



Characterization and Data

Customer Address: Rental Unit

Certificate: 2405171CC

Product: Solid State Amplifier

Manufacturer: IFI

Model: SMC10

Serial: U2026-0816

Notes: Frequency Range: 80MHz to 1GHz

Power: 10 Watts

CSV Files available upon request

Date of Characterization: 5/17/2024

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 The EMC Shop. The Characterization was carried out in accordance with the general requirements of local TES procedures 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	7/27/2024

Ambient Conditions of Laboratory

Temperature (°C): 20.5

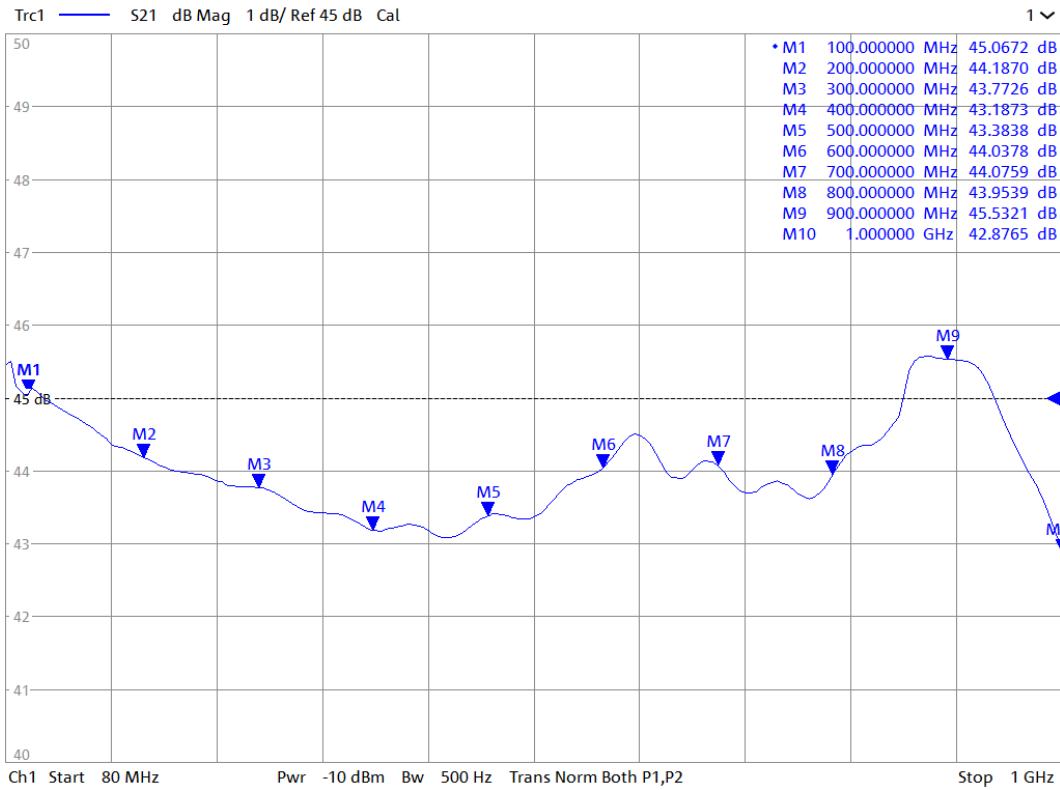
Relative Humidity (%): 44

Technician: Caleb Crites

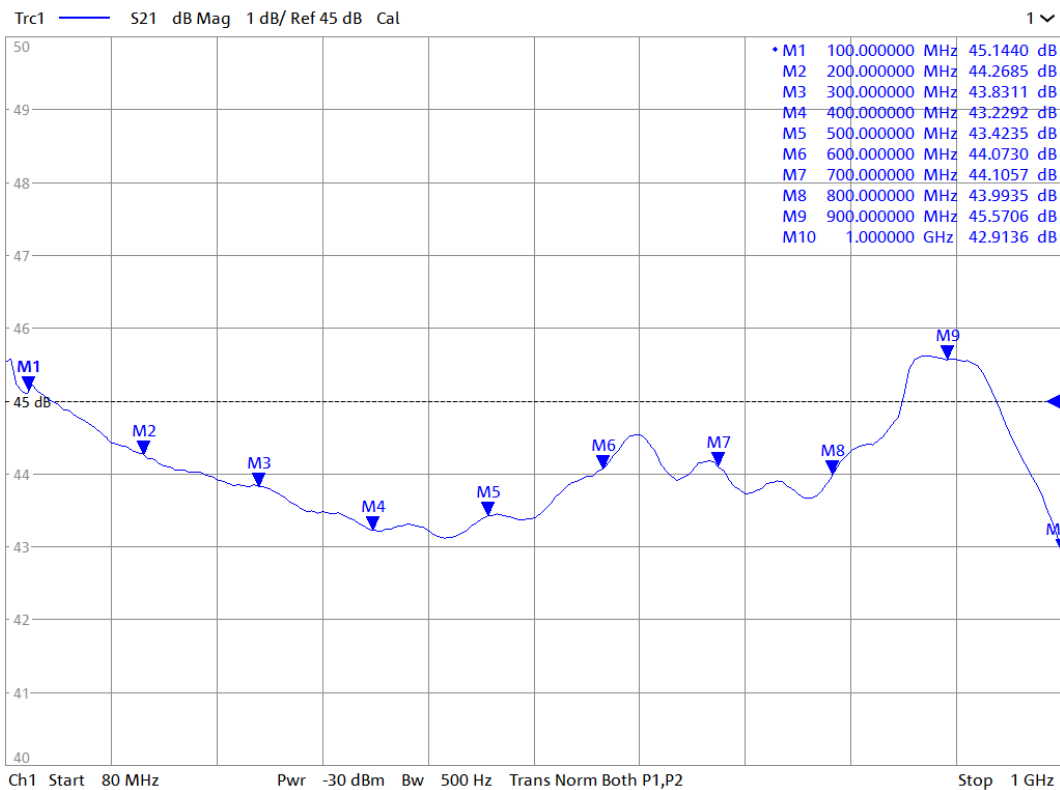
Technician Signature: Caleb B Crites



Gain Through Band: -10dBm Input

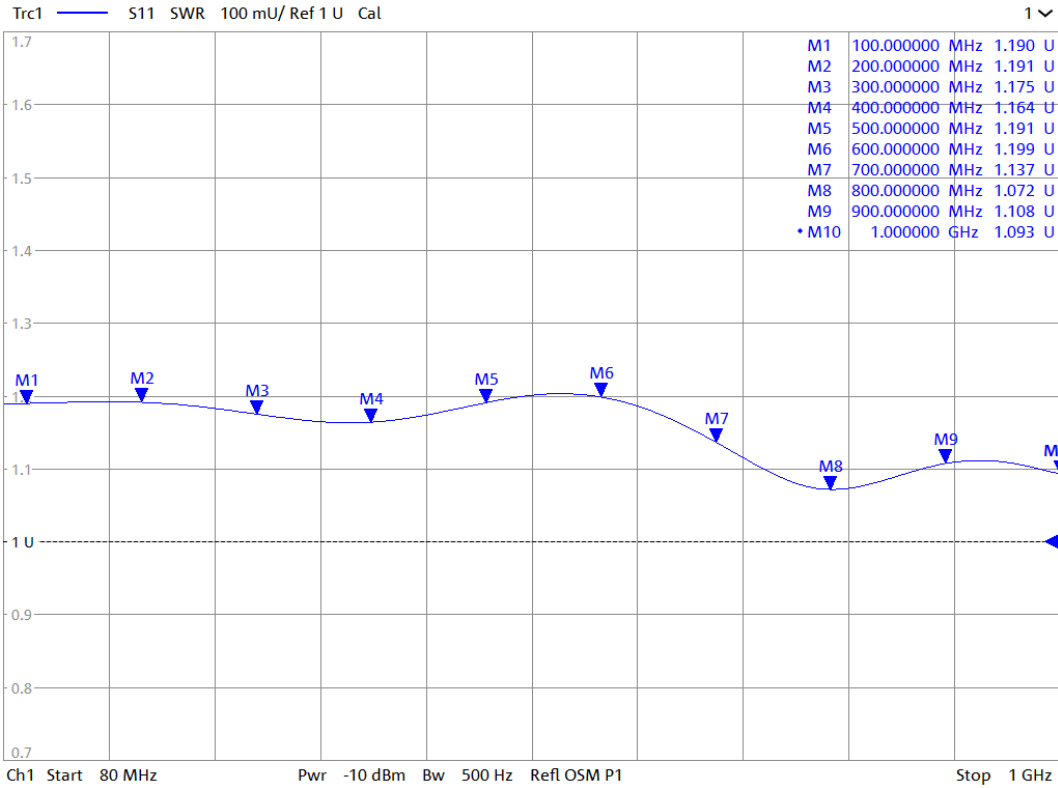


Small Signal Gain Through Band: -30dBm Input





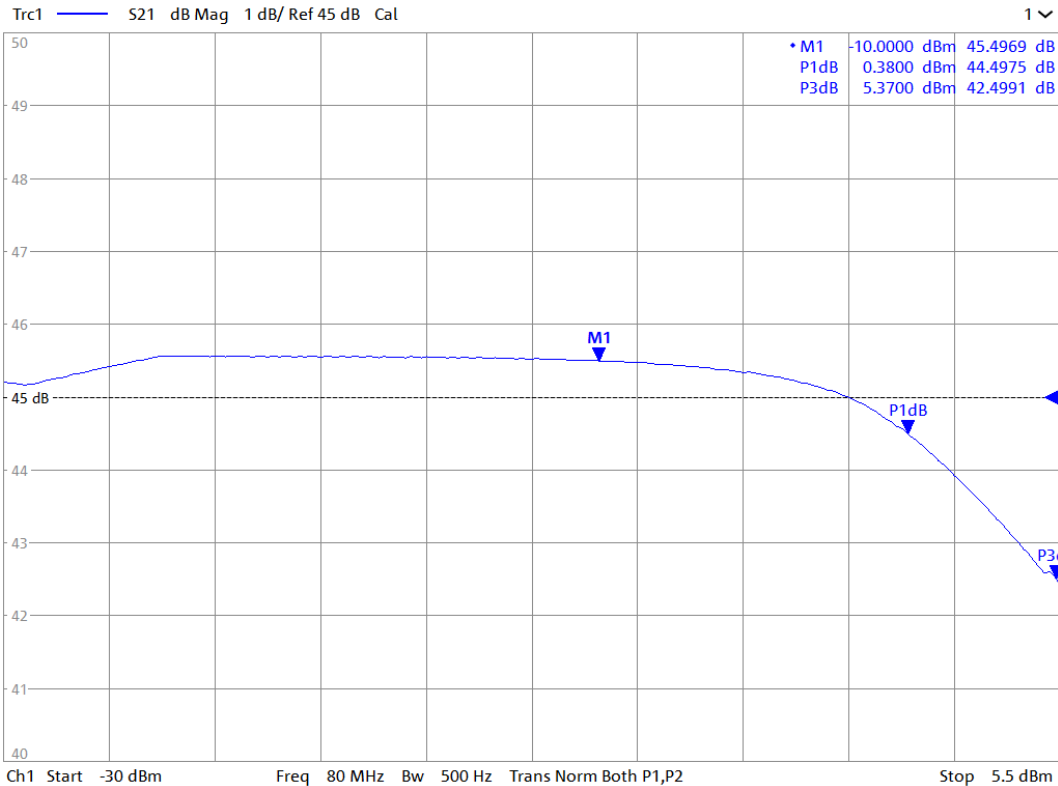
Input VSWR



Compression at 80 MHz

P1dB: 0.38

P3dB: 5.37

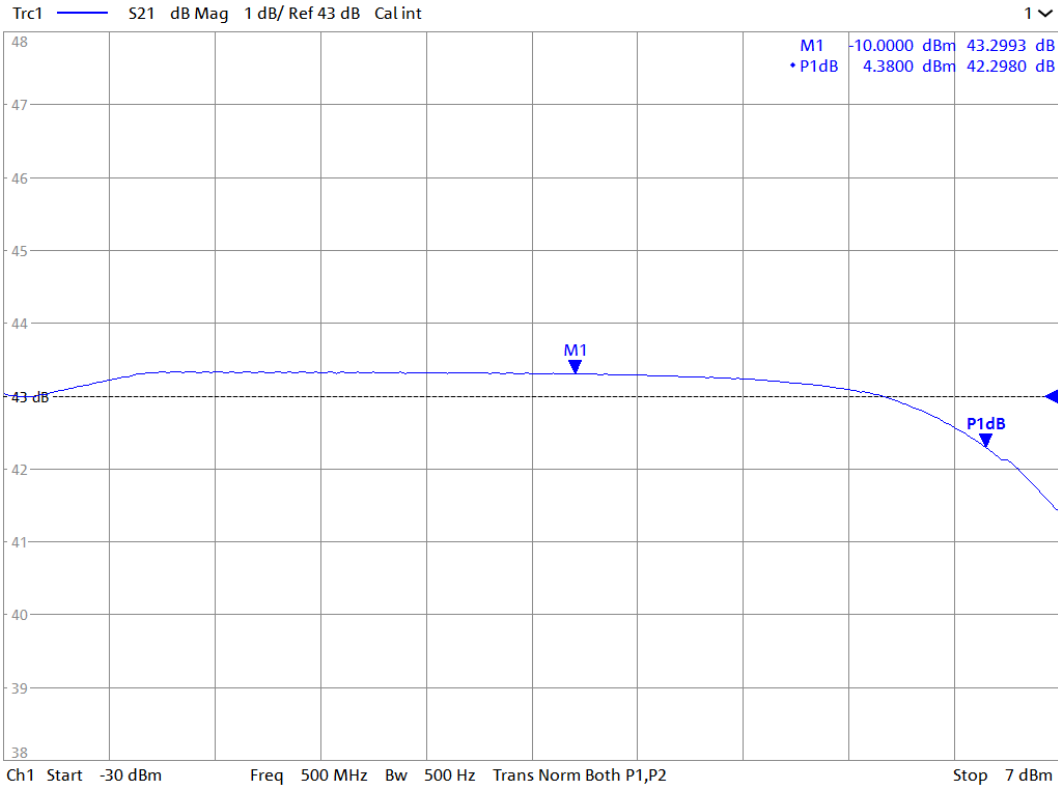




Compression at 500 MHz

P1dB: 4.38

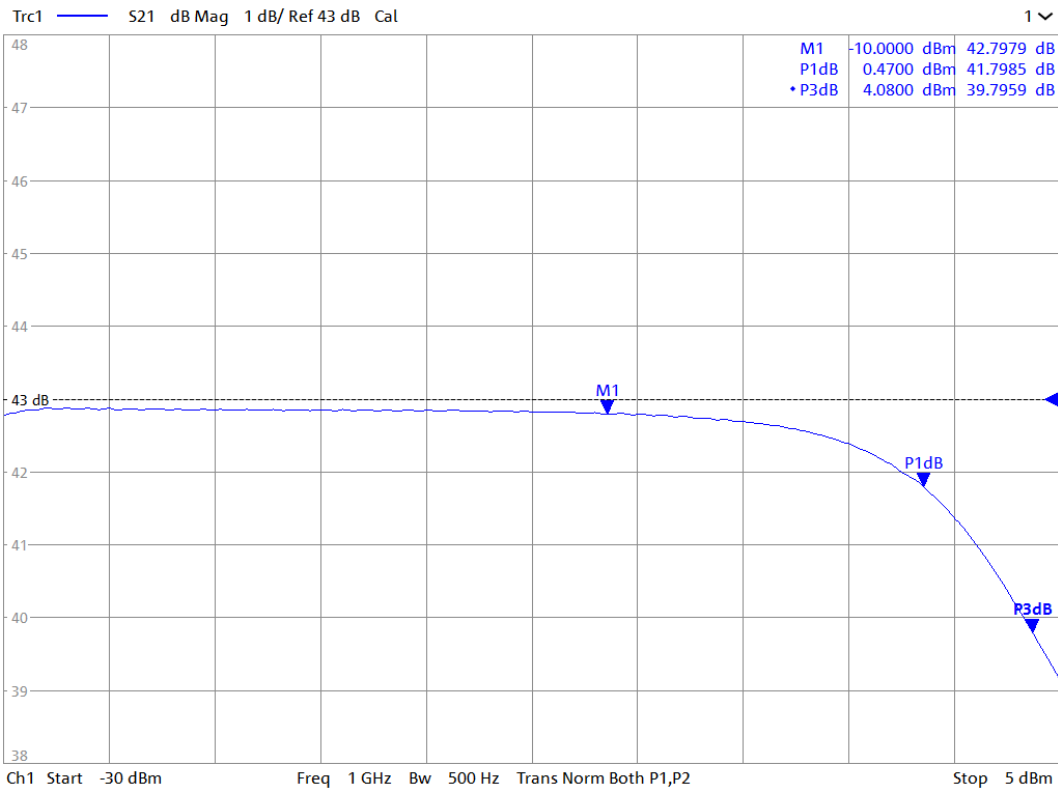
