

# **CETECOM Inc.**



## **CETECOM Inc.**

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Issued test report consists of 52 Pages

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**RECOGNIZED BY INDUSTRY CANADA**

**IC - 3925**

**Test report no.: 141FCC/2001**

**FCC Part 15.247**

**HP OmniBook 500**

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The test results of this test report relate exclusively to the test item specified in 1.5. The CETECOM Inc. USA does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the CETECOM Inc. USA.

**1.2 Testing laboratory****CETECOM Inc.**

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Phone: +1 408 586 6200 Fax: +1 408 586 6299  
E-mail: lothar.schmidt@cetecomusa.com  
Internet: www.cetecomusa.com

**1.3 Details of applicant**

Name : Hewlett Packard Co.; Mobile Computing Division  
Street : 1000 NE Circle Blvd.  
City : Corvallis, OR 97330  
Country : USA  
Telephone : +1 541 715 2171  
Telefax : +1 541 715 3607  
Contact : Kathy Warnock  
e-mail : Kathy\_warnock@hp.com

**1.4 Application details**

Date of receipt of application : 2001-04-01  
Date of receipt of test item : 2001-04-15  
Date of test : 2001-04-18/19/20

**1.5 Test item**

Manufacturer : Hewlett Packard.  
Address : See above  
Model number : HP OmniBook 500 Series  
Type Designation : HP OmniBook 500 Series

**Additional informations:**

Frequency : 2.412 – 2.484 GHz  
Type of modulation : DBPSK at 1Mb/s; DQPSK at 2Mb/s; CCK at 5.5.and 11Mb/s  
Number of channels : 11 Channels in US  
Antenna : Integral  
Power supply : 5.0V  
Type of equipment : Temperature range : 0°C - +35°C  
Tests were carried out at the maximum number of channels available (13) in the test software. The US version will set to 11 channels only.

**1.6 Test standards**

FCC Part 15 §15.247

The tests were done following the public notice DA 00-705 released March 30, 2000

**2 Technical test****2.1 Summary of test results**

**No deviations from the technical specification(s) were ascertained in the course of the tests performed.**

**Technical responsibility for area of testing :**

**2001-05-10****EMC&****Lothar****Radio****Schmidt**

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**Date****Section****Name****Signature**

**2.2 Testreport**

**TEST REPORT**

**Testreport no. : 141FCC/2001  
HP OmniBook 500**

**TEST REPORT REFERENCE****LIST OF MEASUREMENTS**

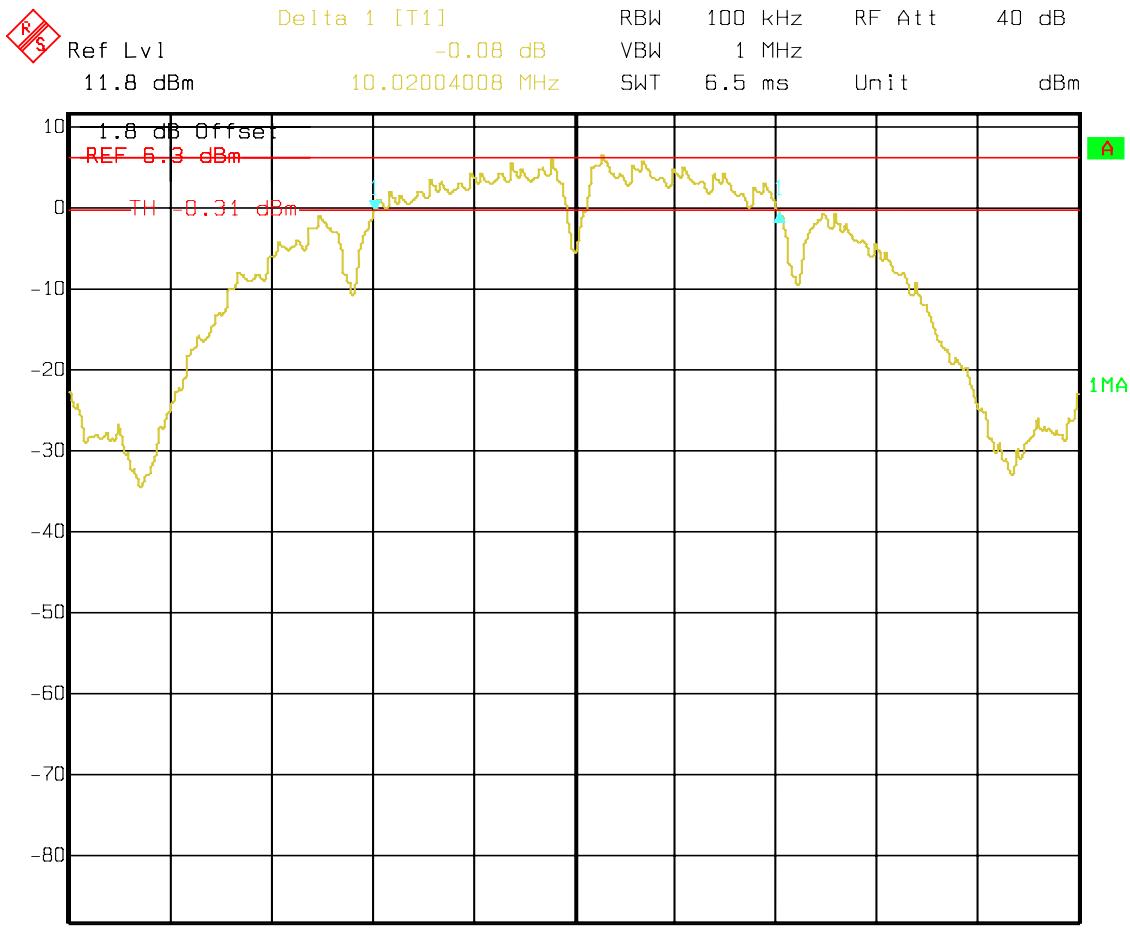
<b>Paragraph</b>	<b>PARAMETER TO BE MEASURED</b>	<b>PAGE</b>
<b>Transmitter parameters</b>		
§ 15.247 (a)(2)	<b>Spectrum Bandwidth of a DSSS System</b>	7
§ 15.247 (b)(1)	<b>Maximum peak output power</b>	11
§ 15.247 (c)(1)	<b>Emission limitations</b>	16
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<b>Test equipment listing</b>		
<b>Test Site</b>		
<b>Photographs of the equipment</b>		

**NOTE: Conducted Emissions as per § 15.107 are not applicable for the EUT since it is a built in a laptop computer. The Laptop was measured in accordance with FCC part 15 B including the Wireless LAN.**

**SPECTRUM BANDWIDTH OF DSSS-SYSTEM****SUBCLAUSE § 15.247 (a)(2)**

<b>TEST CONDITIONS</b>		<b>6 dB BANDWIDTH ( kHz )</b>		
		<b>2412</b>	<b>2442</b>	<b>2472</b>
<b>T<sub>nom</sub></b> ( 20 )°C	<b>V<sub>nom</sub></b> 0V	<b>10020</b>	<b>11422</b>	<b>10020</b>
<b>Measurement uncertainty</b>		<b>±3dB</b>		

**LIMIT****SUBCLAUSE §15.247(a) (2)****The minimum 6dB bandwidth shall be at least 500 KHz**

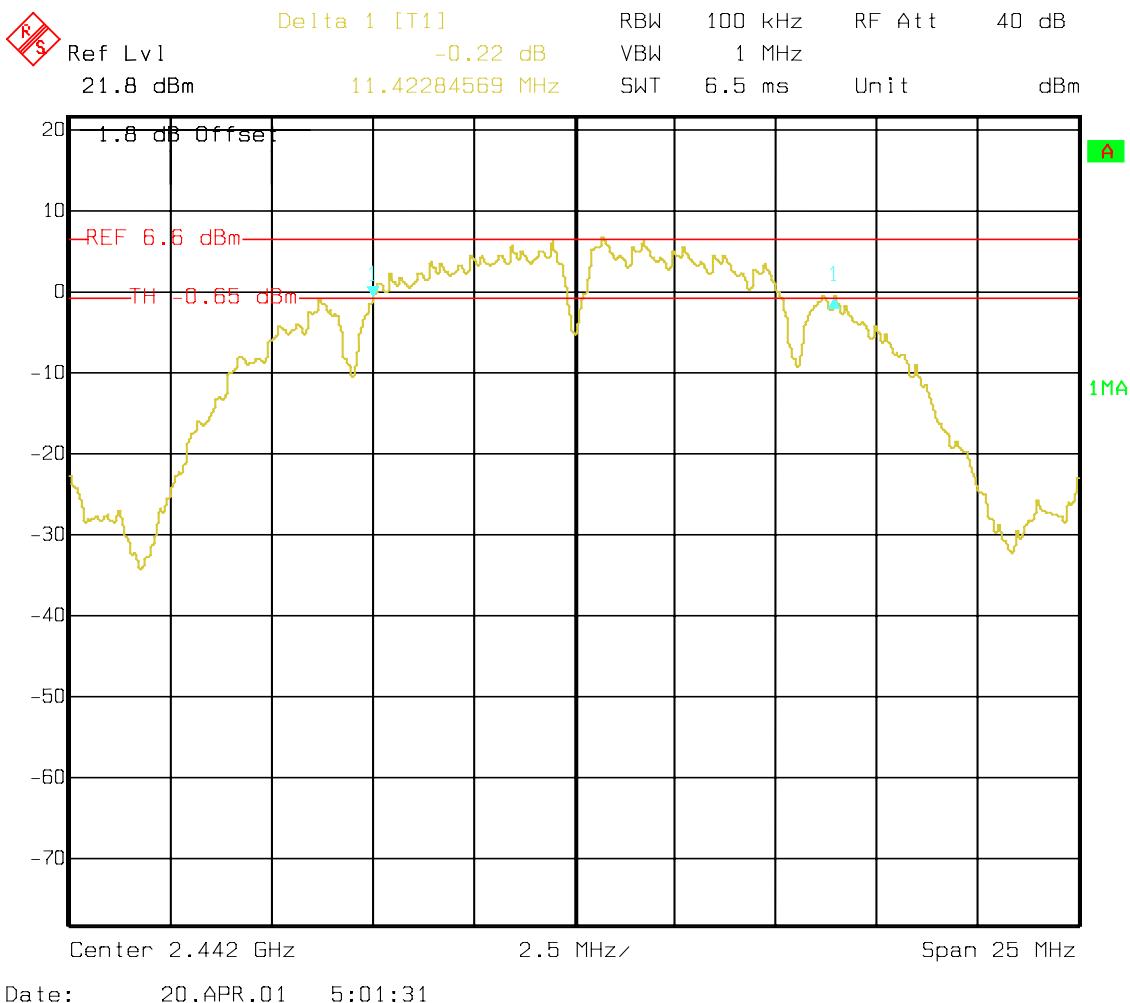
**SPECTRUM BANDWIDTH OF DSSS-SYSTEM  
2412 MHz**
**SUBCLAUSE § 15.247 (a)(2)**


Date: 20.APR.01 5:27:11

**LIMIT**
**SUBCLAUSE §15.247(a) (2)**

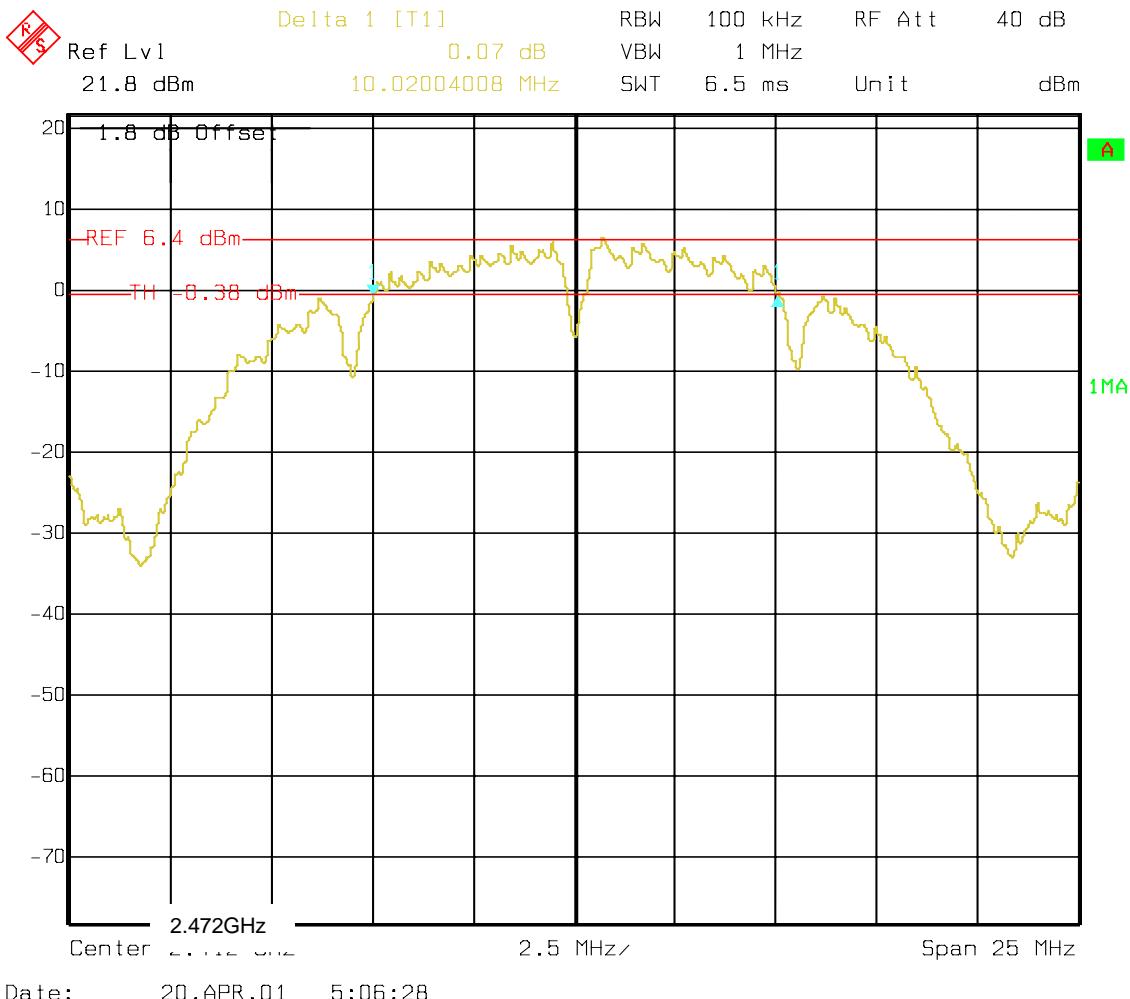
**The minimum 6dB bandwidth shall be at least 500 KHz , here 10.02 MHz**

**ANALYZER SETTINGS: RBW=100KHz , VBW=1MHz**

**SPECTRUM BANDWIDTH OF DSSS-SYSTEM  
2442 MHz**
**SUBCLAUSE § 15.247 (a)(2)**

**LIMIT**
**SUBCLAUSE §15.247(a) (2)**

**The minimum 6dB bandwidth shall be at least 500 KHz , here 11.42 MHz**

**ANALYZER SETTINGS: RBW=100KHz , VBW=1MHz**

**SPECTRUM BANDWIDTH OF DSSS-SYSTEM  
2472 MHz**
**SUBCLAUSE § 15.247 (a)(2)**

**LIMIT**
**SUBCLAUSE §15.247(a) (2)**

The minimum 6dB bandwidth shall be at least 500 KHz , here 10.02 MHz

ANALYZER SETTINGS: RBW=100KHz , VBW=1MHz

**MAXIMUM PEAK OUTPUT POWER  
(CONDUCTED)****SUBCLAUSE § 15.247 (b) (1)**

<b>TEST CONDITIONS</b>		<b>MAXIMUM PEAK OUTPUT POWER (dBm)</b>					
		<b>2412</b>		<b>2442</b>		<b>2472</b>	
<b>T<sub>nom</sub>( 23 )°C</b>	<b>V<sub>nom</sub>0V</b>	Pk	<b>16.81</b>	Pk	<b>17.06</b>	Pk	<b>17.22</b>
		Av	<b>11.80</b>	Av	<b>12.05</b>	Av	<b>11.84</b>
<b>T<sub>nom</sub>( 0 )°C</b>	<b>V<sub>nom</sub>0V</b>	Pk	<b>17.47</b>	Pk	<b>17.60</b>	Pk	<b>17.57</b>
		Av	<b>12.39</b>	Av	<b>12.70</b>	Av	<b>12.45</b>
<b>T<sub>nom</sub>( 35 )°C</b>	<b>V<sub>nom</sub>0V</b>	Pk	<b>16.27</b>	Pk	<b>16.49</b>	Pk	<b>16.13</b>
		Av	<b>11.17</b>	Av	<b>11.45</b>	Av	<b>10.96</b>
<b>Measurement uncertainty</b>		<b>±3dB</b>					

**LIMIT****SUBCLAUSE § 15.247 (b) (1)**

<b>Frequency range</b>	<b>RF power output</b>
<b>2400-2483.5 MHz / 5725 – 5850 MHz</b>	<b>1.0 Watt</b>

