	32.00	6.83
17.0	19.66	51.80	7.82	13.90	16.28	1.11	23.61	25.33	31.29	6.47
17.2	19.71	51.60	8.24	13.60	16.01	1.10	23.35	25.23	31.25	6.38
17.4	19.71	51.50	8.58	13.20	16.02	1.08	23.18	25.14	31.05	6.28
17.6	19.74	50.70	9.04	12.90	14.79	1.06	23.08	25.01	30.98	6.20
17.8	19.71	50.80	9.43	12.40	15.00	1.05	22.98	24.85	31.12	6.13
18.0	19.70	50.50	9.89	12.10	14.64	1.03	22.96	24.78	31.00	6.04
18.2	19.68	50.50	10.40	11.90	14.89	1.02	22.95	24.69	31.41	5.94
18.4	19.63	50.30	10.90	11.70	14.70	1.01	22.95	24.63	31.29	5.83
18.6	19.56	50.50	11.30	11.70	15.25	1.00	23.02	24.65	31.34	5.71
18.8	19.48	50.70	11.60	11.50	15.72	0.99	23.04	24.60	31.21	5.56
19.0	19.39	50.40	11.80	11.60	15.35	0.99	23.11	24.62	31.50	5.44
19.2	19.28	50.70	11.90	11.40	16.12	0.99	23.17	24.63	31.38	5.32
19.4	19.22	51.00	11.90	11.30	16.74	0.99	23.17	24.59	31.91	5.16
19.6	19.20	50.80	12.00	11.30	16.41	0.99	23.22	24.61	31.96	5.02
19.8	19.12	50.90	12.00	11.20	16.78	0.99	23.21	24.56	32.07	4.88
20.0	19.08	50.00	12.00	11.40	15.27	0.99	23.20	24.51	32.52	4.78
20.2	18.96	50.30	11.70	11.20	15.91	0.99	23.23	24.51	32.77	4.66
20.4	18.93	50.50	11.50	11.10	16.11	0.99	23.19	24.43	32.98	4.52
20.6	18.93	50.40	11.20	11.00	15.89	0.99	23.21	24.42	33.26	4.44
20.8	18.95	50.80	11.20	11.10	16.62	0.99	23.25	24.42	33.27	4.34
21.0	18.90	50.90	11.00	10.90	16.84	1.00	23.26	24.40	33.88	4.28
21.2	18.93	52.00	10.70	10.90	18.93	1.00	23.35	24.46	33.66	4.21
21.4	18.95	52.40	10.70	11.10	19.85	1.00	23.41	24.50	34.63	4.17
21.6	18.95	52.40	10.40	11.20	19.69	1.01	23.46	24.51	34.30	4.10
21.8	18.92	52.00	10.30	11.40	18.95	1.02	23.56	24.57	34.87	4.06
22.0	18.90	52.50	9.93	11.20	19.78	1.02	23.56	24.57	34.90	4.00
22.2	18.93	52.90	9.98	11.50	20.80	1.02	23.58	24.60	34.84	3.94
22.4	18.94	52.70	9.78	11.40	20.20	1.03	23.62	24.62	34.60	3.88
22.6	18.91	52.40	9.72	11.70	19.75	1.03	23.54	24.57	35.12	3.85
22.8	18.91	52.70	9.63	11.60	20.41	1.03	23.57	24.59	35.15	3.79
23.0	18.97	53.50	9.50	11.80	22.00	1.04	23.55	24.52	34.73	3.76
23.2	19.01	53.70	9.54	12.00	22.58	1.04	23.50	24.44	34.12	3.72
23.4	19.02	54.30	9.25	12.20	24.12	1.05	23.55	24.45	35.12	3.69
23.5	19.03	54.10	9.31	12.30	23.47	1.05	23.55	24.40	34.62	3.64
23.6	19.08	54.30	9.11	12.40	23.77	1.06	23.63	24.45	34.44	3.60
23.8	19.17	54.60	9.16	12.70	24.52	1.06	23.77	24.53	35.11	3.57
24.0	19.26	54.40	8.97	12.70	23.59	1.07	23.87	24.59	34.36	3.53
24.2	19.36	53.90	8.98	12.90	22.21	1.07	24.10	24.77	34.92	3.48
24.4	19.41	54.10	8.98	12.90	22.63	1.07	24.20	24.84	35.54	3.46
24.6	19.45	54.20	8.91	12.90	22.76	1.07	24.28	24.89	35.28	3.44
24.8	19.52	54.10	8.84	12.70	22.23	1.07	24.47	25.04	35.03	3.39
25.0	19.67	54.50	8.88	12.60	22.77	1.06	24.69	25.21	35.21	3.34
25.2	19.83	54.40	8.85	12.50	22.13	1.06	24.79	25.29	33.76	3.31
25.4	19.98	54.80	8.93	12.20	22.68	1.06	24.86	25.35	34.23	3.26
25.6	20.19	55.30	8.93	12.00	23.32	1.05	24.91	25.37	33.35	3.22
25.8	20.37	55.70	9.03	11.80	24.06	1.05	24.84	25.29	33.88	3.15
26.0	20.58	57.20	9.09	11.70	27.68	1.04	24.81	25.25	35.28	3.12
26.2	20.77	57.20	9.19	11.60	27.37	1.04	24.83	25.22	33.53	3.08
26.4	20.97	59.00	9.34	11.40	32.74	1.03	24.78	25.14	33.88	3.06
26.6	21.19	58.00	9.38	11.30	28.46	1.03	24.88	25.18	33.29	3.02
26.8	21.45	58.60	9.54	11.30	29.77	1.03	24.97	25.20	33.55	2.97
27.0	21.68	59.80	9.58	11.40	33.37	1.03	25.03	25.21	33.95	3.02
