FCC CLASS II CHANGE EMI TEST REPORT

of

E.U.T. : Wireless LAN Card

FCC ID. : M4Y-XI-300

MODEL : XI-300

for

APPLICANT : Z-COM, INC.

ADDRESS : 7F-2, NO. 9, PROSEPERITY 1ST RD.,
SCIENCE-BASED INDUSTRIAL PARK,
HSINCHU, TAIWAN, R.O.C.

Test Performed by

ELECTRONICS TESTING CENTER, TAIWAN
NO. 34, LIN 5, DING FU TSUN, LINKOU HSIANG
TAIPEI HSIEN, TAIAWN, R.O.C.

Tel:(02)26023052, 26023054
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Report Number : ET90R-08-063

TEST REPORT CERTIFICATION

Applicant	: Z-COM, INC. 7F-2, NO. 9, PROSEPERITY 1ST RD., SCIENCE-BASED INDUSTRIAL PARK, HSINCHU, TAIWAN, R.O.C.
Manufacturer	: Z-COM, INC. 7F-2, NO. 9, PROSEPERITY 1ST RD., SCIENCE-BASED INDUSTRIAL PARK, HSINCHU, TAIWAN, R.O.C.
Description of EUT	:
a) Type of EUT	: Wireless LAN Card
b) Trade Name	: Z-COM
c) Model No.	: XI-300
d) Power Supply	: From Notebook PC
Regulation Applied	: FCC Rules and Regulations Part 15 Subpart B & C (1999)

I HEREBY CERTIFY THAT: The data shown in this report were made in accordance with the procedures given in ANSI C63.4, and the energy emitted by the device was founded to be within the limits applicable. I assume full responsibility for accuracy and completeness of these data.

Note: 1. The result of the testing report relate only to the item tested.
2. The testing report shall not be reproduced expect in full, without the written approval of ETC.

Issued Date : Aug. 27, 2001

Test Engineer : Jeff Chuang
(Jeff Chuang)

Approve & Authorized Signer : Will Yauo
Will Yauo, Manager
EMC Dept. II of ELECTRONICS
TESTING CENTER, TAIWAN

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1 GENERAL INFORMATION

1.1 Product Description

a) Type of EUT	: Wireless LAN Card
b) Trade Name	: Z-COM
c) Model No.	: XI-300
d) Power Supply	: From Notebook PC

1.2 Characteristics of Device

The Wireless LAN Card designed with a transmitting method of direct sequence spread spectrum is for local area network operation, which operates at 2.4 GHz ISM band and data rate up to 11 Mbps. The spread spectrum unit is HFA3861 and the rated output power is 10.8 dBm (12.0 mW).

1.3 Test Methodology

The Wireless LAN Card designed with a transmitting method of direct sequence spread spectrum is for local area network operation, which operates at 2.4 GHz ISM band and data rate up to 11 Mbps. The spread spectrum unit is HFA3861 and the rated output power is 10.8 dBm (12.0 mW).

1.4 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the roof top of Building at No. 34, Lin 5, Ding Fu Tsun, Linkou Hsiang, Taipei Hsien, Taiwan 244, R.O.C.
This site has been fully described in a report submitted to your office, and accepted in a letter dated Feb. 10, 2000.

2 PROVISIONS APPLICABLE

2.1 Definition

Unintentional radiator:
A device that intentionally generates and radio frequency energy for use within the device, or that sends radio frequency signals by conduction to associated equipment via connecting wiring, but which is not intended to emit RF energy by radiation or induction.

Class A Digital Device:
A digital device which is marketed for use in commercial or business environment; exclusive of a device which is market for use by the general public, or which is intended to be used in the home.

Class B Digital Device :
A digital device which is marketed for use in a residential environment notwithstanding use in a commercial, business of industrial environment. Example of such devices that are marketed for the general public.

Note : A manufacturer may also qualify a device intended to be marketed in a commercial, business, or industrial environment as a Class B digital device, and in fact is encouraged to do so, provided the device complies with the technical specifications for a Class B Digital Device. In the event that a particular type of device has been found to repeatedly cause harmful interference to radio communications, the Commission may classify such a digital device as a Class B Digital Device, Regardless of its intended use.

Intentional radiator:
A device that intentionally generates and emits radio frequency energy by radiation or induction.

2.2 Requirement for Compliance

(1) Conducted Emission Requirement

For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following:

Frequency MHz	Emissions μV	Emissions dBμV
0.45 - 30.0	250	48.0

For intentional device, according to § 15.207(a) Line Conducted Emission Limits is same as above table.

(2) Radiated Emission Requirement

For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency MHz	Distance Meters	Radiated dBμV/m	Radiated μV/m
30 - 88	3	40.0	100
88 - 216	3	43.5	150
216 - 960	3	46.0	200
Above 960	3	54.0	500

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emissions from intentional radiators at a distance of 3 meters shall not exceed the above table.

(3) Antenna Requirement

For intentional device, according to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

(4) Bandwidth Requirement

For direct sequence system, according to 15.247(a)(2), the minimum 6dB bandwidth shall be at least 500 kHz.

(5) Output Power Requirement

For direct sequence system, according to 15.247(b), the maximum peak output power of the transmitter shall not exceed 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(6) 100 kHz Bandwidth of Frequency Band Edges Requirement

According to 15.247(c), if any 100 kHz bandwidth outside these frequency bands, the radio frequency power that is produced by the modulation products of the spreading sequence, the information sequence and the carrier frequency shall be either at least 20 dB below that in any 100 kHz bandwidth within the band that contains the highest level of the desired power or shall not exceed the general levels specified in § 15.209(a), whichever results in the lesser attenuation.

(7) Power Density Requirement

According to 15.247(d), for direct sequence systems, the transmitted power density averaged over any 1 second interval shall not be greater than 8 dBm in any 3 kHz bandwidth within these bands.

(8) Processing Gain Requirement

According to 15.247(e), the processing gain of a direct sequence system shall be at least 10 dB. The processing gain shall be determined from the ratio in dB of the signal to noise ratio with the system spreading code turned off to the signal to noise ratio with the system spreading code turned on, as measured at the demodulated output of the receiver.

2.3 Restricted Bands of Operation

Only spurious emissions are permitted in any of the frequency bands listed below :

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42-16.423	399.9-410	4.5-5.25
0.495 - 0.505 **	16.69475 - 16.69525	608-614	5.35-5.46
2.1735 - 2.1905	16.80425 - 16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475 - 156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2655-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3360-4400	Above 38.6
13.36-13.41			

** : Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

2.4 Labeling Requirement

The device shall bear the following statement in a conspicuous location on the device :

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

2.5 User Information

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual.

The Federal Communications Commission Radio Frequency Interference Statement includes the following paragraph.

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio / TV technician for help.

3. SYSTEM TEST CONFIGURATION

3.1 Justification

For both radiated and conducted emissions below 1 GHz, the system was configured for testing in a typical fashion as a customer would normally use it. The peripherals other than EUT were connected in normally standing by situation. Measurement was performed under the condition that a computer program was exercised to simulate data communication of EUT, and the transmission rate was set to maximum allowed by EUT. Three highest emissions were verified with varying placement of the transmitting antenna connected to EUT to maximize the emission from EUT.

For conducted emissions, only measured on TX and RX operation, for the digital circuits portion also function normally whenever TX or RX is operated. For radiated emissions, whichever RF channel is operated, the digital circuits function identically. As the reason, measurement of radiated emissions from digital circuits is only performed with channel 7 by transmitting mode.

During the preliminary test, the worse case is the antenna with a cable, and data presented in this test report just shows the worse case.

3.2 Devices for Tested System

Device	Manufacture	Model	Cable Description
Wireless LAN Card *	Z-COM, INC.	XI-300	----
Note Book Computer	Twinhead	P79T	2.5m Unshielded AC Adaptor Poewr Cord

Remark “*” means equipment under test.

4 RADIATED EMISSION MEASUREMENT

4.1 Applicable Standard

For unintentional radiator, the radiated emission shall comply with § 15.109(a).

For intentional radiators, according to § 15.247 (a), operation under this provision is limited to frequency hopping and direct sequence spread spectrum, and the out band emission shall be comply with § 15.247 (c)

4.2 Measurement Procedure

1. Setup the configuration per figure 5 and 6 for frequencies measured below and above 1 GHz respectively.
2. For emission frequencies measured below 1 GHz, a pre-scan is performed in a shielded chamber to determine the accurate frequencies of higher emissions will be checked on a open test site. As the same purpose, for emission frequencies measured above 1 GHz, a pre-scan also be performed with a 1 meter measuring distance before final test.
3. For emission frequencies measured below and above 1 GHz, set the spectrum analyzer on a 100 kHz and 1 MHz resolution bandwidth respectively for each frequency measured in step 2.
4. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highness when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ° to 360 ° with a speed as slow as possible, and keep the azimuth that highest emission is indicated on the spectrum analyzer. Vary the antenna position again and record the highest value as a final reading. A RF test receiver is also used to confirm emissions measured.

   Note : A band pass filter was used to avoid pre-amplifier saturated when measure TX operation mode in frequency band above 1 GHz.
5. Repeat step 4 until all frequencies need to be measured were complete.
6. Repeat step 5 with search antenna in vertical polarized orientations.
7. Check the three frequencies of highest emission with varying the placement of cables associated with EUT to obtain the worse case and record the result.

Figure 1 : Frequencies measured below 1 GHz configuration

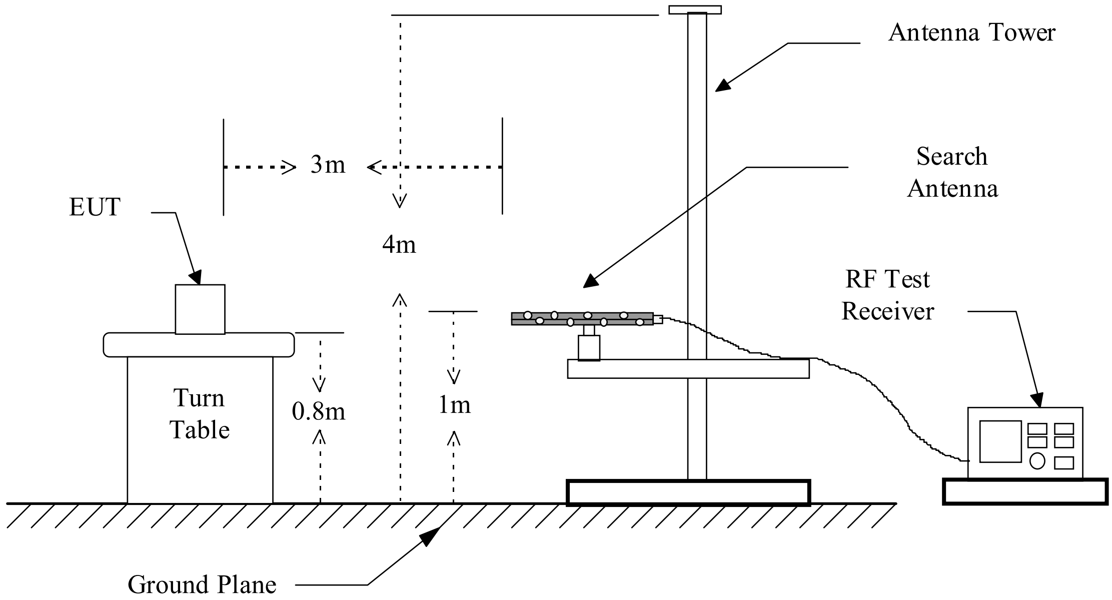
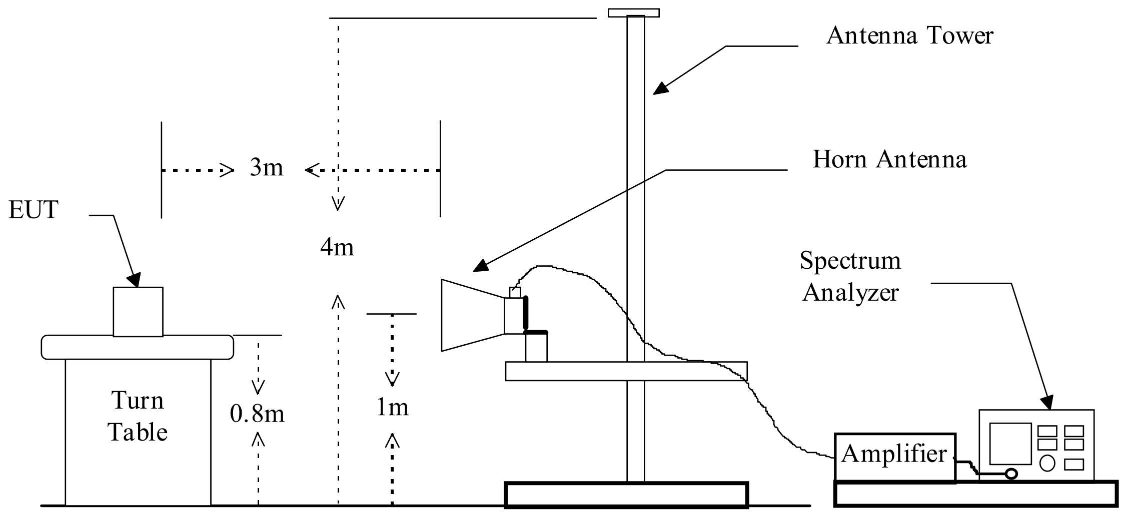


Figure 2 : Frequencies measured above 1 GHz configuration



4.3 Measuring Instrument

The following instrument are used for radiated emissions measurement:

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Hewlett-Packard	8568B	12/21/2001
Pre-selector	Hewlett-Packard	85685A	01/01/2002
Quasi Peak Detector	Hewlett-Packard	85650A	01/01/2002
Spectrum Analyzer	Adventest	R3271	09/09/2001
RF Test Receiver	Rohde & Schwarz	ESVS 30	08/05/2002
Horn Antenna	EMCO	3115	05/14/2002
Log periodic Antenna	EMCO	3146	11/02/2001
Biconical Antenna	EMCO	3110B	11/02/2001
Preamplifier	Hewlett-Packard	8449B	05/10/2002
Preamplifier	Hewlett-Packard	8447D	12/29/2001
Spectrum Analyzer	Hewlett-Packard	8564E	04/22/2002

Measuring instrument setup in measured frequency band when specified detector function is used :

Frequency Band (MHz)	Instrument	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	RF Test Receiver	Quasi-Peak	120 kHz	N/A
	Spectrum Analyzer	Peak	100 kHz	100 kHz
Above 1000	Spectrum Analyzer	Peak	1 MHz	1 MHz
	Spectrum Analyzer	Average	1 MHz	300 Hz

4.4 Radiated Emission Data

4.4.1 RF Portion

a) Channel 1

Operation Mode : Receiving /Transmitting

Fundamental Frequency : 2412 MHz (Local Frequency : 2038 MHz)

Test Date : Aug. 24, 2001 Temperature : 25 ℃ Humidity : 61 %

Frequency	Reading (dBuV)				Factor	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin (dB)	Table Deg. (Deg.)	Ant. High
	H		V		(dB)							
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.			(m)
*2037.780	48.5	46.3	51.7	49.1	-4.5	47.2	44.6	74.0	54.0	-9.4	90	1.10
*4075.560	42.6	***	43.2	***	2.0	45.2	***	74.0	54.0	-8.8	90	1.10
*6113.340	---	---	---	---	4.5	---	---	74.0	54.0	---	---	---
*8151.120	---	---	---	---	6.5	---	---	74.0	54.0	---	---	---
*10188.900	---	---	---	---	7.6	---	---	74.0	54.0	---	---	---
4826.824	---	---	---	---	2.6	---	---	74.0	54.0	---	---	---
7240.236	---	---	---	---	5.8	---	---	74.0	54.0	---	---	---
9653.648	---	---	---	---	7.3	---	---	74.0	54.0	---	---	---
12067.060	---	---	---	---	9.2	---	---	74.0	54.0	---	---	---
14480.472	---	---	---	---	11.6	---	---	74.0	54.0	---	---	---

Note :

1. Item of margin shown in above table refer to average limit.
2. It is considered that the results of average comply with average limit when measuring data with a peak function detector meet the average limit. Mark "***" means that Peak result is meet average limit.
3. Remark "---" means that the emissions level is too low to be measured.
4. Item "Margin" referred to Average limit while there is only peak result.
5. The expanded uncertainty of the radiated emission tests is 3.53 dB.

b) Channel 6

Operation Mode : Receiving / Transmitting

Fundamental Frequency : 2437 MHz (Local Frequency : 2063 MHz)

Test Date : Aug. 24, 2001 Temperature : 25 ℃ Humidity : 61 %

Frequency	Reading (dBuV)				Factor	Result @3m (dBuV/m)		Limit @3m (dBuV/m)		Margin	Table	Ant.
	H		V		(dB)					(dB)	Deg. (Deg.)	High
(MHz)	Peak	Ave	Peak	Ave	Corr.	Peak	Ave	Peak	Ave.			(m)
*2062.800	49.3	47.2	50.0	48.2	-4.4	45.6	43.8	74.0	54.0	-10.2	270	1.00
*4125.600	42.7	***	43.5	***	2.0	45.5	***	74.0	54.0	-8.5	90	1.00
*6188.400	---	---	---	---	4.5	---	---	74.0	54.0	---	---	---
*8251.200	---	---	---	---	6.6	---	---	74.0	54.0	---	---	---
*10314.000	---	---	---	---	7.7	---	---	74.0	54.0	---	---	---
4876.822	---	---	---	---	2.7	---	---	74.0	54.0	---	---	---
7315.233	---	---	---	---	5.9	---	---	74.0	54.0	---	---	---
9753.644	---	---	---	---	7.3	---	---	74.0	54.0	---	---	---
12192.055	---	---	---	---	9.3	---	---	74.0	54.0	---	---	---
14630.466	---	---	---	---	11.6	---	---	74.0	54.0	---	---	---

Note :

1. Item of margin shown in above table refer to average limit.
2. It is considered that the results of average comply with average limit when measuring data with a peak function detector meet the average limit. Mark "***" means that Peak result is meet average limit.
3. Remark "---" means that the emissions level is too low to be measured.
4. Item "Margin" referred to Average limit while there is only peak result.
5. The expanded uncertainty of the radiated emission tests is 3.53 dB.

c) Channel 11

Operation Mode : Receiving / Transmitting

Fundamental Frequency : 2462 MHz (Local Frequency : 2088 MHz)

Test Date : Aug. 24, 2001 Temperature : 25 ℃ Humidity : 61 %

Frequency (MHz)	Reading (dBuV) H Peak	H Ave	V Peak	V Ave	Factor (dB) Corr.	Result @3m (dBuV/m) Peak	Ave	Limit @3m (dBuV/m) Peak	Ave.	Margin (dB)	Table Deg. (Deg.)	Ant. High (m)
*2087.800	50.0	48.7	49.0	47.6	-4.3	45.7	44.4	74.0	54.0	-9.6	90	1.00
*4175.600	46.6	41.3	45.0	38.6	2.0	48.6	43.3	74.0	54.0	-10.7	90	1.10
*6188.400	---	---	---	---	4.5	---	---	74.0	54.0	---	---	---
*8251.200	---	---	---	---	6.6	---	---	74.0	54.0	---	---	---
*10314.000	---	---	---	---	7.7	---	---	74.0	54.0	---	---	---
4926.822	---	---	---	---	2.8	---	---	74.0	54.0	---	---	---
7390.233	---	---	---	---	6.0	---	---	74.0	54.0	---	---	---
9853.644	---	---	---	---	7.3	---	---	74.0	54.0	---	---	---
12317.055	---	---	---	---	9.3	---	---	74.0	54.0	---	---	---
14780.466	---	---	---	---	11.5	---	---	74.0	54.0	---	---	---

Note :

1. Item of margin shown in above table refer to average limit.
2. It is considered that the results of average comply with average limit when measuring data with a peak function detector meet the average limit. Mark "***" means that Peak result is meet average limit.
3. Remark "---" means that the emissions level is too low to be measured.
4. Item "Margin" referred to Average limit while there is only peak result.
5. The expanded uncertainty of the radiated emission tests is 3.53 dB.

4.4.2 Other Emission

a) Emission frequencies below 1 GHz

Test Date : Aug. 24, 2001 Temperature : 25 ℃ Humidity : 61 %

Frequency (MHz)	Ant-Pol H/V	Meter Reading (dBuV)	Corrected Factor (dB)	Result @3m (dBuV/m)	Limit @3m (dBuV/m)	Margin (dB)	Table Degree (Deg.)	Ant. High (m)
80.814	V	46.1	-14.9	31.2	40.0	-8.8	270	1.00
133.686	V	44.4	-11.2	33.2	43.5	-10.3	85	1.00
192.064	H	45.7	-8.1	37.6	43.5	-5.9	90	4.00
200.450	H	44.9	-7.1	37.8	43.5	-5.7	90	4.00
233.886	H	41.9	-4.9	37.0	46.0	-9.0	15	4.00
334.086	H	46.3	-8.1	38.2	46.0	-7.8	0	3.50
467.072	V	41.0	-4.8	36.2	46.0	-9.8	15	1.30

Note :

1. Remark "---" means that the emissions level is too low to be measured.

2. The expanded uncertainty of the radiated emission tests is 3.53 dB.

b) Emission frequencies above 1 GHz

Radiated emission frequencies above 1 GHz to 5 GHz were too low to be measured with a pre-amplifier of 35 dB.

4.5 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor, High Pass Filter Loss(if used) and Cable Loss, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

where

Corrected Factor = Antenna FACTOR + Cable Loss + High Pass Filter Loss - Amplifier Gain

4.6 Photos of Radiation Measuring Setup

Please see Setup photos in Exhibit F.

5 CONDUCTED EMISSION MEASUREMENT

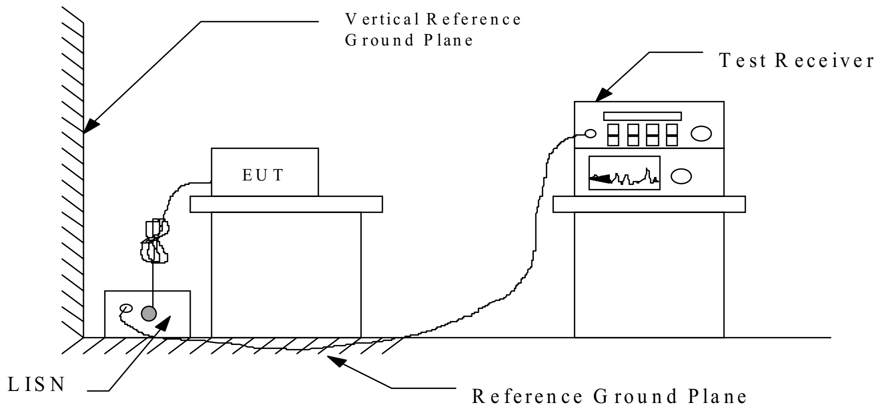
5.1 Standard Applicable

For unintentional and intentional device, Line Conducted Emission Limits are in accordance to § 15.107(a) and § 15.207(a) respectively. Both Limits are identical specification.

5.2 Measurement Procedure

1. Setup the configuration per figure 3.
2. A preliminary scan with a spectrum monitor is performed to identify the frequency of emission that has the highest amplitude relative to the limit by operating the EUT in selected modes of operation, typical cable positions, and with a typical system configuration.
3. Record the 6 or 8 highest emissions relative to the limit.
4. Measure each frequency obtained from step 3 by a test receiver set on quasi peak detector function, and then record the accuracy frequency and emission level. If all emissions measured in the specified band are attenuated more than 20 dB from the limit, this step would be ignored, and the peak detector function would be used.
5. Confirm the highest three emissions with variation of the EUT cable configuration and record the final data.
6. Repeat all above procedures on measuring each operation mode of EUT.

Figure 3 : Conducted emissions measurement configuration



5.3 Conducted Emission Data

a) Channel 1

Operation Mode : Transmitting / Receiving
Test Date : Aug. 24, 2001 Temperature : 24 ℃ Humidity: 71 %

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result (dBuV)		Limit (dBuV)	Margin (dB)
	Va	Vb		Va	Vb		
0.460	31.8	28.7	0.2	32.0	28.9	48.0	-16.0
0.538	27.0	32.7	0.2	27.2	32.9	48.0	-15.1
3.540	25.6	27.0	0.3	25.9	27.3	48.0	-20.7
3.619	27.4	27.2	0.3	27.7	27.5	48.0	-20.3
3.697	28.8	25.6	0.3	29.1	25.9	48.0	-18.9
11.700	36.8	25.7	0.6	37.4	26.3	48.0	-10.6
17.786	25.7	24.6	0.9	26.6	25.5	48.0	-21.4

b) Channel 6

Operation Mode : Transmitting / Receiving
Test Date : Aug. 24, 2001 Temperature : 24 ℃ Humidity: 71 %

Frequency (MHz)	Reading (dBuV)		Factor (dB)	Result (dBuV)		Limit (dBuV)	Margin (dB)
	Va	Vb		Va	Vb		
0.460	31.7	28.5	0.2	31.9	28.7	48.0	-16.1
0.538	26.8	32.6	0.2	27.0	32.8	48.0	-15.2
3.540	25.5	26.8	0.3	25.8	27.1	48.0	-20.9
3.619	27.2	27.1	0.3	27.5	27.4	48.0	-20.5
3.697	28.7	25.4	0.3	29.0	25.7	48.0	-19.0
11.700	36.7	25.5	0.6	37.3	26.1	48.0	-10.7
17.786	25.5	24.5	0.9	26.4	25.4	48.0	-21.6

c) Channel 11

Operation Mode : Transmitting / Receiving
Test Date : Aug. 24, 2001 Temperature : 24 ℃ Humidity: 71 %

Frequency	Reading (dBuV)		Factor	Result (dBuV)		Limit	Margin
(MHz)	Va	Vb	(dB)	Va	Vb	(dBuV)	(dB)
0.460	31.6	28.6	0.2	31.8	28.8	48.0	-16.2
0.538	26.9	32.5	0.2	27.1	32.7	48.0	-15.3
3.540	25.4	26.9	0.3	25.7	27.2	48.0	-20.8
3.619	27.3	27.0	0.3	27.6	27.3	48.0	-20.4
3.697	28.6	25.5	0.3	28.9	25.8	48.0	-19.1
11.700	36.5	25.6	0.6	37.1	26.2	48.0	-10.9
17.786	25.6	24.4	0.9	26.5	25.3	48.0	-21.5

Note : 1. Please see appendix 3 for Plotted Data
2. The expanded uncertainty of the conducted emission tests is 2.45 dB.

5.4 Result Data Calculation

The result data is calculated by adding the LISN Factor to the measured reading. The basic equation with a sample calculation is as follows:

RESULT = READING + LISN FACTOR

Assume a receiver reading of 22.5 dB μ V is obtained, and LISN Factor is 0.1 dB, then the total of disturbance voltage is 22.6 dB μ V.

RESULT = 22.5 + 0.1 = 22.6 dB μ V
Level in μ V = Common Antilogarithm[(22.6 dB μ V)/20]
= 13.48 μ V

5.5 Conducted Measurement Equipment

The following test equipment are used during the conducted test .

Equipment	Manufacturer	Model No.	Next Cal. Due
RF Test Receiver	Rohde and Schwarz	ESH3	12/29/2001
Spectrum Monitor	Rohde and Schwarz	EZM	N.C.R.
Line Impedance Stabilization network	Kyoritsu	KNW-407	11/24/2001
Line Impedance Stabilization network	Rohde and Schwarz	ESH2-Z5	08/05/2002
Plotter	Hewlett-Packard	7440A	N/A
Shielded Room	Riken		N.C.R.

5.6 Photos of Conduction Measuring Setup

Please see Setup photos in Exhibit F.

6 ANTENNA REQUIREMENT

6.1 Standard Applicable

For intentional device, according to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.
And according to § 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.2 Antenna Construction and Directional Gain

The antenna terminal of this unit is designed with a reversed MMCX Connector. Please see constraction Photos Of Exhibit B for details.
The directional gain of antenna used for transmitting is 2dBi, and the details antenna construction please see ***Appendix 2***.

7 EMISSION BANDWIDTH MEASUREMENT

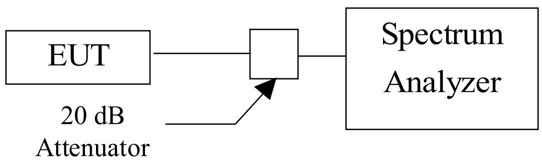
7.1 Standard Applicable

According to 15.247(a)(2), for direct sequence system, the minimum 6dB bandwidth shall be at least 500 kHz.

7.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 5 without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 6 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.

Figure 4: Emission bandwidth measurement configuration.



7.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
RF Test Receiver	Rohde & Schwarz	ESBI	05/15/2002
Plotter	Hewlett-Packard	7440A	N/A
Attenuator	Weinschel Engineering	AS3667	N/A

7.4 Measurement Data

Test Date : Aug. 24, 2001 Temperature : 24 ℃ Humidity: 71 %

a) Channel 01 : 6 dB Emission Bandwidth is 11.08 MHz
b) Channel 06 : 6 dB Emission Bandwidth is 11.06 MHz
c) Channel 11 : 6 dB Emission Bandwidth is 11.06 MHz

Note : 1. Please see appendix 3 for Plotted Data
2. The expanded uncertainty of the emission bandwidth tests is 1500Hz.

8 OUTPUT POWER MEASUREMENT

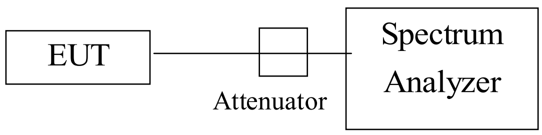
8.1 Standard Applicable

For direct sequence system, according to 15.247(b), the maximum peak output power of the transmitter shall not exceed 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

8.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 5 without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 3 MHz and VBW to 3 MHz.
4. Measure the highest amplitude appearing on spectral display and record the level to calculate result data.
5. Repeat above procedures until all frequencies measured were complete.

Figure 5: Output power and measurement configuration.



8.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
RF Test Receiver	Rohde & Schwarz	ESBI	05/15/2002
Plotter	Hewlett-Packard	7440A	N/A

8.4 Measurement Data

Test Date : Aug. 24, 2001 Temperature : 24 ℃ Humidity: 71 %

a) Channel 01 : Output Peak Power is 10.80 dBm or 12.0 mW
b) Channel 06 : Output Peak Power is 9.58 dBm or 9.1 mW
c) Channel 11 : Output Peak Power is 8.72 dBm or 7.4 mW

Note : 1. Please see appendix 4 for Plotted Data
2. The expanded uncertainty of the output power tests is 2dB.

9 100 kHz BANDWIDTH OF BAND EDGES MEASUREMENT

9.1 Standard Applicable

According to 15.247(c), if any 100 kHz bandwidth outside these frequency bands, the radio frequency power that is produced by the modulation products of the spreading sequence, the information sequence and the carrier frequency shall be either at least 20 dB below that in any 100 kHz bandwidth within the band that contains the highest level of the desired power or shall not exceed the general levels specified in § 15.209(a), whichever results in the lesser attenuation.

9.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 5 without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
3. Set both RBW and VBW of spectrum analyzer to 300 kHz with a convenient frequency span including 100kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

9.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
RF Test Receiver	Rohde & Schwarz	ESBI	05/15/2002
Attenuator	Weinschel Engineering	1	N/A
Plotter	Hewlett-Packard	7440A	N/A

9.4 Measurement Data

Test Date : Aug. 24, 2001 Temperature : 24 ℃ Humidity: 71 %

a) Lower Band Edge : maximum value is –37.75 dBm that is attenuated more than 20 dB

b) Upper Band Edge : maximum value is –40.06 dBm that is attenuated more than 20 dB

Note : 1. Please see appendix 5 for Plotted Data

2. The expanded uncertainty of the 100 khz bandwidth of band edges tests is 2dB.

10 POWER DENSITY MEASUREMENT

10.1 Standard Applicable

According to 15.247(d), for direct sequence systems, the transmitted power density averaged over any 1 second interval shall not be greater than 8 dBm in any 3 kHz bandwidth within these bands.

10.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT as shown in figure 4 without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set EUT to any one measured frequency within its operating range and make sure the instrument is operated in its linear range.
3. Adjust the center frequency of spectrum analyzer on highest level appearing on spectral display within a 300 kHz frequency span.
4. Set the spectrum analyzer on a 3 kHz resolution bandwidth and 300 kHz video bandwidth as well as max. hold function. Also turn on SA level corrected function by 21 dB and then record the measurement result.
5. Repeat above procedures until all measured frequencies were complete.

10.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
RF Test Receiver	Rohde & Schwarz	ESBI	05/15/2002
Attenuator	Weinschel Engineering	1	N/A
Plotter	Hewlett-Packard	7440A	N/A

10.4 Measurement Data

Test Date : Aug. 24, 2001 Temperature : 24 ℃ Humidity: 71 %

a) Channel 01 : Maximun Power Density of 3 kHz Bandwidth is –16.22 dBm
b) Channel 06 : Maximun Power Density of 3 kHz Bandwidth is –17.34 dBm
c) Channel 11 : Maximun Power Density of 3 kHz Bandwidth is –18.02 dBm

Note : 1. Please see appendix 6 for Plotted Data
2. The expanded uncertainty of the power density tests is 2dB.

11 PROCESSING GAIN MEASUREMENT

11.1 Standard Applicable

According to 15.247(e), the processing gain of a direct sequence system shall be at least 10 dB. The processing gain shall be determined from the ratio in dB of the signal to noise ratio with the system spreading code turned off to the signal to noise ratio with the system spreading code turned on, as measured at the demodulated output of the receiver.

11.2 Measurement Description

The processing gain measurement is based upon the CW jamming margin method suggested in the FCC document entitled "GUIDANCE ON MEASUREMENTS FOR DIRECT SEQENCE SPREAD SPECTRUM SYSTEMS, 54597, July 12,1995"
The test consists of stepping a CW signal generator in 50KHz increment across pass band of each three channels within 2400 – 2483 MHz band. This CW signal represents the jamming signal. The selected three channels are as followings:

Channel 01: centered at 2412 MHz
Channel 06: centered at 2437 MHz
Channel 11: centered at 2462 MHz

These three channels represents the Low, Mid and High frequency bands of the EUT, respectively. And, the processing gain of the EUT determined for these bands should be representative of the entire band.
(1). Measurement Configuration
The measurement configuration (draw in next page) is according to FCC document 54797,page3.
(2)Procedures

(a) The test-firmware loaded into EUT(Tx) transmits a length of random data packet that is generated by Hp3784 BER tester. After receiving a Tx command from host PC, EUT sends a clock to synchronize with BER tester (Hp3784A).
(b) After receiving a Rx command from host PC, the test-firmware loaded into the EUT(Rx) will force EUT enter into Rx mode. The EUT (Rx) then, demodulates received data without CRC check, sends them to BER Tester. The BER Tester checks received data and the data stored in flash ROM, then calculates BER and accumulates the result.
(c) The remote PC acts as a command bridge between RS-232 port and PCMCIA bus.
(d) The host PC controls RF signal generator and spectrum analyzer via GPIB interface to get an appropriate J/S ratio.
(e) The host PC issues TX command to EUT(Tx) then issues Rx query command received, the good Rx packet counter will be increased. When a fixed number of

good Rx packets had been reached, the accumulated error bits will be read from EUT(Rx) via RS-232 and Remote PC. The J/S ratio will be re-measured at the same time.

(f) The test program in host PC increases or decreases jamming power and repeats step (d) and (e) to get a chosen BER, then records the J/S ratio.

(g) The test program in Host PC repeats step (f) by increasing CW jamming frequency in 50KHz step across entire pass band of each test channel.

(3) Test Condition

(a) The test configuration and procedure are according to the FCC document 54797, page 2-3.

(b) The pass band of each channel is 22MHz.

(c) The received data bit length executed in Host PC is fixed to 6.29×10E6. The chosen bit error rate (BER) is sustained to 1×10E-5.

(d) The power value of Signal and Jammer listed in the test results are read and recorded automatically by the program. The value is read directly from the function of "channel power measurement " of HP8563E Spectrum analyzer with the turn-off of signal or Jammer.

(4) Derivation of the Processing Gain

(a) The Processing Gain (Gp) is calculated according to the following equations:

Gp=(S/N)o + Mj + Lsys …..(4-1)…. Refer to FCC document 54797 Page3

Where Mj = J/S ratio (dB)

Lsys =System losses (assumed to be 2 dB)

(S/N)o = the required signal to noise ratio at the receiver output for a given received signal quality

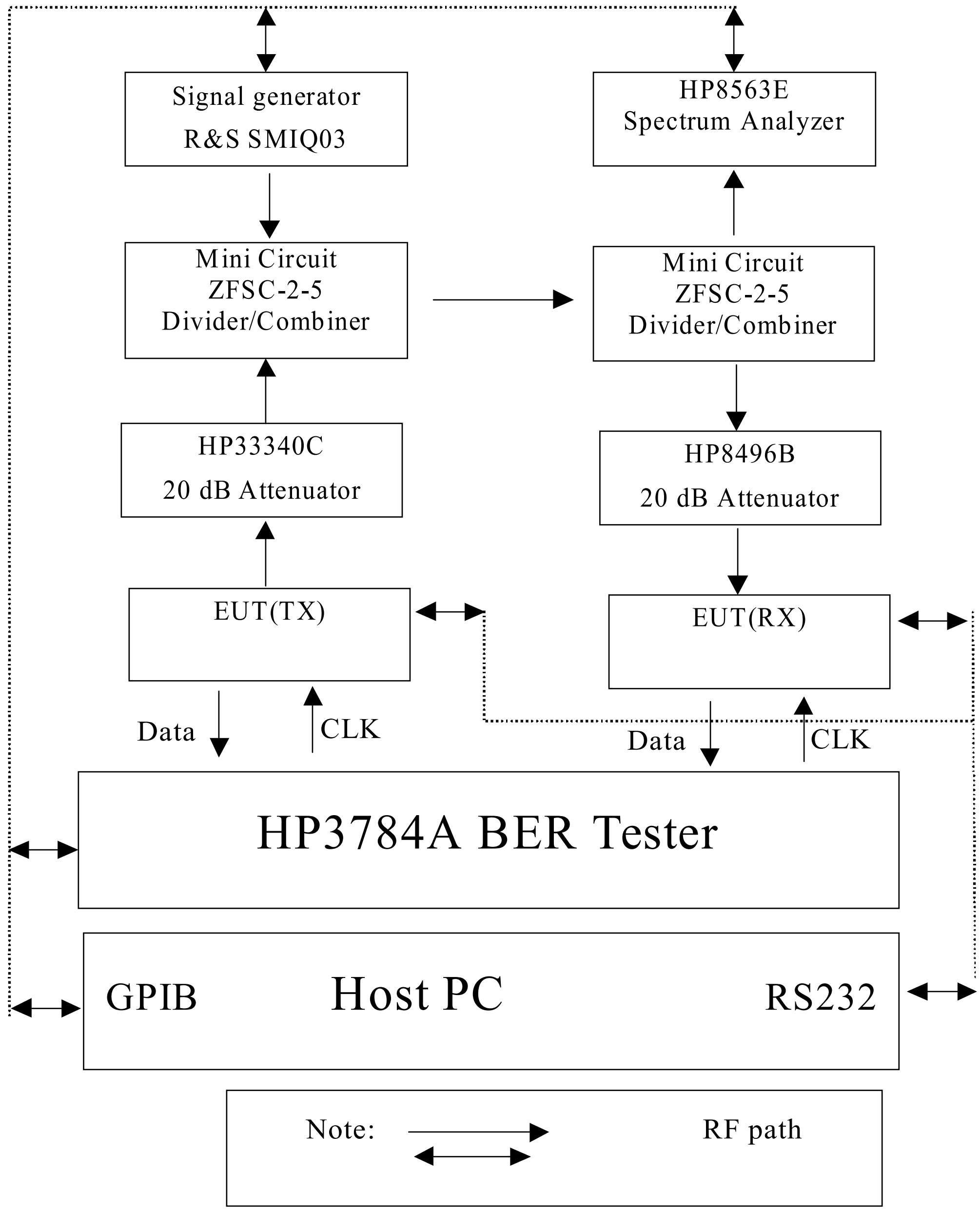
(b) Since the EUT uses coherent DBPSK/DQPSK demodulation, A (S/N)o=16.4dB is required to sustain a BER of 1×10E-5. The curve is shown in Fig.7.2, Viterbi, A.J. Principles of Coherent Communications, Page 192 (New York; McGraw-Hill, 1996), recommended by FCC document 54797.

