

ANNEX PROCESSING GAIN OF DIRECT SEQUENCE SPREAD SPECTRUM MEASUREMENT

1. LIMITS OF PROCESSING GAIN OF A DIRECT SEQUENCE SPREAD SPECTRUM MEASUREMENT

The limit of processing gain is 10dB

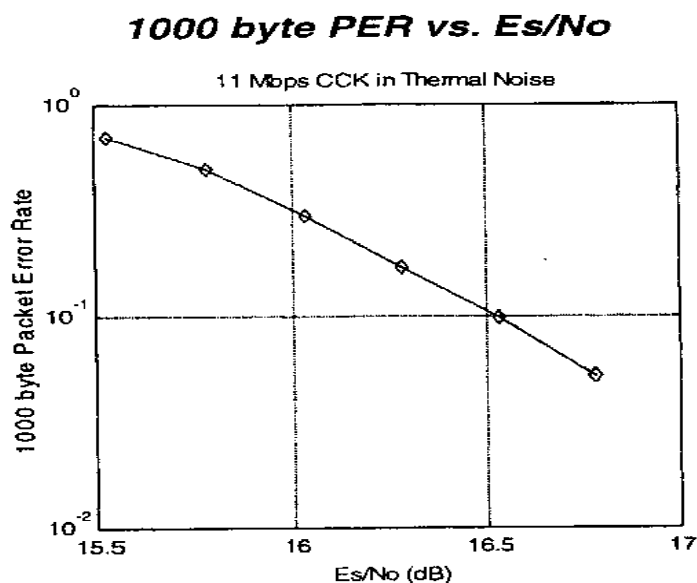
1.1 TEST INSTRUMENTS & SUPPORT UNIT

Description & Manufacturer	Model No.	Serial No.
Anritsu Spectrum Analyzer, 9kHz to 30GHz	MS2667C	M10281
Anritsu Signal Generator, 10kHz to 20GHz	68247B	984703
Hewlett Packard Power Meter,	HP438A	2743A04416
Hewlett Packard Power Sensor, -30 to 20dBm	8485A	2942A08387
Hewlett Packard Step Attenuator, 10dB steps	HP8496B	3247A18505
Mini-Circuits Power Splitter	ZN2PD-9G	NA
DELL Laptop Computer	Inspiron 5000e	NA
Campaq Laptop Computer	PPX	99125

1.2 METHOD OF MEASUREMENT

The processing gain may be measured using the CW jamming margin method. Section 4.7.4 shows the test configuration. The test consists of stepping a signal generator in 50 kHz increments across the passband of the system. At each point, the generator level required to produce the recommended Bit Error Rate (BER) is recorded. This level is jammer level. The output power of the transmitting unit is measured at the same point. The jammer to Signal (J/S) ratio is then calculated. Discard the worst 20% of the J/S data points. The lowest remaining J/S ratio is used when calculating the Process Gain.

The reference PER is specified as 8%. The corresponding Es/No (signal to noise ratio per symbol) is 16.4 dB. The curve is attached as below.



This value and the measured J/S ratio are used in the following equation to calculate the Process Gain (Gp) of the system.

$$G_p = (S/N)_o + M_j + L_{sys}$$

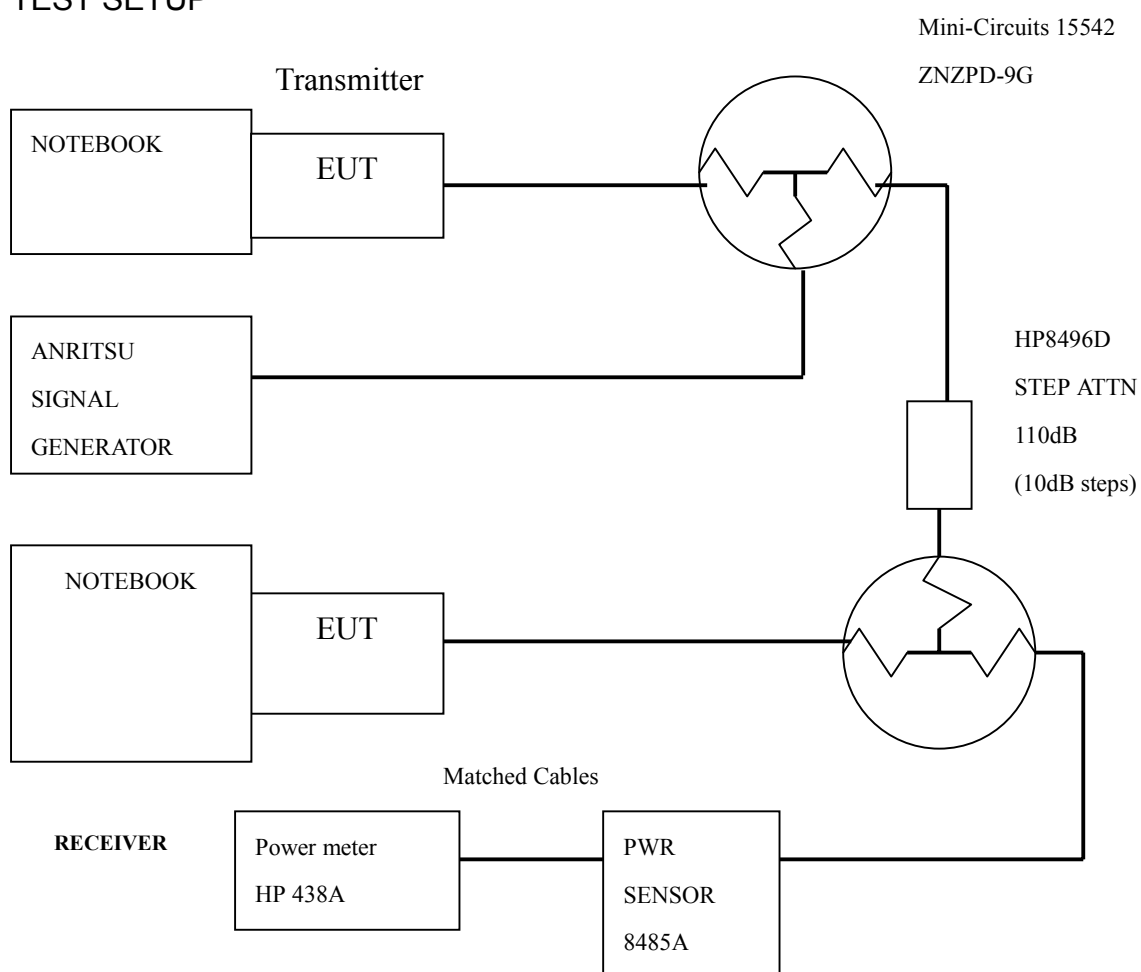
Where:

(S/N)_o: Signal to noise ratio for the chosen BER.

M_j : Maximum jammer to Signal Ratio recorded at the detected BER.

L_{sys} : System losses . For the purpose of this processing gain calculation, we assume L_{sys} at its minimum value of 2 dB.

TEST SETUP



1.3 TEST PROCEDURES

Obtain the simplex link shown. Perform all independent instrumentation calibrations prior to this procedure. Set operating power levels using fixed and variable attenuators in system to meet the following objectives:

Signal Power at receiver approximately -55dBm (above thermal sensitivity such that thermal noise does not cause bit errors).

Signal Power at power meter between -20 and -30dBm for optimal linearity.

Use spectrum analyzer to monitor test.

Ensure that CW Jammer generator RF output is disabled and measure the power at the power meter port using the power meter. This is the relative signal power, S_r .

Disable Transmitter, and set CW Jammer generator RF output frequency equal to the carrier frequency and enable generator output. Set reference CW Jammer power level at power meter port 8.4dB below S_r (minimum J/S, or 10dB processing gain reference level). Note the power level setting on the generator, this is the reference CW Jammer power setting, J_r .

Disable CW Jammer, re-establish link. PER test should be operating essentially error -free.

Enable CW Jammer at the reference power level and verify that the PER test indicates a PER of less than 8%.

Alternatively, adjust the CW Jammer level to that which causes 8% PER and verify that the S/J is less than 8.4dB .

Repeat step 7 for uniform steps in frequency increments of 50 kHz across the receiver passband with the CW Jammer. In this case the receiver passband is $\pm 8.5\text{ MHz}$.

The numerical data associated with the following radio channel is tabulated and presented for Channel 1, 6, and 11.

Note: Since the jamming signal will be blocked by the IF filter if the jamming frequency is far from the center of the carrier frequency. So, only those frequencies around carrier frequency are shown here.

1.4 EUT OPERATING CONDITION

The software provided by client to set the EUT to transmit at lowest, middle and highest channel.

1.5 TEST RESULTS

EUT	11Mbps Wireless LAN Card	Model	WL-311F
Environmental Conditions	27°C, 60%RH	Tested By	Gary Chang

Although the theoretical processing gain is lower than 10 dB, but the CCK coding provides an extra coding gain of 2.2dB.

11Mbps CHANNEL 1 Processing Gain				
Frequency	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.40700	11.5	16.4	-6.9	2
2.40705	11.5	16.4	-6.9	2
2.40710	11.4	16.4	-7	2
2.40715	11.3	16.4	-7.1	2
2.40720	11.3	16.4	-7.1	2
2.40725	11.3	16.4	-7.1	2
2.40730	11.2	16.4	-7.2	2
2.40735	11.2	16.4	-7.2	2
2.40740	11.3	16.4	-7.1	2
2.40745	11.3	16.4	-7.1	2
2.40750	11.2	16.4	-7.2	2
2.40755	11.2	16.4	-7.2	2
2.40760	11.3	16.4	-7.1	2
2.40765	11.2	16.4	-7.2	2
2.40770	11.1	16.4	-7.3	2
2.40775	11.1	16.4	-7.3	2
2.40780	11.2	16.4	-7.2	2
2.40785	11.2	16.4	-7.2	2
2.40790	11.3	16.4	-7.1	2
2.40795	11.2	16.4	-7.2	2
2.40800	11.2	16.4	-7.2	2
2.40805	11.3	16.4	-7.1	2