27.5	22.26	59.60	9.73	11.90	30.80	1.03	25.36	25.37	34.64	3.03
28.0	22.91	58.60	9.92	12.90	26.05	1.05	25.49	25.40	33.95	3.12
28.5	23.49	58.90	10.20	14.80	25.77	1.06	25.20	25.20	34.64	3.31
29.0	23.78	58.60	10.60	16.70	24.51	1.06	24.56	24.79	34.54	3.41
29.5	23.53	57.30	11.40	18.60	22.40	1.06	23.89	24.26	35.14	3.42
30.0	22.78	56.40	12.90	21.50	22.67	1.04	23.26	23.61	35.18	3.52
30.5	21.61	55.10	14.40	22.60	22.73	1.03	22.58	22.89	34.84	3.50
31.0	20.30	53.30	14.20	23.20	21.49	1.03	21.85	22.14	32.76	3.64
31.5	18.75	52.60	12.20	24.20	23.11	1.06	21.15	21.42	31.31	3.84
32.0	16.92	52.70	11.30	18.90	28.28	1.06	20.69	20.93	30.05	3.99
32.5	14.81	53.40	11.70	12.60	37.68	1.01				
33.0	12.48	52.30	13.70	8.79	40.82	0.90				
33.5	10.16	52.40	17.90	6.63	49.64	0.80				
34.0	7.90	51.60	30.80	5.51	55.04	0.72				

Typical Performance Data

NOTE: Use PDF Bookmarks to view DATA at required conditions

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

TEST CONDITIONS: V_{DD} = +7 V, I_{DD} = 160 mA @ Temperature = +25°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		1dB Comp. Output	Psat Output	IP-3 Output	Noise Figure
(GHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dBm)	(dB)
16.0	18.19	53.10	5.79	15.30	20.09	1.22	26.17	26.34	34.00	7.41
16.5	18.77	51.50	7.06	15.90	17.11	1.16	25.58	25.89	34.11	6.83
17.0	19.02	51.80	8.10	15.30	18.01	1.12	25.25	25.81	34.12	6.46
17.2	19.06	51.50	8.52	15.00	17.41	1.10	25.12	25.82	33.99	6.38
17.4	19.06	51.50	8.84	14.40	17.61	1.09	25.00	25.82	33.97	6.29
17.6	19.09	50.80	9.28	14.00	16.40	1.07	24.85	25.74	34.04	6.21
17.8	19.05	50.70	9.62	13.50	16.40	1.06	24.69	25.62	34.02	6.12
18.0	19.03	50.50	10.00	13.20	16.15	1.04	24.65	25.54	34.05	6.05
18.2	18.99	50.50	10.50	12.90	16.22	1.03	24.59	25.43	34.20	5.96
18.4	18.93	50.30	10.90	12.60	16.11	1.02	24.57	25.37	34.34	5.84
18.6	18.83	50.60	11.20	12.40	16.88	1.01	24.63	25.37	34.49	5.74
18.8	18.74	50.70	11.40	12.20	17.22	1.01	24.62	25.31	34.70	5.62
19.0	18.63	50.40	11.50	12.20	16.88	1.01	24.69	25.32	34.87	5.48
19.2	18.50	50.70	11.50	11.80	17.62	1.00	24.73	25.33	35.08	5.32
19.4	18.43	51.10	11.50	11.70	18.54	1.00	24.71	25.31	35.26	5.20
19.6	18.38	51.00	11.60	11.60	18.55	1.00	24.76	25.34	35.46	5.06
19.8	18.29	50.80	11.50	11.50	18.11	1.00	24.69	25.25	35.67	4.93
20.0	18.23	50.10	11.50	11.60	16.91	1.00	24.65	25.20	35.89	4.82
20.2	18.09	50.30	11.30	11.30	17.49	1.00	24.67	25.18	35.99	4.71
20.4	18.04	50.30	11.10	11.20	17.53	1.00	24.60	25.11	36.08	4.60
20.6	18.02	50.30	10.80	11.00	17.32	1.00	24.62	25.12	36.24	4.51
20.8	18.02	50.90	10.80	11.10	18.62	1.00	24.64	25.13	36.42	4.42
21.0	17.95	51.00	10.60	10.90	18.89	1.00	24.64	25.10	36.57	4.33
21.2	17.96	51.80	10.40	10.90	20.61	1.00	24.69	25.09	36.66	4.27
21.4	17.95	52.30	10.30	11.00	21.72	1.01	24.72	25.06	37.19	4.22
21.6	17.93	52.40	10.00	11.00	21.88	1.01	24.71	25.01	37.34	4.15
21.8	17.88	51.80	10.00	11.10	20.62	1.02	24.75	25.00	37.52	4.13
22.0	17.85	52.30	9.66	10.90	21.48	1.02	24.77	24.99	38.07	4.07
22.2	17.85	52.50	9.72	11.10	22.23	1.02	24.82	25.04	38.00	4.02
22.4	17.84	52.30	9.51	11.00	21.55	1.02	24.87	25.09	38.03	3.99
22.6	17.81	52.50	9.47	11.20	22.17	1.03	24.86	25.13	38.39	3.94
22.8	17.79	52.60	9.39	11.10	22.50	1.03	24.89	25.19	38.22	3.87
23.0	17.84	53.10	9.25	11.30	23.70	1.03	24.80	25.14	38.11	3.86
