



Characterization and Data

Customer Address: Rental Unit

Certificate #: 2212201CC

Product: Solid State Amplifier

Manufacturer: Ophir
 Model: 5142
 Serial #: 1007

Notes: Frequency Range: 700MHz to 3GHz
 Power: 30 Watts
 CSV Files available upon request

Date of Characterization: 12/20/2022
 Next Characterization: *

*The next characterization date is defined by the equipment user/owner. We recommend characterization annually.

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 to the extent appropriate to the instrument's specification.

Calibration Equipment			
Model	Description	Serial Number	Due Date
ZNB8-2Port	Rohde & Schwarz Vector Analyzer	1311601042103153	11/12/2023
ZV-Z21	Calibration Kit N (50 Ω)	100800	1/26/2023

Ambient Conditions of Laboratory

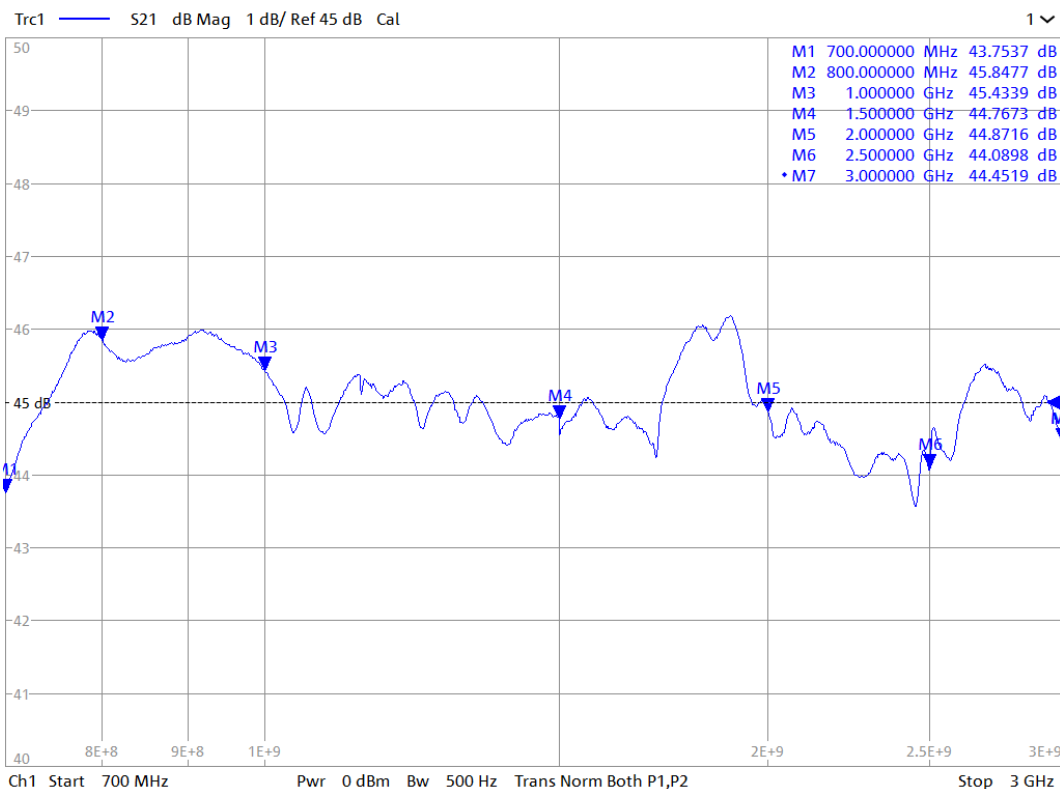
Temperature (°C): 22.4
 Relative Humidity (%): 37

