

# Voltage Variable Equalizer, 50Ω

# VAEQ-2150+

## Typical Performance Data @ V+=5V

Frequency (MHz)	Insertion Loss (dB)		Input Return Loss (dB)		Output Return Loss (dB)		Deviation from Linear (dB)		Insertion Phase (deg)		Frequency (MHz)	Input IP3 (dBm)	
	Vcontrol		Vcontrol		Vcontrol		Vcontrol		Vcontrol			Vcontrol	
	0V	3V	0V	3V	0V	3V	0V	3V	0V	3V		0V	3V
900	12.89	12.73	12.09	12.37	10.44	10.01	-	-	-92.49	-94.63	950	52.07	53.70
920	12.77	12.62	12.01	12.29	10.32	9.91	-	-	-95.30	-97.42	1000	52.97	55.09
950	12.62	12.48	11.88	12.16	10.12	9.71	-0.07	-0.04	-99.45	-101.50	1100	53.01	54.45
970	12.50	12.37	11.83	12.10	10.01	9.60	-0.05	-0.03	-102.13	-104.15	1200	53.30	54.67
990	12.38	12.25	11.77	12.04	9.89	9.50	-0.04	-0.02	-104.97	-106.95	1300	52.53	54.10
1010	12.27	12.14	11.73	12.00	9.79	9.41	-0.03	-0.01	-107.84	-109.79	1400	53.03	53.97
1030	12.17	12.05	11.67	11.94	9.69	9.33	-0.04	-0.02	-110.69	-112.60	1500	53.53	53.75
1050	12.07	11.96	11.57	11.84	9.57	9.21	-0.04	-0.03	-113.48	-115.36	1600	54.64	53.00
1070	11.96	11.85	11.52	11.77	9.47	9.12	-0.04	-0.03	-116.19	-118.03	1700	53.85	52.55
1000	12.32	12.19	11.75	12.02	9.84	9.46	-0.03	-0.01	-106.39	-108.36	1800	52.01	52.45
1020	12.22	12.09	11.71	11.97	9.73	9.37	-0.03	-0.01	-109.29	-111.22	1900	52.23	52.39
1040	12.12	12.00	11.62	11.89	9.63	9.27	-0.04	-0.02	-112.06	-113.96	2000	52.69	53.29
1060	12.02	11.91	11.54	11.80	9.52	9.16	-0.05	-0.03	-114.84	-116.70	2100	53.30	54.03
1100	11.77	11.67	11.49	11.75	9.35	9.01	0.00	0.00	-120.47	-122.27	2150	53.60	54.33
1120	11.66	11.56	11.43	11.69	9.26	8.94	0.00	0.00	-123.51	-125.26			
1140	11.58	11.49	11.38	11.63	9.16	8.85	-0.02	-0.02	-126.38	-128.11			
1160	11.49	11.40	11.31	11.56	9.07	8.77	-0.03	-0.04	-129.06	-130.75			
1180	11.36	11.27	11.27	11.51	8.99	8.69	-0.01	-0.01	-131.86	-133.51			
1200	11.24	11.15	11.25	11.50	8.91	8.61	0.01	0.00	-134.83	-136.45			
1220	11.13	11.05	11.24	11.50	8.84	8.56	0.00	0.00	-137.90	-139.50			
1250	11.01	10.93	11.16	11.41	8.73	8.46	-0.03	-0.04	-142.29	-143.85			
