

Exhibit for Direct Sequence System Processing Gain, Hopper Plus 120-24, Multipoint Wireless Ethernet Bridge:

Reference: Part 15, Subpart C, Section 15.247 (e) (2)
RSS-139, Annex B, Section 4.2 (2)

Method of Measurement:

- The CW (continuous wave) jamming margin method was used to determine the Processing Gain.
- $G_p = SNR_o + J/S + L_{sys}$

Where: $SNR_o = 19.5\text{dB}$ (This is the theoretical Signal-to-Noise Ratio for a BPSK/QPSK Receiver with 8-bits/symbol yielding a $BER = 1E-06$).
 J is the Jammer level measured in dBm for the CW signal that provides a Receiver Output $BER = 1E-06$
 S is the Spread Spectrum signal level measured in dBm at the same point as the Jammer.
 $L_{sys} = 2\text{dB}$ (Maximum allowable total System Losses including transmitter and receiver).

- The CW Jammer was stepped in 50kHz increments across the 33MHz bandwidth of the DSSS signal. Thus a total of 660 measurement points were taken and recorded on a spreadsheet. The J/S ratio was computed for each point and the final Processing Gain figure was determined using the lowest remaining value of J/S ratio after discarding the worst 20% of the J/S points recorded.
- Initial Receiver Conditions:

Channel Bandwidth: 2423.6-2456.4MHz
RSSI = -60dBm to -50dBm
Receiver Output $BER = 0.0E+00$
- Figure 1 illustrates the equipment set-up for measuring the Jammer and Signal levels and measuring the BER.