Technician: Caleb Crites

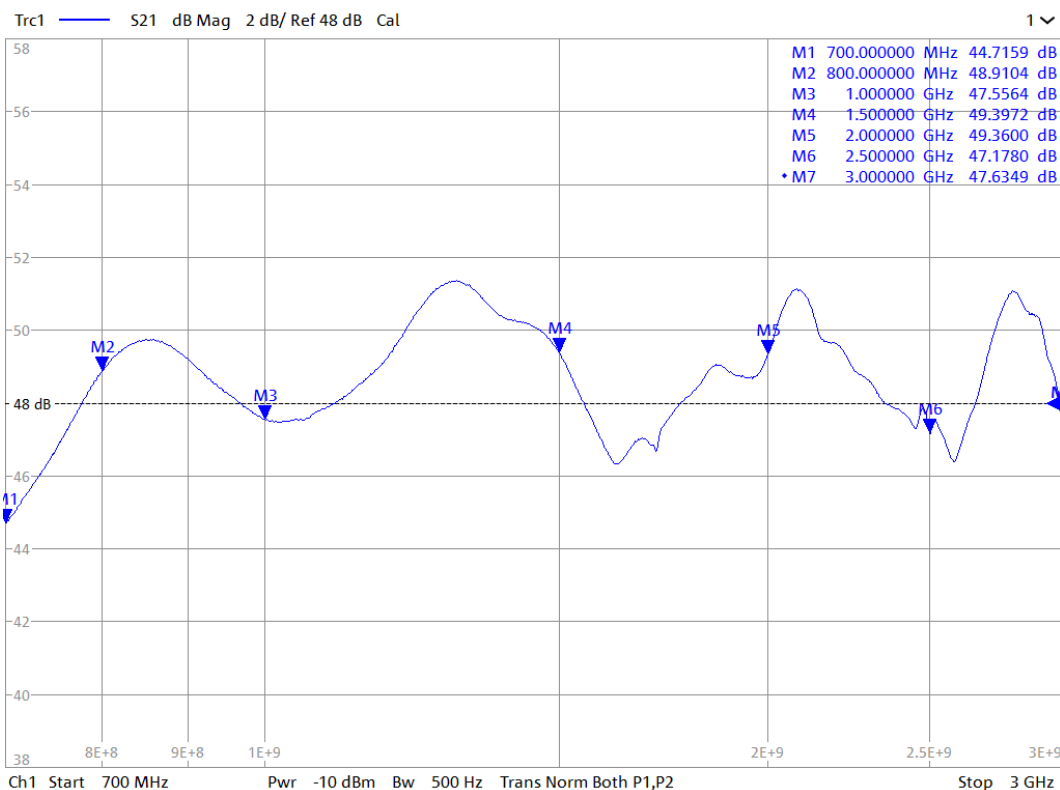
Technician Signature: _____



Gain Through Band: 0dB Input

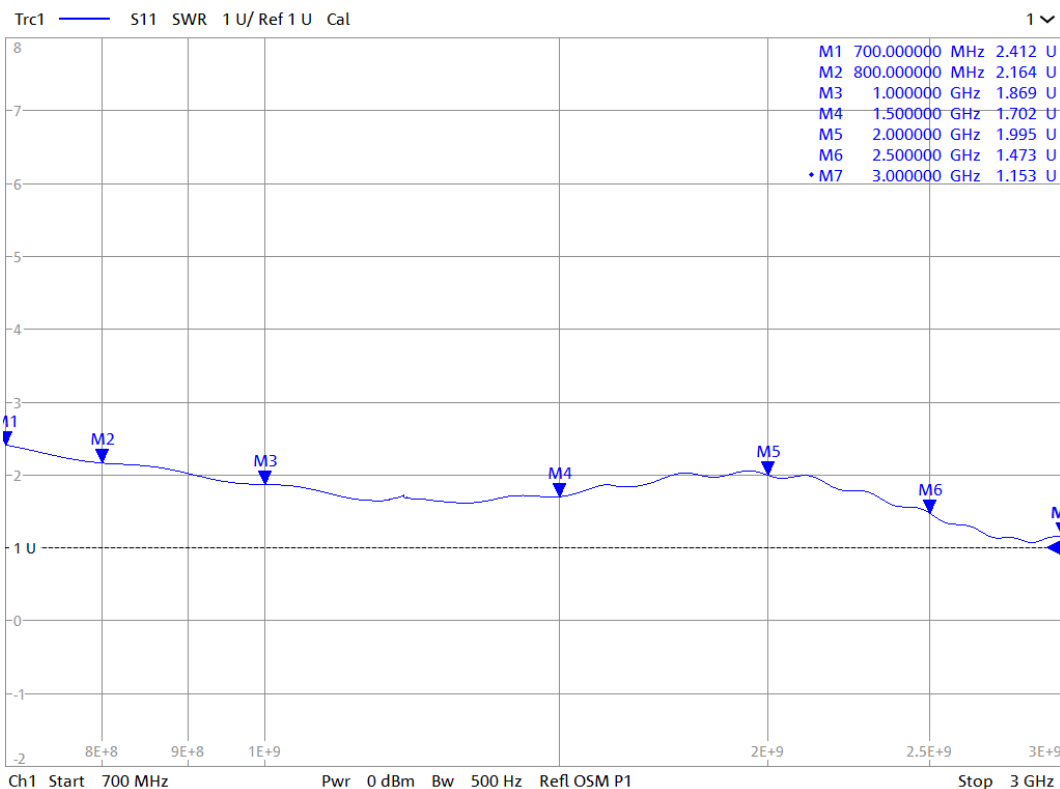


Small Signal Gain Through Band: -10 dB Input

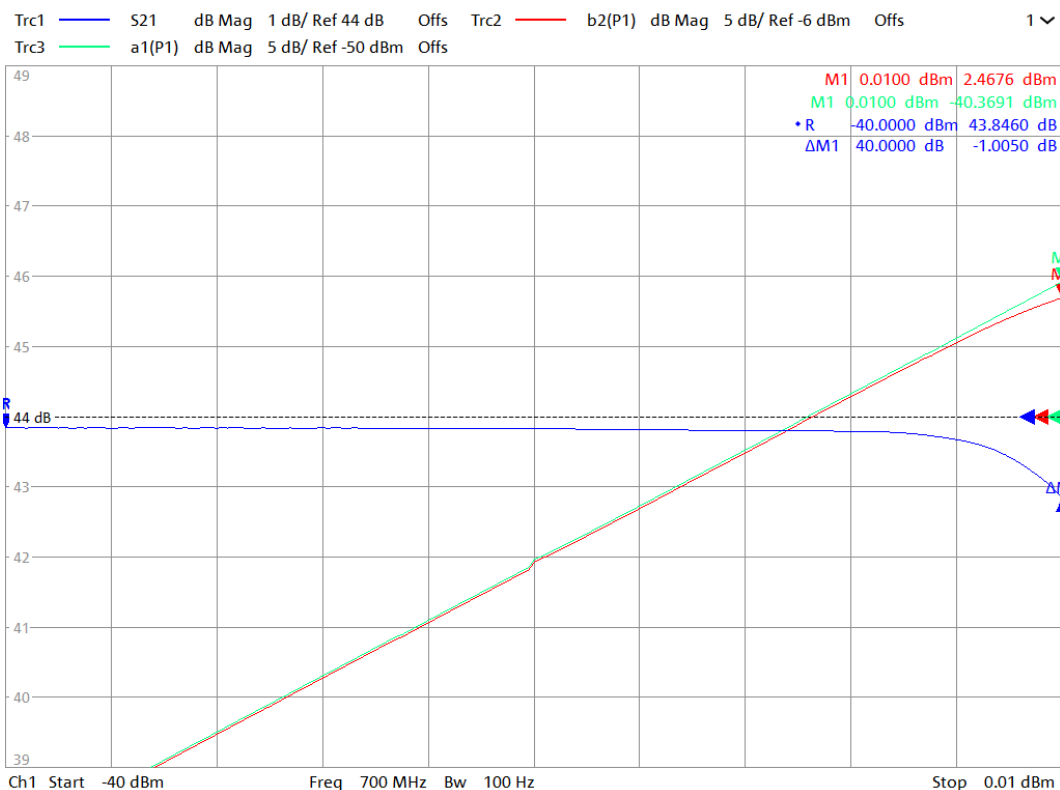




Input VSWR



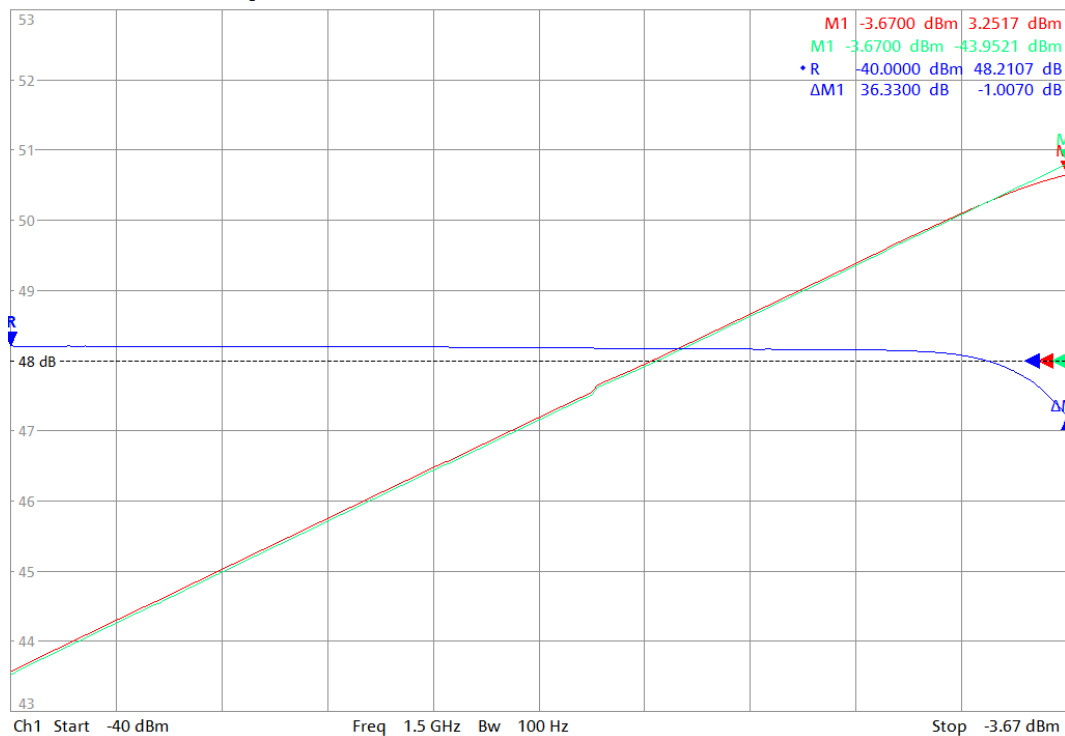
P1dB at 700MHz : 0.01dBm





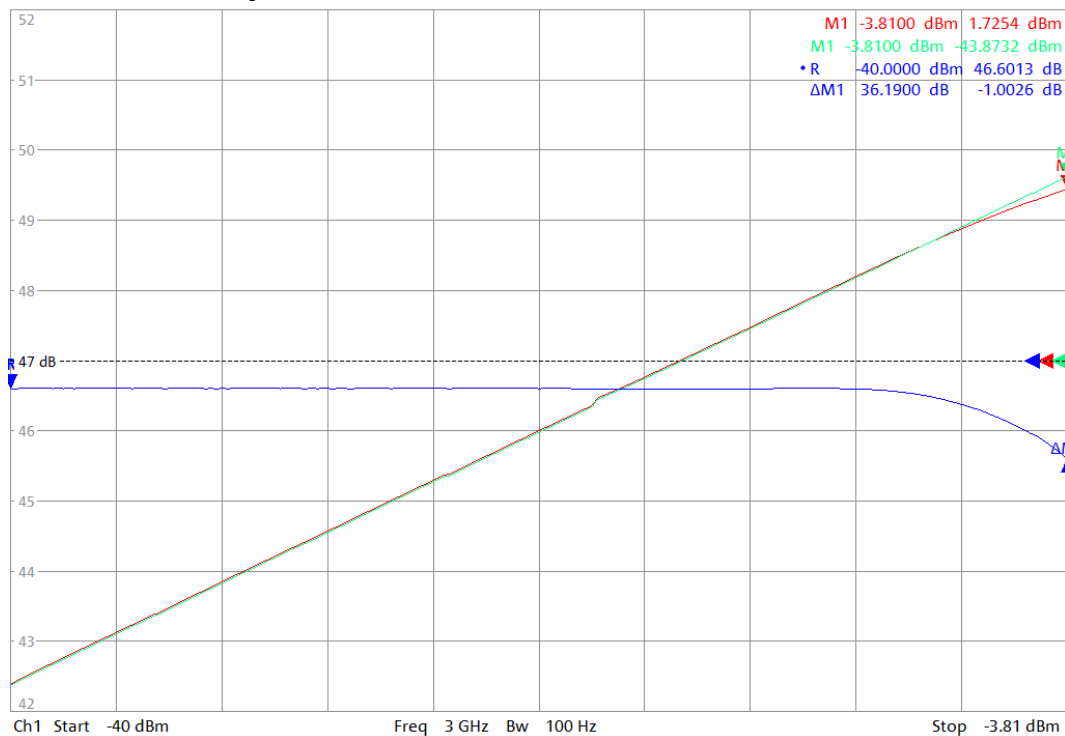
P1dB at 1.5GHz : -3.67dBm

Trc1 — S21 dB Mag 1 dB/ Ref 48 dB Offs Trc2 — b2(P1) dB Mag 5 dB/ Ref -10 dBm Offs 1 ▼
 Trc3 — a1(P1) dB Mag 5 dB/ Ref -58 dBm Offs



P1dB at 3GHz : -3.81dBm

Trc1 — S21 dB Mag 1 dB/ Ref 47 dB Offs Trc2 — b2(P1) dB Mag 5 dB/ Ref -10.5 dBm Offs 1 ▼
 Trc3 — a1(P1) dB Mag 5 dB/ Ref -57 dBm Offs



Frequency (Hz)	Gain Through Band (dBm)	VSWR at Input (U)
700,000,000	43.75	2.41
701,020,464	43.80	2.41
702,042,415	43.85	2.41
703,065,857	43.86	2.40
704,090,790	43.95	2.40
705,117,217	43.99	2.40
706,145,141	44.02	2.40
707,174,564	44.07	2.39
708,205,487	44.11	2.39
709,237,912	44.16	2.39
710,271,843	44.19	2.38
711,307,282	44.25	2.38
712,344,229	44.30	2.38
713,382,689	44.33	2.38
714,422,662	44.36	2.37
715,464,151	44.43	2.37
716,507,159	44.47	2.37
717,551,687	44.49	2.36
718,597,738	44.53	2.36
719,645,314	44.53	2.36
720,694,417	44.58	2.35
721,745,049	44.60	2.35
722,797,213	44.62	2.35
723,850,911	44.65	2.34
724,906,144	44.66	2.34
725,962,917	44.72	2.34