Therefore, from equation (4-1)

Gp=16.4 + J/S +2 (dB) = 18.4 + J/S (dB)…..(4-2)

(5) Test Results

The tested data are listed in the following pages. After discarding the worst 20% of the J/S ratio data points, the lowest remaining J/S ratio is used to determine the processing gain (PG), according to the derivative equation(4/2), of each tested channel.


Signal generator
R&S SMIQ03
HP8563E
Spectrum Analyzer
Mini Circuit
ZFSC-2-5
Divider/Combiner
Mini Circuit
ZFSC-2-5
Divider/Combiner
HP33340C
20 dB Attenuator
HP8496B
20 dB Attenuator
EUT(TX)
EUT(RX)
Data
CLK
Data
CLK
HP3784A BER Tester
GPIB
Host PC
RS232
Note:
RF path

11.3 Measurement Instrument

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Hewlett-Packard	HP8563E	07/04/2002
RF Signal Generator	Rohde & Schwarz	SMIQ03	11/02/2001
Attenuator	Hewlett-Packard	AP33341C 20dB	N/A
Attenuator	Hewlett-Packard	HP8496B 20dB	N/A
Combiner / Spliter	Mini Circuit	ZFSC-2-5	N/A

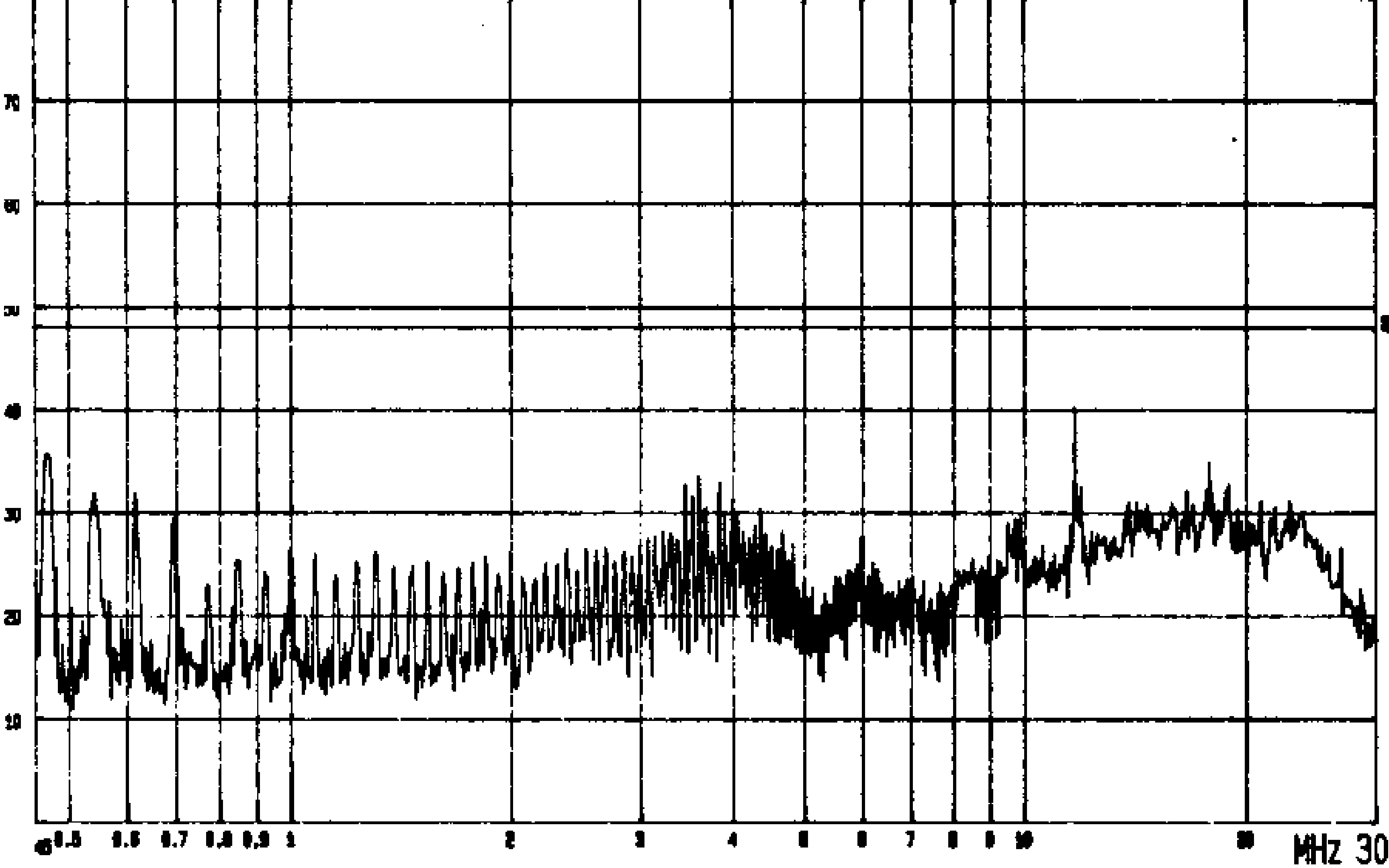
11.4 Measurement Data

Test Date : Aug. 24, 2001 Temperature : 24 ℃ Humidity: 71 %

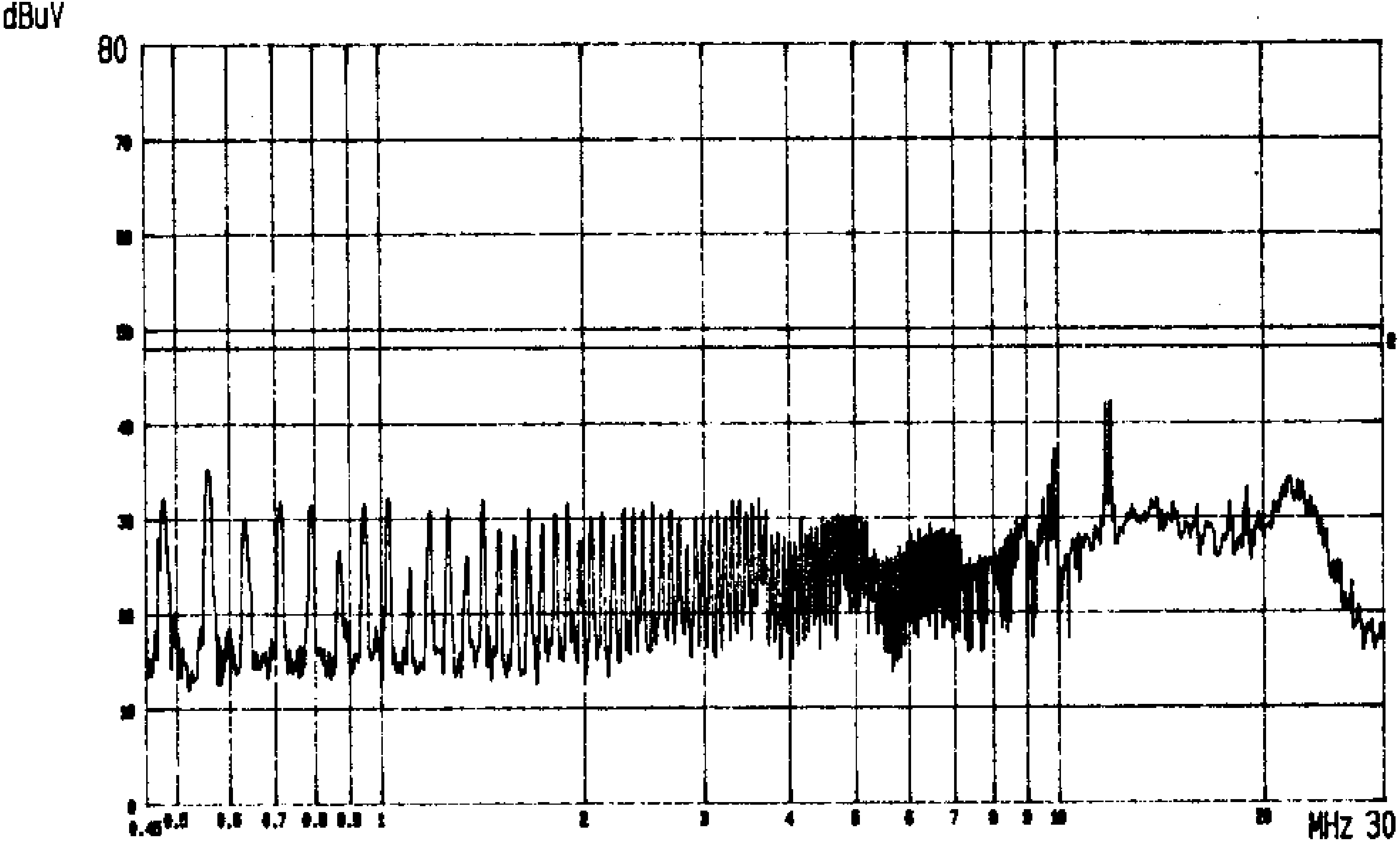
The processing gain is greater then 10 dB, please see Appendix 7 for details.

Data Rate = 2Mbps
For BPSK channel 1, PG =12.0 (2412 MHz)
BPSK channel 6, PG =12.6 (2437 MHz)
BPSK channel 11, PG =11.9 (2462 MHz)
Data Rate = 2Mbps
For QPSK channel 1, PG =11.5 (2412 MHz)
QPSK channel 6, PG =10.6 (2437 Mhz)
QPSK channel 11, PG =11.7 (2462 MHz)
In these three channels, the processing-gain values of EUT are all greater than 10dB, which satisfies §15.247(e).

Appendix 1 : Ploted Datas of Power Line Conducted Emissions

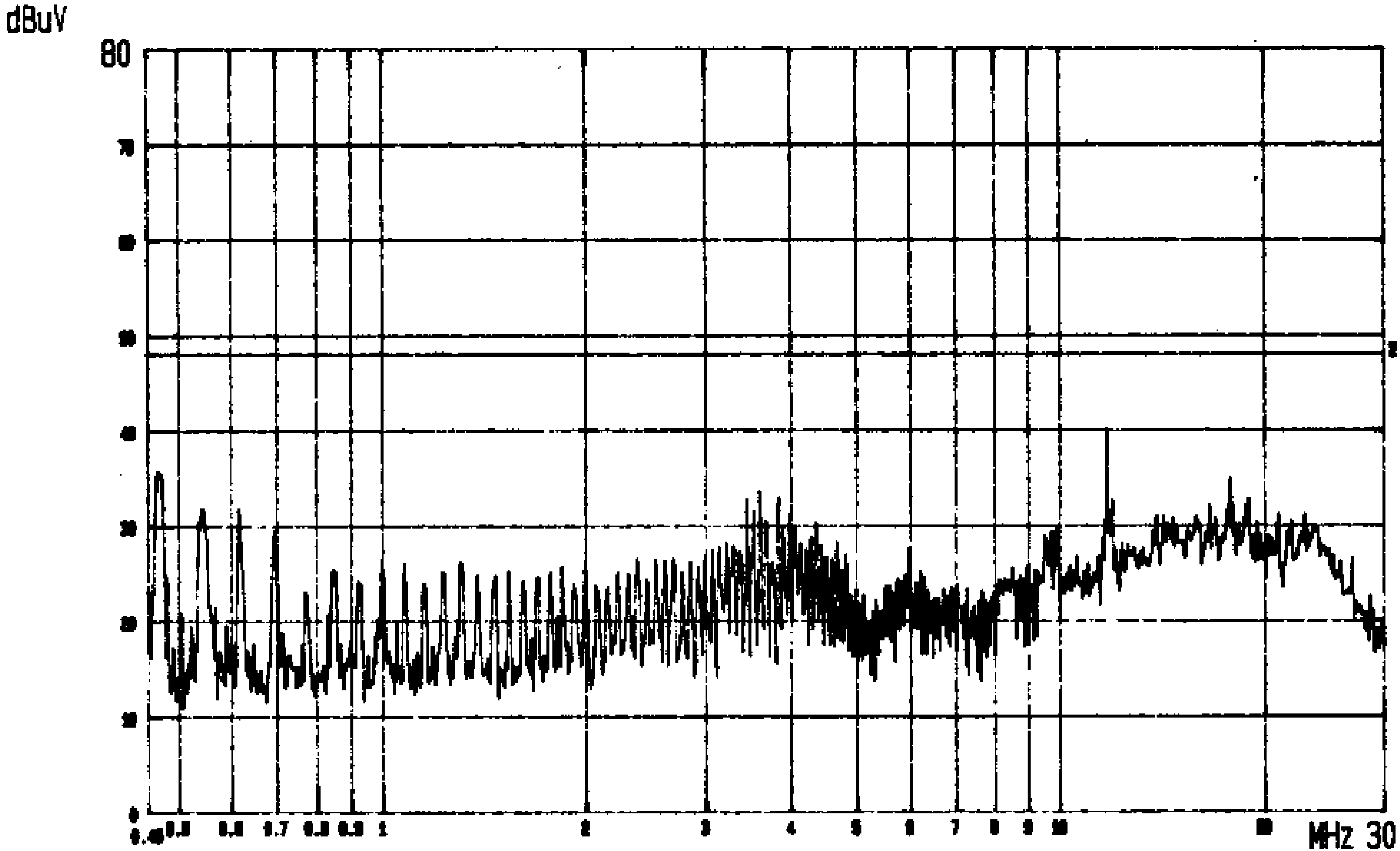


FCC ONDUC ED TE IT   EUT: Wire e LAN Car(LISN: N   2: QP   CLASS B L:MIT
'OWER: Fr m N eBoo PC   MODE: TX/RX CH:)   ETC EMI LAB



FCC CONDUCTED TEST   EUT: Wireless LAN Card   LISN: L1   2: QP., CLASS B LIMIT

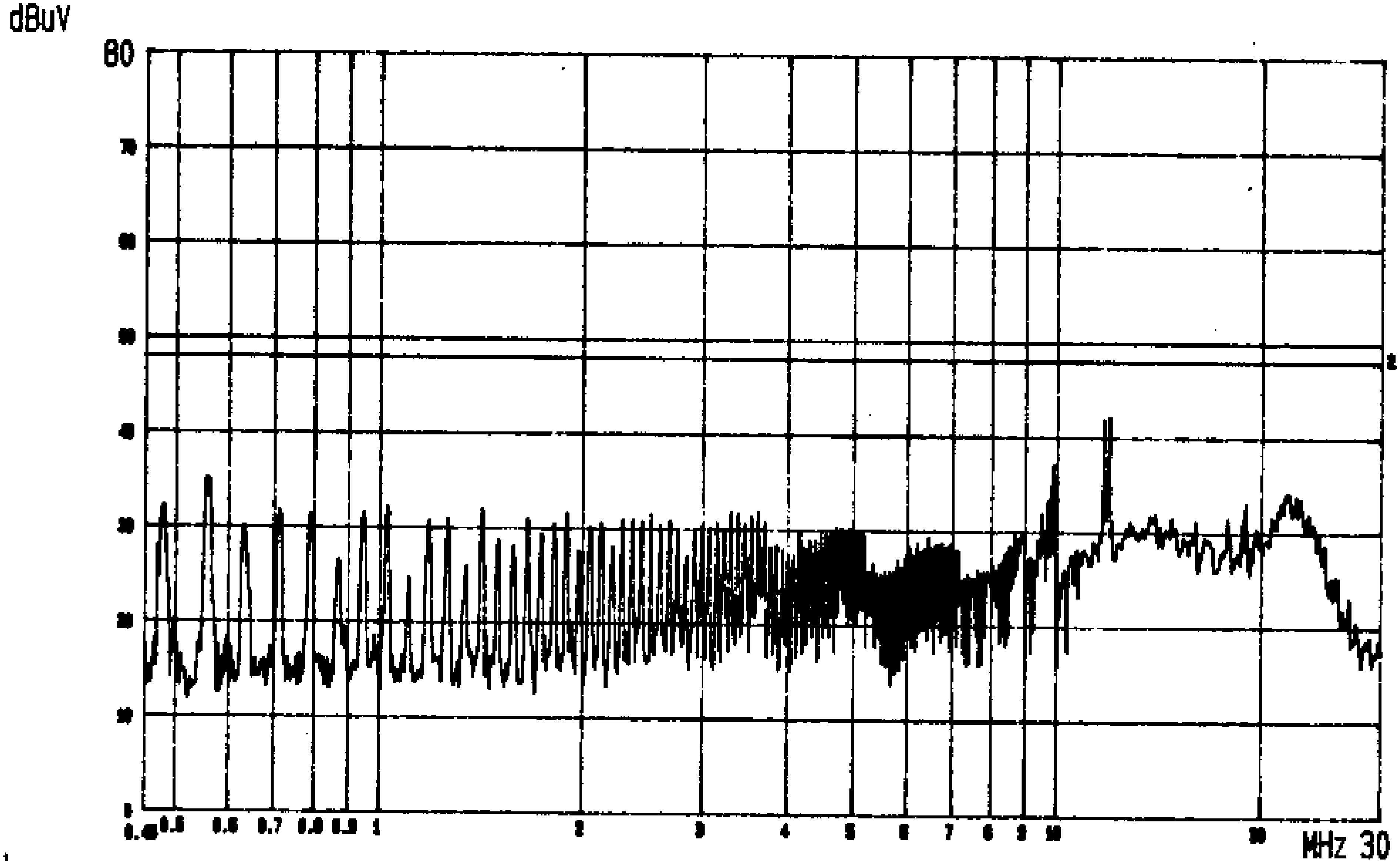
POWER: From NoteBook PC   MODE: TX/RX (CH1)   ETC EMI LAB.



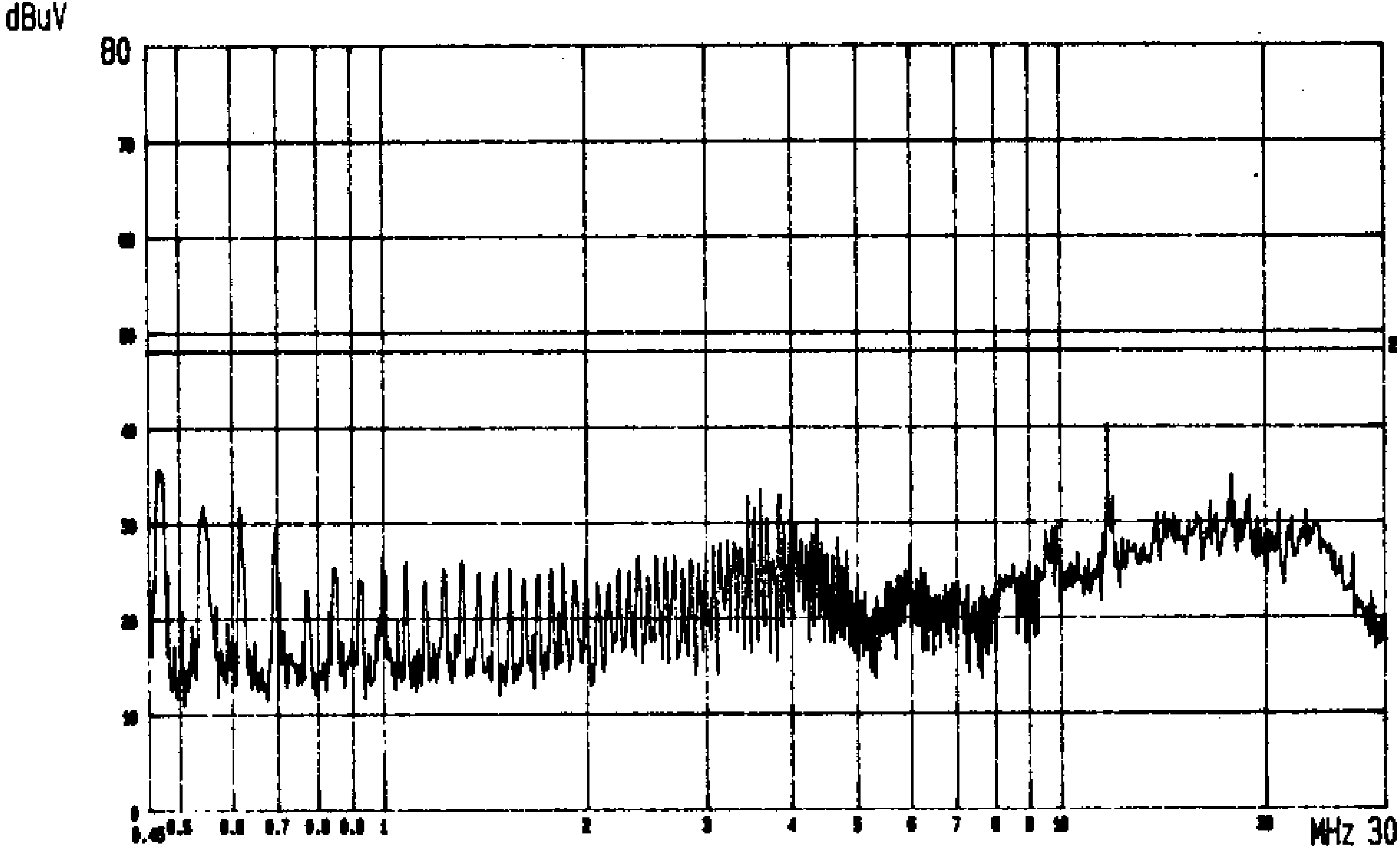
|---

FCC CONDUCTED TEST EUT: Wireless LAN Card LISN: N 2: QP., CLASS B LIMIT

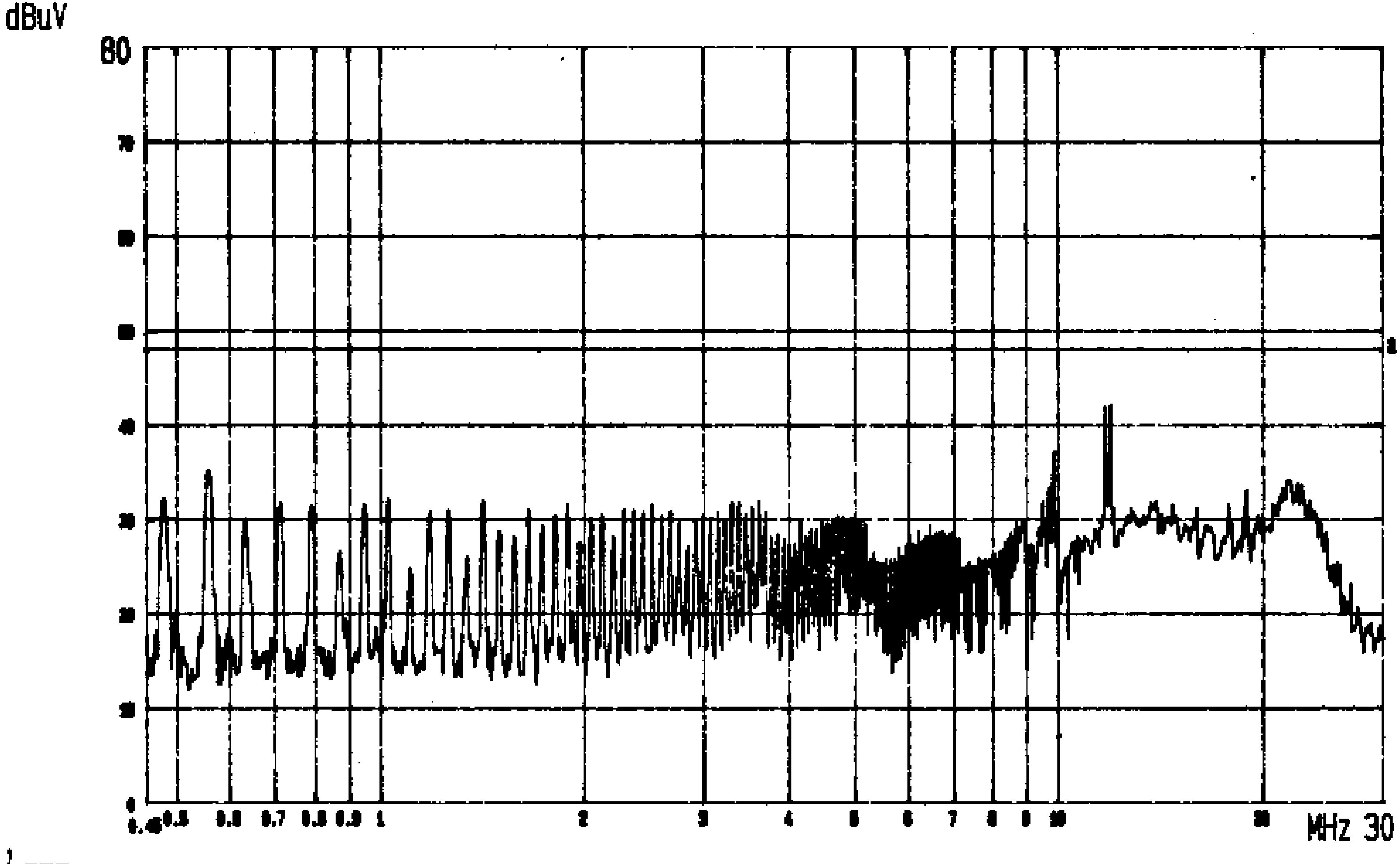
POWER: From NoteBook PC MODE: TX/RX (CH6) ETC EMI LAB.



FCC CONDUCTED TEST EUT: Wireless LAN Card LISN: L1 2: QP., CLASS B LIMIT
POWER: From NoteBook PC MODE: TX/RX (CH6) ETC EMI LAB.



FCC CONDUCTED TEST EUT: Wireless LAN Card LISN: N 2: QP., CLASS B LIMIT
POWER: From NoteBook PC MODE: TX/RX (CH11) ETC EMI LAB.

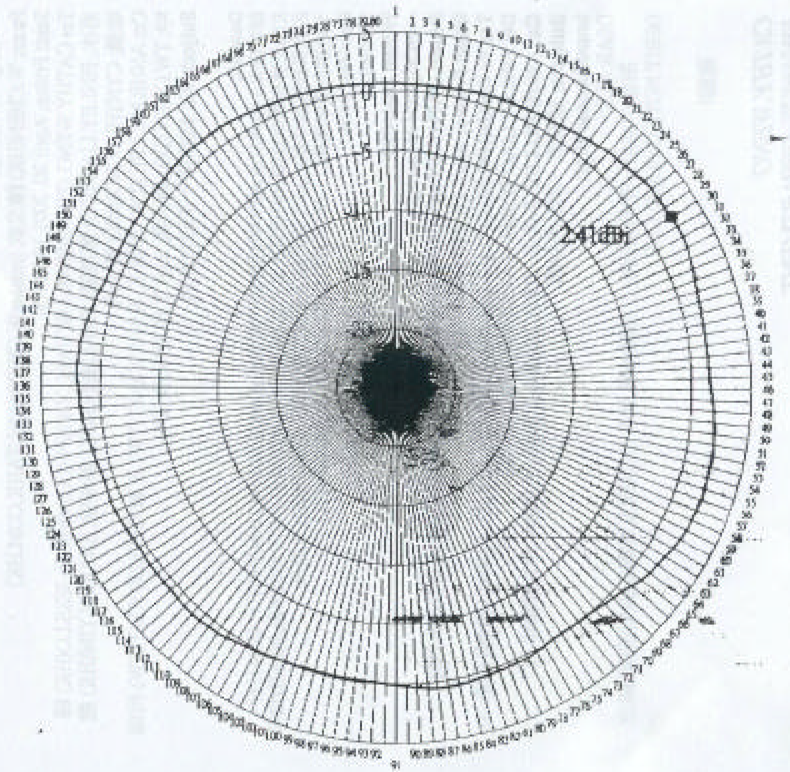


FCC CONDUCTED TEST EUT: Wireless LAN Card LISN: L1 2: QP.. CLASS B LIMIT
POWER: From NoteBook PC MODE: TX/RX (CH11) ETC EMI LAB.

Appendix 2 : Engineering Graph of Antenna Construction

1.jpg (1052x1644x16M jpeg)

Fax : 03-5244079 May 22 '01 18:01 P.01



DLT-STD-135
0990160400

TEST DATE:2001/05/21

TEST FREQUENCY:2442MHz

TEST POLARIZATION:VERTICAL

TEST ANTENNA: HORN ANTENNA

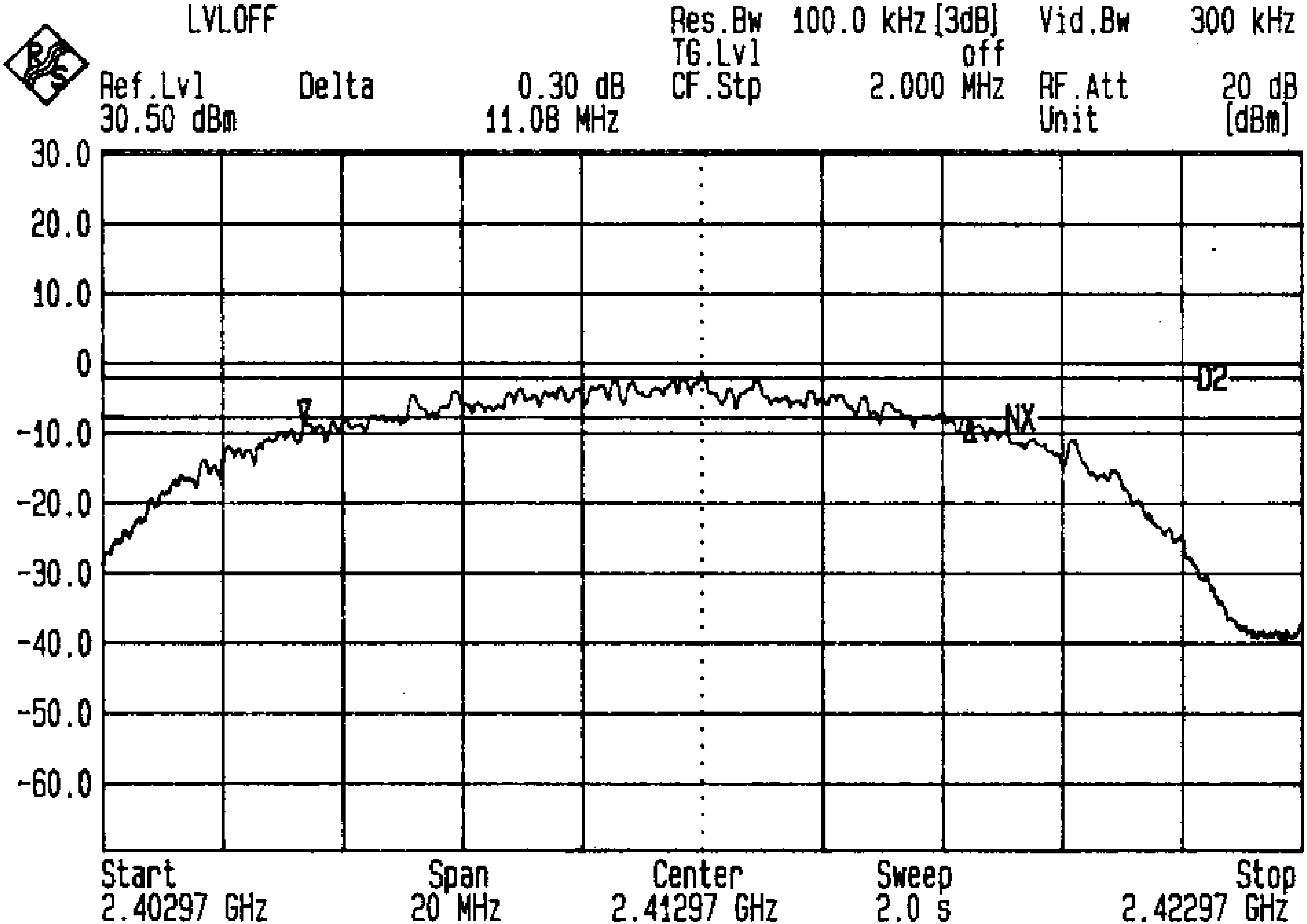
TEST STEP DEGREE: 2 DEGREE

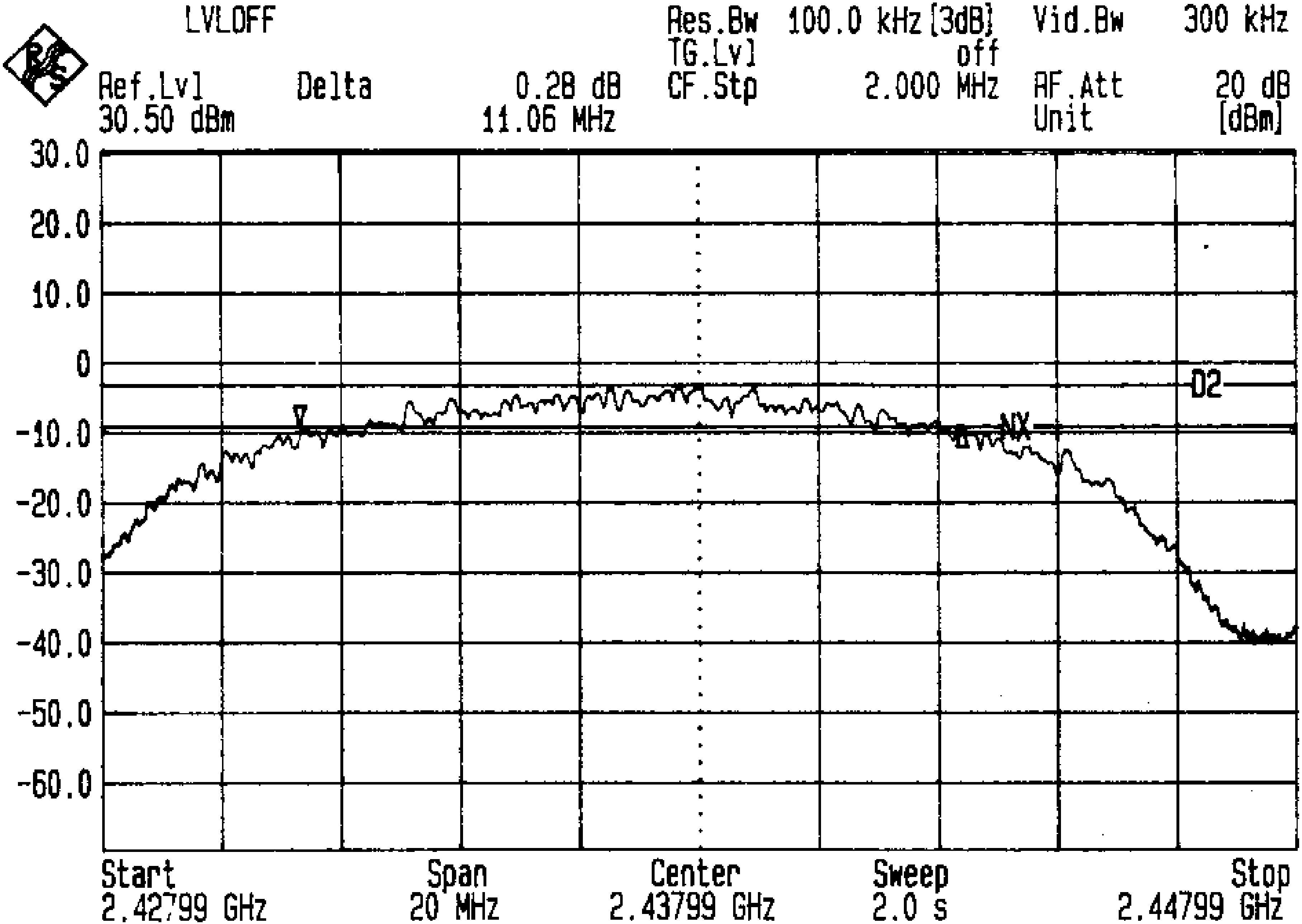
TEST CHAMBER: RF CHAMBER

TEST PERSONNEL: JAMES

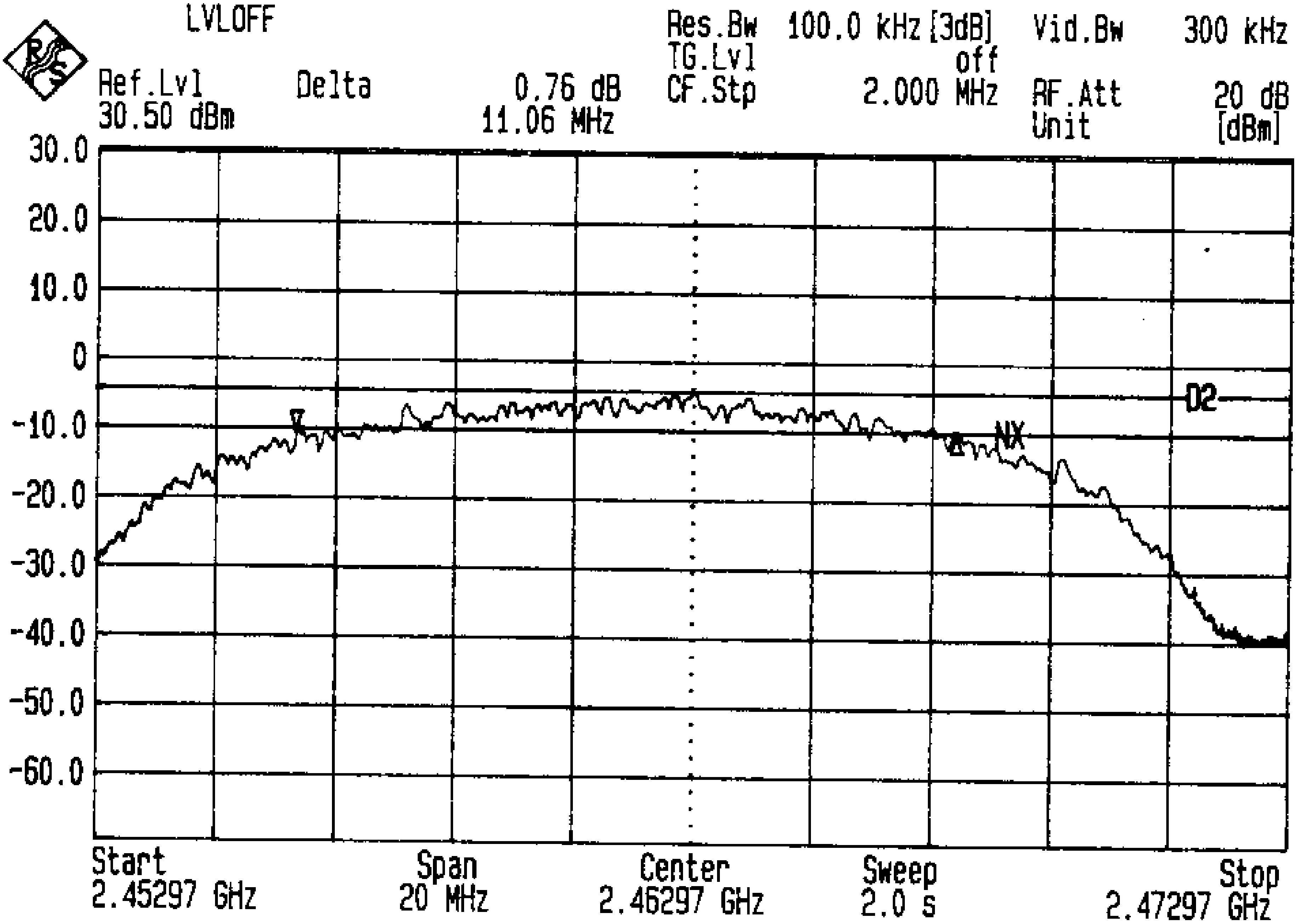
MAX GAIN:2.41dBi
A.V. GAIN:1.08dBi

Appendix 3 : Ploted Datas of Emissions Bandwidth


LVLOFF
Res.Bw 100.0 kHz [3dB]
Vid.Bw 300 kHz
TG.Lvl off
Ref.Lvl 30.50 dBm
Delta 0.30 dB
11.08 MHz
CF.Stp 2.000 MHz
RF.Att 20 dB
Unit [dBm]
30.0
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
D2
NX
Start 2.40297 GHz
Span 20 MHz
Center 2.41297 GHz
Sweep 2.0 s
Stop 2.42297 GHz