P3dB: Above Max Input



Compression at 1 GHz

P1dB: 0.47

P3dB: 4.08



Frequency (Hz)	Gain -10dBm Input (dBm)	Small Signal Gain -30dBm Input (dBm)	2nd Order Harmonics (dBc)	3rd Order Harmonics (dBc)
80,000,000	45.46	45.54	34.59	91.98
84,600,000	45.51	45.58	34.90	92.12
89,200,000	45.16	45.24	35.19	92.76
93,800,000	45.09	45.14	35.67	92.84
98,400,000	45.02	45.10	35.96	92.64
103,000,000	45.15	45.23	36.33	92.02
107,600,000	45.08	45.14	36.64	91.82
112,200,000	45.01	45.09	36.99	91.67
116,800,000	44.95	45.02	36.83	91.46
121,400,000	44.92	44.99	32.20	97.25
126,000,000	44.87	44.95	32.40	96.84
130,600,000	44.83	44.88	32.25	96.44
135,200,000	44.79	44.87	32.12	96.09
139,800,000	44.74	44.81	32.23	95.59
144,400,000	44.71	44.77	32.10	95.25
149,000,000	44.65	44.73	31.75	94.99
153,600,000	44.62	44.68	31.99	94.84
158,200,000	44.56	44.63	31.82	94.55
162,800,000	44.50	44.57	31.75	94.24
167,400,000	44.45	44.51	32.14	93.67
172,000,000	44.36	44.43	31.62	93.26
176,600,000	44.33	44.41	31.27	93.00
181,200,000	44.33	44.38	31.36	92.65
185,800,000	44.29	44.37	30.94	91.95
190,400,000	44.26	44.32	30.77	91.46
195,000,000	44.23	44.29	30.68	91.11
199,600,000	44.19	44.27	30.49	90.76
204,200,000	44.16	44.21	30.47	90.79
208,800,000	44.13	44.21	30.18	90.79
213,400,000	44.08	44.14	30.09	91.32
218,000,000	44.06	44.11	29.83	92.16
222,600,000	44.02	44.10	29.46	92.14
227,200,000	44.00	44.06	29.60	91.95
231,800,000	43.99	44.06	29.55	91.93
236,400,000	43.98	44.05	29.05	92.00
241,000,000	43.97	44.02	29.12	92.34
245,600,000	43.96	44.03	28.81	92.39
250,200,000	43.95	44.02	28.41	92.45
254,800,000	43.93	43.98	28.46	92.87
259,400,000	43.90	43.97	28.30	93.36