727,021,229	44.73	2.33
728,081,085	44.75	2.33
729,142,486	44.76	2.33
730,205,434	44.78	2.32
731,269,931	44.80	2.32
732,335,980	44.83	2.32
733,403,584	44.86	2.31
734,472,744	44.84	2.31
735,543,462	44.90	2.31
736,615,741	44.92	2.30
737,689,584	44.94	2.30
738,764,992	44.95	2.30
739,841,968	44.99	2.29
740,920,513	44.97	2.29
742,000,631	45.02	2.29

743,082,324	45.05	2.28
744,165,594	45.07	2.28
745,250,442	45.08	2.28
746,336,873	45.15	2.27
747,424,887	45.14	2.27
748,514,487	45.15	2.27
749,605,675	45.19	2.26
750,698,455	45.24	2.26
751,792,827	45.24	2.26
752,888,795	45.28	2.25
753,986,360	45.33	2.25
755,085,526	45.33	2.25
756,186,294	45.38	2.25
757,288,666	45.40	2.24
758,392,646	45.44	2.24
759,498,235	45.46	2.24
760,605,435	45.49	2.23
761,714,250	45.55	2.23
762,824,682	45.55	2.23
763,936,732	45.59	2.23
765,050,403	45.66	2.22
766,165,697	45.68	2.22
767,282,618	45.69	2.22
768,401,167	45.71	2.21
769,521,346	45.74	2.21
770,643,159	45.78	2.21
771,766,607	45.79	2.21
772,891,692	45.84	2.20
774,018,418	45.84	2.20
775,146,787	45.87	2.20
776,276,800	45.89	2.20
777,408,460	45.89	2.20
778,541,771	45.94	2.19
779,676,733	45.95	2.19
780,813,350	45.93	2.19
781,951,624	45.95	2.19
783,091,558	45.95	2.19
784,233,153	45.98	2.18
785,376,412	45.97	2.18
786,521,339	45.97	2.18
787,667,934	45.99	2.18
788,816,200	45.97	2.18
789,966,141	45.95	2.18
791,117,758	45.99	2.17