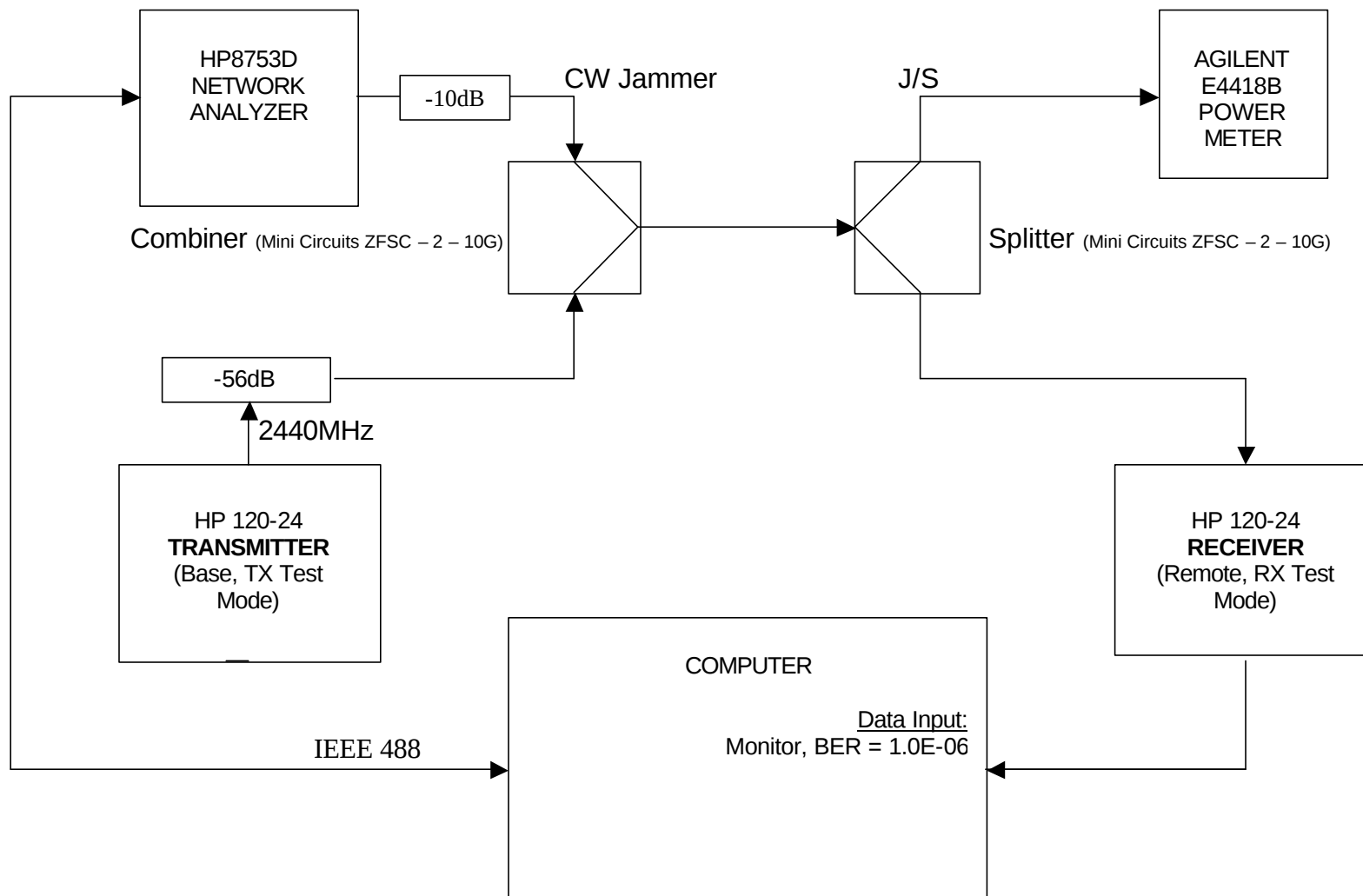


Figure 1: Equipment Set-up for Measuring Processing Gain

Processing Gain Test Results

J Freq.	J(8753D)	Signal Level	Correction Factor	Corrected Jammer Level	Gp Values	Gp Sorted	Gp
2423.5	-30	-43	14.92	-44.92	19.58	9.08	11.83
2423.55	-30	-43	14.92	-44.92	19.58	9.08	
2423.6	-30	-43	14.92	-44.92	19.58	9.33	
2423.65	-30	-43	14.92	-44.92	19.58	9.58	
2423.7	-30	-43	14.92	-44.92	19.58	9.58	
2423.75	-30	-43	14.92	-44.92	19.58	9.58	
2423.8	-30	-43	14.92	-44.92	19.58	9.58	
2423.85	-30	-43	14.92	-44.92	19.58	9.58	
2423.9	-30	-43	14.92	-44.92	19.58	9.58	
2423.95	-30	-43	14.92	-44.92	19.58	9.58	
2424	-30	-43	14.92	-44.92	19.58	9.58	
2424.05	-30	-43	14.92	-44.92	19.58	9.58	
2424.1	-30	-43	14.92	-44.92	19.58	10.08	
2424.15	-30	-43	14.92	-44.92	19.58	10.08	
2424.2	-30	-43	14.92	-44.92	19.58	10.33	
2424.25	-30	-43	14.92	-44.92	19.58	10.33	
2424.3	-30	-43	14.92	-44.92	19.58	10.33	
2424.35	-30	-43	14.92	-44.92	19.58	10.33	
2424.4	-30	-43	14.92	-44.92	19.58	10.33	
2424.45	-30	-43	14.92	-44.92	19.58	10.33	
2424.5	-30	-43	14.92	-44.92	19.58	10.58	
2424.55	-30	-43	14.92	-44.92	19.58	10.58	
2424.6	-30	-43	14.92	-44.92	19.58	10.58	
2424.65	-30.25	-43	14.92	-45.17	19.33	10.58	
2424.7	-30	-43	14.92	-44.92	19.58	10.58	
2424.75	-30	-43	14.92	-44.92	19.58	10.58	
2424.8	-31.5	-43	14.92	-46.42	18.08	10.58	
2424.85	-31.75	-43	14.92	-46.67	17.83	10.58	
2424.9	-31	-43	14.92	-45.92	18.58	10.58	
2424.95	-30.25	-43	14.92	-45.17	19.33	10.83	
2425	-31.25	-43	14.92	-46.17	18.33	10.83	
2425.05	-30.5	-43	14.92	-45.42	19.08	10.83	
2425.1	-31	-43	14.92	-45.92	18.58	10.83	
2425.15	-31.5	-43	14.92	-46.42	18.08	10.83	
2425.2	-31.75	-43	14.92	-46.67	17.83	10.83	
2425.25	-32	-43	14.92	-46.92	17.58	10.83	
2425.3	-31.75	-43	14.92	-46.67	17.83	10.83	
2425.35	-32	-43	14.92	-46.92	17.58	10.83	
2425.4	-31.75	-43	14.92	-46.67	17.83	11.08	
2425.45	-31.75	-43	14.92	-46.67	17.83	11.08	
2425.5	-31.75	-43	14.92	-46.67	17.83	11.08	
2425.55	-34	-43	14.92	-48.92	15.58	11.08	
2425.6	-32.25	-43	14.92	-47.17	17.33	11.08	
2425.65	-34	-43	14.92	-48.92	15.58	11.08	
2425.7	-33	-43	14.92	-47.92	16.58	11.08	
2425.75	-34	-43	14.92	-48.92	15.58	11.08	
2425.8	-33.75	-43	14.92	-48.67	15.83	11.08	
2425.85	-32	-43	14.92	-46.92	17.58	11.08	
2425.9	-33	-43	14.92	-47.92	16.58	11.08	
2425.95	-33.5	-43	14.92	-48.42	16.08	11.08	
2426	-33.75	-43	14.92	-48.67	15.83	11.33	
2426.05	-34	-43	14.92	-48.92	15.58	11.33	
2426.1	-34	-43	14.92	-48.92	15.58	11.33	
2426.15	-34	-43	14.92	-48.92	15.58	11.33	

2426.2	-33.75	-43	14.92	-48.67	15.83	11.33
2426.25	-34.5	-43	14.92	-49.42	15.08	11.33
2426.3	-34	-43	14.92	-48.92	15.58	11.33
2426.35	-33.75	-43	14.92	-48.67	15.83	11.33
2426.4	-35.25	-43	14.92	-50.17	14.33	11.33
2426.45	-32.75	-43	14.92	-47.67	16.83	11.33
2426.5	-35.5	-43	14.92	-50.42	14.08	11.33
2426.55	-34.75	-43	14.92	-49.67	14.83	11.33
2426.6	-34.5	-43	14.92	-49.42	15.08	11.33
2426.65	-36.5	-43	14.92	-51.42	13.08	11.33
2426.7	-36.25	-43	14.92	-51.17	13.33	11.33
2426.75	-36	-43	14.92	-50.92	13.58	11.33
2426.8	-34	-43	14.92	-48.92	15.58	11.58
2426.85	-36	-43	14.92	-50.92	13.58	11.58
2426.9	-35	-43	14.92	-49.92	14.58	11.58
2426.95	-35.75	-43	14.92	-50.67	13.83	11.58
2427	-35	-43	14.92	-49.92	14.58	11.58
2427.05	-37.25	-43	14.92	-52.17	12.33	11.58
2427.1	-37	-43	14.92	-51.92	12.58	11.58
2427.15	-36.5	-43	14.92	-51.42	13.08	11.58
2427.2	-38.25	-43	14.92	-53.17	11.33	11.58
2427.25	-36.75	-43	14.92	-51.67	12.83	11.58
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2427.6	-37.75	-43	14.92	-52.67	11.83	11.58
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2427.75	-37.75	-43	14.92	-52.67	11.83	11.58
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2429	-37.5	-43	14.92	-52.42	12.08	11.58
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2431.1	-38.25	-43	14.92	-53.17	11.33	12.08
2431.15	-38	-43	14.92	-52.92	11.58	12.08
2431.2	-40.25	-43	14.92	-55.17	9.33	12.08
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2431.95	-37.5	-43	14.92	-52.42	12.08	12.08