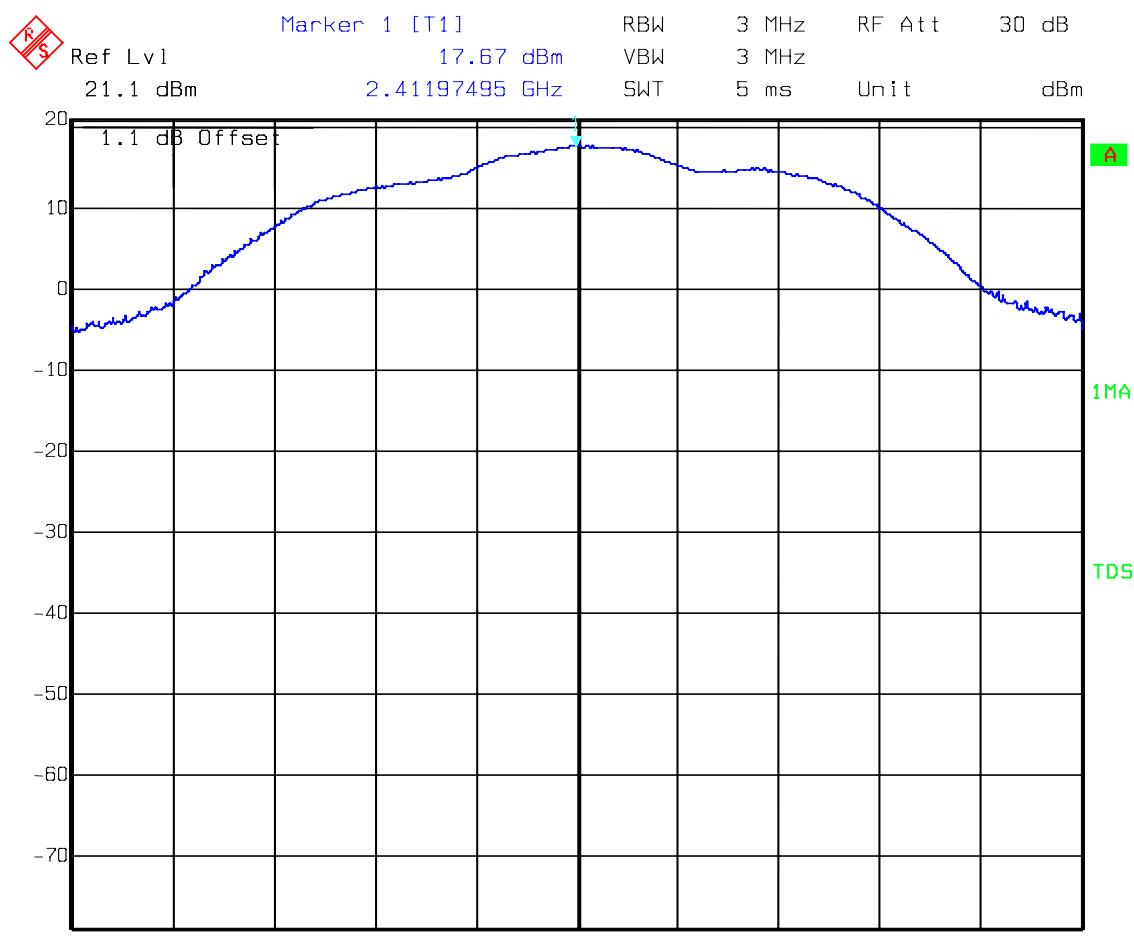
**MAXIMUM PEAK OUTPUT POWER (EIRP)  
(RADIATED)****SUBCLAUSE § 15.247 (b) (1)**

<b>TEST CONDITIONS</b>		<b>MAXIMUM PEAK OUTPUT POWER (dBm)</b>						
		<b>2412</b>		<b>2442</b>		<b>2472</b>		
<b>T<sub>nom</sub>( 23 )°C</b>	<b>V<sub>nom</sub>0V</b>	<b>Pk</b>	<b>17.67</b>	<b>Pk</b>	<b>18.43</b>	<b>Pk</b>	<b>18.85</b>	
		<b>Av</b>	<b>12.57</b>	<b>Av</b>	<b>13.23</b>	<b>Av</b>	<b>13.75</b>	
<b>Maximum deviation from output power under extreme test conditions (dBc)</b>		<b>not performed</b>		<b>not performed</b>		<b>not performed</b>		
<b>Measurement uncertainty</b>		<b>±3dB</b>						

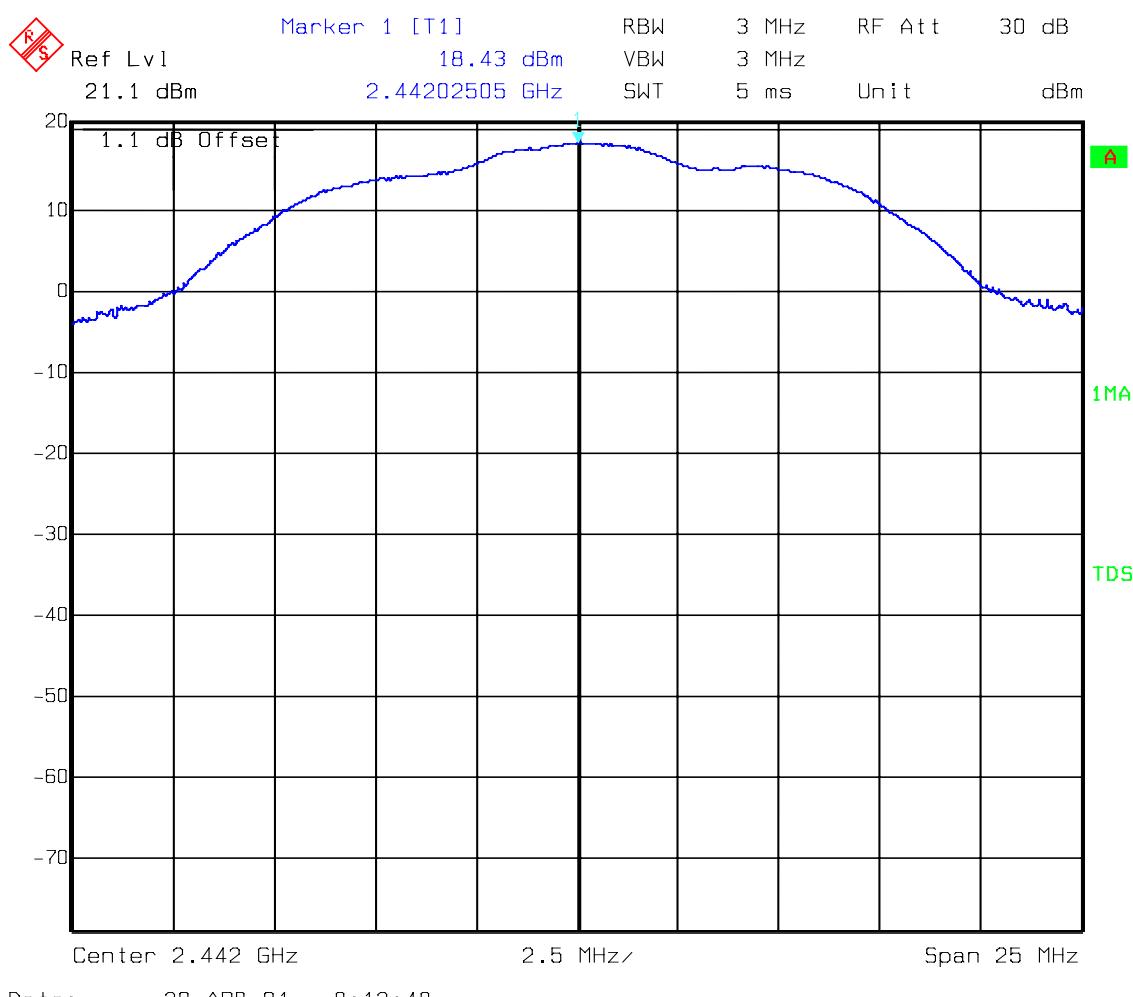
**LIMIT****SUBCLAUSE § 15.247 (b) (1)**

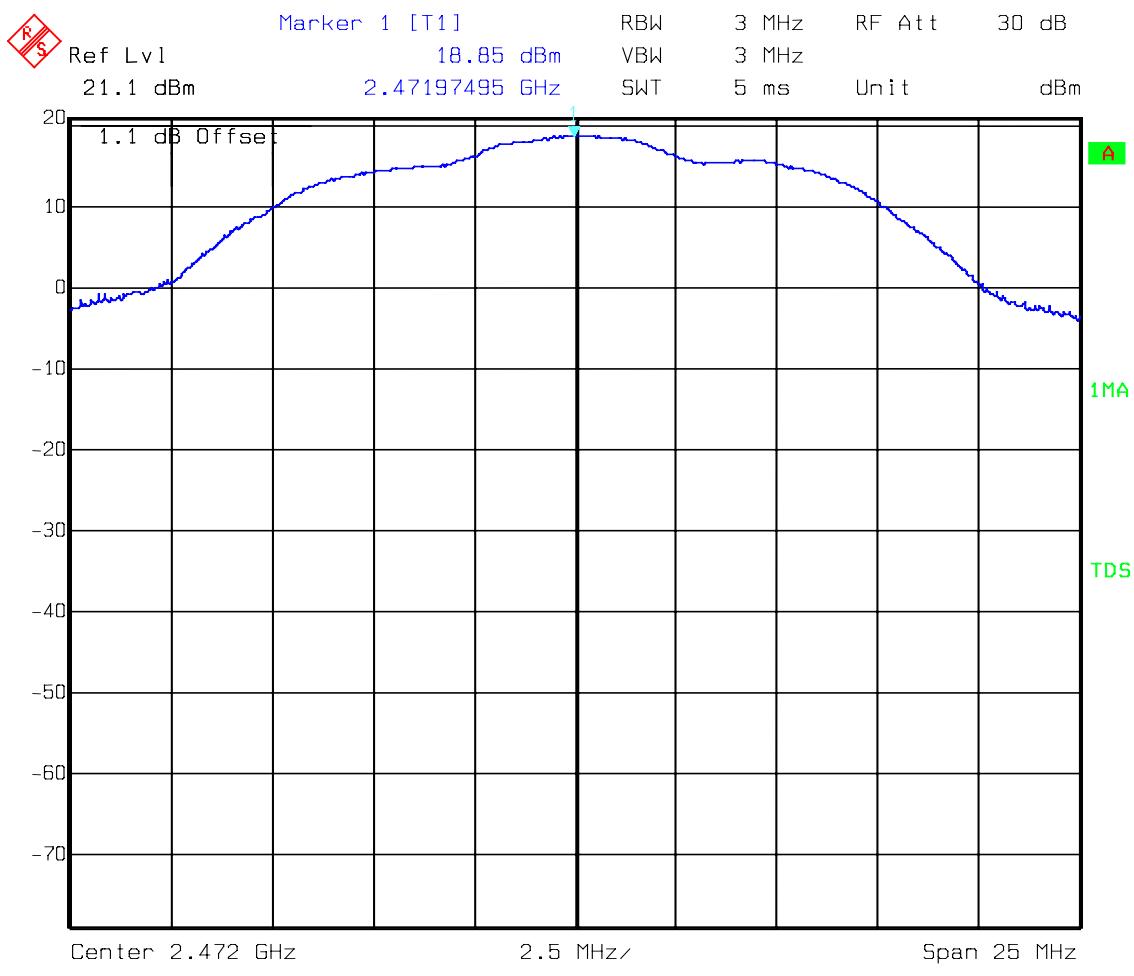
<b>Frequency range</b>	<b>RF power output</b>
<b>2400-2483.5 MHz / 5725 – 5850 MHz</b>	<b>1.0 Watt</b>

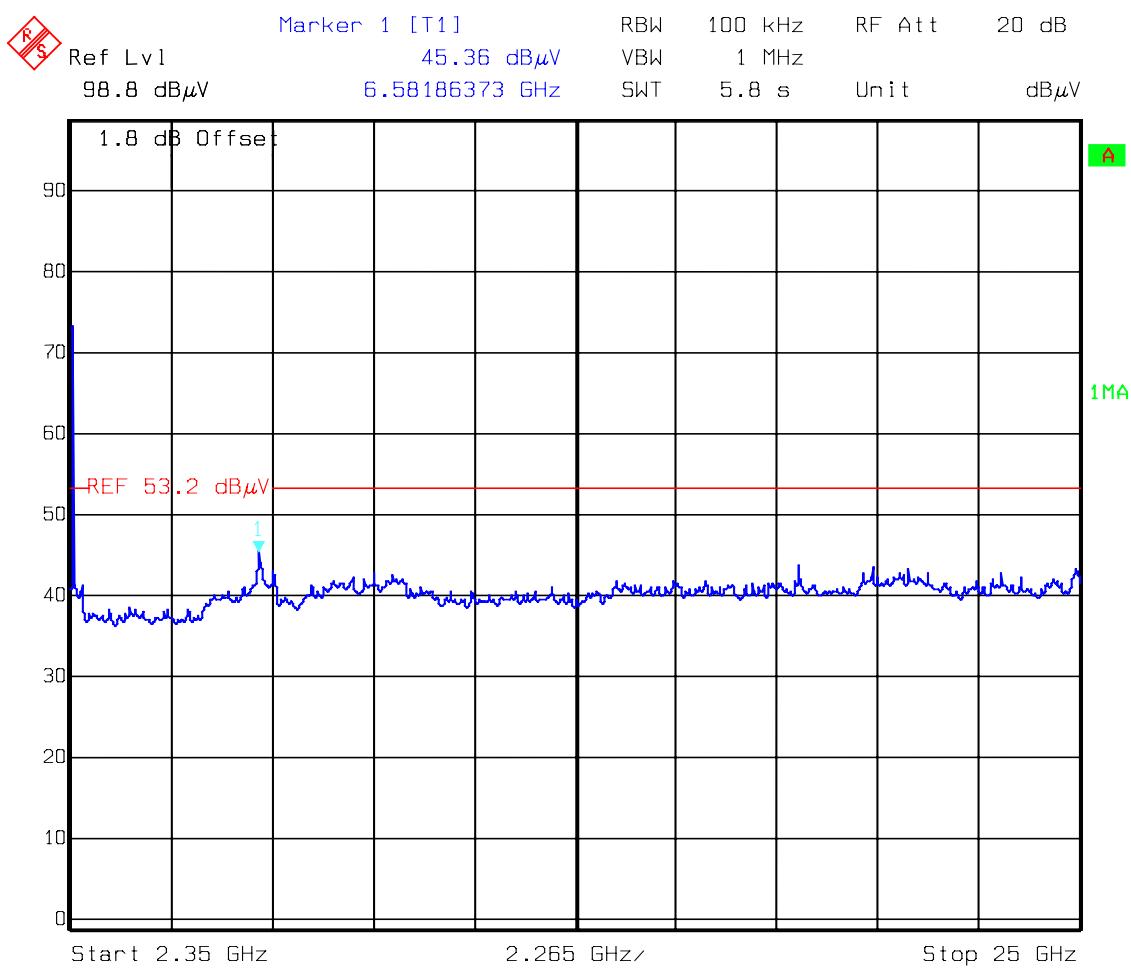
ANALYZER SETTINGS: RBW=3MHz , VBW=3MHz

**EIRP:2412MHz**

Date: 20.APR.01 8:11:05

**EIRP:2442MHz**

**EIRP:2472MHz**

**EMISSION LIMITATIONS (Transmitter)****SUBCLAUSE § 15.247 (c) (1)****conducted****2412 MHz up to 25 GHz**

Date: 18.APR.01 13:55:14

**LIMITS****SUBCLAUSE § 15.247 (c)**

In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

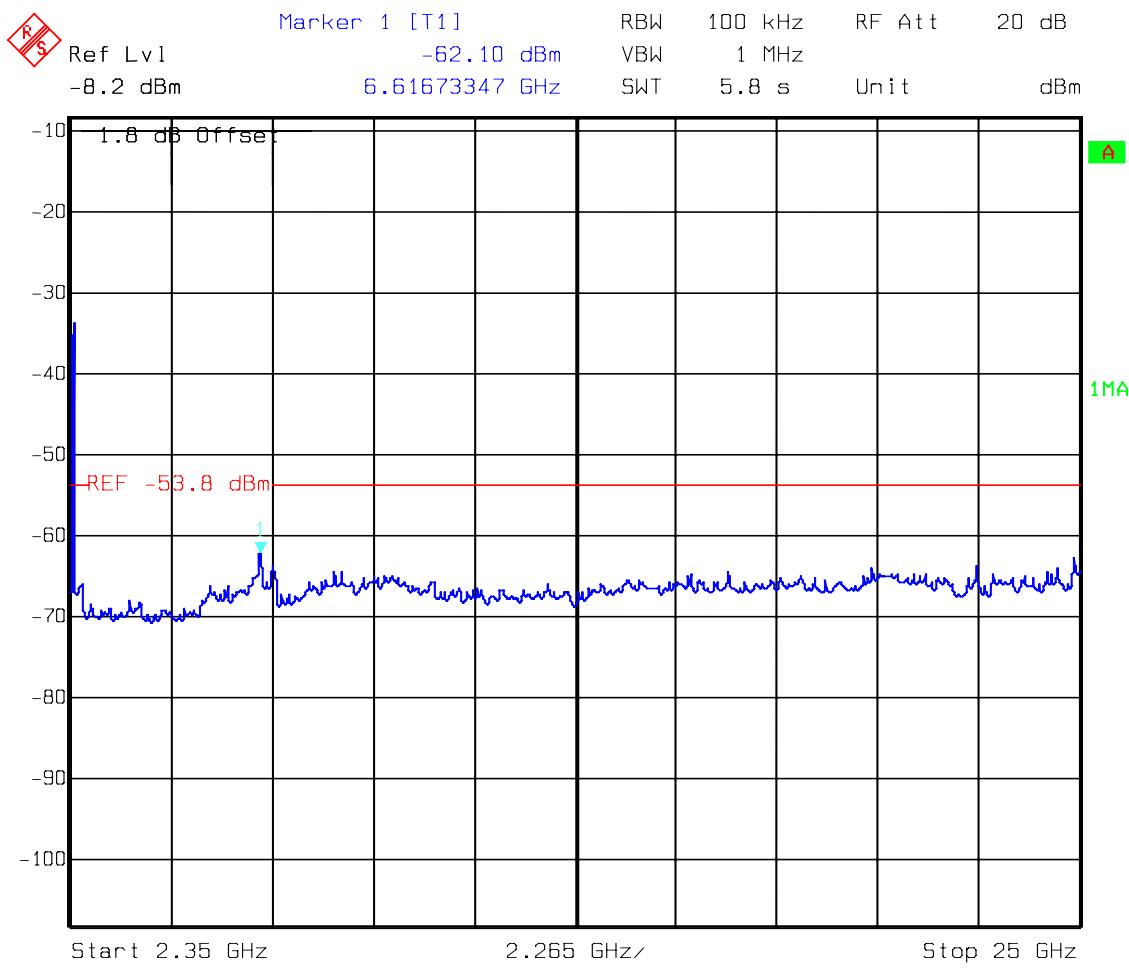
ANALYZER SETTINGS: RBW=100KHz , VBW=1MHz