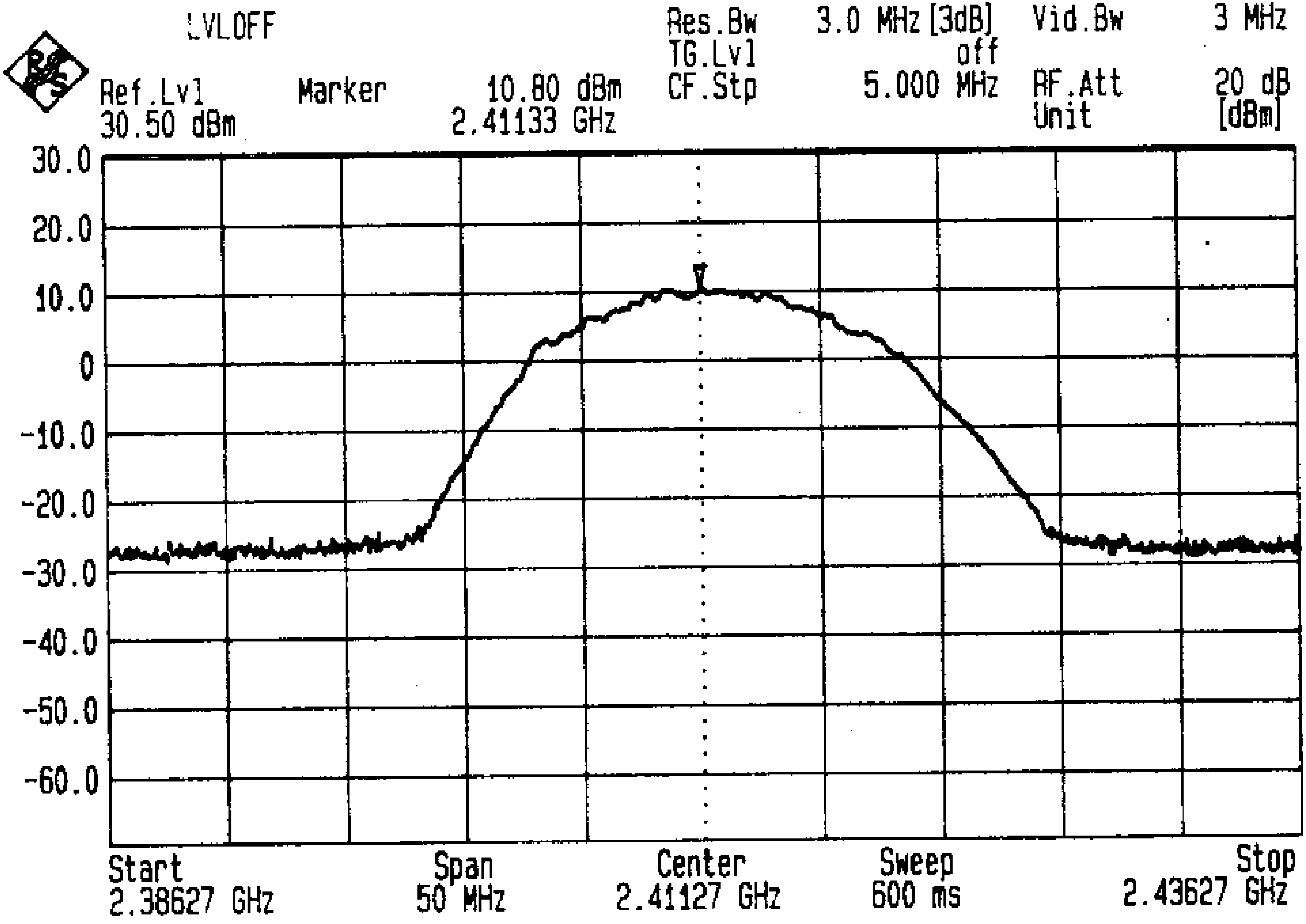


LVLOFF
Res.Bw 100.0 kHz [3dB]
Vid.Bw 300 kHz
TG.Lvl off
Ref.Lvl 30.50 dBm
Delta 0.28 dB 11.06 MHz
CF.Stp 2.000 MHz
RF.Att 20 dB
Unit [dBm]
30.0
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
D2
NX
Start 2.42799 GHz
Span 20 MHz
Center 2.43799 GHz
Sweep 2.0 s
Stop 2.44799 GHz

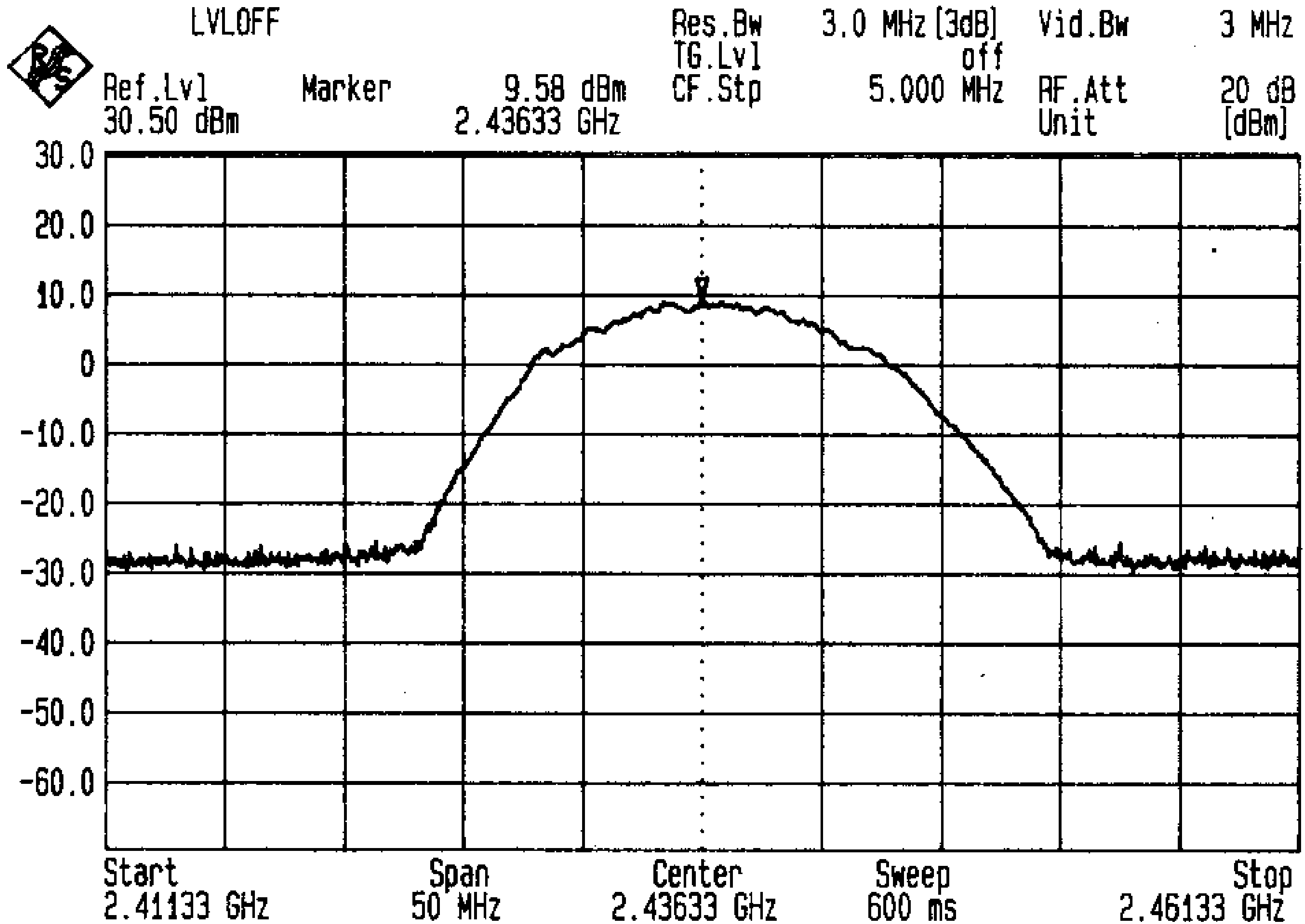


LVLOFF
Res.Bw 100.0 kHz [3dB]
Vid.Bw 300 kHz
TG.Lvl off
Ref.Lvl 30.50 dBm
Delta 0.76 dB 11.06 MHz
CF.Stp 2.000 MHz
RF.Att 20 dB
Unit [dBm]
30.0
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
D2
NX
Start 2.45297 GHz
Span 20 MHz
Center 2.46297 GHz
Sweep 2.0 s
Stop 2.47297 GHz

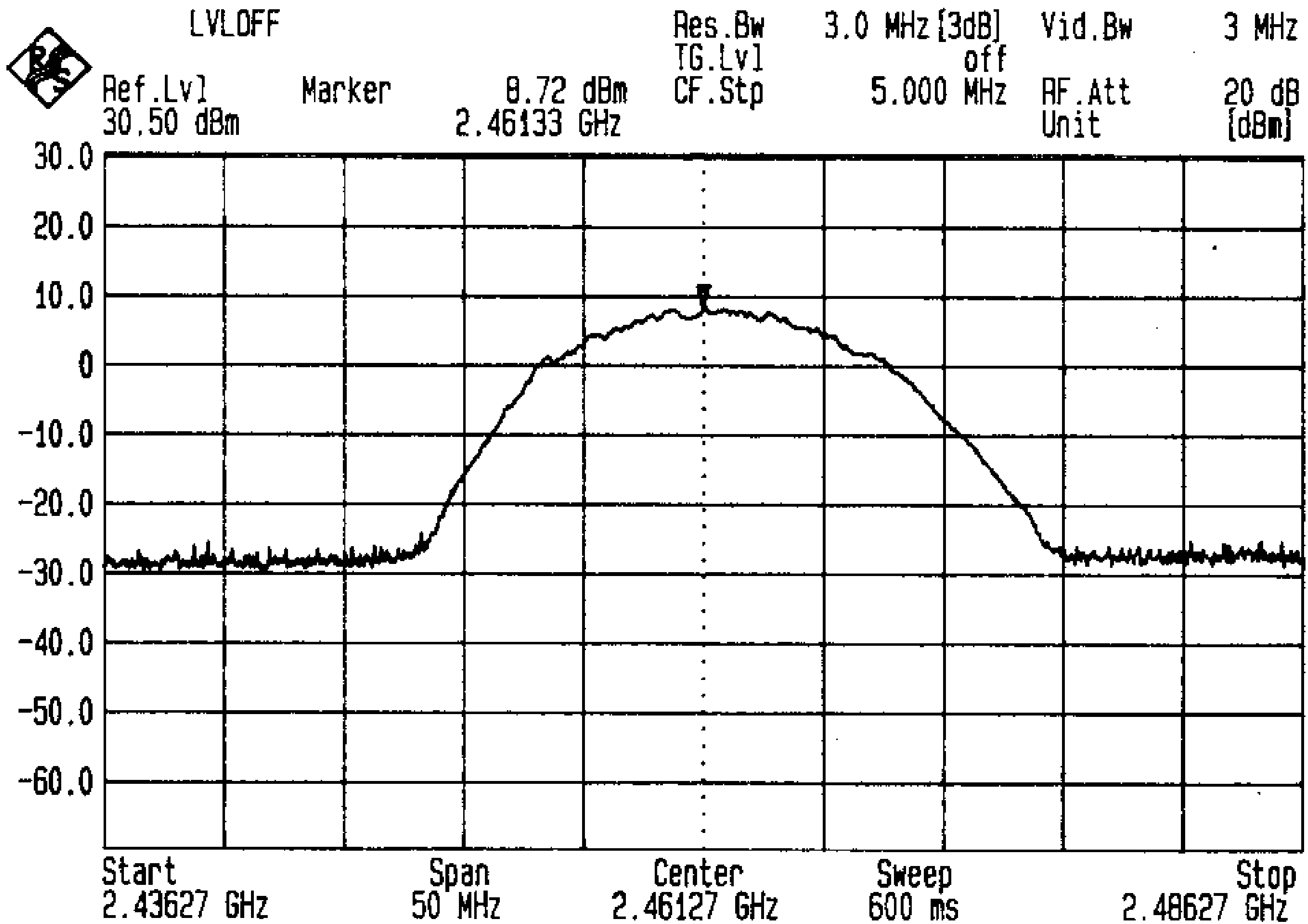
Appendix 4 : Ploted Datas of Output Peak Power



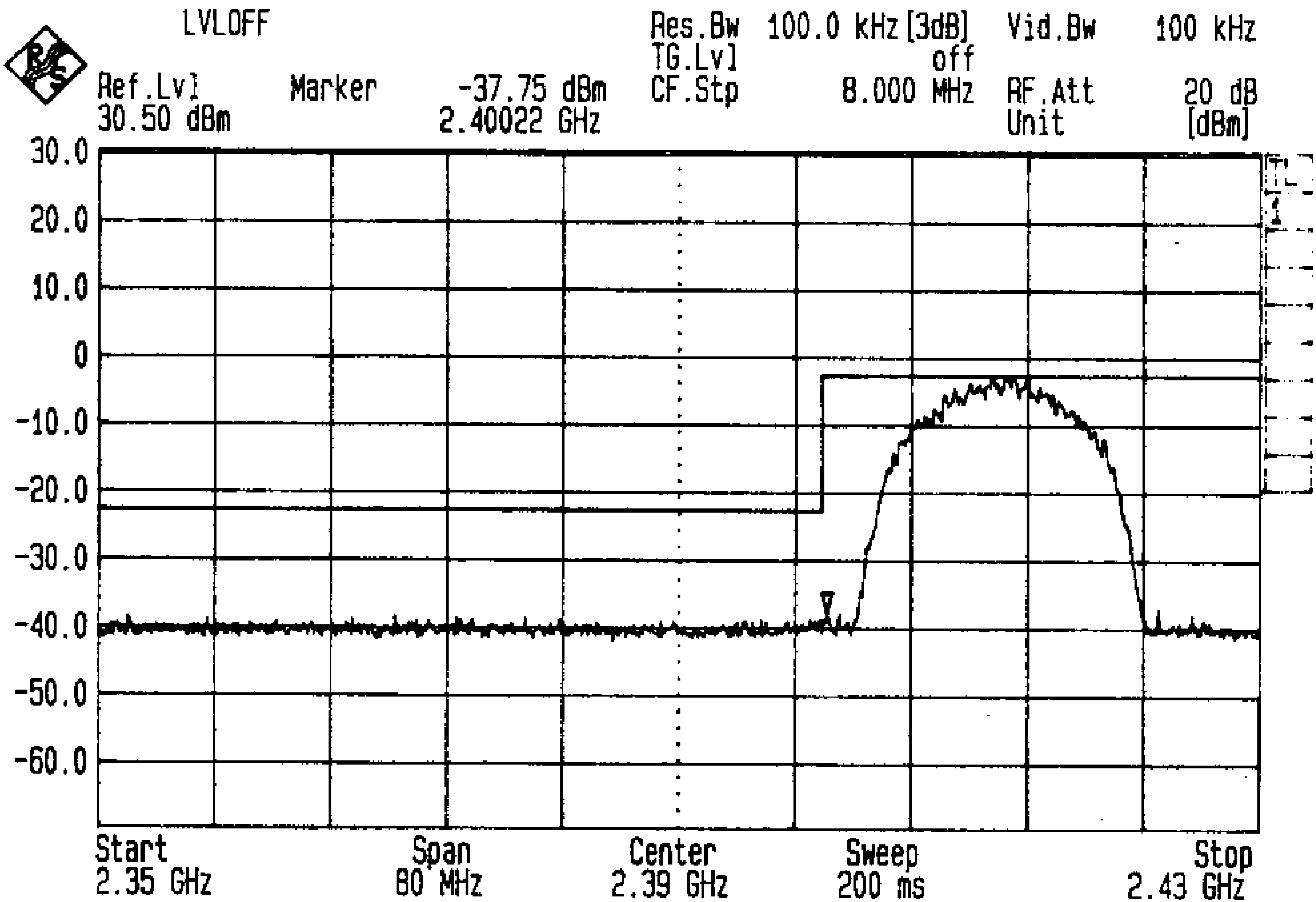
LVLOFF
Res.Bw 3.0 MHz [3dB]
Vid.Bw 3 MHz
TG.Lvl off
Ref.Lvl 30.50 dBm
Marker 10.80 dBm 2.41133 GHz
CF.Stp 5.000 MHz
RF.Att 20 dB
Unit [dBm]
30.0
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Start 2.38627 GHz
Span 50 MHz
Center 2.41127 GHz
Sweep 600 ms
Stop 2.43627 GHz

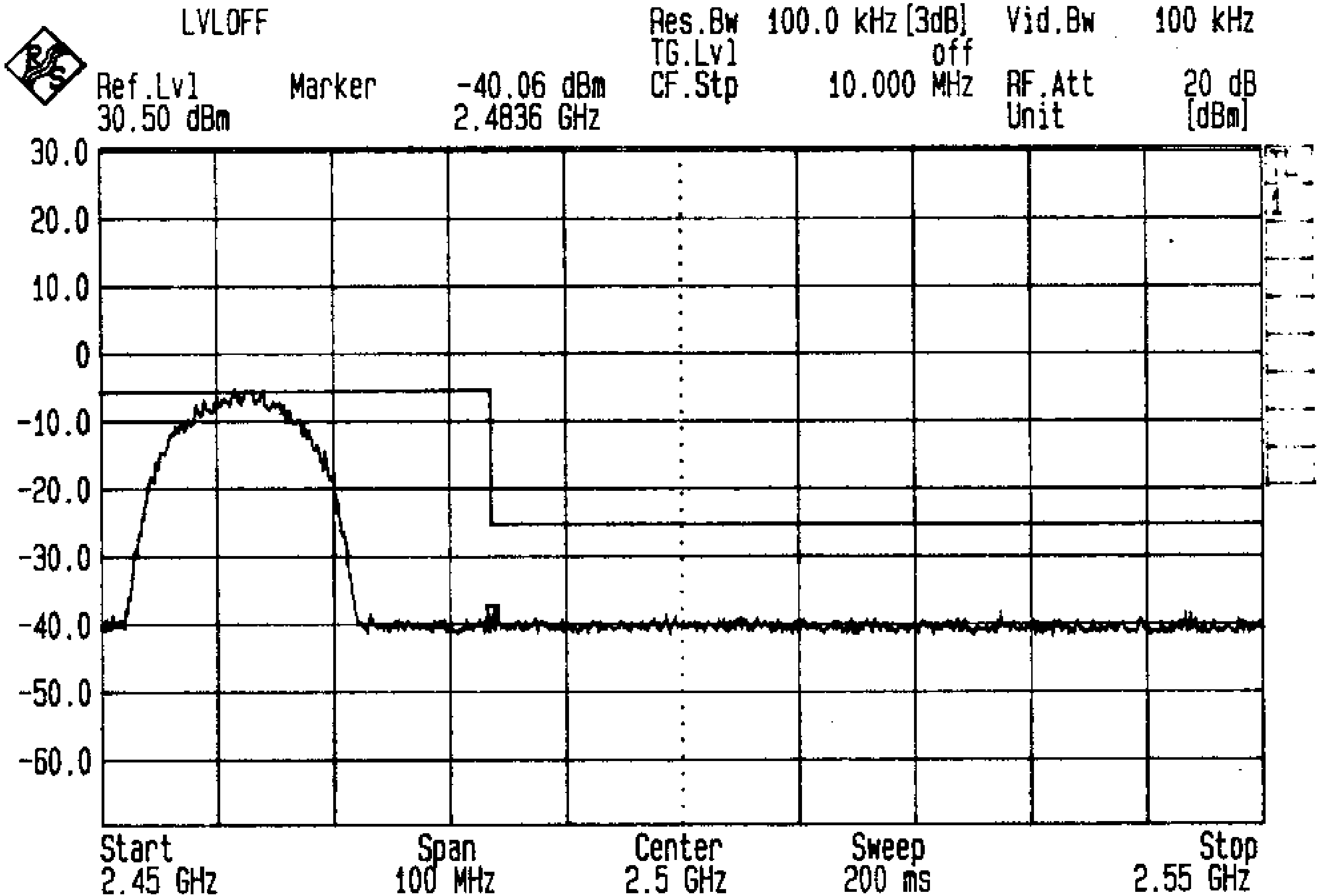


LVLOFF
Res.Bw 3.0 MHz [3dB]
Vid.Bw 3 MHz
TG.Lvl off
Ref.Lvl 30.50 dBm
Marker 9.58 dBm 2.43633 GHz
CF.Stp 5.000 MHz
RF.Att 20 dB
Unit [dBm]
30.0
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Start 2.41133 GHz
Span 50 MHz
Center 2.43633 GHz
Sweep 600 ms
Stop 2.46133 GHz

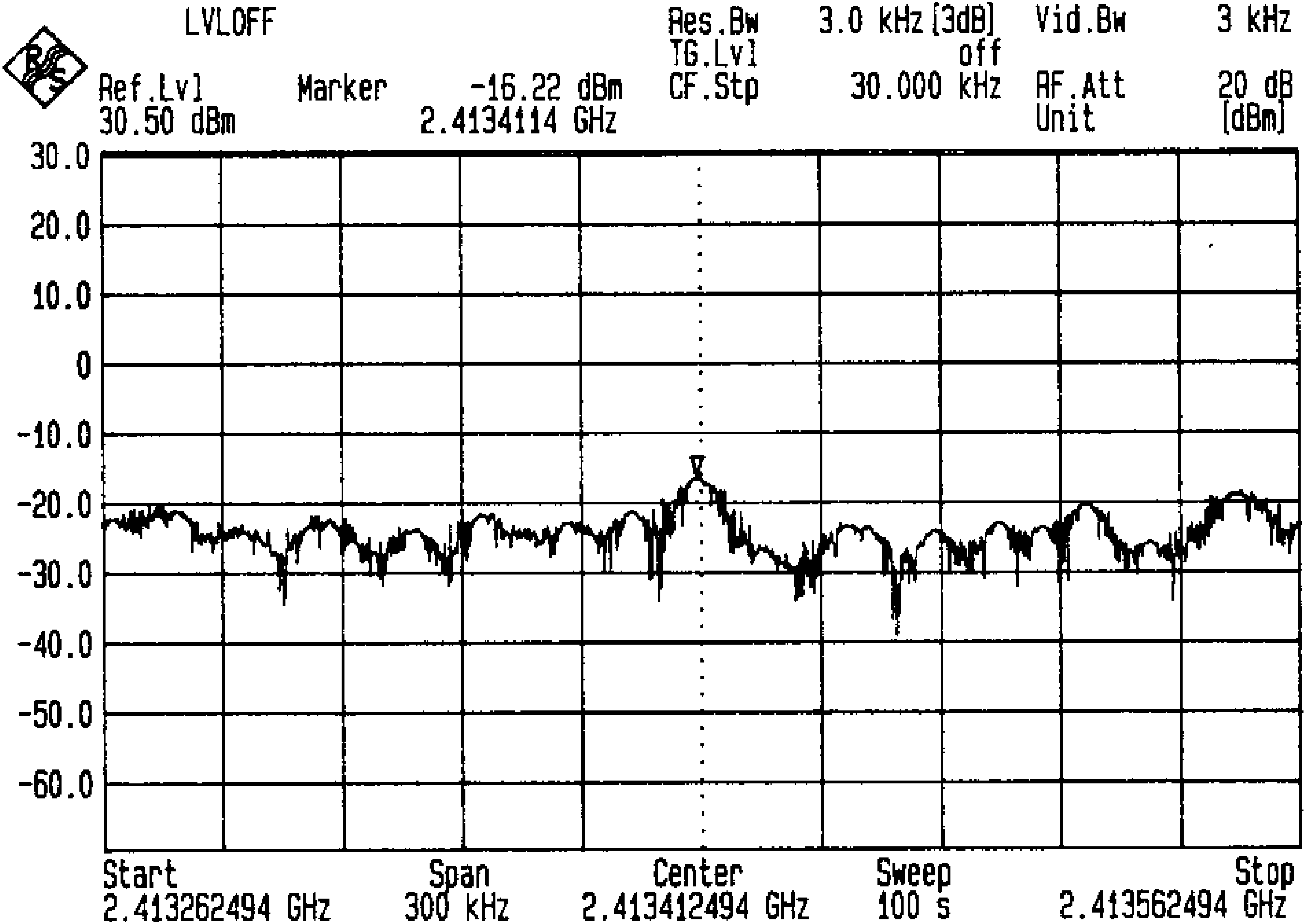

LVLOFF
Res.Bw 3.0 MHz [3dB]
Vid.Bw 3 MHz
TG.Lvl off
Ref.Lvl 30.50 dBm
Marker 8.72 dBm 2.46133 GHz
CF.Stp 5.000 MHz
RF.Att 20 dB
Unit [dBm]
30.0
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Start 2.43627 GHz
Span 50 MHz
Center 2.46127 GHz
Sweep 600 ms
Stop 2.48627 GHz

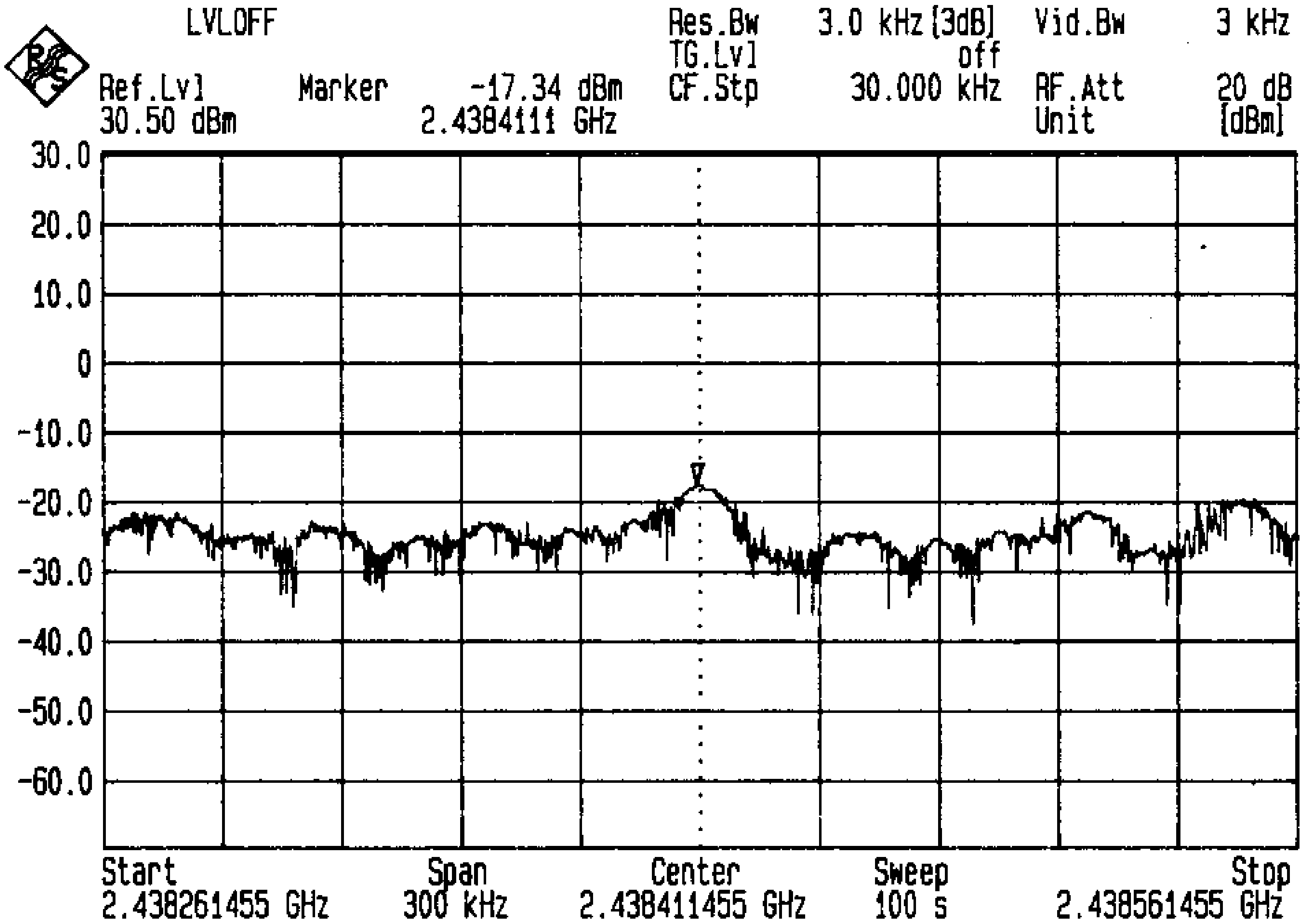
Appendix 5 : Ploted Datas of Band Edge Emission

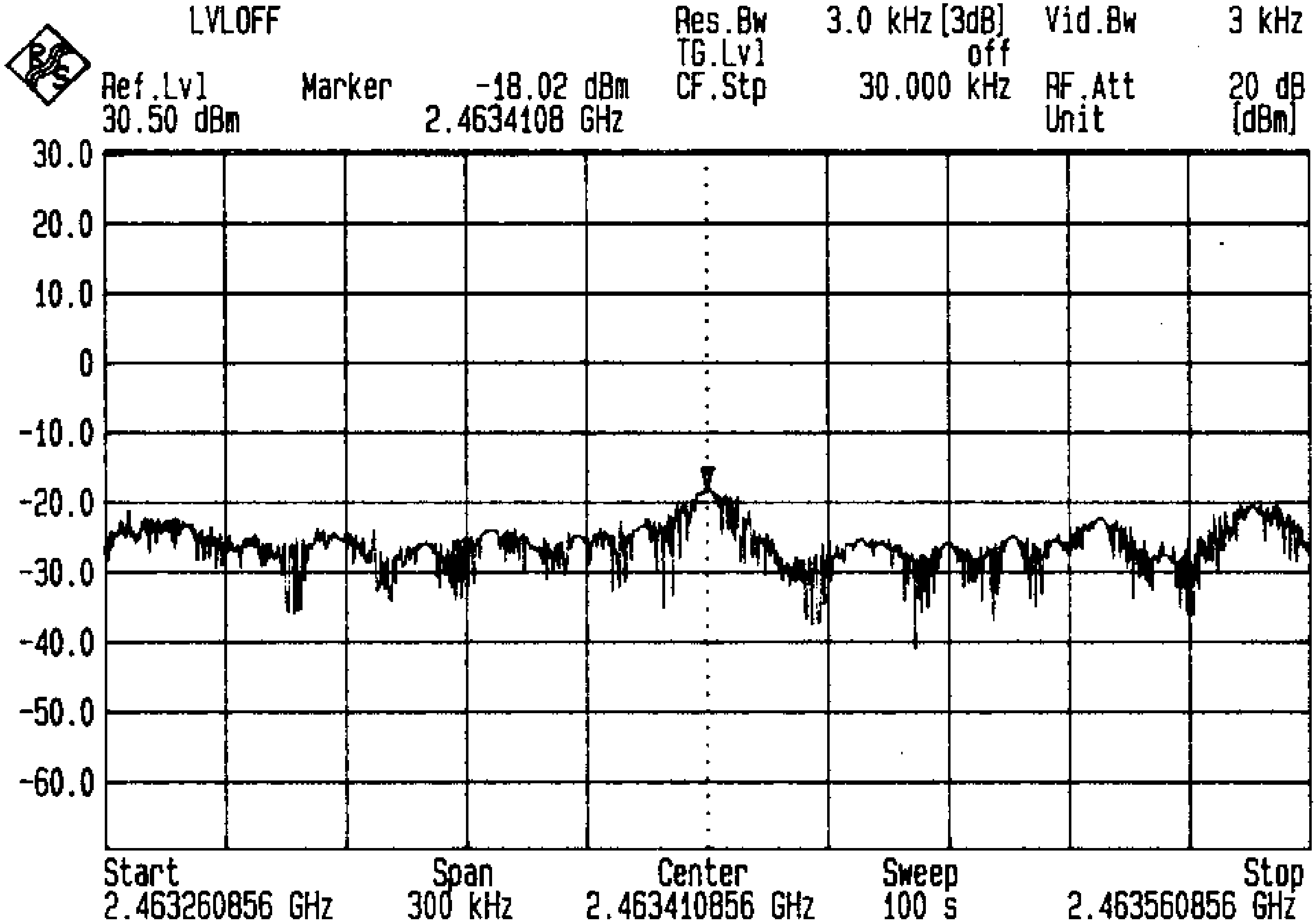

LVLOFF
Res.Bw 100.0 kHz [3dB]
Vid.Bw 100 kHz
TG.Lvl off
Ref.Lvl 30.50 dBm
Marker -37.75 dBm 2.40022 GHz
CF.Stp 8.000 MHz
RF.Att 20 dB
Unit [dBm]
30.0
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Start 2.35 GHz
Span 80 MHz
Center 2.39 GHz
Sweep 200 ms
Stop 2.43 GHz


LVLOFF
Res.Bw 100.0 kHz [3dB]
Vid.Bw 100 kHz
TG.Lvl off
Ref.Lvl 30.50 dBm
Marker -40.06 dBm 2.4836 GHz
CF.Stp 10.000 MHz
RF.Att 20 dB
Unit [dBm]
30.0
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Start 2.45 GHz
Span 100 MHz
Center 2.5 GHz
Sweep 200 ms
Stop 2.55 GHz

Appendix 6 : Ploted Datas of Power Density


LVLOFF
Res.Bw 3.0 kHz [3dB]
Vid.Bw 3 kHz
TG.Lvl off
Ref.Lvl 30.50 dBm
Marker -16.22 dBm 2.4134114 GHz
CF.Stp 30.000 kHz
RF.Att 20 dB
Unit [dBm]
30.0
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Start 2.413262494 GHz
Span 300 kHz
Center 2.413412494 GHz
Sweep 100 s
Stop 2.413562494 GHz


LVLOFF
Res.Bw 3.0 kHz [3dB]
Vid.Bw 3 kHz
TG.Lvl off
Ref.Lvl 30.50 dBm
Marker -17.34 dBm 2.4384111 GHz
CF.Stp 30.000 kHz
RF.Att 20 dB
Unit [dBm]
30.0
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Start 2.438261455 GHz
Span 300 kHz
Center 2.438411455 GHz
Sweep 100 s
Stop 2.438561455 GHz


LVLOFF
Res.Bw 3.0 kHz [3dB]
Vid.Bw 3 kHz
TG.Lvl off
Ref.Lvl 30.50 dBm
Marker -18.02 dBm 2.4634108 GHz
CF.Stp 30.000 kHz
RF.Att 20 dB
Unit [dBm]
30.0
20.0
10.0
0
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Start 2.463260856 GHz
Span 300 kHz
Center 2.463410856 GHz
Sweep 100 s
Stop 2.463560856 GHz

Appendix 7 : Processing Gain Tested Data Sheets

2Mbps Channel 1 Processing Gain							
Gp=(S/N)o+Mj+Lsys							
Freq. (MHz)	Gp (dB)	(S/N)o (dB)	Mj = J/S (dB)	Lsys (dB)	Jammer (dBm)	Lvl (dBm)	FER
2403.50	17.4	12.6	2.8	2	-27.2	-30	5.8
2403.55	17	12.6	2.4	2	-27.6	-30	6.7
2403.60	16.7	12.6	2.1	2	-27.9	-30	6.5
2403.65	16.6	12.6	2	2	-28	-30	6
2403.70	16.5	12.6	1.9	2	-28.1	-30	6.3
2403.75	16.4	12.6	1.8	2	-28.2	-30	6.8
2403.80	16.3	12.6	1.7	2	-28.3	-30	6
2403.85	16.4	12.6	1.8	2	-28.2	-30	5.9
2403.90	16.5	12.6	1.9	2	-28.1	-30	6.4
2403.95	16.5	12.6	1.9	2	-28.1	-30	5.6
2404.00	16.6	12.6	2	2	-28	-30	6.7
2404.05	16.6	12.6	2	2	-28	-30	6.3
2404.10	16.4	12.6	1.8	2	-28.2	-30	6.2
2404.15	16.5	12.6	1.9	2	-28.1	-30	5.4
2404.20	16.5	12.6	1.9	2	-28.1	-30	5.2
2404.25	16.4	12.6	1.8	2	-28.2	-30	6
2404.30	16.3	12.6	1.7	2	-28.3	-30	5.6
2404.35	16.2	12.6	1.6	2	-28.4	-30	6.4
2404.40	16.1	12.6	1.5	2	-28.5	-30	6.2
2404.45	16	12.6	1.4	2	-28.6	-30	6.7
2404.50	15.9	12.6	1.3	2	-28.7	-30	7.3
2404.55	15.7	12.6	1.1	2	-28.9	-30	6.1
2404.60	15.5	12.6	0.9	2	-29.1	-30	5.8
2404.65	15.4	12.6	0.8	2	-29.2	-30	6.9
2404.70	15.4	12.6	0.8	2	-29.2	-30	6.3
2404.75	15.3	12.6	0.7	2	-29.3	-30	6.4
2404.80	15.3	12.6	0.7	2	-29.3	-30	5.7
2404.85	15.2	12.6	0.6	2	-29.4	-30	5.6
2404.90	15.3	12.6	0.7	2	-29.3	-30	5.4
2404.95	15.4	12.6	0.8	2	-29.2	-30	5.1
2405.00	15.4	12.6	0.8	2	-29.2	-30	4.8
2405.05	15.5	12.6	0.9	2	-29.1	-30	5.1
2405.10	15.5	12.6	0.9	2	-29.1	-30	6.3

