Flom Test Labs
EMI, EMC, RF Testing Experts Since 1963

toll-free: (866) 311-3268
fax: (480) 926-3598
http://www.flomlabs.com
info@flomlabs.com

Date: January 28, 2008

Applicant: Nucomm Incorporated
101 Bilby Road, Bldg. 2
Hackettstown, NJ 07840

Attention of: George Williamson
Ph: (908) 852-3700
Fax:
Email: gwilliamson@nucomm.com

Equipment: Amplifier
FCC ID: I4U23UHPA-P10
FCC Rules: 74 (F)

Gentlemen:

Enclosed please find your copy of the Engineering Test Report for which you are subject to the restrictions as listed on the attached summary.

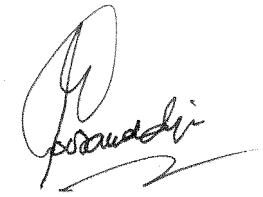
Once a Telecommunication Certification Body (TCB) issues a Grant the Federal Communication Commission (FCC) has 30 days to review the application and request added information. It is your decision whether or not to market the equipment subject to a possible recall before the end of the 30 days.

If your equipment is still retained by us, it will be returned to you 30 days after approval is achieved. Our invoice for services has been directed to your Accounts Payable Department.

For any additional information please contact us.

Thank you.

Sincerely yours,



Hoosamuddin S. Bandukwala, Lab Director

enclosure(s)
HSB/mdw

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Summary of Restrictions

1. All submissions to the FCC are subject to **their** Examiner's interpretation.

2. Please allow from 60 to 90 days before hearing from the FCC with regard to any submission.

3. The FCC can set aside any action; modify or set aside any action, within 30 days. (FCC Rule 1.108, 1.113).

4. Under Rule 2.803, if device is not type accepted/certificated then it must **not** be sold, leased, offered for sale, imported, shipped or distributed or advertised for sale.

5. FCC can revoke its certificates at any time if the equipment does not meet or **continue** to meet their Rules. (Rule Parts 2.927, 2.939).

6. FCC can request a sample at any time (2.936).

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Date: January 28, 2008

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

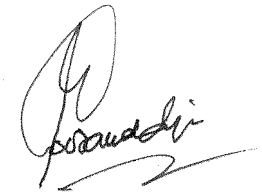
Applicant: Nucomm Incorporated
Equipment: Amplifier
FCC ID: I4U23UHPA-P10
FCC Rules: 74F

Dear Gentleman:

On behalf of the Applicant, enclosed please find Application Form 731, Engineering Test Report and all pertinent documentation, the whole for approval of the referenced equipment as shown.

We trust the same is in order. Should you need any further information, kindly contact the writer who is authorized to act as agent.

Best regards,



Hoosamuddin S. Bandukwala, Lab Director

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Test Report

for

Amplifier

Model: 23UHPA-AD-P10-BD

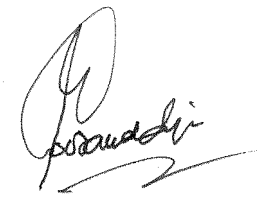
to

Federal Communications Commission

Rule Part(s) 74F

Date of report: January 28, 2008
Date of Revised Report: September 29, 2008

On the Behalf of the Applicant:	Nucomm Incorporated
At the Request of:	Nucomm Incorporated 101 Bilby Road, Bldg. 2 Hackettstown, NJ 07840
Attention of:	George Williamson Ph: (908) 852-3700 Fax: Email: gwilliamson@nucomm.com



Reviewed by: Hoosamuddin S. Bandukwala, Lab Director

Flom Test Labs
3356 North San Marcos Place, Suite 107
Chandler, Arizona 85225-7176
(866) 311-3268 phone, (480) 926-3598 fax

List of Exhibits

(FCC **Certification** (Transmitters) - Revised 9/28/98)

Applicant: Nucomm Incorporated

FCC ID: I4U23UHPA-P10

By Applicant:

1. Letter of Authorization

2. Confidentiality Request: 0.457 And 0.459

3. Identification Drawings, 2.1033(c)(11)
   - Label
   - Location of Label
   - Compliance Statement
   - Location of Compliance Statement

4. Photographs, 2.1033(c)(12)

5. Documentation: 2.1033(c)
   - (3) User Manual
   - (9) Tune Up Info
   - (10) Schematic Diagram
   - (10) Circuit Description
   - Block Diagram
   - Parts List
   - Active Devices

6. MPE/SAR Report

By F.T.L.:

A. Testimonial & Statement of Certification

The Applicant has been cautioned as to the following:

15.21 **Information to the User**.

The users manual or instruction manual for an intentional 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.

15.27(a) **Special Accessories**.

Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge.

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.

Testimonial and Statement of Certification

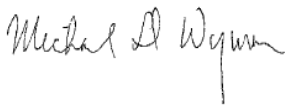
This is to Certify:

1. **That** the application was prepared either by, or under the direct supervision of, the undersigned.

2. **That** the technical data supplied with the application was taken under my direction and supervision.

3. **That** the data was obtained on representative units, randomly selected.

4. **That**, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.



Certifying Engineer: Michael Wyman

Flom Test Labs
3356 North San Marcos Place, Suite 107
Chandler, Arizona 85225-7176
(866) 311-3268 phone, (480) 926-3598 fax

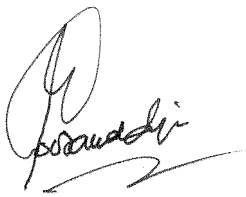
Table of Contents

Required information per ISO 17025-2005, paragraph 5.10.2:

a) **Test Report**

b) Laboratory: (FCC: 31040/SIT) (Canada: IC 2044-A)	Flom Test Lab 3356 N. San Marcos Place, Suite 107 Chandler, AZ 85225
c) Report Number:	d0740003
d) Client:	Nucomm Incorporated 101 Bilby Road, Bldg. 2 Hackettstown, NJ 07840
e) Identification:	Amplifier Model # 23UHPA-AD-P10-BD
EUT Description:	Video Booster Amplifier
f) EUT Condition:	Not required unless specified in individual tests.
g) Report Date: EUT Received:	January 28, 2008
h, j, k):	As indicated in individual tests.
i) Sampling method:	No sampling procedure used.
l) Measurement Uncertainty:	In accordance with FTL internal quality manual.

m) Reviewed by:



Hoosamuddin S. Bandukwala, Lab Director

n) Results:	The results presented in this report relate only to the item tested.
o) Reproduction:	This report must not be reproduced, except in full, without written permission from this laboratory.

Accessories used during testing:

Type	Quantity	Manufacturer	Model	Serial No.	FCC ID

Sub-part 2.1033(c)(14):

Test and Measurement Data

All tests and measurement data shown were performed in accordance with FCC Rules and Regulations, Volume II; Part 2, Sub-part J, Sections 2.947, 2.1033(c), 2.1041, 2.1046, 2.1047, 2.1079, 2.1051, 2.1053, 2.1055, 2.1057 and the following individual Parts:

____ X ____ 74 Subpart F – Television Auxiliary Broadcast Transmitter

Standard Test Conditions and Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI/TIA-603-C-2004, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Measurement results, unless otherwise noted, are worst-case measurements.

A2LA

"A2LA has accredited Flom Test Labs, Chandler, AZ for technical competence in the field of Electrical testing. The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO 17025:2005 'General Requirements for the Competence of Testing and Calibration Laboratories' and any additional program requirements in the identified field of testing."

Please refer to www.a2la.org for current scope of accreditation.

Certificate number: 2152.01

ACCREDITED
CERT NO: 2152-01

FCC OATS Reg. #933597

IC Reg. # 2044A-1

List of General Information Required for Certification

In Accordance with FCC Rules and Regulations,
Volume II, Part 2 and to

Sub-part 2.1033
(c)(1):

Name and Address of Applicant: Nucomm Incorporated
101 Bilby Road, Bldg. 2
Hackettstown, NJ 07840

Manufacturer: Nucomm Incorporated
101 Bilby Road, Bldg. 2
Hackettstown, NJ 07840

(c)(2):**FCC ID**: I4U23UHPA-P10

Model Number: 23UHPA-AD-P10-BD

(c)(3): **Instruction Manual(s):**

Please see attached exhibits

(c)(4): **Type of Emission**: QPSK, 64-QAM

(c)(5): **Frequency Range, MHz**: 1999 – 2101 2450 - 2500

(c)(6): **Power Rating, Watts**: 38.83 dBm (7.64W)
____ Switchable ____ Variable ____ N/A

FCC Grant Note:

(c)(7): **Maximum Allowable Power, Watts**: 45.0

DUT Results: Passes x Fails _____

Subpart 2.1033 (continued)

(c)(8): Voltages & currents in all elements in final RF stage, including final transistor or solid-state device:

Collector Current, A	=	4.8
Collector Voltage, Vdc	=	11.7
Supply Voltage, Vdc	=	12.0

(c)(9): **Tune-Up Procedure**:

Please see attached exhibits

(c)(10): **Circuit Diagram/Circuit Description**:

Including description of circuitry & devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation and limiting power.

Please see attached exhibits

(c)(11): **Label Information**:

Please see attached exhibits

(c)(12): **Photographs**:

Please see attached exhibits

(c)(13): **Digital Modulation Description**:

___ Attached Exhibits
_x_ N/A

(c)(14): **Test and Measurement Data**:

Follows

Test Results Summary

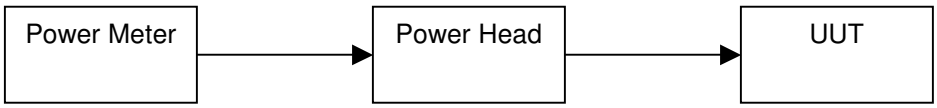
Specification	Test Name	Pass, Fail, N/A	Comments
2.1046(a)	Carrier Output Power (Conducted)	Pass	
2.1046(a)	ERP Carrier Power (Output)	Pass	
2.1046(a)	RF Power Output (Radiated)	Pass	
2.1051	Unwanted Emissions (Transmitter Conducted)	Pass	
2.1053(a)	Field Strength of Spurious Radiation	Pass	
2.1049(c) (1)	Emission Masks (Occupied Bandwidth)	N/A	The EUT is an amplifier
2.1047(a)	Audio Low Pass Filter (Voice Input)	N/A	The EUT is an amplifier
2.1047(a)	Audio Frequency Response	N/A	The EUT is an amplifier
2.1047(b)	Modulation Limiting	N/A	The EUT is an amplifier
2.1055(a) (1)	Frequency Stability (Temperature Variation)	N/A	The EUT is an amplifier
2.1055(b) (1)	Frequency Stability (Voltage Variation)	N/A	The EUT is an amplifier
2.202(g)	Necessary Bandwidth and Emission Bandwidth	N/A	The EUT is an amplifier

Name of Test: Carrier Output Power (Conducted)
Specification: **Engineer:**
Test Equipment Utilized: i00317, i00218 **Test Date: 7/12/08**

Measurement Procedure

The Unit Under Test (UUT) was connected directly to a power meter input. The peak readings were taken and the result was then compared to the limit.

Test Setup



Transmitter Peak Output Power

Power Setting	Frequency, MHz	RF Power, dBm
High Power	1999.000	38.83
	2050.000	38.54
	2101.000	38.79
	2458.000	38.61
	2475.000	38.47
	2491.000	38.32
Low Power	1999.000	33.06
	2050.000	32.85
	2101.000	33.00
	2458.000	32.89
	2475.000	32.75
	2491.000	32.60

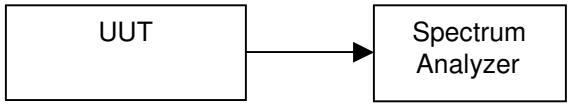
Name of Test: Conducted Spurious Emissions
Specification: 2.1047
Test Equipment Utilized: i00049 **Test Date: 7/15/08**

Test Procedure

The UUT was connected directly to a spectrum analyzer to verify that the UUT met the requirements for spurious emissions. The reference level was offset for the peak power output with the resolution bandwidth set for 1 MHz. The frequency range from 30 MHz to the 10th harmonic of the fundamental transmitter was observed. Only detectable spurious emissions were recorded and plotted. The reference level is added to the absolute value of the measured spurious level to provide the calculated measured level in dBc

Only the worst case is recorded in the Conducted Spurious Emissions Summary Test Table.