264,000,000	43.86	43.92	28.09	93.81
268,600,000	43.85	43.90	28.01	94.08
273,200,000	43.80	43.88	27.96	94.60
277,800,000	43.79	43.84	27.52	95.41
282,400,000	43.78	43.85	27.27	96.21
287,000,000	43.78	43.84	27.23	97.59
291,600,000	43.78	43.82	26.90	97.16
296,200,000	43.78	43.86	26.84	99.22
300,800,000	43.77	43.83	26.67	99.08
305,400,000	43.76	43.82	26.32	97.36
310,000,000	43.73	43.80	26.15	95.36
314,600,000	43.70	43.75	25.95	94.05
319,200,000	43.65	43.71	25.87	93.63
323,800,000	43.62	43.67	26.19	93.80
328,400,000	43.56	43.60	26.65	95.20
333,000,000	43.52	43.57	27.16	95.31
337,600,000	43.48	43.52	27.27	93.85
342,200,000	43.45	43.49	26.96	92.71
346,800,000	43.44	43.49	27.35	94.10
351,400,000	43.42	43.46	27.40	96.68
356,000,000	43.43	43.48	27.37	98.74
360,600,000	43.42	43.46	27.83	100.36
365,200,000	43.42	43.46	27.96	101.24
369,800,000	43.41	43.47	27.71	101.96
374,400,000	43.39	43.43	27.77	102.08
379,000,000	43.35	43.40	27.86	102.41
383,600,000	43.32	43.37	27.93	102.79
388,200,000	43.28	43.32	27.92	103.13
392,800,000	43.23	43.28	28.34	103.67
397,400,000	43.19	43.23	28.21	104.42
402,000,000	43.18	43.23	27.97	104.71
406,600,000	43.17	43.21	28.18	104.91
411,200,000	43.21	43.25	28.23	105.19
415,800,000	43.21	43.25	28.08	105.33
420,400,000	43.23	43.28	28.41	105.95
425,000,000	43.24	43.29	28.69	105.81
429,600,000	43.27	43.31	28.55	106.03
434,200,000	43.26	43.30	28.36	106.36
438,800,000	43.25	43.28	28.52	106.10
443,400,000	43.23	43.27	29.01	106.63
448,000,000	43.18	43.22	29.51	107.04
452,600,000	43.13	43.17	29.85	107.39
457,200,000	43.10	43.14	30.62	107.48
461,800,000	43.09	43.12	31.16	107.90

466,400,000	43.09	43.13	32.03	108.49
471,000,000	43.10	43.14	33.39	108.90
475,600,000	43.13	43.18	35.04	109.24
480,200,000	43.18	43.21	36.62	110.38
484,800,000	43.25	43.29	38.53	111.26
489,400,000	43.29	43.33	40.59	111.13
494,000,000	43.35	43.38	42.98	112.30
498,600,000	43.37	43.42	46.11	112.85
503,200,000	43.41	43.43	50.24	112.32
507,800,000	43.41	43.45	53.48	112.42
512,400,000	43.40	43.43	63.34	112.66
517,000,000	43.38	43.41	59.64	112.91
521,600,000	43.36	43.40	55.24	113.75
526,200,000	43.35	43.38	58.41	113.47
530,800,000	43.34	43.38	63.04	113.53
535,400,000	43.34	43.38	66.68	113.87
540,000,000	43.37	43.40	65.51	114.11
544,600,000	43.41	43.45	64.83	113.71
549,200,000	43.47	43.52	63.87	115.13
553,800,000	43.56	43.58	62.72	115.61
558,400,000	43.64	43.69	61.96	117.05
563,000,000	43.72	43.75	61.48	118.17
567,600,000	43.80	43.82	61.33	118.58
572,200,000	43.83	43.88	61.05	120.01
576,800,000	43.88	43.90	61.16	118.87
581,400,000	43.89	43.94	61.06	118.02
586,000,000	43.93	43.97	60.77	118.61
590,600,000	43.95	43.96	61.19	119.04
595,200,000	43.99	44.04	61.38	118.45
599,800,000	44.03	44.07	61.15	119.30
604,400,000	44.13	44.15	61.93	117.73
609,000,000	44.21	44.25	61.60	117.25
613,600,000	44.31	44.33	61.62	118.00
618,200,000	44.40	44.44	61.07	117.60
622,800,000	44.47	44.52	61.02	118.19
627,400,000	44.51	44.53	61.66	117.98
632,000,000	44.49	44.55	61.13	117.61
636,600,000	44.44	44.49	60.86	117.79
641,200,000	44.37	44.40	61.13	118.41
645,800,000	44.25	44.31	61.55	118.42
650,400,000	44.12	44.14	61.52	119.58
655,000,000	43.99	44.04	61.89	119.59
659,600,000	43.92	43.97	61.50	120.76
664,200,000	43.91	43.91	62.28	118.83