## EMISSION LIMITATIONS (Transmitter)

## SUBCLAUSE § 15.247 (c) (1)

conducted

## 2442 MHz up to 25 GHz



Date: 18.APR.01 13:58:02

## LIMITS

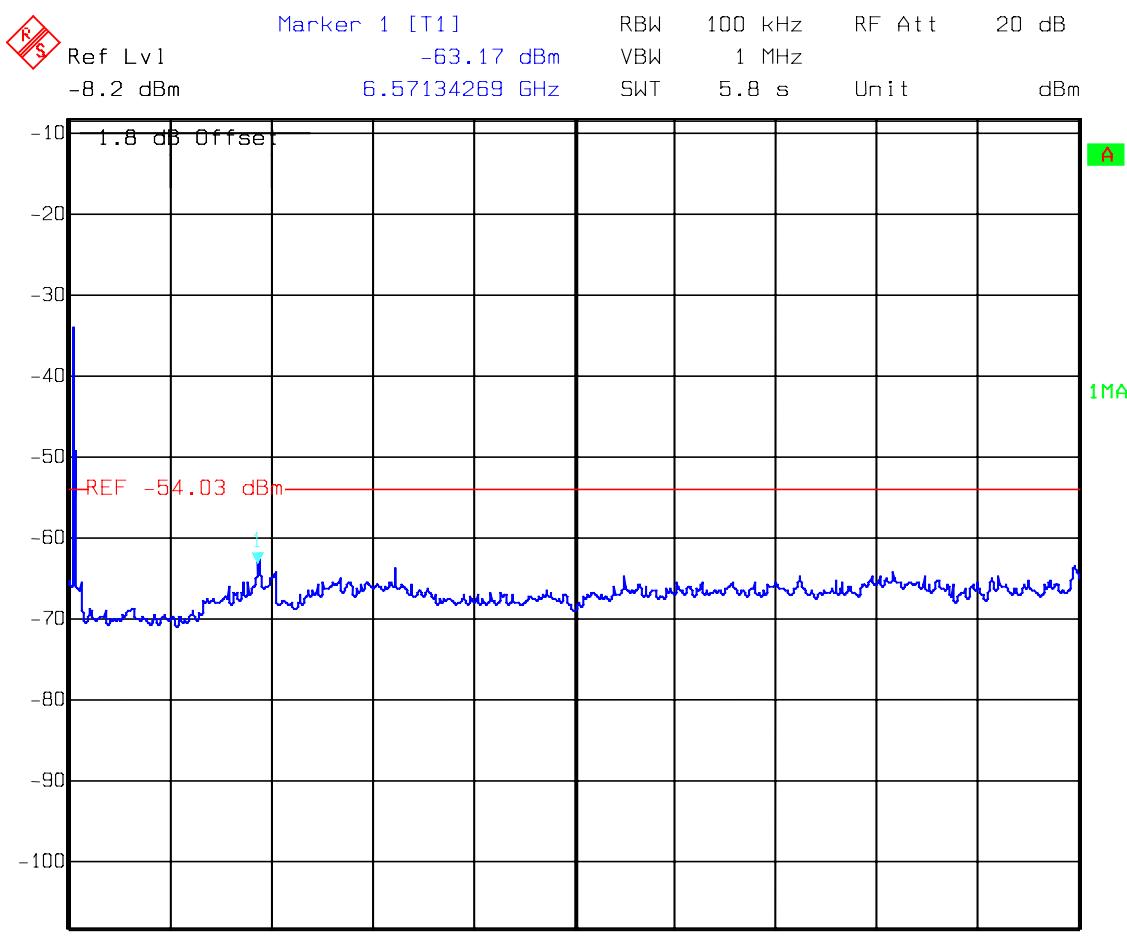
## SUBCLAUSE § 15.247 (c)

In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

ANALYZER SETTINGS: RBW=100KHz , VBW=1MHz

## EMISSION LIMITATIONS (Transmitter)

## SUBCLAUSE § 15.247 (c) (1)

conducted**2472 MHz up to 25 GHz**

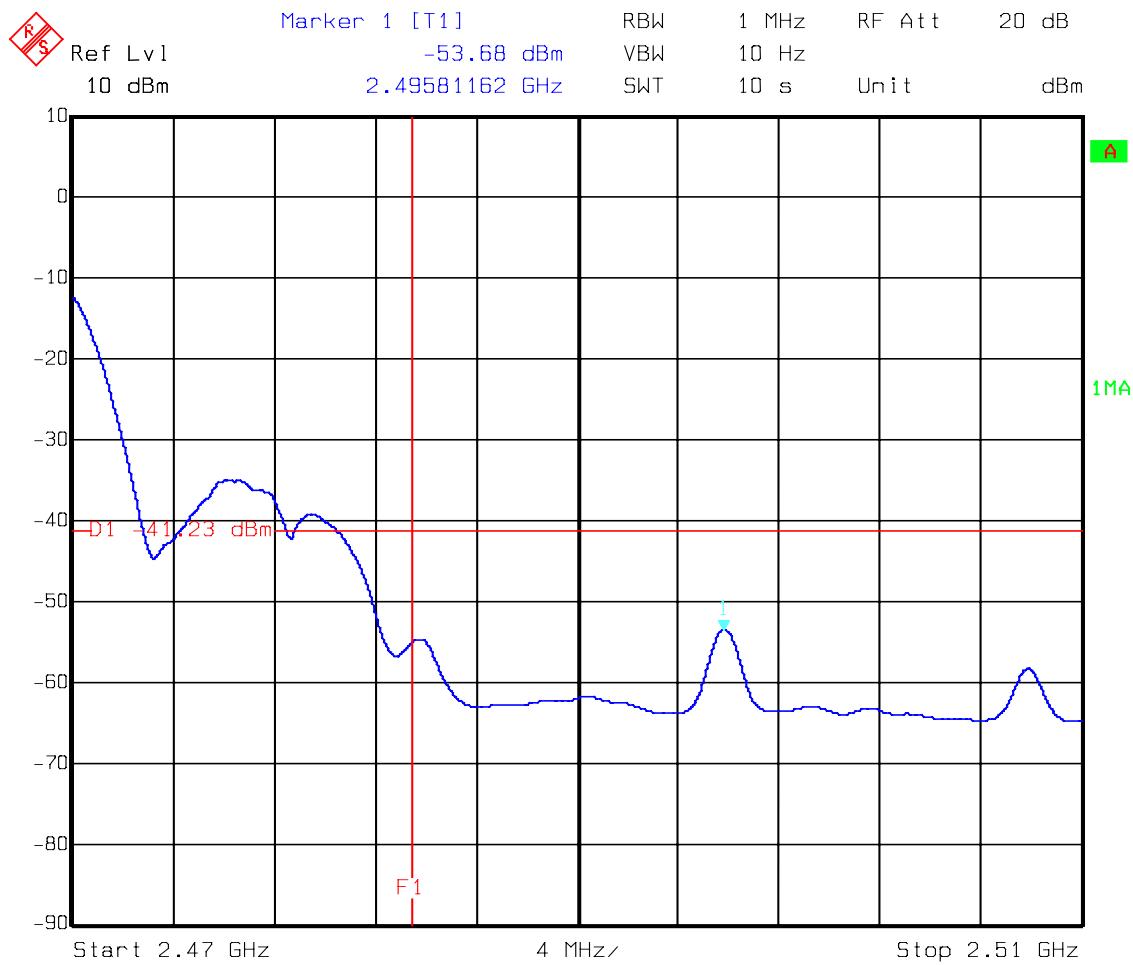
Date: 18.APR.01 13:59:56

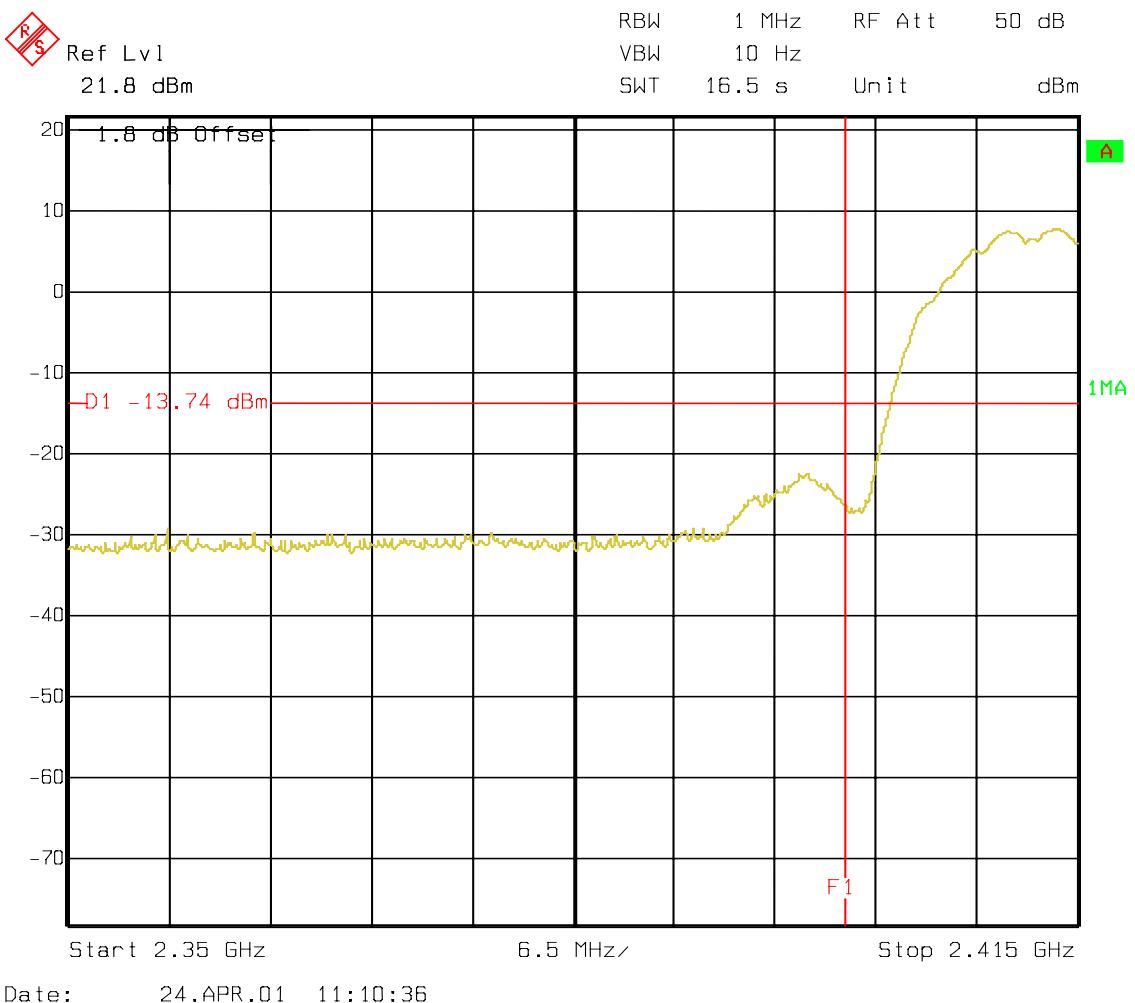
**LIMITS**

## SUBCLAUSE § 15.247 (c)

In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

ANALYZER SETTINGS: RBW=100KHz , VBW=1MHz

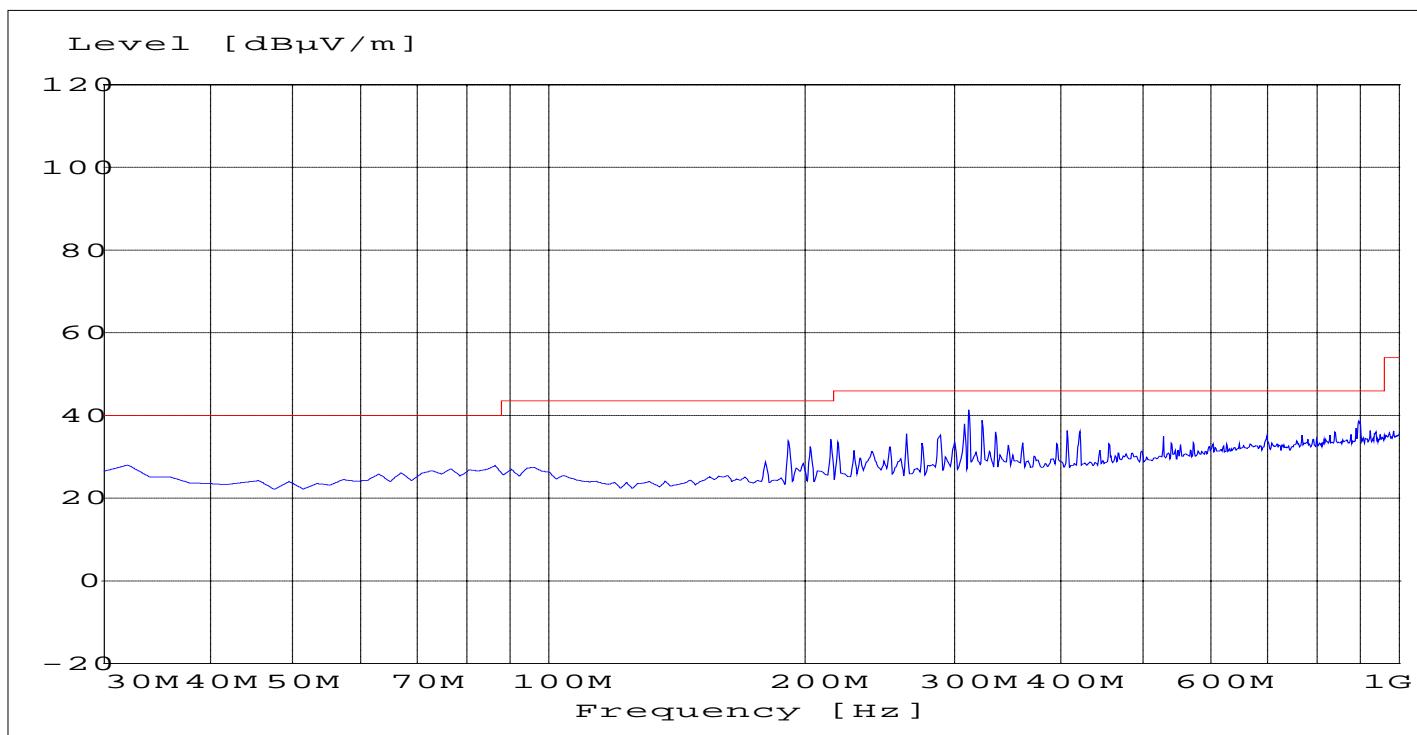
**EMISSION LIMITATIONS (Transmitter)****SUBCLAUSE § 15.247 (c) (2)****conducted****spurious in the restricted band 2483.5 – 2500 MHz  
(Higher Band Edge)****ANALYZER SETTINGS: RBW=1MHz , VBW=10Hz**

**Lower Band Edge****conducted****ANALYZER SETTINGS: RBW=1MHz , VBW=10Hz**

**EMISSION LIMITATIONS (Transmitter) SUBCLAUSE § 15.247 (c) (1)**

The spurious emissions were done with different settings, using the relevant pre-amplifiers for the relevant frequency ranges. This is the reason that the graphs show different noise levels. In the range between 18 and 26 GHz very short cable connections to the antenna was used to minimize the noise level. Channel 1: 2412 MHz; Channel 2: 2442 MHz; Channel 3: 2472 MHz

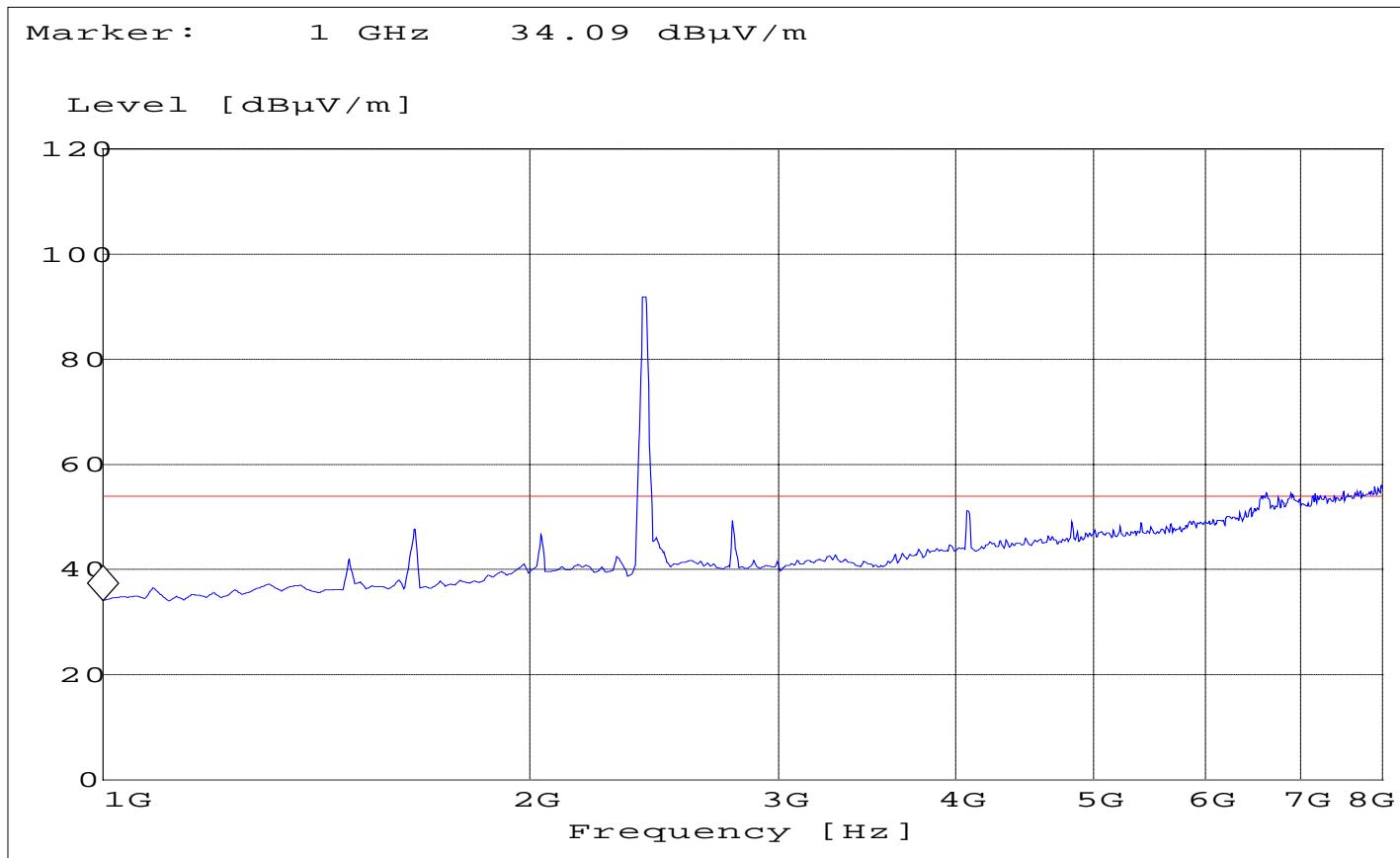
**All emission measurements were done in Peak mode to reduce measurement time. In case limits are exceeded the measurements will be repeated and documented in the test report either with Quasi Peak or average detector depending on the frequency range specified in FCC 15 and/or DA00-705. Bandwidth, sweep time etc. Were set according DA00-705 and recorded**

**Channel 1: 30MHz-1GHz****LIMITS****SUBCLAUSE § 15.247 (c)**

In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

ANALYZER SETTINGS:  $f < 1 \text{ GHz}$  : RBW/VBW: 100 kHz

$f \geq 1 \text{ GHz}$  : RBW/VBW: 1 MHz

**EMISSION LIMITATIONS (Transmitter) SUBCLAUSE § 15.247 (c) (1)****Channel 1: 1GHz-8GHz**

NOTE: This measurement was repeated with High Pass Filter to eliminate the carrier frequency & harmonics were found lowered by minimum 4dB.