792,271,054	45.95	2.17
793,426,031	45.92	2.17
794,582,692	45.96	2.17
795,741,039	45.91	2.17
796,901,075	45.90	2.17
798,062,801	45.87	2.17
799,226,222	45.88	2.16
800,391,338	45.83	2.16
801,558,153	45.80	2.16
802,726,669	45.79	2.16
803,896,888	45.76	2.16
805,068,814	45.75	2.16
806,242,448	45.73	2.16
807,417,792	45.72	2.16
808,594,850	45.68	2.16
809,773,625	45.71	2.15
810,954,117	45.68	2.15
812,136,330	45.67	2.15
813,320,267	45.65	2.15
814,505,930	45.64	2.15
815,693,321	45.62	2.15
816,882,444	45.59	2.15
818,073,299	45.63	2.15
819,265,891	45.59	2.15
820,460,221	45.58	2.15
821,656,293	45.59	2.15
822,854,108	45.56	2.15
824,053,669	45.57	2.15
825,254,979	45.56	2.14
826,458,041	45.55	2.14
827,662,856	45.58	2.14
828,869,427	45.58	2.14
830,077,758	45.56	2.14
831,287,850	45.56	2.14
832,499,706	45.57	2.14
833,713,328	45.58	2.14
834,928,720	45.57	2.14
836,145,884	45.58	2.14
837,364,822	45.58	2.14
838,585,537	45.60	2.14
839,808,032	45.60	2.13
841,032,309	45.63	2.13
842,258,370	45.61	2.13
843,486,219	45.61	2.13

844,715,858	45.63	2.13
845,947,289	45.63	2.13
847,180,516	45.63	2.13
848,415,541	45.65	2.13
849,652,365	45.66	2.12
850,890,993	45.67	2.12
852,131,427	45.66	2.12
853,373,669	45.67	2.12
854,617,722	45.71	2.12
855,863,588	45.71	2.12
857,111,271	45.73	2.11
858,360,772	45.74	2.11
859,612,095	45.75	2.11
860,865,243	45.76	2.11
862,120,217	45.75	2.11
863,377,021	45.77	2.10
864,635,656	45.77	2.10
865,896,127	45.75	2.10
867,158,435	45.78	2.10
868,422,584	45.79	2.10
869,688,575	45.78	2.09
870,956,412	45.78	2.09
872,226,097	45.79	2.09
873,497,633	45.78	2.08
874,771,022	45.80	2.08
876,046,268	45.78	2.08
877,323,374	45.82	2.08
878,602,340	45.80	2.07
879,883,172	45.82	2.07
881,165,870	45.79	2.07
882,450,439	45.79	2.07
883,736,880	45.82	2.06
885,025,197	45.80	2.06
886,315,391	45.80	2.06
887,607,467	45.81	2.05
888,901,426	45.82	2.05
890,197,271	45.81	2.05
891,495,006	45.83	2.04
892,794,632	45.86	2.04
894,096,153	45.83	2.04
895,399,571	45.86	2.03
896,704,890	45.85	2.03
898,012,111	45.88	2.03
899,321,238	45.90	2.02

900,632,274	45.91	2.02
901,945,220	45.92	2.02
903,260,081	45.92	2.01
904,576,859	45.94	2.01
905,895,556	45.94	2.00
907,216,175	45.95	2.00
908,538,720	45.98	2.00
909,863,193	45.95	1.99
911,189,597	45.96	1.99
912,517,934	45.96	1.99
913,848,208	45.98	1.98
915,180,421	46.00	1.98
916,514,576	45.99	1.98
917,850,676	45.99	1.97
919,188,723	46.00	1.97
920,528,722	45.96	1.97
921,870,674	45.95	1.96
923,214,582	45.96	1.96
924,560,449	45.94	1.96
925,908,279	45.95	1.95
927,258,073	45.97	1.95
928,609,835	45.96	1.95
929,963,567	45.92	1.94
931,319,273	45.93	1.94
932,676,956	45.91	1.94
934,036,617	45.92	1.93
935,398,261	45.93	1.93
936,761,890	45.91	1.93
938,127,507	45.88	1.93
939,495,114	45.87	1.92
940,864,715	45.86	1.92
942,236,313	45.88	1.92
943,609,910	45.83	1.92
944,985,510	45.83	1.91
946,363,115	45.80	1.91
947,742,729	45.80	1.91
949,124,353	45.80	1.91
950,507,992	45.79	1.90
951,893,648	45.80	1.90
953,281,324	45.77	1.90
954,671,022	45.77	1.90
956,062,747	45.76	1.90
957,456,501	45.76	1.89
958,852,286	45.77	1.89

960,250,106	45.74	1.89
961,649,964	45.72	1.89
963,051,863	45.72	1.89
964,455,805	45.71	1.89
965,861,794	45.72	1.89
967,269,833	45.72	1.88
968,679,924	45.72	1.88
970,092,071	45.69	1.88
971,506,277	45.66	1.88
972,922,544	45.68	1.88
974,340,876	45.67	1.88
975,761,275	45.66	1.88
977,183,746	45.68	1.88
978,608,290	45.66	1.88
980,034,910	45.63	1.88
981,463,610	45.64	1.88
982,894,394	45.63	1.87
984,327,262	45.60	1.87
985,762,220	45.61	1.87
987,199,270	45.59	1.87
988,638,414	45.57	1.87
990,079,657	45.54	1.87
991,523,001	45.55	1.87
992,968,448	45.54	1.87
994,416,003	45.51	1.87
995,865,668	45.49	1.87
997,317,447	45.45	1.87
998,771,342	45.46	1.87
1,000,227,356	45.43	1.87
1,001,685,493	45.40	1.87
1,003,145,756	45.41	1.87
1,004,608,147	45.37	1.87
1,006,072,671	45.33	1.87
1,007,539,329	45.32	1.87
1,009,008,125	45.31	1.87
1,010,479,063	45.30	1.87
1,011,952,145	45.23	1.87
1,013,427,374	45.23	1.87
1,014,904,754	45.22	1.87
1,016,384,288	45.20	1.87
1,017,865,979	45.17	1.86
1,019,349,830	45.15	1.86
1,020,835,843	45.11	1.86
1,022,324,024	45.09	1.86

1,023,814,373	45.09	1.86
1,025,306,895	45.06	1.86
1,026,801,593	45.04	1.86
1,028,298,471	44.99	1.86
1,029,797,530	44.98	1.86
1,031,298,774	44.91	1.86
1,032,802,207	44.84	1.86
1,034,307,832	44.76	1.85
1,035,815,652	44.71	1.85
1,037,325,670	44.65	1.85
1,038,837,889	44.60	1.85
1,040,352,312	44.57	1.85
1,041,868,944	44.60	1.85
1,043,387,786	44.63	1.84
1,044,908,843	44.66	1.84
1,046,432,116	44.69	1.84
1,047,957,611	44.74	1.84
1,049,485,329	44.84	1.84
1,051,015,275	44.94	1.83
1,052,547,451	45.00	1.83
1,054,081,860	45.08	1.83
1,055,618,507	45.12	1.83
1,057,157,393	45.17	1.82
1,058,698,523	45.21	1.82
1,060,241,900	45.18	1.82
1,061,787,526	45.16	1.81
1,063,335,406	45.11	1.81
1,064,885,542	45.08	1.81
1,066,437,938	45.03	1.80
1,067,992,597	44.95	1.80
1,069,549,523	44.87	1.80
1,071,108,718	44.81	1.80
1,072,670,186	44.76	1.79
1,074,233,931	44.71	1.79
1,075,799,955	44.68	1.79
1,077,368,262	44.63	1.78
1,078,938,856	44.60	1.78
1,080,511,739	44.60	1.77
1,082,086,915	44.59	1.77
1,083,664,387	44.59	1.77
1,085,244,159	44.56	1.76
1,086,826,234	44.57	1.76
1,088,410,615	44.60	1.76
1,089,997,306	44.62	1.75