1300	10.69	10.62	11.12	11.36	8.56	8.30	0.03	0.02	-149.29	-150.75			
1350	10.49	10.42	11.12	11.36	8.41	8.18	-0.03	-0.04	-156.99	-158.39			
1450	9.95	9.89	11.09	11.32	8.16	7.95	-0.01	-0.02	-172.15	-173.41			
1500	9.61	9.56	11.11	11.35	8.05	7.86	0.05	0.04	-179.45	179.37			
1550	9.40	9.35	11.24	11.47	7.96	7.79	0.01	0.00	172.58	171.45			
1600	9.10	9.06	11.25	11.48	7.85	7.69	0.05	0.04	164.93	163.87			
1620	8.97	8.92	11.34	11.58	7.82	7.68	0.08	0.08	161.70	160.66			
1640	8.88	8.84	11.29	11.53	7.77	7.63	0.06	0.05	158.11	157.09			
1660	8.82	8.78	11.32	11.55	7.74	7.60	0.02	0.01	155.00	154.01			
1680	8.73	8.69	11.41	11.64	7.73	7.59	0.01	0.00	152.09	151.12			
1700	8.56	8.52	11.41	11.64	7.70	7.57	0.06	0.06	148.88	147.93			
1720	8.45	8.41	11.46	11.68	7.64	7.52	0.07	0.07	145.44	144.52			
1750	8.33	8.29	11.55	11.77	7.60	7.49	0.04	0.03	140.38	139.48			
1800	8.07	8.04	11.62	11.85	7.56	7.46	0.03	0.03	132.30	131.47			
1850	7.79	7.76	11.66	11.88	7.41	7.33	0.05	0.05	123.50	122.73			
1900	7.56	7.53	11.87	12.10	7.45	7.38	0.02	0.02	115.47	114.75			
1950	7.31	7.28	11.81	12.03	7.26	7.22	0.02	0.02	106.48	105.82			
2000	7.10	7.08	11.79	12.00	7.27	7.23	-0.05	-0.04	97.57	96.98			
2020	7.01	6.99	11.79	12.00	7.24	7.20	-0.06	-0.05	94.31	93.74			
2040	6.86	6.84	11.72	11.92	7.17	7.15	-0.01	-0.01	90.82	90.29			
2060	6.74	6.72	11.60	11.80	7.12	7.10	0.00	0.01	86.88	86.38			
2080	6.69	6.67	11.53	11.72	7.13	7.12	-0.05	-0.04	83.07	82.59			
2100	6.64	6.62	11.45	11.64	7.20	7.18	-0.10	-0.09	79.63	79.18			
2120	6.52	6.50	11.33	11.51	7.18	7.16	-0.09	-0.08	76.26	75.84			
2140	6.36	6.34	11.13	11.30	7.08	7.08	-0.04	-0.03	72.51	72.12			
2150	6.29	6.28	11.04	11.20	7.04	7.04	-0.02	-0.01	70.46	70.09			
2200	6.15	6.13	10.64	10.79	7.07	7.07	-	-	60.73	60.43			
2250	5.82	5.80	10.00	10.12	7.05	7.07	-	-	51.28	51.07			
2300	5.65	5.63	9.35	9.46	7.10	7.13	-	-	40.50	40.36			
2400	5.25	5.22	7.95	8.02	7.32	7.36	-	-	18.94	18.95			
2500	5.01	4.98	6.63	6.67	7.71	7.77	-	-	-5.20	-5.06			