2432	-38	-43	14.92	-52.92	11.58	12.08
2432.05	-38	-43	14.92	-52.92	11.58	12.08
2432.1	-37.5	-43	14.92	-52.42	12.08	12.08
2432.15	-37.25	-43	14.92	-52.17	12.33	12.08
2432.2	-37.25	-43	14.92	-52.17	12.33	12.08
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2434.15	-40	-43	14.92	-54.92	9.58	12.58
2434.2	-39.25	-43	14.92	-54.17	10.33	12.58
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2434.3	-38	-43	14.92	-52.92	11.58	12.58
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2434.6	-36.75	-43	14.92	-51.67	12.83	12.58
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2434.7	-38	-43	14.92	-52.92	11.58	12.58
2434.75	-37.75	-43	14.92	-52.67	11.83	12.58
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2434.85	-36	-43	14.92	-50.92	13.58	12.58

2434.9	-37.5	-43	14.92	-52.42	12.08	12.58
2434.95	-38	-43	14.92	-52.92	11.58	12.58
2435	-36	-43	14.92	-50.92	13.58	12.58
2435.05	-36	-43	14.92	-50.92	13.58	12.58
2435.1	-36	-43	14.92	-50.92	13.58	12.58
2435.15	-36	-43	14.92	-50.92	13.58	12.58
2435.2	-37.5	-43	14.92	-52.42	12.08	12.58
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2435.55	-36.75	-43	14.92	-51.67	12.83	12.58
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2435.65	-37.75	-43	14.92	-52.67	11.83	12.58
2435.7	-40	-43	14.92	-54.92	9.58	12.58
2435.75	-37.5	-43	14.92	-52.42	12.08	12.83
2435.8	-38	-43	14.92	-52.92	11.58	12.83
2435.85	-38	-43	14.92	-52.92	11.58	12.83
2435.9	-37.75	-43	14.92	-52.67	11.83	12.83
2435.95	-38.75	-43	14.92	-53.67	10.83	12.83
2436	-39	-43	14.92	-53.92	10.58	12.83
2436.05	-38	-43	14.92	-52.92	11.58	12.83
2436.1	-40	-43	14.92	-54.92	9.58	12.83
2436.15	-38.75	-43	14.92	-53.67	10.83	12.83
2436.2	-38.5	-43	14.92	-53.42	11.08	12.83
2436.25	-37.5	-43	14.92	-52.42	12.08	12.83
2436.3	-39	-43	14.92	-53.92	10.58	12.83
2436.35	-39	-43	14.92	-53.92	10.58	12.83
2436.4	-39.25	-43	14.92	-54.17	10.33	12.83
2436.45	-37	-43	14.92	-51.92	12.58	12.83
2436.5	-37.25	-43	14.92	-52.17	12.33	12.83
2436.55	-37.5	-43	14.92	-52.42	12.08	12.83
2436.6	-37.5	-43	14.92	-52.42	12.08	12.83
2436.65	-38	-43	14.92	-52.92	11.58	12.83
2436.7	-38.25	-43	14.92	-53.17	11.33	12.83
2436.75	-38.25	-43	14.92	-53.17	11.33	12.83
2436.8	-38	-43	14.92	-52.92	11.58	12.83
2436.85	-37	-43	14.92	-51.92	12.58	12.83
2436.9	-38	-43	14.92	-52.92	11.58	12.83
2436.95	-37.75	-43	14.92	-52.67	11.83	12.83
2437	-38	-43	14.92	-52.92	11.58	12.83
2437.05	-36.75	-43	14.92	-51.67	12.83	12.83
2437.1	-36	-43	14.92	-50.92	13.58	13.08
2437.15	-36	-43	14.92	-50.92	13.58	13.08
2437.2	-36.25	-43	14.92	-51.17	13.33	13.08
2437.25	-38	-43	14.92	-52.92	11.58	13.08
2437.3	-38	-43	14.92	-52.92	11.58	13.08
2437.35	-37	-43	14.92	-51.92	12.58	13.08
2437.4	-36	-43	14.92	-50.92	13.58	13.08
2437.45	-36	-43	14.92	-50.92	13.58	13.08
2437.5	-36	-43	14.92	-50.92	13.58	13.08
2437.55	-36.5	-43	14.92	-51.42	13.08	13.08
2437.6	-36	-43	14.92	-50.92	13.58	13.08
2437.65	-37.75	-43	14.92	-52.67	11.83	13.08
2437.7	-36	-43	14.92	-50.92	13.58	13.08
2437.75	-36.5	-43	14.92	-51.42	13.08	13.08