1,091,586,310	44.63	1.75
1,093,177,631	44.64	1.75
1,094,771,271	44.72	1.74
1,096,367,235	44.74	1.74
1,097,965,525	44.80	1.73
1,099,566,145	44.83	1.73
1,101,169,099	44.85	1.73
1,102,774,390	44.90	1.72
1,104,382,020	44.93	1.72
1,105,991,994	44.95	1.72
1,107,604,316	44.99	1.71
1,109,218,987	45.02	1.71
1,110,836,013	45.07	1.71
1,112,455,396	45.07	1.70
1,114,077,139	45.10	1.70
1,115,701,247	45.16	1.70
1,117,327,723	45.17	1.69
1,118,956,569	45.19	1.69
1,120,587,790	45.22	1.69
1,122,221,389	45.26	1.69
1,123,857,370	45.26	1.68
1,125,495,736	45.29	1.68
1,127,136,489	45.31	1.68
1,128,779,635	45.32	1.67
1,130,425,177	45.35	1.67
1,132,073,117	45.36	1.67
1,133,723,459	45.35	1.67
1,135,376,207	45.37	1.67
1,137,031,365	45.37	1.66
1,138,688,936	45.39	1.66
1,140,348,923	45.36	1.66
1,142,011,330	45.11	1.66
1,143,676,160	45.16	1.66
1,145,343,418	45.26	1.66
1,147,013,106	45.31	1.66
1,148,685,228	45.32	1.65
1,150,359,787	45.29	1.65
1,152,036,788	45.26	1.65
1,153,716,234	45.27	1.65
1,155,398,128	45.23	1.65
1,157,082,474	45.25	1.65
1,158,769,275	45.20	1.65
1,160,458,535	45.25	1.65
1,162,150,258	45.24	1.65

1,163,844,447	45.22	1.65
1,165,541,106	45.17	1.65
1,167,240,238	45.15	1.65
1,168,941,848	45.14	1.65
1,170,645,937	45.12	1.65
1,172,352,512	45.10	1.65
1,174,061,574	45.08	1.65
1,175,773,127	45.10	1.65
1,177,487,176	45.05	1.65
1,179,203,723	45.08	1.65
1,180,922,773	45.10	1.65
1,182,644,328	45.08	1.65
1,184,368,394	45.07	1.65
1,186,094,973	45.11	1.65
1,187,824,069	45.14	1.67
1,189,555,685	45.17	1.67
1,191,289,826	45.15	1.68
1,193,026,495	45.16	1.68
1,194,765,696	45.20	1.68
1,196,507,432	45.23	1.68
1,198,251,707	45.21	1.68
1,199,998,525	45.24	1.68
1,201,747,889	45.24	1.69
1,203,499,804	45.26	1.70
1,205,254,273	45.25	1.69
1,207,011,299	45.24	1.71
1,208,770,887	45.26	1.71
1,210,533,040	45.30	1.73
1,212,297,761	45.27	1.69
1,214,065,056	45.27	1.68
1,215,834,927	45.25	1.70
1,217,607,378	45.24	1.68
1,219,382,412	45.19	1.69
1,221,160,035	45.18	1.68
1,222,940,249	45.10	1.68
1,224,723,058	45.09	1.68
1,226,508,466	45.02	1.67
1,228,296,477	45.03	1.67
1,230,087,094	44.96	1.67
1,231,880,322	44.93	1.67
1,233,676,164	44.87	1.67
1,235,474,624	44.78	1.67
1,237,275,705	44.71	1.67
1,239,079,413	44.65	1.67

1,240,885,750	44.65	1.67
1,242,694,720	44.63	1.67
1,244,506,327	44.64	1.67
1,246,320,575	44.68	1.66
1,248,137,468	44.74	1.66
1,249,957,010	44.80	1.66
1,251,779,204	44.85	1.66
1,253,604,055	44.88	1.65
1,255,431,566	44.91	1.65
1,257,261,741	44.95	1.65
1,259,094,584	44.95	1.65
1,260,930,099	45.00	1.65
1,262,768,290	45.01	1.65
1,264,609,161	45.06	1.65
1,266,452,715	45.10	1.64
1,268,298,957	45.08	1.64
1,270,147,890	45.07	1.64
1,271,999,519	45.11	1.64
1,273,853,847	45.11	1.64
1,275,710,878	45.13	1.64
1,277,570,616	45.12	1.64
1,279,433,066	45.14	1.63
1,281,298,230	45.15	1.63
1,283,166,114	45.15	1.63
1,285,036,721	45.14	1.63
1,286,910,054	45.13	1.63
1,288,786,119	45.13	1.63
1,290,664,918	45.10	1.63
1,292,546,457	45.07	1.62
1,294,430,738	45.06	1.62
1,296,317,767	45.02	1.62
1,298,207,546	44.97	1.62
1,300,100,080	44.89	1.62
1,301,995,373	44.89	1.62
1,303,893,429	44.85	1.62
1,305,794,252	44.80	1.62
1,307,697,846	44.80	1.62
1,309,604,216	44.73	1.62
1,311,513,364	44.72	1.62
1,313,425,295	44.71	1.62
1,315,340,014	44.73	1.62
1,317,257,524	44.74	1.62
1,319,177,829	44.75	1.62
1,321,100,934	44.83	1.62

1,323,026,842	44.85	1.62
1,324,955,558	44.93	1.62
1,326,887,086	44.96	1.62
1,328,821,429	44.97	1.62
1,330,758,592	45.00	1.62
1,332,698,579	45.02	1.62
1,334,641,395	45.07	1.62
1,336,587,042	45.07	1.62
1,338,535,526	45.09	1.62
1,340,486,851	45.08	1.63
1,342,441,020	45.08	1.63
1,344,398,038	45.05	1.63
1,346,357,909	45.02	1.63
1,348,320,637	45.01	1.63
1,350,286,226	45.00	1.64
1,352,254,681	44.96	1.64
1,354,226,005	44.94	1.64
1,356,200,204	44.90	1.64
1,358,177,280	44.89	1.65
1,360,157,238	44.84	1.65
1,362,140,083	44.81	1.65
1,364,125,818	44.78	1.66
1,366,114,448	44.75	1.66
1,368,105,978	44.74	1.66
1,370,100,410	44.68	1.66
1,372,097,750	44.64	1.67
1,374,098,002	44.60	1.67
1,376,101,170	44.56	1.67
1,378,107,257	44.54	1.68
1,380,116,270	44.52	1.68
1,382,128,211	44.49	1.68
1,384,143,085	44.50	1.69
1,386,160,897	44.48	1.69
1,388,181,650	44.44	1.69
1,390,205,349	44.45	1.70
1,392,231,998	44.44	1.70
1,394,261,601	44.41	1.70
1,396,294,163	44.41	1.70
1,398,329,689	44.42	1.71
1,400,368,182	44.42	1.71
1,402,409,646	44.44	1.71
1,404,454,087	44.50	1.71
1,406,501,508	44.51	1.71
1,408,551,913	44.54	1.71