ISO 9001 ISO 14001 AS 9100 CERTIFIED

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# Voltage Variable Equalizer, 50Ω

# VAEQ-2150+

## Typical Performance Data @ V+=5V

Frequency (MHz)	Insertion Loss (dB) Vcontrol		Input Return Loss (dB) Vcontrol		Output Return Loss (dB) Vcontrol		Deviation from Linear (dB) Vcontrol		Insertion Phase (deg) Vcontrol		Frequency (MHz)	Input IP3 (dBm) Vcontrol	
	4.4V	5V	4.4V	5V	4.4V	5V	4.4V	5V	4.4V	5V		4V	5V
900	7.61	6.61	29.48	25.24	16.86	17.53	-	-	-128.04	-131.33	950	52.81	55.71
920	7.61	6.61	29.65	25.66	16.78	17.53	-	-	-130.94	-134.30	1000	53.31	59.05
950	7.60	6.62	30.06	26.56	16.59	17.49	-0.05	-0.05	-135.26	-138.73	1100	53.33	58.83
970	7.59	6.61	30.67	27.34	16.51	17.52	-0.04	-0.04	-138.11	-141.67	1200	53.13	56.15
990	7.58	6.61	31.06	27.99	16.46	17.55	-0.03	-0.03	-141.05	-144.69	1300	52.93	54.46
1010	7.58	6.61	31.29	28.46	16.41	17.57	-0.03	-0.03	-143.98	-147.69	1400	53.32	53.63
1030	7.58	6.62	31.26	29.03	16.32	17.55	-0.04	-0.04	-146.87	-150.65	1500	56.06	55.26
1050	7.57	6.62	30.95	30.11	16.20	17.53	-0.03	-0.03	-149.71	-153.57	1600	58.16	58.10
1070	7.57	6.62	31.02	31.29	16.13	17.56	-0.02	-0.02	-152.59	-156.54	1700	54.32	57.14
1000	7.58	6.61	31.24	28.17	16.44	17.58	-0.03	-0.03	-142.52	-146.20	1800	52.48	55.51
1020	7.58	6.62	31.39	28.71	16.37	17.57	-0.03	-0.03	-145.44	-149.18	1900	52.59	54.41
1040	7.58	6.62	31.23	29.62	16.26	17.55	-0.03	-0.03	-148.25	-152.08	2000	52.87	54.38
1060	7.57	6.62	30.94	30.69	16.16	17.54	-0.03	-0.03	-151.15	-155.05	2100	53.91	55.13
1100	7.55	6.62	31.47	32.71	16.08	17.65	-0.01	-0.01	-156.98	-161.05	2150	54.38	54.67
1120	7.55	6.63	31.10	33.69	16.03	17.67	-0.01	-0.01	-159.93	-164.06			
1140	7.55	6.64	30.55	34.95	15.91	17.61	-0.02	-0.08	-162.82	-167.02			
1160	7.55	6.64	30.06	36.91	15.82	17.58	-0.02	-0.02	-165.63	-169.93			
1180	7.53	6.64	29.56	39.38	15.75	17.60	0.00	0.00	-168.51	-172.90			
1200	7.52	6.64	29.39	39.94	15.70	17.61	0.01	-0.02	-171.50	-175.96			
1220	7.53	6.66	29.28	39.70	15.67	17.64	0.00	0.00	-174.48	-179.00			