2437.8	-37	-43	14.92	-51.92	12.58	13.08
2437.85	-38.25	-43	14.92	-53.17	11.33	13.08
2437.9	-37	-43	14.92	-51.92	12.58	13.08
2437.95	-37.5	-43	14.92	-52.42	12.08	13.08
2438	-37.5	-43	14.92	-52.42	12.08	13.08
2438.05	-37	-43	14.92	-51.92	12.58	13.08
2438.1	-37.25	-43	14.92	-52.17	12.33	13.08
2438.15	-36	-43	14.92	-50.92	13.58	13.08
2438.2	-36.5	-43	14.92	-51.42	13.08	13.08
2438.25	-37	-43	14.92	-51.92	12.58	13.08
2438.3	-36	-43	14.92	-50.92	13.58	13.33
2438.35	-37	-43	14.92	-51.92	12.58	13.33
2438.4	-36	-43	14.92	-50.92	13.58	13.33
2438.45	-36	-43	14.92	-50.92	13.58	13.33
2438.5	-35.75	-43	14.92	-50.67	13.83	13.33
2438.55	-38	-43	14.92	-52.92	11.58	13.33
2438.6	-36	-43	14.92	-50.92	13.58	13.33
2438.65	-36	-43	14.92	-50.92	13.58	13.33
2438.7	-38	-43	14.92	-52.92	11.58	13.33
2438.75	-37	-43	14.92	-51.92	12.58	13.33
2438.8	-35.25	-43	14.92	-50.17	14.33	13.33
2438.85	-36	-43	14.92	-50.92	13.58	13.33
2438.9	-35.5	-43	14.92	-50.42	14.08	13.33
2438.95	-36.75	-43	14.92	-51.67	12.83	13.33
2439	-36	-43	14.92	-50.92	13.58	13.33
2439.05	-40	-43	14.92	-54.92	9.58	13.33
2439.1	-36	-43	14.92	-50.92	13.58	13.33
2439.15	-35.5	-43	14.92	-50.42	14.08	13.58
2439.2	-34	-43	14.92	-48.92	15.58	13.58
2439.25	-35	-43	14.92	-49.92	14.58	13.58
2439.3	-36	-43	14.92	-50.92	13.58	13.58
2439.35	-34	-43	14.92	-48.92	15.58	13.58
2439.4	-34.75	-43	14.92	-49.67	14.83	13.58
2439.45	-33.5	-43	14.92	-48.42	16.08	13.58
2439.5	-33.75	-43	14.92	-48.67	15.83	13.58
2439.55	-33.25	-43	14.92	-48.17	16.33	13.58
2439.6	-33.25	-43	14.92	-48.17	16.33	13.58
2439.65	-32.25	-43	14.92	-47.17	17.33	13.58
2439.7	-32	-43	14.92	-46.92	17.58	13.58
2439.75	-31.25	-43	14.92	-46.17	18.33	13.58
2439.8	-31.75	-43	14.92	-46.67	17.83	13.58
2439.85	-31	-43	14.92	-45.92	18.58	13.58
2439.9	-31	-43	14.92	-45.92	18.58	13.58
2439.95	-32	-43	14.92	-46.92	17.58	13.58
2440	-32	-43	14.92	-46.92	17.58	13.58
2440.05	-32.25	-43	14.92	-47.17	17.33	13.58
2440.1	-30.75	-43	14.92	-45.67	18.83	13.58
2440.15	-30	-43	14.92	-44.92	19.58	13.58
2440.2	-30	-43	14.92	-44.92	19.58	13.58
2440.25	-31.25	-43	14.92	-46.17	18.33	13.58
2440.3	-32	-43	14.92	-46.92	17.58	13.58
2440.35	-30.5	-43	14.92	-45.42	19.08	13.58
2440.4	-32	-43	14.92	-46.92	17.58	13.58
2440.45	-31.75	-43	14.92	-46.67	17.83	13.58
2440.5	-32	-43	14.92	-46.92	17.58	13.58
2440.55	-34	-43	14.92	-48.92	15.58	13.58
2440.6	-33.25	-43	14.92	-48.17	16.33	13.58
2440.65	-34.25	-43	14.92	-49.17	15.33	13.58