23.2	17.86	53.50	9.31	11.40	24.91	1.03	24.73	25.09	38.17	3.84
23.4	17.87	53.90	9.02	11.50	25.66	1.04	24.69	25.06	37.83	3.82
23.5	17.87	54.10	9.11	11.60	26.35	1.04	24.60	24.97	37.76	3.81
23.6	17.92	54.00	8.89	11.60	26.01	1.05	24.63	25.00	37.71	3.78
23.8	18.00	54.30	8.97	11.80	26.69	1.05	24.65	25.01	37.78	3.76
24.0	18.08	54.20	8.78	11.90	26.03	1.06	24.69	25.03	37.78	3.78
24.2	18.19	54.20	8.80	12.00	25.76	1.06	24.87	25.17	37.77	3.81
24.4	18.23	54.10	8.81	11.90	25.29	1.06	24.92	25.22	37.71	3.82
24.6	18.27	53.90	8.74	11.90	24.64	1.06	24.99	25.27	37.67	3.82
24.8	18.36	54.20	8.67	11.80	25.04	1.06	25.19	25.44	37.61	3.77
25.0	18.50	54.50	8.73	11.70	25.55	1.05	25.42	25.65	37.47	3.80
25.2	18.67	54.50	8.69	11.60	24.91	1.05	25.57	25.82	37.14	3.79
25.4	18.83	55.00	8.80	11.40	26.15	1.05	25.71	25.96	37.09	3.74
25.6	19.04	55.20	8.80	11.20	25.90	1.04	25.79	26.03	36.98	3.69
25.8	19.23	56.40	8.91	11.00	28.96	1.04	25.77	26.00	36.86	3.62
26.0	19.45	56.80	8.98	10.90	29.54	1.03	25.77	25.98	36.83	3.59
26.2	19.65	57.60	9.07	10.80	31.85	1.03	25.76	25.94	36.93	3.50
26.4	19.87	59.00	9.23	10.60	36.50	1.02	25.71	25.85	37.12	3.41
26.6	20.10	59.80	9.28	10.50	38.89	1.02	25.77	25.88	37.09	3.34
26.8	20.37	58.90	9.45	10.50	34.06	1.01	25.79	25.86	37.19	3.26
27.0	20.61	59.60	9.47	10.50	36.23	1.01	25.84	25.88	37.28	3.22
27.5	21.24	59.60	9.62	10.80	33.87	1.02	26.09	26.06	36.82	3.14
28.0	21.94	61.90	9.81	11.50	41.33	1.03	26.31	26.17	35.98	3.09
28.5	22.59	59.40	10.10	12.90	29.48	1.04	26.20	26.01	35.36	3.11
29.0	22.99	58.60	10.60	14.70	26.47	1.05	25.72	25.63	34.90	3.16
29.5	22.90	58.60	11.50	17.40	27.77	1.05	25.19	25.22	34.27	3.19
30.0	22.30	58.60	13.00	23.80	30.75	1.04	24.64	24.72	33.64	3.31
30.5	21.24	54.90	14.60	33.20	23.14	1.03	23.99	24.06	32.78	3.42
31.0	19.99	51.70	14.20	27.20	18.50	1.04	23.24	23.29	31.77	3.54
31.5	18.44	51.70	12.20	29.20	21.57	1.06	22.48	22.51	30.84	3.73
32.0	16.62	52.90	11.40	23.10	30.27	1.07	21.96	21.96	30.16	3.94
32.5	14.52				36.80	1.02				
33.0	12.19				39.14	0.92				
33.5	9.83				61.72	0.81				
34.0	7.51				60.66	0.73				

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: V_{DD} = +6 V, I_{DD} = 160 mA @ Temperature = -55°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		1dB Comp. Output	Psat Output	IP-3 Output	Noise Figure
(GHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dBm)	(dB)
16.0	20.58	53.30	5.12	15.00	14.55	1.26	26.16	26.29	31.41	5.86
16.5	21.22	51.60	6.61	16.40	12.77	1.19	25.21	25.86	31.35	5.28
17.0	21.41	52.10	7.84	15.80	13.99	1.13	24.27	25.78	30.74	4.89
17.2	21.42	51.90	8.32	15.40	13.86	1.11	24.01	25.77	29.97	4.80
17.4	21.37	51.40	8.68	14.60	13.28	1.09	23.84	25.76	30.54	4.72
17.6	21.34	50.90	9.15	14.10	12.81	1.07	23.76	25.68	29.75	4.63
17.8	21.24	51.00	9.58	13.40	13.06	1.05	23.65	25.53	29.66	4.57
18.0	21.16	50.70	10.10	12.90	12.93	1.04	23.66	25.47	29.50	4.48
18.2	21.06	50.50	10.60	12.50	12.82	1.02	23.66	25.36	29.22	4.42
18.4	20.90	50.80	11.00	12.10	13.60	1.01	23.65	25.27	29.31	4.30
18.6	20.75	50.90	11.30	11.80	13.99	1.00	23.78	25.28	29.24	4.22
18.8	20.58	51.30	11.50	11.40	14.83	0.99	23.80	25.20	28.49	4.10
19.0	20.44	50.90	11.70	11.40	14.37	0.99	23.91	25.19	28.73	3.99
19.2	20.27	51.30	11.70	11.00	15.18	0.99	24.05	25.20	28.53	3.87
19.4	20.16	51.30	11.70	10.90	15.33	0.98	24.08	25.12	28.56	3.74
