

MMIC Amplifier Die

PGA-105-D+

Typical Performance Data

Full 2-Port Extension

Definitions:

Input Return Loss = -S11 (dB)

Gain(Power Gain) = S21 (dB)

Reverse Isolation = -S12 (dB)

Output Return Loss = -S22 (dB)

TEST CONDITIONS: Vd = 5.00V, Id = 64mA @Temperature = +25°C

FREQ.	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
20	18.22	20.21	6.65	7.84	0.68	0.59	34.01	20.20	1.29
30	16.97	19.60	9.48	10.61	0.83	0.60	34.02	20.18	1.40
40	16.28	19.30	11.63	12.70	0.92	0.59	34.04	20.17	1.52
50	15.85	18.95	13.18	14.32	0.96	0.58	34.12	20.15	1.64
60	15.66	19.36	14.86	15.77	1.02	0.62	34.25	20.14	1.70
70	15.48	19.09	15.95	16.87	1.03	0.60	34.32	20.12	1.73
80	15.37	19.08	16.95	17.80	1.05	0.60	34.40	20.11	1.77
90	15.30	19.05	17.81	18.57	1.06	0.60	34.50	20.09	1.78
100	15.24	19.05	18.53	19.29	1.07	0.60	34.56	20.06	1.80
150	15.11	19.01	20.98	21.48	1.09	0.60	34.97	20.04	1.83
200	15.06	19.03	22.12	22.64	1.09	0.60	35.33	20.02	1.88
250	15.02	18.99	22.65	23.46	1.10	0.60	35.56	19.98	1.92
300	15.01	19.01	22.76	23.90	1.10	0.60	35.99	19.95	1.98
350	14.99	19.06	22.68	24.20	1.10	0.61	36.36	19.91	1.99
400	14.99	19.08	22.63	24.45	1.11	0.61	36.61	19.88	2.00
450	14.97	19.11	22.40	24.53	1.11	0.62	36.57	19.88	2.02
500	14.97	19.12	22.14	24.61	1.11	0.62	36.64	19.84	2.02
600	14.96	19.20	21.75	24.72	1.11	0.62	36.74	19.81	2.01
700	14.96	19.27	21.46	24.55	1.12	0.63	36.76	19.75	1.95
800	14.96	19.38	21.32	24.09	1.13	0.64	36.73	19.67	1.90
900	14.96	19.48	21.39	23.47	1.13	0.65	36.92	19.58	1.86
1000	14.97	19.59	21.69	22.66	1.14	0.65	36.51	19.47	1.84
1050	14.97	19.64	21.89	22.25	1.14	0.65	36.57	19.41	1.83
1100	14.97	19.72	22.28	21.76	1.15	0.66	36.44	19.36	1.83
1200	14.99	19.87	23.13	20.79	1.16	0.67	36.30	19.24	1.84
1300	15.00	20.01	24.45	19.84	1.16	0.67	36.06	19.12	1.83
1400	15.01	20.18	26.26	18.84	1.17	0.68	35.84	19.01	1.83
1500	15.03	20.38	29.19	17.89	1.18	0.69	35.43	18.90	1.84
1600	15.04	20.58	33.61	16.98	1.19	0.70	35.17	18.84	1.84
1700	15.05	20.80	41.57	16.00	1.20	0.71	34.84	18.76	1.84
1800	15.07	21.06	34.30	15.11	1.21	0.72	34.40	18.70	1.82
1900	15.09	21.36	28.53	14.24	1.22	0.73	34.12	18.65	1.81
2000	15.11	21.68	24.99	13.43	1.24	0.75	33.84	18.63	1.78
2100	15.13	22.06	22.24	12.64	1.25	0.76	33.57	18.59	1.76
2200	15.16	22.55	20.25	11.89	1.27	0.78	33.42	18.59	1.74
2300	15.19	23.04	18.63	11.19	1.30	0.80	33.17	18.60	1.74
2400	15.21	23.75	17.34	10.51	1.34	0.82	33.03	18.64	1.75
2500	15.24	24.61	16.35	9.87	1.41	0.84	32.79	18.72	1.77
2600	15.26	25.73	15.63	9.27	1.53	0.85	32.60	18.81	1.79
2700	15.26	27.22	15.29	8.67	1.73	0.86	32.40	18.92	1.85
2800	15.22	29.30	15.28	8.14	2.11	0.86	32.19	19.08	1.91
2900	15.14	32.50	15.75	7.63	2.97	0.85	32.09	19.28	1.93
3000	14.99	38.29	16.41	7.19	5.75	0.83	32.01	19.52	1.94