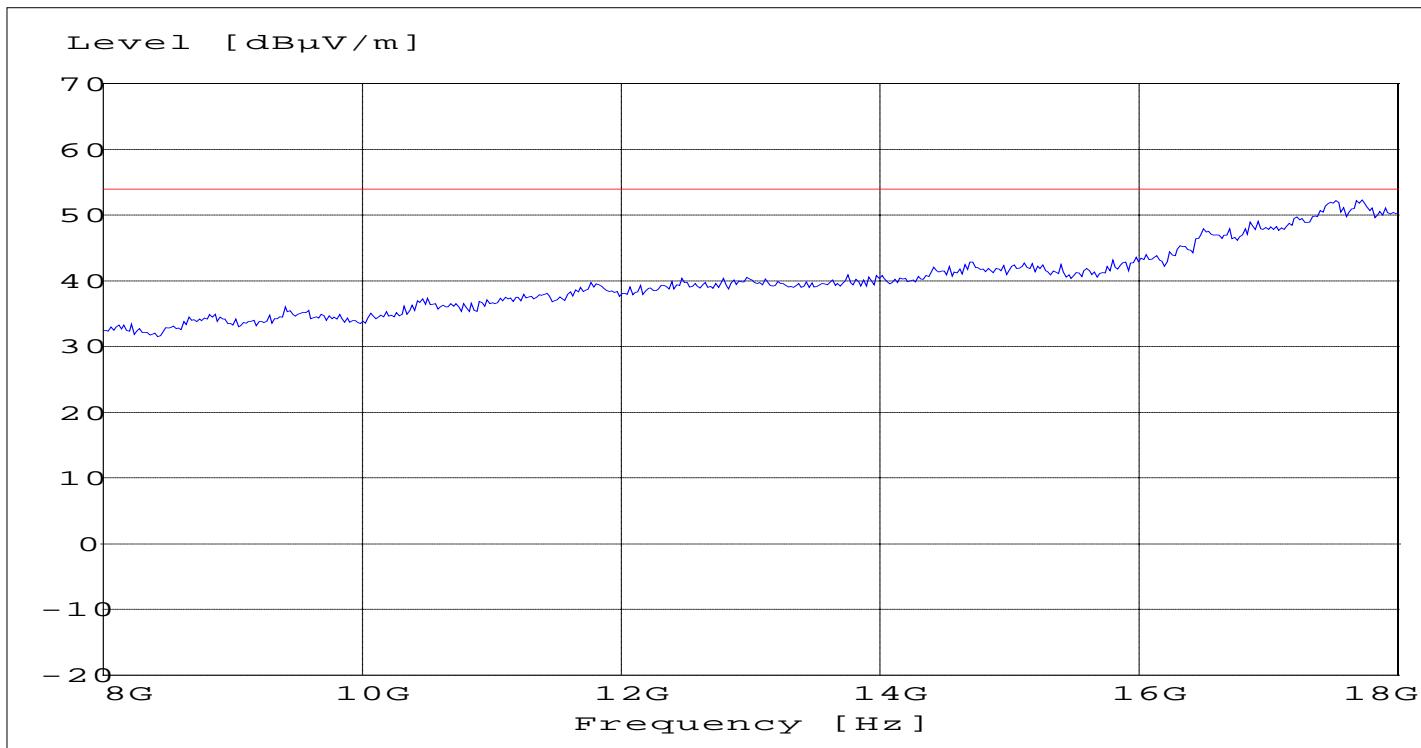
The peak above the limit is the carrier frequency. This is related to all the spurious emissions measurements.

**LIMITS****SUBCLAUSE § 15.247 (c)**

In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

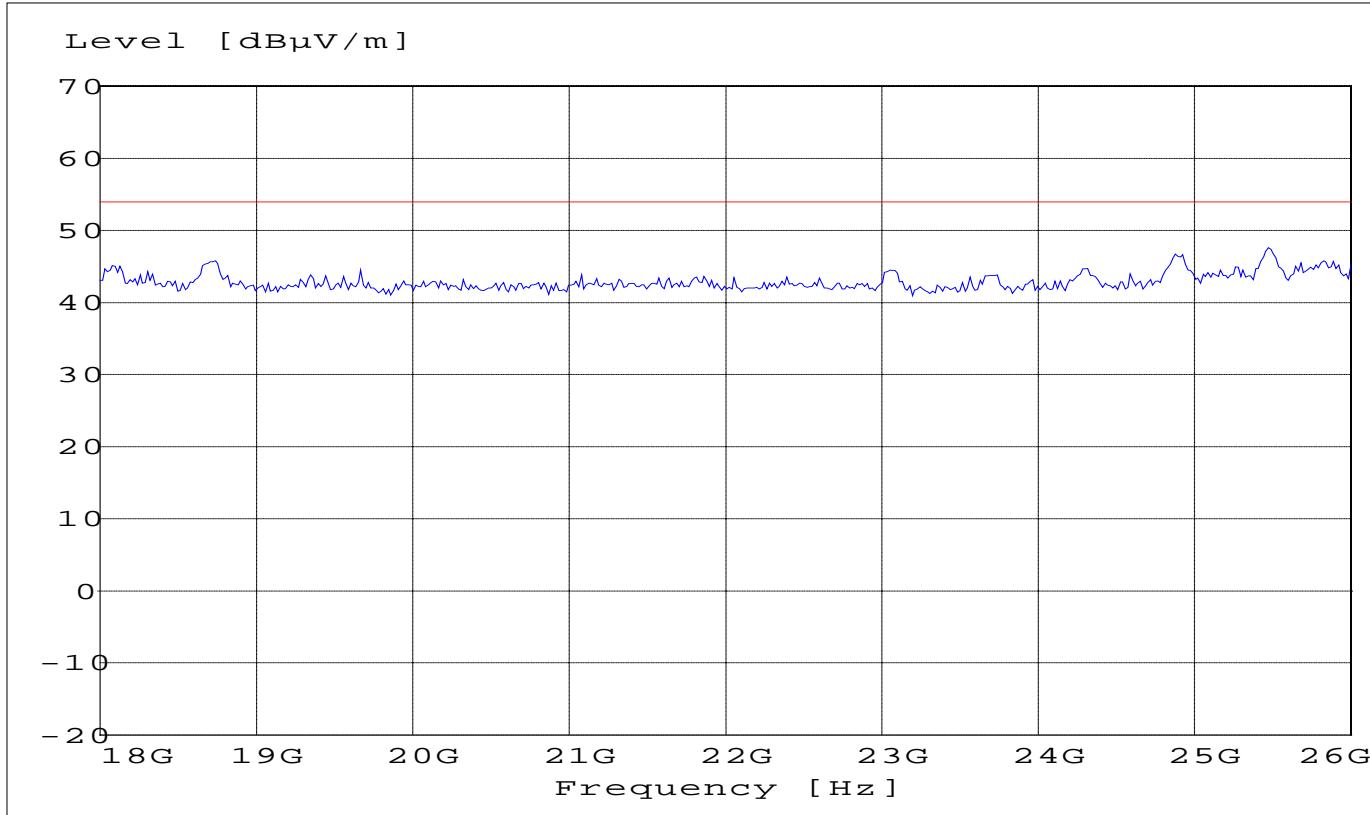
ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz

$f \geq 1$  GHz : RBW/VBW: 1 MHz

**EMISSION LIMITATIONS (Transmitter) SUBCLAUSE § 15.247 (c) (1)****Channel 1: 8GHz -18GHz****LIMITS****SUBCLAUSE § 15.247 (c)**

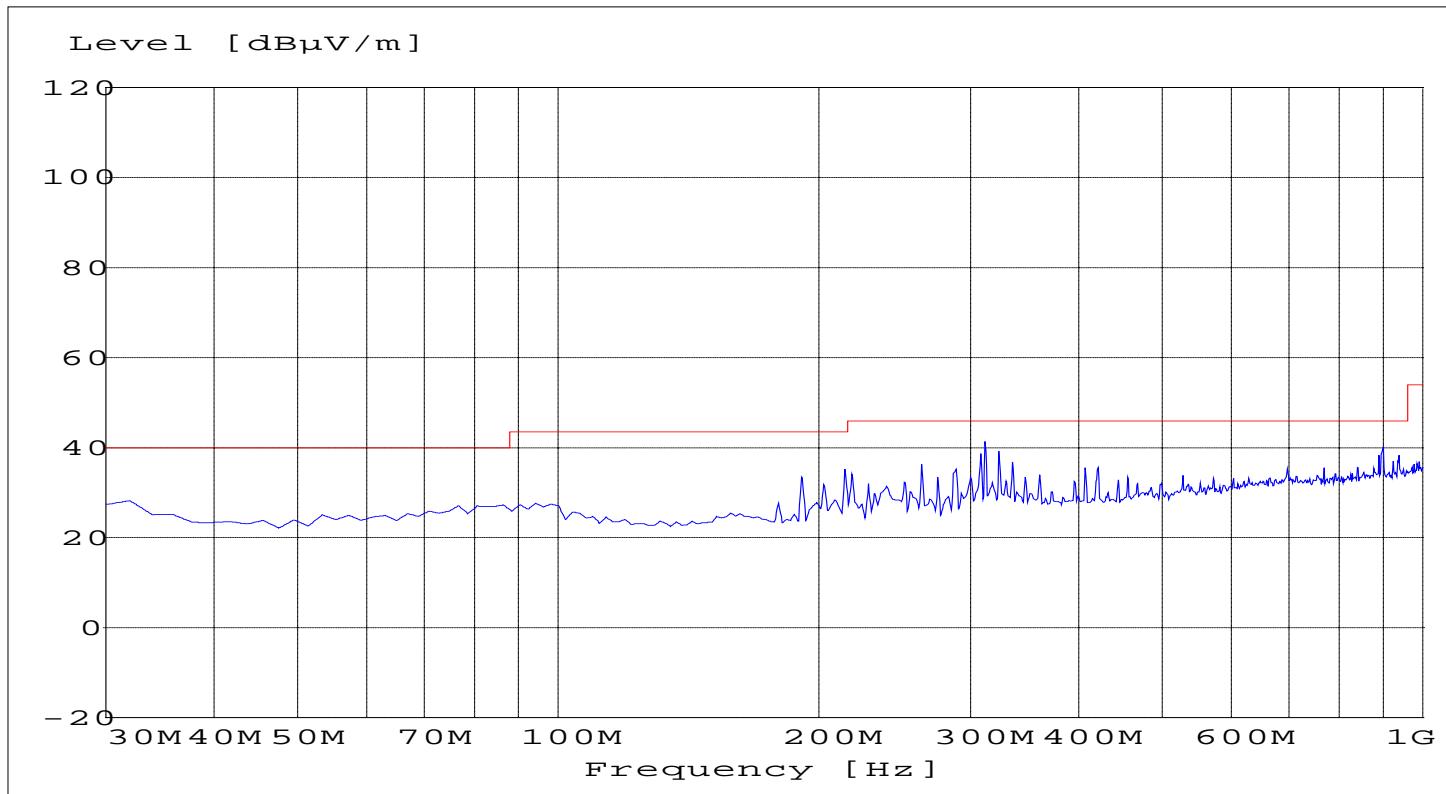
In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

**EMISSION LIMITATIONS (Transmitter) SUBCLAUSE § 15.247 (c) (1)****Channel 1: 18GHz -26GHz****LIMITS****SUBCLAUSE § 15.247 (c)**

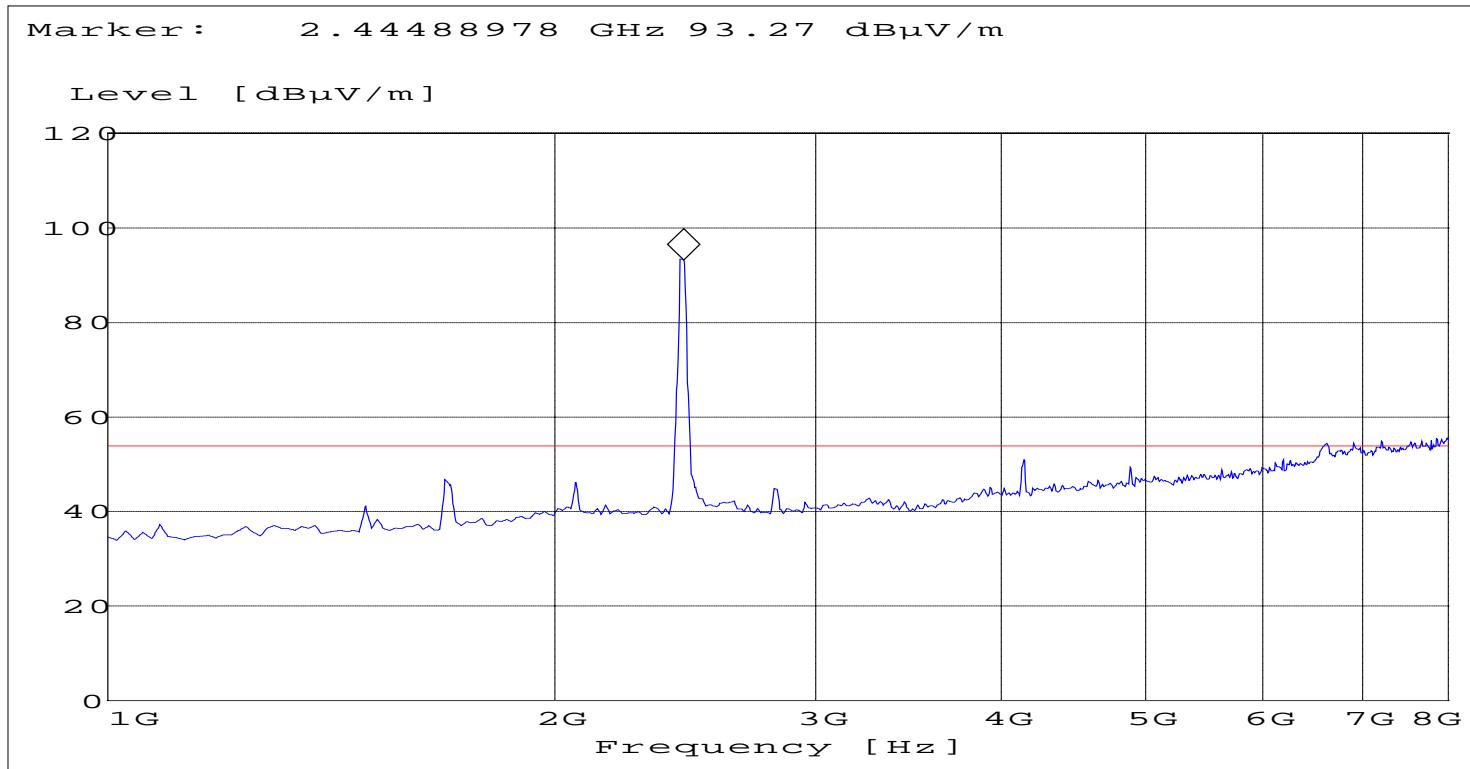
In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

**EMISSION LIMITATIONS (Transmitter) SUBCLAUSE § 15.247 (c) (1)****Channel 2: 30MHz -1GHz****LIMITS****SUBCLAUSE § 15.247 (c)**

In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

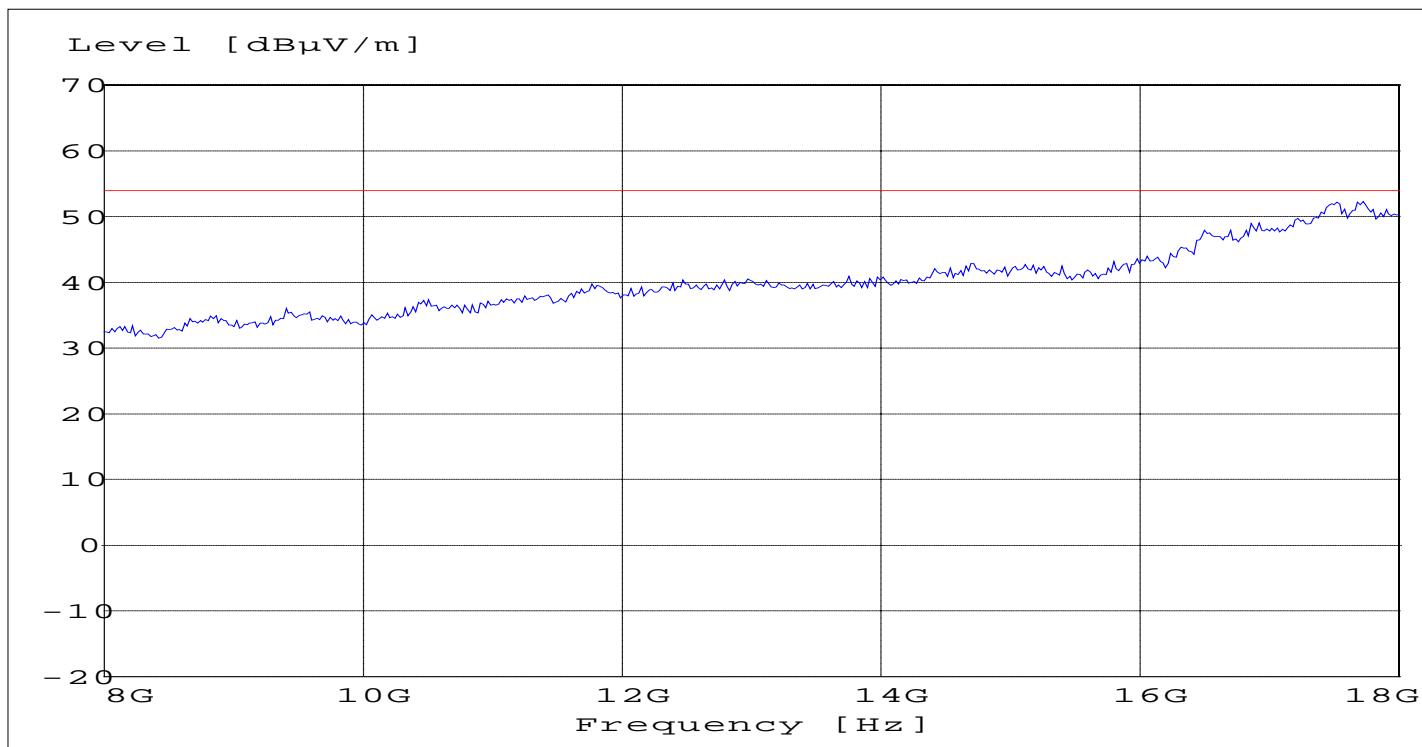
**EMISSION LIMITATIONS (Transmitter) SUBCLAUSE § 15.247 (c) (1)****Channel 2: 1GHz -8GHz**

NOTE: This measurement was repeated with High Pass Filter to eliminate the carrier frequency & harmonics were found lowered by minimum 4dB.