1250	7.53	6.67	28.38	40.00	15.53	17.59	-0.01	-0.01	-178.80	176.58			
1300	7.49	6.67	27.32	34.81	15.39	17.57	0.03	0.03	174.07	169.22			
1350	7.52	6.72	26.71	32.54	15.23	17.53	0.00	0.05	166.66	161.67			
1450	7.49	6.76	25.17	28.53	14.91	17.34	0.02	0.02	151.98	146.66			
1500	7.45	6.76	24.43	26.70	14.79	17.27	0.06	0.15	144.83	139.31			
1550	7.48	6.84	24.26	25.89	14.64	17.14	0.02	0.02	137.45	131.80			
1600	7.45	6.86	23.70	24.95	14.46	16.91	0.04	0.04	130.14	124.33			
1620	7.45	6.88	23.68	24.61	14.42	16.90	0.05	0.05	127.26	121.41			
1640	7.44	6.88	23.44	24.52	14.28	16.70	0.05	0.05	124.09	118.23			
1660	7.47	6.93	23.33	24.33	14.17	16.57	0.02	0.02	121.17	115.24			
1680	7.49	6.96	23.26	24.00	14.11	16.49	0.00	0.00	118.39	112.38			
1700	7.45	6.95	22.96	23.58	14.07	16.44	0.04	0.04	115.57	109.52			
1720	7.45	6.97	23.09	23.68	13.98	16.32	0.04	0.04	112.49	106.41			
1750	7.48	7.04	23.12	23.63	13.82	16.10	0.00	0.00	108.03	101.91			
1800	7.48	7.10	22.80	23.18	13.56	15.73	0.00	0.00	100.90	94.67			
1850	7.47	7.16	22.56	23.14	13.23	15.27	0.00	0.00	93.47	87.23			
1900	7.52	7.29	22.57	22.95	12.96	14.87	-0.05	-0.05	86.73	80.42			
1950	7.52	7.36	22.32	23.38	12.52	14.29	-0.05	-0.05	79.34	73.08			
2000	7.54	7.48	21.73	23.09	12.12	13.71	-0.08	-0.08	72.29	66.13			
2020	7.56	7.54	21.61	23.24	11.94	13.48	-0.10	-0.10	69.74	63.62			
2040	7.52	7.55	21.12	22.85	11.76	13.23	-0.06	-0.06	67.20	61.19			
2060	7.50	7.57	20.48	22.32	11.56	12.94	-0.04	-0.04	64.29	58.44			
2080	7.51	7.62	20.01	21.89	11.40	12.72	-0.06	-0.06	61.51	55.80			
2100	7.53	7.68	19.56	21.47	11.28	12.54	-0.07	-0.07	59.03	53.49			
2120	7.49	7.69	18.95	20.84	11.07	12.25	-0.04	-0.04	56.65	51.32			
2140	7.42	7.67	18.11	19.91	10.79	11.89	0.04	0.04	54.09	49.04			
2150	7.38	7.66	17.70	19.42	10.66	11.70	0.07	0.07	52.70	47.81			
2200	7.31	7.67	15.99	17.30	10.18	11.03	-	-	46.20	42.24			
2250	7.02	7.44	13.93	14.80	9.66	10.33	-	-	40.22	37.50			
2300	6.70	7.08	12.01	12.47	9.19	9.67	-	-	32.96	31.57			
2400	5.77	5.90	8.71	8.75	8.53	8.78	-	-	16.82	17.03			
2500	5.03	4.98	6.72	6.78	8.40	8.61	-	-	-4.91	-4.63			