11Mbps CHANNEL 1 Processing Gain				
Frequency	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.40810	11.3	16.4	-7.1	2
2.40815	11.1	16.4	-7.3	2
2.40820	11.0	16.4	-7.4	2
2.40825	11.2	16.4	-7.2	2
2.40830	11.1	16.4	-7.3	2
2.40835	11.1	16.4	-7.3	2
2.40840	11.2	16.4	-7.2	2
2.40845	11.2	16.4	-7.2	2
2.40850	11.0	16.4	-7.4	2
2.40855	11.2	16.4	-7.2	2
2.40860	11.1	16.4	-7.3	2
2.40865	11.1	16.4	-7.3	2
2.40870	11.2	16.4	-7.2	2
2.40875	11.2	16.4	-7.2	2
2.40880	11.3	16.4	-7.1	2
2.40885	11.3	16.4	-7.1	2
2.40890	11.1	16.4	-7.3	2
2.40895	11.0	16.4	-7.4	2
2.40900	11.0	16.4	-7.4	2
2.40905	11.1	16.4	-7.3	2
2.40910	11.1	16.4	-7.3	2
2.40915	11.1	16.4	-7.3	2
2.40920	11.1	16.4	-7.3	2
2.40925	11.1	16.4	-7.3	2
2.40930	11.0	16.4	-7.4	2
2.40935	11.2	16.4	-7.2	2
2.40940	11.1	16.4	-7.3	2
2.40945	11.1	16.4	-7.3	2
2.43450	11.0	16.4	-7.4	2
2.43455	11.2	16.4	-7.2	2
2.43460	11.1	16.4	-7.3	2
2.43465	11.1	16.4	-7.3	2
2.43470	11.2	16.4	-7.2	2
2.43475	11.2	16.4	-7.2	2

11Mbps CHANNEL 1 Processing Gain				
Frequency	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.43480	11.3	16.4	-7.1	2
2.43485	11.2	16.4	-7.2	2
2.43490	11.2	16.4	-7.2	2
2.43495	11.3	16.4	-7.1	2
2.43500	11.3	16.4	-7.1	2
2.43505	11.1	16.4	-7.3	2
2.43510	11.0	16.4	-7.4	2
2.43515	11.2	16.4	-7.2	2
2.43520	11.1	16.4	-7.3	2
2.43525	11.1	16.4	-7.3	2
2.43530	11.2	16.4	-7.2	2
2.43535	11.2	16.4	-7.2	2
2.43540	11.3	16.4	-7.1	2
2.43545	11.3	16.4	-7.1	2
2.43550	11.1	16.4	-7.3	2
2.43555	11.0	16.4	-7.4	2
2.43560	11.0	16.4	-7.4	2
2.43565	11.1	16.4	-7.3	2
2.43570	11.1	16.4	-7.3	2
5.43575	11.3	16.4	-7.1	2
2.43580	11.3	16.4	-7.1	2
2.43585	11.1	16.4	-7.3	2
2.43590	11.4	16.4	-7	2
2.43595	11.2	16.4	-7.2	2
2.43600	11.1	16.4	-7.3	2
2.43605	11.1	16.4	-7.3	2
2.43610	11.2	16.4	-7.2	2
2.43615	11.2	16.4	-7.2	2
2.43620	11.2	16.4	-7.2	2
2.43625	11.2	16.4	-7.2	2
2.43630	11.1	16.4	-7.3	2
2.43635	11.2	16.4	-7.2	2
2.43640	11.1	16.4	-7.3	2
2.43645	11.1	16.4	-7.3	2
2.43650	11.2	16.4	-7.2	2
2.43655	11.2	16.4	-7.2	2

11Mbps CHANNEL 1 Processing Gain				
Frequency	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.43660	11.2	16.4	-7.2	2
2.43665	11.2	16.4	-7.2	2
2.43670	11.1	16.4	-7.3	2
2.43675	11.1	16.4	-7.3	2
2.43680	11.1	16.4	-7.3	2
2.43685	11.1	16.4	-7.3	2
2.43690	11.1	16.4	-7.3	2
2.43695	11.1	16.4	-7.3	2
2.43700	10.9	16.4	-7.5	2
2.43705	10.9	16.4	-7.5	2
2.43710	10.9	16.4	-7.5	2
2.43715	11.0	16.4	-7.4	2
2.43720	11.1	16.4	-7.3	2
2.43725	11.1	16.4	-7.3	2
2.43730	11.1	16.4	-7.3	2
2.43735	11.1	16.4	-7.3	2
2.43740	11.2	16.4	-7.2	2
2.43745	11.3	16.4	-7.1	2
2.43750	11.2	16.4	-7.2	2
2.43755	11.1	16.4	-7.3	2
2.43760	11.1	16.4	-7.3	2
2.43765	11.2	16.4	-7.2	2
2.43770	11.2	16.4	-7.2	2
2.43775	11.2	16.4	-7.2	2
2.43780	11.2	16.4	-7.2	2
2.43785	11.1	16.4	-7.3	2
2.43790	11.1	16.4	-7.3	2
2.43795	11.1	16.4	-7.3	2
2.43800	11.1	16.4	-7.3	2
2.43805	11.7	16.4	-6.7	2
2.43810	11.6	16.4	-6.8	2
2.43815	11.2	16.4	-7.2	2
2.43820	11.1	16.4	-7.3	2
2.43825	11.2	16.4	-7.2	2
2.43830	11.2	16.4	-7.2	2
2.43835	11.4	16.4	-7	2