**LIMITS****SUBCLAUSE § 15.247 (c)**

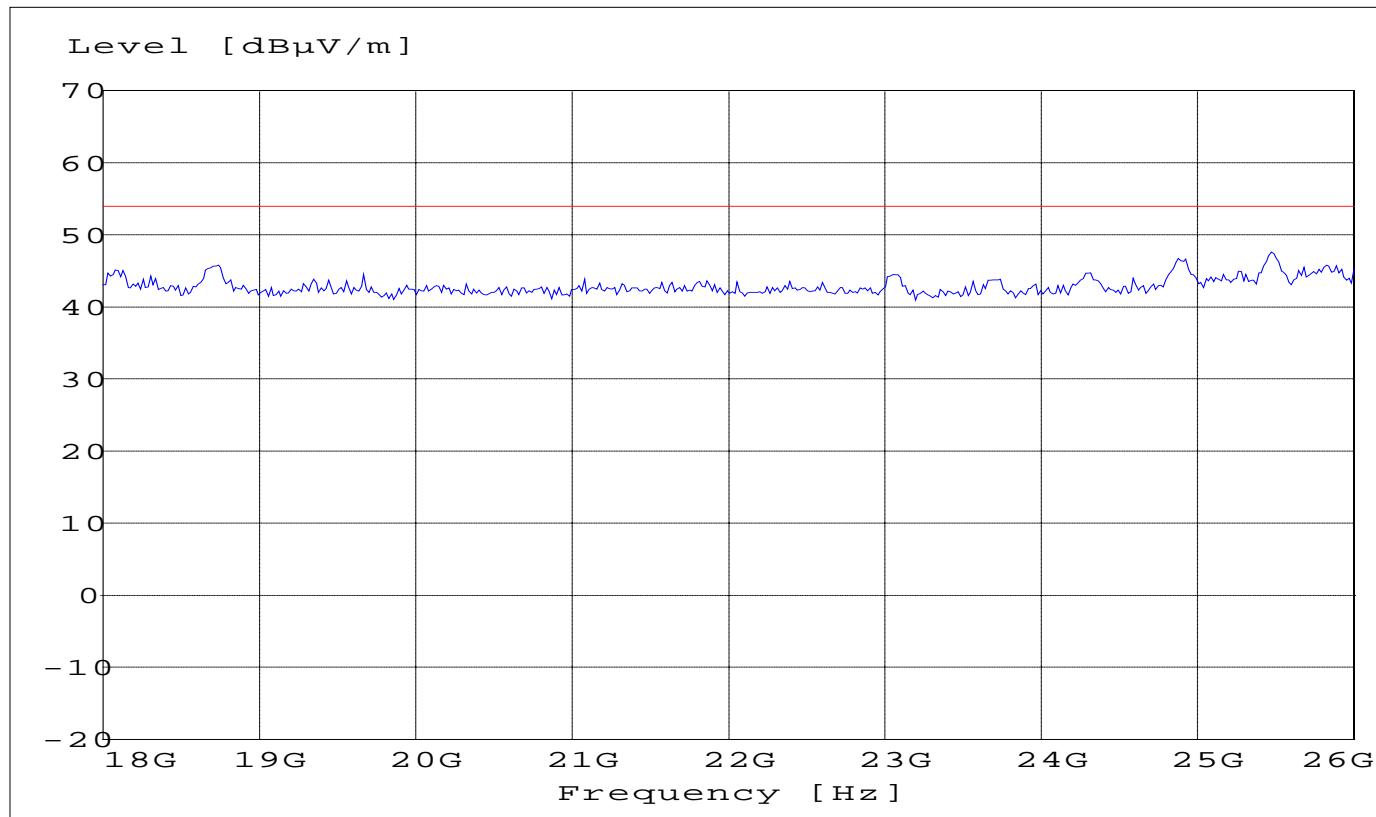
In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

**EMISSION LIMITATIONS (Transmitter) SUBCLAUSE § 15.247 (c) (1)****Channel 2: 8GHz -18GHz****LIMITS****SUBCLAUSE § 15.247 (c)**

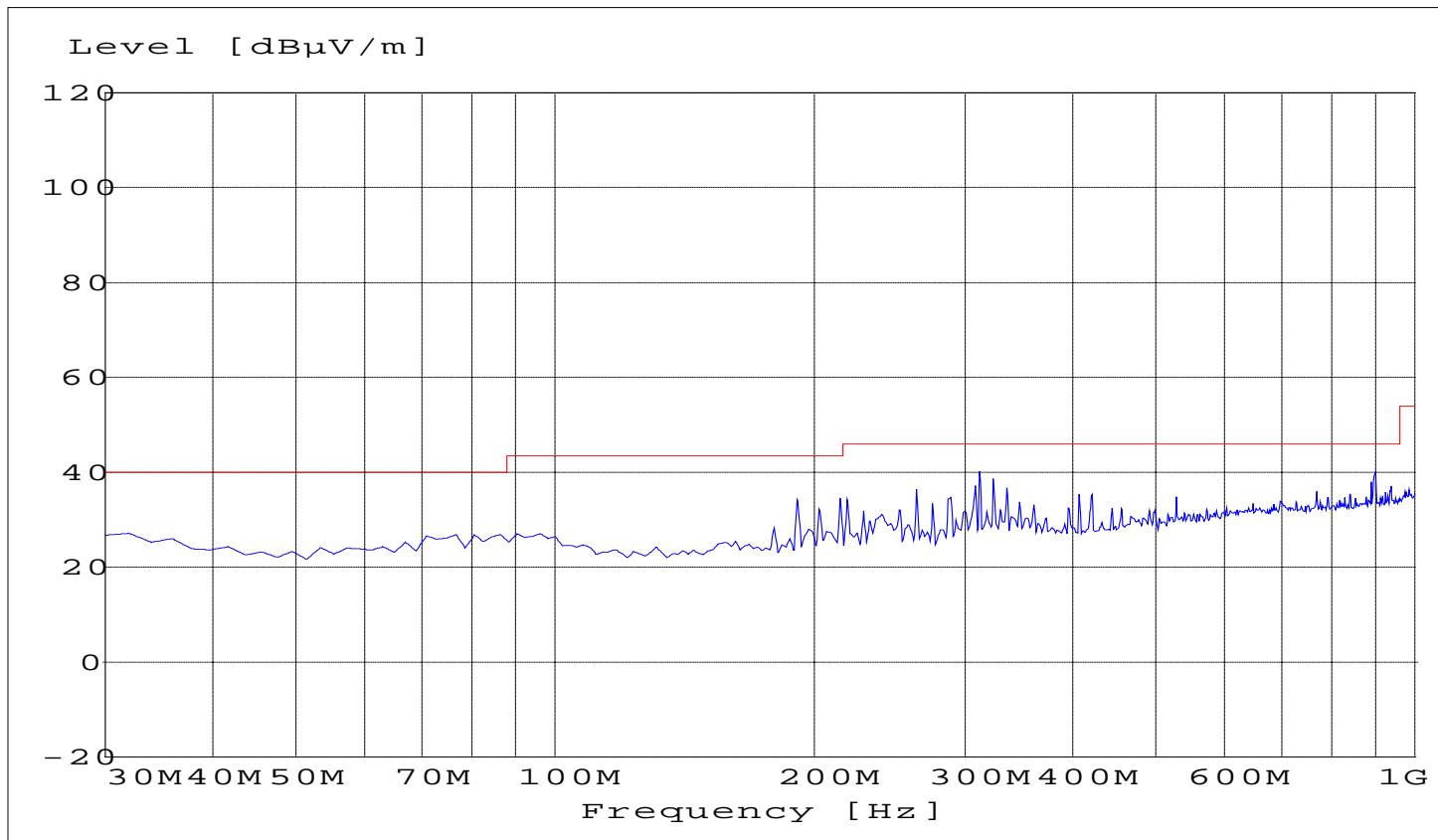
In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

**EMISSION LIMITATIONS (Transmitter) SUBCLAUSE § 15.247 (c) (1)****Channel 2: 18GHz -26GHz****LIMITS****SUBCLAUSE § 15.247 (c)**

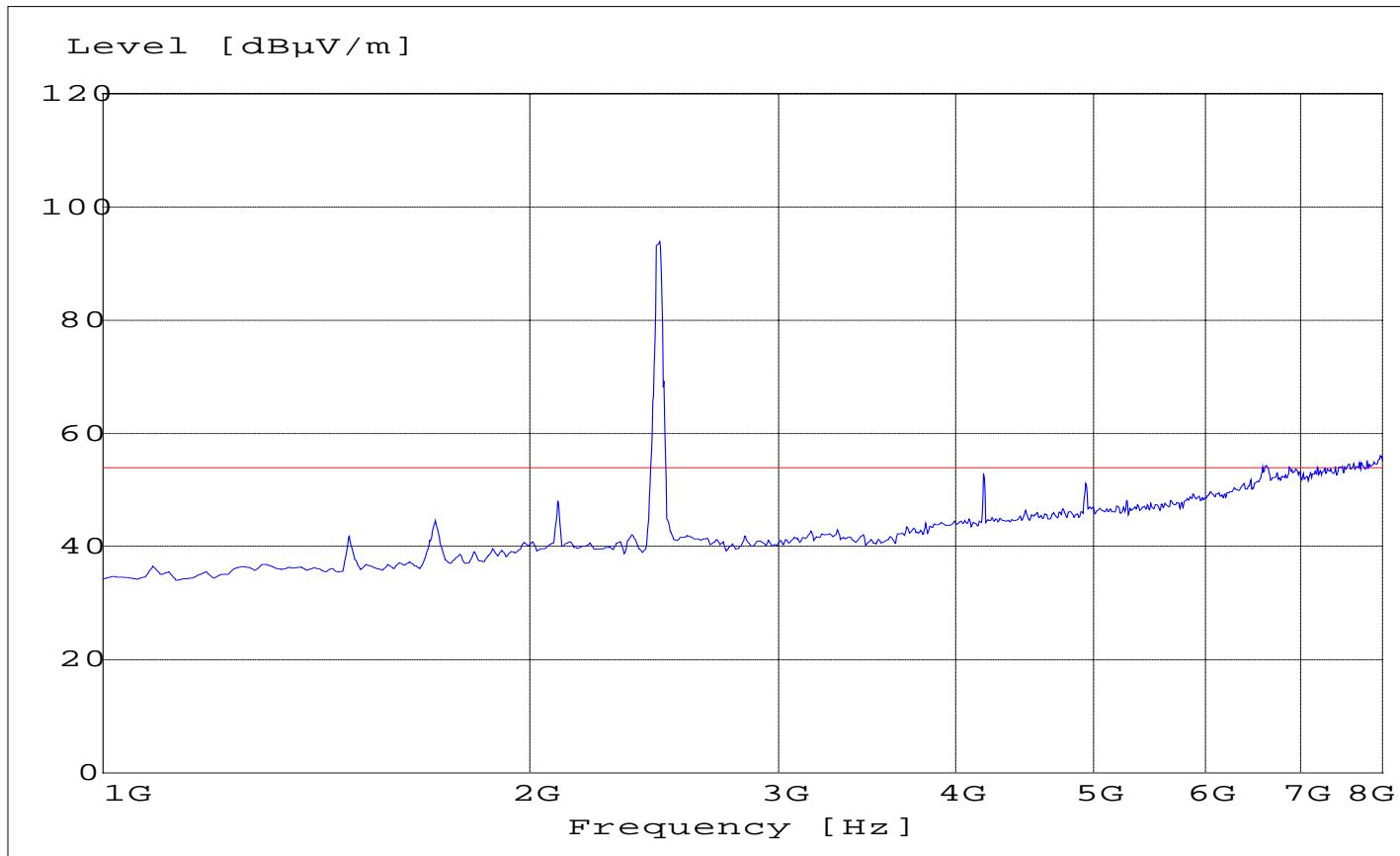
In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

**EMISSION LIMITATIONS (Transmitter) SUBCLAUSE § 15.247 (c) (1)****Channel 3: 30MHz -1GHz****LIMITS****SUBCLAUSE § 15.247 (c)**

In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

ANALYZER SETTINGS:  $f < 1 \text{ GHz}$  : RBW/VBW: 100 kHz $f \geq 1 \text{ GHz}$  : RBW/VBW: 1 MHz

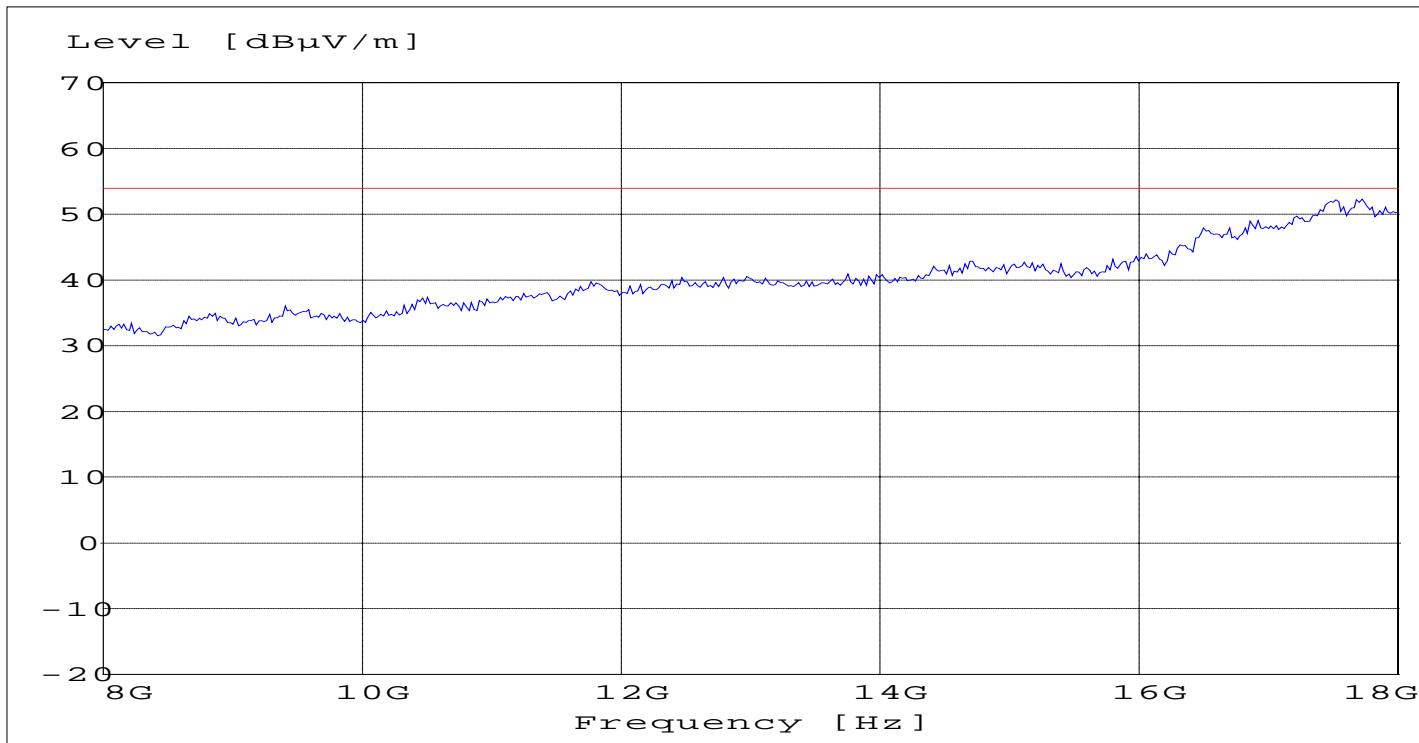
**EMISSION LIMITATIONS (Transmitter) SUBCLAUSE § 15.247 (c) (1)****Channel 3: 1GHz -8GHz**

**NOTE:** This measurement was repeated with High Pass Filter to eliminate the carrier frequency. This lowered the harmonics values by minimum 4dB.

**LIMITS****SUBCLAUSE § 15.247 (c)**

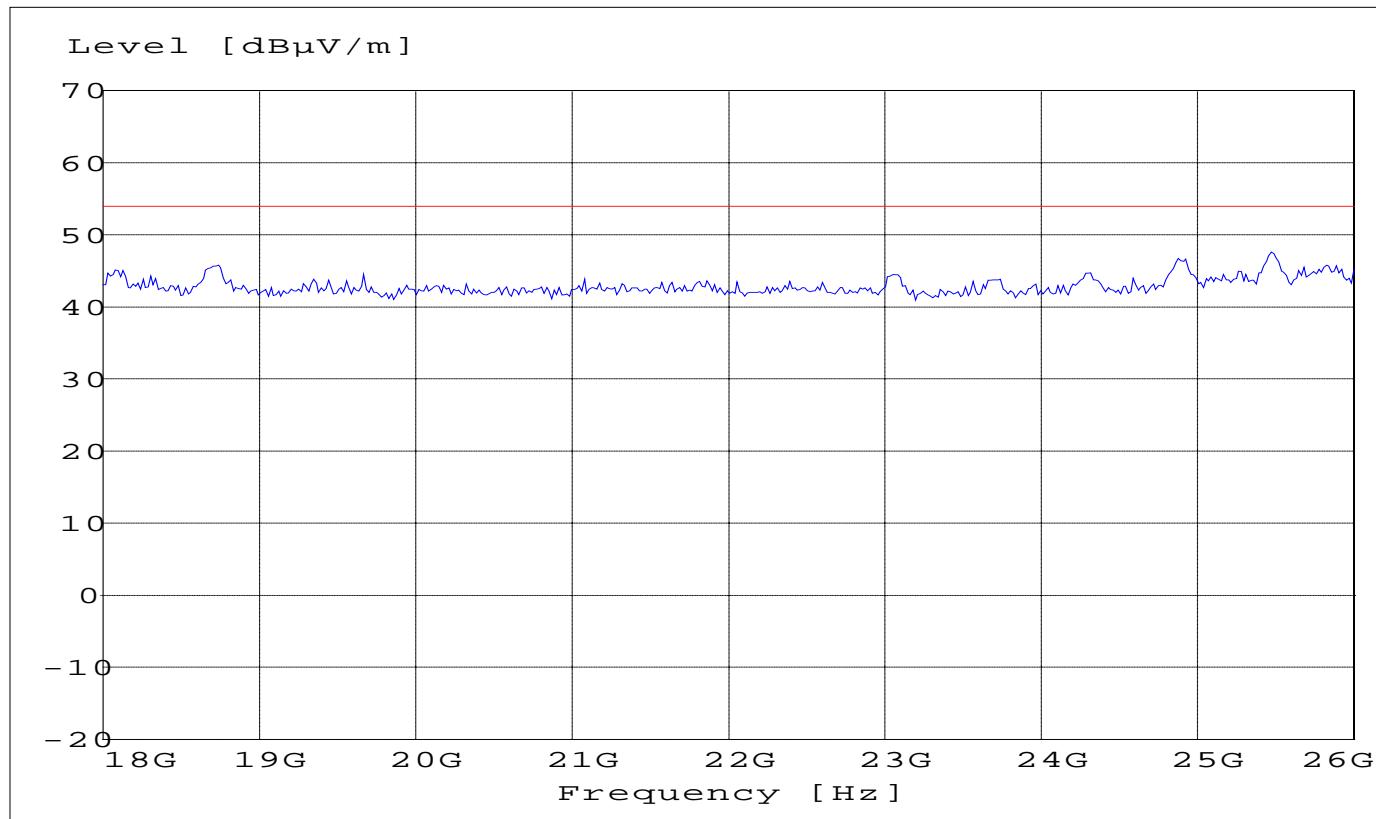
In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

