Characterization and Data

Customer Address:	Rental Unit
Certificate #:	23091202DR
Product:	Solid State Amplifier
Manufacturer:	Amplifier Research
Model:	40/5SG11
Serial #:	0424789
Notes:	Ranges:BandA .7 to 4.2GHZ Band B 4.0 to 10.6GHz Power: Band A 40 Watts Band B 5 Watts CSV Files available upon request
Date of Characterization:	
Next Characterization: *	

The next characterization date is defined by the equipment user/owner.

The above equipment was tested and found to be within the Manufacturer's specification. The results of the tests performed are held on file at TheEMCShop.com; see the comments below. The Characterization was carried out in accordance with the general requirements of IEC 61000-4-3 using laboratory standards which are traceable to the National Institute of Standards and Technology (NIST) except where none exist. Tests are carried out in environmental conditions controlled appropriately to the instrument's specification.

Calibration Equipment

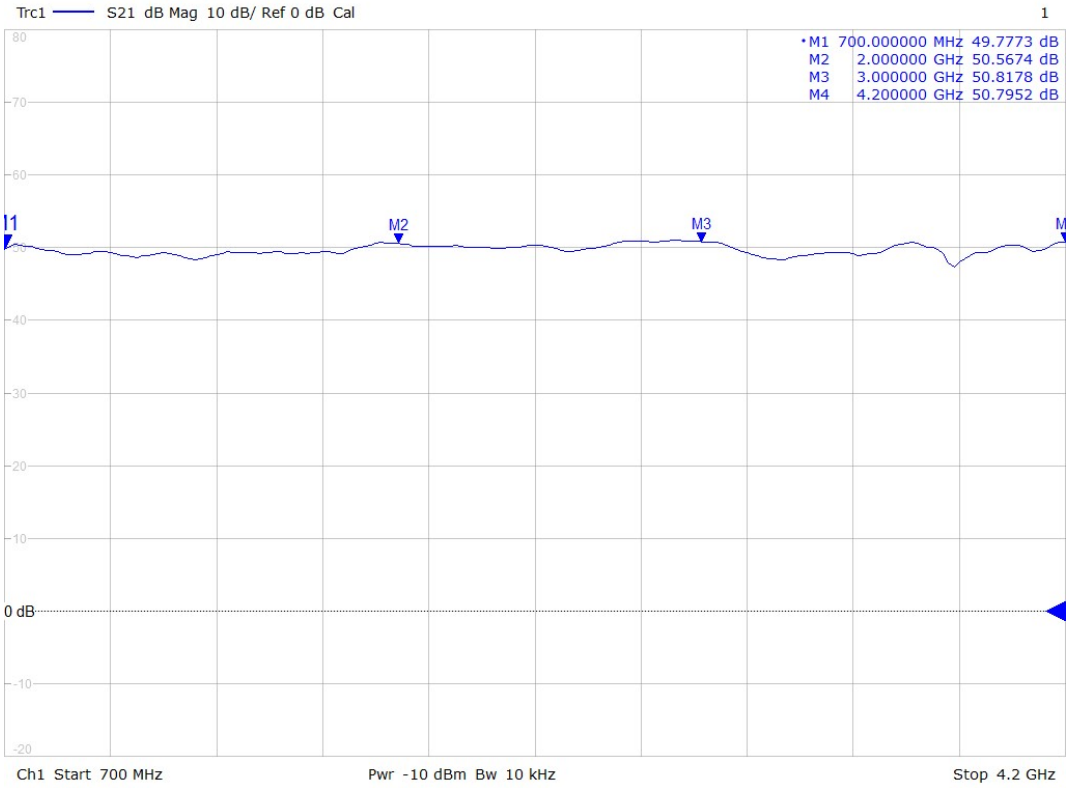
Model	Description	Serial Number	Due Date
ZNB8-2Port	Rohde & Schwarz Vector Analyzer	1311601042103153	7/3/2024
ZV-Z21	Calibration Kit N (50 Ω)	100800	1/26/2024

Ambient Conditions of Laboratory	
Temperature (°C):	**20.5**
Relative Humidity (%):	**44**