2405.15	15.5	12.6	0.9	2	-29.1	-30	6.2
2405.20	15.6	12.6	1	2	-29	-30	5.7
2405.25	15.5	12.6	0.9	2	-29.1	-30	5.6
2405.30	15.4	12.6	0.8	2	-29.2	-30	4.7
2405.35	15.3	12.6	0.7	2	-29.3	-30	5.8
2405.40	15.3	12.6	0.7	2	-29.3	-30	6.3
2405.45	14.8	12.6	0.2	2	-29.8	-30	6.7
2405.50	15.7	12.6	1.1	2	-28.9	-30	6.5
2405.55	14.3	12.6	-0.3	2	-30.3	-30	7.3
2405.60	14.2	12.6	-0.4	2	-30.4	-30	6.2
2405.65	14.1	12.6	-0.5	2	-30.5	-30	5.1
2405.70	14.1	12.6	-0.5	2	-30.5	-30	5.5
2405.75	14.1	12.6	-0.5	2	-30.5	-30	5.7
2405.80	14.1	12.6	-0.5	2	-30.5	-30	6
2405.85	14.1	12.6	-0.5	2	-30.5	-30	5.9
2405.90	14.3	12.6	-0.3	2	-30.3	-30	6.1
2405.95	14.4	12.6	-0.2	2	-30.2	-30	7.3
2406.00	14.5	12.6	-0.1	2	-30.1	-30	7.1
2406.05	14.8	12.6	0.2	2	-29.8	-30	6.5
2406.10	15	12.6	0.4	2	-29.6	-30	6.3
2406.15	14.9	12.6	0.3	2	-29.7	-30	6.1
2406.20	15.5	12.6	0.9	2	-29.1	-30	5.5
2406.25	16	12.6	1.4	2	-28.6	-30	5.8
2406.30	17.1	12.6	2.5	2	-27.5	-30	6.6
2406.35	16.8	12.6	2.2	2	-27.8	-30	6.1
2406.40	15.9	12.6	1.3	2	-28.7	-30	6.7
2406.45	16.3	12.6	1.7	2	-28.3	-30	6.5
2406.50	16.1	12.6	1.5	2	-28.5	-30	7.6
2406.55	15.7	12.6	1.1	2	-28.9	-30	7.1
2406.60	16	12.6	1.4	2	-28.6	-30	7.3
2406.65	16.2	12.6	1.6	2	-28.4	-30	6.8
2406.70	15.8	12.6	1.2	2	-28.8	-30	6.2
2406.75	15.6	12.6	1	2	-29	-30	5.9
2406.80	15.2	12.6	0.6	2	-29.4	-30	5.6
2406.85	14.9	12.6	0.3	2	-29.7	-30	5.4
2406.90	14.2	12.6	-0.4	2	-30.4	-30	5.9

2406.95	13.8	12.6	-0.8	2	-30.8	-30	6
2407.00	13.7	12.6	-0.9	2	-30.9	-30	5.3
2407.05	13.4	12.6	-1.2	2	-31.2	-30	5.1
2407.10	13.6	12.6	-1	2	-31	-30	4.8
2407.15	13.5	12.6	-1.1	2	-31.1	-30	5.3
2407.20	13.1	12.6	-1.5	2	-31.5	-30	5.8
2407.25	13.2	12.6	-1.4	2	-31.4	-30	6.7
2407.30	13.5	12.6	-1.1	2	-31.1	-30	6.3
2407.35	13.1	12.6	-1.5	2	-31.5	-30	6.1
2407.40	13.5	12.6	-1.1	2	-31.1	-30	7.2
2407.45	13.6	12.6	-1	2	-31	-30	6.3
2407.50	13.8	12.6	-0.8	2	-30.8	-30	5.6
2407.55	14	12.6	-0.6	2	-30.6	-30	5.7
2407.60	13.8	12.6	-0.8	2	-30.8	-30	6.2
2407.65	13.7	12.6	-0.9	2	-30.9	-30	5.6
2407.70	13.8	12.6	-0.8	2	-30.8	-30	5.8
2407.75	13.8	12.6	-0.8	2	-30.8	-30	7.1
2407.80	13.7	12.6	-0.9	2	-30.9	-30	6.3
2407.85	13.7	12.6	-0.9	2	-30.9	-30	6.2
2407.90	13.7	12.6	-0.9	2	-30.9	-30	5.4
2407.95	13.6	12.6	-1	2	-31	-30	5.2
2408.00	13.6	12.6	-1	2	-31	-30	6.1
2408.05	13.3	12.6	-1.3	2	-31.3	-30	6.3
2408.10	13.1	12.6	-1.5	2	-31.5	-30	5.8
2408.15	13.1	12.6	-1.5	2	-31.5	-30	7.4
2408.20	12.9	12.6	-1.7	2	-31.7	-30	6.4
2408.25	13.1	12.6	-1.5	2	-31.5	-30	6.1
2408.30	12.8	12.6	-1.8	2	-31.8	-30	4.8
2408.35	12.8	12.6	-1.8	2	-31.8	-30	5.7
2408.40	12.8	12.6	-1.8	2	-31.8	-30	6.2
2408.45	12.9	12.6	-1.7	2	-31.7	-30	6.7
2408.50	12.9	12.6	-1.7	2	-31.7	-30	5.4
2408.55	12.8	12.6	-1.8	2	-31.8	-30	5.2
2408.60	13.1	12.6	-1.5	2	-31.5	-30	5.8
2408.65	13.2	12.6	-1.4	2	-31.4	-30	6.1
2408.70	12.8	12.6	-1.8	2	-31.8	-30	6.7

2408.75	12.8	12.6	-1.8	2	-31.8	-30	6.6
2408.80	12.9	12.6	-1.7	2	-31.7	-30	5.7
2408.85	12.7	12.6	-1.9	2	-31.9	-30	5.6
2408.90	12.7	12.6	-1.9	2	-31.9	-30	6.2
2408.95	12.5	12.6	-2.1	2	-32.1	-30	6.4
2409.00	12.4	12.6	-2.2	2	-32.2	-30	4.8
2409.05	12.2	12.6	-2.4	2	-32.4	-30	6.3
2409.10	12.4	12.6	-2.2	2	-32.2	-30	5.4
2409.15	12.1	12.6	-2.5	2	-32.5	-30	6.1
2409.20	12.7	12.6	-1.9	2	-31.9	-30	6.2
2409.25	12.1	12.6	-2.5	2	-32.5	-30	5.8
2409.30	12.1	12.6	-2.5	2	-32.5	-30	6.7
2409.35	12.2	12.6	-2.4	2	-32.4	-30	6.2
2409.40	11.9	12.6	-2.7	2	-32.7	-30	6.3
2409.45	12.2	12.6	-2.4	2	-32.4	-30	6.6
2409.50	12.1	12.6	-2.5	2	-32.5	-30	6.5
2409.55	12	12.6	-2.6	2	-32.6	-30	6.9
2409.60	12.1	12.6	-2.5	2	-32.5	-30	7.6
2409.65	12.3	12.6	-2.3	2	-32.3	-30	6.3
2409.70	12.1	12.6	-2.5	2	-32.5	-30	5.9
2409.75	12	12.6	-2.6	2	-32.6	-30	6.4
2409.80	12.1	12.6	-2.5	2	-32.5	-30	6.1
2409.85	12.3	12.6	-2.3	2	-32.3	-30	6.2
2409.90	12	12.6	-2.6	2	-32.6	-30	5.8
2409.95	12	12.6	-2.6	2	-32.6	-30	5.3
2410.00	11.8	12.6	-2.8	2	-32.8	-30	5.6
2410.05	11.8	12.6	-2.8	2	-32.8	-30	5.5
2410.10	11.5	12.6	-3.1	2	-33.1	-30	6.3
2410.15	11.8	12.6	-2.8	2	-32.8	-30	9.8
2410.20	11.2	12.6	-3.4	2	-33.4	-30	6.6
2410.25	11.6	12.6	-3	2	-33	-30	6.1
2410.30	11.3	12.6	-3.3	2	-33.3	-30	6.7
2410.35	11.6	12.6	-3	2	-33	-30	5.7
2410.40	11.6	12.6	-3	2	-33	-30	7.6
2410.45	11.7	12.6	-2.9	2	-32.9	-30	7.2
2410.50	11.8	12.6	-2.8	2	-32.8	-30	7.1

2410.55	11.9	12.6	-2.7	2	-32.7	-30	6.8
2410.60	11.9	12.6	-2.7	2	-32.7	-30	6.3
2410.65	12	12.6	-2.6	2	-32.6	-30	6.5
2410.70	11.9	12.6	-2.7	2	-32.7	-30	6.1
2410.75	11.9	12.6	-2.7	2	-32.7	-30	6.2
2410.80	11.9	12.6	-2.7	2	-32.7	-30	6.9
2410.85	12.1	12.6	-2.5	2	-32.5	-30	6.6
2410.90	11.9	12.6	-2.7	2	-32.7	-30	6.1
2410.95	11.7	12.6	-2.9	2	-32.9	-30	6.7
2411.00	11.5	12.6	-3.1	2	-33.1	-30	6.6
2411.05	11.4	12.6	-3.2	2	-33.2	-30	6.3
2411.10	11	12.6	-3.6	2	-33.6	-30	6.8
2411.15	11.2	12.6	-3.4	2	-33.4	-30	6.1
2411.20	11	12.6	-3.6	2	-33.6	-30	6.7
2411.25	11.1	12.6	-3.5	2	-33.5	-30	6.4
2411.30	11.1	12.6	-3.5	2	-33.5	-30	4.8
2411.35	11.3	12.6	-3.3	2	-33.3	-30	5.6
2411.40	11.2	12.6	-3.4	2	-33.4	-30	6.3
2411.45	11.3	12.6	-3.3	2	-33.3	-30	6.7
2411.50	11.6	12.6	-3	2	-33	-30	6.2
2411.55	12.4	12.6	-2.2	2	-32.2	-30	6.8
2411.60	12.6	12.6	-2	2	-32	-30	6.3
2411.65	12.8	12.6	-1.8	2	-31.8	-30	5.9
2411.70	13.7	12.6	-0.9	2	-30.9	-30	6
2411.75	16	12.6	1.4	2	-28.6	-30	5.7
2411.80	16.4	12.6	1.8	2	-28.2	-30	7.9
2411.85	16.3	12.6	1.7	2	-28.3	-30	6.4
2411.90	16.6	12.6	2	2	-28	-30	4.8
2411.95	16.8	12.6	2.2	2	-27.8	-30	6.9
2412.00	16.5	12.6	1.9	2	-28.1	-30	5.4
2412.05	15.8	12.6	1.2	2	-28.8	-30	6.5
2412.10	15.7	12.6	1.1	2	-28.9	-30	7.6
2412.15	15.4	12.6	0.8	2	-29.2	-30	7.1
2412.20	15.2	12.6	0.6	2	-29.4	-30	6.7
2412.25	14.3	12.6	-0.3	2	-30.3	-30	5.6
2412.30	13	12.6	-1.6	2	-31.6	-30	7.4

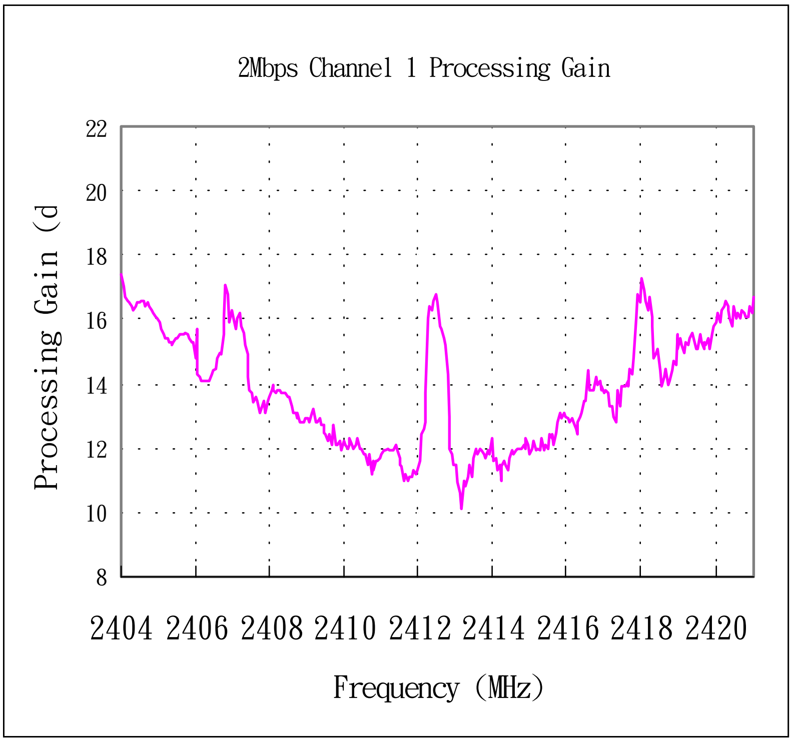
2412.35	12	12.6	-2.6	2	-32.6	-30	6.8
2412.40	11.8	12.6	-2.8	2	-32.8	-30	6.3
2412.45	11.5	12.6	-3.1	2	-33.1	-30	5.9
2412.50	11.5	12.6	-3.1	2	-33.1	-30	6.2
2412.55	10.9	12.6	-3.7	2	-33.7	-30	7.1
2412.60	10.6	12.6	-4	2	-34	-30	7.3
2412.65	10.1	12.6	-4.5	2	-34.5	-30	7.4
2412.70	11	12.6	-3.6	2	-33.6	-30	6.8
2412.75	10.8	12.6	-3.8	2	-33.8	-30	5.8
2412.80	11.1	12.6	-3.5	2	-33.5	-30	6.7
2412.85	11.5	12.6	-3.1	2	-33.1	-30	6.6
2412.90	11.1	12.6	-3.5	2	-33.5	-30	6.9
2412.95	11.7	12.6	-2.9	2	-32.9	-30	7
2413.00	12	12.6	-2.6	2	-32.6	-30	7.6
2413.05	11.9	12.6	-2.7	2	-32.7	-30	6.3
2413.10	11.8	12.6	-2.8	2	-32.8	-30	5.2
2413.15	12	12.6	-2.6	2	-32.6	-30	5.4
2413.20	11.9	12.6	-2.7	2	-32.7	-30	4.6
2413.25	11.8	12.6	-2.8	2	-32.8	-30	5.6
2413.30	11.7	12.6	-2.9	2	-32.9	-30	7.4
2413.35	11.9	12.6	-2.7	2	-32.7	-30	6.8
2413.40	11.8	12.6	-2.8	2	-32.8	-30	6.3
2413.45	12.3	12.6	-2.3	2	-32.3	-30	5.9
2413.50	11.6	12.6	-3	2	-33	-30	6.2
2413.55	11.7	12.6	-2.9	2	-32.9	-30	7.1
2413.60	11.3	12.6	-3.3	2	-33.3	-30	7.3
2413.65	11.5	12.6	-3.1	2	-33.1	-30	7.4
2413.70	11	12.6	-3.6	2	-33.6	-30	6.1
2413.75	11.4	12.6	-3.2	2	-33.2	-30	5.8
2413.80	11.6	12.6	-3	2	-33	-30	6.7
2413.85	11.5	12.6	-3.1	2	-33.1	-30	5.3
2413.90	11.3	12.6	-3.3	2	-33.3	-30	5.8
2413.95	11.7	12.6	-2.9	2	-32.9	-30	6.3
2414.00	11.9	12.6	-2.7	2	-32.7	-30	6.7
2414.05	11.8	12.6	-2.8	2	-32.8	-30	6.2
2414.10	11.9	12.6	-2.7	2	-32.7	-30	5.6

2414.15	12	12.6	-2.6	2	-32.6	-30	6.3
2414.20	12	12.6	-2.6	2	-32.6	-30	6.8
2414.25	12	12.6	-2.6	2	-32.6	-30	6.1
2414.30	12.1	12.6	-2.5	2	-32.5	-30	6.9
2414.35	12	12.6	-2.6	2	-32.6	-30	6.2
2414.40	12.3	12.6	-2.3	2	-32.3	-30	5.9
2414.45	12.1	12.6	-2.5	2	-32.5	-30	6.1
2414.50	11.8	12.6	-2.8	2	-32.8	-30	5.7
2414.55	12	12.6	-2.6	2	-32.6	-30	6.6
2414.60	12.2	12.6	-2.4	2	-32.4	-30	4.8
2414.65	11.9	12.6	-2.7	2	-32.7	-30	5
2414.70	12	12.6	-2.6	2	-32.6	-30	4.4
2414.75	11.9	12.6	-2.7	2	-32.7	-30	5.8
2414.80	12.3	12.6	-2.3	2	-32.3	-30	7.1
2414.85	11.9	12.6	-2.7	2	-32.7	-30	4.8
2414.90	12.1	12.6	-2.5	2	-32.5	-30	5.7
2414.95	12	12.6	-2.6	2	-32.6	-30	6.5
2415.00	12.4	12.6	-2.2	2	-32.2	-30	5.8
2415.05	12.3	12.6	-2.3	2	-32.3	-30	6.7
2415.10	12.4	12.6	-2.2	2	-32.2	-30	6.6
2415.15	12.1	12.6	-2.5	2	-32.5	-30	6.1
2415.20	12.5	12.6	-2.1	2	-32.1	-30	5.9
2415.25	12.8	12.6	-1.8	2	-31.8	-30	6.2
2415.30	13.1	12.6	-1.5	2	-31.5	-30	5.6
2415.35	12.9	12.6	-1.7	2	-31.7	-30	6.8
2415.40	13.1	12.6	-1.5	2	-31.5	-30	6.3
2415.45	13	12.6	-1.6	2	-31.6	-30	5.9
2415.50	12.9	12.6	-1.7	2	-31.7	-30	5.7
2415.55	12.8	12.6	-1.8	2	-31.8	-30	6.3
2415.60	12.9	12.6	-1.7	2	-31.7	-30	6
2415.65	12.8	12.6	-1.8	2	-31.8	-30	6.1
2415.70	12.6	12.6	-2	2	-32	-30	5.7
2415.75	12.4	12.6	-2.2	2	-32.2	-30	5.9
2415.80	12.8	12.6	-1.8	2	-31.8	-30	5.5
2415.85	13	12.6	-1.6	2	-31.6	-30	5.3
2415.90	13.1	12.6	-1.5	2	-31.5	-30	5.4

2415.95	13.5	12.6	-1.1	2	-31.1	-30	5.1
2416.00	13.5	12.6	-1.1	2	-31.1	-30	5.4
2416.05	14.4	12.6	-0.2	2	-30.2	-30	6.3
2416.10	13.8	12.6	-0.8	2	-30.8	-30	7.6
2416.15	13.8	12.6	-0.8	2	-30.8	-30	7.1
2416.20	13.8	12.6	-0.8	2	-30.8	-30	7
2416.25	14.2	12.6	-0.4	2	-30.4	-30	6.3
2416.30	14	12.6	-0.6	2	-30.6	-30	5.4
2416.35	14.1	12.6	-0.5	2	-30.5	-30	5.8
2416.40	13.8	12.6	-0.8	2	-30.8	-30	6.2
2416.45	13.9	12.6	-0.7	2	-30.7	-30	7
2416.50	13.7	12.6	-0.9	2	-30.9	-30	6.3
2416.55	13.8	12.6	-0.8	2	-30.8	-30	6.9
2416.60	13.7	12.6	-0.9	2	-30.9	-30	5.7
2416.65	13.3	12.6	-1.3	2	-31.3	-30	5.2
2416.70	13.3	12.6	-1.3	2	-31.3	-30	7.1
2416.75	13	12.6	-1.6	2	-31.6	-30	6.7
2416.80	12.8	12.6	-1.8	2	-31.8	-30	6.3
2416.85	13.8	12.6	-0.8	2	-30.8	-30	6.4
2416.90	13.3	12.6	-1.3	2	-31.3	-30	6.8
2416.95	13.9	12.6	-0.7	2	-30.7	-30	7
2417.00	13.9	12.6	-0.7	2	-30.7	-30	6.3
2417.05	13.9	12.6	-0.7	2	-30.7	-30	6.7
2417.10	14.1	12.6	-0.5	2	-30.5	-30	6
2417.15	13.9	12.6	-0.7	2	-30.7	-30	6.3
2417.20	14.5	12.6	-0.1	2	-30.1	-30	6.6
2417.25	14.3	12.6	-0.3	2	-30.3	-30	7.2
2417.30	14.8	12.6	0.2	2	-29.8	-30	6.1
2417.35	16	12.6	1.4	2	-28.6	-30	6.4
2417.40	16.8	12.6	2.2	2	-27.8	-30	6.9
2417.45	16.5	12.6	1.9	2	-28.1	-30	6.8
2417.50	17.3	12.6	2.7	2	-27.3	-30	7.1
2417.55	16.9	12.6	2.3	2	-27.7	-30	6.3
2417.60	16.6	12.6	2	2	-28	-30	5.8
2417.65	16.3	12.6	1.7	2	-28.3	-30	6.5
2417.70	16.7	12.6	2.1	2	-27.9	-30	6.3

2417.75	16.1	12.6	1.5	2	-28.5	-30	5.7
2417.80	15.8	12.6	1.2	2	-28.8	-30	5.9
2417.85	14.8	12.6	0.2	2	-29.8	-30	6.1
2417.90	15	12.6	0.4	2	-29.6	-30	6
2417.95	15.1	12.6	0.5	2	-29.5	-30	6.3
2418.00	14.4	12.6	-0.2	2	-30.2	-30	5.9
2418.05	13.9	12.6	-0.7	2	-30.7	-30	6.5
2418.10	14.2	12.6	-0.4	2	-30.4	-30	7.1
2418.15	14.5	12.6	-0.1	2	-30.1	-30	6.7
2418.20	14	12.6	-0.6	2	-30.6	-30	6
2418.25	14.1	12.6	-0.5	2	-30.5	-30	6.4
2418.30	14.4	12.6	-0.2	2	-30.2	-30	6.6
2418.35	14.7	12.6	0.1	2	-29.9	-30	6.3
2418.40	14.6	12.6	0	2	-30	-30	6.2
2418.45	15.5	12.6	0.9	2	-29.1	-30	5.9
2418.50	15.1	12.6	0.5	2	-29.5	-30	6.2
2418.55	15.4	12.6	0.8	2	-29.2	-30	5.8
2418.60	15.2	12.6	0.6	2	-29.4	-30	5.6
2418.65	15	12.6	0.4	2	-29.6	-30	4.9
2418.70	15.3	12.6	0.7	2	-29.3	-30	5
2418.75	15.2	12.6	0.6	2	-29.4	-30	5.3
2418.80	15.4	12.6	0.8	2	-29.2	-30	5.7
2418.85	15.6	12.6	1	2	-29	-30	6
2418.90	15.4	12.6	0.8	2	-29.2	-30	6.2
2418.95	15.1	12.6	0.5	2	-29.5	-30	6
2419.00	15.1	12.6	0.5	2	-29.5	-30	6.1
2419.05	15.5	12.6	0.9	2	-29.1	-30	5.8
2419.10	15.3	12.6	0.7	2	-29.3	-30	5.6
2419.15	15.1	12.6	0.5	2	-29.5	-30	5.7
2419.20	15.3	12.6	0.7	2	-29.3	-30	5.2
2419.25	15.2	12.6	0.6	2	-29.4	-30	5.8
2419.30	15.4	12.6	0.8	2	-29.2	-30	6.4
2419.35	15.1	12.6	0.5	2	-29.5	-30	9.9
2419.40	15.6	12.6	1	2	-29	-30	7.4
2419.45	15.8	12.6	1.2	2	-28.8	-30	6.3
2419.50	15.9	12.6	1.3	2	-28.7	-30	5.6

2419.55	16.2	12.6	1.6	2	-28.4	-30	6.4
2419.60	15.9	12.6	1.3	2	-28.7	-30	7.6
2419.65	16.3	12.6	1.7	2	-28.3	-30	6.8
2419.70	16.4	12.6	1.8	2	-28.2	-30	6.6
2419.75	16.6	12.6	2	2	-28	-30	6.2
2419.80	16.4	12.6	1.8	2	-28.2	-30	6.8
2419.85	16.3	12.6	1.7	2	-28.3	-30	6.5
2419.90	16	12.6	1.4	2	-28.6	-30	6.3
2419.95	15.8	12.6	1.2	2	-28.8	-30	6.9
2420.00	16.4	12.6	1.8	2	-28.2	-30	7.3
2420.05	16	12.6	1.4	2	-28.6	-30	6.6
2420.10	16.2	12.6	1.6	2	-28.4	-30	6.8
2420.15	16	12.6	1.4	2	-28.6	-30	5.1
2420.20	16.3	12.6	1.7	2	-28.3	-30	6.3
2420.25	16.2	12.6	1.6	2	-28.4	-30	7.1
2420.30	16.1	12.6	1.5	2	-28.5	-30	6.6
2420.35	16.1	12.6	1.5	2	-28.5	-30	6.1
2420.40	16.4	12.6	1.8	2	-28.2	-30	5.7
2420.45	16.2	12.6	1.6	2	-28.4	-30	6.4
2420.50	16.7	12.6	2.1	2	-27.9	-30	6.2
Processing Gain (dB) @20th Percentile=				12			


2Mbps Channel 1 Processing Gain
Processing Gain (d
22
20
18
16
14
12
10
8
2404 2406 2408 2410 2412 2414 2416 2418 2420
Frequency (MHz)

2Mbps Channel 6 Processing Gain							
Gp=(S/N)o+Mj+Lsys							
Freq. (MHz)	Gp (dB)	(S/N)o (dB)	Mj = J/S (dB)	Lsys (dB)	Jammer (dBm)	Lvl (dBm)	FER
2428.50	18.3	12.6	3.7	2	−28.5	−32.2	7
2428.55	17.5	12.6	2.9	2	−29.3	−32.2	6.8
2428.60	18.6	12.6	4	2	−28.2	−32.2	6.5
2428.65	18.5	12.6	3.9	2	−28.3	−32.2	6.7
2428.70	18.4	12.6	3.8	2	−28.4	−32.2	7.5
2428.75	18.4	12.6	3.8	2	−28.4	−32.2	7.2
2428.80	18.4	12.6	3.8	2	−28.4	−32.2	7.4
2428.85	18.5	12.6	3.9	2	−28.3	−32.2	7.6
2428.90	18.3	12.6	3.7	2	−28.5	−32.2	7.5
2428.95	18.3	12.6	3.7	2	−28.5	−32.2	6.5
2429.00	18.2	12.6	3.6	2	−28.6	−32.2	6.3
2429.05	18.1	12.6	3.5	2	−28.7	−32.2	5.9
2429.10	17.9	12.6	3.3	2	−28.9	−32.2	6.5
2429.15	17.7	12.6	3.1	2	−29.1	−32.2	6
2429.20	17.6	12.6	3	2	−29.2	−32.2	5.7
2429.25	17.5	12.6	2.9	2	−29.3	−32.2	5.8
2429.30	17.4	12.6	2.8	2	−29.4	−32.2	6.8
2429.35	17.33	12.6	2.73	2	−29.47	−32.2	6.2
2429.40	17.3	12.6	2.7	2	−29.5	−32.2	7
2429.45	17.2	12.6	2.6	2	−29.6	−32.2	6.4
2429.50	17	12.6	2.4	2	−29.8	−32.2	7.3
2429.55	16.9	12.6	2.3	2	−29.9	−32.2	5.8
2429.60	16.8	12.6	2.2	2	−30	−32.2	5.1
2429.65	16.7	12.6	2.1	2	−30.1	−32.2	6.3
2429.70	16.6	12.6	2	2	−30.2	−32.2	6.9
2429.75	16.6	12.6	2	2	−30.2	−32.2	7
2429.80	16.5	12.6	1.9	2	−30.3	−32.2	5.4
2429.85	16.5	12.6	1.9	2	−30.3	−32.2	7.1
2429.90	16.6	12.6	2	2	−30.2	−32.2	7.6
2429.95	16.5	12.6	1.9	2	−30.3	−32.2	6.8
2430.00	16.6	12.6	2	2	−30.2	−32.2	6.8
2430.05	16.6	12.6	2	2	−30.2	−32.2	6.2

2430.10	16.6	12.6	2	2	−30.2	−32.2	5.6
2430.15	16.7	12.6	2.1	2	−30.1	−32.2	6.3
2430.20	16.8	12.6	2.2	2	−30	−32.2	6.7
2430.25	16.6	12.6	2	2	−30.2	−32.2	4.8
2430.30	16.6	12.6	2	2	−30.2	−32.2	5.6
2430.35	16.5	12.6	1.9	2	−30.3	−32.2	5.1
2430.40	16.4	12.6	1.8	2	−30.4	−32.2	7
2430.45	16.3	12.6	1.7	2	−30.5	−32.2	5.3
2430.50	16.2	12.6	1.6	2	−30.6	−32.2	6.7
2430.55	15.8	12.6	1.2	2	−31	−32.2	7.3
2430.60	15.6	12.6	1	2	−31.2	−32.2	5.7
2430.65	15.6	12.6	1	2	−31.2	−32.2	6.4
2430.70	15.5	12.6	0.9	2	−31.3	−32.2	5.9
2430.75	15.4	12.6	0.8	2	−31.4	−32.2	5.7
2430.80	15.3	12.6	0.7	2	−31.5	−32.2	5.6
2430.85	15.1	12.6	0.5	2	−31.7	−32.2	5.7
2430.90	15.1	12.6	0.5	2	−31.7	−32.2	5.6
2430.95	15.3	12.6	0.7	2	−31.5	−32.2	6
2431.00	15.6	12.6	1	2	−31.2	−32.2	7.6
2431.05	15.7	12.6	1.1	2	−31.1	−32.2	6.4
2431.10	15.7	12.6	1.1	2	−31.1	−32.2	5.3
2431.15	15.9	12.6	1.3	2	−30.9	−32.2	5.9
2431.20	16.6	12.6	2	2	−30.2	−32.2	6.1
2431.25	16.5	12.6	1.9	2	−30.3	−32.2	6.3
2431.30	16.3	12.6	1.7	2	−30.5	−32.2	5.7
2431.35	16.2	12.6	1.6	2	−30.6	−32.2	6.4
2431.40	16	12.6	1.4	2	−30.8	−32.2	7.2
2431.45	15.8	12.6	1.2	2	−31	−32.2	7.3
2431.50	15.6	12.6	1	2	−31.2	−32.2	6.2
2431.55	15.8	12.6	1.2	2	−31	−32.2	6.3
2431.60	15.8	12.6	1.2	2	−31	−32.2	6.5
2431.65	15.4	12.6	0.8	2	−31.4	−32.2	6.7
2431.70	15.2	12.6	0.6	2	−31.6	−32.2	6.8
2431.75	15.4	12.6	0.8	2	−31.4	−32.2	7.1
2431.80	15.2	12.6	0.6	2	−31.6	−32.2	5.8
2431.85	15	12.6	0.4	2	−31.8	−32.2	5.9

2431.90	14.8	12.6	0.2	2	−32	−32.2	5.6
2431.95	15	12.6	0.4	2	−31.8	−32.2	6.2
2432.00	14.8	12.6	0.2	2	−32	−32.2	6.3
2432.05	14.6	12.6	0	2	−32.2	−32.2	6
2432.10	14.3	12.6	−0.3	2	−32.5	−32.2	7.5
2432.15	14.2	12.6	−0.4	2	−32.6	−32.2	6.8
2432.20	14.1	12.6	−0.5	2	−32.7	−32.2	7.4
2432.25	14.2	12.6	−0.4	2	−32.6	−32.2	7.1
2432.30	14.3	12.6	−0.3	2	−32.5	−32.2	7.7
2432.35	14.4	12.6	−0.2	2	−32.4	−32.2	7.3
2432.40	14.4	12.6	−0.2	2	−32.4	−32.2	6
2432.45	14.6	12.6	0	2	−32.2	−32.2	5.4
2432.50	14.7	12.6	0.1	2	−32.1	−32.2	6.1
2432.55	14.6	12.6	0	2	−32.2	−32.2	7.1
2432.60	14.4	12.6	−0.2	2	−32.4	−32.2	5.7
2432.65	15	12.6	0.4	2	−31.8	−32.2	6.1
2432.70	14.8	12.6	0.2	2	−32	−32.2	5.6
2432.75	14.9	12.6	0.3	2	−31.9	−32.2	6.3
2432.80	14.8	12.6	0.2	2	−32	−32.2	5.7
2432.85	14.8	12.6	0.2	2	−32	−32.2	5.8
2432.90	14.7	12.6	0.1	2	−32.1	−32.2	7.3
2432.95	14.4	12.6	−0.2	2	−32.4	−32.2	5.9
2433.00	14	12.6	−0.6	2	−32.8	−32.2	7.4
2433.05	13.9	12.6	−0.7	2	−32.9	−32.2	6.3
2433.10	13.7	12.6	−0.9	2	−33.1	−32.2	5.7
2433.15	13.5	12.6	−1.1	2	−33.3	−32.2	6.8
2433.20	13.5	12.6	−1.1	2	−33.3	−32.2	6.3
2433.25	13.6	12.6	−1	2	−33.2	−32.2	6.2
2433.30	13.7	12.6	−0.9	2	−33.1	−32.2	5.2
2433.35	13.7	12.6	−0.9	2	−33.1	−32.2	5.8
2433.40	13.8	12.6	−0.8	2	−33	−32.2	4.5
2433.45	13.7	12.6	−0.9	2	−33.1	−32.2	6.2
2433.50	13.8	12.6	−0.8	2	−33	−32.2	5.6
2433.55	13.9	12.6	−0.7	2	−32.9	−32.2	5.7
2433.60	14	12.6	−0.6	2	−32.8	−32.2	5.4
2433.65	13.9	12.6	−0.7	2	−32.9	−32.2	6

2433.70	13.8	12.6	−0.8	2	−33	−32.2	5.6
2433.75	13.7	12.6	−0.9	2	−33.1	−32.2	6.3
2433.80	13.6	12.6	−1	2	−33.2	−32.2	6.3
2433.85	13.5	12.6	−1.1	2	−33.3	−32.2	6.4
2433.90	13.4	12.6	−1.2	2	−33.4	−32.2	5.5
2433.95	13.3	12.6	−1.3	2	−33.5	−32.2	5.8
2434.00	13.2	12.6	−1.4	2	−33.6	−32.2	5.6
2434.05	14.2	12.6	−0.4	2	−32.6	−32.2	5.7
2434.10	13	12.6	−1.6	2	−33.8	−32.2	5.7
2434.15	13	12.6	−1.6	2	−33.8	−32.2	5.9
2434.20	12.8	12.6	−1.8	2	−34	−32.2	5.6
2434.25	14.2	12.6	−0.4	2	−32.6	−32.2	6.1
2434.30	13.9	12.6	−0.7	2	−32.9	−32.2	6.4
2434.35	13.8	12.6	−0.8	2	−33	−32.2	6.3
2434.40	12.8	12.6	−1.8	2	−34	−32.2	5.6
2434.45	13	12.6	−1.6	2	−33.8	−32.2	6.4
2434.50	13	12.6	−1.6	2	−33.8	−32.2	6.6
2434.55	12.9	12.6	−1.7	2	−33.9	−32.2	4.9
2434.60	13	12.6	−1.6	2	−33.8	−32.2	5.7
2434.65	12.9	12.6	−1.7	2	−33.9	−32.2	4.8
2434.70	12.8	12.6	−1.8	2	−34	−32.2	6.2
2434.75	12.9	12.6	−1.7	2	−33.9	−32.2	5.1
2434.80	12.9	12.6	−1.7	2	−33.9	−32.2	6.3
2434.85	12.9	12.6	−1.7	2	−33.9	−32.2	5.8
2434.90	12.8	12.6	−1.8	2	−34	−32.2	6.1
2434.95	12.6	12.6	−2	2	−34.2	−32.2	5.7
2435.00	12.4	12.6	−2.2	2	−34.4	−32.2	6.8
2435.05	12.3	12.6	−2.3	2	−34.5	−32.2	6.1
2435.10	12	12.6	−2.6	2	−34.8	−32.2	6.4
2435.15	11.8	12.6	−2.8	2	−35	−32.2	6.3
2435.20	11.8	12.6	−2.8	2	−35	−32.2	5.6
2435.25	12	12.6	−2.6	2	−34.8	−32.2	6.4
2435.30	12	12.6	−2.6	2	−34.8	−32.2	5.3
2435.35	12.1	12.6	−2.5	2	−34.7	−32.2	5.7
2435.40	12.1	12.6	−2.5	2	−34.7	−32.2	5.7
2435.45	12.3	12.6	−2.3	2	−34.5	−32.2	5.8

2435.50	12.4	12.6	−2.2	2	−34.4	−32.2	7
2435.55	12.6	12.6	−2	2	−34.2	−32.2	6
2435.60	12.7	12.6	−1.9	2	−34.1	−32.2	6.4
2435.65	12.6	12.6	−2	2	−34.2	−32.2	6.3
2435.70	12.6	12.6	−2	2	−34.2	−32.2	6.7
2435.75	12.6	12.6	−2	2	−34.2	−32.2	6.5
2435.80	12.6	12.6	−2	2	−34.2	−32.2	7.3
2435.85	11.7	12.6	−2.9	2	−35.1	−32.2	5.7
2435.90	12.6	12.6	−2	2	−34.2	−32.2	6
2435.95	11.9	12.6	−2.7	2	−34.9	−32.2	7.1
2436.00	12.1	12.6	−2.5	2	−34.7	−32.2	6.7
2436.05	11.8	12.6	−2.8	2	−35	−32.2	7.4
2436.10	11.5	12.6	−3.1	2	−35.3	−32.2	6.9
2436.15	11.4	12.6	−3.2	2	−35.4	−32.2	6.8
2436.20	11.3	12.6	−3.3	2	−35.5	−32.2	5.2
2436.25	11.4	12.6	−3.2	2	−35.4	−32.2	5.6
2436.30	11.4	12.6	−3.2	2	−35.4	−32.2	5.4
2436.35	11.6	12.6	−3	2	−35.2	−32.2	6.1
2436.40	11.6	12.6	−3	2	−35.2	−32.2	5.2
2436.45	12	12.6	−2.6	2	−34.8	−32.2	6.3
2436.50	12.2	12.6	−2.4	2	−34.6	−32.2	5.2
2436.55	13.3	12.6	−1.3	2	−33.5	−32.2	5.7
2436.60	14.9	12.6	0.3	2	−31.9	−32.2	6.8
2436.65	14.8	12.6	0.2	2	−32	−32.2	5.3
2436.70	14.7	12.6	0.1	2	−32.1	−32.2	6.2
2436.75	15.4	12.6	0.8	2	−31.4	−32.2	6.1
2436.80	15.7	12.6	1.1	2	−31.1	−32.2	3.2
2436.85	16.6	12.6	2	2	−30.2	−32.2	4.2
2436.90	17.3	12.6	2.7	2	−29.5	−32.2	4.8
2436.95	17.5	12.6	2.9	2	−29.3	−32.2	5.5
2437.00	17.6	12.6	3	2	−29.2	−32.2	7.4
2437.05	17.5	12.6	2.9	2	−29.3	−32.2	5.2
2437.10	17.1	12.6	2.5	2	−29.7	−32.2	5.4
2437.15	16.9	12.6	2.3	2	−29.9	−32.2	5.3
2437.20	15.5	12.6	0.9	2	−31.3	−32.2	5.3
2437.25	15.2	12.6	0.6	2	−31.6	−32.2	6.2