19.6	20.05	51.00	11.70	10.90	14.99	0.98	24.20	25.13	28.87	3.62
19.8	19.93	50.90	11.60	10.70	15.04	0.98	24.25	25.04	28.70	3.48
20.0	19.76	50.20	11.40	10.70	14.10	0.98	24.26	24.97	29.08	3.39
20.2	19.69	51.50	11.10	10.20	16.13	0.98	24.39	24.97	29.21	3.29
20.4	19.69	51.80	10.90	10.30	16.78	0.98	24.40	24.89	29.20	3.18
20.6	19.70	52.00	10.70	10.10	16.99	0.98	24.48	24.90	30.06	3.09
20.8	19.73	52.60	10.50	10.30	18.09	0.99	24.62	24.93	30.41	2.97
21.0	19.74	53.00	10.30	10.20	18.83	0.99	24.67	24.92	30.42	2.92
21.2	19.81	53.30	9.95	10.40	19.29	1.00	24.77	24.94	31.60	2.86
21.4	19.83	53.70	9.80	10.60	20.03	1.01	24.85	24.94	30.91	2.82
21.6	19.85	54.00	9.44	10.80	20.72	1.02	24.80	24.90	31.67	2.74
21.8	19.84	53.60	9.31	11.00	19.72	1.03	24.82	24.92	31.78	2.70
22.0	19.90	54.60	9.01	11.00	21.83	1.04	24.83	24.92	32.19	2.64
22.2	19.95	55.20	9.04	11.50	23.62	1.05	24.86	24.96	31.84	2.58
22.4	19.97	55.10	8.84	11.50	23.18	1.05	24.97	25.05	32.28	2.54
22.6	19.97	55.30	8.81	11.90	23.84	1.06	24.99	25.04	32.37	2.49
22.8	20.03	55.90	8.74	12.00	25.16	1.06	25.10	25.11	32.31	2.40
23.0	20.11	57.60	8.61	12.40	30.50	1.07	25.13	25.08	32.06	2.37
23.2	20.14	58.30	8.68	12.60	32.96	1.07	25.06	25.00	32.42	2.34
23.4	20.15	59.10	8.47	12.80	36.11	1.08	25.15	25.03	32.64	2.30
23.5	20.16	58.70	8.52	13.00	34.59	1.08	25.16	24.99	32.56	2.25
23.6	20.24	58.90	8.32	13.00	34.66	1.09	25.20	25.04	32.87	2.22
23.8	20.32	59.40	8.33	13.20	36.36	1.09	25.33	25.15	32.68	2.17
24.0	20.39	59.10	8.11	13.00	34.59	1.10	25.33	25.17	32.72	2.13
24.2	20.46	59.10	8.01	13.00	34.13	1.10	25.43	25.30	32.34	2.10
24.4	20.48	58.70	7.97	12.80	32.26	1.10	25.49	25.36	32.82	2.09
24.6	20.51	58.50	7.85	12.60	31.18	1.10	25.53	25.40	32.64	2.08
24.8	20.59	57.90	7.70	12.30	28.56	1.10	25.61	25.50	32.49	2.04
25.0	20.72	58.00	7.64	12.00	28.45	1.10	25.79	25.66	32.20	1.98
25.2	20.83	58.00	7.57	11.60	27.89	1.09	25.93	25.76	31.89	1.93
25.4	20.96	57.60	7.57	11.30	26.07	1.09	26.00	25.82	32.50	1.89
25.6	21.14	57.80	7.51	11.00	25.99	1.08	26.07	25.88	32.39	1.84
25.8	21.32	59.00	7.58	10.70	29.07	1.07	26.03	25.84	33.09	1.80
26.0	21.51	59.30	7.66	10.60	29.32	1.07	25.98	25.83	32.61	1.79
26.2	21.71	60.00	7.74	10.40	30.99	1.06	26.01	25.86	32.95	1.75
26.4	21.93	59.70	7.82	10.30	29.32	1.05	25.95	25.82	33.00	1.73
26.6	22.17	58.10	7.86	10.20	23.70	1.05	26.03	25.89	32.24	1.70
26.8	22.44	61.00	7.97	10.20	32.50	1.05	26.10	25.94	32.62	1.64
27.0	22.67	59.00	8.01	10.20	25.01	1.04	26.06	25.92	32.65	1.63
27.5	23.28	60.40	8.04	10.60	27.57	1.05	26.05	25.93	33.84	1.61
28.0	24.01	59.10	8.06	11.30	22.30	1.07	25.82	25.67	32.55	1.55
28.5	24.84	59.50	8.06	12.90	21.75	1.10	25.36	25.27	33.58	1.59
29.0	25.55	58.80	8.45	14.70	19.00	1.11	24.83	25.04	33.62	1.62
29.5	26.02	58.40	8.98	16.80	17.76	1.10	24.43	24.90	33.39	1.61
30.0	25.88	56.80	9.72	21.60	15.65	1.10	24.06	24.53	33.53	1.67
30.5	25.31	55.90	10.40	37.50	15.42	1.09	23.51	23.91	34.08	1.69
31.0	24.33	52.80	9.94	25.60	11.85	1.10	22.70	23.14	34.19	1.78
31.5	22.97	51.50	8.59	23.20	11.49	1.13	21.73	22.32	33.46	1.92
32.0	21.19	51.30	8.12	22.90	13.46	1.15	21.12	21.73	31.56	2.16
32.5	19.03	51.40	8.84	14.20	17.50	1.08				
33.0	16.55	54.10	10.80	9.23	30.55	0.95				
33.5	13.97	51.10	14.40	6.65	27.04	0.81				
34.0	11.47	51.40	22.00	5.28	34.81	0.71				