MMIC Amplifier Die

PGA-105-D+

Typical Performance Data

Full 2-Port Extension

Definitions:

Input Return Loss = -S11 (dB)

Gain(Power Gain) = S21 (dB)

Reverse Isolation = -S12 (dB)

Output Return Loss = -S22 (dB)

TEST CONDITIONS: Vd = 4.75V, Id = 60mA @Temperature = +25°C

FREQ.	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
20	18.19	20.26	6.60	7.82	0.68	0.60	33.42	19.85	1.27
30	16.93	19.53	9.44	10.60	0.83	0.60	33.51	19.84	1.38
40	16.24	19.29	11.61	12.68	0.92	0.60	33.70	19.84	1.50
50	15.81	19.26	13.46	14.26	0.98	0.61	33.81	19.84	1.62
60	15.62	19.12	14.57	15.71	1.01	0.60	33.87	19.83	1.68
70	15.44	19.05	15.89	16.86	1.03	0.60	33.95	19.82	1.72
80	15.33	19.03	16.90	17.77	1.05	0.60	34.09	19.84	1.75
90	15.26	19.00	17.74	18.56	1.06	0.60	34.14	19.82	1.77
100	15.20	19.00	18.51	19.26	1.07	0.60	34.23	19.82	1.79
150	15.07	19.00	20.95	21.45	1.09	0.60	34.84	19.80	1.81
200	15.01	18.98	22.06	22.58	1.09	0.60	35.29	19.79	1.86
250	14.98	19.02	22.69	23.37	1.10	0.61	35.82	19.76	1.91
300	14.96	19.00	22.73	23.85	1.10	0.61	36.39	19.73	1.96
350	14.95	19.06	22.62	24.16	1.11	0.61	36.70	19.70	1.97
400	14.95	19.06	22.56	24.43	1.11	0.61	36.79	19.68	1.98
450	14.93	19.11	22.37	24.54	1.11	0.62	36.69	19.68	2.00
500	14.92	19.09	22.13	24.72	1.11	0.62	36.63	19.65	2.00
600	14.92	19.17	21.65	24.83	1.11	0.63	36.94	19.62	1.99
700	14.92	19.24	21.41	24.78	1.12	0.63	37.24	19.58	1.94
800	14.91	19.34	21.24	24.40	1.13	0.64	36.85	19.49	1.91
900	14.92	19.43	21.31	23.79	1.13	0.65	36.52	19.41	1.86
1000	14.92	19.56	21.65	23.06	1.14	0.65	36.05	19.29	1.83
1050	14.93	19.62	21.81	22.65	1.14	0.66	35.89	19.21	1.81
1100	14.93	19.68	22.17	22.13	1.15	0.66	35.63	19.16	1.82
1200	14.94	19.83	23.02	21.19	1.16	0.67	35.33	19.03	1.82
1300	14.95	19.97	24.28	20.22	1.16	0.67	35.17	18.92	1.81
1400	14.96	20.13	26.03	19.21	1.17	0.68	34.98	18.78	1.81
1500	14.98	20.32	28.87	18.27	1.18	0.69	34.71	18.67	1.83
1600	14.99	20.53	33.08	17.32	1.19	0.70	34.34	18.61	1.82
1700	15.01	20.77	40.04	16.37	1.21	0.71	33.97	18.52	1.81
1800	15.03	21.05	34.88	15.44	1.22	0.72	33.78	18.46	1.82
1900	15.05	21.32	28.92	14.55	1.23	0.74	33.64	18.40	1.80
2000	15.07	21.66	25.24	13.76	1.24	0.75	33.29	18.37	1.77
2100	15.09	22.04	22.45	12.93	1.26	0.77	33.19	18.32	1.74
2200	15.12	22.52	20.43	12.20	1.28	0.79	33.03	18.33	1.74
2300	15.15	23.09	18.81	11.47	1.31	0.80	32.87	18.36	1.73
2400	15.18	23.73	17.50	10.81	1.35	0.82	32.59	18.41	1.74
2500	15.21	24.62	16.51	10.17	1.43	0.84	32.31	18.48	1.75
2600	15.22	25.75	15.79	9.55	1.55	0.86	32.18	18.55	1.77
2700	15.23	27.26	15.45	8.96	1.76	0.86	31.99	18.67	1.84
2800	15.19	29.43	15.45	8.42	2.18	0.87	31.94	18.81	1.90
2900	15.11	32.77	15.95	7.90	3.12	0.86	31.98	19.04	1.91
3000	14.96	38.75	16.62	7.45	6.18	0.84	32.01	19.29	1.91