11Mbps CHANNEL 1 Processing Gain				
Frequency	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.43840	11.2	16.4	-7.2	2
2.43845	11.2	16.4	-7.2	2
2.43850	11.1	16.4	-7.3	2
2.43855	11.1	16.4	-7.3	2
2.43860	11.1	16.4	-7.3	2
2.43865	11.2	16.4	-7.2	2
2.43870	11.2	16.4	-7.2	2
2.43875	11.2	16.4	-7.2	2
2.43880	11.2	16.4	-7.2	2
2.43885	11.2	16.4	-7.2	2
2.43890	11.3	16.4	-7.1	2
2.43895	11.2	16.4	-7.2	2
2.43900	11.2	16.4	-7.2	2
2.43905	11.3	16.4	-7.1	2
2.43910	11.3	16.4	-7.1	2
2.43915	11.1	16.4	-7.3	2
2.43920	11.0	16.4	-7.4	2
2.43925	11.2	16.4	-7.2	2
2.43930	11.1	16.4	-7.3	2
2.43935	11.1	16.4	-7.3	2
2.43940	11.2	16.4	-7.2	2
2.43945	11.2	16.4	-7.2	2
2.43950	11.3	16.4	-7.1	2
2.43955	11.2	16.4	-7.2	2
2.43960	11.2	16.4	-7.2	2
2.43965	11.1	16.4	-7.3	2
2.43970	11.2	16.4	-7.2	2
2.43975	11.2	16.4	-7.2	2
2.43980	11.4	16.4	-7	2
2.43985	11.2	16.4	-7.2	2
2.43990	11.2	16.4	-7.2	2
2.43995	11.1	16.4	-7.3	2
2.44000	11.1	16.4	-7.3	2
2.44005	11.1	16.4	-7.3	2
2.44010	11.2	16.4	-7.2	2
2.44015	11.2	16.4	-7.2	2

11Mbps CHANNEL 1 Processing Gain				
Frequency	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.44020	11.2	16.4	-7.2	2
2.44025	11.2	16.4	-7.2	2
2.44030	11.2	16.4	-7.2	2
2.44035	11.3	16.4	-7.1	2
2.44040	11.2	16.4	-7.2	2
2.44045	11.2	16.4	-7.2	2
2.44050	11.3	16.4	-7.1	2
2.44055	11.3	16.4	-7.1	2
2.44060	11.1	16.4	-7.3	2
2.44065	11.0	16.4	-7.4	2
2.44070	11.2	16.4	-7.2	2
2.44075	11.1	16.4	-7.3	2
2.44080	11.1	16.4	-7.3	2
2.44085	11.2	16.4	-7.2	2
2.44090	11.2	16.4	-7.2	2
2.44095	11.3	16.4	-7.1	2
2.44100	11.3	16.4	-7.1	2
2.44105	11.3	16.4	-7.1	2
2.44110	11.4	16.4	-7	2
2.44115	11.3	16.4	-7.1	2
2.44120	11.3	16.4	-7.1	2
2.44125	11.3	16.4	-7.1	2
2.44130	11.3	16.4	-7.1	2
2.44135	11.3	16.4	-7.1	2
2.44140	11.3	16.4	-7.1	2
2.44145	11.4	16.4	-7	2
2.44150	11.4	16.4	-7	2
2.44155	11.4	16.4	-7	2
2.44160	11.5	16.4	-6.9	2
2.44165	11.5	16.4	-6.9	2
2.44170	11.5	16.4	-6.9	2
2.44175	11.5	16.4	-6.9	2
2.44180	11.5	16.4	-6.9	2
2.44185	11.5	16.4	-6.9	2
2.44190	11.4	16.4	-7.0	2
2.44195	11.4	16.4	-7.0	2
2.44200	11.5	16.4	-6.9	2