2440.7	-34.75	-43	14.92	-49.67	14.83	13.58
2440.75	-34	-43	14.92	-48.92	15.58	13.58
2440.8	-34.75	-43	14.92	-49.67	14.83	13.58
2440.85	-34.75	-43	14.92	-49.67	14.83	13.58
2440.9	-34	-43	14.92	-48.92	15.58	13.58
2440.95	-36	-43	14.92	-50.92	13.58	13.58
2441	-35.75	-43	14.92	-50.67	13.83	13.58
2441.05	-35.75	-43	14.92	-50.67	13.83	13.58
2441.1	-36	-43	14.92	-50.92	13.58	13.58
2441.15	-35.5	-43	14.92	-50.42	14.08	13.58
2441.2	-36	-43	14.92	-50.92	13.58	13.58
2441.25	-37	-43	14.92	-51.92	12.58	13.58
2441.3	-37.75	-43	14.92	-52.67	11.83	13.58
2441.35	-36	-43	14.92	-50.92	13.58	13.58
2441.4	-35.75	-43	14.92	-50.67	13.83	13.58
2441.45	-37.5	-43	14.92	-52.42	12.08	13.58
2441.5	-37.5	-43	14.92	-52.42	12.08	13.58
2441.55	-35.75	-43	14.92	-50.67	13.83	13.58
2441.6	-37	-43	14.92	-51.92	12.58	13.58
2441.65	-36	-43	14.92	-50.92	13.58	13.58
2441.7	-36.5	-43	14.92	-51.42	13.08	13.58
2441.75	-35.75	-43	14.92	-50.67	13.83	13.58
2441.8	-36.5	-43	14.92	-51.42	13.08	13.58
2441.85	-36	-43	14.92	-50.92	13.58	13.58
2441.9	-35.75	-43	14.92	-50.67	13.83	13.58
2441.95	-36	-43	14.92	-50.92	13.58	13.58
2442	-35.5	-43	14.92	-50.42	14.08	13.58
2442.05	-38.25	-43	14.92	-53.17	11.33	13.58
2442.1	-36.5	-43	14.92	-51.42	13.08	13.58
2442.15	-36.5	-43	14.92	-51.42	13.08	13.58
2442.2	-35.5	-43	14.92	-50.42	14.08	13.58
2442.25	-36.25	-43	14.92	-51.17	13.33	13.58
2442.3	-36.75	-43	14.92	-51.67	12.83	13.58
2442.35	-35.25	-43	14.92	-50.17	14.33	13.58
2442.4	-37	-43	14.92	-51.92	12.58	13.58
2442.45	-36.75	-43	14.92	-51.67	12.83	13.58
2442.5	-37	-43	14.92	-51.92	12.58	13.58
2442.55	-36	-43	14.92	-50.92	13.58	13.58
2442.6	-36.25	-43	14.92	-51.17	13.33	13.58
2442.65	-37	-43	14.92	-51.92	12.58	13.58
2442.7	-36.5	-43	14.92	-51.42	13.08	13.58
2442.75	-36.25	-43	14.92	-51.17	13.33	13.58
2442.8	-36	-43	14.92	-50.92	13.58	13.58
2442.85	-35.5	-43	14.92	-50.42	14.08	13.58
2442.9	-35.75	-43	14.92	-50.67	13.83	13.58
2442.95	-38	-43	14.92	-52.92	11.58	13.58
2443	-38.25	-43	14.92	-53.17	11.33	13.58
2443.05	-38.25	-43	14.92	-53.17	11.33	13.58
2443.1	-38	-43	14.92	-52.92	11.58	13.58
2443.15	-36	-43	14.92	-50.92	13.58	13.58
2443.2	-36.5	-43	14.92	-51.42	13.08	13.58
2443.25	-37.5	-43	14.92	-52.42	12.08	13.58
2443.3	-37	-43	14.92	-51.92	12.58	13.58
2443.35	-37.25	-43	14.92	-52.17	12.33	13.58
2443.4	-36.75	-43	14.92	-51.67	12.83	13.58
2443.45	-37.5	-43	14.92	-52.42	12.08	13.58
2443.5	-37.75	-43	14.92	-52.67	11.83	13.58
2443.55	-39	-43	14.92	-53.92	10.58	13.58

2443.6	-38	-43	14.92	-52.92	11.58	13.58
2443.65	-38	-43	14.92	-52.92	11.58	13.83
2443.7	-38	-43	14.92	-52.92	11.58	13.83
2443.75	-38.5	-43	14.92	-53.42	11.08	13.83
2443.8	-38	-43	14.92	-52.92	11.58	13.83
2443.85	-38	-43	14.92	-52.92	11.58	13.83
2443.9	-38.5	-43	14.92	-53.42	11.08	13.83
2443.95	-38	-43	14.92	-52.92	11.58	13.83
2444	-38.25	-43	14.92	-53.17	11.33	13.83
2444.05	-35.5	-43	14.92	-50.42	14.08	13.83
2444.1	-36	-43	14.92	-50.92	13.58	13.83
2444.15	-37.25	-43	14.92	-52.17	12.33	13.83
2444.2	-36	-43	14.92	-50.92	13.58	13.83
2444.25	-37.25	-43	14.92	-52.17	12.33	13.83
2444.3	-36.75	-43	14.92	-51.67	12.83	13.83
2444.35	-37.25	-43	14.92	-52.17	12.33	13.83
2444.4	-34.5	-43	14.92	-49.42	15.08	13.83
2444.45	-36.25	-43	14.92	-51.17	13.33	13.83
2444.5	-36	-43	14.92	-50.92	13.58	13.83
2444.55	-35	-43	14.92	-49.92	14.58	13.83
2444.6	-35.25	-43	14.92	-50.17	14.33	13.83
2444.65	-34	-43	14.92	-48.92	15.58	13.83
2444.7	-36	-43	14.92	-50.92	13.58	13.83
2444.75	-35	-43	14.92	-49.92	14.58	13.83
2444.8	-34.5	-43	14.92	-49.42	15.08	13.83
2444.85	-35.25	-43	14.92	-50.17	14.33	13.83
2444.9	-34.25	-43	14.92	-49.17	15.33	13.83
2444.95	-35.5	-43	14.92	-50.42	14.08	14.08
2445	-36.5	-43	14.92	-51.42	13.08	14.08
2445.05	-35.75	-43	14.92	-50.67	13.83	14.08
2445.1	-36.75	-43	14.92	-51.67	12.83	14.08
2445.15	-36	-43	14.92	-50.92	13.58	14.08
2445.2	-36.75	-43	14.92	-51.67	12.83	14.08
2445.25	-35.5	-43	14.92	-50.42	14.08	14.08
2445.3	-37.5	-43	14.92	-52.42	12.08	14.08
2445.35	-37.75	-43	14.92	-52.67	11.83	14.08
2445.4	-38	-43	14.92	-52.92	11.58	14.08
2445.45	-38	-43	14.92	-52.92	11.58	14.08
2445.5	-40	-43	14.92	-54.92	9.58	14.08
2445.55	-37.5	-43	14.92	-52.42	12.08	14.08
2445.6	-36	-43	14.92	-50.92	13.58	14.08
2445.65	-37.5	-43	14.92	-52.42	12.08	14.08
2445.7	-37.75	-43	14.92	-52.67	11.83	14.08
2445.75	-37	-43	14.92	-51.92	12.58	14.08
2445.8	-36.75	-43	14.92	-51.67	12.83	14.08
2445.85	-37	-43	14.92	-51.92	12.58	14.08
2445.9	-37.75	-43	14.92	-52.67	11.83	14.08
2445.95	-36	-43	14.92	-50.92	13.58	14.08
2446	-38	-43	14.92	-52.92	11.58	14.08
2446.05	-35.75	-43	14.92	-50.67	13.83	14.08
2446.1	-36	-43	14.92	-50.92	13.58	14.08
2446.15	-36.25	-43	14.92	-51.17	13.33	14.08
2446.2	-35.75	-43	14.92	-50.67	13.83	14.08
2446.25	-35.75	-43	14.92	-50.67	13.83	14.33
2446.3	-35.25	-43	14.92	-50.17	14.33	14.33
2446.35	-34.75	-43	14.92	-49.67	14.83	14.33
2446.4	-35	-43	14.92	-49.92	14.58	14.33
2446.45	-34.5	-43	14.92	-49.42	15.08	14.33