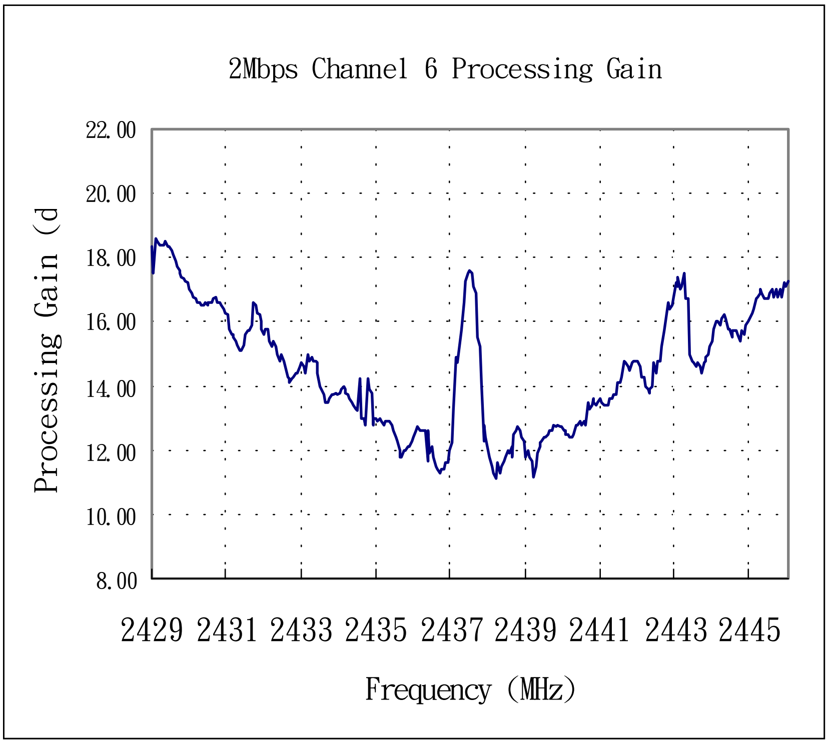
2437.30	14.1	12.6	−0.5	2	−32.7	−32.2	5.2
2437.35	12.3	12.6	−2.3	2	−34.5	−32.2	6.7
2437.40	12.8	12.6	−1.8	2	−34	−32.2	4.8
2437.45	12.4	12.6	−2.2	2	−34.4	−32.2	6.8
2437.50	12	12.6	−2.6	2	−34.8	−32.2	6.1
2437.55	11.8	12.6	−2.8	2	−35	−32.2	7.1
2437.60	11.5	12.6	−3.1	2	−35.3	−32.2	6.3
2437.65	11.3	12.6	−3.3	2	−35.5	−32.2	7.3
2437.70	11.1	12.6	−3.5	2	−35.7	−32.2	6.6
2437.75	11.6	12.6	−3	2	−35.2	−32.2	5.8
2437.80	11.3	12.6	−3.3	2	−35.5	−32.2	5.4
2437.85	11.5	12.6	−3.1	2	−35.3	−32.2	5.4
2437.90	11.7	12.6	−2.9	2	−35.1	−32.2	6.3
2437.95	11.8	12.6	−2.8	2	−35	−32.2	5.3
2438.00	12	12.6	−2.6	2	−34.8	−32.2	5.2
2438.05	11.9	12.6	−2.7	2	−34.9	−32.2	6.6
2438.10	12.1	12.6	−2.5	2	−34.7	−32.2	5.7
2438.15	11.8	12.6	−2.8	2	−35	−32.2	6
2438.20	12.5	12.6	−2.1	2	−34.3	−32.2	6
2438.25	12.6	12.6	−2	2	−34.2	−32.2	7.1
2438.30	12.7	12.6	−1.9	2	−34.1	−32.2	6.2
2438.35	12.6	12.6	−2	2	−34.2	−32.2	5.9
2438.40	12.4	12.6	−2.2	2	−34.4	−32.2	5.3
2438.45	12.3	12.6	−2.3	2	−34.5	−32.2	6.1
2438.50	11.8	12.6	−2.8	2	−35	−32.2	6.5
2438.55	12	12.6	−2.6	2	−34.8	−32.2	6.3
2438.60	11.8	12.6	−2.8	2	−35	−32.2	7
2438.65	11.7	12.6	−2.9	2	−35.1	−32.2	4.8
2438.70	11.2	12.6	−3.4	2	−35.6	−32.2	5.4
2438.75	11.5	12.6	−3.1	2	−35.3	−32.2	5.7
2438.80	11.9	12.6	−2.7	2	−34.9	−32.2	6.9
2438.85	12.1	12.6	−2.5	2	−34.7	−32.2	7
2438.90	12.2	12.6	−2.4	2	−34.6	−32.2	7
2438.95	12.3	12.6	−2.3	2	−34.5	−32.2	5.8
2439.00	12.4	12.6	−2.2	2	−34.4	−32.2	7.3
2439.05	12.4	12.6	−2.2	2	−34.4	−32.2	5.3

2439.10	12.5	12.6	−2.1	2	−34.3	−32.2	4.9
2439.15	12.6	12.6	−2	2	−34.2	−32.2	5.3
2439.20	12.6	12.6	−2	2	−34.2	−32.2	5.1
2439.25	12.8	12.6	−1.8	2	−34	−32.2	5.6
2439.30	12.7	12.6	−1.9	2	−34.1	−32.2	6.8
2439.35	12.8	12.6	−1.8	2	−34	−32.2	5.3
2439.40	12.7	12.6	−1.9	2	−34.1	−32.2	7.4
2439.45	12.7	12.6	−1.9	2	−34.1	−32.2	7.9
2439.50	12.6	12.6	−2	2	−34.2	−32.2	6.6
2439.55	12.6	12.6	−2	2	−34.2	−32.2	6.3
2439.60	12.5	12.6	−2.1	2	−34.3	−32.2	5.7
2439.65	12.5	12.6	−2.1	2	−34.3	−32.2	5.7
2439.70	12.4	12.6	−2.2	2	−34.4	−32.2	7.2
2439.75	12.4	12.6	−2.2	2	−34.4	−32.2	7.3
2439.80	12.5	12.6	−2.1	2	−34.3	−32.2	7
2439.85	12.8	12.6	−1.8	2	−34	−32.2	6.8
2439.90	12.8	12.6	−1.8	2	−34	−32.2	6.6
2439.95	12.9	12.6	−1.7	2	−33.9	−32.2	6.2
2440.00	12.8	12.6	−1.8	2	−34	−32.2	5.6
2440.05	12.9	12.6	−1.7	2	−33.9	−32.2	5.8
2440.10	12.8	12.6	−1.8	2	−34	−32.2	6.7
2440.15	13.5	12.6	−1.1	2	−33.3	−32.2	6.3
2440.20	13.3	12.6	−1.3	2	−33.5	−32.2	6.3
2440.25	13.4	12.6	−1.2	2	−33.4	−32.2	5.9
2440.30	13.6	12.6	−1	2	−33.2	−32.2	5.4
2440.35	13.5	12.6	−1.1	2	−33.3	−32.2	5.3
2440.40	13.4	12.6	−1.2	2	−33.4	−32.2	7.3
2440.45	13.5	12.6	−1.1	2	−33.3	−32.2	5.7
2440.50	13.6	12.6	−1	2	−33.2	−32.2	5.9
2440.55	13.5	12.6	−1.1	2	−33.3	−32.2	6.1
2440.60	13.4	12.6	−1.2	2	−33.4	−32.2	6.3
2440.65	13.4	12.6	−1.2	2	−33.4	−32.2	5.8
2440.70	13.4	12.6	−1.2	2	−33.4	−32.2	5.4
2440.75	13.6	12.6	−1	2	−33.2	−32.2	5.6
2440.80	13.6	12.6	−1	2	−33.2	−32.2	5
2440.85	13.7	12.6	−0.9	2	−33.1	−32.2	7.3

2440.90	13.7	12.6	-0.9	2	-33.1	-32.2	6.3
2440.95	14.1	12.6	-0.5	2	-32.7	-32.2	5.8
2441.00	14.1	12.6	-0.5	2	-32.7	-32.2	7.2
2441.05	14.3	12.6	-0.3	2	-32.5	-32.2	5.9
2441.10	14.3	12.6	-0.3	2	-32.5	-32.2	6
2441.15	14.8	12.6	0.2	2	-32	-32.2	5.8
2441.20	14.7	12.6	0.1	2	-32.1	-32.2	6.2
2441.25	14.6	12.6	0	2	-32.2	-32.2	6.1
2441.30	14.5	12.6	-0.1	2	-32.3	-32.2	5.2
2441.35	14.7	12.6	0.1	2	-32.1	-32.2	5.3
2441.40	14.8	12.6	0.2	2	-32	-32.2	7.3
2441.45	14.8	12.6	0.2	2	-32	-32.2	7.1
2441.50	14.8	12.6	0.2	2	-32	-32.2	6.6
2441.55	14.6	12.6	0	2	-32.2	-32.2	6.8
2441.60	14.3	12.6	-0.3	2	-32.5	-32.2	6.7
2441.65	14.3	12.6	-0.3	2	-32.5	-32.2	4.9
2441.70	14	12.6	-0.6	2	-32.8	-32.2	6.3
2441.75	13.9	12.6	-0.7	2	-32.9	-32.2	5.1
2441.80	13.8	12.6	-0.8	2	-33	-32.2	6.4
2441.85	13.9	12.6	-0.7	2	-32.9	-32.2	5.3
2441.90	14	12.6	-0.6	2	-32.8	-32.2	5.8
2441.95	14.7	12.6	0.1	2	-32.1	-32.2	5.7
2442.00	14.4	12.6	-0.2	2	-32.4	-32.2	5.3
2442.05	14.8	12.6	0.2	2	-32	-32.2	5.1
2442.10	14.8	12.6	0.2	2	-32	-32.2	6.1
2442.15	15.2	12.6	0.6	2	-31.6	-32.2	5.8
2442.20	15.7	12.6	1.1	2	-31.1	-32.2	4.9
2442.25	16	12.6	1.4	2	-30.8	-32.2	5.7
2442.30	16.6	12.6	2	2	-30.2	-32.2	5.8
2442.35	16.4	12.6	1.8	2	-30.4	-32.2	5.9
2442.40	16.52	12.6	1.92	2	-30.28	-32.2	6.1
2442.45	16.8	12.6	2.2	2	-30	-32.2	7.1
2442.50	17.2	12.6	2.6	2	-29.6	-32.2	4.8
2442.55	17.1	12.6	2.5	2	-29.7	-32.2	7.3
2442.60	17.4	12.6	2.8	2	-29.4	-32.2	4.7
2442.65	17	12.6	2.4	2	-29.8	-32.2	7.4

2442.70	17.1	12.6	2.5	2	−29.7	−32.2	5.2
2442.75	17.5	12.6	2.9	2	−29.3	−32.2	5.6
2442.80	16.7	12.6	2.1	2	−30.1	−32.2	4.8
2442.85	16.7	12.6	2.1	2	−30.1	−32.2	6.3
2442.90	15	12.6	0.4	2	−31.8	−32.2	6.4
2442.95	14.8	12.6	0.2	2	−32	−32.2	6.3
2443.00	14.7	12.6	0.1	2	−32.1	−32.2	4.9
2443.05	14.6	12.6	0	2	−32.2	−32.2	5.7
2443.10	14.7	12.6	0.1	2	−32.1	−32.2	5.7
2443.15	14.6	12.6	0	2	−32.2	−32.2	6.1
2443.20	14.4	12.6	−0.2	2	−32.4	−32.2	6.8
2443.25	14.7	12.6	0.1	2	−32.1	−32.2	6.3
2443.30	14.8	12.6	0.2	2	−32	−32.2	6.9
2443.35	14.9	12.6	0.3	2	−31.9	−32.2	5.7
2443.40	15	12.6	0.4	2	−31.8	−32.2	5.6
2443.45	15.2	12.6	0.6	2	−31.6	−32.2	6.2
2443.50	15.4	12.6	0.8	2	−31.4	−32.2	6.1
2443.55	15.8	12.6	1.2	2	−31	−32.2	6.3
2443.60	16	12.6	1.4	2	−30.8	−32.2	5.8
2443.65	16	12.6	1.4	2	−30.8	−32.2	7.1
2443.70	15.9	12.6	1.3	2	−30.9	−32.2	4.8
2443.75	16.1	12.6	1.5	2	−30.7	−32.2	6.8
2443.80	16.2	12.6	1.6	2	−30.6	−32.2	6.6
2443.85	16.1	12.6	1.5	2	−30.7	−32.2	6.3
2443.90	15.8	12.6	1.2	2	−31	−32.2	5.1
2443.95	15.8	12.6	1.2	2	−31	−32.2	5.7
2444.00	15.5	12.6	0.9	2	−31.3	−32.2	4.8
2444.05	15.7	12.6	1.1	2	−31.1	−32.2	6.5
2444.10	15.7	12.6	1.1	2	−31.1	−32.2	5.3
2444.15	15.7	12.6	1.1	2	−31.1	−32.2	5.8
2444.20	15.6	12.6	1	2	−31.2	−32.2	5.7
2444.25	15.4	12.6	0.8	2	−31.4	−32.2	6.2
2444.30	15.7	12.6	1.1	2	−31.1	−32.2	6.1
2444.35	15.6	12.6	1	2	−31.2	−32.2	6.3
2444.40	15.9	12.6	1.3	2	−30.9	−32.2	5.8
2444.45	16	12.6	1.4	2	−30.8	−32.2	6.5

2444.50	16.1	12.6	1.5	2	−30.7	−32.2	6.2
2444.55	16.3	12.6	1.7	2	−30.5	−32.2	5.8
2444.60	16.4	12.6	1.8	2	−30.4	−32.2	5.8
2444.65	16.7	12.6	2.1	2	−30.1	−32.2	5.9
2444.70	16.8	12.6	2.2	2	−30	−32.2	6.1
2444.75	16.9	12.6	2.3	2	−29.9	−32.2	7.2
2444.80	17	12.6	2.4	2	−29.8	−32.2	7.5
2444.85	16.9	12.6	2.3	2	−29.9	−32.2	7.3
2444.90	16.7	12.6	2.1	2	−30.1	−32.2	4.9
2444.95	16.7	12.6	2.1	2	−30.1	−32.2	5.9
2445.00	16.7	12.6	2.1	2	−30.1	−32.2	6.7
2445.05	16.9	12.6	2.3	2	−29.9	−32.2	6.3
2445.10	17	12.6	2.4	2	−29.8	−32.2	5.9
2445.15	16.8	12.6	2.2	2	−30	−32.2	5.8
2445.20	17	12.6	2.4	2	−29.8	−32.2	7.2
2445.25	16.8	12.6	2.2	2	−30	−32.2	6.2
2445.30	17	12.6	2.4	2	−29.8	−32.2	7.1
2445.35	16.8	12.6	2.2	2	−30	−32.2	6.3
2445.40	17.2	12.6	2.6	2	−29.6	−32.2	6.2
2445.45	17.1	12.6	2.5	2	−29.7	−32.2	5.8
2445.50	17.3	12.6	2.7	2	−29.5	−32.2	6.7
Processing Gain (dB) @20th Percentile=				12.6			


2Mbps Channel 6 Processing Gain
Processing Gain (d
22.00
20.00
18.00
16.00
14.00
12.00
10.00
8.00
2429 2431 2433 2435 2437 2439 2441 2443 2445
Frequency (MHz)

2Mbps Channel 11 Processing Gain							
Gp=(S/N)o+Mj+Lsys							
Freq. (MHz)	Gp (dB)	(S/N)o (dB)	Mj = J/S (dB)	Lsys (dB)	Jammer (dBm)	Lvl (dBm)	FER
2453.50	15.2	12.6	0.6	2	-31.4	-32	6.8
2453.55	16.9	12.6	2.3	2	-29.7	-32	6.7
2453.60	16.9	12.6	2.3	2	-29.7	-32	7.3
2453.65	16.6	12.6	2	2	-30	-32	6.8
2453.70	16.7	12.6	2.1	2	-29.9	-32	7.1
2453.75	16.6	12.6	2	2	-30	-32	6.5
2453.80	16.8	12.6	2.2	2	-29.8	-32	7.3
2453.85	16.9	12.6	2.3	2	-29.7	-32	5.7
2453.90	16.9	12.6	2.3	2	-29.7	-32	7.4
2453.95	17	12.6	2.4	2	-29.6	-32	6.1
2454.00	16.6	12.6	2	2	-30	-32	6.3
2454.05	15.9	12.6	1.3	2	-30.7	-32	6.5
2454.10	16.2	12.6	1.6	2	-30.4	-32	5.8
2454.15	15.9	12.6	1.3	2	-30.7	-32	7.1
2454.20	15.7	12.6	1.1	2	-30.9	-32	6.1
2454.25	15.8	12.6	1.2	2	-30.8	-32	6.3
2454.30	15.8	12.6	1.2	2	-30.8	-32	5.8
2454.35	15.7	12.6	1.1	2	-30.9	-32	7.2
2454.40	15.7	12.6	1.1	2	-30.9	-32	7.3
2454.45	15.6	12.6	1	2	-31	-32	5.9
2454.50	15.5	12.6	0.9	2	-31.1	-32	4.8
2454.55	15.6	12.6	1	2	-31	-32	7.1
2454.60	15.6	12.6	1	2	-31	-32	7.3
2454.65	15.6	12.6	1	2	-31	-32	5.7
2454.70	15.4	12.6	0.8	2	-31.2	-32	5.8
2454.75	15.3	12.6	0.7	2	-31.3	-32	5.2
2454.80	15.2	12.6	0.6	2	-31.4	-32	6.1
2454.85	15.2	12.6	0.6	2	-31.4	-32	6.3
2454.90	15.1	12.6	0.5	2	-31.5	-32	6.4
2454.95	15	12.6	0.4	2	-31.6	-32	7.1
2455.00	15.1	12.6	0.5	2	-31.5	-32	5.8
2455.05	15	12.6	0.4	2	-31.6	-32	6.3

2455.10	15.1	12.6	0.5	2	-31.5	-32	6.5
2455.15	15.1	12.6	0.5	2	-31.5	-32	7.3
2455.20	15.1	12.6	0.5	2	-31.5	-32	5.9
2455.25	15	12.6	0.4	2	-31.6	-32	5.8
2455.30	15	12.6	0.4	2	-31.6	-32	6.3
2455.35	14.9	12.6	0.3	2	-31.7	-32	6.4
2455.40	14.8	12.6	0.2	2	-31.8	-32	6.6
2455.45	14.7	12.6	0.1	2	-31.9	-32	6.3
2455.50	14.6	12.6	0	2	-32	-32	7.3
2455.55	14.5	12.6	-0.1	2	-32.1	-32	7.3
2455.60	14.4	12.6	-0.2	2	-32.2	-32	7.8
2455.65	14.2	12.6	-0.4	2	-32.4	-32	5.1
2455.70	14	12.6	-0.6	2	-32.6	-32	7.3
2455.75	13.9	12.6	-0.7	2	-32.7	-32	5.8
2455.80	13.8	12.6	-0.8	2	-32.8	-32	7.3
2455.85	13.2	12.6	-1.4	2	-33.4	-32	7.1
2455.90	14	12.6	-0.6	2	-32.6	-32	6.3
2455.95	14.1	12.6	-0.5	2	-32.5	-32	6.5
2456.00	14.1	12.6	-0.5	2	-32.5	-32	6.7
2456.05	14.3	12.6	-0.3	2	-32.3	-32	7.3
2456.10	14.5	12.6	-0.1	2	-32.1	-32	5.8
2456.15	15	12.6	0.4	2	-31.6	-32	5.9
2456.20	15.6	12.6	1	2	-31	-32	6.1
2456.25	15.8	12.6	1.2	2	-30.8	-32	6.3
2456.30	16.2	12.6	1.6	2	-30.4	-32	6.5
2456.35	16.1	12.6	1.5	2	-30.5	-32	7
2456.40	15.8	12.6	1.2	2	-30.8	-32	7.3
2456.45	15.6	12.6	1	2	-31	-32	5.8
2456.50	15.4	12.6	0.8	2	-31.2	-32	5.9
2456.55	15.2	12.6	0.6	2	-31.4	-32	6.1
2456.60	15.1	12.6	0.5	2	-31.5	-32	5.3
2456.65	15	12.6	0.4	2	-31.6	-32	6
2456.70	15.1	12.6	0.5	2	-31.5	-32	5.3
2456.75	15	12.6	0.4	2	-31.6	-32	4.7
2456.80	14.7	12.6	0.1	2	-31.9	-32	4.9
2456.85	14.5	12.6	-0.1	2	-32.1	-32	7.3

2456.90	14.3	12.6	−0.3	2	−32.3	−32	7.8
2456.95	14.1	12.6	−0.5	2	−32.5	−32	7.2
2457.00	13.5	12.6	−1.1	2	−33.1	−32	6.3
2457.05	13.4	12.6	−1.2	2	−33.2	−32	7.1
2457.10	13.1	12.6	−1.5	2	−33.5	−32	7.3
2457.15	13.3	12.6	−1.3	2	−33.3	−32	5.1
2457.20	12.7	12.6	−1.9	2	−33.9	−32	7.1
2457.25	12.5	12.6	−2.1	2	−34.1	−32	5.9
2457.30	12.8	12.6	−1.8	2	−33.8	−32	6.1
2457.35	13	12.6	−1.6	2	−33.6	−32	6.5
2457.40	13.1	12.6	−1.5	2	−33.5	−32	6
2457.45	13.3	12.6	−1.3	2	−33.3	−32	7.1
2457.50	13.4	12.6	−1.2	2	−33.2	−32	9.1
2457.55	13.1	12.6	−1.5	2	−33.5	−32	9.5
2457.60	12.9	12.6	−1.7	2	−33.7	−32	7.3
2457.65	12.9	12.6	−1.7	2	−33.7	−32	5.7
2457.70	12.9	12.6	−1.7	2	−33.7	−32	7.2
2457.75	14.6	12.6	0	2	−32	−32	7.3
2457.80	13.9	12.6	−0.7	2	−32.7	−32	4.8
2457.85	13.8	12.6	−0.8	2	−32.8	−32	5.3
2457.90	14.4	12.6	−0.2	2	−32.2	−32	5.7
2457.95	14.5	12.6	−0.1	2	−32.1	−32	6.3
2458.00	13.5	12.6	−1.1	2	−33.1	−32	6.1
2458.05	13.4	12.6	−1.2	2	−33.2	−32	6.4
2458.10	13.2	12.6	−1.4	2	−33.4	−32	6.5
2458.15	13	12.6	−1.6	2	−33.6	−32	7.1
2458.20	12.8	12.6	−1.8	2	−33.8	−32	7.2
2458.25	12.9	12.6	−1.7	2	−33.7	−32	5.8
2458.30	13	12.6	−1.6	2	−33.6	−32	6
2458.35	13.1	12.6	−1.5	2	−33.5	−32	6.3
2458.40	13.2	12.6	−1.4	2	−33.4	−32	6.2
2458.45	13.3	12.6	−1.3	2	−33.3	−32	5.9
2458.50	13.5	12.6	−1.1	2	−33.1	−32	5.8
2458.55	13.8	12.6	−0.8	2	−32.8	−32	6.1
2458.60	14	12.6	−0.6	2	−32.6	−32	5.1
2458.65	13.9	12.6	−0.7	2	−32.7	−32	5.7

2458.70	13.9	12.6	-0.7	2	-32.7	-32	5.6
2458.75	13.4	12.6	-1.2	2	-33.2	-32	5.7
2458.80	13.8	12.6	-0.8	2	-32.8	-32	6.3
2458.85	13.7	12.6	-0.9	2	-32.9	-32	6.4
2458.90	13.6	12.6	-1	2	-33	-32	6.5
2458.95	13.5	12.6	-1.1	2	-33.1	-32	6.9
2459.00	12.7	12.6	-1.9	2	-33.9	-32	6.1
2459.05	12.4	12.6	-2.2	2	-34.2	-32	5.8
2459.10	12.3	12.6	-2.3	2	-34.3	-32	5.1
2459.15	11.8	12.6	-2.8	2	-34.8	-32	5.3
2459.20	12	12.6	-2.6	2	-34.6	-32	5.7
2459.25	12	12.6	-2.6	2	-34.6	-32	6.1
2459.30	11.9	12.6	-2.7	2	-34.7	-32	6.3
2459.35	12	12.6	-2.6	2	-34.6	-32	6.4
2459.40	11.9	12.6	-2.7	2	-34.7	-32	7.4
2459.45	11.9	12.6	-2.7	2	-34.7	-32	4.8
2459.50	12	12.6	-2.6	2	-34.6	-32	5.9
2459.55	12.1	12.6	-2.5	2	-34.5	-32	5.7
2459.60	12.2	12.6	-2.4	2	-34.4	-32	5.9
2459.65	12.1	12.6	-2.5	2	-34.5	-32	6.6
2459.70	12	12.6	-2.6	2	-34.6	-32	6.1
2459.75	12	12.6	-2.6	2	-34.6	-32	4.8
2459.80	12	12.6	-2.6	2	-34.6	-32	4.9
2459.85	12.2	12.6	-2.4	2	-34.4	-32	5.3
2459.90	12	12.6	-2.6	2	-34.6	-32	7.3
2459.95	12.2	12.6	-2.4	2	-34.4	-32	7.5
2460.00	11.6	12.6	-3	2	-35	-32	6.8
2460.05	11.4	12.6	-3.2	2	-35.2	-32	6.1
2460.10	11.3	12.6	-3.3	2	-35.3	-32	6.3
2460.15	11.2	12.6	-3.4	2	-35.4	-32	6.1
2460.20	11	12.6	-3.6	2	-35.6	-32	6.3
2460.25	11.1	12.6	-3.5	2	-35.5	-32	6.4
2460.30	11	12.6	-3.6	2	-35.6	-32	6.5
2460.35	11.1	12.6	-3.5	2	-35.5	-32	6.7
2460.40	11.2	12.6	-3.4	2	-35.4	-32	6.6
2460.45	11.1	12.6	-3.5	2	-35.5	-32	6.3

2460.50	11.5	12.6	−3.1	2	−35.1	−32	6.5
2460.55	11.6	12.6	−3	2	−35	−32	7.1
2460.60	11.7	12.6	−2.9	2	−34.9	−32	7.3
2460.65	11.6	12.6	−3	2	−35	−32	7.4
2460.70	11.7	12.6	−2.9	2	−34.9	−32	5.8
2460.75	11.8	12.6	−2.8	2	−34.8	−32	5.9
2460.80	11.8	12.6	−2.8	2	−34.8	−32	7
2460.85	11.8	12.6	−2.8	2	−34.8	−32	7.1
2460.90	11.7	12.6	−2.9	2	−34.9	−32	6.2
2460.95	11.5	12.6	−3.1	2	−35.1	−32	6.8
2461.00	11.1	12.6	−3.5	2	−35.5	−32	6.6
2461.05	10.9	12.6	−3.7	2	−35.7	−32	6.4
2461.10	10.7	12.6	−3.9	2	−35.9	−32	5.8
2461.15	10.4	12.6	−4.2	2	−36.2	−32	5.9
2461.20	10.3	12.6	−4.3	2	−36.3	−32	6.1
2461.25	10.3	12.6	−4.3	2	−36.3	−32	6.2
2461.30	10.4	12.6	−4.2	2	−36.2	−32	5.8
2461.35	10.6	12.6	−4	2	−36	−32	6.3
2461.40	10.8	12.6	−3.8	2	−35.8	−32	5.7
2461.45	11	12.6	−3.6	2	−35.6	−32	7.3
2461.50	11.6	12.6	−3	2	−35	−32	7.5
2461.55	11.8	12.6	−2.8	2	−34.8	−32	5.8
2461.60	12.5	12.6	−2.1	2	−34.1	−32	6.1
2461.65	13	12.6	−1.6	2	−33.6	−32	6.3
2461.70	14.2	12.6	−0.4	2	−32.4	−32	5.8
2461.75	14.6	12.6	0	2	−32	−32	7.1
2461.80	15.6	12.6	1	2	−31	−32	7.3
2461.85	16.2	12.6	1.6	2	−30.4	−32	6.5
2461.90	16.7	12.6	2.1	2	−29.9	−32	6.7
2461.95	17.3	12.6	2.7	2	−29.3	−32	6.3
2462.00	17.5	12.6	2.9	2	−29.1	−32	7.1
2462.05	16.8	12.6	2.2	2	−29.8	−32	7.4
2462.10	16.6	12.6	2	2	−30	−32	5.8
2462.15	15.6	12.6	1	2	−31	−32	7
2462.20	15	12.6	0.4	2	−31.6	−32	7.3
2462.25	14.7	12.6	0.1	2	−31.9	−32	4.9

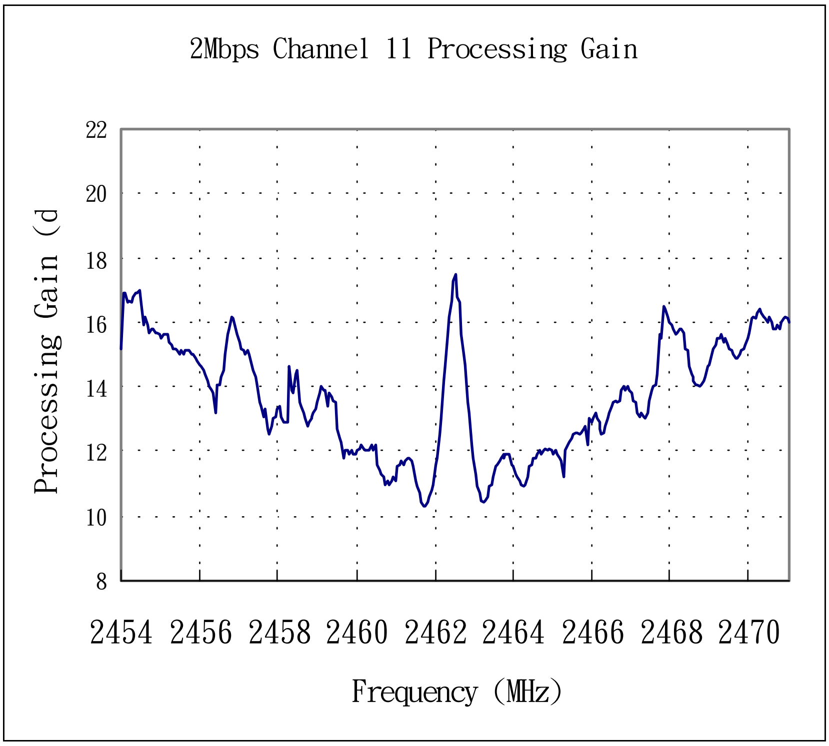
2462.30	13.5	12.6	−1.1	2	−33.1	−32	5.7
2462.35	13.2	12.6	−1.4	2	−33.4	−32	6.1
2462.40	12.2	12.6	−2.4	2	−34.4	−32	6.2
2462.45	11.8	12.6	−2.8	2	−34.8	−32	6.8
2462.50	11.3	12.6	−3.3	2	−35.3	−32	6.3
2462.55	10.9	12.6	−3.7	2	−35.7	−32	6.4
2462.60	10.7	12.6	−3.9	2	−35.9	−32	6.5
2462.65	10.5	12.6	−4.1	2	−36.1	−32	6.6
2462.70	10.4	12.6	−4.2	2	−36.2	−32	6.7
2462.75	10.5	12.6	−4.1	2	−36.1	−32	7.2
2462.80	10.6	12.6	−4	2	−36	−32	7.4
2462.85	10.9	12.6	−3.7	2	−35.7	−32	5.8
2462.90	11	12.6	−3.6	2	−35.6	−32	6.3
2462.95	11.2	12.6	−3.4	2	−35.4	−32	6.5
2463.00	11.5	12.6	−3.1	2	−35.1	−32	7.3
2463.05	11.6	12.6	−3	2	−35	−32	5.8
2463.10	11.7	12.6	−2.9	2	−34.9	−32	6.3
2463.15	11.8	12.6	−2.8	2	−34.8	−32	5.7
2463.20	11.9	12.6	−2.7	2	−34.7	−32	5.4
2463.25	11.8	12.6	−2.8	2	−34.8	−32	5.3
2463.30	11.9	12.6	−2.7	2	−34.7	−32	6.2
2463.35	11.9	12.6	−2.7	2	−34.7	−32	6.3
2463.40	11.9	12.6	−2.7	2	−34.7	−32	6.1
2463.45	11.6	12.6	−3	2	−35	−32	5.9
2463.50	11.5	12.6	−3.1	2	−35.1	−32	6.2
2463.55	11.3	12.6	−3.3	2	−35.3	−32	6.7
2463.60	11.2	12.6	−3.4	2	−35.4	−32	6.3
2463.65	11.1	12.6	−3.5	2	−35.5	−32	5.7
2463.70	11	12.6	−3.6	2	−35.6	−32	7.8
2463.75	10.9	12.6	−3.7	2	−35.7	−32	6.3
2463.80	11	12.6	−3.6	2	−35.6	−32	6.5
2463.85	11.2	12.6	−3.4	2	−35.4	−32	6.3
2463.90	11.5	12.6	−3.1	2	−35.1	−32	6
2463.95	11.6	12.6	−3	2	−35	−32	5.3
2464.00	11.8	12.6	−2.8	2	−34.8	−32	6.3
2464.05	11.8	12.6	−2.8	2	−34.8	−32	6.5

2464.10	11.9	12.6	−2.7	2	−34.7	−32	5.7
2464.15	12	12.6	−2.6	2	−34.6	−32	6
2464.20	11.9	12.6	−2.7	2	−34.7	−32	6.3
2464.25	12	12.6	−2.6	2	−34.6	−32	6.1
2464.30	12.1	12.6	−2.5	2	−34.5	−32	5.7
2464.35	12	12.6	−2.6	2	−34.6	−32	5.6
2464.40	12.1	12.6	−2.5	2	−34.5	−32	0.2
2464.45	12	12.6	−2.6	2	−34.6	−32	5.8
2464.50	11.9	12.6	−2.7	2	−34.7	−32	4.9
2464.55	12	12.6	−2.6	2	−34.6	−32	5.3
2464.60	11.9	12.6	−2.7	2	−34.7	−32	5.3
2464.65	11.8	12.6	−2.8	2	−34.8	−32	5.7
2464.70	11.7	12.6	−2.9	2	−34.9	−32	6.3
2464.75	11.2	12.6	−3.4	2	−35.4	−32	6.5
2464.80	12	12.6	−2.6	2	−34.6	−32	6.6
2464.85	12.2	12.6	−2.4	2	−34.4	−32	6.3
2464.90	12.3	12.6	−2.3	2	−34.3	−32	5.7
2464.95	12.4	12.6	−2.2	2	−34.2	−32	7.3
2465.00	12.5	12.6	−2.1	2	−34.1	−32	7.5
2465.05	12.6	12.6	−2	2	−34	−32	4.8
2465.10	12.6	12.6	−2	2	−34	−32	5.7
2465.15	12.5	12.6	−2.1	2	−34.1	−32	5.8
2465.20	12.6	12.6	−2	2	−34	−32	5.6
2465.25	12.7	12.6	−1.9	2	−33.9	−32	5.7
2465.30	12.8	12.6	−1.8	2	−33.8	−32	6.2
2465.35	12.2	12.6	−2.4	2	−34.4	−32	6.3
2465.40	13	12.6	−1.6	2	−33.6	−32	6.5
2465.45	12.9	12.6	−1.7	2	−33.7	−32	6.7
2465.50	13	12.6	−1.6	2	−33.6	−32	6.3
2465.55	13.2	12.6	−1.4	2	−33.4	−32	5.7
2465.60	13	12.6	−1.6	2	−33.6	−32	7.1
2465.65	12.9	12.6	−1.7	2	−33.7	−32	7.3
2465.70	12.7	12.6	−1.9	2	−33.9	−32	7.1
2465.75	12.5	12.6	−2.1	2	−34.1	−32	7.3
2465.80	12.6	12.6	−2	2	−34	−32	7.8
2465.85	12.8	12.6	−1.8	2	−33.8	−32	6.8

2465.90	13	12.6	-1.6	2	-33.6	-32	7.1
2465.95	13.2	12.6	-1.4	2	-33.4	-32	5.7
2466.00	13.4	12.6	-1.2	2	-33.2	-32	7.3
2466.05	13.5	12.6	-1.1	2	-33.1	-32	6.3
2466.10	13.6	12.6	-1	2	-33	-32	7.1
2466.15	13.5	12.6	-1.1	2	-33.1	-32	6.5
2466.20	13.6	12.6	-1	2	-33	-32	7.5
2466.25	13.9	12.6	-0.7	2	-32.7	-32	6.5
2466.30	14	12.6	-0.6	2	-32.6	-32	7.7
2466.35	13.9	12.6	-0.7	2	-32.7	-32	7.3
2466.40	14	12.6	-0.6	2	-32.6	-32	7.8
2466.45	13.9	12.6	-0.7	2	-32.7	-32	6.8
2466.50	13.8	12.6	-0.8	2	-32.8	-32	7.3
2466.55	13.6	12.6	-1	2	-33	-32	5.8
2466.60	13.5	12.6	-1.1	2	-33.1	-32	6.8
2466.65	13.2	12.6	-1.4	2	-33.4	-32	6.7
2466.70	13.1	12.6	-1.5	2	-33.5	-32	7.3
2466.75	13.2	12.6	-1.4	2	-33.4	-32	6.7
2466.80	13.1	12.6	-1.5	2	-33.5	-32	7.7
2466.85	13	12.6	-1.6	2	-33.6	-32	6.8
2466.90	13.2	12.6	-1.4	2	-33.4	-32	7.1
2466.95	13.6	12.6	-1	2	-33	-32	6.3
2467.00	13.9	12.6	-0.7	2	-32.7	-32	7.8
2467.05	14	12.6	-0.6	2	-32.6	-32	5.7
2467.10	14.1	12.6	-0.5	2	-32.5	-32	7.3
2467.15	14.4	12.6	-0.2	2	-32.2	-32	7.1
2467.20	15.6	12.6	1	2	-31	-32	7.5
2467.25	15.5	12.6	0.9	2	-31.1	-32	6.8
2467.30	16.5	12.6	1.9	2	-30.1	-32	7.1
2467.35	16.4	12.6	1.8	2	-30.2	-32	6.9
2467.40	16.2	12.6	1.6	2	-30.4	-32	7.1
2467.45	16	12.6	1.4	2	-30.6	-32	6.8
2467.50	15.9	12.6	1.3	2	-30.7	-32	5.7
2467.55	15.8	12.6	1.2	2	-30.8	-32	6.2
2467.60	15.6	12.6	1	2	-31	-32	6.5
2467.65	15.7	12.6	1.1	2	-30.9	-32	6.7

2467.70	15.8	12.6	1.2	2	-30.8	-32	7.3
2467.75	15.8	12.6	1.2	2	-30.8	-32	7.1
2467.80	15.7	12.6	1.1	2	-30.9	-32	7.7
2467.85	15.2	12.6	0.6	2	-31.4	-32	7.6
2467.90	15.1	12.6	0.5	2	-31.5	-32	7.1
2467.95	14.6	12.6	0	2	-32	-32	6.8
2468.00	14.4	12.6	-0.2	2	-32.2	-32	7.6
2468.05	14.3	12.6	-0.3	2	-32.3	-32	6.7
2468.10	14.2	12.6	-0.4	2	-32.4	-32	7.8
2468.15	14.1	12.6	-0.5	2	-32.5	-32	6.8
2468.20	14.1	12.6	-0.5	2	-32.5	-32	7.8
2468.25	14	12.6	-0.6	2	-32.6	-32	6.7
2468.30	14.1	12.6	-0.5	2	-32.5	-32	7.5
2468.35	14.2	12.6	-0.4	2	-32.4	-32	6.6
2468.40	14.3	12.6	-0.3	2	-32.3	-32	7.1
2468.45	14.6	12.6	0	2	-32	-32	6.7
2468.50	14.7	12.6	0.1	2	-31.9	-32	7.3
2468.55	15	12.6	0.4	2	-31.6	-32	6.6
2468.60	15.2	12.6	0.6	2	-31.4	-32	7.6
2468.65	15.3	12.6	0.7	2	-31.3	-32	6.4
2468.70	15.5	12.6	0.9	2	-31.1	-32	6.6
2468.75	15.5	12.6	0.9	2	-31.1	-32	6.3
2468.80	15.6	12.6	1	2	-31	-32	7.3
2468.85	15.4	12.6	0.8	2	-31.2	-32	6.5
2468.90	15.5	12.6	0.9	2	-31.1	-32	7.8
2468.95	15.3	12.6	0.7	2	-31.3	-32	6.6
2469.00	15.2	12.6	0.6	2	-31.4	-32	6.8
2469.05	15.1	12.6	0.5	2	-31.5	-32	6.7
2469.10	15	12.6	0.4	2	-31.6	-32	7.5
2469.15	14.9	12.6	0.3	2	-31.7	-32	5.7
2469.20	14.9	12.6	0.3	2	-31.7	-32	7.7
2469.25	15	12.6	0.4	2	-31.6	-32	6.3
2469.30	15.1	12.6	0.5	2	-31.5	-32	7.8
2469.35	15.2	12.6	0.6	2	-31.4	-32	6.7
2469.40	15.3	12.6	0.7	2	-31.3	-32	7.7
2469.45	15.5	12.6	0.9	2	-31.1	-32	6.3