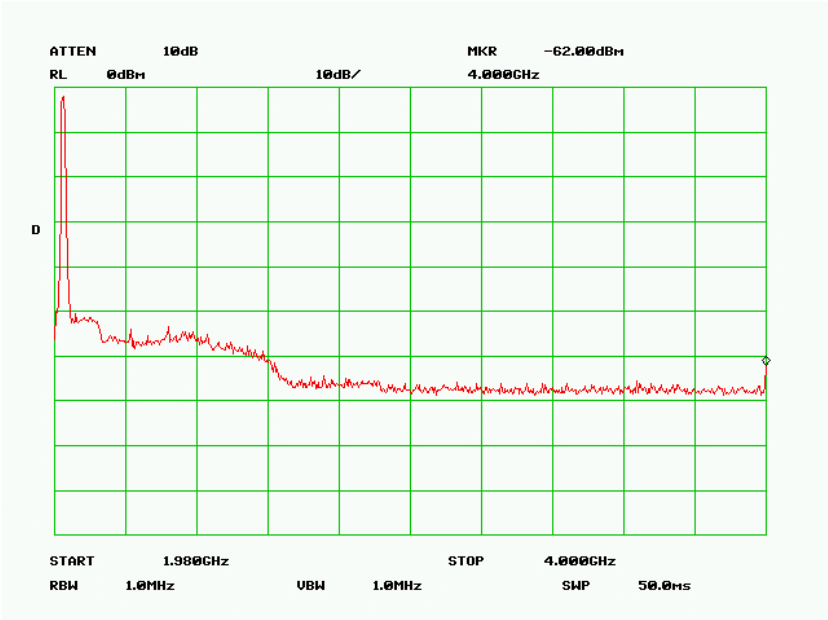
Test Setup

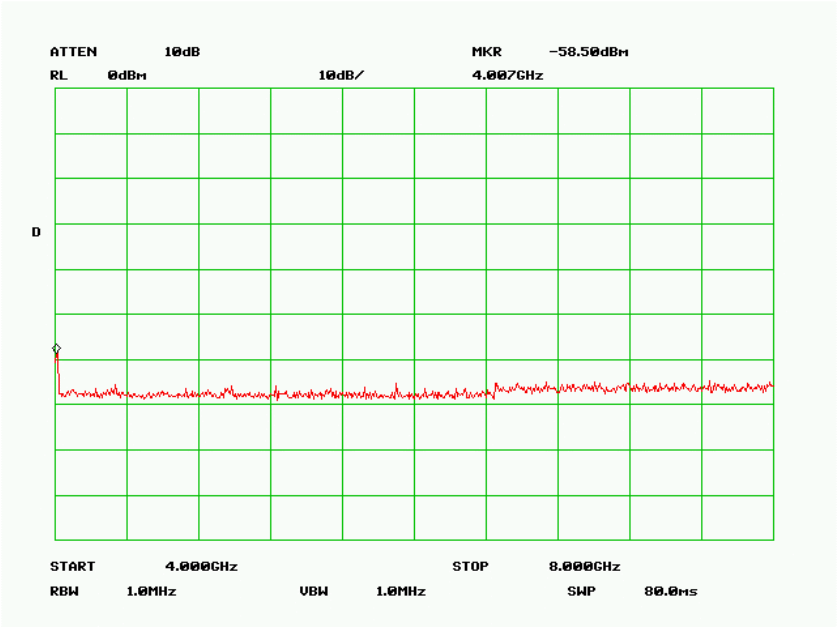


Sample calc.: Spurious level (dBm)) – (Carrier Peak (dBm)) = dBc

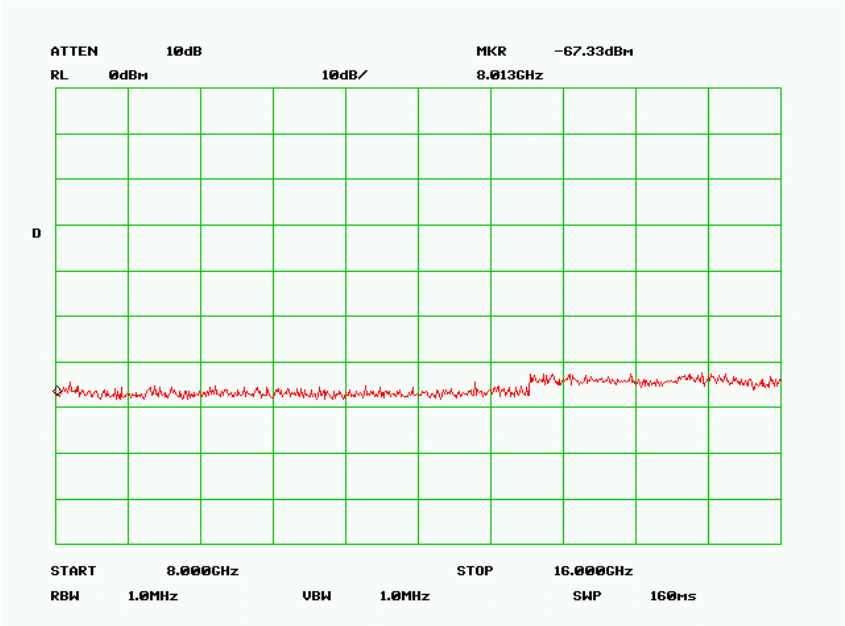
See graphic data for details

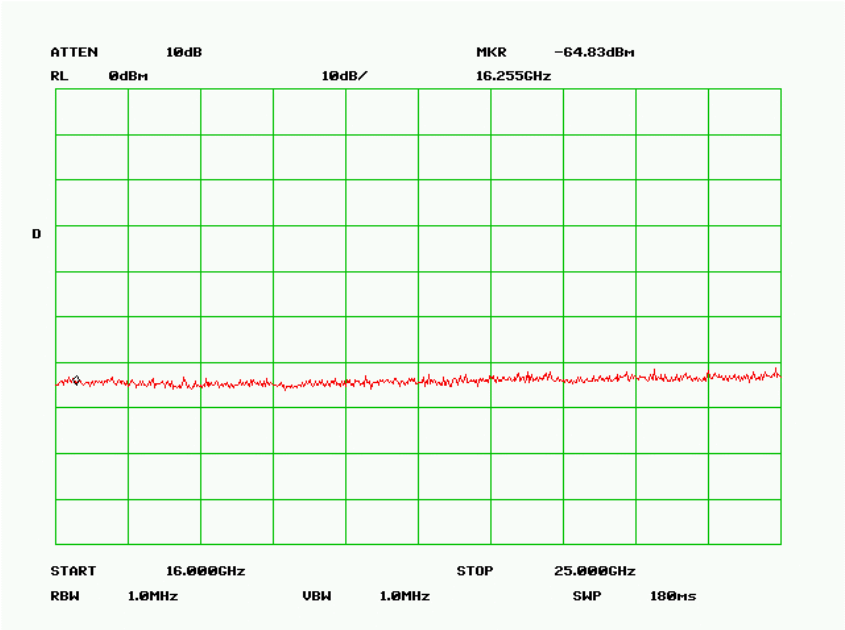
Measurement Results (worst case)



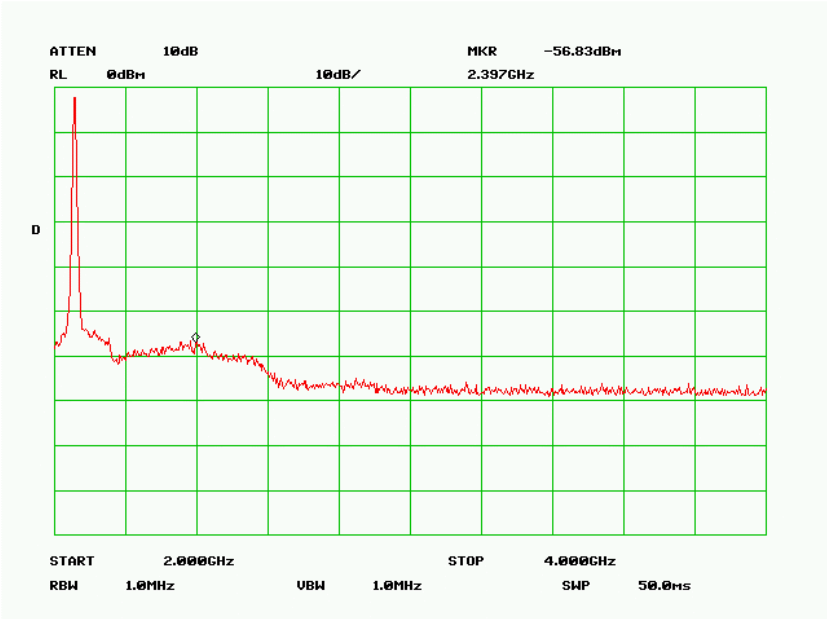


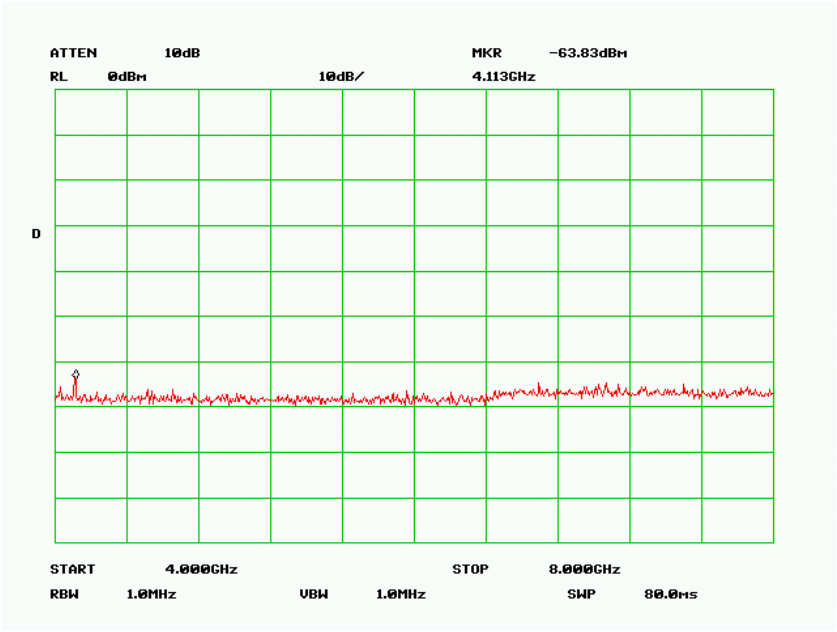
Power:	HIGH
Modulation:	QPSK
TX Frequency	1999MHz



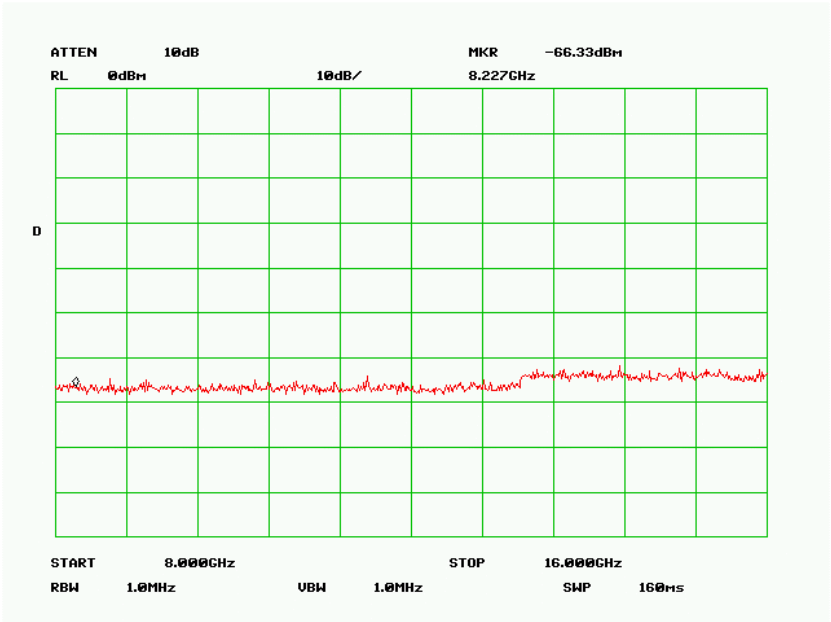


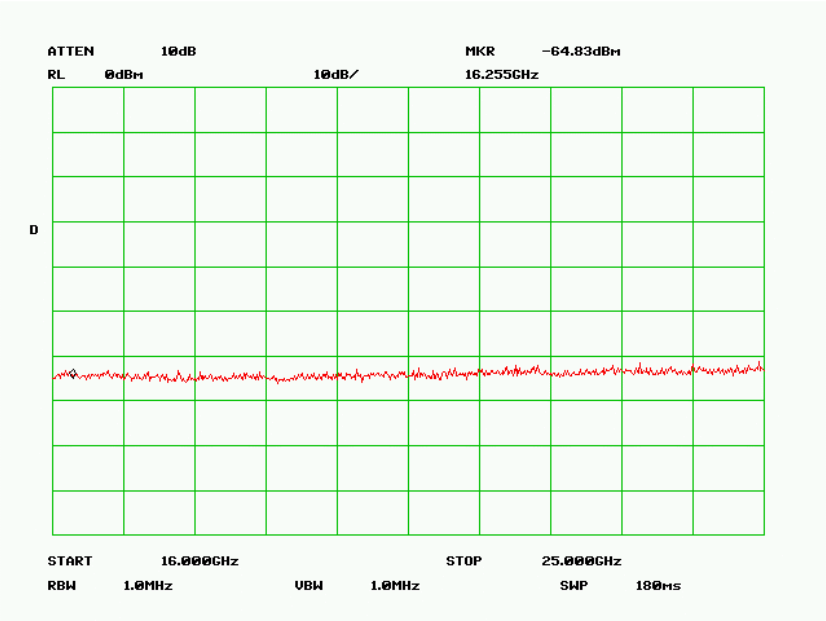
Power:	HIGH
Modulation:	QPSK
TX Frequency	1999MHz



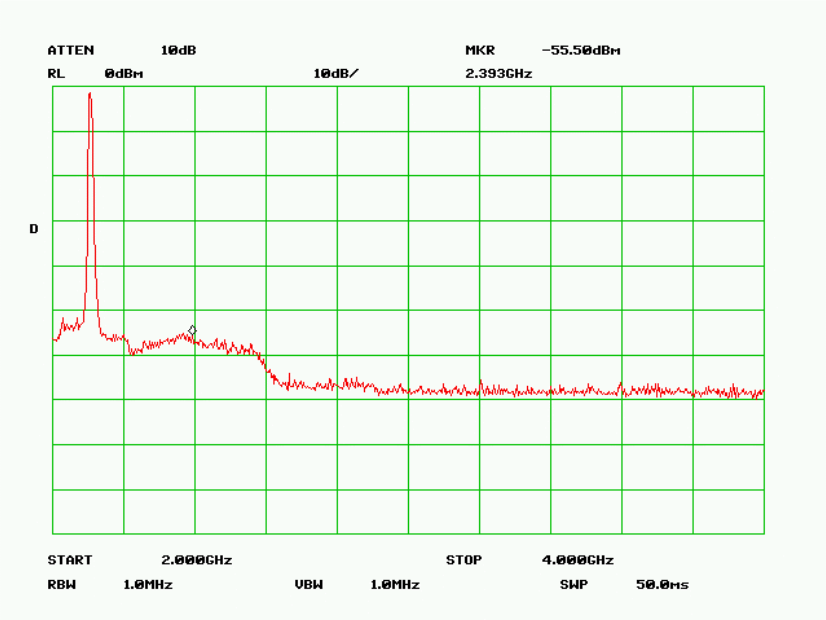


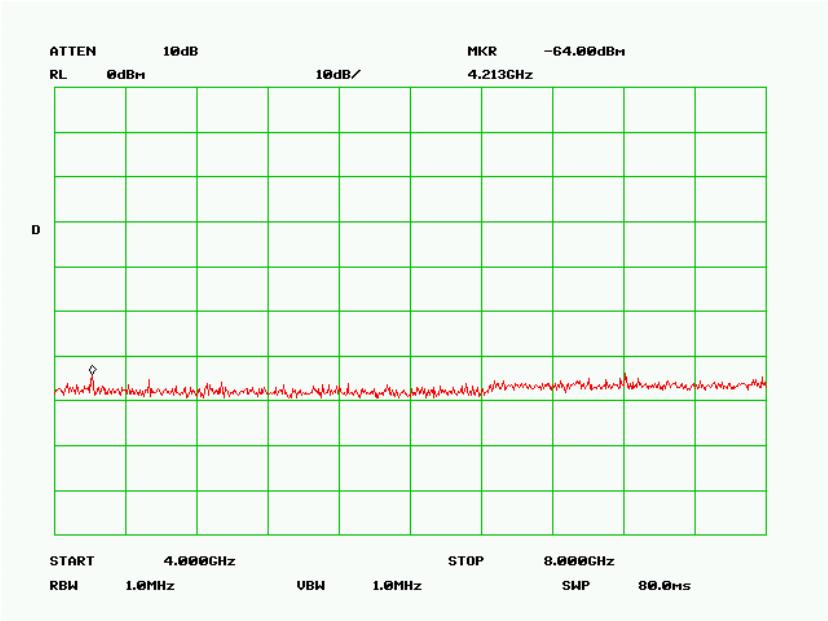
Power:	HIGH
Modulation:	QPSK
TX Frequency	2050MHz



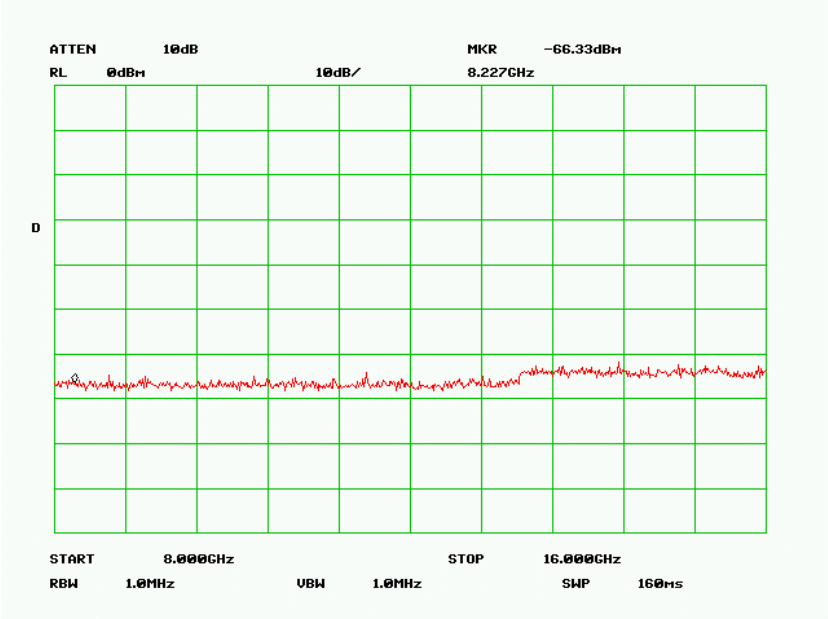


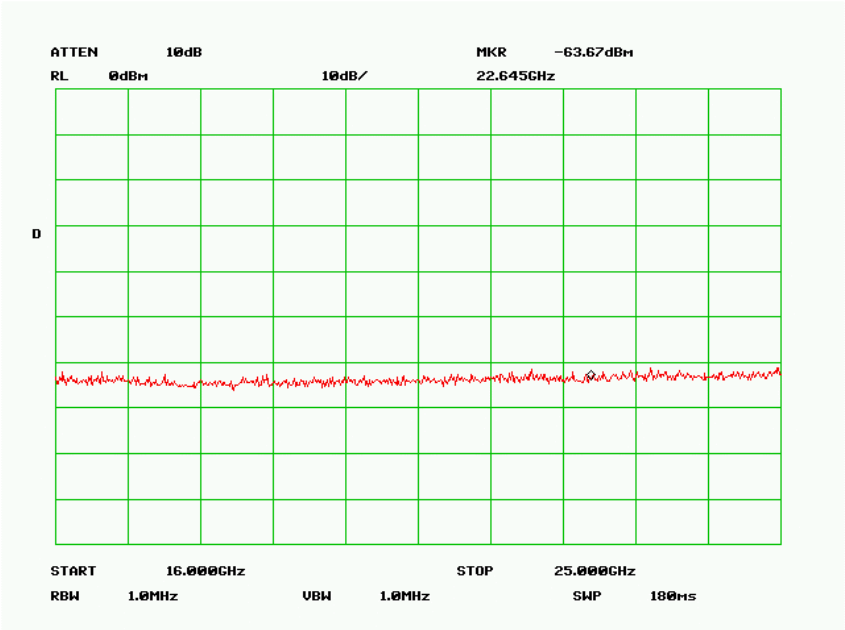
Power:	HIGH
Modulation:	QPSK
TX Frequency	2050MHz