11Mbps CHANNEL 6 Processing Gain				
Freq.	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.43200	11.2	16.4	-7.2	2
2.43205	11.1	16.4	-7.3	2
2.43210	11.1	16.4	-7.3	2
2.43215	11.2	16.4	-7.2	2
2.43220	11.2	16.4	-7.2	2
2.43225	11.3	16.4	-7.1	2
2.43230	11.2	16.4	-7.2	2
2.43235	11.2	16.4	-7.2	2
2.43240	11.3	16.4	-7.1	2
2.43245	11.3	16.4	-7.1	2
2.43250	11.1	16.4	-7.3	2
2.43255	11	16.4	-7.4	2
2.43260	11.2	16.4	-7.2	2
2.43265	11.1	16.4	-7.3	2
2.43270	11.1	16.4	-7.3	2
2.43275	11.2	16.4	-7.2	2
2.43280	11.2	16.4	-7.2	2
2.43285	11.3	16.4	-7.1	2
2.43290	11.3	16.4	-7.1	2
2.43295	11.1	16.4	-7.3	2
2.43300	11	16.4	-7.4	2
2.43305	11	16.4	-7.4	2
2.43310	11.1	16.4	-7.3	2
2.43315	11.1	16.4	-7.3	2
2.43320	11.3	16.4	-7.1	2
2.43325	11.3	16.4	-7.1	2
2.43330	11.1	16.4	-7.3	2
2.43335	11.4	16.4	-7	2
2.43340	11.2	16.4	-7.2	2
2.43345	11.1	16.4	-7.3	2
2.43350	11.1	16.4	-7.3	2
2.43355	11.2	16.4	-7.2	2
2.43360	11.2	16.4	-7.2	2
2.43365	11.1	16.4	-7.3	2
2.43370	11.3	16.4	-7.1	2
2.43375	11.3	16.4	-7.1	2

11Mbps CHANNEL 6 Processing Gain				
Freq.	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.43380	11.1	16.4	-7.3	2
2.43385	11.4	16.4	-7	2
2.43390	11.2	16.4	-7.2	2
2.43395	11.1	16.4	-7.3	2
2.43400	11.1	16.4	-7.3	2
2.43405	11.2	16.4	-7.2	2
2.43410	11.2	16.4	-7.2	2
2.43415	11.2	16.4	-7.2	2
2.43420	11.2	16.4	-7.2	2
2.43425	11.1	16.4	-7.3	2
2.43430	11.1	16.4	-7.3	2
2.43435	11.1	16.4	-7.3	2
2.43440	11.1	16.4	-7.3	2
2.43445	11.1	16.4	-7.3	2
2.43450	11.2	16.4	-7.2	2
2.43455	11.1	16.4	-7.3	2
2.43460	11.4	16.4	-7	2
2.43465	11.2	16.4	-7.2	2
2.43470	11.1	16.4	-7.3	2
2.43475	11.2	16.4	-7.2	2
2.43480	11.2	16.4	-7.2	2
2.43485	11.3	16.4	-7.1	2
2.43490	11.3	16.4	-7.1	2
2.43495	11.1	16.4	-7.3	2
2.43500	11	16.4	-7.4	2
2.43505	11	16.4	-7.4	2
2.43510	11.1	16.4	-7.3	2
2.43515	11.1	16.4	-7.3	2
2.43520	11.3	16.4	-7.1	2
2.43525	11.1	16.4	-7.3	2
2.43530	11.2	16.4	-7.2	2
2.43535	11.2	16.4	-7.2	2
2.43540	11.3	16.4	-7.1	2
2.43545	11.3	16.4	-7.1	2

11Mbps CHANNEL 6 Processing Gain				
Freq.	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.43550	11.1	16.4	-7.3	2
2.43555	11	16.4	-7.4	2
2.43560	11	16.4	-7.4	2
2.43565	11.1	16.4	-7.3	2
2.43570	11.1	16.4	-7.3	2
5.43575	11.3	16.4	-7.1	2
2.43580	11.3	16.4	-7.1	2
2.43585	11.1	16.4	-7.3	2
2.43590	11.2	16.4	-7.2	2
2.43595	11.2	16.4	-7.2	2
2.43600	11.1	16.4	-7.3	2
2.43605	11.1	16.4	-7.3	2
2.43610	11.2	16.4	-7.2	2
2.43615	11.2	16.4	-7.2	2
2.43620	11.2	16.4	-7.2	2
2.43625	11.1	16.4	-7.3	2
2.43630	11.1	16.4	-7.3	2
2.43635	11.1	16.4	-7.3	2
2.43640	11	16.4	-7.4	2
2.43645	10.9	16.4	-7.5	2
2.43650	10.9	16.4	-7.5	2
2.43655	10.9	16.4	-7.5	2
2.43660	10.7	16.4	-7.7	2
2.43665	10.8	16.4	-7.6	2
2.43670	11	16.4	-7.4	2
2.43675	10.9	16.4	-7.5	2
2.43680	11	16.4	-7.4	2
2.43685	11	16.4	-7.4	2
2.43690	11.1	16.4	-7.3	2
2.43695	11.2	16.4	-7.2	2
2.43700	11.1	16.4	-7.3	2
2.43705	11.2	16.4	-7.2	2
2.43710	11.3	16.4	-7.1	2
2.43715	11.2	16.4	-7.2	2