2446.5	-34.75	-43	14.92	-49.67	14.83	14.33
2446.55	-34	-43	14.92	-48.92	15.58	14.33
2446.6	-36.25	-43	14.92	-51.17	13.33	14.33
2446.65	-35.25	-43	14.92	-50.17	14.33	14.33
2446.7	-36	-43	14.92	-50.92	13.58	14.33
2446.75	-35.75	-43	14.92	-50.67	13.83	14.33
2446.8	-36	-43	14.92	-50.92	13.58	14.33
2446.85	-35.5	-43	14.92	-50.42	14.08	14.33
2446.9	-35.75	-43	14.92	-50.67	13.83	14.33
2446.95	-35.75	-43	14.92	-50.67	13.83	14.33
2447	-36	-43	14.92	-50.92	13.58	14.58
2447.05	-38.75	-43	14.92	-53.67	10.83	14.58
2447.1	-38	-43	14.92	-52.92	11.58	14.58
2447.15	-38	-43	14.92	-52.92	11.58	14.58
2447.2	-37	-43	14.92	-51.92	12.58	14.58
2447.25	-37.75	-43	14.92	-52.67	11.83	14.58
2447.3	-37	-43	14.92	-51.92	12.58	14.58
2447.35	-37	-43	14.92	-51.92	12.58	14.58
2447.4	-37.5	-43	14.92	-52.42	12.08	14.58
2447.45	-37.75	-43	14.92	-52.67	11.83	14.58
2447.5	-37.5	-43	14.92	-52.42	12.08	14.58
2447.55	-36	-43	14.92	-50.92	13.58	14.58
2447.6	-37.25	-43	14.92	-52.17	12.33	14.58
2447.65	-38	-43	14.92	-52.92	11.58	14.58
2447.7	-38.5	-43	14.92	-53.42	11.08	14.83
2447.75	-38	-43	14.92	-52.92	11.58	14.83
2447.8	-36.75	-43	14.92	-51.67	12.83	14.83
2447.85	-38.25	-43	14.92	-53.17	11.33	14.83
2447.9	-37.25	-43	14.92	-52.17	12.33	14.83
2447.95	-37	-43	14.92	-51.92	12.58	14.83
2448	-38	-43	14.92	-52.92	11.58	14.83
2448.05	-38	-43	14.92	-52.92	11.58	14.83
2448.1	-38.25	-43	14.92	-53.17	11.33	14.83
2448.15	-36	-43	14.92	-50.92	13.58	15.08
2448.2	-36.75	-43	14.92	-51.67	12.83	15.08
2448.25	-36.5	-43	14.92	-51.42	13.08	15.08
2448.3	-36.75	-43	14.92	-51.67	12.83	15.08
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2448.4	-37	-43	14.92	-51.92	12.58	15.08
2448.45	-37.5	-43	14.92	-52.42	12.08	15.08
2448.5	-39.25	-43	14.92	-54.17	10.33	15.08
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2448.6	-36.5	-43	14.92	-51.42	13.08	15.33
2448.65	-36	-43	14.92	-50.92	13.58	15.33
2448.7	-35.75	-43	14.92	-50.67	13.83	15.33
2448.75	-37	-43	14.92	-51.92	12.58	15.33
2448.8	-37.5	-43	14.92	-52.42	12.08	15.33
2448.85	-36.25	-43	14.92	-51.17	13.33	15.33
2448.9	-38	-43	14.92	-52.92	11.58	15.58
2448.95	-36.5	-43	14.92	-51.42	13.08	15.58
2449	-36	-43	14.92	-50.92	13.58	15.58
2449.05	-36	-43	14.92	-50.92	13.58	15.58
2449.1	-36.25	-43	14.92	-51.17	13.33	15.58
2449.15	-36.5	-43	14.92	-51.42	13.08	15.58
2449.2	-36	-43	14.92	-50.92	13.58	15.58
2449.25	-35.75	-43	14.92	-50.67	13.83	15.58
2449.3	-35.5	-43	14.92	-50.42	14.08	15.58
2449.35	-36	-43	14.92	-50.92	13.58	15.58