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: V_{DD} = +6 V, I_{DD} = 160 mA @ Temperature = +85°C

FREQ	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		1dB Comp. Output	Psat Output	IP-3 Output	Noise Figure
(GHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dBm)	(dB)
16.0	17.27	52.90	5.84	14.70	21.66	1.21	23.45	25.67	30.67	8.19
16.5	17.85	51.70	6.90	15.00	19.02	1.16	22.54	25.27	30.68	7.63
17.0	18.09	51.60	7.79	14.30	19.13	1.12	22.04	24.83	30.71	7.27
17.2	18.14	51.50	8.15	13.90	19.11	1.10	21.89	24.63	30.73	7.17
17.4	18.16	51.60	8.46	13.40	19.33	1.09	21.78	24.46	30.71	7.10
17.6	18.18	51.00	8.82	13.10	18.26	1.07	21.72	24.30	30.67	7.02
17.8	18.17	51.00	9.18	12.60	18.31	1.06	21.66	24.14	30.66	6.95
18.0	18.18	50.60	9.60	12.30	17.55	1.04	21.64	24.07	30.66	6.87
18.2	18.18	50.40	10.10	12.10	17.33	1.03	21.64	24.00	30.69	6.76
18.4	18.16	50.30	10.60	11.90	17.25	1.01	21.64	23.96	30.71	6.63
18.6	18.11	50.30	11.10	11.90	17.57	1.01	21.69	23.99	30.79	6.54
18.8	18.04	50.60	11.40	11.60	18.34	1.00	21.71	23.97	30.86	6.38
19.0	17.96	50.60	11.80	11.70	18.70	0.99	21.76	24.01	30.94	6.22
19.2	17.89	50.50	12.00	11.50	18.50	0.99	21.80	24.03	31.11	6.06
19.4	17.83	50.90	12.20	11.40	19.69	0.99	21.82	24.03	31.23	5.88
19.6	17.83	51.20	12.40	11.40	20.32	0.98	21.85	24.06	31.33	5.72
19.8	17.78	51.30	12.50	11.40	20.76	0.98	21.85	24.03	31.41	5.60
20.0	17.75	50.90	12.60	11.50	19.92	0.98	21.85	24.01	31.48	5.49
20.2	17.69	50.30	12.50	11.40	18.56	0.98	21.85	24.01	31.46	5.39
20.4	17.63	49.90	12.40	11.40	17.90	0.98	21.83	23.95	31.44	5.25
20.6	17.61	49.70	12.10	11.10	17.33	0.98	21.84	23.94	31.45	5.17
20.8	17.65	50.80	12.00	11.10	19.64	0.98	21.83	23.93	31.39	5.06
21.0	17.60	50.80	11.80	10.90	19.48	0.98	21.81	23.90	31.29	5.04
21.2	17.61	52.00	11.60	10.90	22.37	0.98	21.82	23.93	31.26	4.98
21.4	17.62	52.80	11.50	11.10	24.52	0.99	21.81	23.93	31.23	4.91
21.6	17.60	53.20	11.10	11.00	25.59	0.99	21.81	23.93	31.19	4.85
21.8	17.57	52.80	11.00	11.20	24.56	1.00	21.81	23.97	31.28	4.78
22.0	17.55	53.10	10.60	10.90	25.04	1.00	21.78	23.92	31.25	4.74
22.2	17.56	53.40	10.60	11.20	26.06	1.01	21.80	23.91	31.37	4.69
22.4	17.56	53.70	10.40	11.00	26.78	1.01	21.81	23.92	31.41	4.61
22.6	17.56	53.90	10.30	11.30	27.52	1.01	21.82	23.85	31.40	4.58
22.8	17.55	53.50	10.30	11.20	26.33	1.01	21.88	23.90	31.49	4.52
23.0	17.60	54.10	10.20	11.30	27.90	1.02	21.91	23.88	31.63	4.47
23.2	17.65	54.90	10.20	11.50	30.65	1.02	22.00	23.90	31.56	4.41
23.4	17.68	55.20	10.00	11.70	31.68	1.02	22.07	23.99	31.65	4.38
23.5	17.69	55.60	10.10	11.90	33.16	1.02	22.16	24.03	31.71	4.34
23.6	17.74	55.60	10.10	11.90	33.05	1.03	22.31	24.18	31.74	4.30
23.8	17.84	55.20	10.20	12.20	31.51	1.03	22.46	24.32	31.75	4.27
24.0	17.93	55.30	10.10	12.40	31.56	1.03	22.66	24.46	31.82	4.21
24.2	18.02	54.70	10.20	12.60	29.37	1.03	22.91	24.68	31.87	4.19
24.4	18.06	54.90	10.30	12.60	29.73	1.03	23.02	24.76	31.90	4.18
24.6	18.11	55.00	10.30	12.60	30.09	1.03	23.14	24.83	31.95	4.15
24.8	18.22	54.90	10.30	12.70	29.42	1.03	23.41	24.99	31.97	4.12
25.0	18.34	54.50	10.40	12.70	27.63	1.03	23.65	25.14	32.16	4.05
25.2	18.48	54.70	10.40	12.70	28.03	1.03	23.82	25.19	32.40	4.02
25.4	18.64	55.00	10.50	12.60	28.26	1.03	23.95	25.20	32.63	3.98
25.6	18.80	55.00	10.60	12.40	27.70	1.02	24.04	25.18	32.84	3.95
25.8	18.98	55.20	10.60	12.10	27.92	1.02	24.04	25.06	33.03	3.95