11Mbps CHANNEL 6 Processing Gain				
Freq.	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.43720	11.3	16.4	-7.1	2
2.43725	11.2	16.4	-7.2	2
2.43730	11.3	16.4	-7.1	2
2.43735	11.4	16.4	-7	2
2.43740	11.4	16.4	-7	2
2.43745	11.6	16.4	-6.8	2
2.43750	11.5	16.4	-6.9	2
2.43755	11.6	16.4	-6.8	2
2.43760	11.5	16.4	-6.9	2
2.43765	11.6	16.4	-6.8	2
2.43770	11.7	16.4	-6.7	2
2.43775	11.6	16.4	-6.8	2
2.43780	11.7	16.4	-6.7	2
2.43785	11.8	16.4	-6.6	2
2.43790	11.8	16.4	-6.6	2
2.43795	11.9	16.4	-6.5	2
2.43800	11.7	16.4	-6.7	2
2.43805	11.6	16.4	-6.8	2
2.43810	11.6	16.4	-6.8	2
2.43815	11.5	16.4	-6.9	2
2.43820	11.5	16.4	-6.9	2
2.43825	11.4	16.4	-7	2
2.43830	11.3	16.4	-7.1	2
2.43835	11.4	16.4	-7	2
2.43840	11.4	16.4	-7	2
2.43845	11.6	16.4	-6.8	2
2.43850	11.5	16.4	-6.9	2
2.43855	11.6	16.4	-6.8	2
2.43860	11.5	16.4	-6.9	2
2.43865	11.6	16.4	-6.8	2
2.43870	11.7	16.4	-6.7	2
2.43875	11.6	16.4	-6.8	2
2.43880	11.7	16.4	-6.7	2
2.43885	11.8	16.4	-6.6	2

11Mbps CHANNEL 6 Processing Gain				
Freq.	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.43890	11.4	16.4	-7	2
2.43895	11.4	16.4	-7	2
2.43900	11.6	16.4	-6.8	2
2.43905	11.5	16.4	-6.9	2
2.43910	11.6	16.4	-6.8	2
2.43915	11.5	16.4	-6.9	2
2.43920	11.6	16.4	-6.8	2
2.43925	11.7	16.4	-6.7	2
2.43930	11.6	16.4	-6.8	2
2.43935	11.7	16.4	-6.7	2
2.43940	11.8	16.4	-6.6	2
2.43945	11.8	16.4	-6.6	2
2.43950	11.9	16.4	-6.5	2
2.43955	11.7	16.4	-6.7	2
2.43960	11.6	16.4	-6.8	2
2.43965	11.6	16.4	-6.8	2
2.43970	11.5	16.4	-6.9	2
2.43975	11.5	16.4	-6.9	2
2.43980	11.4	16.4	-7	2
2.43985	11.3	16.4	-7.1	2
2.43990	11.8	16.4	-6.6	2
2.43995	11.9	16.4	-6.5	2
2.44000	11.7	16.4	-6.7	2
2.44005	11.6	16.4	-6.8	2
2.44010	11.6	16.4	-6.8	2
2.44015	11.5	16.4	-6.9	2
2.44020	11.5	16.4	-6.9	2
2.44025	11.4	16.4	-7	2
2.44030	11.3	16.4	-7.1	2
2.44035	11.2	16.4	-7.2	2
2.44040	11.3	16.4	-7.1	2
2.44045	11.3	16.4	-7.1	2
2.44050	11.1	16.4	-7.3	2
2.44055	11	16.4	-7.4	2

11Mbps CHANNEL 6 Processing Gain				
Freq.	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.44060	11	16.4	-7.4	2
2.44065	11.1	16.4	-7.3	2
2.44070	11.1	16.4	-7.3	2
2.44075	11.3	16.4	-7.1	2
2.44080	11.3	16.4	-7.1	2
2.44085	11.1	16.4	-7.3	2
2.44090	11.4	16.4	-7	2
2.44095	11.2	16.4	-7.2	2
2.44100	11.1	16.4	-7.3	2
2.44105	11.1	16.4	-7.3	2
2.44110	11.2	16.4	-7.2	2
2.44115	11.2	16.4	-7.2	2
2.44120	11.3	16.4	-7.1	2
2.44125	11.3	16.4	-7.1	2
2.44130	11.6	16.4	-6.8	2
2.44135	11.6	16.4	-6.8	2
2.44140	11.6	16.4	-6.8	2
2.44145	11.6	16.4	-6.8	2
2.44150	11.6	16.4	-6.8	2
2.44155	11.5	16.4	-6.9	2
2.44160	11.6	16.4	-6.8	2
2.44165	11.6	16.4	-6.8	2
2.44170	11.6	16.4	-6.8	2
2.44175	11.6	16.4	-6.8	2
2.44180	11.5	16.4	-6.9	2
2.44185	11.6	16.4	-6.8	2
2.44190	11.6	16.4	-6.8	2
2.44195	11.6	16.4	-6.8	2
2.44200	11.5	16.4	-6.9	2