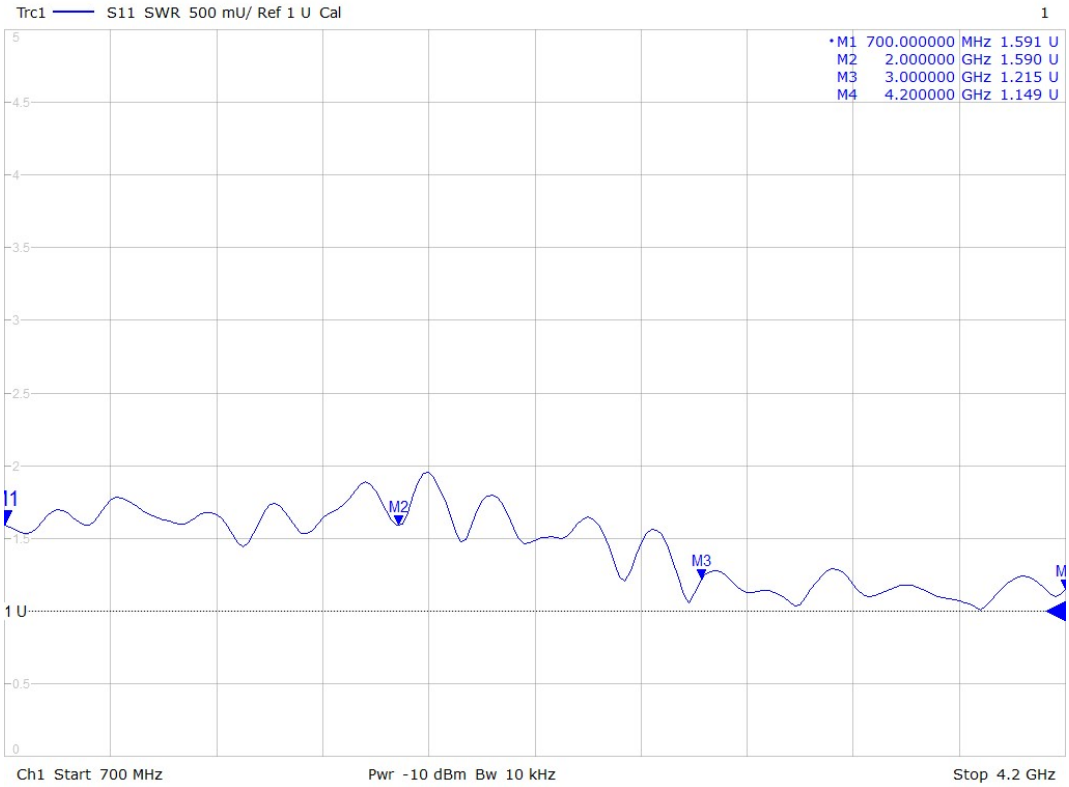
Technician: **Dan Raines**

Technician Signature: _____

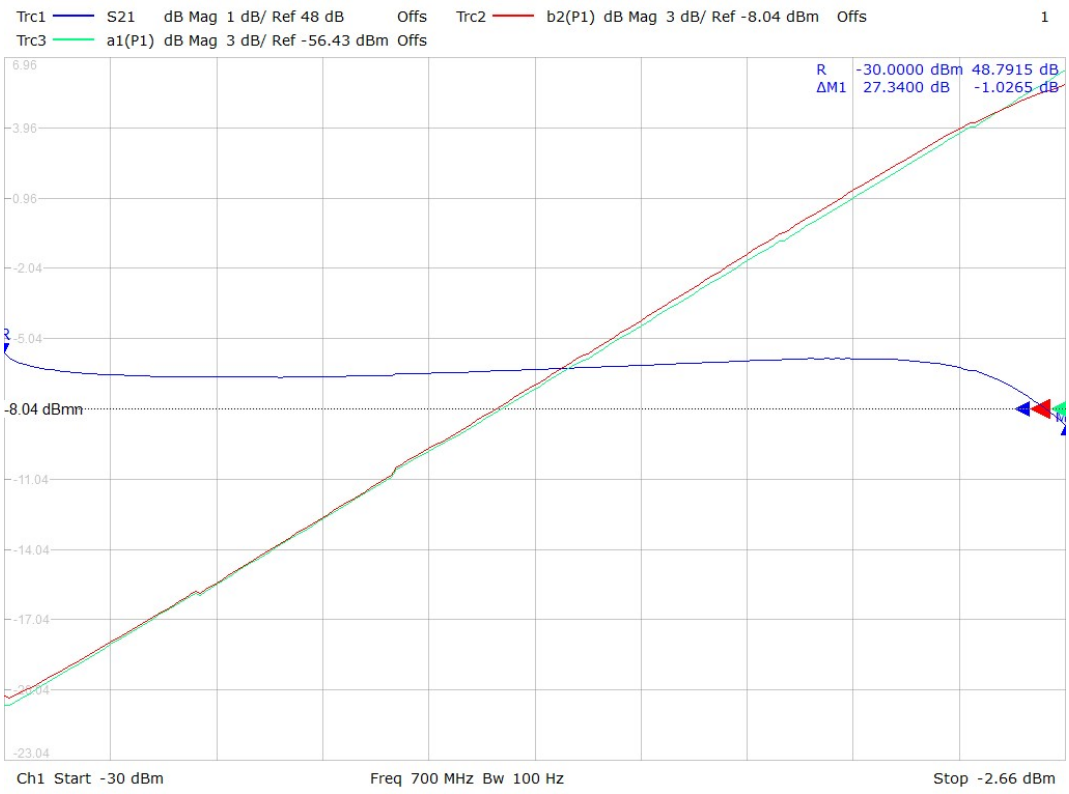
Gain Band A: **-10dBm Input**



Input VSWR Band A



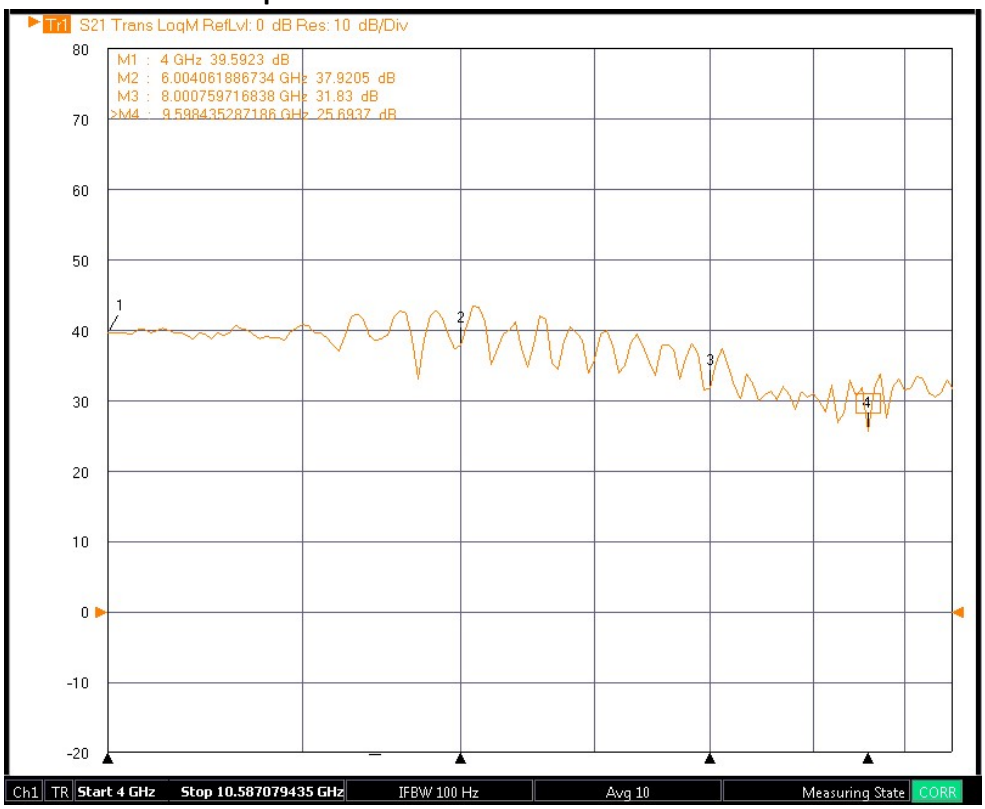
P1dB Band A 700MHz



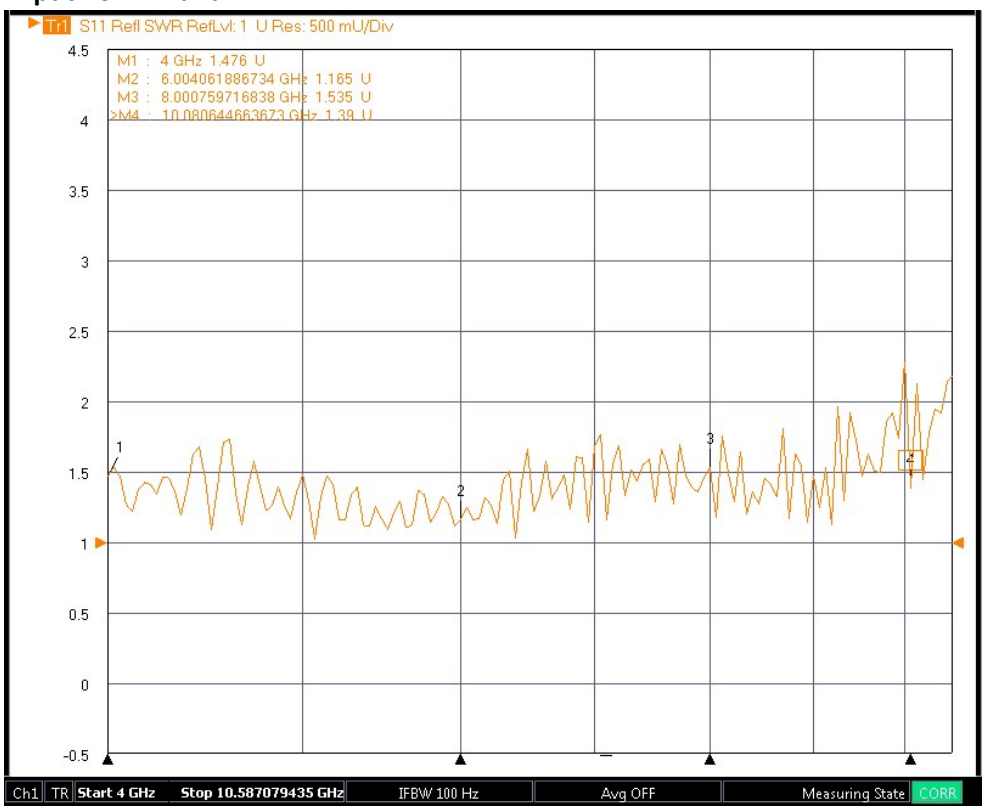
P1dB Band A 2.4GHz

P1dB Band A 4.2 GHz

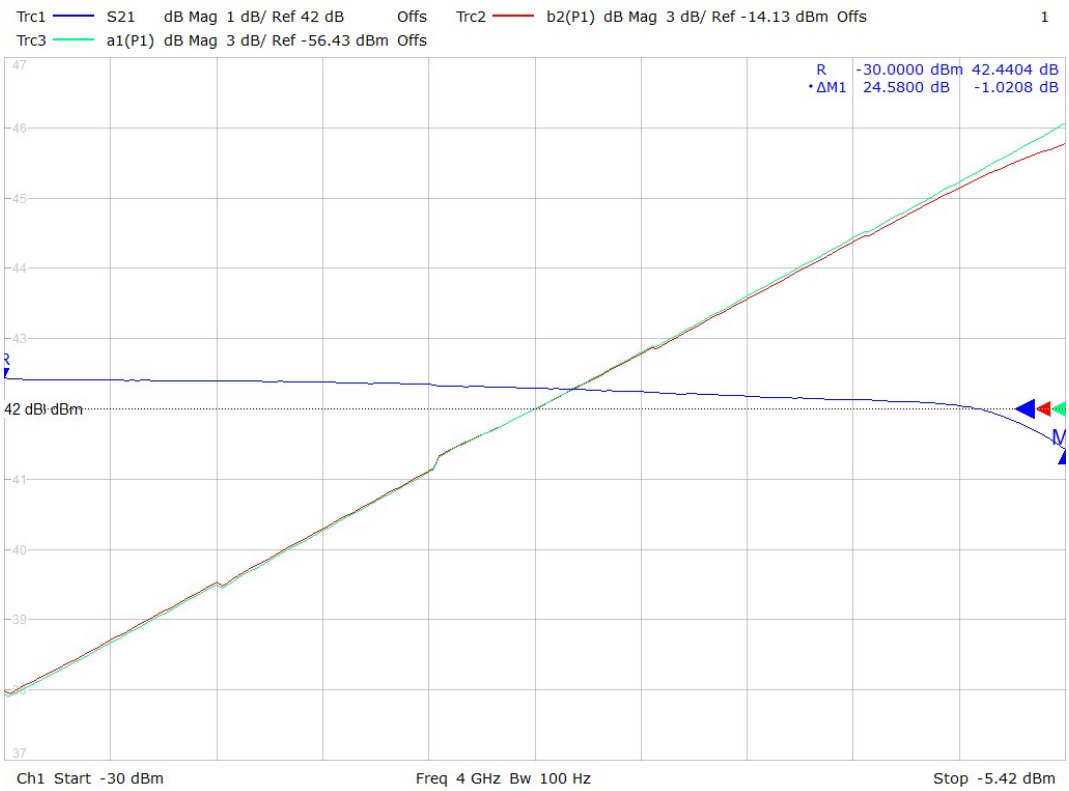
Gain Band B +0dB Input



Input VSWR Band B



P1dB Band B 4.0GHz



P1dB Band B 7.3GHz

P1dB Band B 8.5GHz

Band A

Frequency (Hz)	Gain at -10dBm Input (dBm)	VSWR at Input (U)
700000000	49.79	1.59
717500000	50.19	1.57