2469.50	15.7	12.6	1.1	2	-30.9	-32	6.5
2469.55	16.1	12.6	1.5	2	-30.5	-32	6.1
2469.60	16.2	12.6	1.6	2	-30.4	-32	7.2
2469.65	16.1	12.6	1.5	2	-30.5	-32	7.3
2469.70	16.3	12.6	1.7	2	-30.3	-32	7.5
2469.75	16.4	12.6	1.8	2	-30.2	-32	6.8
2469.80	16.3	12.6	1.7	2	-30.3	-32	7.3
2469.85	16.2	12.6	1.6	2	-30.4	-32	6.2
2469.90	16.1	12.6	1.5	2	-30.5	-32	7.5
2469.95	16	12.6	1.4	2	-30.6	-32	6.8
2470.00	16.2	12.6	1.6	2	-30.4	-32	7.1
2470.05	16	12.6	1.4	2	-30.6	-32	5.7
2470.10	15.8	12.6	1.2	2	-30.8	-32	7.8
2470.15	15.8	12.6	1.2	2	-30.8	-32	6.8
2470.20	15.9	12.6	1.3	2	-30.7	-32	7.8
2470.25	15.8	12.6	1.2	2	-30.8	-32	7.1
2470.30	16	12.6	1.4	2	-30.6	-32	7.9
2470.35	16.1	12.6	1.5	2	-30.5	-32	7.3
2470.40	16.2	12.6	1.6	2	-30.4	-32	7.5
2470.45	16.1	12.6	1.5	2	-30.5	-32	6.8
2470.50	16	12.6	1.4	2	-30.6	-32	5.2
Processing Gain (dB) @20th Percentile=				11.9			



2Mbps Channel 11 Processing Gain
Processing Gain (d
22
20
18
16
14
12
10
8
2454 2456 2458 2460 2462 2464 2466 2468 2470
Frequency (MHz)

11Mbps Channel 1 Processing Gain							
Gp=(S/N)o+Mj+Lsys							
Freq. (MHz)	Gp (dB)	(S/N)o (dB)	Mj = J/S (dB)	Lsys (dB)	Jammer (dBm)	Lvl (dBm)	FER
2403.50	17.4	16.4	-1	2	-31	-30	6.1
2403.55	17.4	16.4	-1	2	-31	-30	6.3
2403.60	17.4	16.4	-1	2	-31	-30	7
2403.65	16.4	16.4	-2	2	-32	-30	6.3
2403.70	16.2	16.4	-2.2	2	-32.2	-30	4.5
2403.75	16.3	16.4	-2.1	2	-32.1	-30	4.9
2403.80	16	16.4	-2.4	2	-32.4	-30	7.4
2403.85	15.9	16.4	-2.5	2	-32.5	-30	6.5
2403.90	16.4	16.4	-2	2	-32	-30	7.9
2403.95	16.6	16.4	-1.8	2	-31.8	-30	6.5
2404.00	16.8	16.4	-1.6	2	-31.6	-30	7.1
2404.05	16.6	16.4	-1.8	2	-31.8	-30	6.8
2404.10	16.4	16.4	-2	2	-32	-30	7.2
2404.15	15.4	16.4	-3	2	-33	-30	7.6
2404.20	15.5	16.4	-2.9	2	-32.9	-30	7.1
2404.25	15.3	16.4	-3.1	2	-33.1	-30	7.8
2404.30	14.9	16.4	-3.5	2	-33.5	-30	7.8
2404.35	15	16.4	-3.4	2	-33.4	-30	6
2404.40	14.9	16.4	-3.5	2	-33.5	-30	7.5
2404.45	15.5	16.4	-2.9	2	-32.9	-30	6.8
2404.50	15.5	16.4	-2.9	2	-32.9	-30	7.2
2404.55	15.8	16.4	-2.6	2	-32.6	-30	7.5
2404.60	14.8	16.4	-3.6	2	-33.6	-30	7.9
2404.65	14.6	16.4	-3.8	2	-33.8	-30	7.9
2404.70	14.9	16.4	-3.5	2	-33.5	-30	7.7
2404.75	14.5	16.4	-3.9	2	-33.9	-30	7.9
2404.80	14.3	16.4	-4.1	2	-34.1	-30	7.3
2404.85	14.5	16.4	-3.9	2	-33.9	-30	7.3
2404.90	14.6	16.4	-3.8	2	-33.8	-30	7.3
2404.95	14.9	16.4	-3.5	2	-33.5	-30	7.7
2405.00	15.2	16.4	-3.2	2	-33.2	-30	7.4
2405.05	14.4	16.4	-4	2	-34	-30	7.4

2405.10	15.1	16.4	−3.3	2	−33.3	−30	7.5
2405.15	14.5	16.4	−3.9	2	−33.9	−30	7.8
2405.20	14.6	16.4	−3.8	2	−33.8	−30	7.4
2405.25	14.8	16.4	−3.6	2	−33.6	−30	7.6
2405.30	14.4	16.4	−4	2	−34	−30	7.9
2405.35	14.4	16.4	−4	2	−34	−30	7.5
2405.40	14.4	16.4	−4	2	−34	−30	7.7
2405.45	14.1	16.4	−4.3	2	−34.3	−30	7.6
2405.50	14.1	16.4	−4.3	2	−34.3	−30	7.6
2405.55	13.8	16.4	−4.6	2	−34.6	−30	7.9
2405.60	14.4	16.4	−4	2	−34	−30	7.8
2405.65	14.5	16.4	−3.9	2	−33.9	−30	7.7
2405.70	14.4	16.4	−4	2	−34	−30	7.6
2405.75	14.7	16.4	−3.7	2	−33.7	−30	7.9
2405.80	14.3	16.4	−4.1	2	−34.1	−30	7.6
2405.85	14.5	16.4	−3.9	2	−33.9	−30	7.7
2405.90	14.4	16.4	−4	2	−34	−30	7.7
2405.95	14.6	16.4	−3.8	2	−33.8	−30	7.8
2406.00	14.2	16.4	−4.2	2	−34.2	−30	7.9
2406.05	14.6	16.4	−3.8	2	−33.8	−30	7.9
2406.10	14.5	16.4	−3.9	2	−33.9	−30	7.6
2406.15	15.1	16.4	−3.3	2	−33.3	−30	7.8
2406.20	15	16.4	−3.4	2	−33.4	−30	7.7
2406.25	14.8	16.4	−3.6	2	−33.6	−30	7.7
2406.30	14.4	16.4	−4	2	−34	−30	7.9
2406.35	14.1	16.4	−4.3	2	−34.3	−30	7.9
2406.40	14.2	16.4	−4.2	2	−34.2	−30	7.9
2406.45	14	16.4	−4.4	2	−34.4	−30	7.5
2406.50	13.7	16.4	−4.7	2	−34.7	−30	7.9
2406.55	13.9	16.4	−4.5	2	−34.5	−30	7.5
2406.60	14.1	16.4	−4.3	2	−34.3	−30	7.3
2406.65	14.3	16.4	−4.1	2	−34.1	−30	7.6
2406.70	14.5	16.4	−3.9	2	−33.9	−30	7.9
2406.75	14.3	16.4	−4.1	2	−34.1	−30	7.4
2406.80	14.7	16.4	−3.7	2	−33.7	−30	7.5
2406.85	15	16.4	−3.4	2	−33.4	−30	7.9

2406.90	14.8	16.4	-3.6	2	-33.6	-30	7.7
2406.95	14.4	16.4	-4	2	-34	-30	7.5
2407.00	14	16.4	-4.4	2	-34.4	-30	7.7
2407.05	13.6	16.4	-4.8	2	-34.8	-30	7.7
2407.10	13.6	16.4	-4.8	2	-34.8	-30	7.5
2407.15	13.6	16.4	-4.8	2	-34.8	-30	7.9
2407.20	13.5	16.4	-4.9	2	-34.9	-30	7.9
2407.25	13.6	16.4	-4.8	2	-34.8	-30	7.8
2407.30	13.6	16.4	-4.8	2	-34.8	-30	7.5
2407.35	13.7	16.4	-4.7	2	-34.7	-30	7.5
2407.40	14	16.4	-4.4	2	-34.4	-30	7.9
2407.45	14	16.4	-4.4	2	-34.4	-30	7.7
2407.50	14.2	16.4	-4.2	2	-34.2	-30	7.9
2407.55	13.9	16.4	-4.5	2	-34.5	-30	7.8
2407.60	13.8	16.4	-4.6	2	-34.6	-30	7.9
2407.65	13.5	16.4	-4.9	2	-34.9	-30	7.9
2407.70	13.1	16.4	-5.3	2	-35.3	-30	7.7
2407.75	12.8	16.4	-5.6	2	-35.6	-30	7.8
2407.80	12.6	16.4	-5.8	2	-35.8	-30	7.9
2407.85	12.5	16.4	-5.9	2	-35.9	-30	7.5
2407.90	12.5	16.4	-5.9	2	-35.9	-30	7.6
2407.95	12.5	16.4	-5.9	2	-35.9	-30	7.3
2408.00	12.7	16.4	-5.7	2	-35.7	-30	7.6
2408.05	12.8	16.4	-5.6	2	-35.6	-30	7.9
2408.10	13	16.4	-5.4	2	-35.4	-30	7.4
2408.15	13	16.4	-5.4	2	-35.4	-30	7.6
2408.20	13.1	16.4	-5.3	2	-35.3	-30	7.6
2408.25	13.1	16.4	-5.3	2	-35.3	-30	7.9
2408.30	12.8	16.4	-5.6	2	-35.6	-30	7.5
2408.35	12.9	16.4	-5.5	2	-35.5	-30	7.7
2408.40	12.6	16.4	-5.8	2	-35.8	-30	7.5
2408.45	12.4	16.4	-6	2	-36	-30	7.5
2408.50	12.2	16.4	-6.2	2	-36.2	-30	7.9
2408.55	11.9	16.4	-6.5	2	-36.5	-30	7.7
2408.60	11.5	16.4	-6.9	2	-36.9	-30	7.5
2408.65	11.5	16.4	-6.9	2	-36.9	-30	7.6

2408.70	11.5	16.4	-6.9	2	-36.9	-30	7.5
2408.75	11.6	16.4	-6.8	2	-36.8	-30	7.7
2408.80	11.8	16.4	-6.6	2	-36.6	-30	7.7
2408.85	11.8	16.4	-6.6	2	-36.6	-30	7.8
2408.90	11.8	16.4	-6.6	2	-36.6	-30	7.6
2408.95	11.9	16.4	-6.5	2	-36.5	-30	7.7
2409.00	11.9	16.4	-6.5	2	-36.5	-30	7.5
2409.05	11.8	16.4	-6.6	2	-36.6	-30	7.9
2409.10	11.6	16.4	-6.8	2	-36.8	-30	7.5
2409.15	11.5	16.4	-6.9	2	-36.9	-30	7.5
2409.20	11.3	16.4	-7.1	2	-37.1	-30	7.8
2409.25	11.2	16.4	-7.2	2	-37.2	-30	7.8
2409.30	10.9	16.4	-7.5	2	-37.5	-30	7.9
2409.35	10.8	16.4	-7.6	2	-37.6	-30	7.7
2409.40	10.7	16.4	-7.7	2	-37.7	-30	7.8
2409.45	10.7	16.4	-7.7	2	-37.7	-30	7.5
2409.50	10.7	16.4	-7.7	2	-37.7	-30	7.6
2409.55	10.9	16.4	-7.5	2	-37.5	-30	7.6
2409.60	11	16.4	-7.4	2	-37.4	-30	7.9
2409.65	11.1	16.4	-7.3	2	-37.3	-30	7.7
2409.70	11.1	16.4	-7.3	2	-37.3	-30	7.2
2409.75	11.2	16.4	-7.2	2	-37.2	-30	7.9
2409.80	11.2	16.4	-7.2	2	-37.2	-30	7.7
2409.85	11.2	16.4	-7.2	2	-37.2	-30	7.8
2409.90	11.1	16.4	-7.3	2	-37.3	-30	7.2
2409.95	11.1	16.4	-7.3	2	-37.3	-30	7.5
2410.00	11	16.4	-7.4	2	-37.4	-30	7.3
2410.05	10.9	16.4	-7.5	2	-37.5	-30	7.4
2410.10	10.8	16.4	-7.6	2	-37.6	-30	7.6
2410.15	10.7	16.4	-7.7	2	-37.7	-30	7.7
2410.20	10.7	16.4	-7.7	2	-37.7	-30	7.3
2410.25	10.7	16.4	-7.7	2	-37.7	-30	7.2
2410.30	10.8	16.4	-7.6	2	-37.6	-30	7.5
2410.35	11	16.4	-7.4	2	-37.4	-30	7.4
2410.40	11.2	16.4	-7.2	2	-37.2	-30	7.5
2410.45	11.3	16.4	-7.1	2	-37.1	-30	7.9

2410.50	11.5	16.4	-6.9	2	-36.9	-30	7.9
2410.55	11.6	16.4	-6.8	2	-36.8	-30	7.6
2410.60	11.6	16.4	-6.8	2	-36.8	-30	7.7
2410.65	11.6	16.4	-6.8	2	-36.8	-30	7.2
2410.70	11.7	16.4	-6.7	2	-36.7	-30	7.9
2410.75	11.7	16.4	-6.7	2	-36.7	-30	7.6
2410.80	11.5	16.4	-6.9	2	-36.9	-30	7.3
2410.85	11.4	16.4	-7	2	-37	-30	8
2410.90	11.4	16.4	-7	2	-37	-30	7.7
2410.95	11.4	16.4	-7	2	-37	-30	7.9
2411.00	11.3	16.4	-7.1	2	-37.1	-30	7.3
2411.05	11	16.4	-7.4	2	-37.4	-30	7.8
2411.10	11	16.4	-7.4	2	-37.4	-30	7.8
2411.15	11.4	16.4	-7	2	-37	-30	7.8
2411.20	11.6	16.4	-6.8	2	-36.8	-30	7.7
2411.25	11.9	16.4	-6.5	2	-36.5	-30	7.8
2411.30	11.9	16.4	-6.5	2	-36.5	-30	7.9
2411.35	12.1	16.4	-6.3	2	-36.3	-30	7.9
2411.40	12.3	16.4	-6.1	2	-36.1	-30	7.9
2411.45	12.3	16.4	-6.1	2	-36.1	-30	7.9
2411.50	12.3	16.4	-6.1	2	-36.1	-30	8
2411.55	12.1	16.4	-6.3	2	-36.3	-30	7.9
2411.60	12.1	16.4	-6.3	2	-36.3	-30	7.5
2411.65	11.9	16.4	-6.5	2	-36.5	-30	7.6
2411.70	11.8	16.4	-6.6	2	-36.6	-30	7.1
2411.75	11.6	16.4	-6.8	2	-36.8	-30	7.8
2411.80	11.4	16.4	-7	2	-37	-30	7.2
2411.85	11.4	16.4	-7	2	-37	-30	7.8
2411.90	11.3	16.4	-7.1	2	-37.1	-30	7.7
2411.95	11.5	16.4	-6.9	2	-36.9	-30	7.9
2412.00	11.2	16.4	-7.2	2	-37.2	-30	7.7
2412.05	11.1	16.4	-7.3	2	-37.3	-30	7.7
2412.10	11.4	16.4	-7	2	-37	-30	7.2
2412.15	11.6	16.4	-6.8	2	-36.8	-30	7.4
2412.20	11.9	16.4	-6.5	2	-36.5	-30	7.6
2412.25	11.8	16.4	-6.6	2	-36.6	-30	7.4

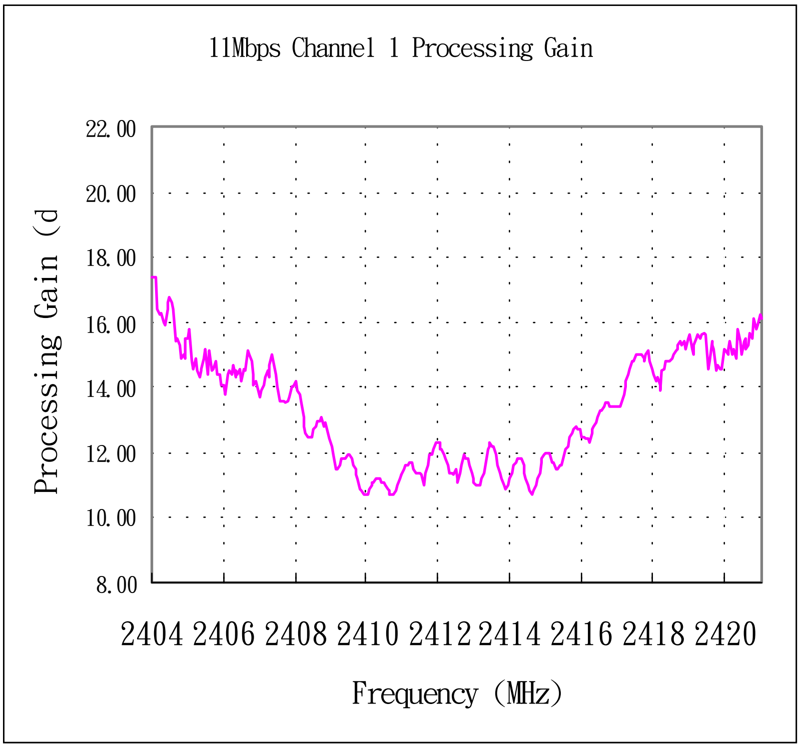
2412.30	11.8	16.4	-6.6	2	-36.6	-30	7.9
2412.35	11.6	16.4	-6.8	2	-36.8	-30	7.9
2412.40	11.4	16.4	-7	2	-37	-30	7.3
2412.45	11.2	16.4	-7.2	2	-37.2	-30	7.2
2412.50	11.1	16.4	-7.3	2	-37.3	-30	7.2
2412.55	11	16.4	-7.4	2	-37.4	-30	7.2
2412.60	11	16.4	-7.4	2	-37.4	-30	7.2
2412.65	11	16.4	-7.4	2	-37.4	-30	7.9
2412.70	11.2	16.4	-7.2	2	-37.2	-30	7.3
2412.75	11.4	16.4	-7	2	-37	-30	7.4
2412.80	11.6	16.4	-6.8	2	-36.8	-30	7.3
2412.85	12.1	16.4	-6.3	2	-36.3	-30	7.5
2412.90	12.2	16.4	-6.2	2	-36.2	-30	7.4
2412.95	12.3	16.4	-6.1	2	-36.1	-30	7.5
2413.00	12.2	16.4	-6.2	2	-36.2	-30	7.2
2413.05	12.2	16.4	-6.2	2	-36.2	-30	7.8
2413.10	11.9	16.4	-6.5	2	-36.5	-30	7.9
2413.15	11.6	16.4	-6.8	2	-36.8	-30	7.9
2413.20	11.4	16.4	-7	2	-37	-30	7.8
2413.25	11.2	16.4	-7.2	2	-37.2	-30	8
2413.30	11	16.4	-7.4	2	-37.4	-30	7.4
2413.35	10.9	16.4	-7.5	2	-37.5	-30	7.5
2413.40	11	16.4	-7.4	2	-37.4	-30	7.5
2413.45	11	16.4	-7.4	2	-37.4	-30	7.6
2413.50	11.2	16.4	-7.2	2	-37.2	-30	7.9
2413.55	11.4	16.4	-7	2	-37	-30	7.4
2413.60	11.6	16.4	-6.8	2	-36.8	-30	7.9
2413.65	11.7	16.4	-6.7	2	-36.7	-30	7.6
2413.70	11.8	16.4	-6.6	2	-36.6	-30	7.4
2413.75	11.8	16.4	-6.6	2	-36.6	-30	7.4
2413.80	11.8	16.4	-6.6	2	-36.6	-30	7.8
2413.85	11.6	16.4	-6.8	2	-36.8	-30	8
2413.90	11.4	16.4	-7	2	-37	-30	7.7
2413.95	11.2	16.4	-7.2	2	-37.2	-30	7.3
2414.00	11	16.4	-7.4	2	-37.4	-30	7.8
2414.05	10.8	16.4	-7.6	2	-37.6	-30	7.3

2414.10	10.7	16.4	−7.7	2	−37.7	−30	7.7
2414.15	10.8	16.4	−7.6	2	−37.6	−30	7.6
2414.20	11	16.4	−7.4	2	−37.4	−30	7.8
2414.25	11.2	16.4	−7.2	2	−37.2	−30	7.6
2414.30	11.4	16.4	−7	2	−37	−30	7.4
2414.35	11.7	16.4	−6.7	2	−36.7	−30	7.6
2414.40	11.8	16.4	−6.6	2	−36.6	−30	7.3
2414.45	11.9	16.4	−6.5	2	−36.5	−30	7.2
2414.50	12	16.4	−6.4	2	−36.4	−30	7.7
2414.55	12	16.4	−6.4	2	−36.4	−30	7.6
2414.60	12	16.4	−6.4	2	−36.4	−30	7.8
2414.65	11.7	16.4	−6.7	2	−36.7	−30	7.6
2414.70	11.7	16.4	−6.7	2	−36.7	−30	7.6
2414.75	11.5	16.4	−6.9	2	−36.9	−30	7.7
2414.80	11.5	16.4	−6.9	2	−36.9	−30	7.8
2414.85	11.5	16.4	−6.9	2	−36.9	−30	7.6
2414.90	11.6	16.4	−6.8	2	−36.8	−30	7.9
2414.95	11.6	16.4	−6.8	2	−36.8	−30	7.4
2415.00	11.9	16.4	−6.5	2	−36.5	−30	7.4
2415.05	12.1	16.4	−6.3	2	−36.3	−30	7.9
2415.10	12.2	16.4	−6.2	2	−36.2	−30	7.8
2415.15	12.5	16.4	−5.9	2	−35.9	−30	8
2415.20	12.6	16.4	−5.8	2	−35.8	−30	7.9
2415.25	12.7	16.4	−5.7	2	−35.7	−30	7.5
2415.30	12.8	16.4	−5.6	2	−35.6	−30	8
2415.35	12.8	16.4	−5.6	2	−35.6	−30	7.7
2415.40	12.7	16.4	−5.7	2	−35.7	−30	7.6
2415.45	12.7	16.4	−5.7	2	−35.7	−30	7.7
2415.50	12.5	16.4	−5.9	2	−35.9	−30	8
2415.55	12.5	16.4	−5.9	2	−35.9	−30	7.6
2415.60	12.4	16.4	−6	2	−36	−30	7.7
2415.65	12.4	16.4	−6	2	−36	−30	7.5
2415.70	12.3	16.4	−6.1	2	−36.1	−30	7.9
2415.75	12.6	16.4	−5.8	2	−35.8	−30	7.4
2415.80	12.7	16.4	−5.7	2	−35.7	−30	7.3
2415.85	12.8	16.4	−5.6	2	−35.6	−30	8

2415.90	12.9	16.4	-5.5	2	-35.5	-30	7.2
2415.95	13.1	16.4	-5.3	2	-35.3	-30	7.5
2416.00	13.3	16.4	-5.1	2	-35.1	-30	7.4
2416.05	13.3	16.4	-5.1	2	-35.1	-30	7.8
2416.10	13.4	16.4	-5	2	-35	-30	7.3
2416.15	13.5	16.4	-4.9	2	-34.9	-30	7.9
2416.20	13.5	16.4	-4.9	2	-34.9	-30	7.5
2416.25	13.4	16.4	-5	2	-35	-30	7.5
2416.30	13.4	16.4	-5	2	-35	-30	7.1
2416.35	13.4	16.4	-5	2	-35	-30	7.4
2416.40	13.4	16.4	-5	2	-35	-30	7.6
2416.45	13.4	16.4	-5	2	-35	-30	7.8
2416.50	13.4	16.4	-5	2	-35	-30	7.5
2416.55	13.4	16.4	-5	2	-35	-30	7.3
2416.60	13.5	16.4	-4.9	2	-34.9	-30	7.6
2416.65	13.8	16.4	-4.6	2	-34.6	-30	8
2416.70	14	16.4	-4.4	2	-34.4	-30	7.8
2416.75	14.2	16.4	-4.2	2	-34.2	-30	7.3
2416.80	14.4	16.4	-4	2	-34	-30	7.6
2416.85	14.6	16.4	-3.8	2	-33.8	-30	7.6
2416.90	14.8	16.4	-3.6	2	-33.6	-30	7.6
2416.95	14.8	16.4	-3.6	2	-33.6	-30	7.3
2417.00	15	16.4	-3.4	2	-33.4	-30	7.4
2417.05	15	16.4	-3.4	2	-33.4	-30	7.9
2417.10	15	16.4	-3.4	2	-33.4	-30	7.3
2417.15	15	16.4	-3.4	2	-33.4	-30	7.7
2417.20	14.9	16.4	-3.5	2	-33.5	-30	7.7
2417.25	14.8	16.4	-3.6	2	-33.6	-30	7.9
2417.30	15	16.4	-3.4	2	-33.4	-30	8
2417.35	15.1	16.4	-3.3	2	-33.3	-30	7.4
2417.40	14.8	16.4	-3.6	2	-33.6	-30	6.8
2417.45	14.6	16.4	-3.8	2	-33.8	-30	7.2
2417.50	14.4	16.4	-4	2	-34	-30	7.1
2417.55	14.2	16.4	-4.2	2	-34.2	-30	6.5
2417.60	14.3	16.4	-4.1	2	-34.1	-30	6.4
2417.65	14.1	16.4	-4.3	2	-34.3	-30	5.3

2417.70	13.9	16.4	-4.5	2	-34.5	-30	7.1
2417.75	14.5	16.4	-3.9	2	-33.9	-30	6.8
2417.80	14.6	16.4	-3.8	2	-33.8	-30	7.5
2417.85	14.8	16.4	-3.6	2	-33.6	-30	7.1
2417.90	14.8	16.4	-3.6	2	-33.6	-30	6.3
2417.95	14.8	16.4	-3.6	2	-33.6	-30	6.5
2418.00	14.9	16.4	-3.5	2	-33.5	-30	5.8
2418.05	15	16.4	-3.4	2	-33.4	-30	5.9
2418.10	15.1	16.4	-3.3	2	-33.3	-30	6.1
2418.15	15.2	16.4	-3.2	2	-33.2	-30	6.2
2418.20	15.3	16.4	-3.1	2	-33.1	-30	6
2418.25	15.4	16.4	-3	2	-33	-30	5.7
2418.30	15.3	16.4	-3.1	2	-33.1	-30	5.8
2418.35	15.4	16.4	-3	2	-33	-30	5.7
2418.40	15.2	16.4	-3.2	2	-33.2	-30	7
2418.45	15.5	16.4	-2.9	2	-32.9	-30	6.8
2418.50	15.6	16.4	-2.8	2	-32.8	-30	6.7
2418.55	15.2	16.4	-3.2	2	-33.2	-30	6.8
2418.60	15	16.4	-3.4	2	-33.4	-30	5.9
2418.65	15.3	16.4	-3.1	2	-33.1	-30	7.3
2418.70	15.5	16.4	-2.9	2	-32.9	-30	7.2
2418.75	15.6	16.4	-2.8	2	-32.8	-30	7.1
2418.80	15.5	16.4	-2.9	2	-32.9	-30	7
2418.85	15.6	16.4	-2.8	2	-32.8	-30	6.8
2418.90	15.7	16.4	-2.7	2	-32.7	-30	6.7
2418.95	15.6	16.4	-2.8	2	-32.8	-30	6.8
2419.00	14.6	16.4	-3.8	2	-33.8	-30	5.9
2419.05	14.8	16.4	-3.6	2	-33.6	-30	6.1
2419.10	15.4	16.4	-3	2	-33	-30	5.7
2419.15	15.3	16.4	-3.1	2	-33.1	-30	6.1
2419.20	15.2	16.4	-3.2	2	-33.2	-30	6.2
2419.25	14.5	16.4	-3.9	2	-33.9	-30	6.3
2419.30	14.7	16.4	-3.7	2	-33.7	-30	6.1
2419.35	14.6	16.4	-3.8	2	-33.8	-30	5.8
2419.40	14.6	16.4	-3.8	2	-33.8	-30	5.9
2419.45	15.2	16.4	-3.2	2	-33.2	-30	6.1

2419.50	15.1	16.4	-3.3	2	-33.3	-30	7.1
2419.55	15	16.4	-3.4	2	-33.4	-30	7.3
2419.60	15.2	16.4	-3.2	2	-33.2	-30	7.4
2419.65	15.4	16.4	-3	2	-33	-30	7.5
2419.70	15	16.4	-3.4	2	-33.4	-30	7.6
2419.75	15.2	16.4	-3.2	2	-33.2	-30	7.1
2419.80	14.9	16.4	-3.5	2	-33.5	-30	7.4
2419.85	15.8	16.4	-2.6	2	-32.6	-30	5.9
2419.90	15.4	16.4	-3	2	-33	-30	5.6
2419.95	15	16.4	-3.4	2	-33.4	-30	5.8
2420.00	15.4	16.4	-3	2	-33	-30	6.3
2420.05	15.5	16.4	-2.9	2	-32.9	-30	6.1
2420.10	15.2	16.4	-3.2	2	-33.2	-30	6.2
2420.15	15.3	16.4	-3.1	2	-33.1	-30	6.3
2420.20	15.7	16.4	-2.7	2	-32.7	-30	6.1
2420.25	15.5	16.4	-2.9	2	-32.9	-30	6.5
2420.30	16.1	16.4	-2.3	2	-32.3	-30	6.3
2420.35	15.8	16.4	-2.6	2	-32.6	-30	6.4
2420.40	15.9	16.4	-2.5	2	-32.5	-30	6.5
2420.45	16.2	16.4	-2.2	2	-32.2	-30	6.2
2420.50	16.1	16.4	-2.3	2	-32.3	-30	6.5
Processing Gain (dB) @20th Percentile=				11.5			


11Mbps Channel 1 Processing Gain
Processing Gain (d
22.00
20.00
18.00
16.00
14.00
12.00
10.00
8.00
2404 2406 2408 2410 2412 2414 2416 2418 2420
Frequency (MHz)

11Mbps Channel 6 Processing Gain							
Gp=(S/N)o+Mj+Lsys							
Freq. (MHz)	Gp (dB)	(S/N)o (dB)	Mj = J/S (dB)	Lsys (dB)	Jammer (dBm)	Lvl (dBm)	FER
2428.50	21.4	16.4	3	2	−29.2	−32.2	7.2
2428.55	20.9	16.4	2.5	2	−29.7	−32.2	6.7
2428.60	21.4	16.4	3	2	−29.2	−32.2	7.6
2428.65	20.9	16.4	2.5	2	−29.7	−32.2	6.5
2428.70	21.1	16.4	2.7	2	−29.5	−32.2	7.8
2428.75	21.2	16.4	2.8	2	−29.4	−32.2	7.3
2428.80	20.9	16.4	2.5	2	−29.7	−32.2	6.5
2428.85	20.6	16.4	2.2	2	−30	−32.2	9.7
2428.90	20.4	16.4	2	2	−30.2	−32.2	6.9
2428.95	20.8	16.4	2.4	2	−29.8	−32.2	7.2
2429.00	20.7	16.4	2.3	2	−29.9	−32.2	6.9
2429.05	21	16.4	2.6	2	−29.6	−32.2	7.9
2429.10	21.3	16.4	2.9	2	−29.3	−32.2	7.4
2429.15	20.9	16.4	2.5	2	−29.7	−32.2	7.4
2429.20	20.8	16.4	2.4	2	−29.8	−32.2	7
2429.25	20.7	16.4	2.3	2	−29.9	−32.2	6.7
2429.30	20.6	16.4	2.2	2	−30	−32.2	6.5
2429.35	20.5	16.4	2.1	2	−30.1	−32.2	7.6
2429.40	20.4	16.4	2	2	−30.2	−32.2	7.4
2429.45	20.25	16.4	1.85	2	−30.35	−32.2	7.3
2429.50	20.2	16.4	1.8	2	−30.4	−32.2	7.3
2429.55	20	16.4	1.6	2	−30.6	−32.2	5.3
2429.60	19.8	16.4	1.4	2	−30.8	−32.2	5.6
2429.65	19.9	16.4	1.5	2	−30.7	−32.2	6.7
2429.70	20.1	16.4	1.7	2	−30.5	−32.2	6.8
2429.75	19.8	16.4	1.4	2	−30.8	−32.2	6.7
2429.80	19.7	16.4	1.3	2	−30.9	−32.2	5.5
2429.85	19.6	16.4	1.2	2	−31	−32.2	7.5
2429.90	19.5	16.4	1.1	2	−31.1	−32.2	7.8
2429.95	19.4	16.4	1	2	−31.2	−32.2	7.6
2430.00	19.4	16.4	1	2	−31.2	−32.2	5.6
2430.05	19	16.4	0.6	2	−31.6	−32.2	6.7

2430.10	18.9	16.4	0.5	2	−31.7	−32.2	5.7
2430.15	18.7	16.4	0.3	2	−31.9	−32.2	6.3
2430.20	18.7	16.4	0.3	2	−31.9	−32.2	7.6
2430.25	18.45	16.4	0.05	2	−32.15	−32.2	7
2430.30	18.3	16.4	−0.1	2	−32.3	−32.2	7.1
2430.35	18.2	16.4	−0.2	2	−32.4	−32.2	7.4
2430.40	18	16.4	−0.4	2	−32.6	−32.2	7.5
2430.45	17.8	16.4	−0.6	2	−32.8	−32.2	5.6
2430.50	17.7	16.4	−0.7	2	−32.9	−32.2	6.1
2430.55	17.5	16.4	−0.9	2	−33.1	−32.2	5.6
2430.60	17.2	16.4	−1.2	2	−33.4	−32.2	5.1
2430.65	16.8	16.4	−1.6	2	−33.8	−32.2	6.9
2430.70	16.6	16.4	−1.8	2	−34	−32.2	6.9
2430.75	16.3	16.4	−2.1	2	−34.3	−32.2	7.3
2430.80	16.3	16.4	−2.1	2	−34.3	−32.2	7.5
2430.85	16.2	16.4	−2.2	2	−34.4	−32.2	6.8
2430.90	16	16.4	−2.4	2	−34.6	−32.2	7.4
2430.95	16.2	16.4	−2.2	2	−34.4	−32.2	6.8
2431.00	16.1	16.4	−2.3	2	−34.5	−32.2	7.9
2431.05	16	16.4	−2.4	2	−34.6	−32.2	7.2
2431.10	16	16.4	−2.4	2	−34.6	−32.2	7.9
2431.15	15.6	16.4	−2.8	2	−35	−32.2	7
2431.20	15.6	16.4	−2.8	2	−35	−32.2	6.2
2431.25	15.4	16.4	−3	2	−35.2	−32.2	6.5
2431.30	15.3	16.4	−3.1	2	−35.3	−32.2	6.9
2431.35	15.1	16.4	−3.3	2	−35.5	−32.2	6.4
2431.40	15.3	16.4	−3.1	2	−35.3	−32.2	6.8
2431.45	14.9	16.4	−3.5	2	−35.7	−32.2	6.1
2431.50	14.9	16.4	−3.5	2	−35.7	−32.2	6.3
2431.55	14.7	16.4	−3.7	2	−35.9	−32.2	6.6
2431.60	14.8	16.4	−3.6	2	−35.8	−32.2	7
2431.65	14.7	16.4	−3.7	2	−35.9	−32.2	6.8
2431.70	14.6	16.4	−3.8	2	−36	−32.2	6.4
2431.75	14.5	16.4	−3.9	2	−36.1	−32.2	6.2
2431.80	14.6	16.4	−3.8	2	−36	−32.2	6.3
2431.85	14.3	16.4	−4.1	2	−36.3	−32.2	6.3

2431.90	14.1	16.4	-4.3	2	-36.5	-32.2	5.9
2431.95	13.5	16.4	-4.9	2	-37.1	-32.2	6.7
2432.00	13.4	16.4	-5	2	-37.2	-32.2	7.2
2432.05	13.3	16.4	-5.1	2	-37.3	-32.2	7.1
2432.10	13.4	16.4	-5	2	-37.2	-32.2	7.5
2432.15	13	16.4	-5.4	2	-37.6	-32.2	6.8
2432.20	12.8	16.4	-5.6	2	-37.8	-32.2	5.9
2432.25	13.1	16.4	-5.3	2	-37.5	-32.2	6.5
2432.30	13	16.4	-5.4	2	-37.6	-32.2	6.9
2432.35	12.8	16.4	-5.6	2	-37.8	-32.2	5.1
2432.40	13	16.4	-5.4	2	-37.6	-32.2	7.6
2432.45	13.2	16.4	-5.2	2	-37.4	-32.2	6.3
2432.50	12.8	16.4	-5.6	2	-37.8	-32.2	5
2432.55	13	16.4	-5.4	2	-37.6	-32.2	6.6
2432.60	12.8	16.4	-5.6	2	-37.8	-32.2	5.6
2432.65	12.7	16.4	-5.7	2	-37.9	-32.2	6.7
2432.70	12.6	16.4	-5.8	2	-38	-32.2	6.8
2432.75	12.4	16.4	-6	2	-38.2	-32.2	6.1
2432.80	12.3	16.4	-6.1	2	-38.3	-32.2	5.4
2432.85	12.2	16.4	-6.2	2	-38.4	-32.2	7
2432.90	12.1	16.4	-6.3	2	-38.5	-32.2	7.2
2432.95	11.9	16.4	-6.5	2	-38.7	-32.2	5.2
2433.00	11.6	16.4	-6.8	2	-39	-32.2	4.2
2433.05	11.9	16.4	-6.5	2	-38.7	-32.2	7.9
2433.10	11.9	16.4	-6.5	2	-38.7	-32.2	7.8
2433.15	11.9	16.4	-6.5	2	-38.7	-32.2	6.5
2433.20	11.9	16.4	-6.5	2	-38.7	-32.2	7.8
2433.25	11.8	16.4	-6.6	2	-38.8	-32.2	5.9
2433.30	11.7	16.4	-6.7	2	-38.9	-32.2	5.8
2433.35	11.7	16.4	-6.7	2	-38.9	-32.2	7.1
2433.40	11.6	16.4	-6.8	2	-39	-32.2	6.9
2433.45	11.6	16.4	-6.8	2	-39	-32.2	6.5
2433.50	11.4	16.4	-7	2	-39.2	-32.2	6
2433.55	11.4	16.4	-7	2	-39.2	-32.2	6.8
2433.60	11.4	16.4	-7	2	-39.2	-32.2	6.9
2433.65	11.1	16.4	-7.3	2	-39.5	-32.2	5.2

2433.70	11.1	16.4	−7.3	2	−39.5	−32.2	4.8
2433.75	11.1	16.4	−7.3	2	−39.5	−32.2	4.7
2433.80	11.2	16.4	−7.2	2	−39.4	−32.2	7.8
2433.85	11.1	16.4	−7.3	2	−39.5	−32.2	5.3
2433.90	11	16.4	−7.4	2	−39.6	−32.2	0.2
2433.95	10.8	16.4	−7.6	2	−39.8	−32.2	6.7
2434.00	10.7	16.4	−7.7	2	−39.9	−32.2	7.1
2434.05	10.8	16.4	−7.6	2	−39.8	−32.2	4.3
2434.10	10.4	16.4	−8	2	−40.2	−32.2	5.1
2434.15	10.8	16.4	−7.6	2	−39.8	−32.2	4.9
2434.20	10	16.4	−8.4	2	−40.6	−32.2	7.2
2434.25	10.4	16.4	−8	2	−40.2	−32.2	6.7
2434.30	10.8	16.4	−7.6	2	−39.8	−32.2	5.3
2434.35	10.7	16.4	−7.7	2	−39.9	−32.2	4.9
2434.40	10.4	16.4	−8	2	−40.2	−32.2	5.3
2434.45	10.6	16.4	−7.8	2	−40	−32.2	6.8
2434.50	10.4	16.4	−8	2	−40.2	−32.2	7.2
2434.55	10.3	16.4	−8.1	2	−40.3	−32.2	6.8
2434.60	10	16.4	−8.4	2	−40.6	−32.2	5.3
2434.65	10	16.4	−8.4	2	−40.6	−32.2	6.1
2434.70	10.1	16.4	−8.3	2	−40.5	−32.2	5.9
2434.75	10.1	16.4	−8.3	2	−40.5	−32.2	4.8
2434.80	10.1	16.4	−8.3	2	−40.5	−32.2	5.8
2434.85	10.1	16.4	−8.3	2	−40.5	−32.2	5.3
2434.90	10.1	16.4	−8.3	2	−40.5	−32.2	7.8
2434.95	10.1	16.4	−8.3	2	−40.5	−32.2	5.2
2435.00	10	16.4	−8.4	2	−40.6	−32.2	6.8
2435.05	10.2	16.4	−8.2	2	−40.4	−32.2	6.5
2435.10	10.8	16.4	−7.6	2	−39.8	−32.2	7.4
2435.15	10.4	16.4	−8	2	−40.2	−32.2	6.4
2435.20	10.4	16.4	−8	2	−40.2	−32.2	7.2
2435.25	10.4	16.4	−8	2	−40.2	−32.2	5.8
2435.30	10.4	16.4	−8	2	−40.2	−32.2	6.2
2435.35	10.4	16.4	−8	2	−40.2	−32.2	4.8
2435.40	10.4	16.4	−8	2	−40.2	−32.2	6.3
2435.45	10.1	16.4	−8.3	2	−40.5	−32.2	7.2

