

EMC TEST REPORT

For

2.4G Color Wireless MPEG-4 Video Network Camera

Model Number: NC601

FCC ID: TW4NC601

Report Number : WT068001138

Test Laboratory	:	Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory Guangdong EMC Compliance Test Center
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TEST REPORT DECLARATION


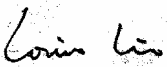

Applicant	:	SHENZHEN AEE TECHNOLOGY CO., LTD
Address	:	1st Floor B building Shenzhen Tsinghua Hi-Tech Park Nanshan Hi-Tech Park North Shenzhen P.R.C
Manufacturer	:	SHENZHEN AEE TECHNOLOGY CO., LTD
Address	:	1st Floor B building Shenzhen Tsinghua Hi-Tech Park Nanshan Hi-Tech Park North Shenzhen P.R.C
EUT Description	:	2.4G Color Wireless MPEG-4 Video Network Camera
Model Number		NC601
FCC ID Number		TW4NC601

Test Standards:

FCC Part 15 15.247 :2005

The EUT described above is tested by Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory to determine the maximum emissions from the EUT. Shenzhen Academy of Metrology and Quality Inspection EMC Laboratory is assumed full responsibility for the accuracy of the test results. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.247.

The test report is valid for above tested sample only and shall not be reproduced in part without written approval of the laboratory.

Tested by:	 <hr style="width: 100%;"/> (Dewelly Yang)	Date:	2006.6.1 <hr style="width: 100%;"/>
Checked by:	 <hr style="width: 100%;"/> (Louis Lin)	Date:	2006.6.1 <hr style="width: 100%;"/>
Approved by:	 <hr style="width: 100%;"/> (Peter Lin)	Date:	2006.6.1 <hr style="width: 100%;"/>

1. TEST RESULTS SUMMARY

Table 1 Test Results Summary

Test Items	FCC Rules	Test Results
Conducted Disturbance	15.207	Pass
Radiated disturbance	15.247 d	Pass
Spectrum Bandwidth of a Direct Sequence Spread Spectrum System Limit: min. 500kHz	15.247(a)(2)	Pass
Maximum Peak Output Power	15.247(b)	Pass
Power Spectral Density	15.247(e)	Pass
Band Edge Measurement Limit: 20dB less than the peak value of fundamental frequency	15.247(d)	Pass
Antenna Requirement	15.203	Pass

2. GENERAL INFORMATION

2.1. Report information

- 2.1.1. This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that SMQ approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that SMQ in any way guarantees the later performance of the product/equipment.
- 2.1.2. The sample/s mentioned in this report is/are supplied by Applicant, SMQ therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.
- 2.1.3. Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through SMQ, unless the applicant has authorized SMQ in writing to do so.

2.2. Laboratory Accreditation and Relationship to Customer

The testing report were performed by the Shenzhen Academy of Metrology and quality Inspection EMC Laboratory (Guangdong EMC compliance testing center), in their facilities located at Bldg. of Metrology & Quality Inspection, Longzhu Road, Nanshan District, Shenzhen, Guangdong, China. At the time of testing, Laboratory is accredited by the following organizations:

China National Accreditation Committee for Laboratories (**CNAL**) accredits the Laboratory for conformance to FCC standards, EMC international standards and EN standards. The Registration Number is L0579.

The Laboratory is listed in the United States of American Federal Communications Commission (**FCC**), and the registration number are **97379**(open area test site) and **274801**(semi anechoic chamber).

The Laboratory is listed in Voluntary Control Council for Interference by Information Technology Equipment (**VCCI**), and the registration number are **R-1974**(open area test site) , **R-1966**(semi anechoic chamber), **C-2117**(mains ports conducted interference measurement) and **T-180**(telecommunication ports conducted interference measurement).

The Laboratory is registered to perform emission tests with Industry Canada (**IC**), and the registration number is **IC4174**.

TUV Rhineland accredits the Laboratory for conformance to IEC and EN standards, the registration number is **E2024086Z02**.

Measurement Uncertainty

2.3. Measurement Uncertainty

Conducted Disturbance : 9kHz~30MHz 3.5dB

Radiated Disturbance: 30MHz~1000MHz 4.5dB
1GHz~18GHz 4.6dB

3. PRODUCT DESCRIPTION

3.1. EUT Description

Description : 2.4G Color Wireless MPEG-4 Video Network Camera

Manufacturer : SHENZHEN AEE TECHNOLOGY CO., LTD

Model Number : NC601

Input : DC5V

Adapter:
M/N:GFP241DA-0540
Input Power : Input:AC100-240V 50/60Hz 0.55A
Output:DC5V 4A

Operate Frequency : IEEE802.11 b/g 2412~2462MHz(11channel)

Antenna Designation : Non-User Replaceable (Fixed)

The EUT have two ways to transmit the signal. One is wire network. The other one is the wireless network.