**EMISSION LIMITATIONS (Transmitter) SUBCLAUSE § 15.247 (c) (1)****Channel 3: 8GHz -18GHz****LIMITS****SUBCLAUSE § 15.247 (c)**

In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

**EMISSION LIMITATIONS (Transmitter) SUBCLAUSE § 15.247 (c) (1)****Channel 3: 18GHz -26GHz****LIMITS****SUBCLAUSE § 15.247 (c)**

In any 100 kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

ANALYZER SETTINGS:  $f < 1 \text{ GHz}$  : RBW/VBW: 100 kHz $f \geq 1 \text{ GHz}$  : RBW/VBW: 1 MHz

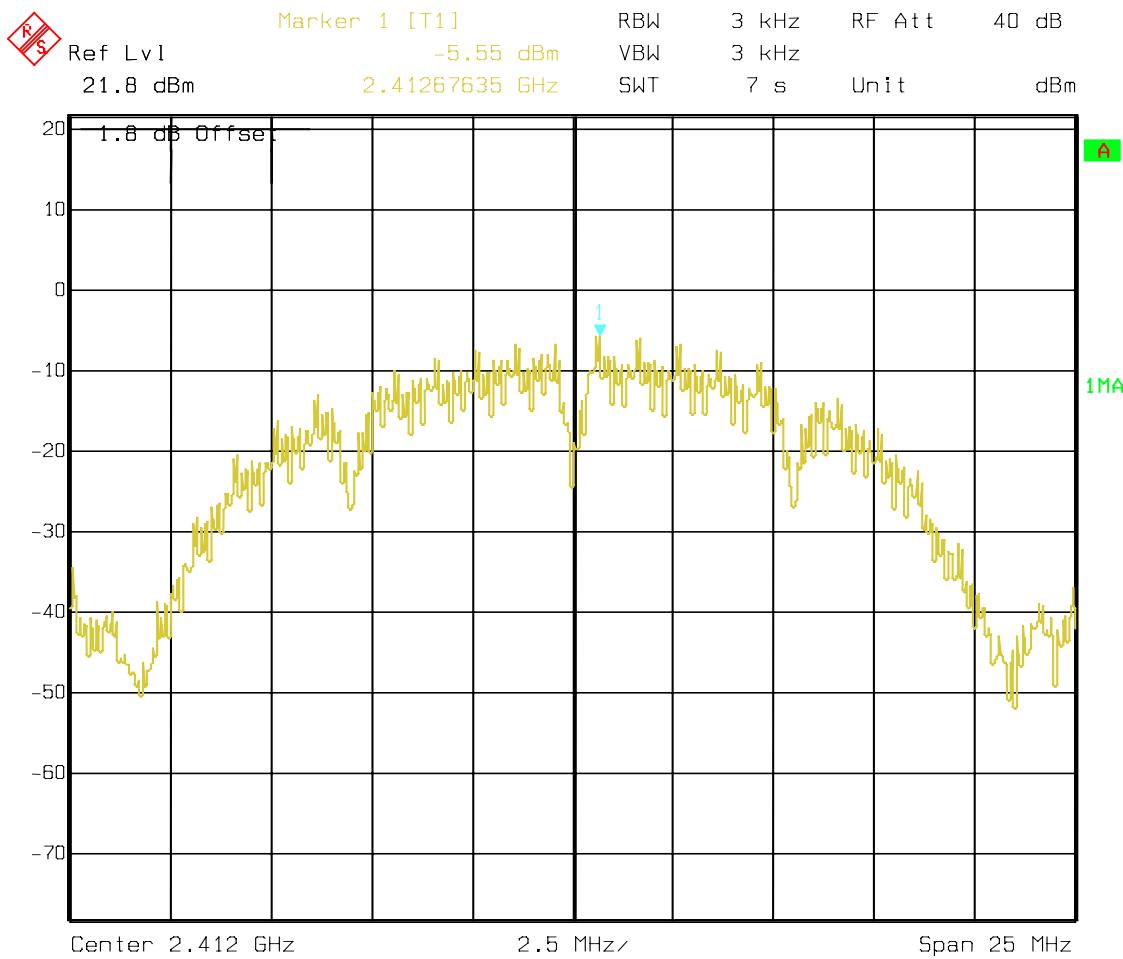
**POWER SPECTRAL DENSITY****SUBCLAUSE § 15.247 (d)**

<b>TEST CONDITIONS</b>		<b>RF POWER LEVEL IN 3 kHz BW</b>		
		<b>2412</b>	<b>2442</b>	<b>2472</b>
$T_{\text{nom}}$ ( 23 )°C	$V_{\text{nom}}$ (V)	<b>-5.55 dBm</b>	<b>-5.30dBm</b>	<b>-5.54 dBm</b>
<b>Maximum deviation from output power under extreme test conditions (dBc)</b>		<b>not performed</b>	<b>not performed</b>	<b>not performed</b>
<b>Measurement uncertainty</b>		<b>±3dB</b>		

**LIMIT****SUBCLAUSE §15.247(d)**

**The peak power spectral density shall not be greater than 8 dBm in any 3 kHz band**

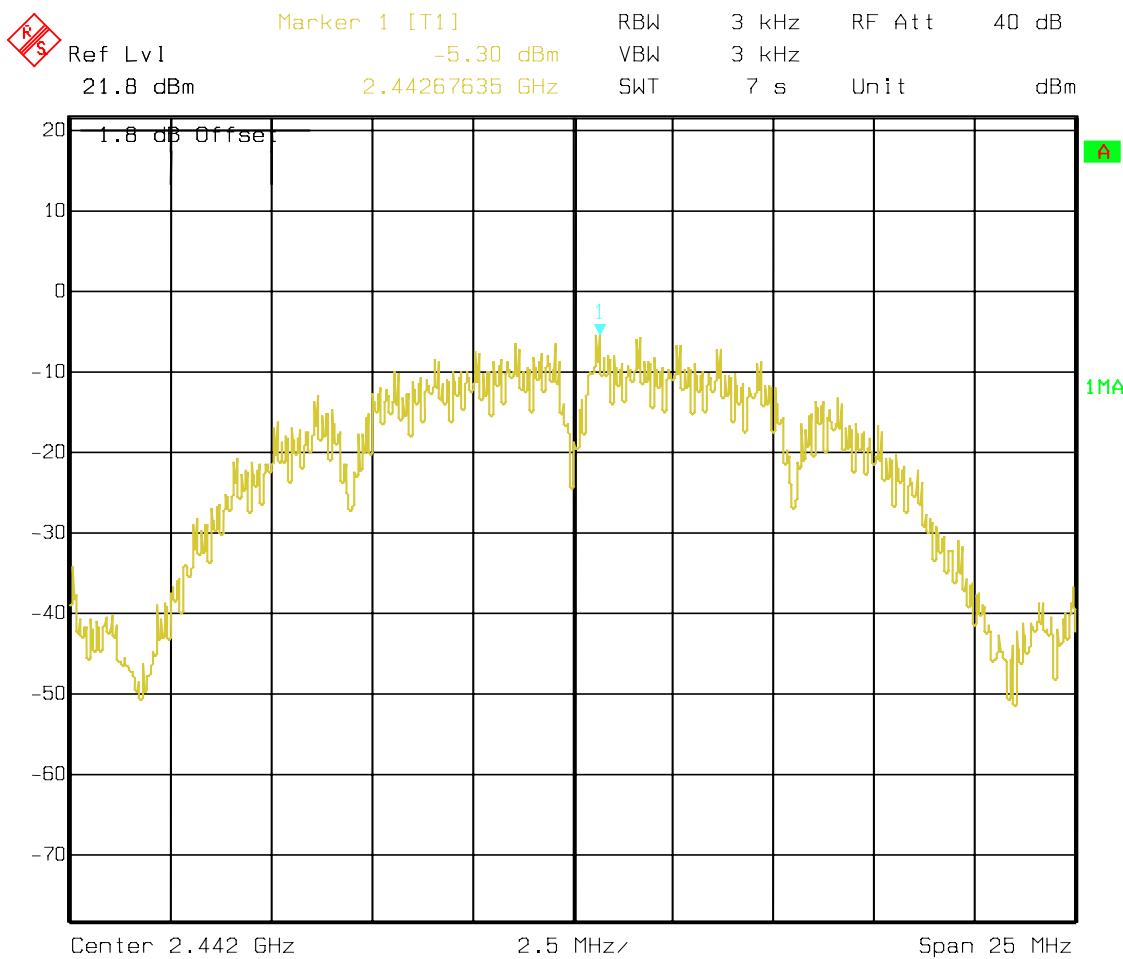
**ANALYZER SETTINGS: RBW=3KHz , VBW=3KHz**

**POWER SPECTRAL DENSITY  
2412 MHz****SUBCLAUSE § 15.247 (d)**

Date: 20.APR.01 4:51:09

**LIMIT****SUBCLAUSE §15.247(d)**

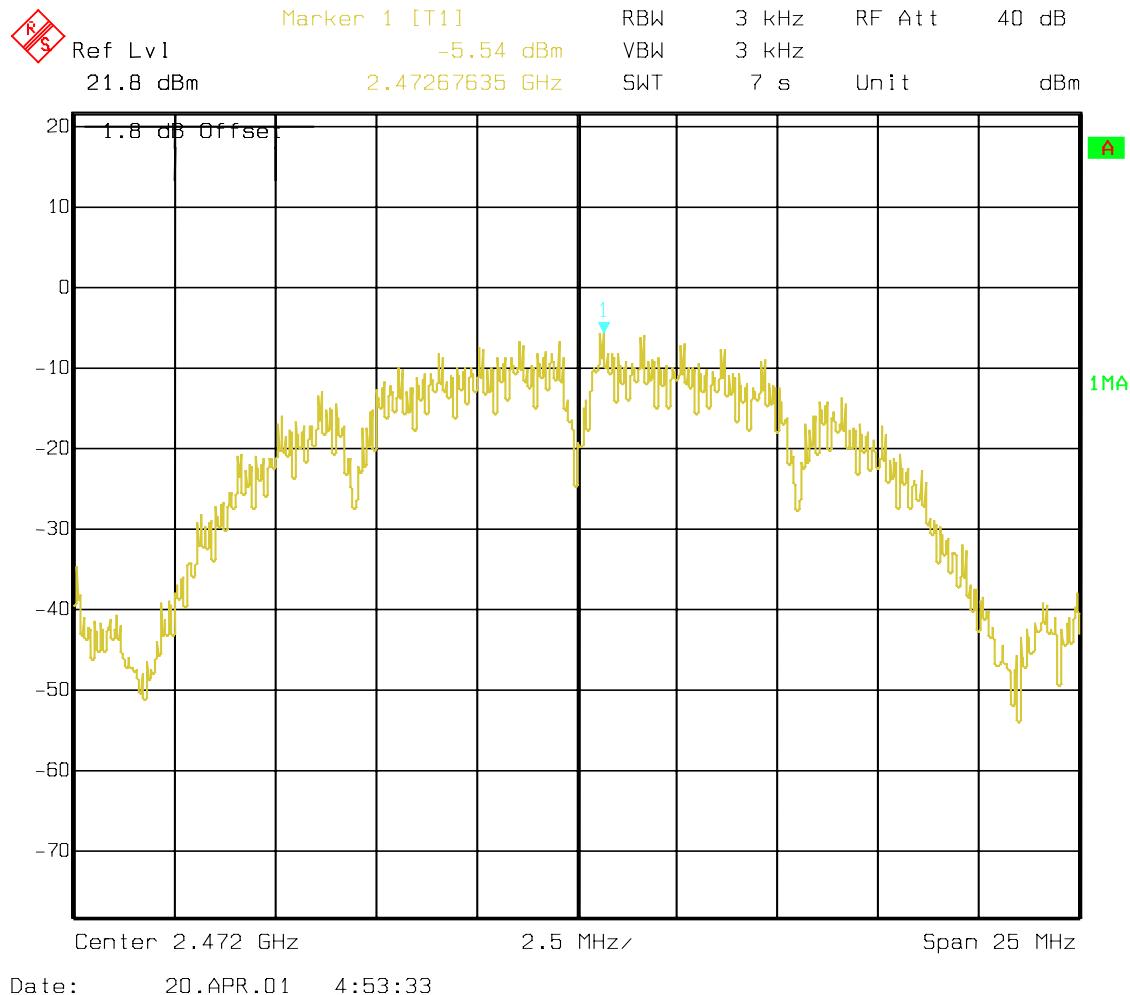
The peak power spectral density shall not be greater than 8 dBm in any 3 kHz band

**POWER SPECTRAL DENSITY****SUBCLAUSE § 15.247 (d)****2442 MHz**

Date: 20.APR.01 4:52:15

**LIMIT****SUBCLAUSE §15.247(d)**

The peak power spectral density shall not be greater than 8 dBm in any 3 kHz band

**POWER SPECTRAL DENSITY  
2472 MHz****SUBCLAUSE § 15.247 (d)****LIMIT****SUBCLAUSE §15.247(d)**

The peak power spectral density shall not be greater than 8 dBm in any 3 kHz band

**PROCESSING GAIN OF DSSS SYSTEMS SUBCLAUSE §15.247 (e)**

(NOTE: The processing gain data is provided by Chip Set Manufacturer)

**Chip/symbol rate, the symbol/bit rate and the Chip/bit**

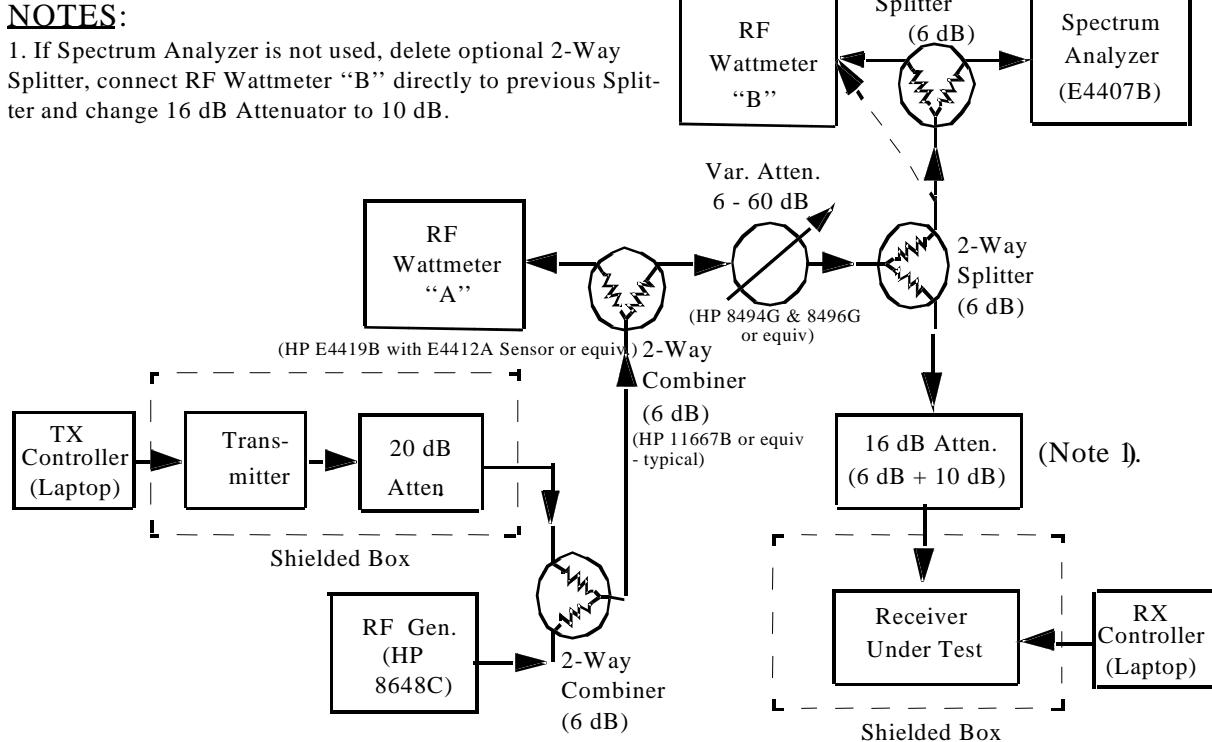
Bit rate	Chip/symbol rate	Bit/symbol rate	Chip/bit rate	Gp (dB)	Spec (dB)
1 Mbit/sec	11	1, DBPSK	11	13.2	10
2 Mbit/sec	11	2, DQPSK	5.5	12.6	10
5.5 Mbit/sec	8	4, CCK	2	13.4	10
11 Mbit/sec	8	8, CCK	1	12.9	10

Note: 1. Gp is Processing Gain;  
2. Spec is Processing Gain specifications defined by FCC for DSSS systems

**Test Set-up - Processing Gain****NOTES:**

1. If Spectrum Analyzer is not used, delete optional 2-Way Splitter, connect RF Wattmeter "B" directly to previous Splitter and change 16 dB Attenuator to 10 dB.