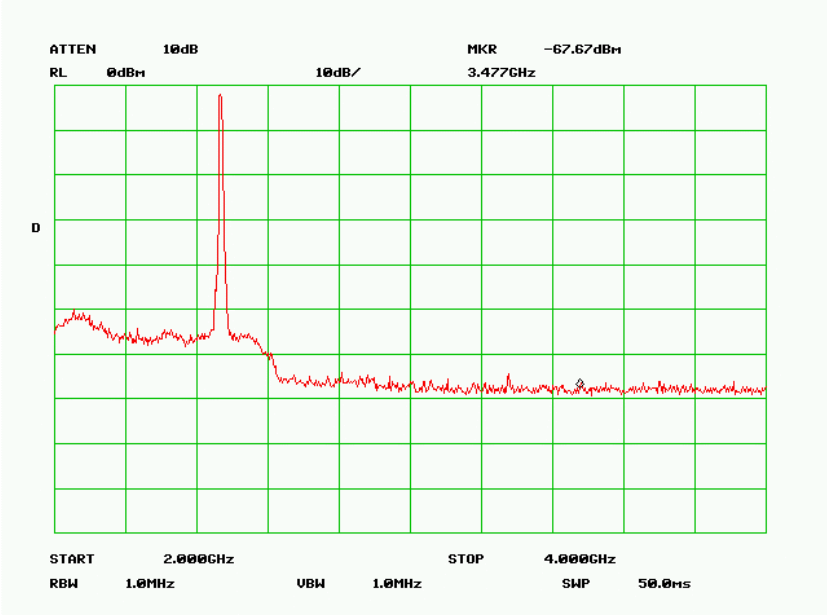


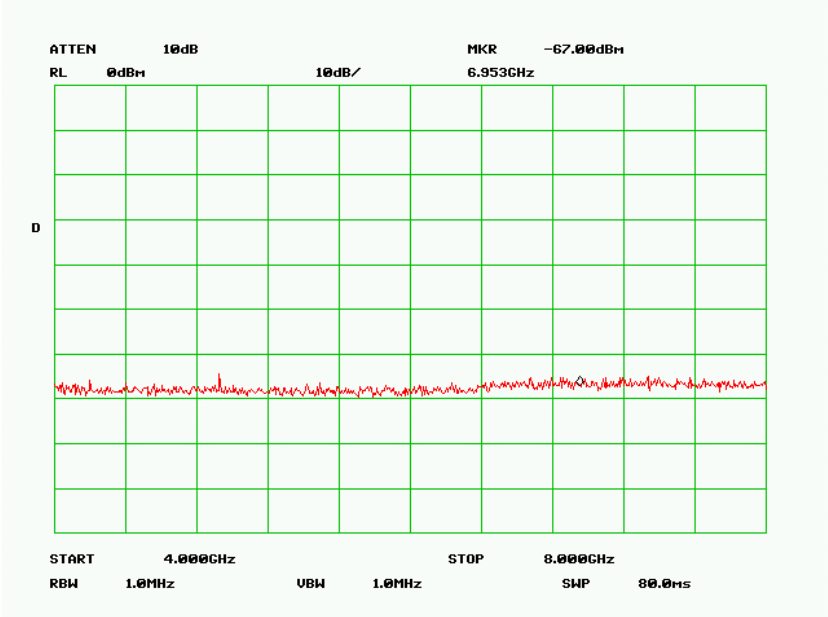
Power:	HIGH
Modulation:	QPSK
TX Frequency	2101MHz



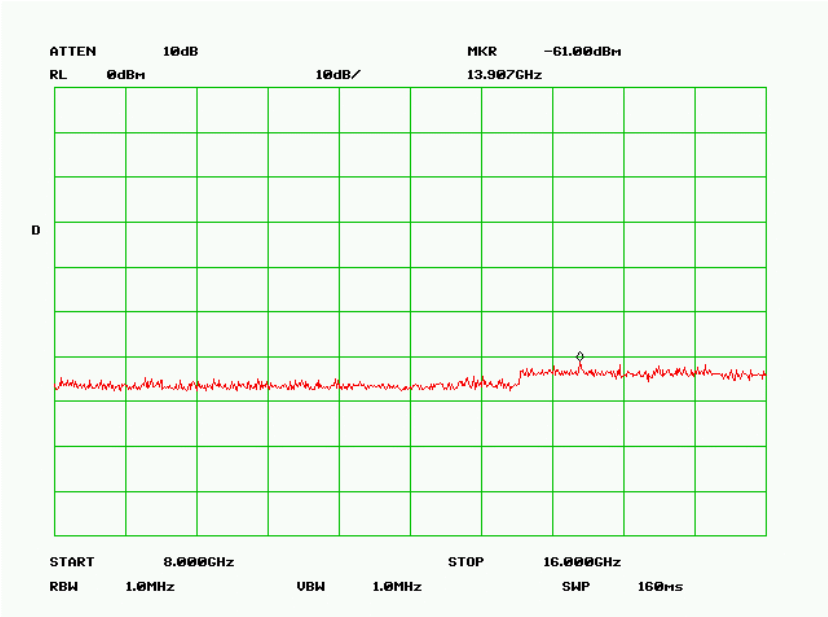


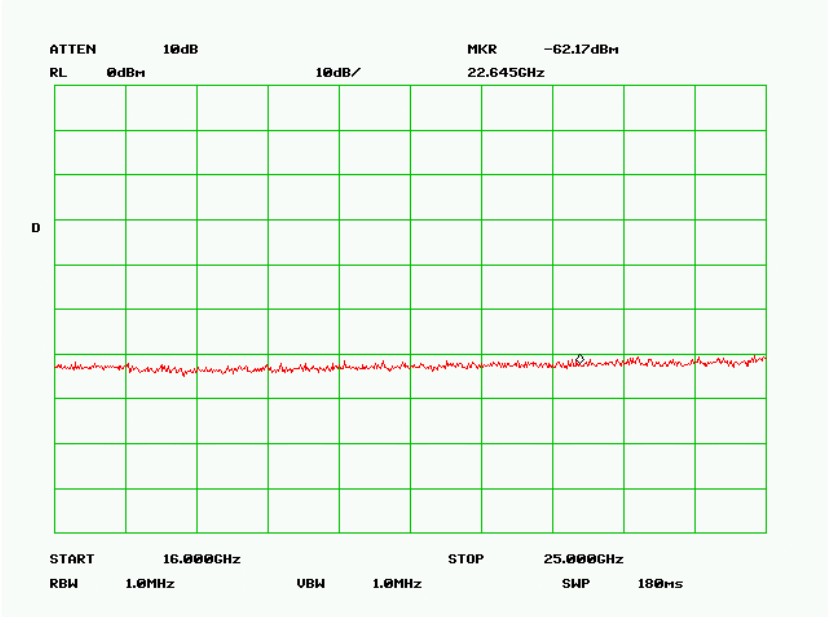
Power:	HIGH
Modulation:	QPSK
TX Frequency	2101MHz



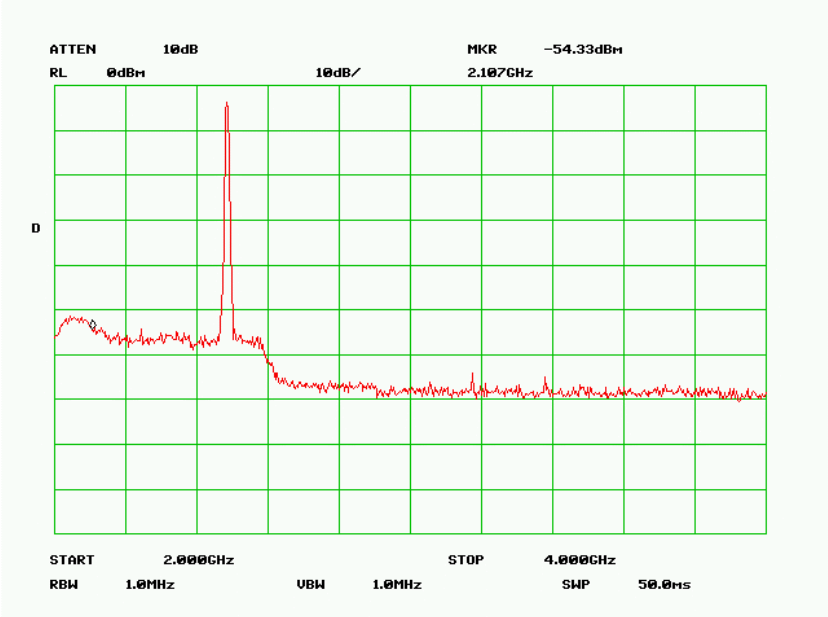


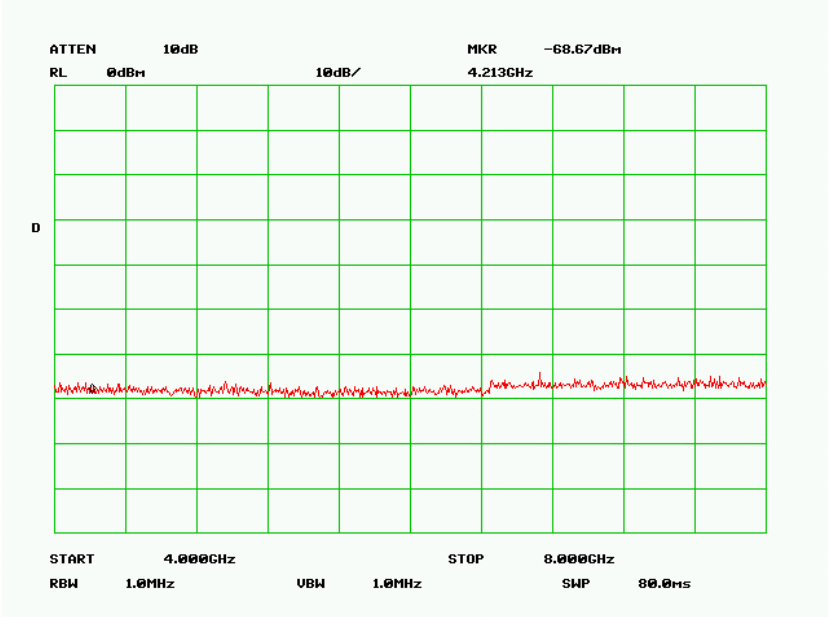
Power:	HIGH
Modulation:	QPSK
TX Frequency	2458MHz



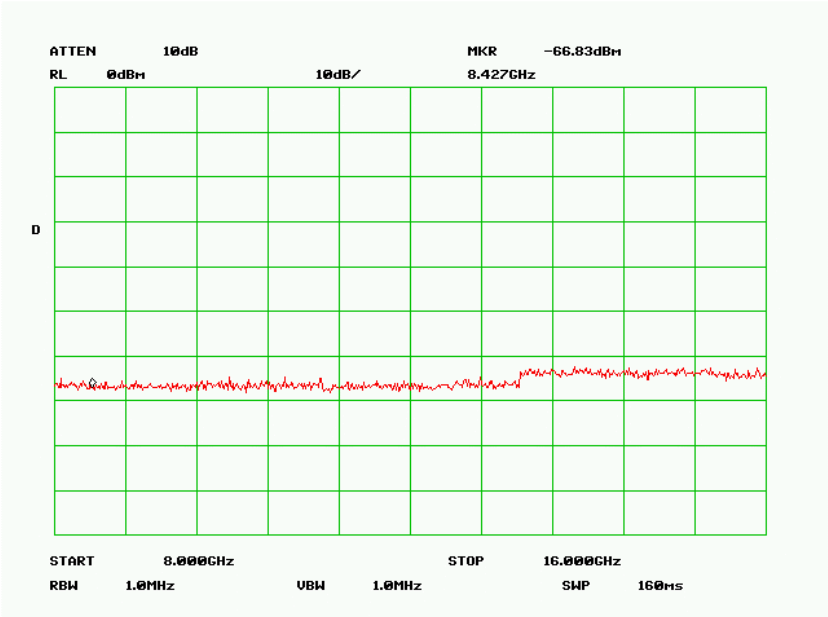


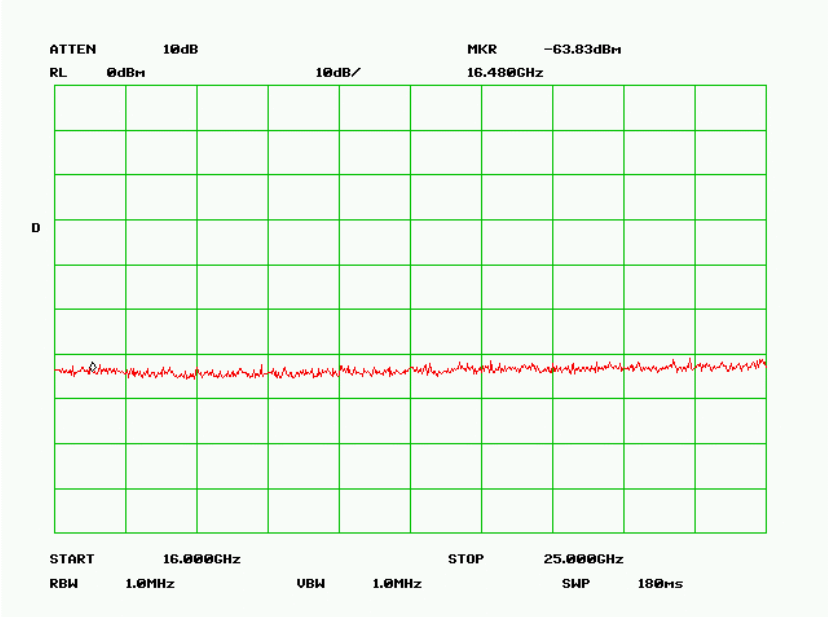
Power:	HIGH
Modulation:	QPSK
TX Frequency	2458MHz