735000000	50.43	1.56
752500000	50.36	1.54
770000000	50.21	1.53
787500000	50.14	1.54
805000000	49.89	1.57
822500000	49.81	1.61
840000000	49.63	1.65
857500000	49.57	1.68
875000000	49.47	1.70
892500000	49.25	1.69
910000000	49.10	1.67
927500000	48.98	1.64
945000000	48.98	1.61
962500000	49.24	1.59
980000000	49.20	1.59
997500000	49.43	1.62
1015000000	49.50	1.67
1032500000	49.46	1.72
1050000000	49.29	1.76
1067500000	49.18	1.78
1085000000	48.93	1.78
1102500000	48.90	1.76
1120000000	48.78	1.74
1137500000	48.67	1.72
1155000000	48.87	1.69
1172500000	48.94	1.67
1190000000	48.99	1.65
1207500000	49.14	1.64
1225000000	49.27	1.63
1242500000	49.22	1.61
1260000000	49.09	1.60
1277500000	48.88	1.60
1295000000	48.59	1.60
1312500000	48.48	1.62
1330000000	48.38	1.64
1347500000	48.51	1.67
1365000000	48.67	1.68
1382500000	48.87	1.68

1400000000	49.08	1.66
1417500000	49.24	1.63
1435000000	49.44	1.58
1452500000	49.33	1.52
1470000000	49.30	1.47
1487500000	49.39	1.44
1505000000	49.28	1.46
1522500000	49.30	1.53
1540000000	49.19	1.62
1557500000	49.28	1.69
1575000000	49.29	1.73
1592500000	49.43	1.74
1610000000	49.44	1.72
1627500000	49.20	1.68
1645000000	49.22	1.63
1662500000	49.19	1.57
1680000000	49.28	1.54
1697500000	49.24	1.53
1715000000	49.27	1.55
1732500000	49.40	1.60
1750000000	49.43	1.64
1767500000	49.48	1.67
1785000000	49.39	1.68
1802500000	49.23	1.70
1820000000	49.20	1.73
1837500000	49.58	1.77
1855000000	49.89	1.82
1872500000	50.09	1.86
1890000000	50.17	1.88
1907500000	50.35	1.87
1925000000	50.62	1.82
1942500000	50.72	1.76
1960000000	50.62	1.69
1977500000	50.55	1.62
1995000000	50.58	1.58
2012500000	50.53	1.60
2030000000	50.39	1.67
2047500000	50.25	1.79
2065000000	50.20	1.89
2082500000	50.21	1.95
2100000000	50.22	1.95
2117500000	50.23	1.92
2135000000	50.24	1.85
2152500000	50.23	1.76