2449.4	-37.5	-43	14.92	-52.42	12.08	15.58
2449.45	-36	-43	14.92	-50.92	13.58	15.58
2449.5	-36	-43	14.92	-50.92	13.58	15.58
2449.55	-34	-43	14.92	-48.92	15.58	15.58
2449.6	-36.25	-43	14.92	-51.17	13.33	15.58
2449.65	-36.75	-43	14.92	-51.67	12.83	15.58
2449.7	-34.75	-43	14.92	-49.67	14.83	15.58
2449.75	-35.75	-43	14.92	-50.67	13.83	15.58
2449.8	-35	-43	14.92	-49.92	14.58	15.58
2449.85	-34	-43	14.92	-48.92	15.58	15.58
2449.9	-36	-43	14.92	-50.92	13.58	15.58
2449.95	-33.75	-43	14.92	-48.67	15.83	15.58
2450	-34	-43	14.92	-48.92	15.58	15.58
2450.05	-34	-43	14.92	-48.92	15.58	15.58
2450.1	-35	-43	14.92	-49.92	14.58	15.58
2450.15	-34.25	-43	14.92	-49.17	15.33	15.58
2450.2	-34.5	-43	14.92	-49.42	15.08	15.58
2450.25	-36	-43	14.92	-50.92	13.58	15.58
2450.3	-36	-43	14.92	-50.92	13.58	15.58
2450.35	-34	-43	14.92	-48.92	15.58	15.58
2450.4	-36	-43	14.92	-50.92	13.58	15.58
2450.45	-36	-43	14.92	-50.92	13.58	15.58
2450.5	-34	-43	14.92	-48.92	15.58	15.58
2450.55	-35.75	-43	14.92	-50.67	13.83	15.58
2450.6	-35.25	-43	14.92	-50.17	14.33	15.58
2450.65	-35.75	-43	14.92	-50.67	13.83	15.58
2450.7	-36	-43	14.92	-50.92	13.58	15.58
2450.75	-35.5	-43	14.92	-50.42	14.08	15.58
2450.8	-36	-43	14.92	-50.92	13.58	15.83
2450.85	-36.25	-43	14.92	-51.17	13.33	15.83
2450.9	-35.5	-43	14.92	-50.42	14.08	15.83
2450.95	-36	-43	14.92	-50.92	13.58	15.83
2451	-35.75	-43	14.92	-50.67	13.83	15.83
2451.05	-35.25	-43	14.92	-50.17	14.33	15.83
2451.1	-36	-43	14.92	-50.92	13.58	15.83
2451.15	-37	-43	14.92	-51.92	12.58	15.83
2451.2	-35.25	-43	14.92	-50.17	14.33	15.83
2451.25	-34	-43	14.92	-48.92	15.58	15.83
2451.3	-36.25	-43	14.92	-51.17	13.33	15.83
2451.35	-35.25	-43	14.92	-50.17	14.33	15.83
2451.4	-36	-43	14.92	-50.92	13.58	16.08
2451.45	-34	-43	14.92	-48.92	15.58	16.08
2451.5	-36	-43	14.92	-50.92	13.58	16.08
2451.55	-33.5	-43	14.92	-48.42	16.08	16.33
2451.6	-34.5	-43	14.92	-49.42	15.08	16.33
2451.65	-34	-43	14.92	-48.92	15.58	16.33
2451.7	-35	-43	14.92	-49.92	14.58	16.33
2451.75	-33.75	-43	14.92	-48.67	15.83	16.33
2451.8	-35	-43	14.92	-49.92	14.58	16.58
2451.85	-35.5	-43	14.92	-50.42	14.08	16.58
2451.9	-36	-43	14.92	-50.92	13.58	16.58
2451.95	-36	-43	14.92	-50.92	13.58	16.83
2452	-36	-43	14.92	-50.92	13.58	16.83
2452.05	-34	-43	14.92	-48.92	15.58	17.33
2452.1	-34.5	-43	14.92	-49.42	15.08	17.33
2452.15	-36.5	-43	14.92	-51.42	13.08	17.33
2452.2	-36	-43	14.92	-50.92	13.58	17.58
2452.25	-35.5	-43	14.92	-50.42	14.08	17.58