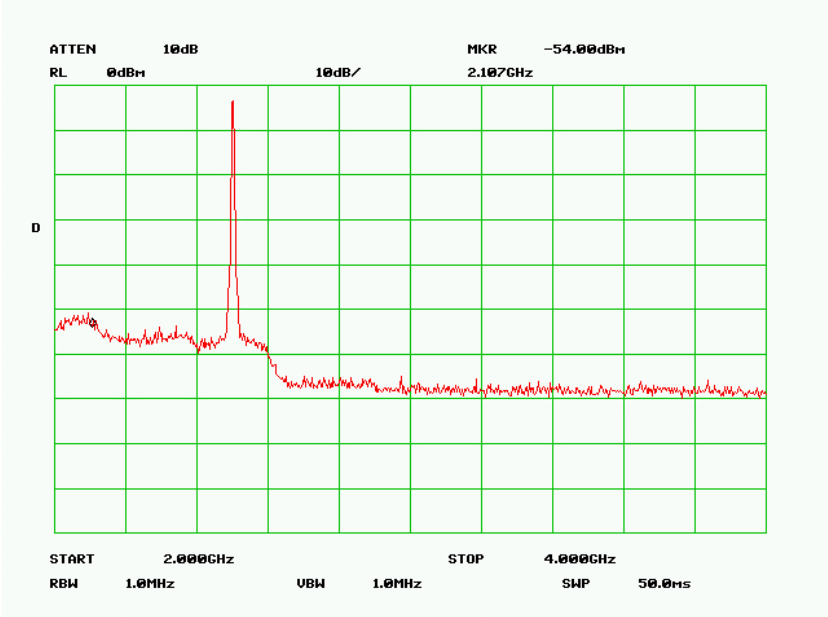


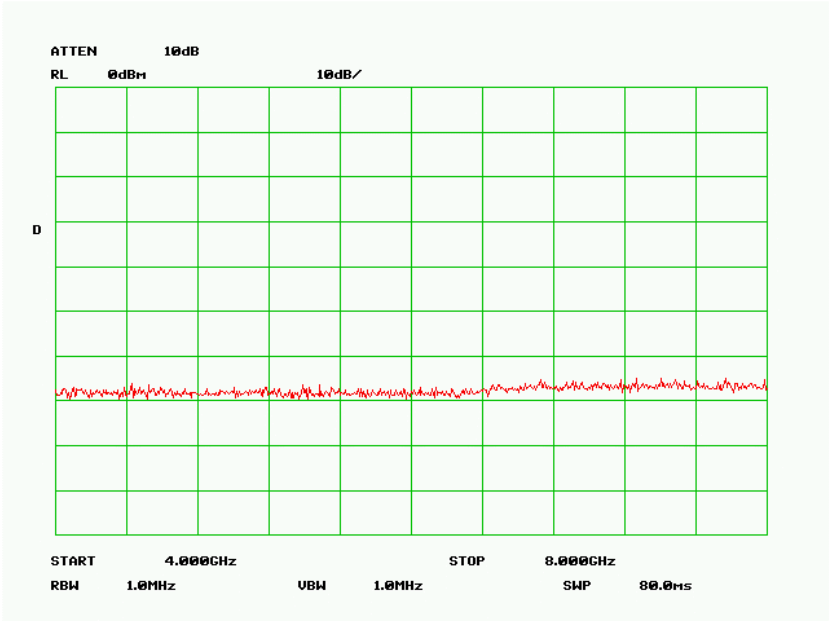
Power:	HIGH
Modulation:	QPSK
TX Frequency	2475MHz



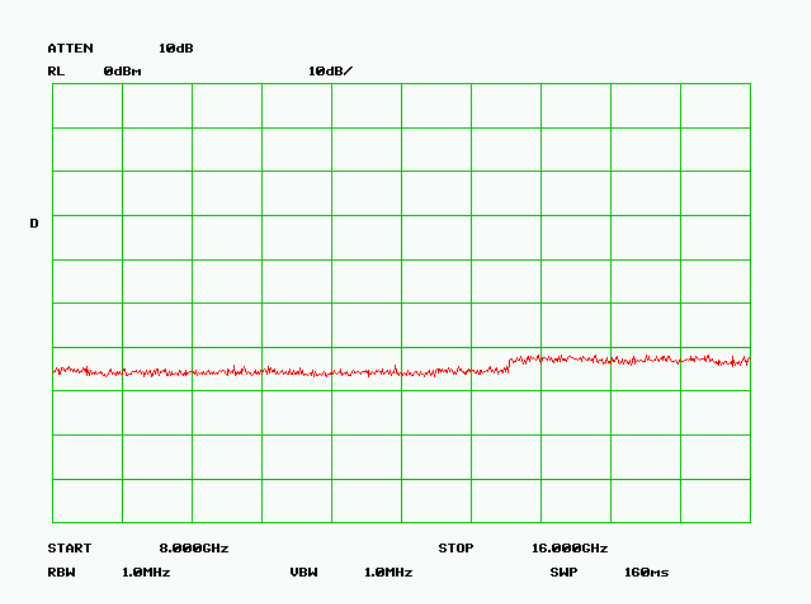


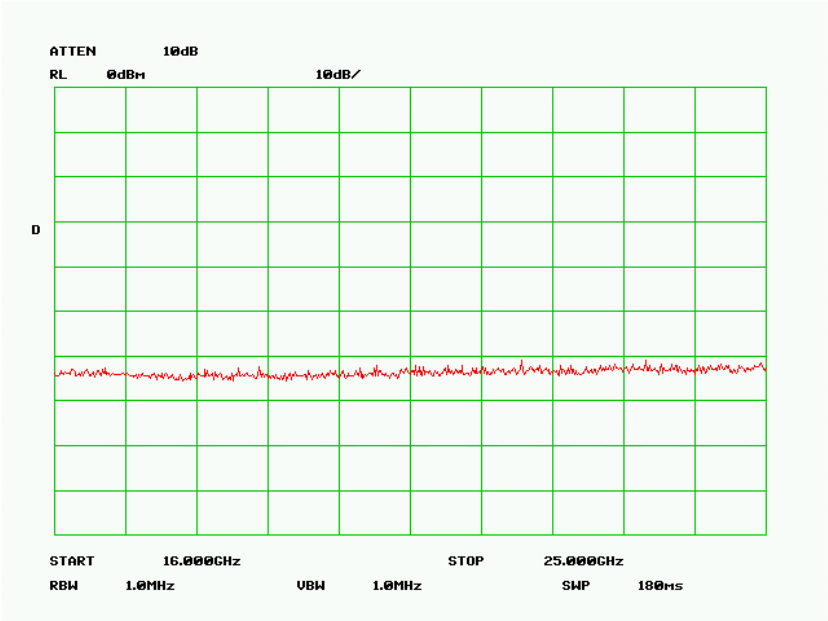
Power:	HIGH
Modulation:	QPSK
TX Frequency	2475MHz



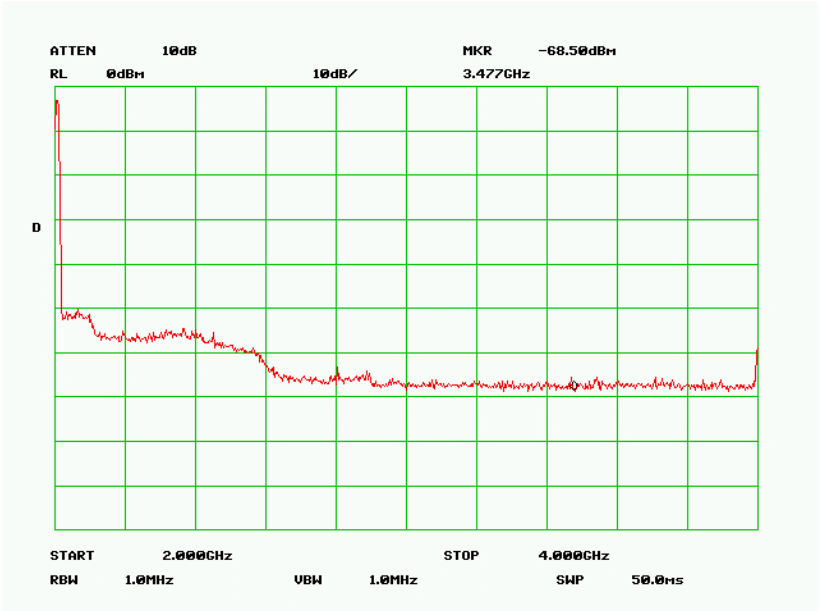


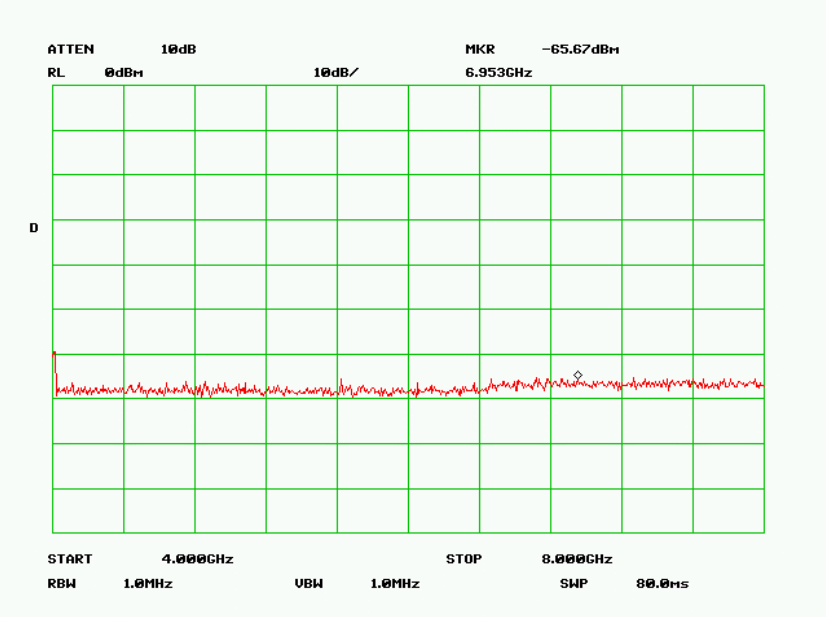
Power:	HIGH
Modulation:	QPSK
TX Frequency	2491MHz



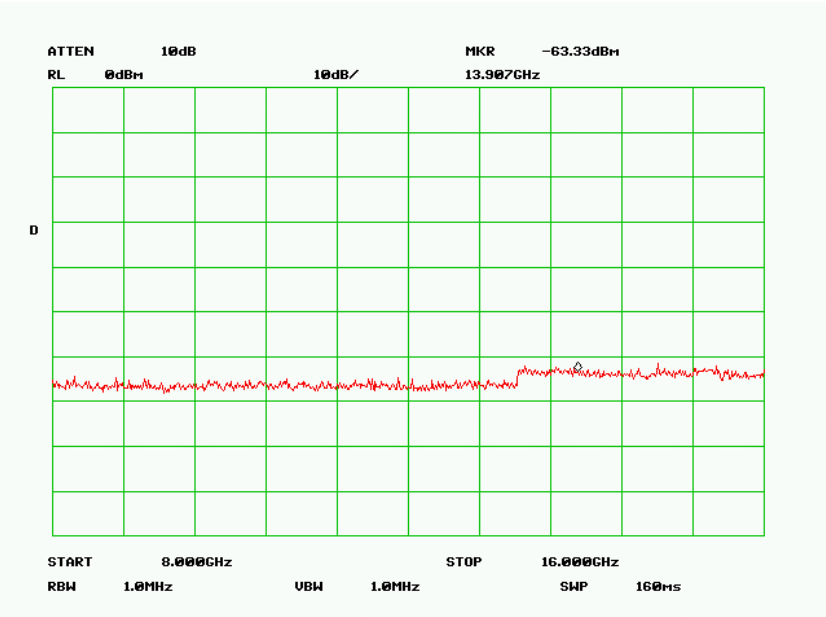


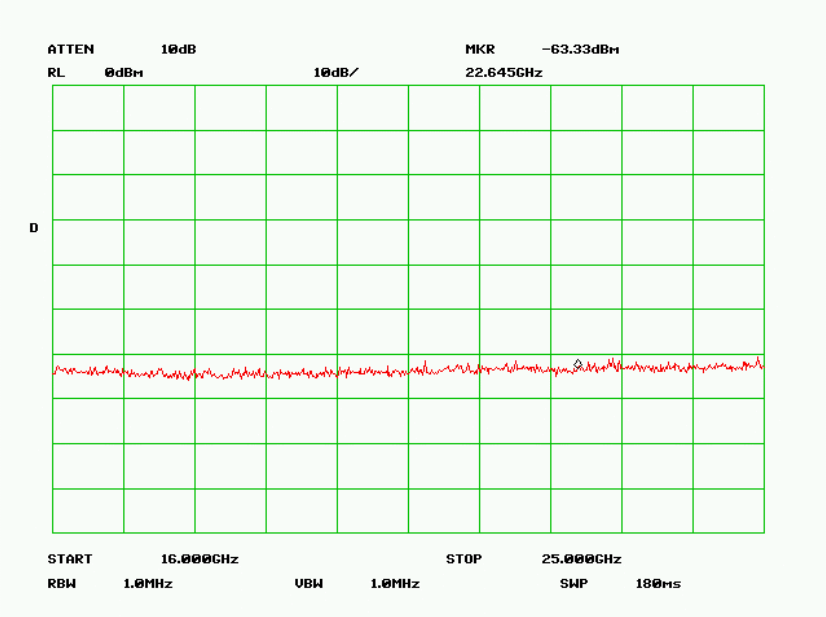
Power:	HIGH
Modulation:	QPSK
TX Frequency	2491MHz



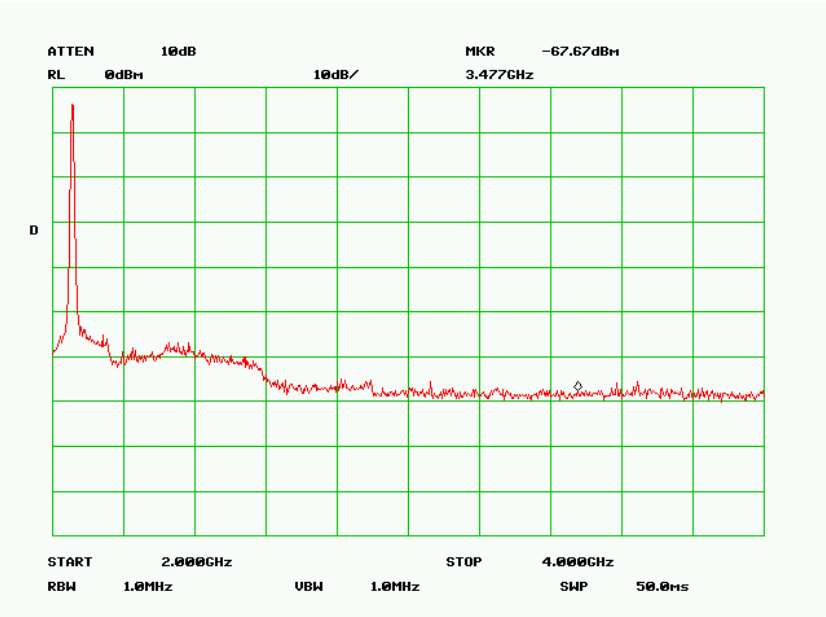


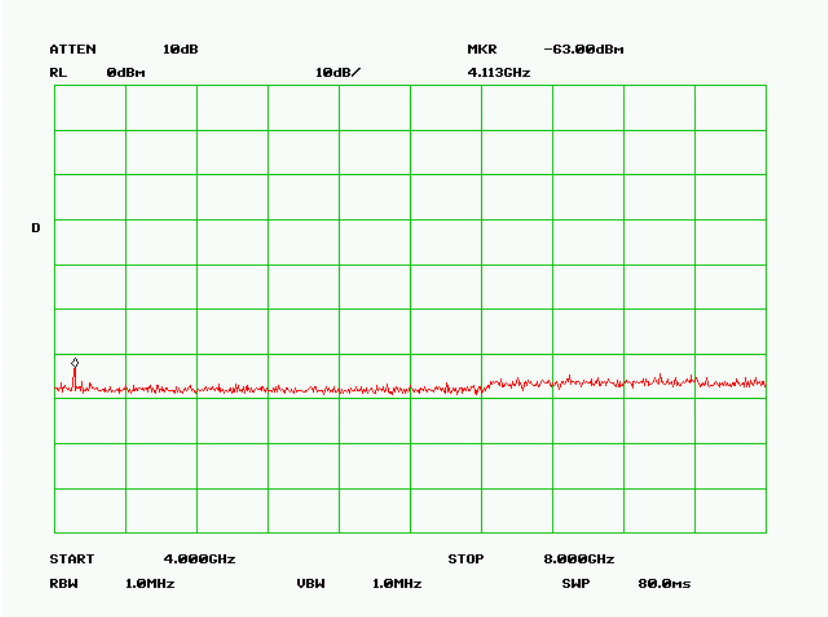
Power:	HIGH
Modulation:	QAM64
TX Frequency	1999MHz