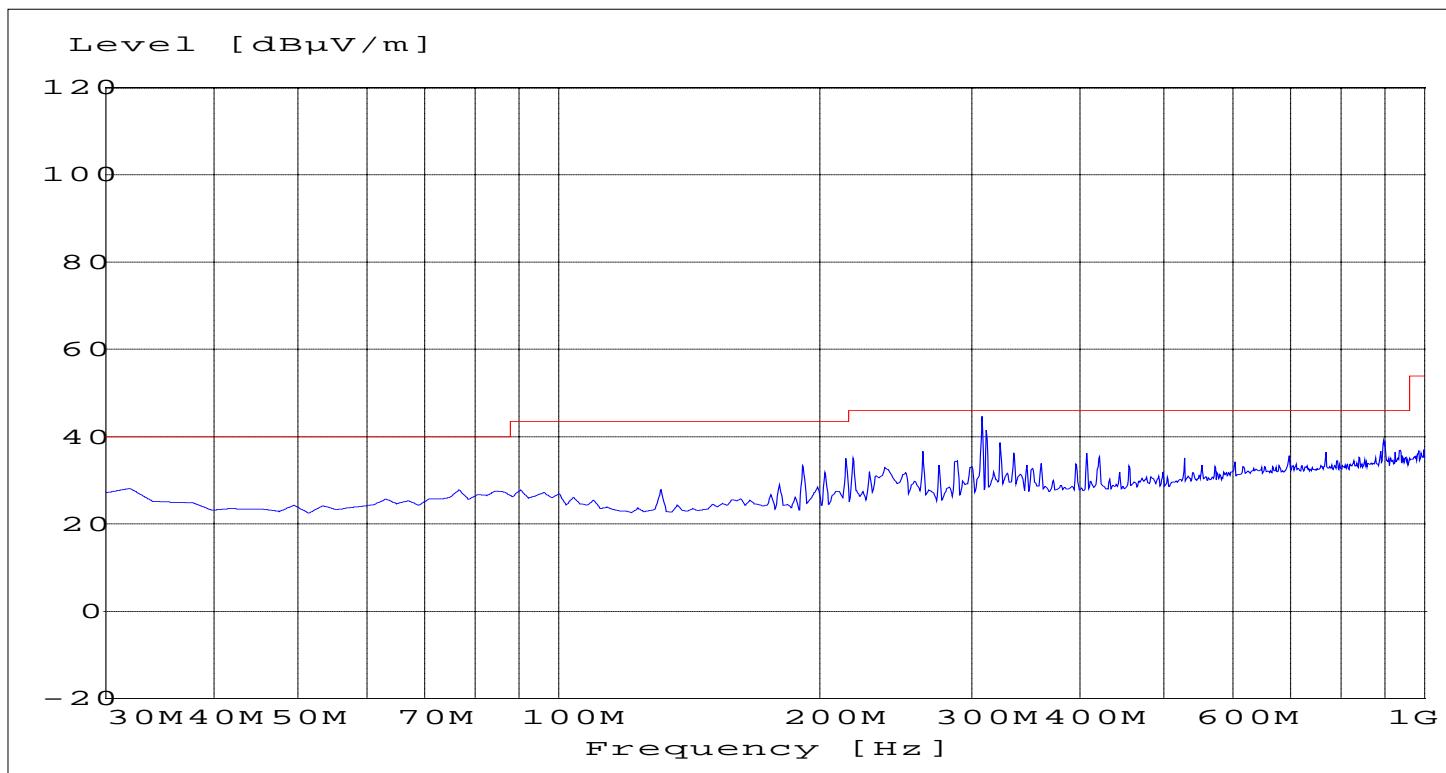
*Note 1.*  
(HP E4419B with E4412A sensitive  
Sensor or equiv.) (optional) 2-Way



## RECEIVER SPURIOUS RADIATION

§ 15.209

Channel 1: 30MHz – 1GHz



Limits

SUBCLAUSE § 15.209

Frequency (MHz)	Field strength ( $\mu$ V/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
above 960	500	3

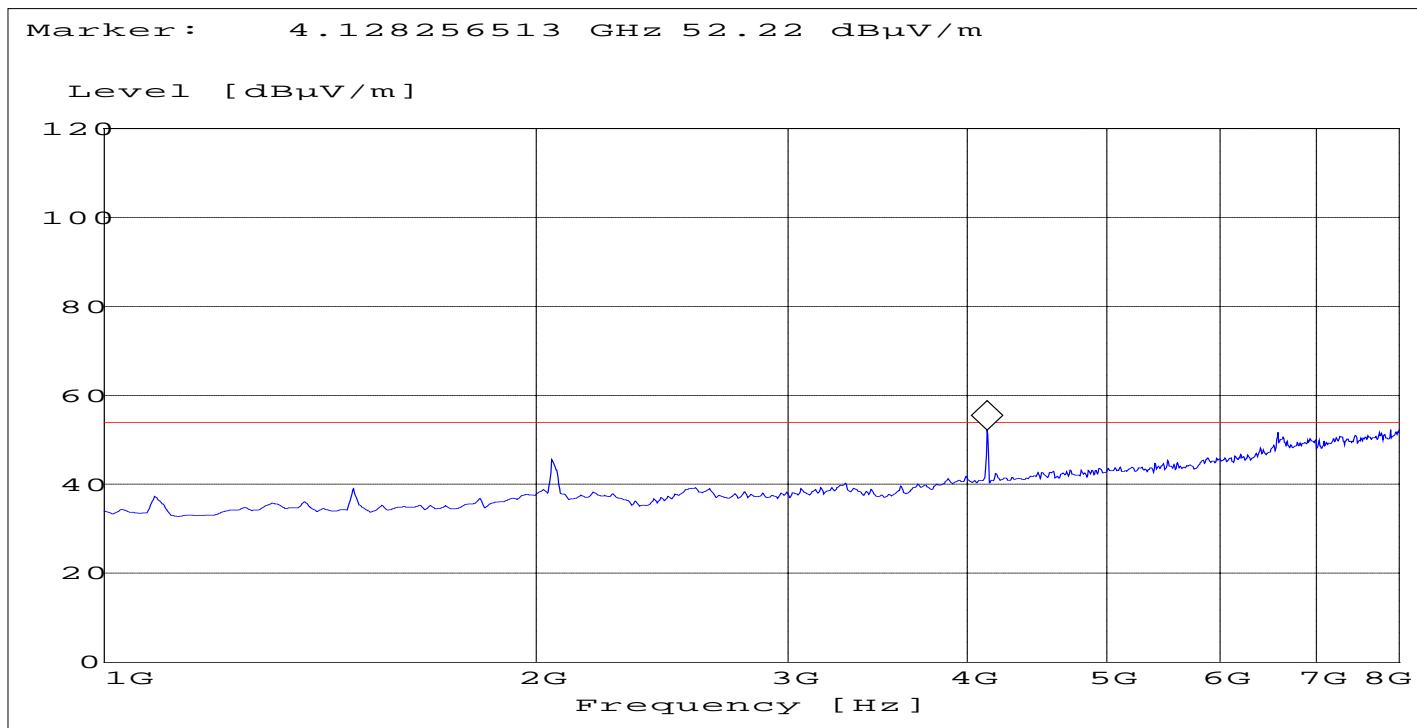
(NOTE: All measurements were done in peak mode)

ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

## RECEIVER SPURIOUS RADIATION

§ 15.209

Channel 1: 1GHz – 8GHz



## Limits

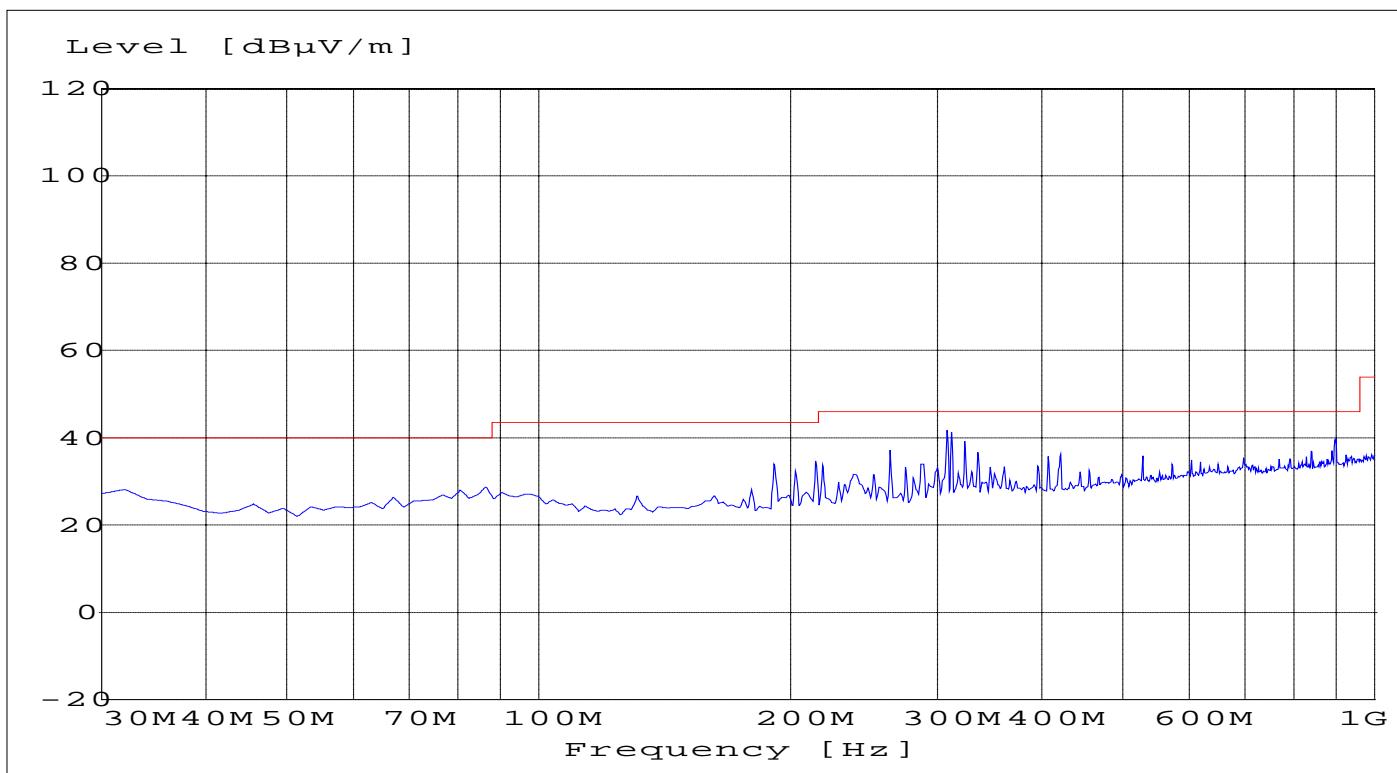
SUBCLAUSE § 15.209

Frequency (MHz)	Field strength ( $\mu$ V/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
above 960	500	3

(NOTE: All measurements were done in peak mode)

ANALYZER SETTINGS: f &lt; 1 GHz : RBW/VBW: 100 kHz

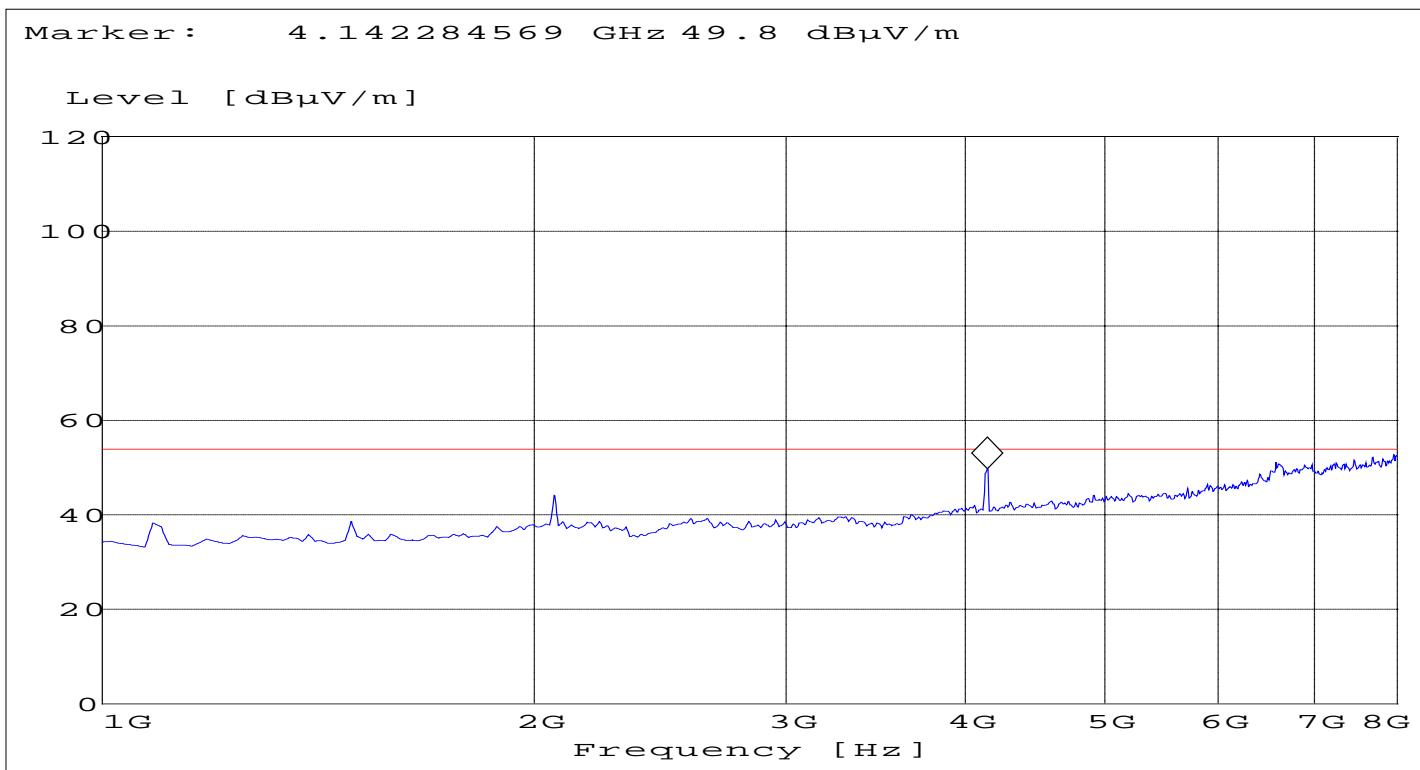
f ≥ 1GHz : RBW/VBW: 1 MHz

**RECEIVER SPURIOUS RADIATION****§ 15.209****Channel 2: 30MHz – 1GHz****Limits****SUBCLAUSE § 15.209**

Frequency (MHz)	Field strength ( $\mu$ V/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
above 960	500	3

(NOTE: All measurements were done in peak mode)

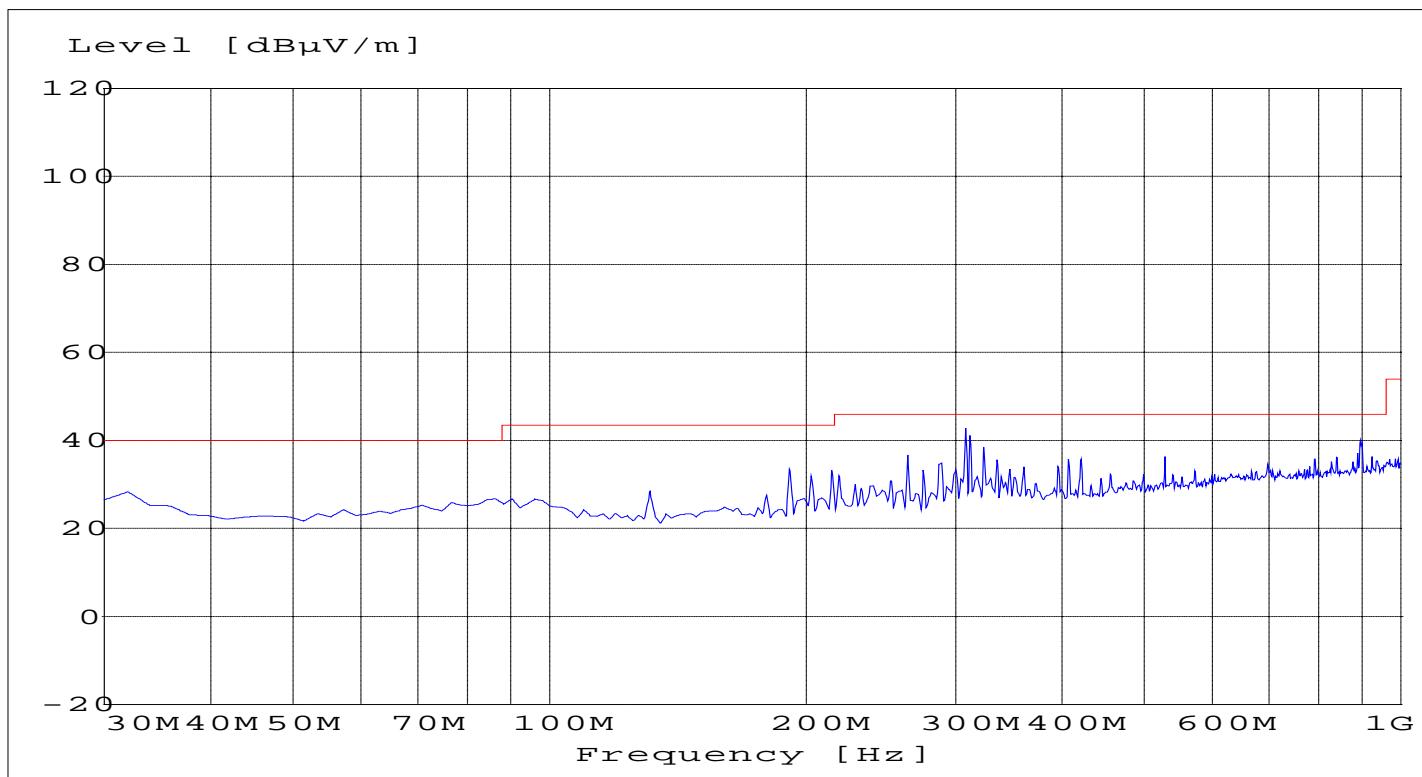
ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

**RECEIVER SPURIOUS RADIATION****§ 15.209****Channel 2: 1GHz – 8GHz****Limits****SUBCLAUSE § 15.209**

Frequency (MHz)	Field strength ( $\mu$ V/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
above 960	500	3

(NOTE: All measurements were done in peak mode)

ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

**RECEIVER SPURIOUS RADIATION****§ 15.209****Channel 3: 30MHz – 1GHz****Limits****SUBCLAUSE § 15.209**

Frequency (MHz)	Field strength ( $\mu$ V/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
above 960	500	3