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# Voltage Variable Equalizer, 50Ω

# VAEQ-2150+

## Typical Performance Data @ V+=3V

Frequency (MHz)	Insertion Loss (dB) Vcontrol		Input Return Loss (dB) Vcontrol		Output Return Loss (dB) Vcontrol		Deviation from Linear (dB) Vcontrol		Insertion Phase (deg) Vcontrol		Frequency (MHz)	Input IP3 (dBm) Vcontrol	
	0V	2V	0V	2V	0V	2V	0V	2V	0V	2V		0V	2V
	900	12.84	12.52	10.67	11.10	9.74	8.87	-	-	-92.91		-97.07	950
920	12.73	12.42	10.62	11.05	9.66	8.81	-	-	-95.68	-99.79	1000	52.74	53.65
950	12.58	12.29	10.51	10.93	9.46	8.64	-0.02	0.04	-99.74	-103.77	1100	52.25	53.62
970	12.46	12.19	10.46	10.87	9.34	8.54	-0.02	0.04	-102.37	-106.32	1200	52.14	53.53
990	12.34	12.08	10.42	10.84	9.25	8.47	0.00	0.05	-105.16	-109.04	1300	51.78	52.90
1010	12.23	11.97	10.42	10.83	9.19	8.42	0.00	0.05	-107.98	-111.79	1400	52.31	53.31
1030	12.13	11.89	10.38	10.79	9.12	8.37	-0.01	0.02	-110.78	-114.54	1500	52.97	53.43
1050	12.04	11.81	10.28	10.69	8.99	8.26	-0.02	0.00	-113.54	-117.21	1600	53.68	52.96
1070	11.93	11.71	10.24	10.63	8.88	8.17	-0.03	0.00	-116.18	-119.79	1700	52.66	52.20
1000	12.28	12.02	10.43	10.84	9.22	8.45	0.00	0.05	-106.56	-110.40	1800	51.99	51.70
1020	12.18	11.93	10.41	10.82	9.15	8.40	0.00	0.04	-109.41	-113.18	1900	51.90	51.90
1040	12.08	11.84	10.34	10.74	9.05	8.32	-0.01	0.02	-112.14	-115.86	2000	52.43	52.94
1060	11.99	11.76	10.26	10.66	8.93	8.21	-0.03	0.00	-114.86	-118.51	2100	53.45	53.73
1100	11.74	11.53	10.24	10.64	8.79	8.10	0.01	0.02	-120.39	-123.88	2150	53.39	53.74
1120	11.63	11.43	10.21	10.61	8.74	8.06	0.01	0.02	-123.38	-126.84			
1140	11.55	11.36	10.16	10.55	8.65	7.99	-0.02	-0.02	-126.21	-129.60			
1160	11.46	11.27	10.09	10.49	8.54	7.90	-0.04	-0.04	-128.83	-132.16			
1180	11.33	11.15	10.06	10.44	8.45	7.83	-0.02	-0.02	-131.57	-134.80			
1200	11.20	11.03	10.06	10.44	8.40	7.78	0.00	0.00	-134.48	-137.67			
1220	11.09	10.93	10.07	10.45	8.37	7.76	0.00	-0.01	-137.53	-140.66			
1250	10.97	10.81	9.99	10.38	8.25	7.67	-0.04	-0.06	-141.85	-144.89			
1300	10.64	10.50	9.96	10.34	8.09	7.55	0.01	0.00	-148.71	-151.58			
1350	10.43	10.30	9.97	10.34	7.97	7.47	-0.04	-0.07	-156.34	-159.10			
1450	9.87	9.76	9.97	10.33	7.75	7.31	-0.03	-0.05	-171.32	-173.79			
1500	9.52	9.42	10.00	10.37	7.67	7.26	0.05	0.02	-178.53	179.15			
1550	9.30	9.20	10.12	10.49	7.60	7.22	0.00	-0.03	173.56	171.34			
1600	8.99	8.89	10.15	10.52	7.52	7.17	0.04	0.02	165.97	163.88			
1620	8.85	8.76	10.24	10.61	7.50	7.16	0.07	0.05	162.76	160.72			
1640	8.76	8.67	10.20	10.57	7.46	7.13	0.05	0.03	159.20	157.20			
1660	8.69	8.61	10.22	10.58	7.44	7.12	0.01	-0.01	156.11	154.16			
1680	8.60	8.51	10.29	10.65	7.45	7.15	0.00	-0.02	153.21	151.29			
1700	8.43	8.35	10.31	10.67	7.43	7.13	0.06	0.04	150.01	148.16			
1720	8.31	8.23	10.38	10.73	7.37	7.09	0.07	0.05	146.60	144.79			
1750	8.18	8.10	10.45	10.82	7.33	7.07	0.03	0.02	141.54	139.79			
1800	7.91	7.84	10.56	10.92	7.38	7.15	0.03	0.02	133.49	131.85			
1850	7.62	7.55	10.64	11.00	7.17	6.97	0.05	0.05	124.74	123.21			
1900	7.37	7.30	10.87	11.23	7.35	7.17	0.03	0.03	116.64	115.24			
1950	7.10	7.03	10.87	11.22	7.06	6.91	0.03	0.03	107.67	106.38			
2000	6.88	6.82	10.94	11.29	7.23	7.10	-0.03	-0.02	98.74	97.57			
2020	6.78	6.73	10.98	11.33	7.20	7.09	-0.04	-0.03	95.42	94.30			
2040	6.63	6.57	10.93	11.26	7.06	6.96	0.01	0.02	91.83	90.78			
2060	6.52	6.46	10.84	11.17	6.96	6.88	0.01	0.03	87.92	86.91			
2080	6.46	6.40	10.83	11.15	7.03	6.95	-0.04	-0.02	84.08	83.12			
2100	6.41	6.35	10.84	11.16	7.19	7.12	-0.10	-0.07	80.64	79.72			
2120	6.29	6.23	10.80	11.11	7.20	7.14	-0.08	-0.06	77.25	76.40			
2140	6.13	6.07	10.64	10.95	7.06	7.02	-0.03	-0.01	73.48	72.68			
2150	6.06	6.00	10.56	10.86	6.99	6.95	-0.02	0.01	71.41	70.65			
2200	5.91	5.85	10.33	10.60	7.11	7.09	-	-	61.57	60.93			
2250	5.59	5.54	9.82	10.06	7.07	7.07	-	-	52.06	51.57			
2300	5.43	5.37	9.34	9.55	7.21	7.23	-	-	41.27	40.93			
2400	5.06	4.98	8.11	8.25	7.48	7.55	-	-	19.65	19.59			
2500	4.85	4.75	6.85	6.95	7.89	8.02	-	-	-4.33	-4.16			