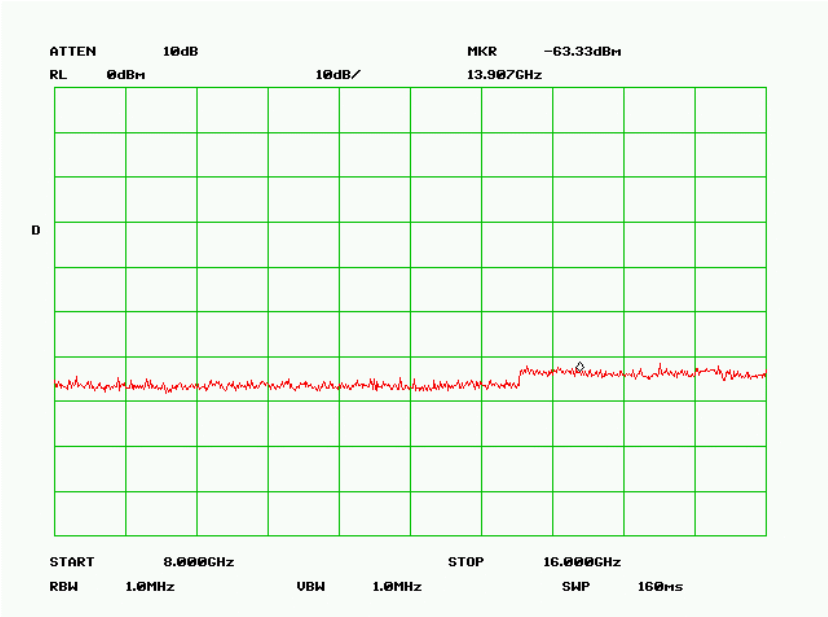


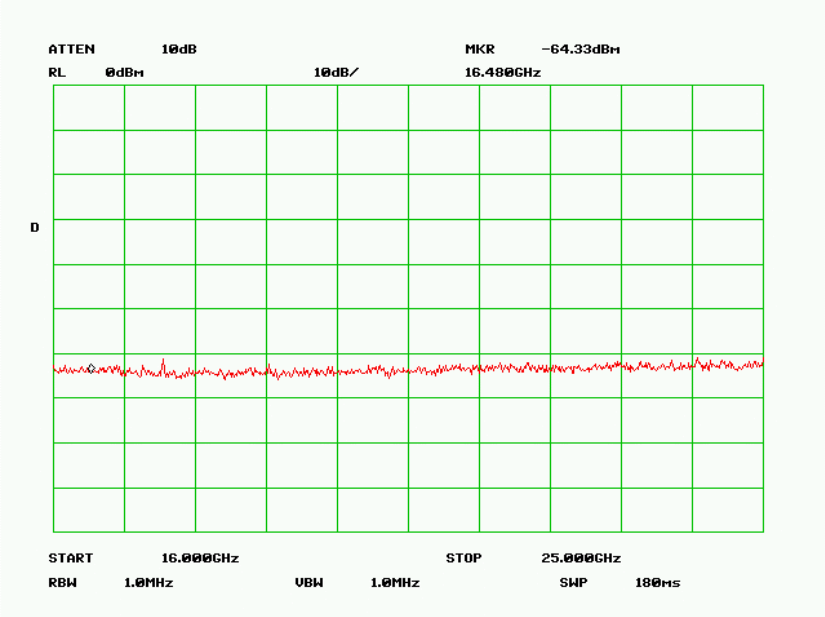
Power:	HIGH
Modulation:	QAM64
TX Frequency	1999MHz



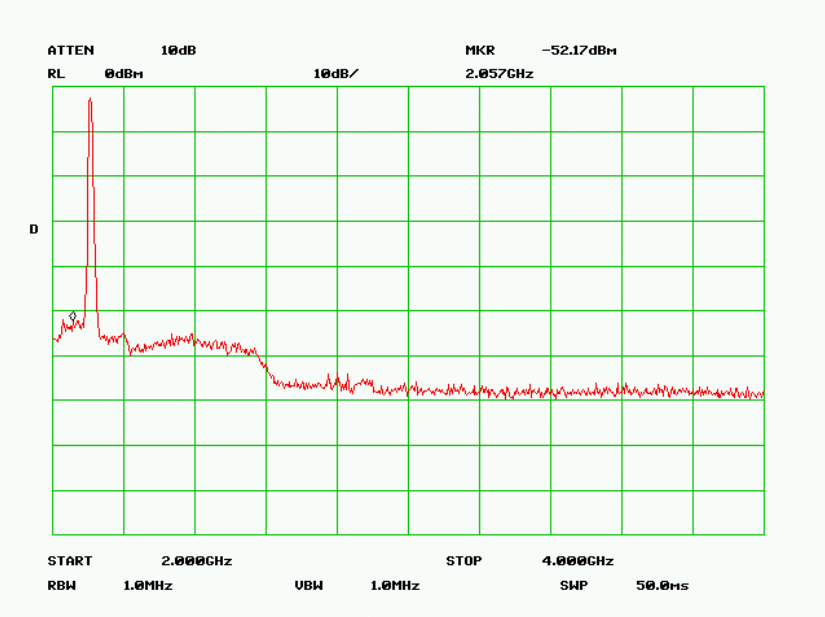


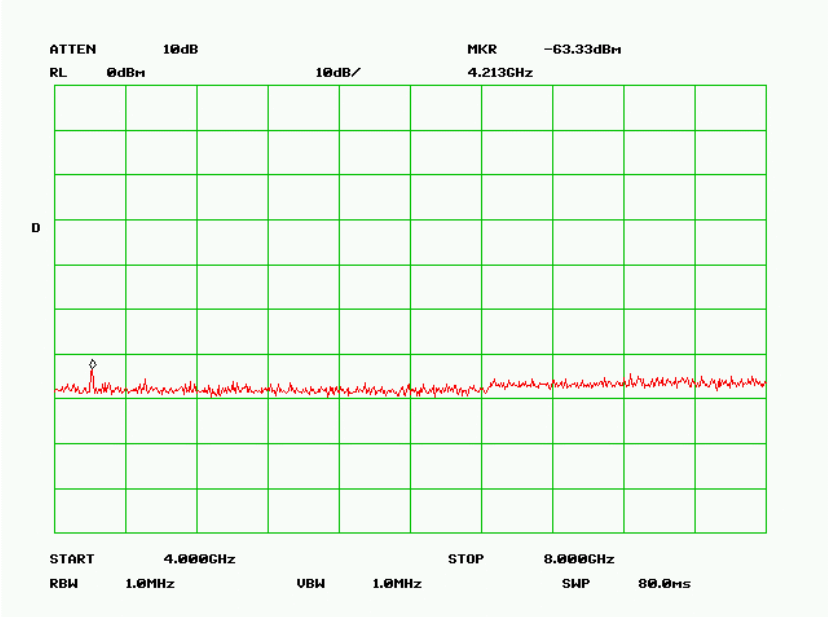
Power:	HIGH
Modulation:	QAM64
TX Frequency	2050MHz



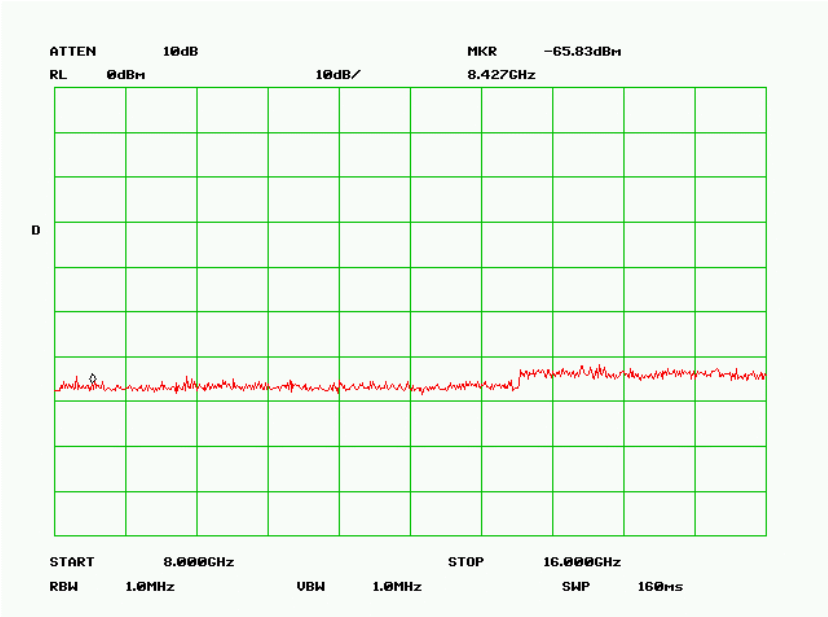


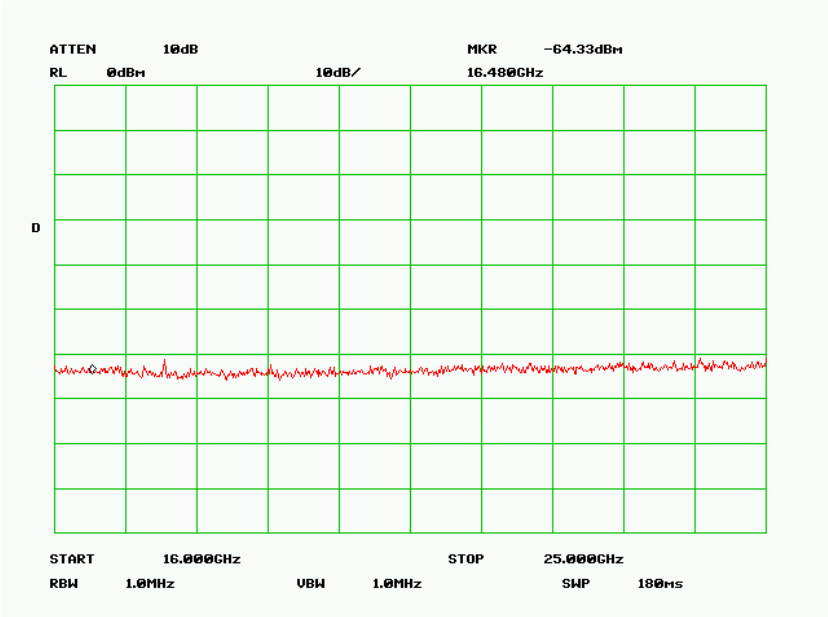
Power:	HIGH
Modulation:	QAM64
TX Frequency	2050MHz



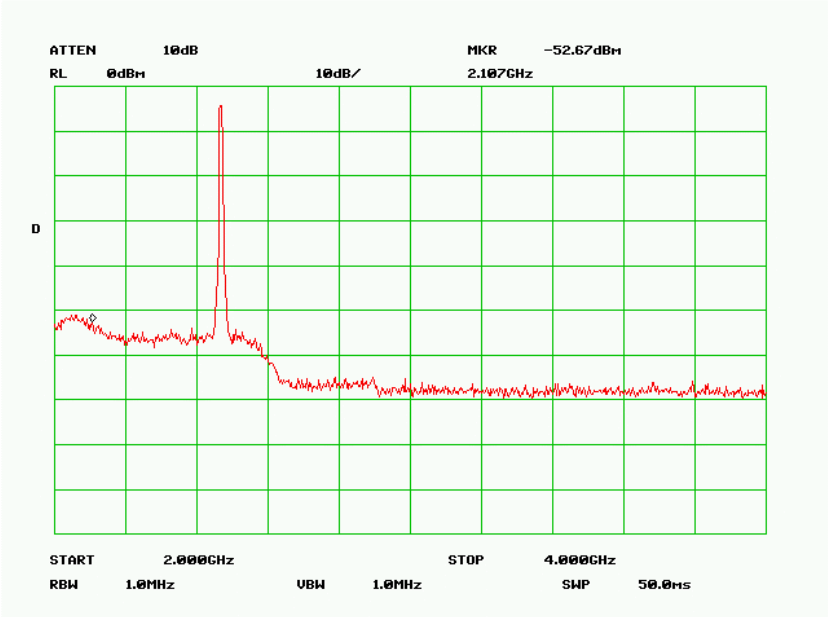


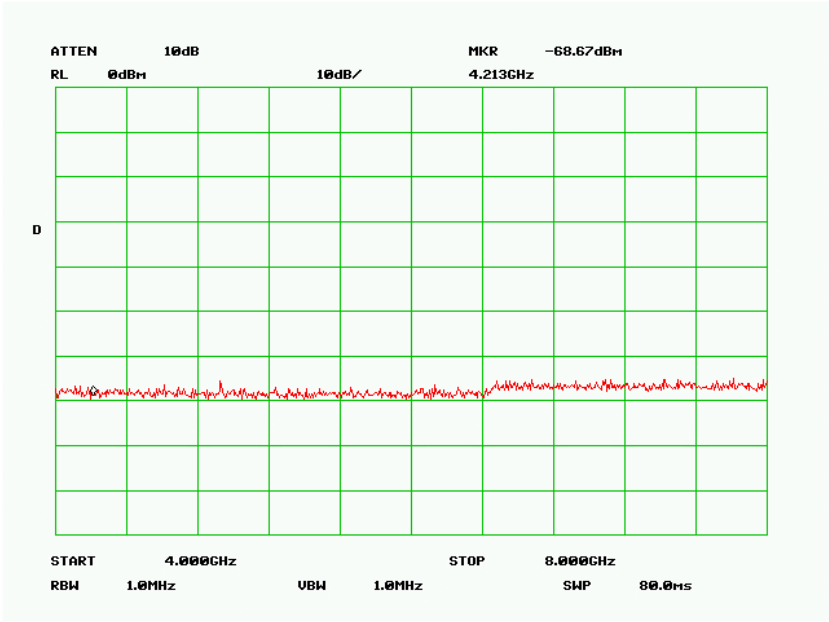
Power:	HIGH
Modulation:	QAM64
TX Frequency	2101MHz



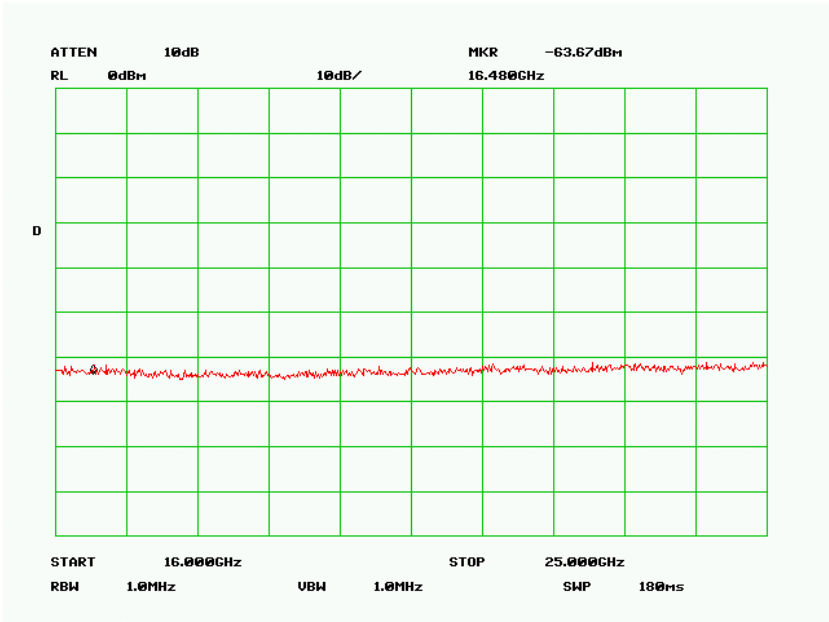


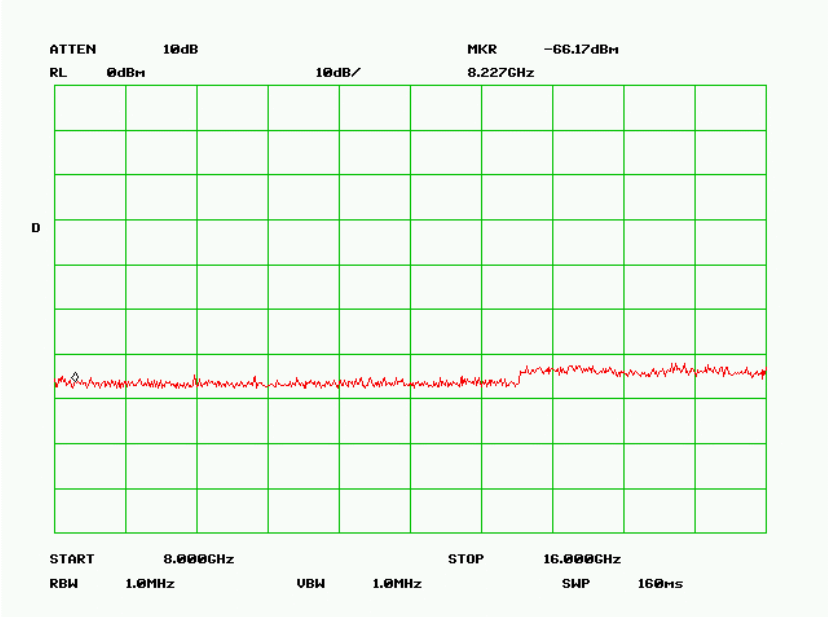
Power:	HIGH
Modulation:	QAM64
TX Frequency	2101MHz