2452.3	-36	-43	14.92	-50.92	13.58	17.58
2452.35	-39	-43	14.92	-53.92	10.58	17.58
2452.4	-35.5	-43	14.92	-50.42	14.08	17.58
2452.45	-38.25	-43	14.92	-53.17	11.33	17.58
2452.5	-35.75	-43	14.92	-50.67	13.83	17.58
2452.55	-36	-43	14.92	-50.92	13.58	17.58
2452.6	-36.5	-43	14.92	-51.42	13.08	17.58
2452.65	-40	-43	14.92	-54.92	9.58	17.58
2452.7	-36	-43	14.92	-50.92	13.58	17.58
2452.75	-35.5	-43	14.92	-50.42	14.08	17.58
2452.8	-35.5	-43	14.92	-50.42	14.08	17.58
2452.85	-36.75	-43	14.92	-51.67	12.83	17.58
2452.9	-37	-43	14.92	-51.92	12.58	17.83
2452.95	-34.5	-43	14.92	-49.42	15.08	17.83
2453	-35	-43	14.92	-49.92	14.58	17.83
2453.05	-34	-43	14.92	-48.92	15.58	17.83
2453.1	-36.75	-43	14.92	-51.67	12.83	17.83
2453.15	-37.25	-43	14.92	-52.17	12.33	17.83
2453.2	-34	-43	14.92	-48.92	15.58	17.83
2453.25	-35.25	-43	14.92	-50.17	14.33	17.83
2453.3	-34	-43	14.92	-48.92	15.58	17.83
2453.35	-36	-43	14.92	-50.92	13.58	18.08
2453.4	-35.25	-43	14.92	-50.17	14.33	18.08
2453.45	-35.5	-43	14.92	-50.42	14.08	18.33
2453.5	-35.5	-43	14.92	-50.42	14.08	18.33
2453.55	-35	-43	14.92	-49.92	14.58	18.33
2453.6	-35.5	-43	14.92	-50.42	14.08	18.58
2453.65	-34	-43	14.92	-48.92	15.58	18.58
2453.7	-33.75	-43	14.92	-48.67	15.83	18.58
2453.75	-34.75	-43	14.92	-49.67	14.83	18.58
2453.8	-35.5	-43	14.92	-50.42	14.08	18.58
2453.85	-36.75	-43	14.92	-51.67	12.83	18.58
2453.9	-34	-43	14.92	-48.92	15.58	18.83
2453.95	-35.75	-43	14.92	-50.67	13.83	18.83
2454	-34.25	-43	14.92	-49.17	15.33	19.08
2454.05	-34	-43	14.92	-48.92	15.58	19.08
2454.1	-34	-43	14.92	-48.92	15.58	19.08
2454.15	-34	-43	14.92	-48.92	15.58	19.33
2454.2	-35	-43	14.92	-49.92	14.58	19.33
2454.25	-33.75	-43	14.92	-48.67	15.83	19.33
2454.3	-35.5	-43	14.92	-50.42	14.08	19.33
2454.35	-34	-43	14.92	-48.92	15.58	19.58
2454.4	-33.25	-43	14.92	-48.17	16.33	19.58
2454.45	-36	-43	14.92	-50.92	13.58	19.58
2454.5	-34	-43	14.92	-48.92	15.58	19.58
2454.55	-33.75	-43	14.92	-48.67	15.83	19.58
2454.6	-32	-43	14.92	-46.92	17.58	19.58
2454.65	-33.75	-43	14.92	-48.67	15.83	19.58
2454.7	-34.25	-43	14.92	-49.17	15.33	19.58
2454.75	-32	-43	14.92	-46.92	17.58	19.58
2454.8	-33.25	-43	14.92	-48.17	16.33	19.58
2454.85	-32	-43	14.92	-46.92	17.58	19.58
2454.9	-34.25	-43	14.92	-49.17	15.33	19.58
2454.95	-33	-43	14.92	-47.92	16.58	19.58
2455	-34	-43	14.92	-48.92	15.58	19.58
2455.05	-34	-43	14.92	-48.92	15.58	19.58
2455.1	-32.75	-43	14.92	-47.67	16.83	19.58
2455.15	-33.75	-43	14.92	-48.67	15.83	19.58

2455.2	-35.5	-43	14.92	-50.42	14.08	19.58
2455.25	-30.75	-43	14.92	-45.67	18.83	19.58
2455.3	-30.5	-43	14.92	-45.42	19.08	19.58
2455.35	-32	-43	14.92	-46.92	17.58	19.58
2455.4	-32	-43	14.92	-46.92	17.58	19.58
2455.45	-31	-43	14.92	-45.92	18.58	19.58
2455.5	-31.75	-43	14.92	-46.67	17.83	19.58
2455.55	-31	-43	14.92	-45.92	18.58	19.58
2455.6	-30.25	-43	14.92	-45.17	19.33	19.58
2455.65	-30.25	-43	14.92	-45.17	19.33	19.58
2455.7	-30	-43	14.92	-44.92	19.58	19.58
2455.75	-30	-43	14.92	-44.92	19.58	19.58
2455.8	-30	-43	14.92	-44.92	19.58	19.58
2455.85	-30	-43	14.92	-44.92	19.58	19.58
2455.9	-30	-43	14.92	-44.92	19.58	19.58
2455.95	-30	-43	14.92	-44.92	19.58	19.58
2456	-30	-43	14.92	-44.92	19.58	19.58
2456.05	-30	-43	14.92	-44.92	19.58	19.58
2456.1	-30	-43	14.92	-44.92	19.58	19.58
2456.15	-30	-43	14.92	-44.92	19.58	19.58
2456.2	-30	-43	14.92	-44.92	19.58	19.58
2456.25	-30	-43	14.92	-44.92	19.58	19.58
2456.3	-30	-43	14.92	-44.92	19.58	19.58
2456.35	-30	-43	14.92	-44.92	19.58	19.58
2456.4	-30	-43	14.92	-44.92	19.58	19.58
2456.45	-30	-43	14.92	-44.92	19.58	19.58