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# Voltage Variable Equalizer, 50Ω

# VAEQ-2150+

## Typical Performance Data @ V+=3V

Frequency (MHz)	Insertion Loss (dB)		Input Return Loss (dB)		Output Return Loss (dB)		Deviation from Linear (dB)		Insertion Phase (deg)		Frequency (MHz)	Input IP3 (dBm)	
	Vcontrol		Vcontrol		Vcontrol		Vcontrol		Vcontrol			Vcontrol	
	3V	5V	3V	5V	3V	5V	3V	5V	3V	5V		3V	5V
900	7.85	3.10	20.75	17.32	13.95	13.17	-	-	-127.74	-141.33	950	52.20	53.03
920	7.86	3.13	20.59	17.37	13.84	13.13	-	-	-130.57	-144.44	1000	52.99	54.16
950	7.87	3.18	20.26	17.32	13.59	12.97	0.20	-0.20	-134.78	-149.07	1100	52.90	53.79
970	7.86	3.20	20.11	17.37	13.46	12.89	0.19	-0.18	-137.53	-152.09	1200	52.82	53.31
990	7.85	3.22	20.01	17.48	13.38	12.85	0.18	-0.16	-140.37	-155.16	1300	52.39	52.40
1010	7.85	3.25	20.00	17.62	13.33	12.85	0.17	-0.14	-143.23	-158.29	1400	52.76	52.21
1030	7.87	3.29	19.86	17.68	13.23	12.83	0.14	-0.14	-146.06	-161.42	1500	55.39	53.26
1050	7.87	3.32	19.58	17.60	13.07	12.73	0.12	-0.13	-148.81	-164.42	1600	58.68	56.24
1070	7.87	3.35	19.40	17.61	12.96	12.65	0.10	-0.11	-151.54	-167.42	1700	53.83	60.73
1000	7.85	3.23	20.01	17.57	13.35	12.85	0.17	-0.15	-141.80	-156.72	1800	52.55	54.92
1020	7.86	3.26	19.95	17.67	13.29	12.84	0.15	-0.14	-144.66	-159.86	1900	52.13	53.61
1040	7.87	3.31	19.72	17.65	13.15	12.78	0.13	-0.13	-147.40	-162.91	2000	52.53	52.85
1060	7.87	3.34	19.48	17.60	13.01	12.68	0.11	-0.12	-150.18	-165.92	2100	53.72	54.18
1100	7.85	3.38	19.40	17.83	12.89	12.63	0.09	-0.08	-155.78	-172.04	2150	54.05	52.78
1120	7.85	3.41	19.31	17.92	12.83	12.63	0.08	-0.06	-158.66	-175.17			
1140	7.86	3.45	19.14	17.91	12.72	12.58	0.05	-0.07	-161.47	-178.26			
1160	7.87	3.50	18.91	17.85	12.59	12.49	0.03	-0.06	-164.13	-178.78			
1180	7.84	3.52	18.74	17.83	12.51	12.44	0.03	-0.04	-166.86	-175.83			
1200	7.83	3.53	18.72	17.91	12.45	12.42	0.03	-0.01	-169.73	-172.73			
1220	7.83	3.57	18.71	18.01	12.43	12.43	0.01	0.00	-172.66	-169.53			
1250	7.84	3.64	18.45	17.93	12.30	12.37	-0.03	-0.01	-176.82	-164.95			