MMIC Amplifier Die

PGA-105-D+

Typical Performance Data

Full 2-Port Extension

Definitions:

Input Return Loss = -S11 (dB)

Gain(Power Gain) = S21 (dB)

Reverse Isolation = -S12 (dB)

Output Return Loss = -S22 (dB)

TEST CONDITIONS: Vd = 5.25V, Id = 68mA @Temperature = +25°C

FREQ.	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
20	18.25	20.34	6.70	7.86	0.68	0.61	33.22	20.47	1.31
30	16.99	19.60	9.50	10.62	0.83	0.59	33.39	20.46	1.42
40	16.31	19.35	11.66	12.72	0.92	0.60	33.49	20.45	1.53
50	15.88	19.39	13.24	14.43	0.98	0.62	33.57	20.45	1.65
60	15.69	18.97	14.84	15.75	1.00	0.58	33.70	20.44	1.71
70	15.51	19.12	15.99	16.89	1.03	0.60	33.77	20.43	1.74
80	15.41	19.08	16.99	17.82	1.05	0.60	33.87	20.42	1.78
90	15.33	19.08	17.84	18.59	1.06	0.60	33.94	20.40	1.80
100	15.28	19.05	18.59	19.32	1.06	0.60	34.04	20.39	1.81
150	15.14	19.04	20.99	21.55	1.09	0.60	34.58	20.37	1.84
200	15.09	19.02	22.14	22.69	1.09	0.60	35.05	20.36	1.89
250	15.06	19.06	22.65	23.51	1.10	0.60	35.71	20.31	1.93
300	15.05	19.07	22.80	23.88	1.10	0.61	36.34	20.28	1.98
350	15.03	19.08	22.75	24.17	1.10	0.61	36.87	20.25	1.99
400	15.02	19.09	22.65	24.42	1.10	0.61	36.87	20.24	2.01
450	15.01	19.12	22.41	24.53	1.11	0.61	36.79	20.24	2.03
500	15.01	19.18	22.13	24.62	1.11	0.62	36.88	20.21	2.03
600	15.00	19.22	21.76	24.60	1.11	0.62	37.12	20.18	2.01
700	15.00	19.31	21.49	24.42	1.12	0.63	37.53	20.13	1.96
800	15.00	19.40	21.37	23.87	1.12	0.64	37.69	20.03	1.91
900	15.00	19.49	21.44	23.21	1.13	0.64	37.53	19.95	1.87
1000	15.01	19.61	21.75	22.38	1.14	0.65	37.37	19.84	1.85
1050	15.01	19.68	21.98	21.95	1.14	0.65	37.29	19.78	1.85
1100	15.01	19.76	22.34	21.45	1.15	0.66	37.18	19.72	1.85
1200	15.02	19.89	23.20	20.50	1.15	0.66	36.80	19.59	1.86
1300	15.03	20.03	24.57	19.52	1.16	0.67	36.43	19.49	1.86
1400	15.04	20.20	26.42	18.56	1.17	0.68	36.06	19.35	1.85
1500	15.06	20.41	29.47	17.63	1.18	0.69	35.91	19.24	1.86
1600	15.07	20.61	34.28	16.70	1.19	0.70	35.73	19.17	1.87
1700	15.09	20.83	42.78	15.75	1.20	0.71	35.47	19.08	1.85
1800	15.10	21.09	34.07	14.85	1.21	0.72	35.29	19.03	1.84
1900	15.12	21.39	28.34	14.00	1.22	0.73	34.98	18.96	1.82
2000	15.14	21.72	24.82	13.20	1.23	0.75	34.58	18.93	1.80
2100	15.16	22.09	22.06	12.40	1.25	0.76	34.20	18.88	1.78
2200	15.19	22.52	20.13	11.67	1.26	0.78	33.79	18.89	1.77
2300	15.21	23.08	18.54	10.96	1.29	0.80	33.51	18.92	1.78
2400	15.23	23.76	17.23	10.30	1.33	0.81	33.17	18.94	1.79
2500	15.26	24.59	16.24	9.66	1.39	0.83	32.91	19.01	1.80
2600	15.28	25.73	15.53	9.05	1.51	0.85	32.72	19.08	1.81
2700	15.28	27.14	15.17	8.46	1.69	0.85	32.57	19.21	1.88
2800	15.25	29.25	15.16	7.94	2.07	0.85	32.51	19.35	1.93
2900	15.16	32.30	15.61	7.42	2.86	0.84	32.34	19.58	1.95
3000	15.01	37.54	16.28	7.00	5.20	0.82	32.26	19.83	1.96