11Mbps CHANNEL 11 Processing Gain				
Freq.	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.45700	12.4	16.4	-6.0	2
2.45705	12.4	16.4	-6.0	2
2.45710	12.4	16.4	-6.0	2
2.45715	12.5	16.4	-5.9	2
2.45720	12.5	16.4	-5.9	2
2.45725	12.5	16.4	-5.9	2
2.45730	12.5	16.4	-5.9	2
2.45735	12.5	16.4	-5.9	2
2.45740	12.5	16.4	-5.9	2
2.45745	12.4	16.4	-6.0	2
2.45750	12.4	16.4	-6.0	2
2.45755	12.3	16.4	-6.1	2
2.45760	12.2	16.4	-6.2	2
2.45765	12.4	16.4	-6.0	2
2.45770	12.4	16.4	-6.0	2
2.45775	12.4	16.4	-6.0	2
2.45780	12.4	16.4	-6.0	2
2.45785	12.3	16.4	-6.1	2
2.45790	12.3	16.4	-6.1	2
2.45795	12.3	16.4	-6.1	2
2.45800	12.2	16.4	-6.2	2
2.45805	12.3	16.4	-6.1	2
2.45810	12.1	16.4	-6.3	2
2.45815	12.2	16.4	-6.2	2
2.45820	12.3	16.4	-6.1	2
2.45825	12.3	16.4	-6.1	2
2.45830	12.3	16.4	-6.1	2
2.45835	12.2	16.4	-6.2	2
2.45840	12.3	16.4	-6.1	2
2.45845	12.2	16.4	-6.2	2
2.45850	12.3	16.4	-6.1	2
2.45855	12.3	16.4	-6.1	2
2.45860	12.3	16.4	-6.1	2
2.45865	12.2	16.4	-6.2	2

11Mbps CHANNEL 11 Processing Gain				
Freq.	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.45870	12.2	16.4	-6.2	2
2.45875	12.1	16.4	-6.3	2
2.45880	12.1	16.4	-6.3	2
2.45885	12	16.4	-6.4	2
2.45890	12.1	16.4	-6.3	2
2.45895	12	16.4	-6.4	2
2.45900	12.1	16.4	-6.3	2
2.45905	12	16.4	-6.4	2
2.45910	12	16.4	-6.4	2
2.45915	12.1	16.4	-6.3	2
2.45920	12	16.4	-6.4	2
2.45925	12	16.4	-6.4	2
2.45930	12.1	16.4	-6.3	2
2.45935	11.8	16.4	-6.6	2
2.45940	11.7	16.4	-6.7	2
2.45945	11.6	16.4	-6.8	2
2.45950	11.5	16.4	-6.9	2
2.45955	11.6	16.4	-6.8	2
2.45960	11.7	16.4	-6.7	2
2.45965	11.6	16.4	-6.8	2
2.45970	11.7	16.4	-6.7	2
2.45975	11.7	16.4	-6.7	2
2.45980	11.9	16.4	-6.5	2
2.45985	12	16.4	-6.4	2
2.45990	12.1	16.4	-6.3	2
2.45995	12	16.4	-6.4	2
2.46000	12.1	16.4	-6.3	2
2.46005	11.9	16.4	-6.5	2
2.46010	12	16.4	-6.4	2
2.46015	12.2	16.4	-6.2	2
2.46020	12.3	16.4	-6.1	2
2.46025	12	16.4	-6.4	2
2.46030	12	16.4	-6.4	2
2.46035	12.1	16.4	-6.3	2
2.46040	11.9	16.4	-6.5	2
2.46045	12	16.4	-6.4	2

11Mbps CHANNEL 11 Processing Gain				
Freq.	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.46050	12	16.4	-6.4	2
2.46055	11.8	16.4	-6.6	2
2.46060	11.9	16.4	-6.5	2
2.46065	12	16.4	-6.4	2
2.46070	12	16.4	-6.4	2
2.46075	12	16.4	-6.4	2
2.46080	11.7	16.4	-6.7	2
2.46085	11.9	16.4	-6.5	2
2.46090	12	16.4	-6.4	2
2.46095	12.1	16.4	-6.3	2
2.46100	12	16.4	-6.4	2
2.46105	12.1	16.4	-6.3	2
2.46110	11.9	16.4	-6.5	2
2.46115	11.8	16.4	-6.6	2
2.46120	11.7	16.4	-6.7	2
2.46125	11.6	16.4	-6.8	2
2.46130	11.5	16.4	-6.9	2
2.46135	11.6	16.4	-6.8	2
2.46140	11.7	16.4	-6.7	2
2.46145	11.6	16.4	-6.8	2
2.46150	11.7	16.4	-6.7	2
2.46155	11.7	16.4	-6.7	2
2.46160	11.9	16.4	-6.5	2
2.46165	12	16.4	-6.4	2
2.46170	12.1	16.4	-6.3	2
2.46175	12	16.4	-6.4	2
2.46180	12.1	16.4	-6.3	2
2.46185	11.9	16.4	-6.5	2
2.46190	12	16.4	-6.4	2
2.46195	12.2	16.4	-6.2	2
2.46200	12.3	16.4	-6.1	2
2.46205	12	16.4	-6.4	2
2.46210	12	16.4	-6.4	2
2.46215	11.6	16.4	-6.8	2