1300	7.79	3.70	18.21	17.93	12.15	12.28	-0.02	0.04	-176.43	-157.61			
1350	7.81	3.81	18.09	17.90	12.03	12.23	-0.08	0.03	-169.22	-149.71			
1450	7.75	3.99	17.73	17.57	11.80	12.10	-0.10	0.09	-155.13	-134.50			
1500	7.67	4.06	17.56	17.24	11.73	12.03	-0.06	0.13	-148.37	-127.26			
1550	7.68	4.19	17.61	17.11	11.65	11.99	-0.12	0.11	-141.17	-119.38			
1600	7.62	4.28	17.44	16.63	11.56	11.89	-0.10	0.14	-134.21	-112.05			
1620	7.59	4.32	17.54	16.58	11.53	11.88	-0.09	0.15	-131.41	-109.00			
1640	7.58	4.36	17.39	16.41	11.45	11.79	-0.09	0.16	-128.31	-105.82			
1660	7.59	4.44	17.33	16.21	11.44	11.72	-0.12	0.13	-125.50	-102.76			
1680	7.59	4.51	17.34	16.04	11.45	11.72	-0.14	0.11	-122.85	-99.86			
1700	7.53	4.54	17.27	15.83	11.42	11.71	-0.09	0.13	-120.13	-97.06			
1720	7.51	4.58	17.33	15.77	11.32	11.66	-0.09	0.14	-117.16	-93.97			
1750	7.51	4.68	17.36	15.58	11.24	11.53	-0.12	0.11	-112.81	-89.33			
1800	7.46	4.85	17.26	15.06	11.27	11.48	-0.11	0.08	-105.91	-82.15			
1850	7.39	4.98	17.18	14.71	10.89	11.12	-0.08	0.08	-98.67	-74.74			
1900	7.35	5.23	17.24	14.30	11.05	11.17	-0.08	-0.01	-92.07	-67.84			
1950	7.27	5.38	17.08	13.95	10.50	10.66	-0.04	-0.02	-84.78	-60.77			
2000	7.21	5.62	16.86	13.43	10.57	10.54	-0.02	-0.10	-77.75	-53.96			
2020	7.18	5.73	16.82	13.35	10.48	10.50	-0.02	-0.14	-75.15	-51.52			
2040	7.10	5.80	16.59	13.14	10.21	10.27	0.05	-0.14	-72.46	-49.25			
2060	7.04	5.86	16.27	12.85	9.97	9.97	0.09	-0.12	-69.49	-46.69			
2080	7.02	5.97	16.06	12.59	9.95	9.83	0.10	-0.16	-66.59	-44.14			
2100	7.01	6.10	15.93	12.44	10.07	9.87	0.09	-0.21	-64.01	-41.98			
2120	6.93	6.19	15.68	12.23	10.01	9.82	0.15	-0.21	-61.52	-40.18			
2140	6.82	6.22	15.23	11.93	9.73	9.57	0.25	-0.16	-58.80	-38.41			
2150	6.76	6.22	14.98	11.74	9.57	9.40	0.30	-0.13	-57.28	-37.41			
2200	6.61	6.34	14.03	10.95	9.40	8.98	-	-	-50.05	-32.75			
2250	6.28	6.18	12.72	10.06	9.05	8.66	-	-	-43.23	-29.61			
2300	5.98	5.77	11.42	9.08	8.86	8.29	-	-	-35.09	-25.02			
2400	5.20	4.45	8.88	7.61	8.59	8.13	-	-	-17.59	-11.92			
2500	4.64	3.47	7.10	7.13	8.67	8.38	-	-	-4.05	-8.16			



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