668,800,000	43.89	43.95	61.80	119.45
673,400,000	43.95	43.98	62.49	119.16
678,000,000	44.02	44.06	62.23	120.78
682,600,000	44.09	44.15	61.77	121.74
687,200,000	44.14	44.16	62.30	122.57
691,800,000	44.13	44.18	62.72	125.37
696,400,000	44.12	44.17	63.68	124.07
701,000,000	44.06	44.09	64.57	124.47
705,600,000	43.99	44.04	64.40	125.64
710,200,000	43.87	43.91	65.05	126.10
714,800,000	43.80	43.82	64.86	127.50
719,400,000	43.72	43.78	64.54	129.59
724,000,000	43.70	43.72	65.18	126.67
728,600,000	43.70	43.74	64.91	126.40
733,200,000	43.72	43.77	65.64	127.50
737,800,000	43.78	43.80	65.59	128.32
742,400,000	43.82	43.87	65.23	128.32
747,000,000	43.84	43.88	65.42	130.43
751,600,000	43.87	43.91	65.24	128.06
756,200,000	43.83	43.89	64.80	127.89
760,800,000	43.81	43.83	64.62	126.20
765,400,000	43.75	43.79	64.44	129.96
770,000,000	43.68	43.73	64.33	127.35
774,600,000	43.65	43.68	64.37	128.12
779,200,000	43.62	43.67	64.35	131.19
783,800,000	43.64	43.68	63.66	130.16
788,400,000	43.70	43.73	63.09	129.94
793,000,000	43.78	43.83	63.54	127.29
797,600,000	43.89	43.93	62.03	128.88
802,200,000	44.01	44.05	62.69	128.69
806,800,000	44.11	44.17	63.01	129.30
811,400,000	44.22	44.25	63.10	125.91
816,000,000	44.27	44.33	62.29	129.93
820,600,000	44.32	44.36	61.77	128.52
825,200,000	44.35	44.39	62.28	128.26
829,800,000	44.35	44.41	62.13	128.93
834,400,000	44.36	44.40	62.13	127.76
839,000,000	44.41	44.45	62.69	127.70
843,600,000	44.47	44.52	62.67	128.21
848,200,000	44.56	44.61	62.60	124.13
852,800,000	44.65	44.71	63.12	123.21
857,400,000	44.74	44.79	63.61	123.71
862,000,000	45.04	45.08	62.96	122.23
866,600,000	45.39	45.45	62.67	120.52

871,200,000	45.51	45.57	62.97	119.13
875,800,000	45.57	45.61	63.37	120.11
880,400,000	45.57	45.62	63.60	117.80
885,000,000	45.58	45.62	64.17	118.52
889,600,000	45.55	45.60	64.99	116.82
894,200,000	45.54	45.59	65.53	116.34
898,800,000	45.53	45.57	65.51	115.25
903,400,000	45.53	45.58	65.73	114.51
908,000,000	45.52	45.57	65.27	113.67
912,600,000	45.51	45.55	65.85	112.61
917,200,000	45.51	45.56	66.54	111.65
921,800,000	45.47	45.52	67.25	110.61
926,400,000	45.42	45.48	67.35	109.82
931,000,000	45.32	45.38	68.30	109.18
935,600,000	45.19	45.24	68.34	108.86
940,200,000	45.03	45.08	69.53	108.41
944,800,000	44.85	44.92	70.82	108.60
949,400,000	44.67	44.73	73.59	108.43
954,000,000	44.51	44.56	73.08	108.77
958,600,000	44.35	44.41	73.24	109.61
963,200,000	44.21	44.26	73.81	111.01
967,800,000	44.06	44.13	72.99	112.80
972,400,000	43.94	43.99	77.22	114.72
977,000,000	43.81	43.87	73.31	118.84
981,600,000	43.66	43.74	74.11	123.78
986,200,000	43.49	43.53	72.80	128.20
990,800,000	43.30	43.36	75.89	127.15
995,400,000	43.10	43.14	72.81	122.52
1,000,000,000	42.88	42.91	71.48	120.20