MMIC Amplifier Die

PGA-105-D+

Typical Performance Data

Without Full 2-Port Extension

Definitions:

Input Return Loss = -S11 (dB)

Gain(Power Gain) = S21 (dB)

Reverse Isolation = -S12 (dB)

Output Return Loss = -S22 (dB)

TEST CONDITIONS: Vd = 5.00V, Id = 64mA @Temperature = +25°C

FREQ.	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
20	18.32	20.17	6.57	7.76	0.67	0.58	34.01	20.20	1.29
30	17.05	19.50	9.39	10.51	0.82	0.58	34.02	20.18	1.40
40	16.36	19.23	11.55	12.62	0.91	0.58	34.04	20.17	1.52
50	15.93	18.88	13.10	14.31	0.96	0.56	34.12	20.15	1.64
60	15.74	19.16	14.79	15.69	1.01	0.59	34.25	20.14	1.70
70	15.55	19.04	15.89	16.78	1.02	0.59	34.32	20.12	1.73
80	15.45	19.02	16.88	17.71	1.04	0.59	34.40	20.11	1.77
90	15.37	19.00	17.73	18.50	1.05	0.59	34.50	20.09	1.78
100	15.31	18.99	18.47	19.20	1.06	0.59	34.56	20.06	1.80
150	15.16	18.95	20.93	21.44	1.08	0.59	34.97	20.04	1.83
200	15.10	18.97	22.06	22.59	1.09	0.59	35.33	20.02	1.88
250	15.05	18.97	22.58	23.42	1.09	0.60	35.56	19.98	1.92
300	15.03	19.00	22.74	23.81	1.10	0.60	35.99	19.95	1.98
350	15.01	19.02	22.70	24.18	1.10	0.61	36.36	19.91	1.99
400	14.99	19.09	22.63	24.44	1.11	0.61	36.61	19.88	2.00
450	14.97	19.12	22.41	24.56	1.11	0.62	36.57	19.88	2.02
500	14.96	19.15	22.13	24.67	1.11	0.62	36.64	19.84	2.02
600	14.94	19.20	21.77	24.71	1.12	0.63	36.74	19.81	2.01
700	14.92	19.33	21.51	24.61	1.12	0.64	36.76	19.75	1.95
800	14.91	19.42	21.37	24.14	1.13	0.65	36.73	19.67	1.90
900	14.90	19.52	21.46	23.54	1.14	0.65	36.92	19.58	1.86