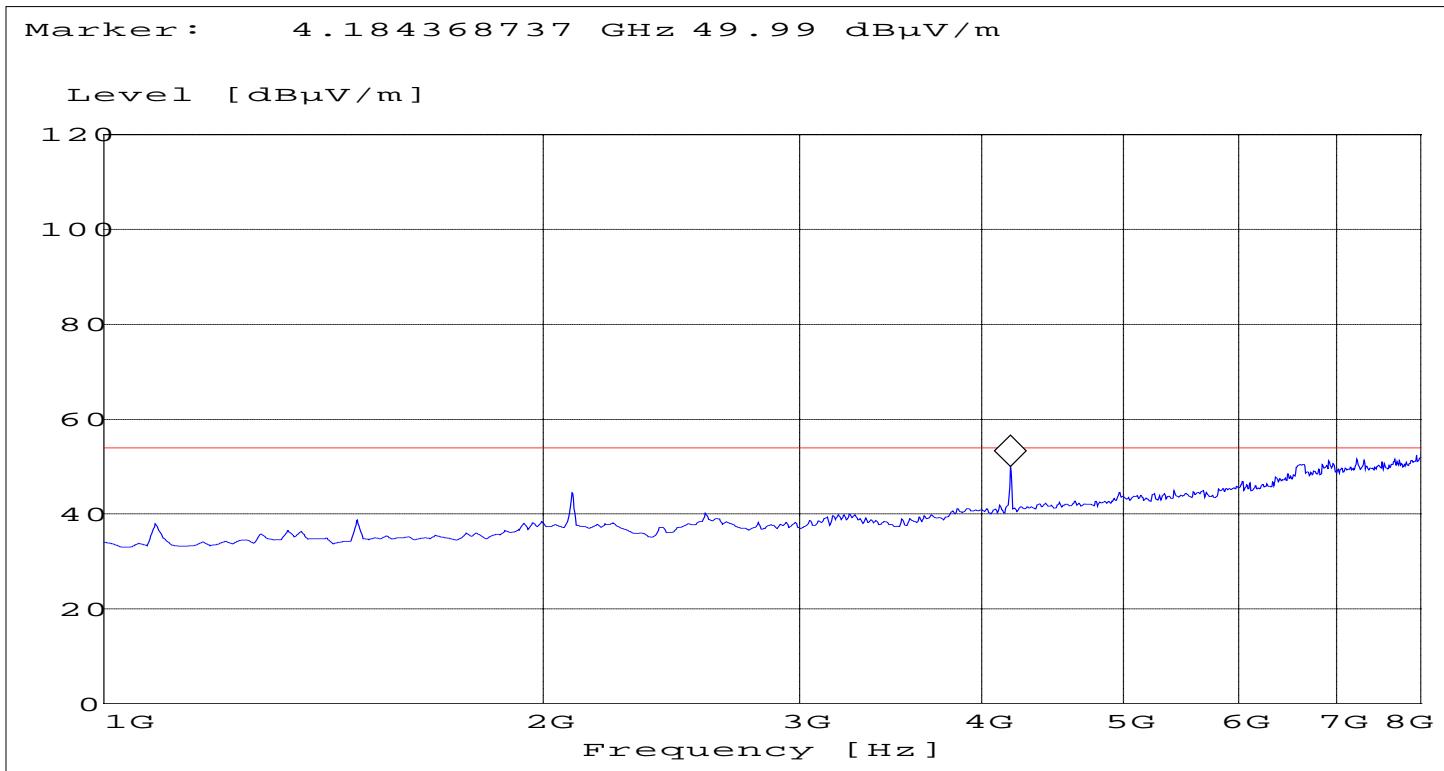
(NOTE: All measurements were done in peak mode)

ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

## RECEIVER SPURIOUS RADIATION

§ 15.209

Channel 3: 1GHz – 8GHz



Limits

SUBCLAUSE § 15.209

Frequency (MHz)	Field strength ( $\mu$ V/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
above 960	500	3

(NOTE: All measurements were done in peak mode)

ANALYZER SETTINGS: f &lt; 1 GHz : RBW/VBW: 100 kHz

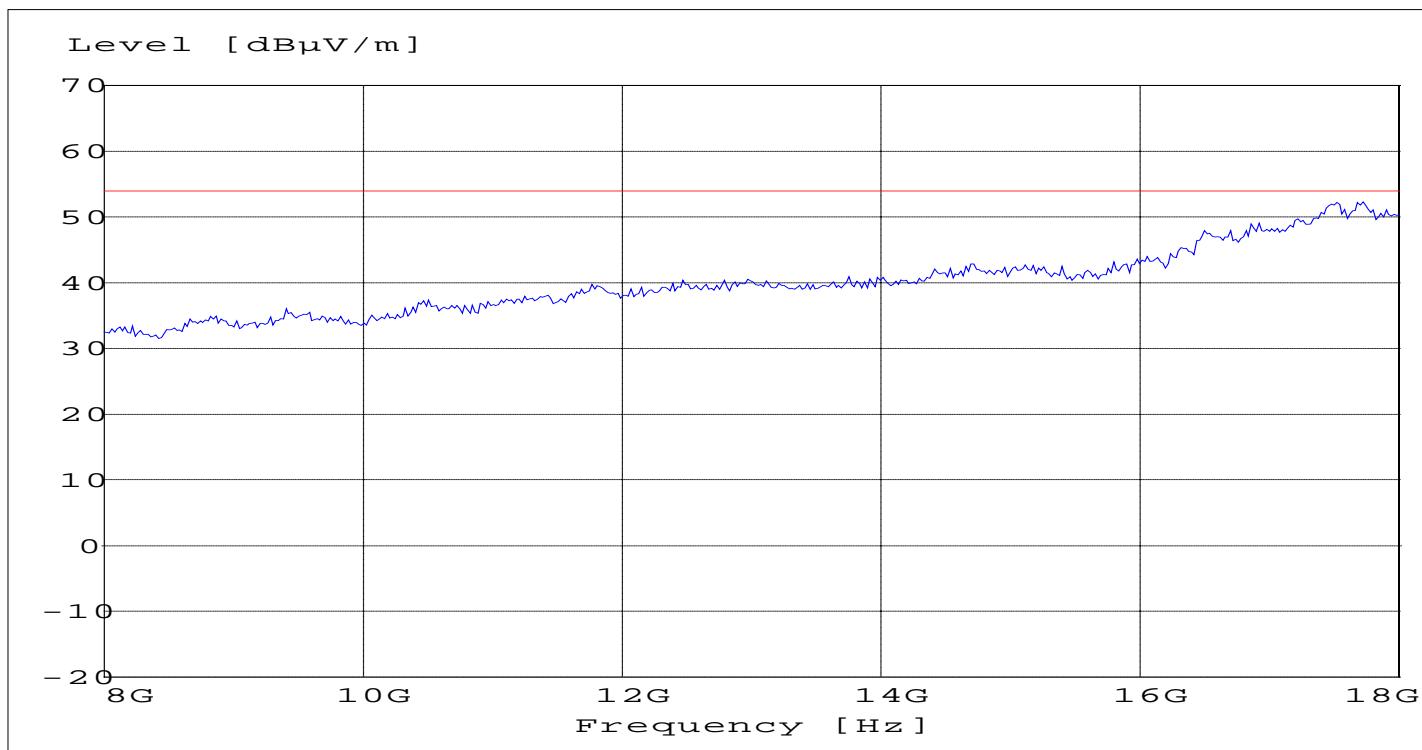
f ≥ 1GHz : RBW/VBW: 1 MHz

## RECEIVER SPURIOUS RADIATION

§ 15.209

8GHz – 18GHz

(NOTE: This plot is applicable for all three channels)



Limits

SUBCLAUSE § 15.209

Frequency (MHz)	Field strength ( $\mu$ V/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
above 960	500	3

(NOTE: All measurements were done in peak mode)

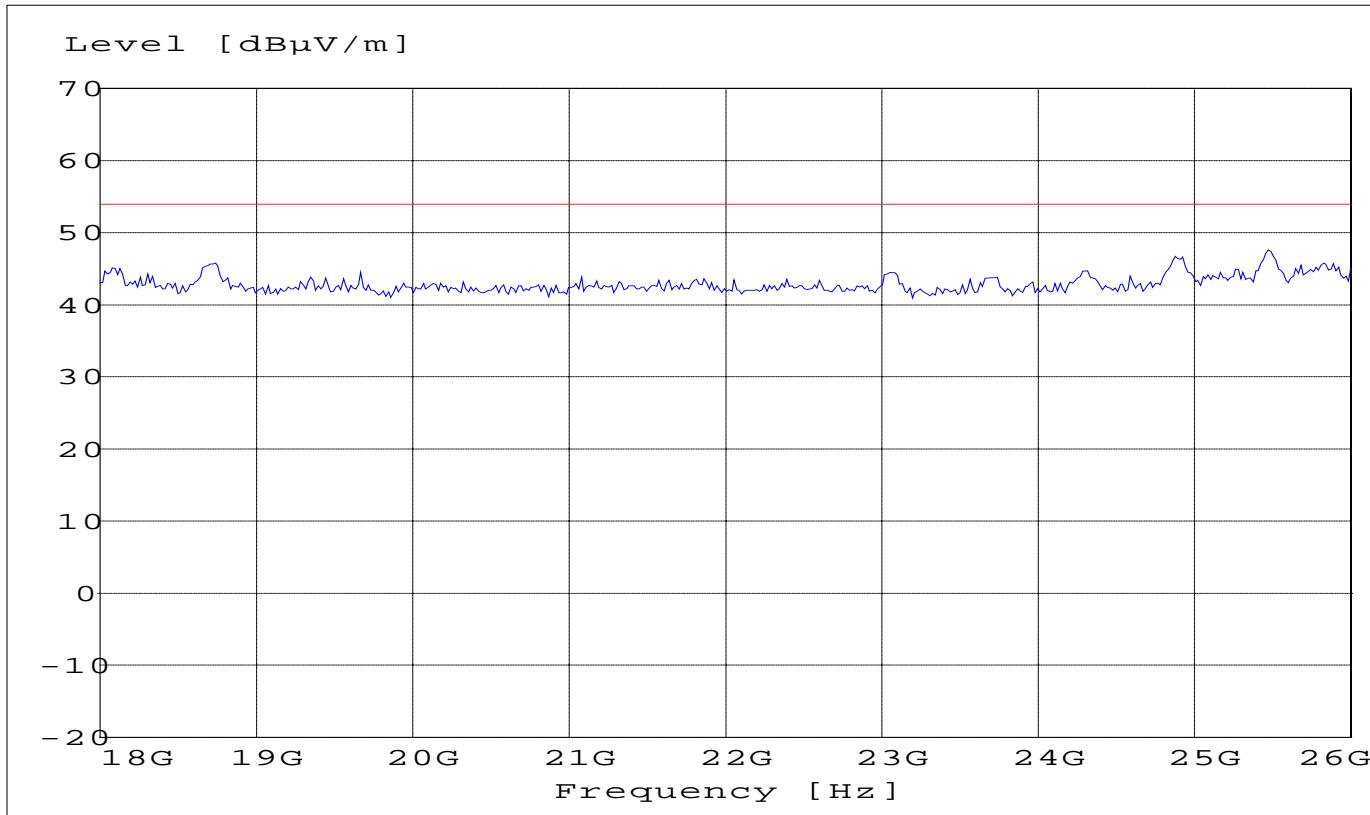
ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

## RECEIVER SPURIOUS RADIATION

§ 15.209

18GHz – 26GHz

(NOTE: This plot is applicable for all three channels)



Limits

SUBCLAUSE § 15.209

Frequency (MHz)	Field strength ( $\mu$ V/m)	Measurement distance (m)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/F(kHz)	30
1.705 - 30.0	30	30
30 - 88	100	3
88 - 216	150	3
216 - 960	200	3
above 960	500	3

(NOTE: All measurements were done in peak mode)

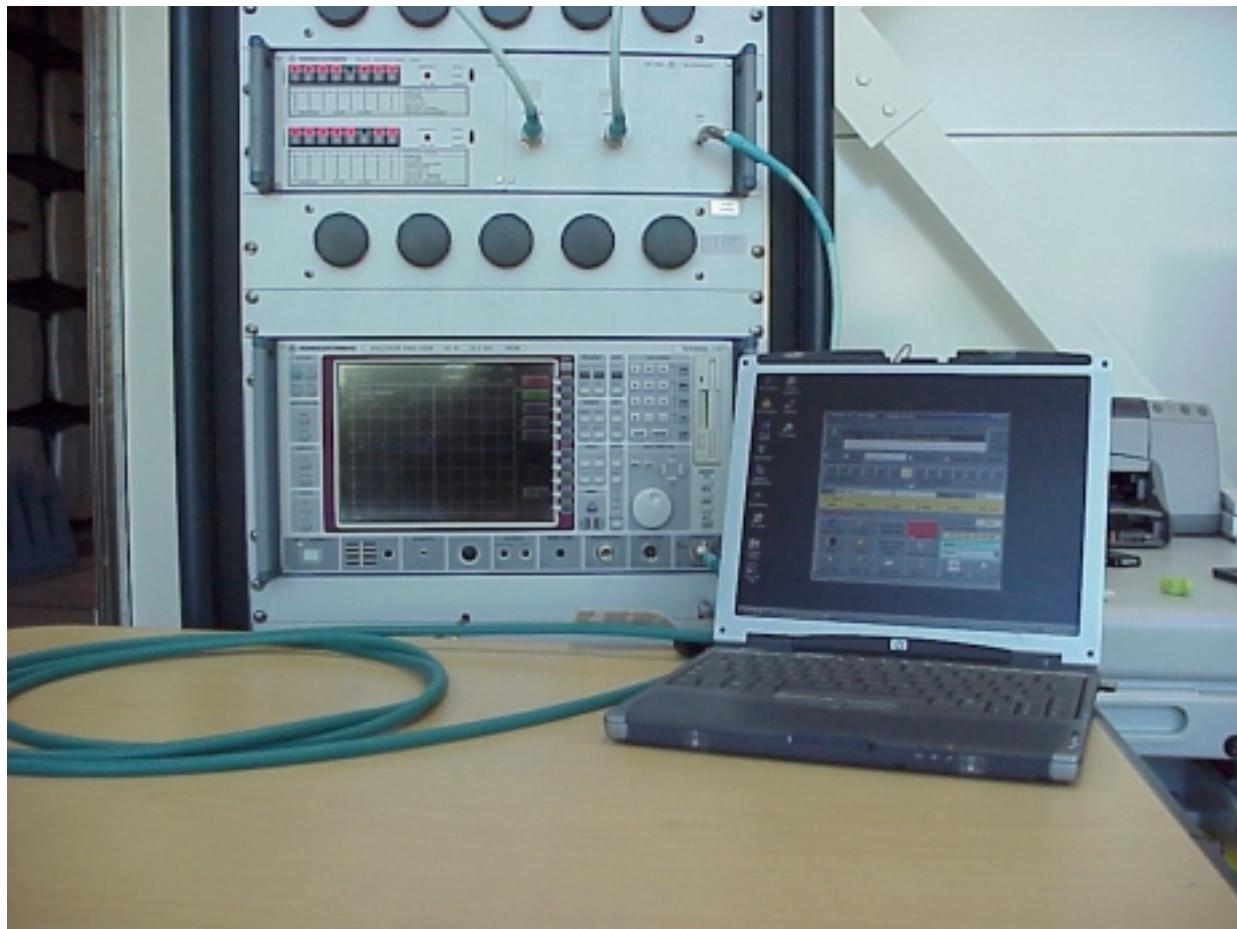
ANALYZER SETTINGS:  $f < 1$  GHz : RBW/VBW: 100 kHz $f \geq 1$  GHz : RBW/VBW: 1 MHz

## TEST EQUIPMENT AND ANCILLARIES USED FOR TESTS

**TEST SITE**  
**Radiated Emissions**



**Conducted Emissions**

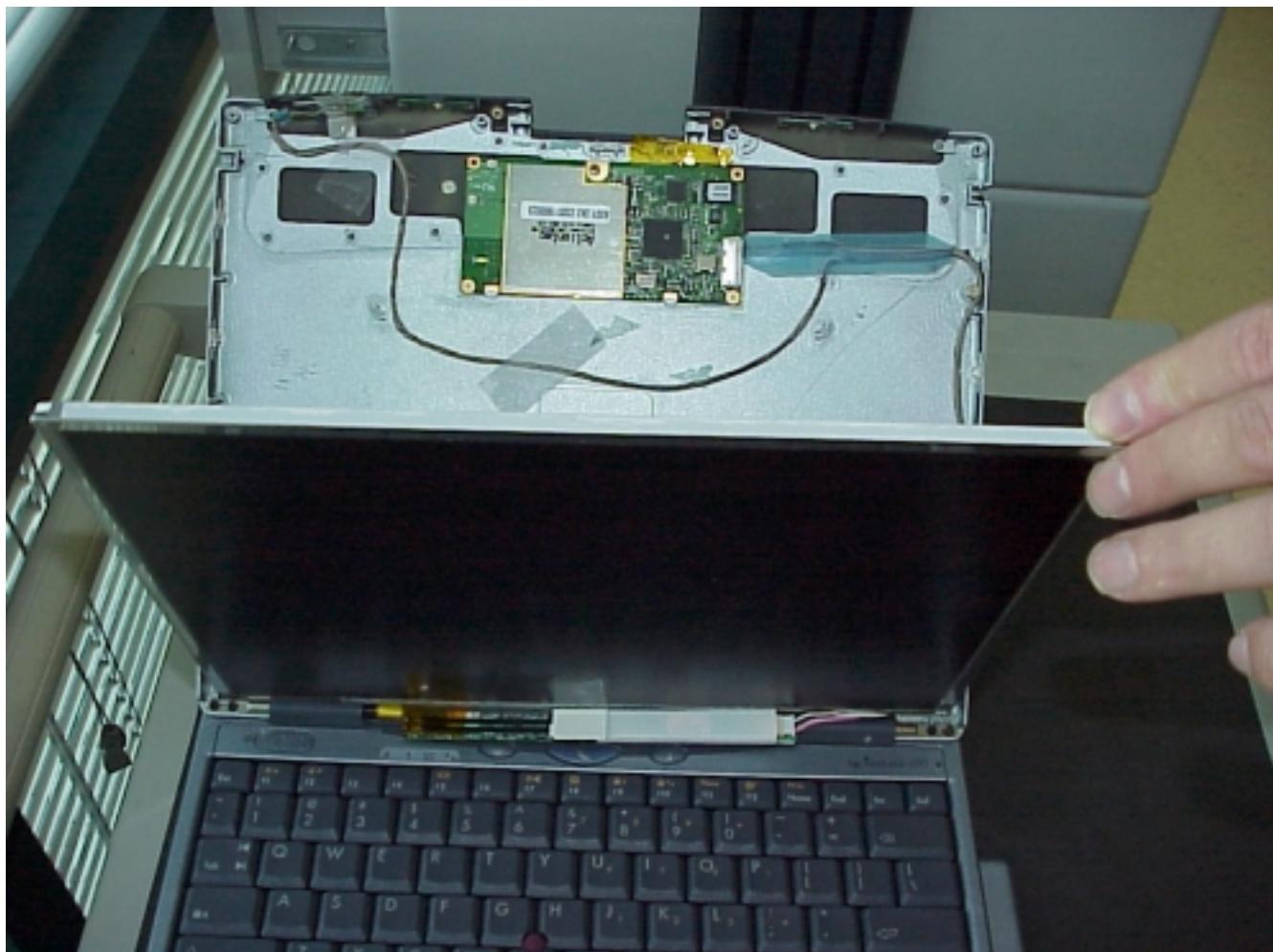


**PHOTOGRAPHS OF THE EQUIPMENT**

**Photograph No.1**



**Photograph No.2**



**Photograph No.3**

Antennas: one transmit /receive and

one diversity receive antenna  
(not connected in this picture)