26.0	19.20	54.80	10.60	11.90	25.90	1.01	24.05	24.98	33.18	3.96
26.2	19.40	55.70	10.50	11.70	27.96	1.01	24.10	24.93	33.19	3.95
26.4	19.60	56.90	10.50	11.60	31.17	1.01	24.09	24.84	33.10	3.95
26.6	19.81	55.30	10.40	11.40	25.00	1.01	24.20	24.87	33.17	3.95
26.8	20.01	54.50	10.30	11.30	22.36	1.01	24.31	24.89	33.23	3.95
27.0	20.21	55.50	10.10	11.30	24.44	1.01	24.40	24.89	33.26	3.94
27.5	20.65	58.00	9.64	11.50	30.51	1.03	24.78	25.05	33.40	4.04
28.0	21.11	57.90	9.51	12.30	29.03	1.05	24.92	25.06	33.63	4.11
28.5	21.51	58.90	9.58	14.40	31.72	1.07	24.57	24.76	34.43	4.26
29.0	21.53	58.00	9.72	17.70	29.04	1.09	23.88	24.21	35.00	4.32
29.5	21.10	58.50	10.40	21.90	33.43	1.08	23.20	23.58	35.58	4.40
30.0	20.32	57.60	11.70	22.50	33.82	1.06	22.54	22.92	36.28	4.45
30.5	19.22	54.70	13.90	19.90	28.08	1.03	21.84	22.19	36.32	4.49
31.0	17.98	54.60	15.70	20.30	32.82	1.02	21.10	21.42	35.95	4.49
31.5	16.36	52.60	15.10	21.60	31.24	1.02	20.40	20.69	35.14	4.55
32.0	14.33	52.80	14.20	16.90	39.35	1.02	19.92	20.19	35.04	4.67
32.5	12.06	51.40	14.50	11.50	41.40	0.96				
33.0	9.71	49.80	16.80	8.25	41.84	0.87				
33.5	7.44	49.10	23.10	6.40	46.32	0.78				
34.0	5.25	50.70	32.50	5.49	67.37	0.72				

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: V_{DD} = +6 V, I_{DD} = 160 mA @ Temperature = +25°C

Power	P_{OUT} (@17 GHz)	P_{OUT} (@24 GHz)	P_{OUT} (@30 GHz)	P_{OUT} (@32 GHz)	I_{DD} (@17 GHz)	I_{DD} (@24 GHz)	I_{DD} (@30 GHz)	I_{DD} (@32 GHz)	Gain (@17 GHz)	Gain (@24 GHz)	Gain (@30 GHz)	Gain (@32 GHz)
(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(mA)	(mA)	(mA)	(mA)	(dBm)	(dBm)	(dBm)	(dBm)
-10	8.6	8.91	10.76	5.68	162.54	162.46	162.67	160.74	20.92	20.80	23.82	18.25
-9	9.62	9.92	11.78	6.65	163.1	163.04	163.47	160.91	20.92	20.79	23.83	18.23
-8	10.61	10.93	12.79	7.63	163.82	163.75	164.49	161.18	20.91	20.80	23.84	18.22
-7	11.61	11.94	13.8	8.61	164.72	164.64	165.83	161.54	20.91	20.80	23.86	18.21
-6	12.61	12.93	14.83	9.61	165.91	165.81	167.56	162	20.90	20.79	23.88	18.21
-5	13.62	13.92	15.86	10.6	167.42	167.28	169.78	162.62	20.90	20.78	23.91	18.21
-4	14.61	14.91	16.91	11.59	169.36	169.16	172.6	163.56	20.89	20.78	23.94	18.20
-3	15.6	15.91	18	12.58	171.8	171.5	176.11	164.87	20.88	20.78	24.02	18.19
-2	16.59	16.92	19.13	13.59	174.9	174.39	180.58	166.71	20.88	20.80	24.13	18.17
-1	17.6	17.95	20.29	14.57	178.77	177.93	186.19	168.98	20.89	20.85	24.24	18.15
0	18.63	19	21.4	15.54	183.48	182.17	193.31	171.92	20.92	20.91	24.33	18.12
1	19.67	20.16	22.34	16.5	189.13	187.75	203.02	175.82	20.95	20.98	24.23	18.09
1.2	19.88	20.38	22.49	16.69	190.39	188.87	205.35	176.78	20.95	20.99	24.17	18.09
1.4	20.08	20.58	22.62	16.88	191.68	190.01	207.77	177.79	20.94	20.99	24.10	18.08
1.6	20.28	20.78	22.74	17.08	193.01	191.17	210.3	178.85	20.93	20.99	24.02	18.08
1.8	20.53	20.97	22.84	17.27	194.72	192.36	212.9	179.97	20.91	20.98	23.92	18.07
2	20.73	21.16	22.93	17.47	196.11	193.6	215.61	181.18	20.89	20.96	23.81	18.07
2.2	20.91	21.33	23.01	17.67	197.54	194.86	218.37	182.44	20.85	20.93	23.69	18.07
2.4	21.09	21.5	23.08	17.87	198.94	196.16	221.19	183.75	20.81	20.90	23.56	18.07
2.6	21.27	21.66	23.14	18.08	200.35	197.5	224.06	185.11	20.77	20.86	23.42	18.08
2.8	21.44	21.81	23.19	18.28	201.7	198.87	226.99	186.55	20.72	20.80	23.27	18.08