1000	14.89	19.65	21.78	22.74	1.15	0.66	36.51	19.47	1.84
1050	14.89	19.72	22.00	22.33	1.15	0.67	36.57	19.41	1.83
1100	14.89	19.81	22.36	21.83	1.16	0.67	36.44	19.36	1.83
1200	14.89	19.95	23.20	20.88	1.17	0.68	36.30	19.24	1.84
1300	14.89	20.11	24.59	19.93	1.18	0.69	36.06	19.12	1.83
1400	14.89	20.29	26.39	18.97	1.19	0.70	35.84	19.01	1.83
1500	14.90	20.49	29.31	18.01	1.20	0.71	35.43	18.90	1.84
1600	14.90	20.70	33.94	17.11	1.21	0.72	35.17	18.84	1.84
1700	14.90	20.96	41.71	16.16	1.23	0.73	34.84	18.76	1.84
1800	14.91	21.22	34.46	15.26	1.24	0.74	34.40	18.70	1.82
1900	14.92	21.52	28.75	14.41	1.26	0.75	34.12	18.65	1.81
2000	14.93	21.88	25.17	13.60	1.27	0.77	33.84	18.63	1.78
2100	14.94	22.25	22.42	12.82	1.29	0.78	33.57	18.59	1.76
2200	14.96	22.70	20.41	12.08	1.31	0.80	33.42	18.59	1.74
2300	14.98	23.23	18.83	11.39	1.35	0.81	33.17	18.60	1.74
2400	15.00	23.96	17.54	10.73	1.40	0.83	33.03	18.64	1.75
2500	15.02	24.81	16.57	10.10	1.48	0.85	32.79	18.72	1.77
2600	15.03	25.94	15.86	9.50	1.61	0.86	32.60	18.81	1.79
2700	15.02	27.43	15.52	8.91	1.83	0.87	32.40	18.92	1.85
2800	14.98	29.55	15.53	8.39	2.26	0.87	32.19	19.08	1.91
2900	14.89	32.71	16.01	7.88	3.18	0.86	32.09	19.28	1.93
3000	14.73	38.41	16.70	7.45	6.10	0.84	32.01	19.52	1.94



MMIC Amplifier Die

PGA-105-D+

Typical Performance Data

Without Full 2-Port Extension

Definitions:

Input Return Loss = -S11 (dB)

Gain(Power Gain) = S21 (dB)

Reverse Isolation = -S12 (dB)

Output Return Loss = -S22 (dB)