2435.50	10.2	16.4	−8.2	2	−40.4	−32.2	6.8
2435.55	10.3	16.4	−8.1	2	−40.3	−32.2	5.6
2435.60	10.2	16.4	−8.2	2	−40.4	−32.2	7.3
2435.65	10.4	16.4	−8	2	−40.2	−32.2	6.8
2435.70	10.4	16.4	−8	2	−40.2	−32.2	6.2
2435.75	10.8	16.4	−7.6	2	−39.8	−32.2	7.9
2435.80	10.4	16.4	−8	2	−40.2	−32.2	6.3
2435.85	10.9	16.4	−7.5	2	−39.7	−32.2	6.5
2435.90	10.4	16.4	−8	2	−40.2	−32.2	6.8
2435.95	10.8	16.4	−7.6	2	−39.8	−32.2	7.6
2436.00	10.7	16.4	−7.7	2	−39.9	−32.2	6.8
2436.05	10.6	16.4	−7.8	2	−40	−32.2	5.6
2436.10	10.4	16.4	−8	2	−40.2	−32.2	4.4
2436.15	10.6	16.4	−7.8	2	−40	−32.2	4.4
2436.20	10.8	16.4	−7.6	2	−39.8	−32.2	5.6
2436.25	10.8	16.4	−7.6	2	−39.8	−32.2	6.7
2436.30	11	16.4	−7.4	2	−39.6	−32.2	5.6
2436.35	10.6	16.4	−7.8	2	−40	−32.2	6.8
2436.40	10.8	16.4	−7.6	2	−39.8	−32.2	7.2
2436.45	10.7	16.4	−7.7	2	−39.9	−32.2	5.6
2436.50	10.8	16.4	−7.6	2	−39.8	−32.2	4.2
2436.55	10.8	16.4	−7.6	2	−39.8	−32.2	6.8
2436.60	10.9	16.4	−7.5	2	-39.7	−32.2	4.7
2436.65	10.6	16.4	−7.8	2	−40	−32.2	6.8
2436.70	10.7	16.4	−7.7	2	−39.9	−32.2	62
2436.75	10.4	16.4	−8	2	−40.2	−32.2	7.4
2436.80	10.5	16.4	−7.9	2	−40.1	−32.2	7.3
2436.85	10.7	16.4	−7.7	2	−39.9	−32.2	6.9
2436.90	10.8	16.4	−7.6	2	−39.8	−32.2	6.8
2436.95	10.3	16.4	−8.1	2	−40.3	−32.2	7.2
2437.00	10.4	16.4	−8	2	−40.2	−32.2	5.7
2437.05	10.4	16.4	−8	2	−40.2	−32.2	6.2
2437.10	10.5	16.4	−7.9	2	−40.1	−32.2	5.6
2437.15	10.5	16.4	−7.9	2	−40.1	−32.2	6.8
2437.20	10.5	16.4	−7.9	2	−40.1	−32.2	7.2
2437.25	10.7	16.4	−7.7	2	−39.9	−32.2	6.2

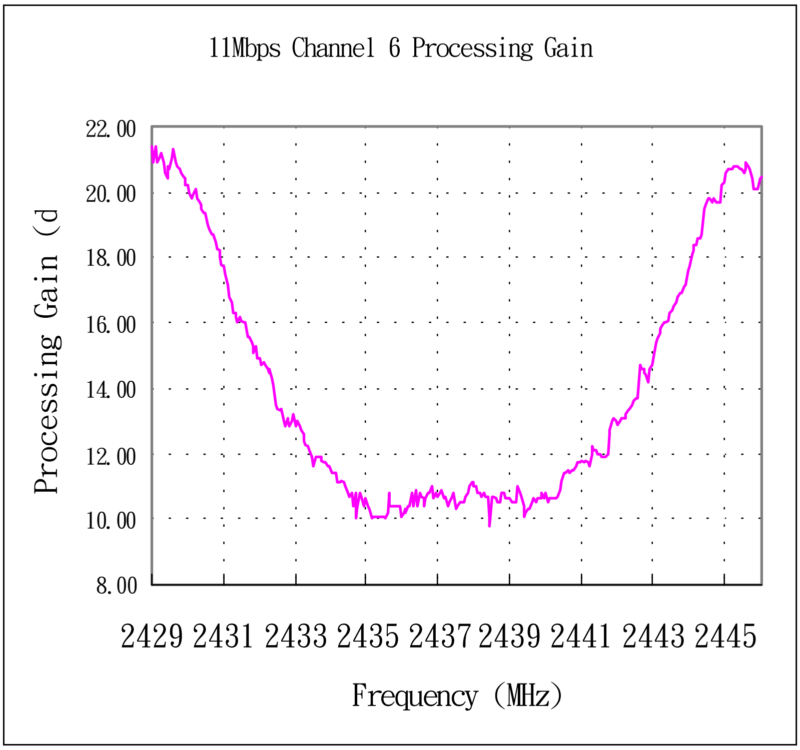
2437.30	10.8	16.4	-7.6	2	-39.8	-32.2	5.6
2437.35	11	16.4	-7.4	2	-39.6	-32.2	6.8
2437.40	11.1	16.4	-7.3	2	-39.5	-32.2	7.2
2437.45	11.1	16.4	-7.3	2	-39.5	-32.2	7
2437.50	11	16.4	-7.4	2	-39.6	-32.2	6.9
2437.55	11	16.4	-7.4	2	-39.6	-32.2	7.2
2437.60	10.8	16.4	-7.6	2	-39.8	-32.2	6.8
2437.65	10.8	16.4	-7.6	2	-39.8	-32.2	7.4
2437.70	10.7	16.4	-7.7	2	-39.9	-32.2	6.8
2437.75	10.8	16.4	-7.6	2	-39.8	-32.2	7.3
2437.80	10.7	16.4	-7.7	2	-39.9	-32.2	6.7
2437.85	10.7	16.4	-7.7	2	-39.9	-32.2	6.8
2437.90	10	16.4	-8.4	2	-40.6	-32.2	4.2
2437.95	9.8	16.4	-8.6	2	-40.8	-32.2	3.5
2438.00	10.7	16.4	-7.7	2	-39.9	-32.2	4.3
2438.05	10.7	16.4	-7.7	2	-39.9	-32.2	5.6
2438.10	10.6	16.4	-7.8	2	-40	-32.2	6.2
2438.15	10.5	16.4	-7.9	2	-40.1	-32.2	4.3
2438.20	10.5	16.4	-7.9	2	-40.1	-32.2	5.7
2438.25	10.8	16.4	-7.6	2	-39.8	-32.2	5.6
2438.30	10.8	16.4	-7.6	2	-39.8	-32.2	6.8
2438.35	10.6	16.4	-7.8	2	-40	-32.2	7.2
2438.40	10.6	16.4	-7.8	2	-40	-32.2	6.8
2438.45	10.6	16.4	-7.8	2	-40	-32.2	6.8
2438.50	10.6	16.4	-7.8	2	-40	-32.2	5.4
2438.55	10.5	16.4	-7.9	2	-40.1	-32.2	4.3
2438.60	10.5	16.4	-7.9	2	-40.1	-32.2	6.8
2438.65	10.5	16.4	-7.9	2	-40.1	-32.2	7.2
2438.70	11	16.4	-7.4	2	-39.6	-32.2	7.1
2438.75	10.8	16.4	-7.6	2	-39.8	-32.2	7.3
2438.80	10.7	16.4	-7.7	2	-39.9	-32.2	5.2
2438.85	10.4	16.4	-8	2	-40.2	-32.2	6.8
2438.90	10.1	16.4	-8.3	2	-40.5	-32.2	7.2
2438.95	10.2	16.4	-8.2	2	-40.4	-32.2	6.8
2439.00	10.3	16.4	-8.1	2	-40.3	-32.2	7.2
2439.05	10.3	16.4	-8.1	2	-40.3	-32.2	6.8

2439.10	10.5	16.4	-7.9	2	-40.1	-32.2	6.5
2439.15	10.6	16.4	-7.8	2	-40	-32.2	5.6
2439.20	10.5	16.4	-7.9	2	-40.1	-32.2	6.2
2439.25	10.6	16.4	-7.8	2	-40	-32.2	5.6
2439.30	10.6	16.4	-7.8	2	-40	-32.2	6.8
2439.35	10.6	16.4	-7.8	2	-40	-32.2	7.6
2439.40	10.8	16.4	-7.6	2	-39.8	-32.2	7.2
2439.45	10.6	16.4	-7.8	2	-40	-32.2	
2439.50	10.8	16.4	-7.6	2	-39.8	-32.2	
2439.55	10.5	16.4	-7.9	2	-40.1	-32.2	
2439.60	10.6	16.4	-7.8	2	-40	-32.2	
2439.65	10.6	16.4	-7.8	2	-40	-32.2	
2439.70	10.6	16.4	-7.8	2	-40	-32.2	
2439.75	10.6	16.4	-7.8	2	-40	-32.2	
2439.80	10.7	16.4	-7.7	2	-39.9	-32.2	
2439.85	10.7	16.4	-7.7	2	-39.9	-32.2	
2439.90	10.9	16.4	-7.5	2	-39.7	-32.2	
2439.95	11.2	16.4	-7.2	2	-39.4	-32.2	
2440.00	11.4	16.4	-7	2	-39.2	-32.2	7.7
2440.05	11.4	16.4	-7	2	-39.2	-32.2	7.2
2440.10	11.5	16.4	-6.9	2	-39.1	-32.2	6.9
2440.15	11.4	16.4	-7	2	-39.2	-32.2	6.8
2440.20	11.5	16.4	-6.9	2	-39.1	-32.2	6.5
2440.25	11.5	16.4	-6.9	2	-39.1	-32.2	6.8
2440.30	11.6	16.4	-6.8	2	-39	-32.2	6.5
2440.35	11.6	16.4	-6.8	2	-39	-32.2	6.2
2440.40	11.7	16.4	-6.7	2	-38.9	-32.2	5.6
2440.45	11.7	16.4	-6.7	2	-38.9	-32.2	5.4
2440.50	11.8	16.4	-6.6	2	-38.8	-32.2	5.6
2440.55	11.7	16.4	-6.7	2	-38.9	-32.2	4.8
2440.60	11.8	16.4	-6.6	2	-38.8	-32.2	3.4
2440.65	11.7	16.4	-6.7	2	-38.9	-32.2	6.7
2440.70	11.6	16.4	-6.8	2	-39	-32.2	6.1
2440.75	12	16.4	-6.4	2	-38.6	-32.2	5.6
2440.80	12.2	16.4	-6.2	2	-38.4	-32.2	5.1
2440.85	12.1	16.4	-6.3	2	-38.5	-32.2	6.2

2440.90	12.1	16.4	-6.3	2	-38.5	-32.2	5.6
2440.95	12	16.4	-6.4	2	-38.6	-32.2	7
2441.00	12	16.4	-6.4	2	-38.6	-32.2	7.1
2441.05	11.9	16.4	-6.5	2	-38.7	-32.2	5.8
2441.10	11.9	16.4	-6.5	2	-38.7	-32.2	6.2
2441.15	11.9	16.4	-6.5	2	-38.7	-32.2	5.3
2441.20	12	16.4	-6.4	2	-38.6	-32.2	5.6
2441.25	12.6	16.4	-5.8	2	-38	-32.2	6.2
2441.30	12.7	16.4	-5.7	2	-37.9	-32.2	7.2
2441.35	13	16.4	-5.4	2	-37.6	-32.2	5.1
2441.40	13.1	16.4	-5.3	2	-37.5	-32.2	6.8
2441.45	13	16.4	-5.4	2	-37.6	-32.2	6.5
2441.50	12.9	16.4	-5.5	2	-37.7	-32.2	6.7
2441.55	13	16.4	-5.4	2	-37.6	-32.2	5.8
2441.60	13.1	16.4	-5.3	2	-37.5	-32.2	6.2
2441.65	13.1	16.4	-5.3	2	-37.5	-32.2	6.8
2441.70	13.1	16.4	-5.3	2	-37.5	-32.2	2.2
2441.75	13.2	16.4	-5.2	2	-37.4	-32.2	4.6
2441.80	13.3	16.4	-5.1	2	-37.3	-32.2	6.2
2441.85	13.4	16.4	-5	2	-37.2	-32.2	5.4
2441.90	13.5	16.4	-4.9	2	-37.1	-32.2	6.8
2441.95	13.6	16.4	-4.8	2	-37	-32.2	6.2
2442.00	13.7	16.4	-4.7	2	-36.9	-32.2	5.6
2442.05	13.7	16.4	-4.7	2	-36.9	-32.2	6.8
2442.10	14.7	16.4	-3.7	2	-35.9	-32.2	4.2
2442.15	14.6	16.4	-3.8	2	-36	-32.2	5.9
2442.20	14.6	16.4	-3.8	2	-36	-32.2	4.4
2442.25	14.5	16.4	-3.9	2	-36.1	-32.2	6.6
2442.30	14.4	16.4	-4	2	-36.2	-32.2	7.1
2442.35	14.2	16.4	-4.2	2	-36.4	-32.2	5.6
2442.40	14.6	16.4	-3.8	2	-36	-32.2	6.4
2442.45	14.7	16.4	-3.7	2	-35.9	-32.2	6.3
2442.50	15	16.4	-3.4	2	-35.6	-32.2	6.9
2442.55	15.4	16.4	-3	2	-35.2	-32.2	7.2
2442.60	15.5	16.4	-2.9	2	-35.1	-32.2	6.2
2442.65	15.7	16.4	-2.7	2	-34.9	-32.2	5.4

2442.70	15.8	16.4	−2.6	2	−34.8	−32.2	5.1
2442.75	15.9	16.4	−2.5	2	−34.7	−32.2	4.3
2442.80	16	16.4	−2.4	2	−34.6	−32.2	6.2
2442.85	16	16.4	−2.4	2	−34.6	−32.2	5.8
2442.90	16.1	16.4	−2.3	2	−34.5	−32.2	7.2
2442.95	16.3	16.4	−2.1	2	−34.3	−32.2	6.3
2443.00	16.4	16.4	−2	2	−34.2	−32.2	5.7
2443.05	16.5	16.4	−1.9	2	−34.1	−32.2	6.5
2443.10	16.6	16.4	−1.8	2	−34	−32.2	5.5
2443.15	16.8	16.4	−1.6	2	−33.8	−32.2	5.9
2443.20	16.8	16.4	−1.6	2	−33.8	−32.2	6.4
2443.25	16.9	16.4	−1.5	2	−33.7	−32.2	6.7
2443.30	16.9	16.4	−1.5	2	−33.7	−32.2	6.2
2443.35	17.1	16.4	−1.3	2	−33.5	−32.2	5.4
2443.40	17.2	16.4	−1.2	2	−33.4	−32.2	5.1
2443.45	17.6	16.4	−0.8	2	−33	−32.2	5.6
2443.50	17.7	16.4	−0.7	2	−32.9	−32.2	4.8
2443.55	18.1	16.4	−0.3	2	−32.5	−32.2	6.8
2443.60	18.2	16.4	−0.2	2	−32.4	−32.2	4.3
2443.65	18.4	16.4	0	2	−32.2	−32.2	4.2
2443.70	18.4	16.4	0	2	−32.2	−32.2	5.6
2443.75	18.6	16.4	0.2	2	−32	−32.2	6.7
2443.80	18.6	16.4	0.2	2	−32	−32.2	7.8
2443.85	18.7	16.4	0.3	2	−31.9	−32.2	5.4
2443.90	19.5	16.4	1.1	2	−31.1	−32.2	4.9
2443.95	19.6	16.4	1.2	2	−31	−32.2	7
2444.00	19.8	16.4	1.4	2	−30.8	−32.2	5.6
2444.05	19.8	16.4	1.4	2	−30.8	−32.2	6.8
2444.10	19.7	16.4	1.3	2	−30.9	−32.2	5.3
2444.15	19.7	16.4	1.3	2	−30.9	−32.2	5.9
2444.20	19.8	16.4	1.4	2	−30.8	−32.2	5.2
2444.25	19.7	16.4	1.3	2	−30.9	−32.2	6.3
2444.30	19.7	16.4	1.3	2	−30.9	−32.2	4.8
2444.35	19.7	16.4	1.3	2	−30.9	−32.2	5.4
2444.40	20.2	16.4	1.8	2	−30.4	−32.2	4.7
2444.45	20.3	16.4	1.9	2	−30.3	−32.2	5.9

2444.50	20.6	16.4	2.2	2	-30	-32.2	7
2444.55	20.7	16.4	2.3	2	-29.9	-32.2	6.7
2444.60	20.7	16.4	2.3	2	-29.9	-32.2	4.7
2444.65	20.7	16.4	2.3	2	-29.9	-32.2	4.8
2444.70	20.7	16.4	2.3	2	-29.9	-32.2	6
2444.75	20.8	16.4	2.4	2	-29.8	-32.2	6.1
2444.80	20.8	16.4	2.4	2	-29.8	-32.2	5.9
2444.85	20.8	16.4	2.4	2	-29.8	-32.2	6.2
2444.90	20.7	16.4	2.3	2	-29.9	-32.2	7.2
2444.95	20.7	16.4	2.3	2	-29.9	-32.2	6.5
2445.00	20.6	16.4	2.2	2	-30	-32.2	6.7
2445.05	20.7	16.4	2.3	2	-29.9	-32.2	6.3
2445.10	20.9	16.4	2.5	2	-29.7	-32.2	6.2
2445.15	20.8	16.4	2.4	2	-29.8	-32.2	5.4
2445.20	20.7	16.4	2.3	2	-29.9	-32.2	5.2
2445.25	20.4	16.4	2	2	-30.2	-32.2	6
2445.30	20.1	16.4	1.7	2	-30.5	-32.2	5.6
2445.35	20.1	16.4	1.7	2	-30.5	-32.2	6.4
2445.40	20.1	16.4	1.7	2	-30.5	-32.2	6.2
2445.45	20.4	16.4	2	2	-30.2	-32.2	6.7
2445.50	20.5	16.4	2.1	2	-30.1	-32.2	7.3
Processing Gain (dB) @20th Percentile=				10.6			


11Mbps Channel 6 Processing Gain
Processing Gain (d
22.00
20.00
18.00
16.00
14.00
12.00
10.00
8.00
2429 2431 2433 2435 2437 2439 2441 2443 2445
Frequency (MHz)

Gp=(S/N)o+Mj+Lsys							
Freq. (MHz)	Gp (dB)	(S/N)o (dB)	Mj = J/S (dB)	Lsys (dB)	Jammer (dBm)	Lvl (dBm)	FER
2453.50	23.2	16.4	4.8	2	−27.2	−32	7.4
2453.55	23	16.4	4.6	2	−27.4	−32	5.8
2453.60	22.9	16.4	4.5	2	−27.5	−32	6.2
2453.65	22.5	16.4	4.1	2	−27.9	−32	6.4
2453.70	22.4	16.4	4	2	−28	−32	6.3
2453.75	22.3	16.4	3.9	2	−28.1	−32	5.8
2453.80	22.2	16.4	3.8	2	−28.2	−32	6.5
2453.85	22.3	16.4	3.9	2	−28.1	−32	6.9
2453.90	22.8	16.4	4.4	2	−27.6	−32	7.8
2453.95	22.6	16.4	4.2	2	−27.8	−32	7.2
2454.00	22.9	16.4	4.5	2	−27.5	−32	7.8
2454.05	22.7	16.4	4.3	2	−27.7	−32	5.8
2454.10	22.7	16.4	4.3	2	−27.7	−32	5.3
2454.15	22.5	16.4	4.1	2	−27.9	−32	6.2
2454.20	22.7	16.4	4.3	2	−27.7	−32	5.8
2454.25	22.5	16.4	4.1	2	−27.9	−32	6.2
2454.30	21.4	16.4	3	2	−29	−32	5.1
2454.35	21.4	16.4	3	2	−29	−32	6.2
2454.40	21.2	16.4	2.8	2	−29.2	−32	5.8
2454.45	21.2	16.4	2.8	2	−29.2	−32	5.8
2454.50	20.9	16.4	2.5	2	−29.5	−32	7.5
2454.55	20.8	16.4	2.4	2	−29.6	−32	6.3
2454.60	20.7	16.4	2.3	2	−29.7	−32	6.5
2454.65	20.6	16.4	2.2	2	−29.8	−32	5.8
2454.70	20.7	16.4	2.3	2	−29.7	−32	8.3
2454.75	20.6	16.4	2.2	2	−29.8	−32	6.2
2454.80	20.3	16.4	1.9	2	−30.1	−32	5.6
2454.85	20.2	16.4	1.8	2	−30.2	−32	6.8
2454.90	20.2	16.4	1.8	2	−30.2	−32	7.5
2454.95	20.2	16.4	1.8	2	−30.2	−32	6.8
2455.00	20.2	16.4	1.8	2	−30.2	−32	7.8
2455.05	20.1	16.4	1.7	2	−30.3	−32	6.5
2455.10	19.9	16.4	1.5	2	−30.5	−32	6

2455.15	19.8	16.4	1.4	2	-30.6	-32	6.8
2455.20	19.5	16.4	1.1	2	-30.9	-32	7
2455.25	19.5	16.4	1.1	2	-30.9	-32	6.5
2455.30	19.2	16.4	0.8	2	-31.2	-32	6.3
2455.35	19.1	16.4	0.7	2	-31.3	-32	6.8
2455.40	18.9	16.4	0.5	2	-31.5	-32	7.7
2455.45	18.3	16.4	-0.1	2	-32.1	-32	5.8
2455.50	18.3	16.4	-0.1	2	-32.1	-32	6.2
2455.55	18.2	16.4	-0.2	2	-32.2	-32	6.8
2455.60	17.9	16.4	-0.5	2	-32.5	-32	5.2
2455.65	17.5	16.4	-0.9	2	-32.9	-32	5.6
2455.70	16.7	16.4	-1.7	2	-33.7	-32	6.3
2455.75	17.3	16.4	-1.1	2	-33.1	-32	5.8
2455.80	17.1	16.4	-1.3	2	-33.3	-32	6.8
2455.85	16.9	16.4	-1.5	2	-33.5	-32	5.2
2455.90	16.9	16.4	-1.5	2	-33.5	-32	6.2
2455.95	16.8	16.4	-1.6	2	-33.6	-32	6.4
2456.00	16.7	16.4	-1.7	2	-33.7	-32	5.8
2456.05	16.5	16.4	-1.9	2	-33.9	-32	6.2
2456.10	16.3	16.4	-2.1	2	-34.1	-32	5.9
2456.15	16.2	16.4	-2.2	2	-34.2	-32	5.8
2456.20	16	16.4	-2.4	2	-34.4	-32	6.2
2456.25	16	16.4	-2.4	2	-34.4	-32	5.6
2456.30	16.6	16.4	-1.8	2	-33.8	-32	4.2
2456.35	16.3	16.4	-2.1	2	-34.1	-32	5.1
2456.40	15.9	16.4	-2.5	2	-34.5	-32	6.3
2456.45	15.2	16.4	-3.2	2	-35.2	-32	4.9
2456.50	16.5	16.4	-1.9	2	-33.9	-32	5.1
2456.55	15.6	16.4	-2.8	2	-34.8	-32	5.8
2456.60	14.8	16.4	-3.6	2	-35.6	-32	6.4
2456.65	15.1	16.4	-3.3	2	-35.3	-32	5.9
2456.70	15	16.4	-3.4	2	-35.4	-32	5.6
2456.75	15	16.4	-3.4	2	-35.4	-32	6.1
2456.80	15	16.4	-3.4	2	-35.4	-32	7
2456.85	14.8	16.4	-3.6	2	-35.6	-32	6
2456.90	14.7	16.4	-3.7	2	-35.7	-32	5.9

2456.95	14.6	16.4	−3.8	2	−35.8	−32	5.8
2457.00	14.5	16.4	−3.9	2	−35.9	−32	6
2457.05	14.3	16.4	−4.1	2	−36.1	−32	7.5
2457.10	14.7	16.4	−3.7	2	−35.7	−32	7.2
2457.15	14.3	16.4	−4.1	2	−36.1	−32	6.8
2457.20	14	16.4	−4.4	2	−36.4	−32	7.1
2457.25	14.1	16.4	−4.3	2	−36.3	−32	6.3
2457.30	14.9	16.4	−3.5	2	−35.5	−32	5.6
2457.35	14	16.4	−4.4	2	−36.4	−32	4.5
2457.40	13.8	16.4	−4.6	2	−36.6	−32	6.6
2457.45	13.8	16.4	−4.6	2	−36.6	−32	7.4
2457.50	13.7	16.4	−4.7	2	−36.7	−32	7
2457.55	13.7	16.4	−4.7	2	−36.7	−32	7.4
2457.60	13.6	16.4	−4.8	2	−36.8	−32	9
2457.65	13.5	16.4	−4.9	2	−36.9	−32	5.3
2457.70	13.4	16.4	−5	2	−37	−32	5.6
2457.75	12.9	16.4	−5.5	2	−37.5	−32	5.2
2457.80	12.9	16.4	−5.5	2	−37.5	−32	5.9
2457.85	12.7	16.4	−5.7	2	−37.7	−32	6.2
2457.90	12.8	16.4	−5.6	2	−37.6	−32	7.2
2457.95	12.8	16.4	−5.6	2	−37.6	−32	6.7
2458.00	12.7	16.4	−5.7	2	−37.7	−32	6.7
2458.05	12.8	16.4	−5.6	2	−37.6	−32	6.7
2458.10	12.7	16.4	−5.7	2	−37.7	−32	6.1
2458.15	12.8	16.4	−5.6	2	−37.6	−32	5.7
2458.20	12.8	16.4	−5.6	2	−37.6	−32	7.2
2458.25	12.8	16.4	−5.6	2	−37.6	−32	6.6
2458.30	12.7	16.4	−5.7	2	−37.7	−32	6.4
2458.35	12.6	16.4	−5.8	2	−37.8	−32	6.6
2458.40	12.5	16.4	−5.9	2	−37.9	−32	5.2
2458.45	12.5	16.4	−5.9	2	−37.9	−32	5.6
2458.50	12.4	16.4	−6	2	−38	−32	5.4
2458.55	12.3	16.4	−6.1	2	−38.1	−32	6
2458.60	12.1	16.4	−6.3	2	−38.3	−32	5.7
2458.65	12.1	16.4	−6.3	2	−38.3	−32	6
2458.70	12	16.4	−6.4	2	−38.4	−32	5.8

2458.75	12.1	16.4	-6.3	2	-38.3	-32	6.2
2458.80	12.1	16.4	-6.3	2	-38.3	-32	7.1
2458.85	11.8	16.4	-6.6	2	-38.6	-32	5.6
2458.90	11.6	16.4	-6.8	2	-38.8	-32	4.8
2458.95	11.6	16.4	-6.8	2	-38.8	-32	6.7
2459.00	11.5	16.4	-6.9	2	-38.9	-32	7.2
2459.05	11.3	16.4	-7.1	2	-39.1	-32	6.8
2459.10	11.2	16.4	-7.2	2	-39.2	-32	6.3
2459.15	11.2	16.4	-7.2	2	-39.2	-32	6.5
2459.20	11.3	16.4	-7.1	2	-39.1	-32	7.2
2459.25	11.2	16.4	-7.2	2	-39.2	-32	6.6
2459.30	11.1	16.4	-7.3	2	-39.3	-32	4.8
2459.35	11.2	16.4	-7.2	2	-39.2	-32	6.8
2459.40	11.1	16.4	-7.3	2	-39.3	-32	5.8
2459.45	11.2	16.4	-7.2	2	-39.2	-32	6.3
2459.50	11.2	16.4	-7.2	2	-39.2	-32	5.3
2459.55	11.3	16.4	-7.1	2	-39.1	-32	7.2
2459.60	11.2	16.4	-7.2	2	-39.2	-32	6.6
2459.65	11.3	16.4	-7.1	2	-39.1	-32	6.5
2459.70	11.3	16.4	-7.1	2	-39.1	-32	6.4
2459.75	11.3	16.4	-7.1	2	-39.1	-32	7.2
2459.80	11.2	16.4	-7.2	2	-39.2	-32	6.8
2459.85	11.2	16.4	-7.2	2	-39.2	-32	7.1
2459.90	11.2	16.4	-7.2	2	-39.2	-32	6.8
2459.95	11.2	16.4	-7.2	2	-39.2	-32	5.3
2460.00	11.1	16.4	-7.3	2	-39.3	-32	7.7
2460.05	11.1	16.4	-7.3	2	-39.3	-32	4.8
2460.10	11.2	16.4	-7.2	2	-39.2	-32	6.2
2460.15	11.3	16.4	-7.1	2	-39.1	-32	5.6
2460.20	11.4	16.4	-7	2	-39	-32	4.6
2460.25	11.4	16.4	-7	2	-39	-32	6.5
2460.30	11.4	16.4	-7	2	-39	-32	5.5
2460.35	11.3	16.4	-7.1	2	-39.1	-32	6.5
2460.40	11.3	16.4	-7.1	2	-39.1	-32	6.3
2460.45	11.3	16.4	-7.1	2	-39.1	-32	6.7
2460.50	11.5	16.4	-6.9	2	-38.9	-32	5.4

2460.55	11.3	16.4	-7.1	2	-39.1	-32	5.6
2460.60	11.1	16.4	-7.3	2	-39.3	-32	3.6
2460.65	11.4	16.4	-7	2	-39	-32	5.6
2460.70	11.7	16.4	-6.7	2	-38.7	-32	6.1
2460.75	11.7	16.4	-6.7	2	-38.7	-32	5.9
2460.80	11.8	16.4	-6.6	2	-38.6	-32	6
2460.85	11.7	16.4	-6.7	2	-38.7	-32	5.8
2460.90	11.5	16.4	-6.9	2	-38.9	-32	4.3
2460.95	11.7	16.4	-6.7	2	-38.7	-32	5.2
2461.00	11.8	16.4	-6.6	2	-38.6	-32	5.8
2461.05	11.8	16.4	-6.6	2	-38.6	-32	4.7
2461.10	11.7	16.4	-6.7	2	-38.7	-32	5.4
2461.15	11.7	16.4	-6.7	2	-38.7	-32	5.2
2461.20	11.7	16.4	-6.7	2	-38.7	-32	4.6
2461.25	11.7	16.4	-6.7	2	-38.7	-32	4.8
2461.30	11.6	16.4	-6.8	2	-38.8	-32	4.5
2461.35	11.7	16.4	-6.7	2	-38.7	-32	5.8
2461.40	11.8	16.4	-6.6	2	-38.6	-32	5.5
2461.45	11.8	16.4	-6.6	2	-38.6	-32	6.4
2461.50	11.9	16.4	-6.5	2	-38.5	-32	6.8
2461.55	11.9	16.4	-6.5	2	-38.5	-32	6
2461.60	12.1	16.4	-6.3	2	-38.3	-32	5.8
2461.65	11.9	16.4	-6.5	2	-38.5	-32	6.4
2461.70	12.1	16.4	-6.3	2	-38.3	-32	7.5
2461.75	11.9	16.4	-6.5	2	-38.5	-32	7.2
2461.80	11.7	16.4	-6.7	2	-38.7	-32	7.8
2461.85	11.6	16.4	-6.8	2	-38.8	-32	6.7
2461.90	11.4	16.4	-7	2	-39	-32	7.6
2461.95	11.6	16.4	-6.8	2	-38.8	-32	6.2
2462.00	11.4	16.4	-7	2	-39	-32	5.8
2462.05	11.4	16.4	-7	2	-39	-32	6.5
2462.10	11	16.4	-7.4	2	-39.4	-32	5.7
2462.15	11.4	16.4	-7	2	-39	-32	5.8
2462.20	11.6	16.4	-6.8	2	-38.8	-32	6.2
2462.25	11.7	16.4	-6.7	2	-38.7	-32	6.4
2462.30	11.9	16.4	-6.5	2	-38.5	-32	6.2

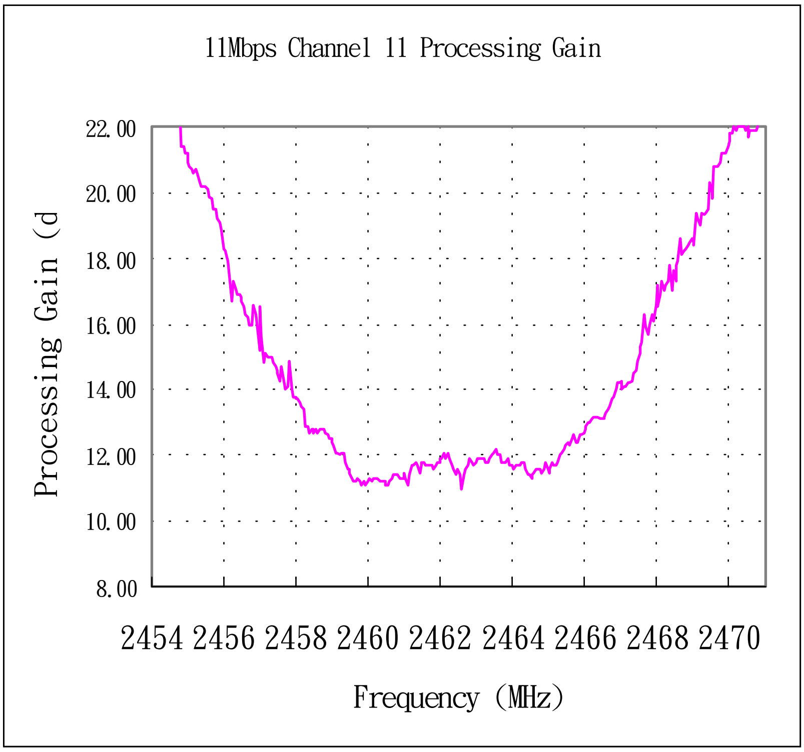
2462.35	11.8	16.4	-6.6	2	-38.6	-32	5.7
2462.40	11.7	16.4	-6.7	2	-38.7	-32	4.5
2462.45	11.8	16.4	-6.6	2	-38.6	-32	6.8
2462.50	11.9	16.4	-6.5	2	-38.5	-32	7.4
2462.55	11.9	16.4	-6.5	2	-38.5	-32	6.5
2462.60	11.9	16.4	-6.5	2	-38.5	-32	6.3
2462.65	11.9	16.4	-6.5	2	-38.5	-32	6.7
2462.70	11.9	16.4	-6.5	2	-38.5	-32	5.8
2462.75	11.8	16.4	-6.6	2	-38.6	-32	5.8
2462.80	11.8	16.4	-6.6	2	-38.6	-32	6.8
2462.85	11.9	16.4	-6.5	2	-38.5	-32	5.4
2462.90	12	16.4	-6.4	2	-38.4	-32	4.8
2462.95	12.1	16.4	-6.3	2	-38.3	-32	5.8
2463.00	12.2	16.4	-6.2	2	-38.2	-32	6
2463.05	12.2	16.4	-6.2	2	-38.2	-32	6.9
2463.10	12	16.4	-6.4	2	-38.4	-32	7.3
2463.15	12	16.4	-6.4	2	-38.4	-32	5.7
2463.20	11.8	16.4	-6.6	2	-38.6	-32	5.9
2463.25	11.8	16.4	-6.6	2	-38.6	-32	6.2
2463.30	11.8	16.4	-6.6	2	-38.6	-32	5.6
2463.35	11.9	16.4	-6.5	2	-38.5	-32	6.2
2463.40	11.7	16.4	-6.7	2	-38.7	-32	5.2
2463.45	11.7	16.4	-6.7	2	-38.7	-32	6.2
2463.50	11.6	16.4	-6.8	2	-38.8	-32	7.5
2463.55	11.6	16.4	-6.8	2	-38.8	-32	6.3
2463.60	11.7	16.4	-6.7	2	-38.7	-32	5.8
2463.65	11.7	16.4	-6.7	2	-38.7	-32	6.3
2463.70	11.7	16.4	-6.7	2	-38.7	-32	7.9
2463.75	11.8	16.4	-6.6	2	-38.6	-32	6.4
2463.80	11.8	16.4	-6.6	2	-38.6	-32	7.2
2463.85	11.6	16.4	-6.8	2	-38.8	-32	5.5
2463.90	11.4	16.4	-7	2	-39	-32	6.9
2463.95	11.4	16.4	-7	2	-39	-32	6.8
2464.00	11.3	16.4	-7.1	2	-39.1	-32	5.5
2464.05	11.4	16.4	-7	2	-39	-32	5.6
2464.10	11.5	16.4	-6.9	2	-38.9	-32	5.3

2464.15	11.6	16.4	−6.8	2	−38.8	−32	6.8
2464.20	11.6	16.4	−6.8	2	−38.8	−32	7.5
2464.25	11.6	16.4	−6.8	2	−38.8	−32	5.4
2464.30	11.5	16.4	−6.9	2	−38.9	−32	4.5
2464.35	11.6	16.4	−6.8	2	−38.8	−32	6.8
2464.40	11.8	16.4	−6.6	2	−38.6	−32	6.4
2464.45	11.6	16.4	−6.8	2	−38.8	−32	6.3
2464.50	11.5	16.4	−6.9	2	−38.9	−32	6.2
2464.55	11.6	16.4	−6.8	2	−38.8	−32	6.4
2464.60	11.8	16.4	−6.6	2	−38.6	−32	6.8
2464.65	11.7	16.4	−6.7	2	−38.7	−32	5.8
2464.70	11.7	16.4	−6.7	2	−38.7	−32	5.2
2464.75	11.8	16.4	−6.6	2	−38.6	−32	5.4
2464.80	12	16.4	−6.4	2	−38.4	−32	4.3
2464.85	12.1	16.4	−6.3	2	−38.3	−32	5.7
2464.90	12.2	16.4	−6.2	2	−38.2	−32	6.8
2464.95	12.3	16.4	−6.1	2	−38.1	−32	6.8
2465.00	12.4	16.4	−6	2	−38	−32	7.2
2465.05	12.4	16.4	−6	2	−38	−32	6.3
2465.10	12.3	16.4	−6.1	2	−38.1	−32	6.5
2465.15	12.5	16.4	−5.9	2	−37.9	−32	6.9
2465.20	12.6	16.4	−5.8	2	−37.8	−32	7.1
2465.25	12.4	16.4	−6	2	−38	−32	7.2
2465.30	12.4	16.4	−6	2	−38	−32	7
2465.35	12.6	16.4	−5.8	2	−37.8	−32	7.4
2465.40	12.6	16.4	−5.8	2	−37.8	−32	6.6
2465.45	12.7	16.4	−5.7	2	−37.7	−32	7
2465.50	12.8	16.4	−5.6	2	−37.6	−32	6.5
2465.55	12.9	16.4	−5.5	2	−37.5	−32	7.4
2465.60	13	16.4	−5.4	2	−37.4	−32	7
2465.65	13	16.4	−5.4	2	−37.4	−32	6.8
2465.70	13.1	16.4	−5.3	2	−37.3	−32	7.1
2465.75	13.2	16.4	−5.2	2	−37.2	−32	7.1
2465.80	13.2	16.4	−5.2	2	−37.2	−32	6.6
2465.85	13.2	16.4	−5.2	2	−37.2	−32	6.7
2465.90	13.1	16.4	−5.3	2	−37.3	−32	6.9