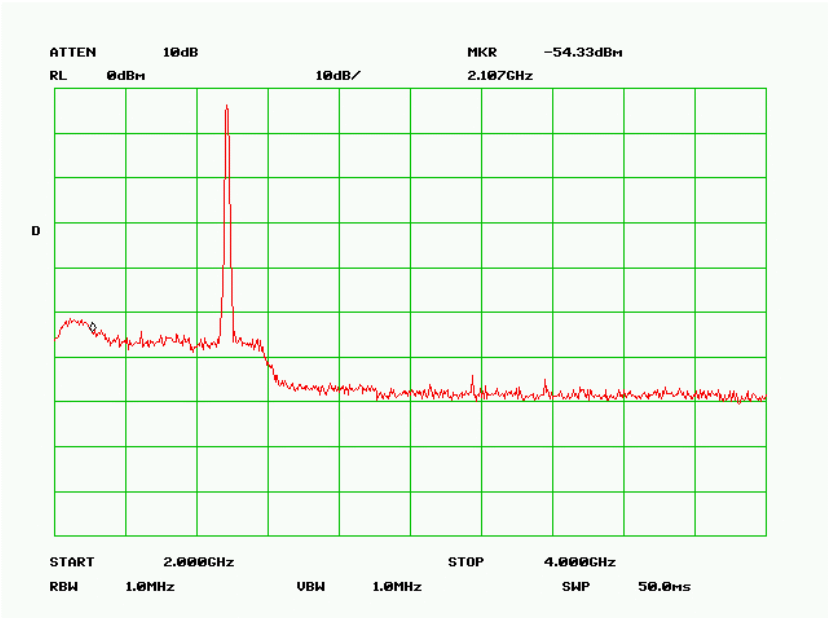


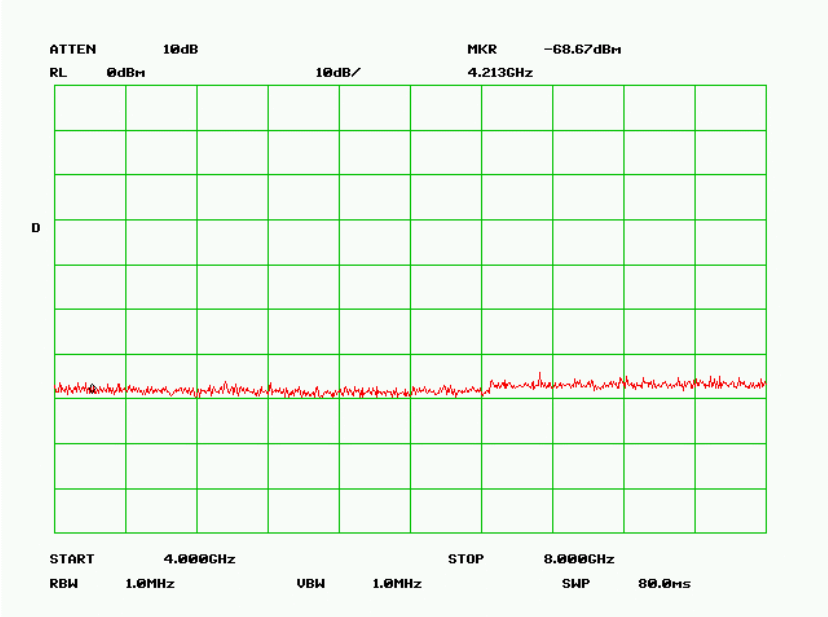
Power:	HIGH
Modulation:	QAM64
TX Frequency	2458MHz



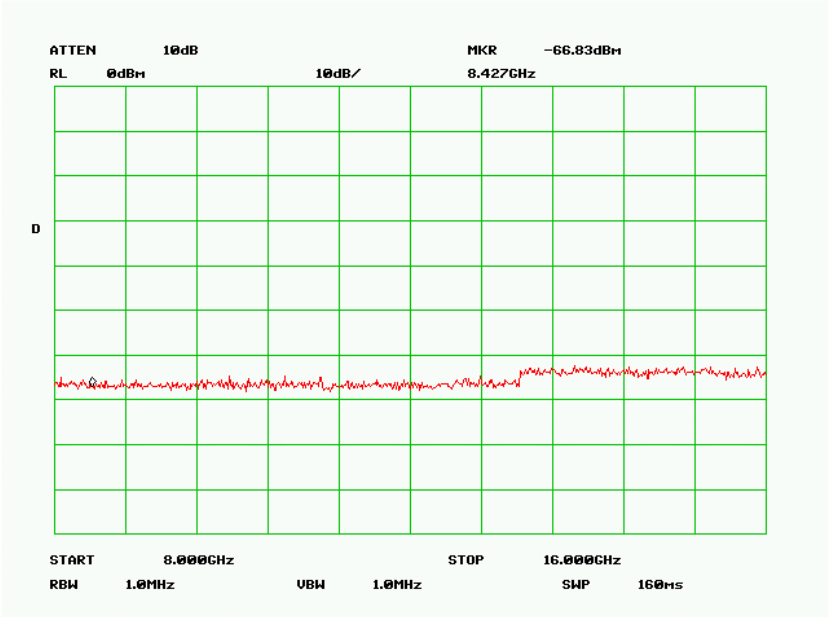


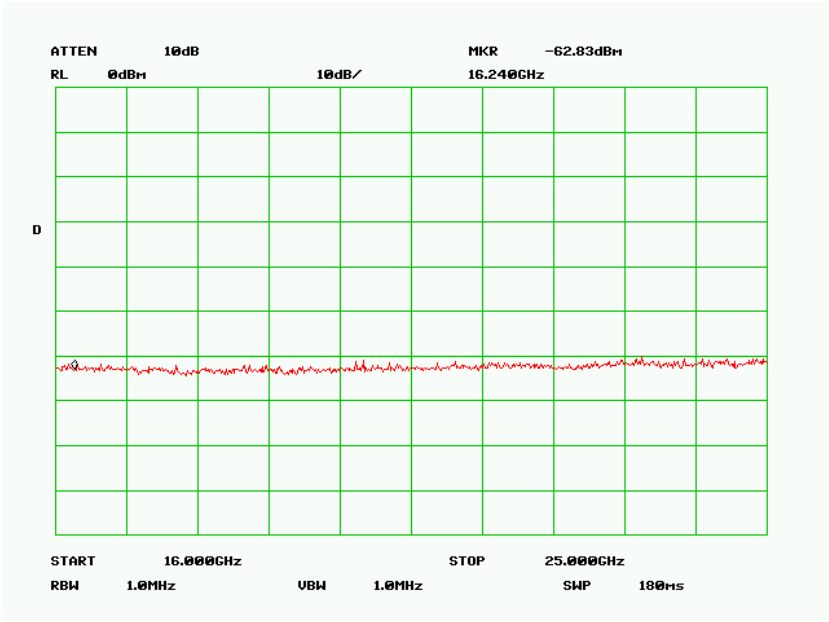
Power:	HIGH
Modulation:	QAM64
TX Frequency	2458MHz



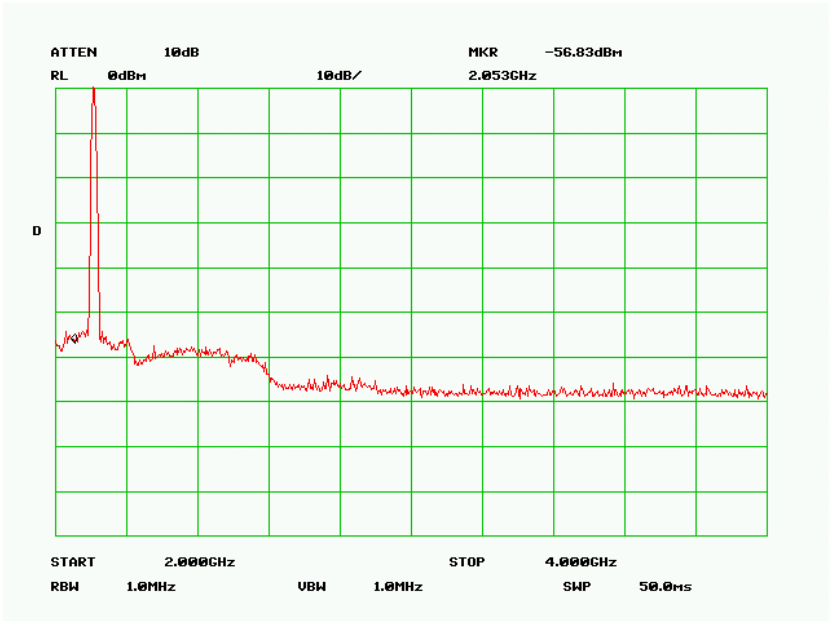


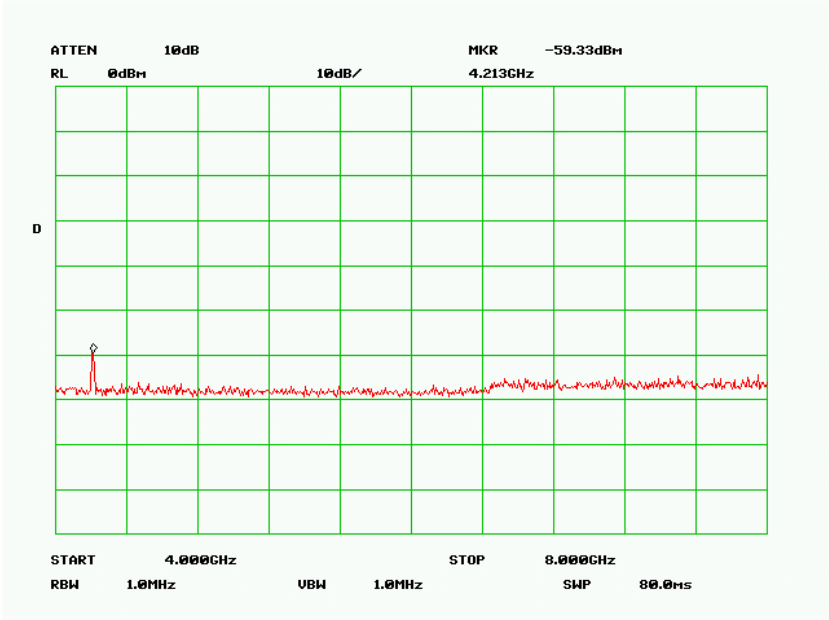
Power:	HIGH
Modulation:	QAM64
TX Frequency	2475MHz



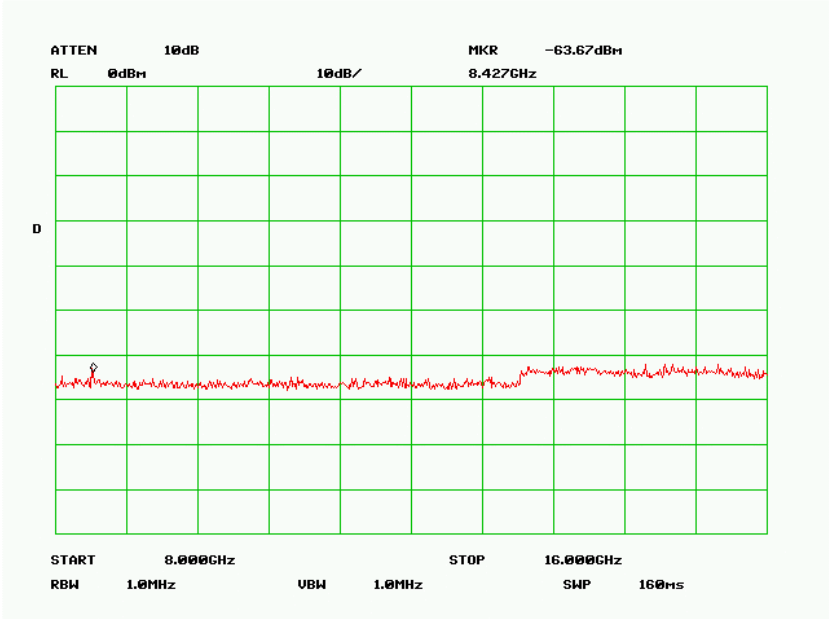


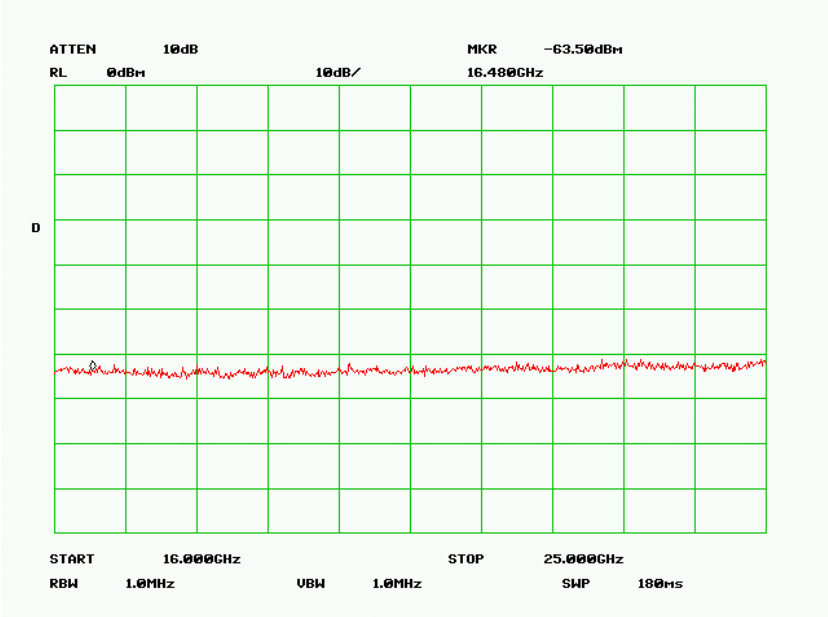
Power:	HIGH
Modulation:	QAM64
TX Frequency	2050MHz