2170000000	50.23	1.65
2187500000	50.28	1.54
2205000000	50.19	1.48
2222500000	50.09	1.49
2240000000	50.09	1.58
2257500000	50.06	1.68
2275000000	50.05	1.75
2292500000	49.98	1.79
2310000000	49.88	1.80
2327500000	49.85	1.77
2345000000	49.97	1.73
2362500000	50.07	1.65
2380000000	50.10	1.57
2397500000	50.10	1.50
2415000000	50.18	1.46
2432500000	50.31	1.46
2450000000	50.38	1.48
2467500000	50.37	1.50
2485000000	50.15	1.51
2502500000	50.01	1.51
2520000000	49.85	1.50
2537500000	49.64	1.50
2555000000	49.53	1.51
2572500000	49.51	1.55
2590000000	49.55	1.60
2607500000	49.69	1.63
2625000000	49.85	1.64
2642500000	49.96	1.62
2660000000	50.02	1.59
2677500000	50.17	1.52
2695000000	50.40	1.44
2712500000	50.59	1.33
2730000000	50.73	1.23
2747500000	50.85	1.20
2765000000	50.88	1.28
2782500000	50.85	1.38
2800000000	50.84	1.47
2817500000	50.85	1.53
2835000000	50.80	1.56
2852500000	50.74	1.56
2870000000	50.86	1.52
2887500000	50.96	1.45
2905000000	51.07	1.35
2922500000	51.03	1.23

2940000000	50.95	1.11
2957500000	50.90	1.06
2975000000	50.90	1.12
2992500000	50.85	1.19
3010000000	50.78	1.24
3027500000	50.74	1.27
3045000000	50.71	1.28
3062500000	50.59	1.27
3080000000	50.34	1.24
3097500000	50.02	1.21
3115000000	49.77	1.17
3132500000	49.51	1.14
3150000000	49.27	1.12
3167500000	49.06	1.13
3185000000	48.86	1.13
3202500000	48.67	1.14
3220000000	48.54	1.14
3237500000	48.43	1.13
3255000000	48.35	1.11
3272500000	48.40	1.09
3290000000	48.54	1.07
3307500000	48.71	1.04
3325000000	48.84	1.04
3342500000	48.95	1.09
3360000000	49.06	1.14
3377500000	49.13	1.20
3395000000	49.23	1.24
3412500000	49.27	1.27
3430000000	49.29	1.29
3447500000	49.29	1.29
3465000000	49.33	1.27
3482500000	49.28	1.23
3500000000	49.15	1.19
3517500000	48.96	1.14
3535000000	48.97	1.11
3552500000	49.17	1.09
3570000000	49.24	1.10
3587500000	49.33	1.12
3605000000	49.57	1.13
3622500000	49.98	1.15
3640000000	50.32	1.17
3657500000	50.54	1.18
3675000000	50.67	1.18
3692500000	50.72	1.18

3710000000	50.59	1.17
3727500000	50.32	1.15
3745000000	50.09	1.13
3762500000	50.01	1.12
3780000000	49.79	1.10
3797500000	49.14	1.09
3815000000	47.82	1.08
3832500000	47.35	1.07
3850000000	48.03	1.07
3867500000	48.52	1.06
3885000000	48.93	1.05
3902500000	49.29	1.03
3920000000	49.29	1.01
3937500000	49.27	1.03
3955000000	49.44	1.07
3972500000	49.88	1.11
3990000000	50.22	1.15
4007500000	50.39	1.19
4025000000	50.39	1.22
4042500000	50.34	1.23
4060000000	50.15	1.24
4077500000	49.82	1.23
4095000000	49.51	1.22
4112500000	49.55	1.19
4130000000	49.74	1.16
4147500000	50.14	1.12
4165000000	50.55	1.10
4182500000	50.75	1.11
4200000000	50.79	1.15