1,410,605,308	44.62	1.72
1,412,661,696	44.62	1.72
1,414,721,082	44.63	1.72
1,416,783,471	44.65	1.72
1,418,848,865	44.68	1.72
1,420,917,271	44.69	1.72
1,422,988,692	44.72	1.72
1,425,063,133	44.71	1.72
1,427,140,598	44.73	1.72
1,429,221,091	44.73	1.72
1,431,304,618	44.73	1.72
1,433,391,182	44.77	1.72
1,435,480,787	44.73	1.72
1,437,573,439	44.76	1.72
1,439,669,142	44.76	1.72
1,441,767,899	44.77	1.72
1,443,869,717	44.76	1.72
1,445,974,598	44.76	1.71
1,448,082,548	44.77	1.71
1,450,193,570	44.79	1.71
1,452,307,671	44.79	1.71
1,454,424,853	44.80	1.71
1,456,545,121	44.80	1.71
1,458,668,481	44.84	1.71
1,460,794,936	44.84	1.71
1,462,924,491	44.84	1.71
1,465,057,150	44.83	1.70
1,467,192,919	44.84	1.70
1,469,331,801	44.83	1.70
1,471,473,801	44.82	1.70
1,473,618,923	44.83	1.70
1,475,767,173	44.82	1.70
1,477,918,555	44.82	1.70
1,480,073,073	44.86	1.70
1,482,230,731	44.84	1.70
1,484,391,536	44.83	1.70
1,486,555,490	44.80	1.70
1,488,722,599	44.81	1.70
1,490,892,867	44.80	1.70
1,493,066,299	44.83	1.70
1,495,242,899	44.80	1.70
1,497,422,672	44.81	1.70
1,499,605,623	44.81	1.70
1,501,791,757	44.56	1.70

1,503,981,077	44.64	1.70
1,506,173,589	44.63	1.71
1,508,369,297	44.68	1.71
1,510,568,206	44.70	1.71
1,512,770,321	44.72	1.71
1,514,975,646	44.73	1.72
1,517,184,186	44.74	1.72
1,519,395,946	44.75	1.72
1,521,610,929	44.74	1.72
1,523,829,142	44.76	1.73
1,526,050,589	44.75	1.73
1,528,275,274	44.80	1.74
1,530,503,202	44.80	1.74
1,532,734,378	44.84	1.74
1,534,968,807	44.81	1.75
1,537,206,493	44.88	1.75
1,539,447,441	44.90	1.76
1,541,691,656	44.94	1.76
1,543,939,142	44.97	1.77
1,546,189,906	44.95	1.77
1,548,443,950	45.00	1.78
1,550,701,280	45.03	1.78
1,552,961,901	45.05	1.79
1,555,225,817	45.03	1.79
1,557,493,034	45.02	1.80
1,559,763,556	45.07	1.80
1,562,037,388	45.06	1.81
1,564,314,535	45.03	1.81
1,566,595,001	45.04	1.82
1,568,878,792	45.01	1.82
1,571,165,912	45.01	1.83
1,573,456,367	44.97	1.83
1,575,750,160	44.94	1.83
1,578,047,297	44.93	1.84
1,580,347,784	44.90	1.84
1,582,651,623	44.90	1.85
1,584,958,822	44.87	1.85
1,587,269,383	44.84	1.85
1,589,583,313	44.82	1.86
1,591,900,617	44.79	1.86
1,594,221,298	44.76	1.86
1,596,545,363	44.70	1.86
1,598,872,816	44.69	1.87
1,601,203,661	44.65	1.87

1,603,537,905	44.67	1.87
1,605,875,551	44.64	1.87
1,608,216,606	44.64	1.86
1,610,561,073	44.63	1.86
1,612,908,958	44.63	1.86
1,615,260,265	44.64	1.86
1,617,615,001	44.62	1.85
1,619,973,169	44.66	1.85
1,622,334,775	44.66	1.85
1,624,699,823	44.71	1.85
1,627,068,320	44.71	1.84
1,629,440,269	44.73	1.84
1,631,815,676	44.74	1.84
1,634,194,546	44.76	1.84
1,636,576,884	44.75	1.84
1,638,962,695	44.78	1.84
1,641,351,983	44.80	1.84
1,643,744,755	44.80	1.84
1,646,141,016	44.78	1.84
1,648,540,769	44.81	1.84
1,650,944,021	44.80	1.84
1,653,350,776	44.77	1.84
1,655,761,040	44.77	1.84
1,658,174,818	44.76	1.84
1,660,592,114	44.73	1.84
1,663,012,935	44.71	1.84
1,665,437,284	44.72	1.84
1,667,865,168	44.68	1.85
1,670,296,591	44.64	1.85
1,672,731,559	44.68	1.85
1,675,170,076	44.63	1.85
1,677,612,148	44.63	1.86
1,680,057,781	44.63	1.86
1,682,506,978	44.63	1.86
1,684,959,746	44.59	1.86
1,687,416,090	44.61	1.87
1,689,876,014	44.59	1.87
1,692,339,525	44.56	1.88
1,694,806,627	44.53	1.88
1,697,277,325	44.49	1.88
1,699,751,626	44.45	1.89
1,702,229,533	44.41	1.89
1,704,711,053	44.42	1.90
1,707,196,190	44.45	1.90

1,709,684,950	44.39	1.91
1,712,177,338	44.29	1.91
1,714,673,360	44.24	1.92
1,717,173,020	44.32	1.92
1,719,676,324	44.51	1.93
1,722,183,278	44.71	1.94
1,724,693,886	44.84	1.94
1,727,208,155	44.95	1.95
1,729,726,088	45.02	1.95
1,732,247,693	45.06	1.96
1,734,772,973	45.11	1.96
1,737,301,935	45.15	1.97
1,739,834,583	45.23	1.98
1,742,370,923	45.26	1.98
1,744,910,961	45.29	1.99
1,747,454,702	45.34	1.99
1,750,002,151	45.37	1.99
1,752,553,314	45.39	2.00
1,755,108,196	45.41	2.00
1,757,666,803	45.46	2.01
1,760,229,139	45.48	2.01
1,762,795,211	45.50	2.01
1,765,365,024	45.54	2.02
1,767,938,582	45.58	2.02
1,770,515,893	45.60	2.02
1,773,096,961	45.67	2.02
1,775,681,792	45.69	2.03
1,778,270,390	45.71	2.03
1,780,862,763	45.75	2.03
1,783,458,914	45.79	2.03
1,786,058,851	45.82	2.03
1,788,662,577	45.82	2.03
1,791,270,099	45.83	2.03
1,793,881,423	45.83	2.03
1,796,496,553	45.87	2.02
1,799,115,496	45.87	2.02
1,801,738,256	45.93	2.02
1,804,364,840	45.95	2.02
1,806,995,253	45.99	2.01
1,809,629,501	45.98	2.01
1,812,267,589	46.04	2.01
1,814,909,523	46.04	2.01
1,817,555,308	46.05	2.00
1,820,204,950	46.03	2.00