3	21.59	21.95	23.24	18.48	203.04	200.29	229.92	188.1	20.66	20.74	23.11	18.09
3.2	21.74	22.08	23.28	18.69	204.31	201.79	232.78	189.75	20.60	20.66	22.96	18.10
3.4	21.89	22.2	23.31	18.9	205.6	203.34	235.5	191.49	20.52	20.59	22.79	18.11
3.6	22.03	22.31	23.35	19.11	206.89	204.98	238.06	193.36	20.44	20.50	22.55	18.12
3.8	22.16	22.42	23.38	19.31	208.25	206.71	240.43	195.37	20.36	20.40	22.32	18.12
4	22.29	22.51	23.41	19.51	209.67	208.53	242.6	197.48	20.27	20.29	21.77	18.12
4.2	22.41	22.61		19.7	211.17	210.47		199.7	20.18	20.17		18.11
4.4	22.53	22.69		19.88	212.81	212.51		201.97	20.10	20.05		18.09
4.6	22.64	22.77		20.04	214.58	214.69		203.89	20.01	19.93		18.05
4.8	22.75	22.85		20.17	216.45	216.97		205.61	19.92	19.80		17.99
5	22.86	22.92		20.29	218.44	219.39		207.3	19.83	19.67		17.91
5.2	22.97	22.99		20.38	220.52	221.93		208.96	19.73	19.54		17.81
5.4	23.07	23.05		20.46	222.69	224.63		210.58	19.63	19.47		17.69
5.6	23.17	23.11		20.53	224.95	227.47		212.13	19.53	19.22		17.56
5.8	23.26			20.66	227.29			213.67	19.42			17.48
6	23.35			20.70	229.69			215.32	19.31			17.32
6.2				20.73				216.91				17.15
6.4				20.69				217.86				16.93
6.6				20.91				219.35				17.01
6.8				20.71				221.31				16.59
7												16.41
7.2												16.08

Typical Performance Data

TEST CONDITIONS: V_{DD} = +6 V, I_{DD} = 160 mA, 200 mA, 250 mA @ Temperature = +25°C

FREQ	Gain @ 160 mA	Gain @ 200 mA	Gain @ 250 mA	1dB Comp. Output @ 160 mA	1dB Comp. Output @ 200 mA	1dB Comp. Output @ 250 mA	OIP3 @ 160 mA	OIP3 @ 200 mA	OIP3 @ 250 mA	Noise Figure @ 160 mA	Noise Figure @ 200 mA	Noise Figure @ 250 mA
(GHz)	(dB)	(dB)	(dB)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dB)	(dB)	(dB)
16.0	18.79	19.64	20.14	25.46	25.44	25.54	32.56	31.29	29.50	7.40	7.38	7.65
16.5	19.40	20.20	20.67	24.51	24.86	25.08	32.38	31.24	29.39	6.83	6.81	7.06
17.0	19.66	20.41	20.85	23.61	24.28	24.61	32.16	31.08	29.08	6.47	6.43	6.69
17.2	19.71	20.43	20.86	23.35	24.06	24.43	32.04	30.97	28.89	6.38	6.35	6.58
17.4	19.71	20.41	20.83	23.18	23.92	24.31	31.97	30.92	28.73	6.28	6.27	6.52
17.6	19.74	20.42	20.82	23.08	23.83	24.22	31.89	30.88	28.60	6.20	6.19	6.43
17.8	19.71	20.36	20.75	22.98	23.73	24.10	31.79	30.80	28.41	6.13	6.11	6.35
18.0	19.70	20.32	20.69	22.96	23.73	24.12	31.79	30.79	28.28	6.04	6.02	6.25
18.2	19.68	20.27	20.62	22.95	23.72	24.09	31.81	30.81	28.18	5.94	5.94	6.16
18.4	19.63	20.19	20.52	22.95	23.73	24.10	31.83	30.86	28.10	5.83	5.83	6.07
18.6	19.56	20.07	20.39	23.02	23.83	24.20	31.93	30.95	28.09	5.71	5.73	5.96
18.8	19.48	19.96	20.26	23.04	23.85	24.21	32.09	31.12	28.15	5.56	5.59	5.84
19.0	19.39	19.84	20.13	23.11	23.94	24.29	32.25	31.26	28.21	5.44	5.46	5.71
19.2	19.28	19.71	19.97	23.17	24.01	24.36	32.49	31.46	28.34	5.32	5.29	5.57
19.4	19.22	19.62	19.88	23.17	24.01	24.35	32.74	31.63	28.45	5.16	5.18	5.43
19.6	19.20	19.58	19.82	23.22	24.06	24.41	33.04	31.80	28.54	5.02	5.05	5.30
19.8	19.12	19.49	19.72	23.21	24.04	24.38	33.24	31.97	28.60	4.88	4.93	5.17
20.0	19.08	19.43	19.65	23.20	24.01	24.35	33.46	32.13	28.66	4.78	4.81	5.07
20.2	18.96	19.29	19.50	23.23	24.03	24.36	33.69	32.24	28.68	4.66	4.71	4.97
20.4	18.93	19.25	19.45	23.19	23.97	24.29	33.78	32.33	28.69	4.52	4.60	4.86
20.6	18.93	19.24	19.43	23.21	23.98	24.30	33.99	32.47	28.70	4.44	4.51	4.73
20.8	18.95	19.25	19.43	23.25	24.01	24.32	34.24	32.60	28.73	4.34	4.42	4.65