TEST CONDITIONS: Vd = 4.75V, Id = 60mA @Temperature = +25°C

FREQ.	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)	K	Measure	(dBm)	(dBm)	(dB)
20	18.28	20.06	6.53	7.72	0.67	0.57	33.42	19.85	1.27
30	17.02	19.46	9.36	10.51	0.82	0.58	33.51	19.84	1.38
40	16.33	19.20	11.53	12.61	0.91	0.58	33.70	19.84	1.50
50	15.89	18.99	13.25	14.17	0.96	0.58	33.81	19.84	1.62
60	15.70	19.18	14.56	15.65	1.00	0.60	33.87	19.83	1.68
70	15.51	18.99	15.84	16.78	1.02	0.59	33.95	19.82	1.72
80	15.41	18.98	16.83	17.70	1.04	0.59	34.09	19.84	1.75
90	15.33	18.94	17.71	18.48	1.05	0.59	34.14	19.82	1.77
100	15.27	18.94	18.47	19.20	1.06	0.59	34.23	19.82	1.79
150	15.12	18.95	20.85	21.41	1.08	0.59	34.84	19.80	1.81
200	15.06	18.94	22.03	22.54	1.09	0.60	35.29	19.79	1.86
250	15.01	18.96	22.61	23.38	1.10	0.60	35.82	19.76	1.91
300	14.99	18.95	22.70	23.87	1.10	0.60	36.39	19.73	1.96
350	14.97	19.01	22.59	24.14	1.10	0.61	36.70	19.70	1.97
400	14.96	19.05	22.59	24.47	1.11	0.61	36.79	19.68	1.98
450	14.93	19.09	22.33	24.59	1.11	0.62	36.69	19.68	2.00
500	14.92	19.11	22.08	24.72	1.11	0.62	36.63	19.65	2.00
600	14.90	19.19	21.69	24.85	1.12	0.63	36.94	19.62	1.99
700	14.88	19.27	21.44	24.83	1.12	0.64	37.24	19.58	1.94
800	14.87	19.37	21.28	24.42	1.13	0.65	36.85	19.49	1.91
900	14.86	19.50	21.37	23.90	1.14	0.66	36.52	19.41	1.86
1000	14.85	19.63	21.70	23.13	1.15	0.67	36.05	19.29	1.83
1050	14.85	19.69	21.86	22.72	1.15	0.67	35.89	19.21	1.81
1100	14.84	19.77	22.24	22.22	1.16	0.67	35.63	19.16	1.82
1200	14.84	19.92	23.11	21.26	1.17	0.68	35.33	19.03	1.82
1300	14.85	20.07	24.39	20.32	1.18	0.69	35.17	18.92	1.81
1400	14.85	20.26	26.13	19.36	1.19	0.70	34.98	18.78	1.81
1500	14.85	20.48	28.96	18.38	1.20	0.71	34.71	18.67	1.83
1600	14.86	20.67	33.20	17.46	1.22	0.72	34.34	18.61	1.82
1700	14.86	20.93	40.37	16.52	1.23	0.73	33.97	18.52	1.81
1800	14.87	21.19	35.04	15.59	1.24	0.74	33.78	18.46	1.82
1900	14.88	21.49	29.04	14.73	1.26	0.76	33.64	18.40	1.80
2000	14.89	21.86	25.47	13.92	1.28	0.77	33.29	18.37	1.77
2100	14.91	22.23	22.66	13.13	1.30	0.79	33.19	18.32	1.74
2200	14.93	22.72	20.62	12.39	1.33	0.80	33.03	18.33	1.74
2300	14.95	23.24	19.03	11.68	1.36	0.82	32.87	18.36	1.73
2400	14.96	23.96	17.72	11.02	1.42	0.84	32.59	18.41	1.74
2500	14.98	24.83	16.74	10.38	1.50	0.85	32.31	18.48	1.75
2600	15.00	26.00	16.02	9.78	1.64	0.87	32.18	18.55	1.77
2700	14.99	27.48	15.70	9.18	1.87	0.87	31.99	18.67	1.84
2800	14.94	29.71	15.70	8.66	2.33	0.88	31.94	18.81	1.90
2900	14.85	32.96	16.20	8.15	3.33	0.87	31.98	19.04	1.91
3000	14.69	39.00	16.89	7.70	6.65	0.85	32.01	19.29	1.91



MMIC Amplifier Die

PGA-105-D+

Typical Performance Data

Without Full 2-Port Extension

Definitions:

Input Return Loss = -S11 (dB)

Gain(Power Gain) = S21 (dB)

Reverse Isolation = -S12 (dB)

Output Return Loss = -S22 (dB)