1,822,858,455	46.03	2.00
1,825,515,828	46.03	1.99
1,828,177,075	46.06	1.99
1,830,842,202	46.03	1.99
1,833,511,214	46.01	1.98
1,836,184,117	46.04	1.98
1,838,860,916	45.98	1.98
1,841,541,618	45.96	1.98
1,844,226,227	45.93	1.97
1,846,914,750	45.90	1.97
1,849,607,193	45.87	1.97
1,852,303,561	45.85	1.97
1,855,003,859	45.84	1.97
1,857,708,094	45.86	1.97
1,860,416,271	45.89	1.97
1,863,128,396	45.88	1.97
1,865,844,475	45.92	1.97
1,868,564,514	45.94	1.97
1,871,288,517	45.96	1.98
1,874,016,492	46.02	1.98
1,876,748,444	46.04	1.98
1,879,484,378	46.06	1.98
1,882,224,301	46.10	1.99
1,884,968,218	46.12	1.99
1,887,716,135	46.16	1.99
1,890,468,058	46.17	2.00
1,893,223,993	46.16	2.00
1,895,983,945	46.17	2.01
1,898,747,921	46.19	2.01
1,901,515,926	46.18	2.01
1,904,287,967	46.16	2.02
1,907,064,048	46.11	2.02
1,909,844,177	46.08	2.03
1,912,628,358	46.04	2.03
1,915,416,598	46.00	2.03
1,918,208,903	45.96	2.04
1,921,005,279	45.89	2.04
1,923,805,731	45.85	2.04
1,926,610,266	45.75	2.05
1,929,418,889	45.71	2.05
1,932,231,606	45.63	2.05
1,935,048,424	45.53	2.05
1,937,869,349	45.43	2.06
1,940,694,385	45.31	2.06

1,943,523,540	45.23	2.06
1,946,356,820	45.14	2.06
1,949,194,230	45.07	2.06
1,952,035,776	45.06	2.06
1,954,881,464	45.03	2.06
1,957,731,301	44.96	2.05
1,960,585,293	44.97	2.05
1,963,443,445	44.96	2.05
1,966,305,764	44.94	2.05
1,969,172,255	44.94	2.04
1,972,042,925	44.97	2.04
1,974,917,781	44.99	2.04
1,977,796,827	45.01	2.03
1,980,680,070	45.02	2.03
1,983,567,516	45.03	2.02
1,986,459,172	45.03	2.02
1,989,355,043	44.99	2.01
1,992,255,136	44.98	2.01
1,995,159,457	44.93	2.00
1,998,068,011	44.90	2.00
2,000,980,806	44.86	1.99
2,003,897,847	44.80	1.99
2,006,819,140	44.76	1.98
2,009,744,692	44.71	1.98
2,012,674,509	44.61	1.97
2,015,608,597	44.53	1.97
2,018,546,962	44.51	1.97
2,021,489,611	44.50	1.96
2,024,436,550	44.54	1.96
2,027,387,785	44.53	1.96
2,030,343,322	44.52	1.96
2,033,303,168	44.52	1.96
2,036,267,328	44.56	1.95
2,039,235,810	44.55	1.95
2,042,208,620	44.58	1.95
2,045,185,763	44.58	1.96
2,048,167,246	44.65	1.96
2,051,153,075	44.74	1.96
2,054,143,258	44.81	1.96
2,057,137,799	44.83	1.96
2,060,136,706	44.85	1.96
2,063,139,985	44.87	1.97
2,066,147,642	44.92	1.97
2,069,159,683	44.91	1.97

2,072,176,116	44.87	1.98
2,075,196,945	44.85	1.98
2,078,222,179	44.83	1.98
2,081,251,823	44.83	1.98
2,084,285,883	44.75	1.99
2,087,324,367	44.73	1.99
2,090,367,280	44.72	1.99
2,093,414,629	44.64	1.99
2,096,466,420	44.59	1.99
2,099,522,661	44.58	1.99
2,102,583,356	44.55	1.99
2,105,648,514	44.57	1.99
2,108,718,140	44.55	1.99
2,111,792,241	44.59	1.99
2,114,870,824	44.59	1.99
2,117,953,894	44.56	1.99
2,121,041,459	44.61	1.98
2,124,133,525	44.63	1.98
2,127,230,098	44.66	1.98
2,130,331,186	44.63	1.97
2,133,436,795	44.72	1.97
2,136,546,931	44.74	1.96
2,139,661,601	44.74	1.96
2,142,780,811	44.72	1.95
2,145,904,569	44.72	1.94
2,149,032,881	44.72	1.93
2,152,165,753	44.71	1.93
2,155,303,192	44.70	1.92
2,158,445,205	44.69	1.91
2,161,591,798	44.62	1.90
2,164,742,979	44.62	1.89
2,167,898,753	44.58	1.88
2,171,059,128	44.53	1.88
2,174,224,110	44.48	1.87
2,177,393,706	44.50	1.86
2,180,567,923	44.44	1.85
2,183,746,767	44.45	1.84
2,186,930,245	44.46	1.84
2,190,118,364	44.46	1.83
2,193,311,130	44.42	1.82
2,196,508,552	44.46	1.82
2,199,710,634	44.44	1.81
2,202,917,384	44.42	1.81
2,206,128,809	44.43	1.80

2,209,344,916	44.42	1.80
2,212,565,711	44.38	1.79
2,215,791,202	44.39	1.79
2,219,021,395	44.37	1.79
2,222,256,296	44.36	1.79
2,225,495,914	44.30	1.79
2,228,740,254	44.28	1.78
2,231,989,324	44.21	1.78
2,235,243,131	44.20	1.78
2,238,501,680	44.15	1.78
2,241,764,981	44.11	1.78
2,245,033,038	44.09	1.78
2,248,305,860	44.05	1.78
2,251,583,452	44.03	1.78
2,254,865,823	43.99	1.79
2,258,152,979	44.01	1.79
2,261,444,927	44.00	1.79
2,264,741,674	43.97	1.79
2,268,043,227	43.96	1.79
2,271,349,593	43.98	1.79
2,274,660,779	43.99	1.78
2,277,976,792	43.97	1.78
2,281,297,639	43.97	1.78
2,284,623,328	43.98	1.78
2,287,953,864	43.98	1.78
2,291,289,256	43.99	1.77
2,294,629,510	44.01	1.77
2,297,974,634	44.04	1.76
2,301,324,634	44.03	1.76
2,304,679,518	44.07	1.75
2,308,039,292	44.10	1.75
2,311,403,965	44.15	1.74
2,314,773,542	44.16	1.73
2,318,148,032	44.23	1.72
2,321,527,441	44.25	1.72
2,324,911,777	44.24	1.71
2,328,301,046	44.29	1.70
2,331,695,256	44.28	1.69
2,335,094,414	44.30	1.68
2,338,498,528	44.30	1.67
2,341,907,604	44.28	1.66
2,345,321,650	44.32	1.65
2,348,740,673	44.29	1.64
2,352,164,680	44.28	1.64