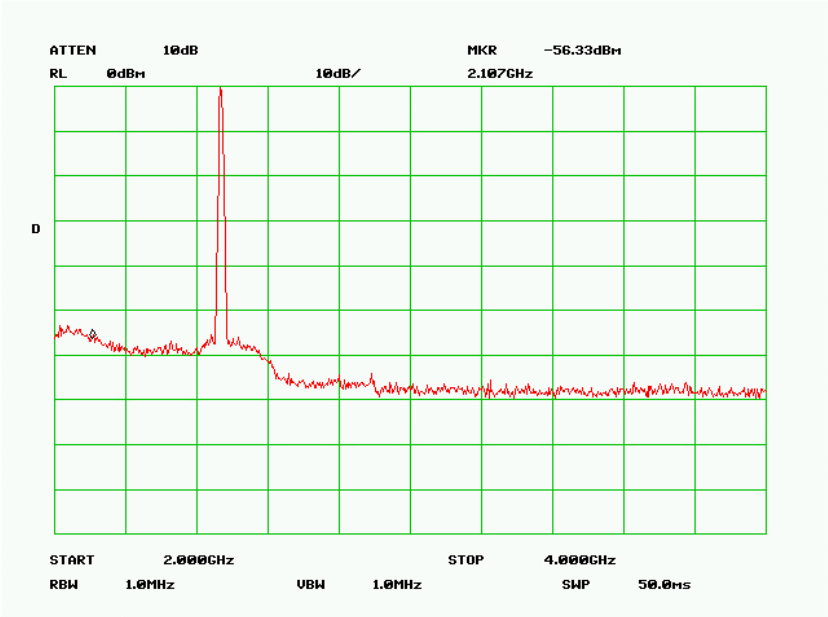


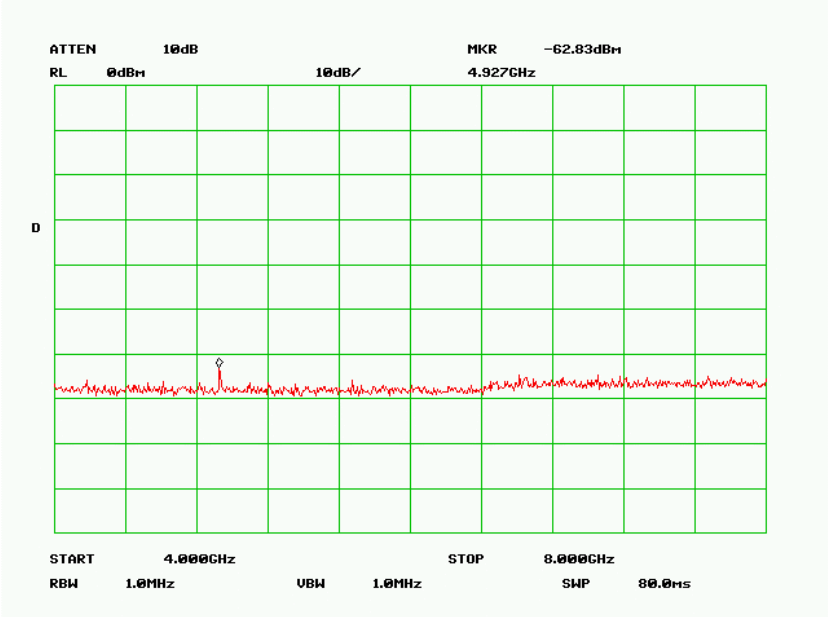
Power:	HIGH
Modulation:	QAM64
TX Frequency	2101MHz



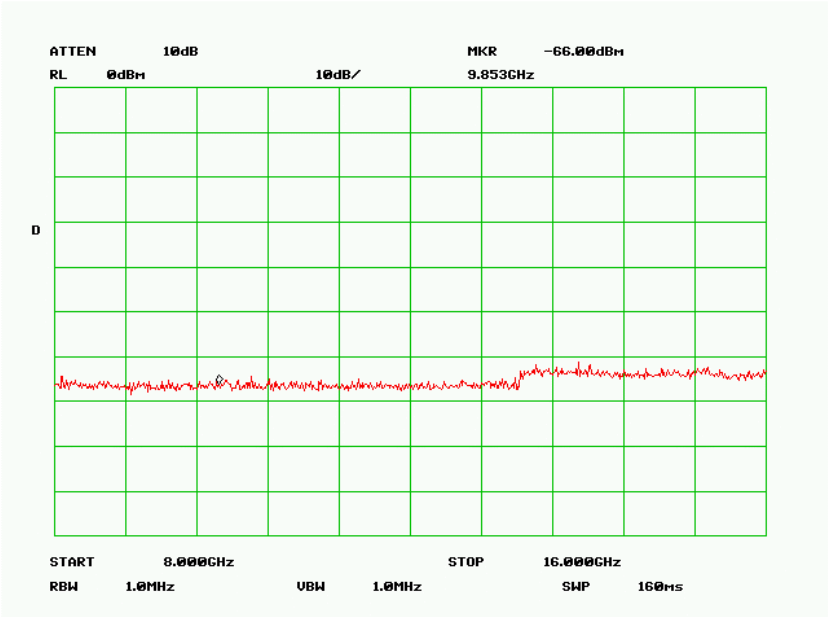


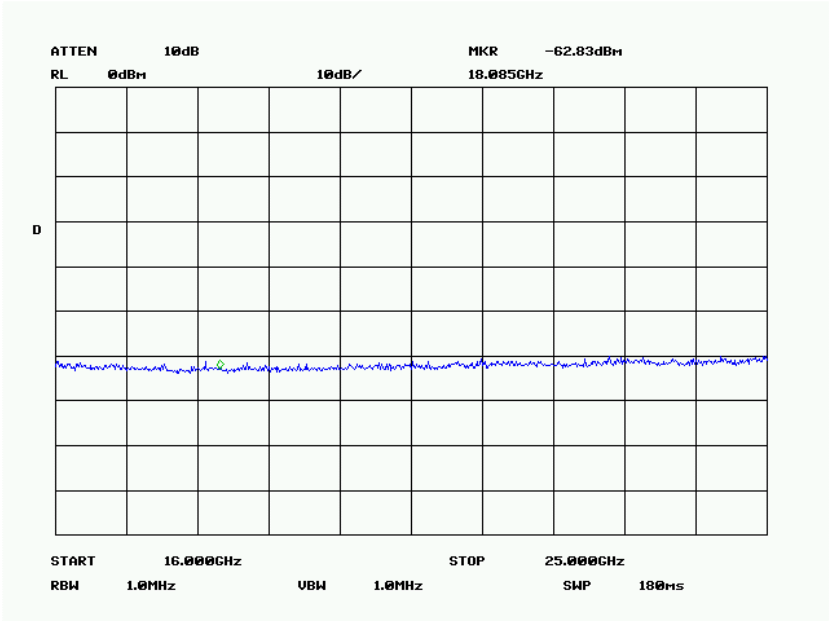
Power:	HIGH
Modulation:	QAM64
TX Frequency	2101MHz



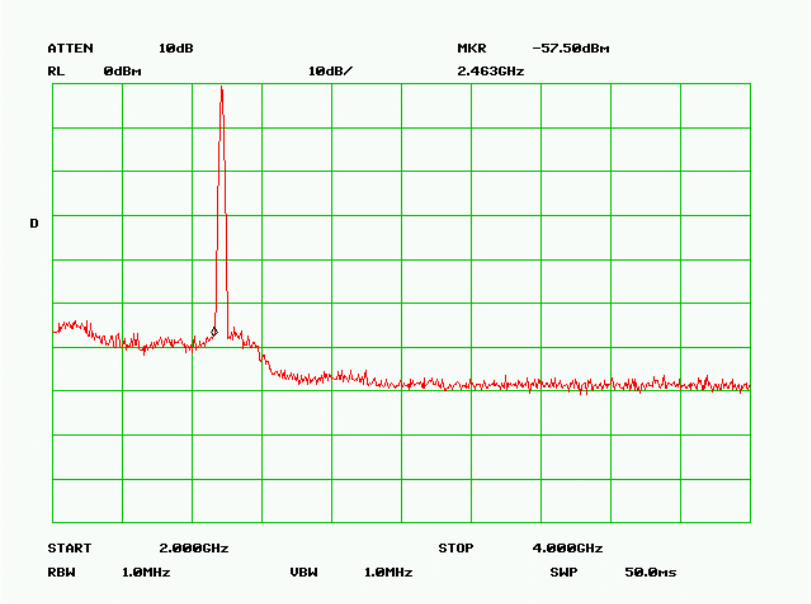


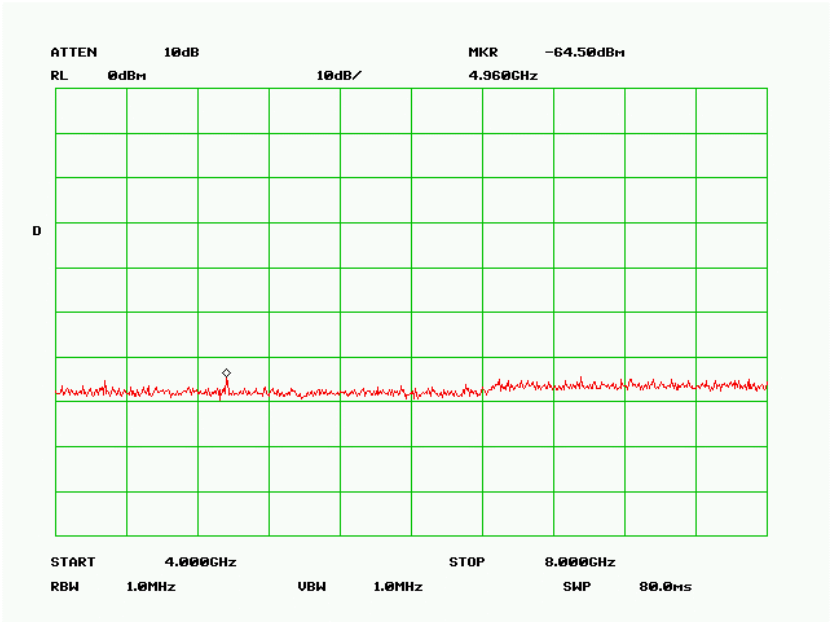
Power:	HIGH
Modulation:	QAM64
TX Frequency	2458MHz



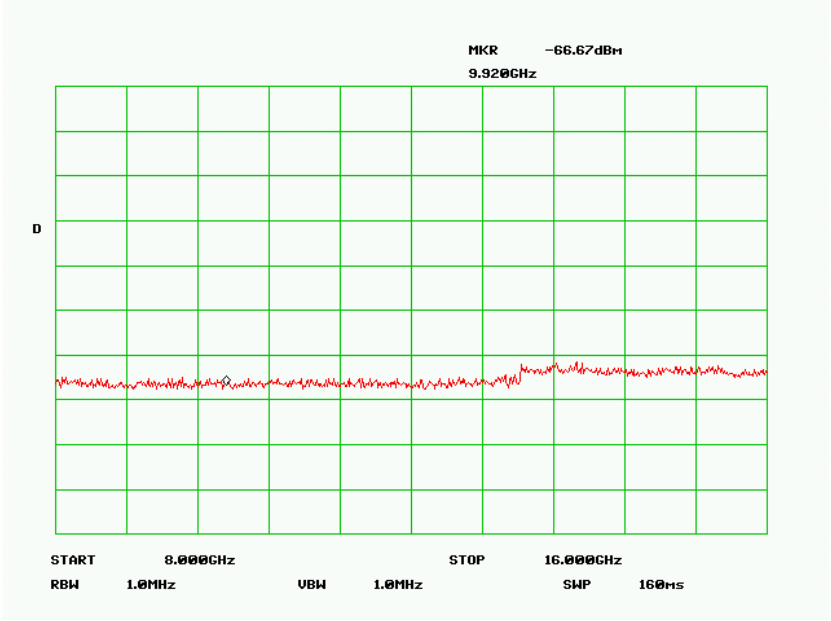


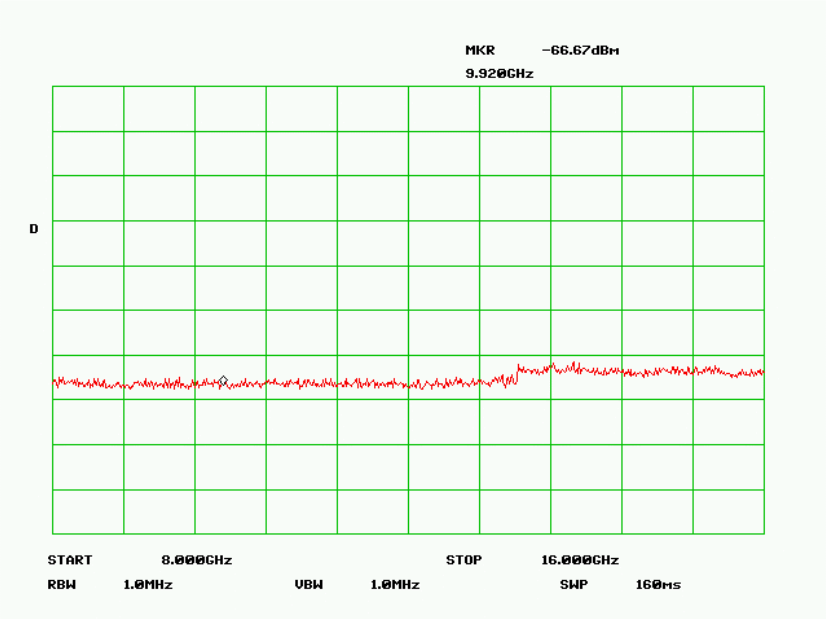
Power:	HIGH
Modulation:	QAM64
TX Frequency	2458MHz



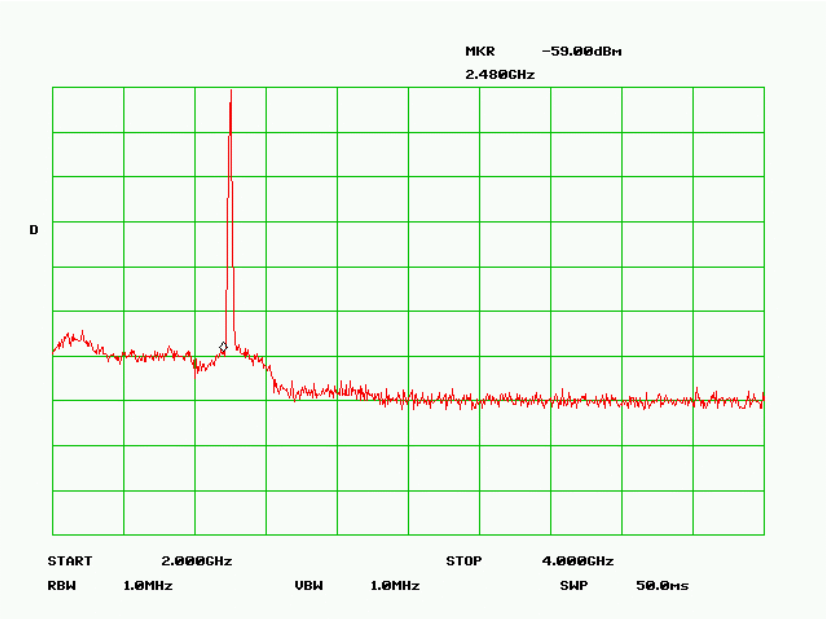


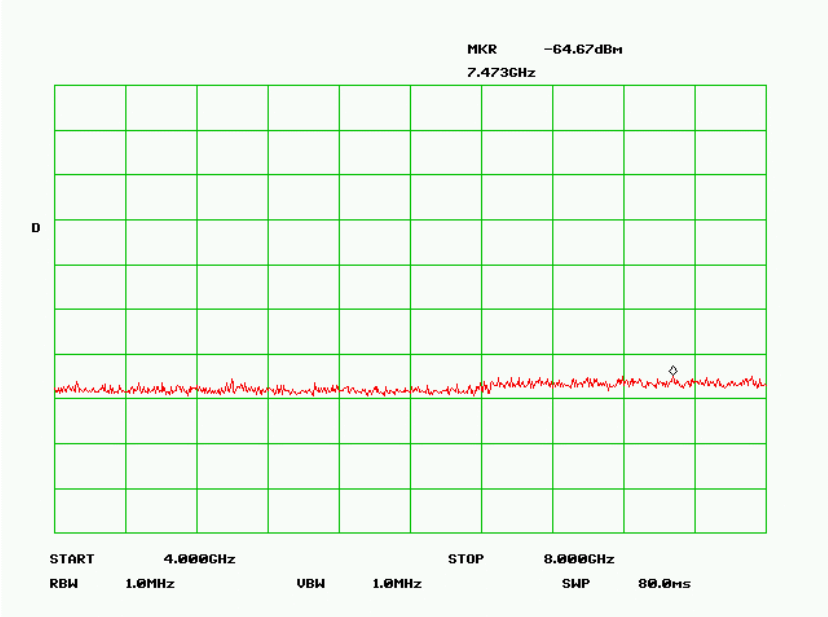
Power:	HIGH
Modulation:	QAM64
TX Frequency	2475MHz