TEST CONDITIONS: Vd = 5.25V, Id = 68mA @Temperature = +25°C

FREQ.	Gain	Isolation	Input Return Loss	Output Return Loss	Stability		IP-3 Output	1dB Comp. Output	Noise Figure
					K	Measure			
(MHz)	(dB)	(dB)	(dB)	(dB)			(dBm)	(dBm)	(dB)
20	18.34	20.21	6.60	7.77	0.67	0.58	33.22	20.47	1.31
30	17.08	19.53	9.42	10.54	0.82	0.58	33.39	20.46	1.42
40	16.40	19.27	11.57	12.64	0.91	0.58	33.49	20.45	1.53
50	15.96	19.03	13.14	14.37	0.96	0.58	33.57	20.45	1.65
60	15.77	19.07	14.80	15.69	1.00	0.58	33.70	20.44	1.71
70	15.59	19.06	15.91	16.82	1.02	0.59	33.77	20.43	1.74
80	15.48	19.04	16.93	17.75	1.04	0.59	33.87	20.42	1.78
90	15.40	19.03	17.77	18.54	1.05	0.59	33.94	20.40	1.80
100	15.34	19.02	18.52	19.26	1.06	0.59	34.04	20.39	1.81
150	15.20	18.98	20.94	21.50	1.08	0.59	34.58	20.37	1.84
200	15.14	18.99	22.09	22.67	1.09	0.59	35.05	20.36	1.89
250	15.10	18.98	22.61	23.46	1.09	0.59	35.71	20.31	1.93
300	15.07	19.05	22.77	23.92	1.10	0.60	36.34	20.28	1.98
350	15.05	19.07	22.71	24.23	1.10	0.61	36.87	20.25	1.99
400	15.03	19.09	22.63	24.43	1.10	0.61	36.87	20.24	2.01
450	15.02	19.10	22.40	24.55	1.11	0.61	36.79	20.24	2.03
500	15.00	19.18	22.14	24.63	1.11	0.62	36.88	20.21	2.03
600	14.98	19.25	21.79	24.64	1.12	0.63	37.12	20.18	2.01
700	14.97	19.33	21.52	24.42	1.12	0.64	37.53	20.13	1.96
800	14.95	19.44	21.40	23.95	1.13	0.64	37.69	20.03	1.91
900	14.94	19.55	21.47	23.25	1.14	0.65	37.53	19.95	1.87
1000	14.93	19.69	21.87	22.48	1.15	0.66	37.37	19.84	1.85
1050	14.93	19.76	22.03	22.08	1.15	0.67	37.29	19.78	1.85
1100	14.93	19.81	22.38	21.53	1.16	0.67	37.18	19.72	1.85
1200	14.93	19.99	23.29	20.59	1.17	0.68	36.80	19.59	1.86
1300	14.93	20.14	24.64	19.64	1.18	0.69	36.43	19.49	1.86
1400	14.93	20.34	26.48	18.67	1.19	0.70	36.06	19.35	1.85
1500	14.93	20.52	29.64	17.74	1.20	0.70	35.91	19.24	1.86
1600	14.93	20.74	34.26	16.83	1.21	0.72	35.73	19.17	1.87
1700	14.94	20.99	42.81	15.90	1.23	0.73	35.47	19.08	1.85
1800	14.95	21.23	34.34	15.02	1.24	0.74	35.29	19.03	1.84
1900	14.95	21.56	28.54	14.15	1.25	0.75	34.98	18.96	1.82
2000	14.96	21.87	24.99	13.38	1.27	0.76	34.58	18.93	1.80
2100	14.97	22.28	22.31	12.58	1.29	0.78	34.20	18.88	1.78
2200	14.99	22.73	20.32	11.86	1.31	0.80	33.79	18.89	1.77
2300	15.01	23.28	18.75	11.16	1.34	0.81	33.51	18.92	1.78
2400	15.02	23.97	17.45	10.49	1.39	0.83	33.17	18.94	1.79
2500	15.04	24.77	16.47	9.88	1.46	0.84	32.91	19.01	1.80
2600	15.05	25.91	15.75	9.27	1.59	0.86	32.72	19.08	1.81
2700	15.04	27.36	15.41	8.69	1.79	0.86	32.57	19.21	1.88
2800	15.00	29.47	15.40	8.18	2.21	0.86	32.51	19.35	1.93
2900	14.91	32.56	15.87	7.67	3.08	0.85	32.34	19.58	1.95
3000	14.75	37.90	16.54	7.26	5.67	0.83	32.26	19.83	1.96