2,355,593,679	44.28	1.63
2,359,027,676	44.27	1.62
2,362,466,680	44.26	1.61
2,365,910,697	44.24	1.60
2,369,359,735	44.21	1.60
2,372,813,800	44.23	1.59
2,376,272,901	44.20	1.59
2,379,737,045	44.23	1.58
2,383,206,239	44.21	1.58
2,386,680,490	44.25	1.57
2,390,159,806	44.27	1.57
2,393,644,195	44.30	1.57
2,397,133,662	44.28	1.57
2,400,628,217	44.27	1.57
2,404,127,866	44.25	1.56
2,407,632,617	44.24	1.56
2,411,142,477	44.22	1.56
2,414,657,454	44.20	1.56
2,418,177,555	44.15	1.56
2,421,702,788	44.11	1.56
2,425,233,160	44.03	1.56
2,428,768,678	43.97	1.56
2,432,309,350	43.90	1.56
2,435,855,185	43.81	1.56
2,439,406,188	43.73	1.56
2,442,962,368	43.68	1.56
2,446,523,732	43.61	1.56
2,450,090,288	43.56	1.56
2,453,662,043	43.60	1.55
2,457,239,005	43.67	1.55
2,460,821,181	43.81	1.55
2,464,408,580	44.00	1.54
2,468,001,209	44.16	1.54
2,471,599,075	44.27	1.53
2,475,202,185	44.33	1.53
2,478,810,549	44.35	1.52
2,482,424,173	44.31	1.51
2,486,043,064	44.30	1.51
2,489,667,232	44.21	1.50
2,493,296,682	44.12	1.49
2,496,931,424	44.06	1.48
2,500,571,465	44.09	1.47
2,504,216,812	44.40	1.46
2,507,867,473	44.63	1.45

2,511,523,456	44.65	1.44
2,515,184,769	44.64	1.43
2,518,851,419	44.59	1.42
2,522,523,414	44.53	1.41
2,526,200,763	44.48	1.40
2,529,883,473	44.42	1.39
2,533,571,551	44.39	1.39
2,537,265,005	44.36	1.38
2,540,963,844	44.34	1.37
2,544,668,076	44.32	1.36
2,548,377,707	44.33	1.36
2,552,092,746	44.30	1.35
2,555,813,201	44.26	1.34
2,559,539,080	44.24	1.34
2,563,270,390	44.25	1.34
2,567,007,140	44.23	1.33
2,570,749,337	44.20	1.33
2,574,496,989	44.21	1.33
2,578,250,105	44.28	1.33
2,582,008,693	44.29	1.32
2,585,772,759	44.35	1.32
2,589,542,313	44.45	1.32
2,593,317,362	44.55	1.32
2,597,097,915	44.67	1.32
2,600,883,978	44.74	1.32
2,604,675,562	44.83	1.32
2,608,472,672	44.88	1.32
2,612,275,318	44.90	1.32
2,616,083,507	44.96	1.32
2,619,897,248	45.00	1.31
2,623,716,549	45.03	1.31
2,627,541,418	45.05	1.31
2,631,371,862	45.12	1.31
2,635,207,891	45.15	1.30
2,639,049,511	45.21	1.30
2,642,896,732	45.25	1.29
2,646,749,562	45.27	1.29
2,650,608,008	45.29	1.28
2,654,472,079	45.31	1.28
2,658,341,783	45.35	1.27
2,662,217,129	45.40	1.26
2,666,098,123	45.40	1.26
2,669,984,776	45.40	1.25
2,673,877,095	45.42	1.24

2,677,775,088	45.44	1.23
2,681,678,763	45.48	1.22
2,685,588,129	45.49	1.22
2,689,503,194	45.50	1.21
2,693,423,967	45.52	1.20
2,697,350,455	45.52	1.19
2,701,282,668	45.47	1.18
2,705,220,613	45.49	1.17
2,709,164,298	45.47	1.17
2,713,113,733	45.44	1.16
2,717,068,925	45.48	1.15
2,721,029,883	45.44	1.15
2,724,996,616	45.46	1.15
2,728,969,131	45.46	1.14
2,732,947,437	45.44	1.14
2,736,931,543	45.41	1.14
2,740,921,457	45.39	1.14
2,744,917,188	45.42	1.13
2,748,918,743	45.39	1.13
2,752,926,132	45.34	1.13
2,756,939,363	45.32	1.14
2,760,958,445	45.26	1.14
2,764,983,385	45.26	1.14
2,769,014,193	45.21	1.14
2,773,050,878	45.23	1.14
2,777,093,446	45.16	1.14
2,781,141,909	45.15	1.14
2,785,196,273	45.18	1.14
2,789,256,547	45.18	1.14
2,793,322,741	45.16	1.14
2,797,394,862	45.18	1.14
2,801,472,920	45.21	1.14
2,805,556,923	45.17	1.14
2,809,646,879	45.17	1.14
2,813,742,798	45.16	1.13
2,817,844,688	45.16	1.13
2,821,952,558	45.14	1.12
2,826,066,416	45.10	1.12
2,830,186,271	45.08	1.12
2,834,312,132	45.03	1.11
2,838,444,008	45.00	1.10
2,842,581,908	44.93	1.10
2,846,725,839	44.88	1.09
2,850,875,812	44.83	1.09

2,855,031,834	44.82	1.08
2,859,193,916	44.79	1.08
2,863,362,064	44.80	1.07
2,867,536,290	44.74	1.07
2,871,716,600	44.75	1.07
2,875,903,004	44.82	1.07
2,880,095,512	44.82	1.07
2,884,294,131	44.89	1.07
2,888,498,871	44.88	1.08
2,892,709,740	44.94	1.08
2,896,926,749	44.94	1.08
2,901,149,905	44.93	1.09
2,905,379,217	44.93	1.10
2,909,614,695	44.96	1.10
2,913,856,347	44.97	1.11
2,918,104,183	45.04	1.11
2,922,358,212	45.05	1.12
2,926,618,442	45.10	1.13
2,930,884,882	45.08	1.13
2,935,157,543	45.09	1.13
2,939,436,431	45.01	1.14
2,943,721,558	45.02	1.14
2,948,012,932	44.99	1.15
2,952,310,561	44.97	1.15
2,956,614,456	44.93	1.15
2,960,924,625	44.88	1.15
2,965,241,077	44.85	1.15
2,969,563,822	44.80	1.15
2,973,892,869	44.74	1.15
2,978,228,226	44.66	1.15
2,982,569,904	44.65	1.15
2,986,917,911	44.58	1.15
2,991,272,256	44.54	1.15
2,995,632,950	44.51	1.15
3,000,000,000	44.45	1.15