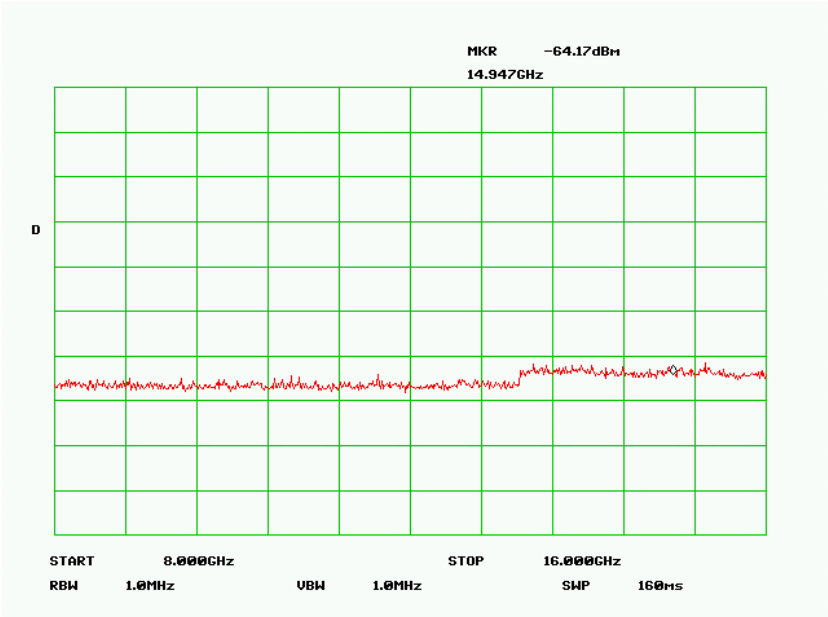


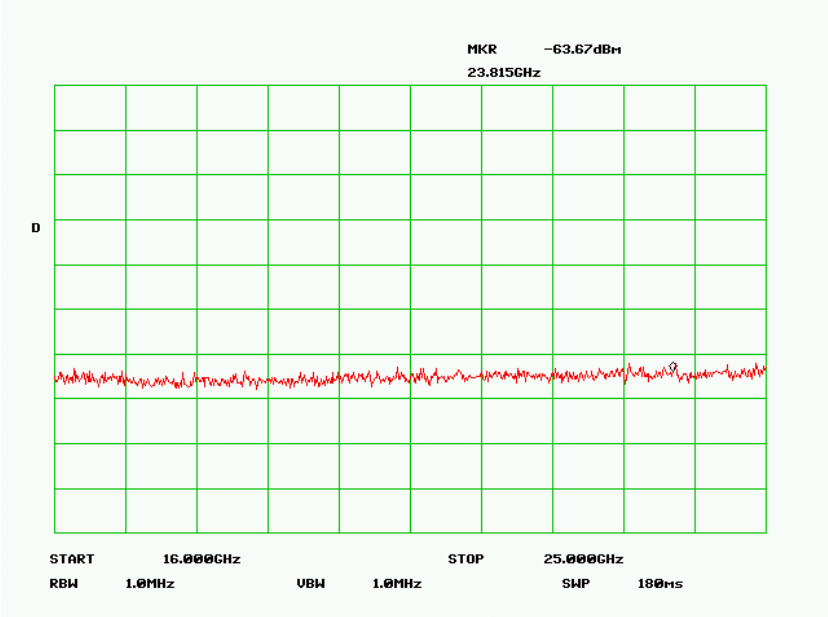
Power:	HIGH
Modulation:	QAM64
TX Frequency	2475MHz





Power:	HIGH
Modulation:	QAM64
TX Frequency	2491MHz





Power:	HIGH
Modulation:	QAM64
TX Frequency	2491MHz

Performed by: Michael Wyman

Flom Test Labs
3356 North San Marcos Place, Suite 107
Chandler, Arizona 85225-7176
(866) 311-3268 phone, (480) 926-3598 fax

Name of Test: Field Strength of Spurious Radiation
Specification:
Test Equipment Utilized: I00049, i00037-39, i00042 - 48 **Test Date: 7/10/08**

Measurement Procedure

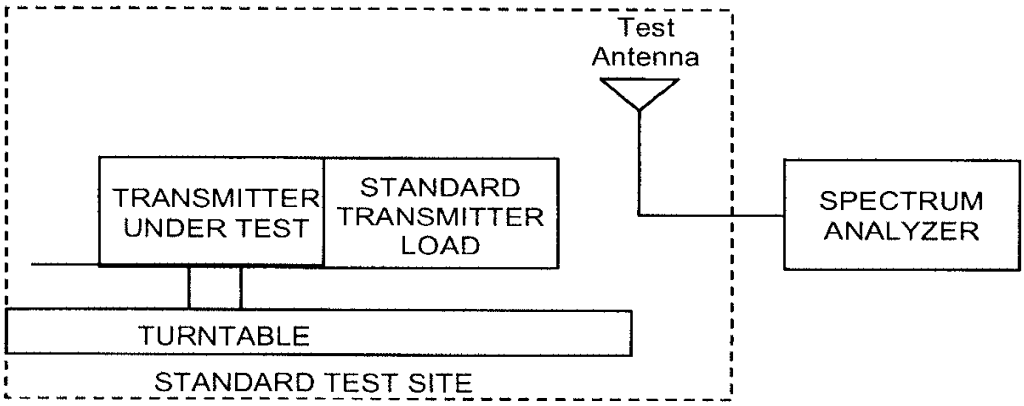
Definition:
Radiated spurious emissions are emissions from the equipment when transmitting into a non-radiating load on a frequency or frequencies which are outside an occupied band sufficient to ensure transmission of information of required quality for the class of communications desired.

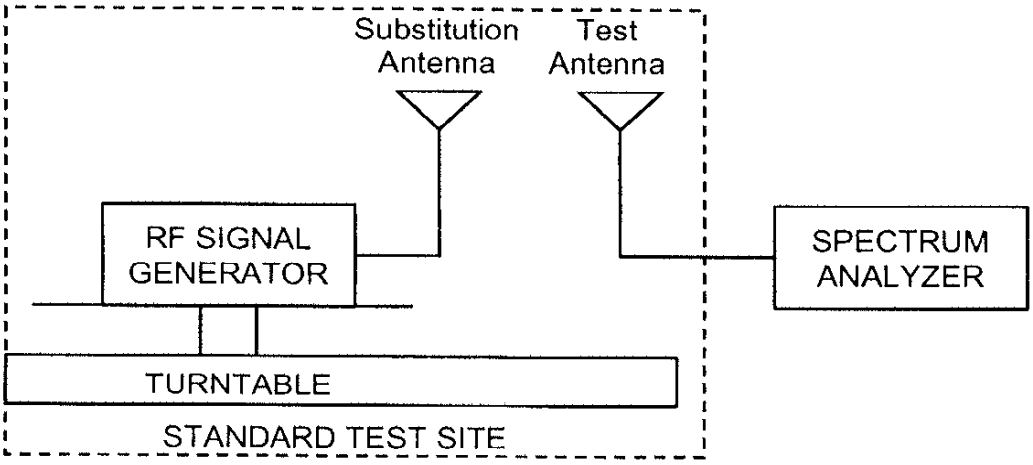
Method of Measurement:
A) Connect the equipment as illustrated
B) Adjust the spectrum analyzer for the following settings:
1) Resolution Bandwidth 100 kHz (<1 GHZ), 1 MHZ (> 1GHz).
2) Video Bandwidth ≥ 3 times Resolution Bandwidth, or 30 kHz
3) Sweep Speed ≤2000 Hz/second
4) Detector Mode = Mean or Average Power
C) Place the transmitter to be tested on the turntable in the standard test site. The transmitter is transmitting into a non-radiating load that is placed on the turntable. The RF cable to this load should be of minimum length.
D) For each spurious measurement the test antenna should be adjusted to the correct length for the frequency involved. This length may be determined from a calibration ruler supplied with the equipment. Measurements shall be made from the lowest radio frequency generated in the equipment to the tenth harmonic of the carrier, except for the region close to the carrier equal to ± the test bandwidth (see section 1.3.4.4).
E) For each spurious frequency, raise and lower the test antenna from 1 m to 4 m to obtain a maximum reading on the spectrum analyzer with the test antenna at horizontal polarity. Repeat this procedure to obtain the highest possible reading. Record this maximum reading.
F) Repeat step E) for each spurious frequency with the test antenna polarized vertically.
G) Reconnect the equipment as illustrated.
H) Keep the spectrum analyzer adjusted as in step B).
I) Remove the transmitter and replace it with a substitution antenna (the antenna should be half-wavelength for each frequency involved). The center of the substitution antenna should be approximately at the same location as the center of the transmitter. At lower frequencies, where the substitution antenna is very long, this will be impossible to achieve when the antenna is polarized vertically. In such case the lower end of the antenna should be 0.3 m above the ground.
J) Feed the substitution antenna at the transmitter end with a signal generator connected to the antenna by means of a non-radiating cable. With the antennas at both ends horizontally polarized and with the signal generator tuned to a particular spurious frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading for this set of conditions is obtained. This should be done carefully repeating the adjustment of the test antenna and generator output.
K) Repeat step J) with both antennas vertically polarized for each spurious frequency.
L) Calculate power in dBm into a reference ideal half-wave dipole antenna by reducing the readings obtained in steps J) and K) by the power loss in the cable between the generator and the antenna and further corrected for the gain of the substitution antenna used relative to an ideal half-wave dipole antenna.
M) The levels recorded in step L) are absolute levels of radiated spurious emissions in dBm. The radiated spurious emissions in dB can be calculated by the following:

Radiated spurious emissions dB =
$10\log_{10}$(TX power in watts/0.001) – the levels in step I)

NOTE: It is permissible that other antennas provided can be referenced to a dipole.

Substitution Method Test Setup





Measurement Results

Low Channel (1999 MHz) **Peak Power 38.83dBm**

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit (dBm) EIRP	Result
1999.000000	-66.74	.5	-66.24	18.8	Pass
1999.000000	-62.34	4.2	-58.14	18.8	Pass
1999.000000	-62.34	8.6	-53.74	18.8	Pass

No other emissions were detected. All emissions were greater than –20 dBc.

Mid Channel (2050MHz) **Peak Power 38.54dBm**

Emission Frequency (MHz)	Monitored Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit (dBm) EIRP	Result
2050.000000	-69.34	.6	-68.74	18.8	Pass
2050.000000	-62.54	4.5	-58.04	18.8	Pass
2050.000000	-62.14	9.0	-53.14	18.8	Pass

No other emissions were detected. All emissions were greater than –20 dBc.

High Channel (2101 MHz) **Peak Power 38.79dBm**

Emission Frequency (MHz)	Monitored Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit (dBm) EIRP	Result
2101.000000	-82.74	37.2	-45.54	18.8	Pass
2101.000000	-71.24	41.3	-29.94	18.8	Pass
2101.000000	-71.24	45.8	-25.44	18.8	Pass

Measurement Results

Low Channel (1999 MHz) Peak Power 38.61dBm

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit (dBm) EIRP	Result
2450.000000	-67.74	2.5	-65.24	18.8	Pass
2450.000000	-62.74	7.5	-55.24	18.8	Pass
2450.000000	-62.14	11.2	-50.94	18.8	Pass

No other emissions were detected. All emissions were greater than –20 dBc.

Mid Channel (2050MHz) Peak Power 38.47dBm

Emission Frequency (MHz)	Monitored Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit (dBm) EIRP	Result
2475.000000	-68.44	2.6	-65.84	18.8	Pass
2475.000000	-63.04	7.7	-55.34	18.8	Pass
2475.000000	-62.84	11.3	-51.64	18.8	Pass

No other emissions were detected. All emissions were greater than –20 dBc.

High Channel (2101 MHz) Peak Power 38.32dBm

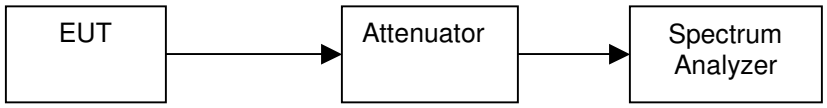
Emission Frequency (MHz)	Monitored Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit (dBm) EIRP	Result
2491.000000	-68.24	2.7	-65.54	18.8	Pass
2491.000000	-62.84	7.8	-55.04	18.8	Pass
2491.000000	-62.24	11.4	-50.84	18.8	Pass

No other emissions were detected. All emissions were greater than –20 dBc.

Name of Test: Emission Masks (Occupied Bandwidth)
Specification:
Test Equipment Utilized: **Test Date: N/A**

The EUT was connected directly to a spectrum analyzer to verify that the EUT meets the required emissions mask. A reference level plot is provided to verify that the peak power was established prior to testing the mask.

Test Setup



Emission Mask Plots

Measurement Results

The are no measurement results for the EUT, as the EUT is an ERFP amplifier that is connected to only one transmitter and has only one antenna output. The modulation type for the device is F7W.

Name of Test: Frequency Stability (Temperature Variation)
Specification: 2.1055(a)(1)
Test Equipment Utilized: **Test Date: N/A**

Measurement Procedure

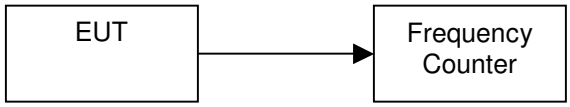
A) The EUT and test equipment were set up as shown on the following page.

B) With all power removed, the temperature was decreased to -30°C and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was noted within one minute.

C) With power OFF, the temperature was raised in 10°C steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.

D) The temperature tests were performed for the worst case.

Measurement Setup



Measurement Results

This measurement is not applicable, as per FCC reminder sheet for AMP, Booster and Repeater.

Michael D Wyman

Performed by: Michael Wyman

Name of Test: Frequency Stability (Voltage Variation)
Specification: 2.1055(b)(1)
Test Equipment Utilized: **Test Date: N/A**

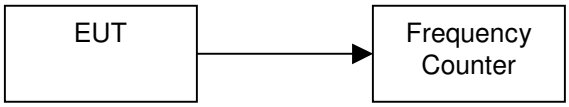
Measurement Procedure

A) The EUT was placed in a temperature chamber (if required) at 25±5°C and connected as shown below.

B) The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.

C) The variation in frequency was measured for the worst case.

Measurement Setup



Measurement Results

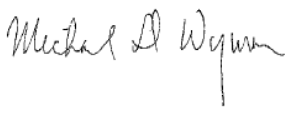
This measurement is not applicable, as per FCC reminder sheet for AMP, Booster and Repeater.

Michael D Wyman

Performed by: Michael Wyman

Name of Test: Necessary Bandwidth and Emission Bandwidth
Specification: 2.202 **Engineer:** M.Wyman

The EUT is classified per FCC EAD reminder sheet (Amp, Booster and repeater) as a ERFP amplifier. Per this document guidelines there is no specified frequency part to the emission bandwidth. Therefore emission type is F7W.



Performed by: Michael Wyman

Test Equipment Utilized

Description	MFG	Model Number	FTL Asset Number	Last Cal Date	Cal Due Date
RF Pre-Amplifier	HP	8449	i00028	1/23/07	1/23/09
Spectrum Analyzer	HP	8563E	i00029	3/9/07	3/9/08
Spectrum Analyzer	HP	8566B	i00049	8/18/07	8/18/08
Bi Con Antenna	EMCO	3109B	i00088	10/15/07	10/15/09
Log Periodic Antenna	Aprel	2001	i00089	10/22/07	10/22/09
Monopole Antenna	Ailtech	DM-105A-T1,T2, T3	i00037, 39 i00042, 48	Verified	Verified
Horn Antenna	EMCO	3115	i00103	9/5/06	9/5/08
Horn Antenna	Aprel	3115	I00091	NCR	NCR
Power Meter	HP	E4418B	i00228	9/6/07	9/6/08
Power sensor	HP	8481A	i00317	9/6/07	9/6/08
Spectrum Analyzer	HP	8566B	i00329	5/05/08	5/05/09
Voltmeter	Fluke	87III	i00319	11/05/07	11/05/08
Temperature Chamber	Tenney	Tenney Jr.	i00027	9/25/07	9/25/08
Audio Analyzer	HP	8903A	i00324	9/14/07	9/14/08
Modulation Analyzer	HP	8901A	i00321	9/17/07	9/17/08
Frequency Counter	HP	5334A	i00019	11/20/07	11/20/08
Power Supply	HP	6286A	i00005	NCR	NCR
Signal Generator	R&S	SMT-03	i00266	NCR	NCR
Digitizing Oscilloscope	HP	50402	i00318	10/17/07	10/17/08
Crystal Detector	HP	8472B	i00159	NCR	NCR

In addition to the above listed equipment standard RF connectors and cables were utilized in the testing of the described equipment. Prior to testing these components were tested to verify proper operation.

END OF TEST REPORT