Band B

Frequency (Hz)	Gain at +0dBm Input (dBm)	VSWR at Input (U)
4.00	39.59	1.48
4.03	39.68	1.54
4.06	39.68	1.47
4.08	39.58	1.27
4.11	39.49	1.22
4.14	40.16	1.38
4.17	40.13	1.43
4.20	39.66	1.42
4.23	39.95	1.35
4.26	40.30	1.47
4.29	40.01	1.46

4.32	39.58	1.36
4.35	39.71	1.20
4.38	39.27	1.39
4.41	38.72	1.63
4.44	39.68	1.68
4.47	39.47	1.45
4.51	38.78	1.10
4.54	39.68	1.40
4.57	39.32	1.71
4.60	39.68	1.74
4.63	40.71	1.35
4.67	40.22	1.13
4.70	40.03	1.40
4.73	39.36	1.58
4.77	38.85	1.40
4.80	39.16	1.23
4.83	38.97	1.27
4.87	39.04	1.40
4.90	38.57	1.26
4.94	39.80	1.17
4.97	40.37	1.36
5.00	40.87	1.48
5.04	40.62	1.30
5.08	39.67	1.03
5.11	39.57	1.33
5.15	38.98	1.48
5.18	37.86	1.41
5.22	37.14	1.16
5.26	39.35	1.16
5.29	41.91	1.34
5.33	42.32	1.39
5.37	41.52	1.13
5.41	39.22	1.12
5.44	38.55	1.26
5.48	38.87	1.17
5.52	39.32	1.10
5.56	41.86	1.21
5.60	42.75	1.30
5.64	42.45	1.11
5.68	38.81	1.13
5.72	33.13	1.37
5.76	38.77	1.34
5.80	42.08	1.15
5.84	42.84	1.21

5.88	41.71	1.33
5.92	39.31	1.27
5.96	37.39	1.12
6.00	37.92	1.16
6.05	40.65	1.25
6.09	43.43	1.17
6.13	43.27	1.17
6.17	41.27	1.32
6.22	35.20	1.27
6.26	37.32	1.14
6.31	39.51	1.45
6.35	40.03	1.51
6.39	41.21	1.03
6.44	37.47	1.43
6.48	34.81	1.66
6.53	38.04	1.22
6.58	41.99	1.33
6.62	41.60	1.58
6.67	35.31	1.31
6.72	34.48	1.39
6.76	38.52	1.48
6.81	40.46	1.24
6.86	39.71	1.61
6.91	38.64	1.60
6.96	33.89	1.14
7.00	35.87	1.68
7.05	39.48	1.77
7.10	40.00	1.16
7.15	37.89	1.56
7.20	33.98	1.69
7.25	35.03	1.34
7.30	38.31	1.52
7.36	39.46	1.44
7.41	37.64	1.56
7.46	35.51	1.59
7.51	33.61	1.29
7.56	37.81	1.67
7.62	38.00	1.55
7.67	37.32	1.28
7.73	33.12	1.70
7.78	36.08	1.47
7.83	38.19	1.39
7.89	36.74	1.36
7.94	31.54	1.47

8.00	31.83	1.53
8.06	35.42	1.18
8.11	37.47	1.76
8.17	34.77	1.49
8.23	32.14	1.29
8.29	30.27	1.65
8.34	33.81	1.21
8.40	32.48	1.36
8.46	30.03	1.28
8.52	30.92	1.46
8.58	31.34	1.41
8.64	30.22	1.32
8.70	31.98	1.81
8.76	30.90	1.17
8.82	28.83	1.63
8.89	31.29	1.54
8.95	30.51	1.15
9.01	31.02	1.47
9.08	29.86	1.25
9.14	28.48	1.53
9.20	32.23	1.13
9.27	26.98	1.97
9.33	28.31	1.30
9.40	32.90	1.92
9.46	30.64	1.73
9.53	31.87	1.47
9.60	25.69	1.63
9.67	31.81	1.51
9.73	33.82	1.50
9.80	27.66	1.86
9.87	31.95	1.92
9.94	33.08	1.74
10.01	31.57	2.29
10.08	31.82	1.39
10.15	33.51	2.13
10.22	33.11	1.45
10.29	31.09	1.78
10.37	30.57	1.95
10.44	31.20	1.92
10.51	32.98	2.15
10.59	31.55	2.19