11Mbps CHANNEL 11 Processing Gain				
Freq.	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.46220	11.7	16.4	-6.7	2
2.46225	11.7	16.4	-6.7	2
2.46230	11.9	16.4	-6.5	2
2.46235	12	16.4	-6.4	2
2.46240	12.1	16.4	-6.3	2
2.46245	12	16.4	-6.4	2
2.46250	12.1	16.4	-6.3	2
2.46255	11.9	16.4	-6.5	2
2.46260	12	16.4	-6.4	2
2.46265	12.2	16.4	-6.2	2
2.46270	12.3	16.4	-6.1	2
2.46275	12	16.4	-6.4	2
2.46280	12	16.4	-6.4	2
2.46285	12	16.4	-6.4	2
2.46290	12	16.4	-6.4	2
2.46295	11.9	16.4	-6.5	2
2.46300	12	16.4	-6.4	2
2.46305	12.1	16.4	-6.3	2
2.46310	12	16.4	-6.4	2
2.46315	12.1	16.4	-6.3	2
2.46320	11.9	16.4	-6.5	2
2.46325	12	16.4	-6.4	2
2.46330	12.2	16.4	-6.2	2
2.46335	12	16.4	-6.4	2
2.46340	12	16.4	-6.4	2
2.46345	12	16.4	-6.4	2
2.46350	12	16.4	-6.4	2
2.46355	12.1	16.4	-6.3	2
2.46360	11.9	16.4	-6.5	2
2.46365	11.9	16.4	-6.5	2
2.46370	11.9	16.4	-6.5	2
2.46375	12	16.4	-6.4	2
2.46380	11.9	16.4	-6.5	2
2.46385	11.8	16.4	-6.6	2

11Mbps CHANNEL 11 Processing Gain				
Freq.	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.46390	11.8	16.4	-6.6	2
2.46395	11.9	16.4	-6.5	2
2.46400	12	16.4	-6.4	2
2.46405	11.8	16.4	-6.6	2
2.46410	11.9	16.4	-6.5	2
2.46415	12	16.4	-6.4	2
2.46420	12	16.4	-6.4	2
2.46425	12	16.4	-6.4	2
2.46430	11.7	16.4	-6.7	2
2.46435	11.9	16.4	-6.5	2
4.46440	12	16.4	-6.4	2
2.46445	12.1	16.4	-6.3	2
2.46450	12	16.4	-6.4	2
2.46455	12.1	16.4	-6.3	2
2.46460	11.9	16.4	-6.5	2
2.46465	12	16.4	-6.4	2
2.46470	12.2	16.4	-6.2	2
2.46475	12.3	16.4	-6.1	2
2.46480	12	16.4	-6.4	2
2.46485	12	16.4	-6.4	2
2.46490	12	16.4	-6.4	2
2.46495	12.1	16.4	-6.3	2
2.46500	11.9	16.4	-6.5	2
2.46505	11.9	16.4	-6.5	2
2.46510	11.8	16.4	-6.6	2
2.46515	12	16.4	-6.4	2
2.46520	11.9	16.4	-6.5	2
2.46525	11.8	16.4	-6.6	2
2.46530	11.8	16.4	-6.6	2
2.46535	11.9	16.4	-6.5	2
2.46540	12	16.4	-6.4	2
2.46545	11.8	16.4	-6.6	2
2.46550	11.9	16.4	-6.5	2

11Mbps CHANNEL 11 Processing Gain				
Freq.	Gp	(S/N)	Mj = J/S	Lsys
(GHz)	(dB)	(dB)	(dB)	(dB)
2.46555	12.1	16.4	-6.3	2
2.46560	12	16.4	-6.4	2
2.46565	12.2	16.4	-6.2	2
2.46570	12.2	16.4	-6.2	2
2.46575	12.2	16.4	-6.2	2
2.46580	12.3	16.4	-6.1	2
2.46585	12.1	16.4	-6.3	2
2.46590	12.3	16.4	-6.1	2
2.46595	12.2	16.4	-6.2	2
2.46600	12.2	16.4	-6.2	2
2.46605	12.2	16.4	-6.2	2
2.46610	12.2	16.4	-6.2	2
2.46615	12.2	16.4	-6.2	2
2.46620	12.3	16.4	-6.1	2
2.46625	12.1	16.4	-6.3	2
2.46630	12.3	16.4	-6.1	2
2.46635	12.2	16.4	-6.2	2
2.46640	12.2	16.4	-6.2	2
2.46645	12.2	16.4	-6.2	2
2.46650	12.2	16.4	-6.2	2
2.46655	12.2	16.4	-6.2	2
2.46660	12.3	16.4	-6.1	2
2.46665	12.3	16.4	-6.1	2
2.46670	12.4	16.4	-6.0	2
2.46675	12.2	16.4	-6.2	2
2.46680	12.2	16.4	-6.2	2
2.46685	12.2	16.4	-6.2	2
2.46690	12.3	16.4	-6.1	2
2.46695	12.3	16.4	-6.1	2
2.46700	12.4	16.4	-6.0	2