2465.95	13.1	16.4	−5.3	2	−37.3	−32	7.2
2466.00	13.1	16.4	−5.3	2	−37.3	−32	7.3
2466.05	13.2	16.4	−5.2	2	−37.2	−32	6.9
2466.10	13.3	16.4	−5.1	2	−37.1	−32	6.8
2466.15	13.4	16.4	−5	2	−37	−32	7
2466.20	13.5	16.4	−4.9	2	−36.9	−32	6.7
2466.25	13.7	16.4	−4.7	2	−36.7	−32	6.2
2466.30	13.8	16.4	−4.6	2	−36.6	−32	6.5
2466.35	14	16.4	−4.4	2	−36.4	−32	7.3
2466.40	14.2	16.4	−4.2	2	−36.2	−32	7.8
2466.45	14.2	16.4	−4.2	2	−36.2	−32	6.8
2466.50	14.3	16.4	−4.1	2	−36.1	−32	6.3
2466.55	14	16.4	−4.4	2	−36.4	−32	7.3
2466.60	14.1	16.4	−4.3	2	−36.3	−32	6.6
2466.65	14.1	16.4	−4.3	2	−36.3	−32	6.5
2466.70	14.2	16.4	−4.2	2	−36.2	−32	7.3
2466.75	14.2	16.4	−4.2	2	−36.2	−32	7.9
2466.80	14.3	16.4	−4.1	2	−36.1	−32	6.6
2466.85	14.5	16.4	−3.9	2	−35.9	−32	7.4
2466.90	14.6	16.4	−3.8	2	−35.8	−32	6.2
2466.95	14.9	16.4	−3.5	2	−35.5	−32	6.9
2467.00	15.1	16.4	−3.3	2	−35.3	−32	6.8
2467.05	15.3	16.4	−3.1	2	−35.1	−32	6.5
2467.10	15.4	16.4	−3	2	−35	−32	7.3
2467.15	16.3	16.4	−2.1	2	−34.1	−32	5.7
2467.20	15.9	16.4	−2.5	2	−34.5	−32	5.8
2467.25	15.7	16.4	−2.7	2	−34.7	−32	5.2
2467.30	16	16.4	−2.4	2	−34.4	−32	6.1
2467.35	16.3	16.4	−2.1	2	−34.1	−32	6.3
2467.40	16.1	16.4	−2.3	2	−34.3	−32	6.4
2467.45	16.6	16.4	−1.8	2	−33.8	−32	7.1
2467.50	17.2	16.4	−1.2	2	−33.2	−32	5.8
2467.55	16.5	16.4	−1.9	2	−33.9	−32	6.3
2467.60	16.9	16.4	−1.5	2	−33.5	−32	6.5
2467.65	17.3	16.4	−1.1	2	−33.1	−32	7.3
2467.70	17	16.4	−1.4	2	−33.4	−32	5.9

2467.75	17.2	16.4	-1.2	2	-33.2	-32	5.8
2467.80	17.3	16.4	-1.1	2	-33.1	-32	6.3
2467.85	17.8	16.4	-0.6	2	-32.6	-32	6.7
2467.90	17	16.4	-1.4	2	-33.4	-32	6.5
2467.95	17.6	16.4	-0.8	2	-32.8	-32	7.3
2468.00	17.3	16.4	-1.1	2	-33.1	-32	6.2
2468.05	17.8	16.4	-0.6	2	-32.6	-32	5.1
2468.10	17.9	16.4	-0.5	2	-32.5	-32	5.5
2468.15	18.6	16.4	0.2	2	-31.8	-32	5.7
2468.20	18.1	16.4	-0.3	2	-32.3	-32	6
2468.25	18.2	16.4	-0.2	2	-32.2	-32	5.9
2468.30	18.3	16.4	-0.1	2	-32.1	-32	6.1
2468.35	18.4	16.4	0	2	-32	-32	7.3
2468.40	18.5	16.4	0.1	2	-31.9	-32	7.1
2468.45	18.6	16.4	0.2	2	-31.8	-32	6.5
2468.50	18.5	16.4	0.1	2	-31.9	-32	6.3
2468.55	18.4	16.4	0	2	-32	-32	6.1
2468.60	19.4	16.4	1	2	-31	-32	5.5
2468.65	19.2	16.4	0.8	2	-31.2	-32	5.8
2468.70	19	16.4	0.6	2	-31.4	-32	5.6
2468.75	19.4	16.4	1	2	-31	-32	5.7
2468.80	19.3	16.4	0.9	2	-31.1	-32	5.7
2468.85	19.4	16.4	1	2	-31	-32	5.9
2468.90	19.5	16.4	1.1	2	-30.9	-32	5.6
2468.95	20.3	16.4	1.9	2	-30.1	-32	6.1
2469.00	20	16.4	1.6	2	-30.4	-32	6.4
2469.05	19.8	16.4	1.4	2	-30.6	-32	6.3
2469.10	20.8	16.4	2.4	2	-29.6	-32	5.6
2469.15	20.8	16.4	2.4	2	-29.6	-32	6.4
2469.20	20.8	16.4	2.4	2	-29.6	-32	7.4
2469.25	20.9	16.4	2.5	2	-29.5	-32	6.9
2469.30	21.2	16.4	2.8	2	-29.2	-32	6.7
2469.35	21.2	16.4	2.8	2	-29.2	-32	6.7
2469.40	21.2	16.4	2.8	2	-29.2	-32	6.7
2469.45	21.4	16.4	3	2	-29	-32	7.6
2469.50	21.6	16.4	3.2	2	-28.8	-32	7.7

2469.55	21.8	16.4	3.4	2	-28.6	-32	7.1
2469.60	21.8	16.4	3.4	2	-28.6	-32	6.3
2469.65	22	16.4	3.6	2	-28.4	-32	6.9
2469.70	21.9	16.4	3.5	2	-28.5	-32	6.7
2469.75	22	16.4	3.6	2	-28.4	-32	6.5
2469.80	22	16.4	3.6	2	-28.4	-32	7.1
2469.85	22	16.4	3.6	2	-28.4	-32	7.8
2469.90	22	16.4	3.6	2	-28.4	-32	7.4
2469.95	21.9	16.4	3.5	2	-28.5	-32	6.5
2470.00	22	16.4	3.6	2	-28.4	-32	6.5
2470.05	21.7	16.4	3.3	2	-28.7	-32	7
2470.10	21.9	16.4	3.5	2	-28.5	-32	6.7
2470.15	21.9	16.4	3.5	2	-28.5	-32	6.6
2470.20	21.9	16.4	3.5	2	-28.5	-32	7.8
2470.25	21.9	16.4	3.5	2	-28.5	-32	6.9
2470.30	22	16.4	3.6	2	-28.4	-32	6.5
2470.35	42.1	16.4	23.7	2	-8.3	-32	6.9
2470.40	22.1	16.4	3.7	2	-28.3	-32	6.7
2470.45	22.1	16.4	3.7	2	-28.3	-32	6.3
2470.50	22.3	16.4	3.9	2	-28.1	-32	7.1
Processing Gain (dB) @20th Percentile=				11.7			


11Mbps Channel 11 Processing Gain
Processing Gain (d
22.00
20.00
18.00
16.00
14.00
12.00
10.00
8.00
2454 2456 2458 2460 2462 2464 2466 2468 2470
Frequency (MHz)

Processing gain of Direct Sequence Spread Spetrum

Product name: SP905 Wireless LAN PCMCIA card.
Tested by: Spectrum Technologies Corporation
Prepared by: 12F-1, No. 100, Min-Chuan Road, Hsin-Tien, Taipei, Taiwan, R.O.C.

Date: Oct. 30, 2000
FCC requirements: The processing gain of a direct sequence system shall be at least 10dB. The processing gain shall be determined from the ratio in dB of the signal-to-noise ratio with the system spreading code turned off to the signal-to-noise ratio with the system spreading code turned on, as measured at the demodulated output of the receiver.

This document contains theoretical calculation and test setup, procedure, measurement data and report.

Test equipment:

Hp8593 Spectrum analyzer
Hp ESG D3000A signal generator
Hp4418A Power meter
Hp8493A attenuator 1dB steps
Hp8495D attenuator 10dB steps
Hp11636BB power spiltter
Notebook PC X2

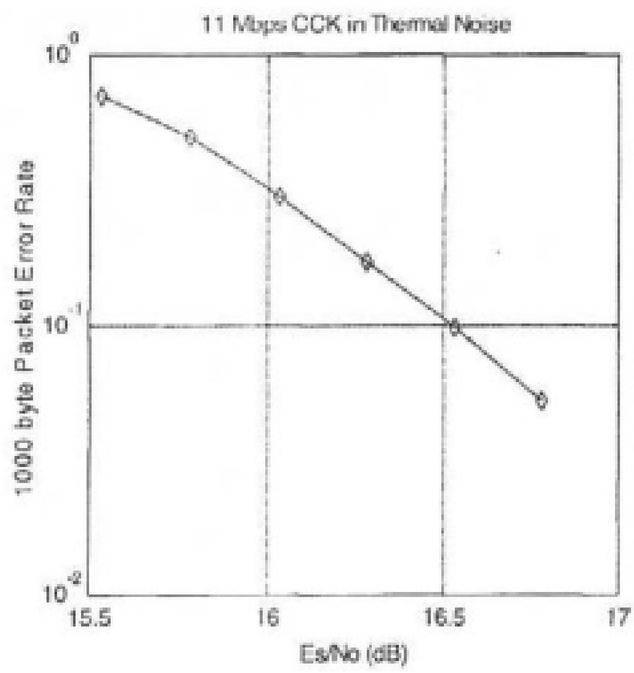
Theoretical calculation: The Processing gain is related to be jamming margin as follows:

$$Gp=(S/N)_{output} + (J/S) + L_{sys}$$

Where $BER_{reference}$ is the reference bit error ratio with its corresponding, theoretical output signal to noise ratio per symbol, $(S/N)_{output}$, (J/S) is the jamming margin(jamming signal power relative to desired signal power), and L_{sys} is the system losses.

- For 5.5Mbps and 11Mbps case: The HFA 3861A direct sequence spread spectrum baseband processor use CCK modulation which is a form of M-ary Orthogonal Keying. The Probability of error for generalized M-ary orthogonal signaling using coherent demodulation is given by:

$$P_e = 1 - P_{c1} = 1 - \frac{1}{\sqrt{2\pi}} \int_{\frac{S_{01}}{N_o}}^{\infty} \left[2\left(1 - Q\left\{ z + \sqrt{2\frac{E_b}{\eta}} \right\}\right)\right]^{\frac{M}{2}-1} e^{\left\{-\frac{z^2}{2}\right\}} dz$$



So the FER performance curve is given by[1] as left graph:

Therefore:

Gp= (Es/No)o+ (J/S) + Lsys=16.4+2.0+(J/S)

Gp=18.4+(J/S) must >10dB

For the case of the HFA3861A, the bit rates are 1,2, 5.5 and 11Mbps. The corresponding symbol rates are 1, 1, 1.375 and 1.375 MSPS. The chip rate is always 11MCps, so the ratio of chip rate to symbol rate is 11.:1 for the1 and 2Mbps and 8:1 for 5.5 and 11Mbps rates. Since the symbol rate to bit rate is less than 10 for the higher rates, we supply the theoretical processing gain and coding are utilized. This is a reasonable in that they cannot be sperated in the demodulation process. If a separable FEC coding scheme were used, we would not be comfortable making this assertion.

As can be seen from the curve of figure 1, the Es/No is 16.4dB at the PER of 8%. It is well know that the Eb/No of BPSK is 9.6dB for 1e-5BER, so therefore the coding gain of CCK over BPSK is 2.2dB. We add this to the processing gain of 9B to get 11.2dB overall processing gain for the CW jamming test.

Taking the calculation above, if the (J/S)>-8.4dB then the equipment passes the CW jamming test.

- For 1&2Mbps case: The modulation is either DBPSK or DQPSK for 1and 2Mbps. With differential coding, there is and error extension factor of 2 which from the fact that if one symbol is error, then the next will be demodulated in error too since it's phase is dependant on the change of phase from symbol to symbol. In DBPSK, this result is a simple factor of two in BER. With DQPSK, the picture is a little muddied in that a symbol error may cause one or two bit errors since two bits are carried per symbol. From the book of Fig.7.2, Viterbi, A.J. Principles of Coherent Communications, Page 192 (New York; McGraw-Hill, 1996), the Eb/No of BPSK is 9.6dB. When operating DQPSK at 2Mbps, the Eb/No remains essentially the same, but the Es/No goes up by 3dB. So the (S/N)o is 12.6.

Test procedure:

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

1. Signal Power at receiver is approximately –60dBm.
2. Signal Power at power meter between –20 and –30dBm.
3. Use spectrum analyzer to monitor test.
4. Ensure that CW jammer generator RF output is disabled and measure the power at the power meter port using Hp4418B power meter. This is relative power, Sr.
5. Disable TX and set CW jammer output frequency equal to the carrier frequency and enable generator output. Set reference CW jammer power level at power meter port 8.4dB below Sr.
6. Disable CW jammer and re-establish Link. FER test should be essentially error free.
7. Enable the CW jammer at the reference power level and verify that FER at the reference power level and verify that FER test indicate less than 8%.
8. Alternatively, adjust the CW jammer level to that which causes 8% FER.
9. Repeat Step 7 for uniform steps in frequency increments of 50KHz across the receiver passband with the CW jammer. In this case, the receiver passband is ± 8.5MHz

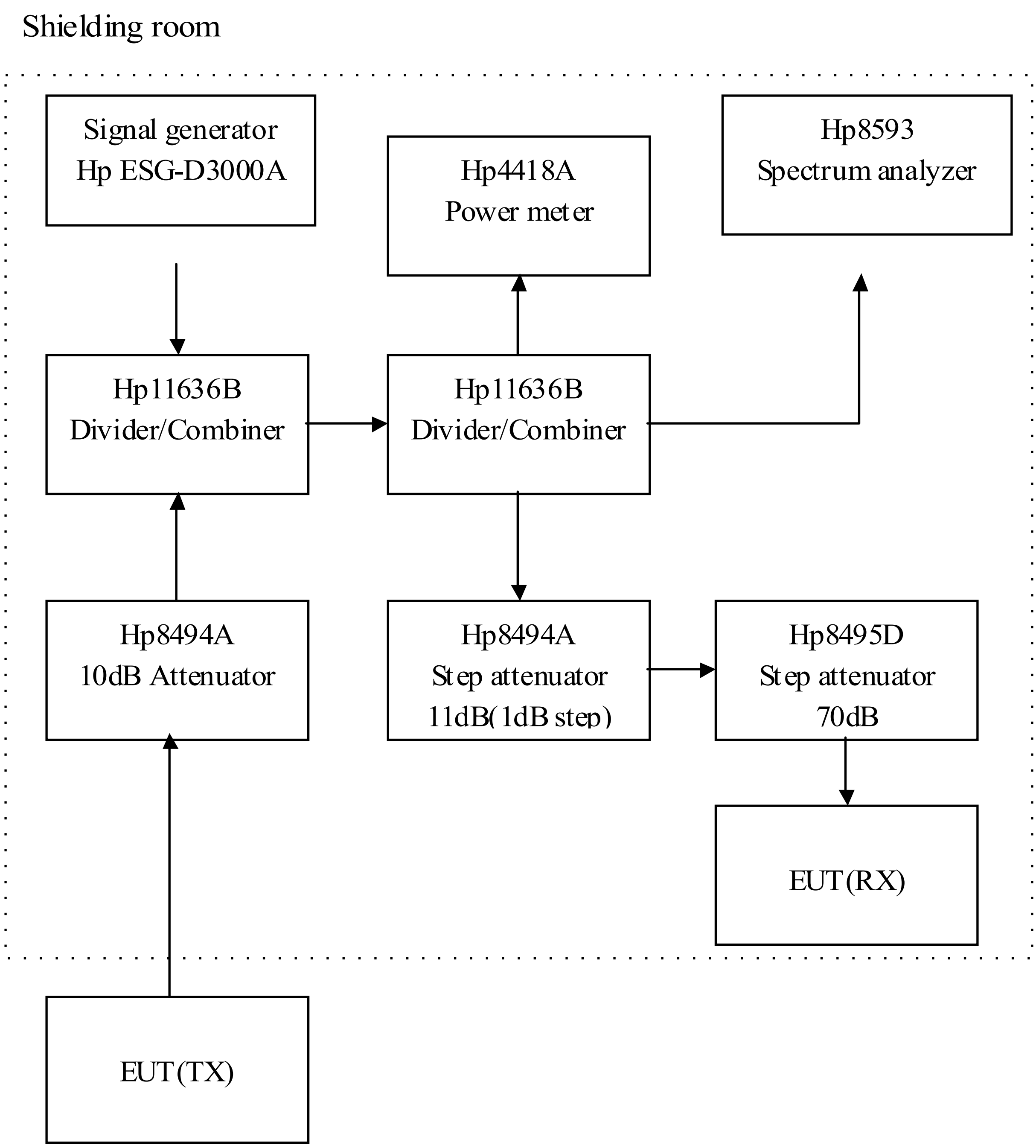
Test setup: as shown at next page

Processing gain test result summary:

Frequency channel	Frequency	Data rate(Mbps)	Gp(dB)
1	2412MHz	11	11.5
6	2437MHz	11	10.6
11	2462MHz	11	11.7
1	2412MHz	2	12
6	2437MHz	2	12.6
11	2462MHz	2	11.9

Reference

[1]. Intersil processing gain test document(Attached file).



Processing gain test setup

Appendix B

Intersil Corporation Certification Report

Testing for Compliance with FCC Rules 15-247e

Theoretical BER Curves for the IEEE 1 and 2Mbps Modulations

11Mbps Channel 1 Processing Gain

11Mbps Channel 6 Processing Gain

11Mbps Channel 11 Processing Gain

2Mbps Channel 6 Processing Gain

Certification Report on Compliance with Respect to FCC CFR 47, Para. 15.247(e)
Measurement of Processing Gain of Direct Sequence Spread Spectrum

Product: Intersil HWB3163 Rev B WLAN PCMCIA

Tested by: Intersil Corp.
2401 Palm Bay Rd.
Palm Bay, FL 32905

Prepared by: Robert J. Rood, Staff Eng.
Ph (407)724-7108
Fax(407)724-7886
e-mail: rrood@intersil.com

Date: October 14, 1999

ENGINEERING SUMMARY AND CERTIFICATION

This report contains the results of the engineering evaluation performed on an Intersil Wireless LAN PC Card, Model HWB3163 Rev B. The tests were carried out in accordance with FCC CFR 47, Para. 15.247(e).

Robert Rood is a Wireless Applications Staff Engineer at Intersil Corporation. Intersil is a new independent company as of August 13, 1999, previously known as Harris Semiconductor. Robert received a BSEE from the University of Florida in 1979 and his Masters of Science in Engineering Management from Florida Tech in 1988. He joined Harris Semiconductor in 1983 as a Test Engineer after 3 ½ years with Burr Brown Research Corp. He was promoted to Test Staff Engineer in 1989 and moved into Applications in 1991 where he has built on his experience with high speed linear and currently leads the wireless radio development team.

I certify that this data was taken by me or at my direction and to the best of my knowledge and belief, is true and accurate. Based on the test results, it is certified that the product meets the requirements as set forth in the above specification.

Submitted by: Robert Rood __________ Date: Nov 11, 1999
Staff Engineer, Wireless Applications, Intersil Corp.

Processing Gain of a Direct Sequence Spread Spectrum, FCC CFR 47, Para. 15.247(e)

Product Name: HWB3163 Rev B

FCC Requirements: The processing gain of a direct sequence system shall be at least 10dB. The processing gain shall be determined from the ratio in dB of the signal-to-noise ratio with the system spreading code turned off to the signal-to-noise ratio with the system spreading code turned on, as measured at the demodulated output of the receiver.

Environmental Conditions: Room Temperature and Humidity: 25^{o}C and 50%.

Power Input: DC Power from a laptop computer.

Test Equipment:
- Hewlett Packard Spectrum Analyzer, Model HP8593E 9kHz to 22GHz
- Marconi Signal Generator, Model 2031, Freq. Range 10kHz to 2.7GHz
- Hewlett Packard Power Meter, Model HP438A
- Hewlett Packard Power Sensor, Model HP8481D, -20 to -70dBm
- Hewlett Packard Attenuators, Model HP8493A, 6dB and 10dB
- Hewlett Packard Step Attenuator, Model HP8494A, 1dB steps
- Hewlett Packard Step Attenuator, Model HP8495D, 10dB steps
- Hewlett Packard Power Splitter, Model HP11667B
- Campaq Laptop Computers (Qty 2), Model Armada 1700

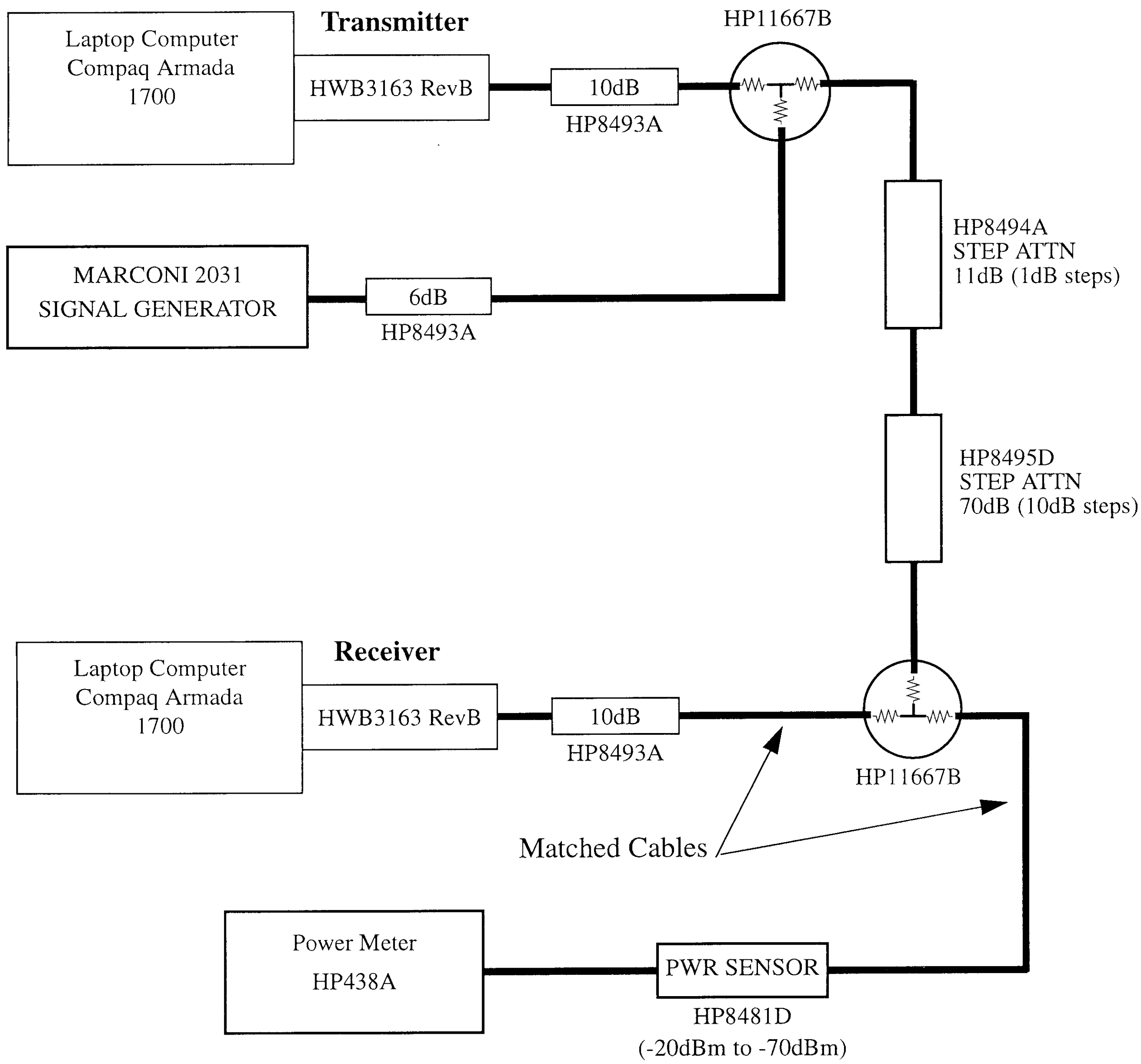
Method of Measurement: Jamming Margin Method. The processing gain may be measured using the CW jamming margin method. Figure 1 shows the test configuration. The test consists of stepping a signal generator in 50kHz increments across the passband of the system. At each point, the generator level required to produce the recommended Bit Error Rate (BER) is recorded. This level is the jammer level. The output power of the transmitting unit is measured at the same point. The Jammer to Signal (J/S) ratio is the calculated. Discard the worst 20% of the J/S data points. The lowest remaining J/S ratio is used when calculating the Process Gain.

Theoretical Calculation: The use of 8% FER frame error rate (or PER packet error rate) as a substitute for the recommended BER bit error rate and the ideal signal to noise ratio per symbol (Es/No) is derived in the attached documents; "Testing for compliance with FCC rules 15-247e", by Carl Andren and "Theoretical BER curves for the IEEE 1 and 2 Mbps modulations" by Carl Andren.

Engineering Summary: Processing Gain Results Summary

Frequency Channel	Data Rate(Mbps)	Gp (dB)
1	11	11.5
6	11	11.4
11	11	12
6	2	12.5

Processing Gain Test Set Up



Testing for compliance with FCC rules 15-247e

Carl Andren
intersil Corporation
October 7, 1999
candren@intersil.com
407-724-7535

Scope

This report presents the test procedure, test configuration and test data associated with a FCC Part 15.247 (e) Jamming Margin test for the indirect measurement of processing gain.

Applicable Reference Documents.

1. "Operation within the bands 902-928 MHz, 2400-2483.5, and 5725-5850 MHz" ***Title 47 Part 15 section 247 (e) Code of Federal Regulations***. **(47 CFR 15.247).**

2. "Report and Order: Amendment of Parts 2 and 15 of the Commission's Rules Regarding Spread Spectrum Transmitters. Appendix C: 'Guidance on Measurements for Direct Sequence Spread Spectrum Systems" ***FCC 97-114. ET Docket No. 96-8, RM-8435, RM-8608, RM-8609.***

3. "HFA3861A Direct Sequence Spread Spectrum Baseband Processor" ***Harris Corporation Semiconductor Sector Preliminary Data Sheet***, Melbourne FL, July 1999.

4. " M-ary Orthogonal Keying BER Curve",

Test Background and Procedure.

According to FCC regulations [1], a direct sequence spread spectrum system must have a processing gain, G_p of at least 10 dB. Compliance to this requirement can be shown by demonstrating a relative bit-error-ratio (BER) performance improvement (and corresponding signal to noise ratio per symbol improvement of at least 10 dB) between the case where spread spectrum processes (coding, modulation) are engaged relative to the processes being bypassed. In some practical systems, the spread spectrum processing cannot simply be bypassed. In these cases, the processing gain can be indirectly measured by a jamming margin test [2]. In accordance with the new NPRM 99-231, if the vendor has a system with less than 10 chips per symbol, the CW jamming results must be supported by a theoretical explanation of the system processing gain.

Theoretical calculations

The processing gain is related to the jamming margin as follows [2]:

$$G_p = \left(\frac{S}{N}\right)_{output} + \left(\frac{J}{S}\right) + L_{system}$$

Where $BER_{REFERENCE}$ is the reference bit error ratio with its corresponding, theoretical output signal to noise ratio per symbol, $(S/N)_{output}$, (J/S) is the jamming margin (jamming signal power relative to desired signal power), and L_{system} are the system implementation losses.

The maximum allowed total system implementation loss is 2 dB.

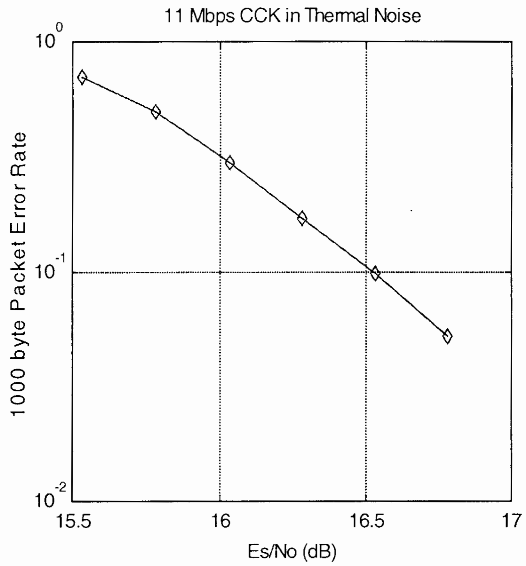
The HFA3861A direct sequence spread spectrum baseband processor uses CCK modulation which is a form of M-ary Orthogonal Keying. The BER performance curve is given by [5]:

" The probability of error for generalized M-ary Orthogonal signaling using coherent demodulation is given by:

$$P_e = 1 - P_{c1} = 1 - \frac{1}{\sqrt{2\pi}} \int_{-\frac{S_{01}}{N_0}}^{\infty} \left[2(1 - Q\left\{ z + \sqrt{2\frac{E_b}{\eta}} \right\}) \right]^{\frac{M}{2}-1} \exp\left\{ -\frac{z^2}{2} \right\} dz$$

This integral cannot be solved in closed form, and numerical integration must be used. This is done in a MATHCAD environment and is displayed in graphical format.

1.1 1000 byte PER vs. Es/No



The reference PER is specified as 8% . The corresponding Es/No (signal to noise ratio per symbol) is 16.4 dB. The Es/No required to achieve the desired BER with maximum system implementation losses is 18.4 dB. The minimum processing gain is again, 10 dB, therefore:

$$G_p = \left(\frac{E_s}{N_o}\right)_{output} + \left(\frac{J}{S}\right) + L_{system} = 16.4dB + 2.0dB + \left(\frac{J}{S}\right) \geq 10dB$$

$$G_p = 18.4\,dB + \left(\frac{J}{S}\right) \geq 10dB$$

The minimum jammer to signal ratio is as follows:

$$\left(\frac{J}{S}\right) \geq -8.4\,dB$$

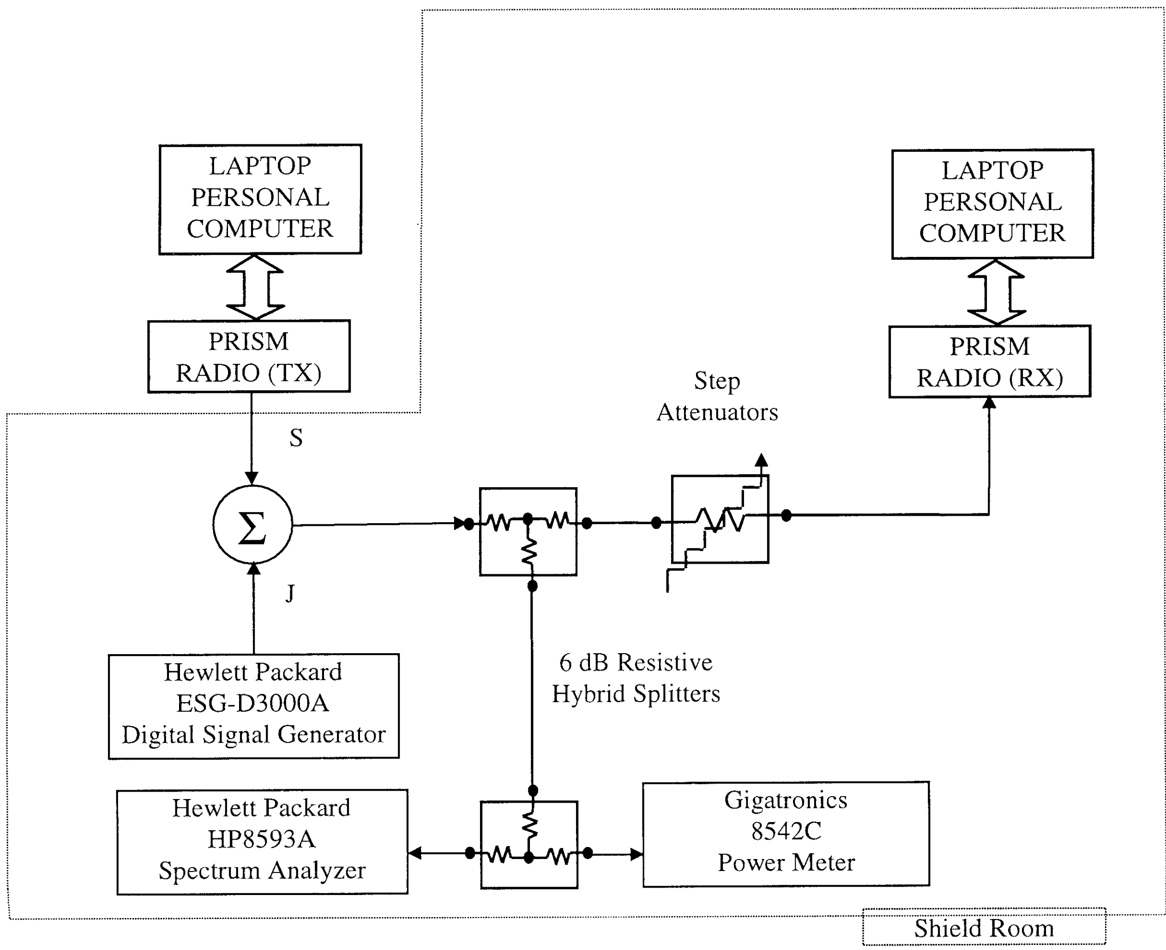
For the case of the HFA3861A, the bit rates are 1, 2, 5.5, and 11 Mbps. The corresponding symbol rates are 1, 1, 1.375, and 1.375 MSps. The chip rate is always 11 MCps, so the ratio of chip rate to symbol rate is 11:1 for the 1 and 2 Mbps rates and 8:1 for the 5.5 and 11 Mbps rates. Since the symbol rate to bit rate is less than 10 for the higher rates, we supply the theoretical processing gain calculation for these cases where both spread spectrum processing gain and coding gain are utilized. This is reasonable in that they cannot be separated in the demodulation process. If a separable FEC coding scheme were used, we would not be comfortable making this assertion.

As can be seen from the curve of figure 1, the Es/N0 is 16.4 dB at the PER of 8%. This PER can be related to a BER of 1e-5 on 1000 byte packets. With 8 bits per symbol, the Eb/N0 is then 7.4 dB or 9 dB less than the Es/N0. It is well known that the Eb/N0 of BPSK is 9.6 dB for 1e-5 BER, so therefore the coding gain of CCK over BPSK is 2.2 dB. We add this to the processing gain of 9 dB to get 11.2 dB overall processing gain for the CW jammer test.

Taking the calculations above, if the $\left(\frac{J}{S}\right) \geq -8.4\,dB$ then the equipment passes the CW jamming test.

Test Configuration: CW Jamming Margin (15.247) (e)

Basic Test Block Diagram



Test Procedure

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:

1. Signal Power at receiver approximately -60 dBm (above thermal sensitivity such that thermal noise does not cause bit errors).

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

3. Use spectrum analyzer to monitor test.

4. 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.

5. 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 8.4 dB below S_r (minimum J/S, or 10 dB processing gain reference level). Note the power level setting on the generator, this is the reference CW Jammer power setting, J_r.

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

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

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

9. 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 MHz.

The number of points where the PER fails to achieve 8% (is higher than 8%) is determined and if this is above 20% of the total, the test is failed otherwise it is passed.

The margin by which the radio passes the test (for informational purposes) can be determined from the average of the remaining points' PERs scaled on the PER curve above.

The numerical data associated with the following radio channels is tabulated and presented for:

Channel 1: 2412 MHz
Channel 6: 2437 MHz
Channel 11: 2462 MHz

Theoretical BER curves for the IEEE 1 and 2 Mbps modulations

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The expected BER versus Eb/N0 curves for these cases may be determined as follows.

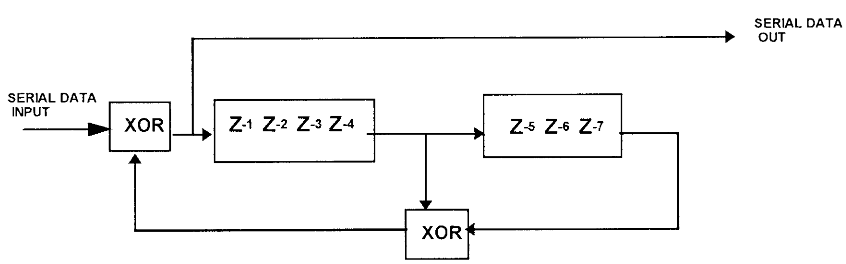
Differential error extension.

The modulation is either DBPSK or DQPSK for 1 and 2 Mbps. With differential coding, there is an error extension factor of 2 which comes from the fact that if one symbol is in error, then the next will be demodulated in error too since it's phase is dependent on the change of phase from symbol to symbol. In DBPSK, this results in a simple factor of two in BER. With QDQPSK, the picture is a little muddied in that a symbol error may cause one or two bit errors since two bits are carried per symbol. The IEEE 802.11 modulations use Grey coding of the phase so that usually only one bit error occurs with a symbol error. Sometimes, two bit errors occur, but this is infrequent at the BER considered. The bit error pattern can be adjacent, separated by one or separated by two for the two error case. This will be shown to be important in descrambling.

De-Scrambling Error Extension

The IEEE 802.11 modulation is scrambled with a self synchronizing scrambler. This scrambler implements a polynomial multiply operation using a feed back shift register configuration as shown in figure 1.

Scrambler Polynomial; $G(z)=Z^{-7}+Z^{-4}+1$



It mixes two taps out of a 7 bit shift register with the data stream. The shift register is fed the received data and any error will propagate through the register for the next 7 clocks. As the error bit passes each of the taps, it will contaminate the output data. Thus each input error can produce several errors on the output. The bit error rate has to be adjusted to account for this effect. For the IEEE 802.11 modulation, taps at registers 4 and 7 are used. In BPSK mode, this produces an error extension of 3. Thus, for an output rate of 10^{-5}, the input rate must be $0.33 * 10^{-6}$ which requires that the Eb/N0 be increased by 0.5 dB. In QPSK mode, the errors can be non adjacent since they are symbol errors and the bit in error can be either the first or second of the dibits. This makes it possible for some errors to cancel in the de-scrambler. Therefore the error extension can be either 2 or 3 in this case.

What we see when running the BER test is that the errors generally occur in groups of 6 with occasional 4s.

The overall effect is to move where we operate on the BER curve. The curve below shows the resulting BER versus Eb/N0 curve. It is well known that a simple BPSK link operates at 9.6 dB for 1e-5 BER. With the error extension effect, we see that at that Eb/N0, the error rate is 6 e-5. Or, conversely, we must operate at 10.3 dB to get 1e-5.

When operating DQPSK at 2 Mbps, the Eb/N0 remains essentially the same, but the Es/N0 goes up by 3 dB. For the purposes of the FCC testing for CW jamming, we add the allowed 2 dB for implementation loss to get a net Es/N0 of 15.3 dB.