21.0	18.90	19.20	19.37	23.26	24.01	24.31	34.36	32.66	28.71	4.28	4.35	4.61
21.2	18.93	19.22	19.39	23.35	24.11	24.39	34.53	32.79	28.70	4.21	4.29	4.55
21.4	18.95	19.23	19.39	23.41	24.18	24.45	34.84	32.95	28.76	4.17	4.24	4.49
21.6	18.95	19.22	19.37	23.46	24.21	24.47	35.05	33.03	28.77	4.10	4.16	4.45
21.8	18.92	19.18	19.32	23.56	24.30	24.54	35.27	33.14	28.85	4.06	4.11	4.39
22.0	18.90	19.16	19.29	23.56	24.29	24.53	35.52	33.28	28.95	4.00	4.08	4.33
22.2	18.93	19.18	19.31	23.58	24.30	24.56	35.63	33.36	29.07	3.94	4.02	4.31
22.4	18.94	19.19	19.31	23.62	24.34	24.60	35.65	33.41	29.12	3.88	3.97	4.26
22.6	18.91	19.15	19.27	23.54	24.26	24.54	35.77	33.50	29.16	3.85	3.94	4.23
22.8	18.91	19.15	19.25	23.57	24.29	24.57	35.81	33.54	29.21	3.79	3.89	4.20
23.0	18.97	19.21	19.31	23.55	24.25	24.51	35.89	33.61	29.25	3.76	3.87	4.18
23.2	19.01	19.24	19.35	23.50	24.17	24.44	36.06	33.65	29.19	3.72	3.84	4.17
23.4	19.02	19.25	19.35	23.55	24.22	24.47	36.22	33.67	29.19	3.69	3.83	4.16
23.5	19.03	19.25	19.35	23.55	24.19	24.43	36.30	33.66	29.17	3.64	3.80	4.14
23.6	19.08	19.31	19.41	23.63	24.26	24.50	36.42	33.66	29.15	3.60	3.79	4.12
23.8	19.17	19.40	19.50	23.77	24.39	24.60	36.48	33.62	29.08	3.57	3.79	4.13
24.0	19.26	19.49	19.59	23.87	24.46	24.67	36.47	33.59	29.08	3.53	3.81	4.13
24.2	19.36	19.60	19.70	24.10	24.66	24.86	36.40	33.55	29.05	3.48	3.81	4.15
24.4	19.41	19.65	19.75	24.20	24.75	24.94	36.38	33.53	29.05	3.46	3.82	4.16
24.6	19.45	19.69	19.80	24.28	24.82	25.00	36.41	33.54	29.06	3.44	3.83	4.17
24.8	19.52	19.77	19.88	24.47	24.99	25.17	36.29	33.49	29.03	3.39	3.83	4.16
25.0	19.67	19.92	20.04	24.69	25.19	25.37	36.43	33.53	29.09	3.34	3.80	4.15
25.2	19.83	20.10	20.22	24.79	25.28	25.47	36.54	33.55	29.16	3.31	3.80	4.14
25.4	19.98	20.26	20.39	24.86	25.33	25.53	36.91	33.64	29.21	3.26	3.78	4.07
25.6	20.19	20.47	20.61	24.91	25.37	25.55	37.05	33.65	29.23	3.22	3.76	4.03
25.8	20.37	20.66	20.81	24.84	25.26	25.45	37.22	33.68	29.24	3.15	3.70	3.97
26.0	20.58	20.89	21.04	24.81	25.21	25.38	37.35	33.70	29.26	3.12	3.62	3.89
26.2	20.77	21.09	21.26	24.83	25.19	25.35	37.34	33.67	29.18	3.08	3.56	3.83
26.4	20.97	21.30	21.48	24.78	25.10	25.25	37.30	33.60	29.08	3.06	3.47	3.77
26.6	21.19	21.53	21.72	24.88	25.17	25.29	37.51	33.59	29.06	3.02	3.41	3.71
26.8	21.45	21.81	22.01	24.97	25.22	25.32	37.69	33.51	28.98	2.97	3.35	3.62
27.0	21.68	22.06	22.28	25.03	25.25	25.34	37.75	33.47	28.91	3.02	3.30	3.58
27.5	22.26	22.68	22.95	25.36	25.49	25.57	37.80	33.35	28.86	3.03	3.21	3.50
28.0	22.91	23.41	23.75	25.49	25.57	25.65	37.98	33.29	28.74	3.12	3.11	3.43
28.5	23.49	24.11	24.58	25.20	25.27	25.32	38.93	33.42	28.74	3.31	3.16	3.49
29.0	23.78	24.56	25.20	24.56	24.61	24.65	39.61	33.58	28.66	3.41	3.18	3.53
29.5	23.53	24.48	25.31	23.89	23.96	23.98	39.68	33.58	28.35	3.42	3.22	3.58
30.0	22.78	23.87	24.87	23.26	23.34	23.35	39.14	33.68	27.91	3.52	3.37	3.71
30.5	21.61	22.79	23.89	22.58	22.66	22.66	38.03	33.99	27.44	3.50	3.47	3.83
31.0	20.30	21.53	22.69	21.85	21.92	21.92	36.08	34.29	26.93	3.64	3.58	3.96
31.5	18.75	19.96	21.12	21.15	21.21	21.24	34.06	34.26	26.35	3.84	3.77	4.15
32.0	16.92	18.09	19.19	20.69	20.76	20.83	33.15	33.84	25.93	3.99	3.98	4.35
32.5	14.81	15.91	16.94									
33.0	12.48	13.51	14.46									
33.5	10.16	11.12	11.99									
34.0	7.90	8.78	9.56									