Table 2 _ The working Frequency List

Channel	Frequency	Channel	Frequency
1	2412 MHz	7	2442 MHz
2	2417 MHz	8	2447 MHz
3	2422 MHz	9	2452 MHz
4	2427 MHz	10	2457 MHz
5	2432 MHz	11	2462 MHz
6	2437 MHz		

3.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: TW4NC601 filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

3.3. Block Diagram of EUT Configuration

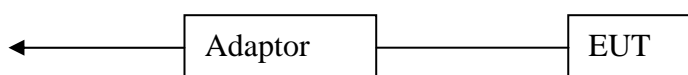


Figure 1 EUT setup 1

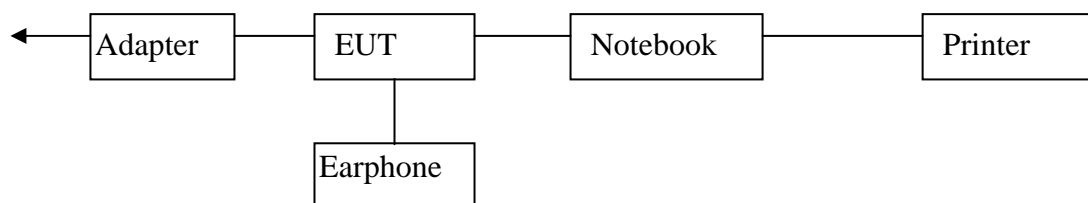


Figure 2 EUT setup 2

3.4. Operating Condition of EUT

Mode 1: ch1(IEEE802.11 54Mbps)
 Mode2: ch6(IEEE802.11 54Mbps)
 Mode3: ch11(IEEE802.11 54Mbps)
 Mode4: Connect to PC(wire network)

3.5. Special Accessories

Not available for this EUT intended for grant.

3.6. Equipment Modifications

Not available for this EUT intended for grant.

3.7. Support Equipment List

N/A

3.8. Test Conditions

Date of test : May.15,2006
 Date of EUT Receive : May.12,2006
 Temperature: 24
 Relative Humidity: 53%

4. TEST EQUIPMENT USED

Table 2 Test Equipment

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
SB2603	EMI Test Receiver	Rohde & Schwarz	ESCS30	Jan.26, 2006	1 Year
SB3321	AMN	Rohde & Schwarz	ESH2-Z5	Jan.26, 2006	1 Year
SB2604	AMN	Rohde & Schwarz	ESH3-Z5	Jan.26, 2006	1 Year
SB3612	Audio generator	KENWOOD	AD-203D	Jun.21, 2005	1 Year
SB3436	EMI Test Receiver	Rohde & Schwarz	ESI26	Jan.26, 2006	1 Year
SB3440	Bilog Antenna	Chase	CBL6112B	Jan.26, 2006	1 Year
SB3435	Horn Antenna	Rohde & Schwarz	HF906	Jan.26, 2006	1 Year
SB3435/01	Amplifier(1-18 GHz)	Rohde & Schwarz	---	Jan.26, 2006	1 Year
SB3435/02	Amplifier(18-40 GHz)	Rohde & Schwarz	---	May.06, 2006	1 Year
SB3435/03	Horn Antenna	Rohde & Schwarz	AT4560	May.06, 2006	1 Year
SB3612	Audio generator	KENWOOD	AD-203D	Jun.21, 2005	1 Year
SB3450/01	3m Semi-anechoic chamber	Albatross Projects	9X6X6	Jan 26,2006	1 Year

5. CONDUCTED DISTURBANCE TEST

5.1. Test Standard and Limit

5.1.1. Test Standard

FCC Part 15 15.207 :2005

5.1.2. Test Limit

Table 3 Conducted Disturbance Test Limit (Class B)

Frequency	Maximum RF Line Voltage (dB μ V)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

- Decreasing linearly with logarithm of the frequency
- The lower limit shall apply at the transition frequency.

5.2. Test Procedure

The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI test receiver (R&S Test Receiver ESCS30) is used to test the emissions form both sides of AC line. According to the requirements in Section 7 and 13 of ANSI C63.4-2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode.

The bandwidth of EMI test receiver is set at 9kHz.

5.3. Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

5.4. Test Data

The emissions don't show in below are too low against the limits. Refer to the test curves .
Working mode: Ch1 (the worst case)

Table 4 Conducted Disturbance Test Data

Model : NC601

Mode: 1

Line							
Frequency (MHz)	Correction Factor (dB)	Quasi-Peak			Average		
		Reading (dB μ V)	Emission Level (dB μ V)	Limits (dB μ V)	Reading (dB μ V)	Emission Level (dB μ V)	Limits (dB μ V)
0.150	10.1	30.2	40.3	66	37.4	37.5	56
0.206	10.2	25.3	35.5	63.4	12.5	22.7	53.4
0.402	10.1	25.4	35.5	57.8	15.6	25.7	47.8
0.604	10.2	25.0	35.2	56	17.3	27.5	46
12.000	10.2	33.6	43.8	60	33.0	43.2	46
24.000	10.3	37.7	48.0	60	36.2	46.5	50

REMARKS: 1. Emission level(dBuV)=Read Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB) =LISN Factor (dB) + Cable Factor (dB)+Limiter Factor(dB)
 3. The other emission levels were very low against the limit.

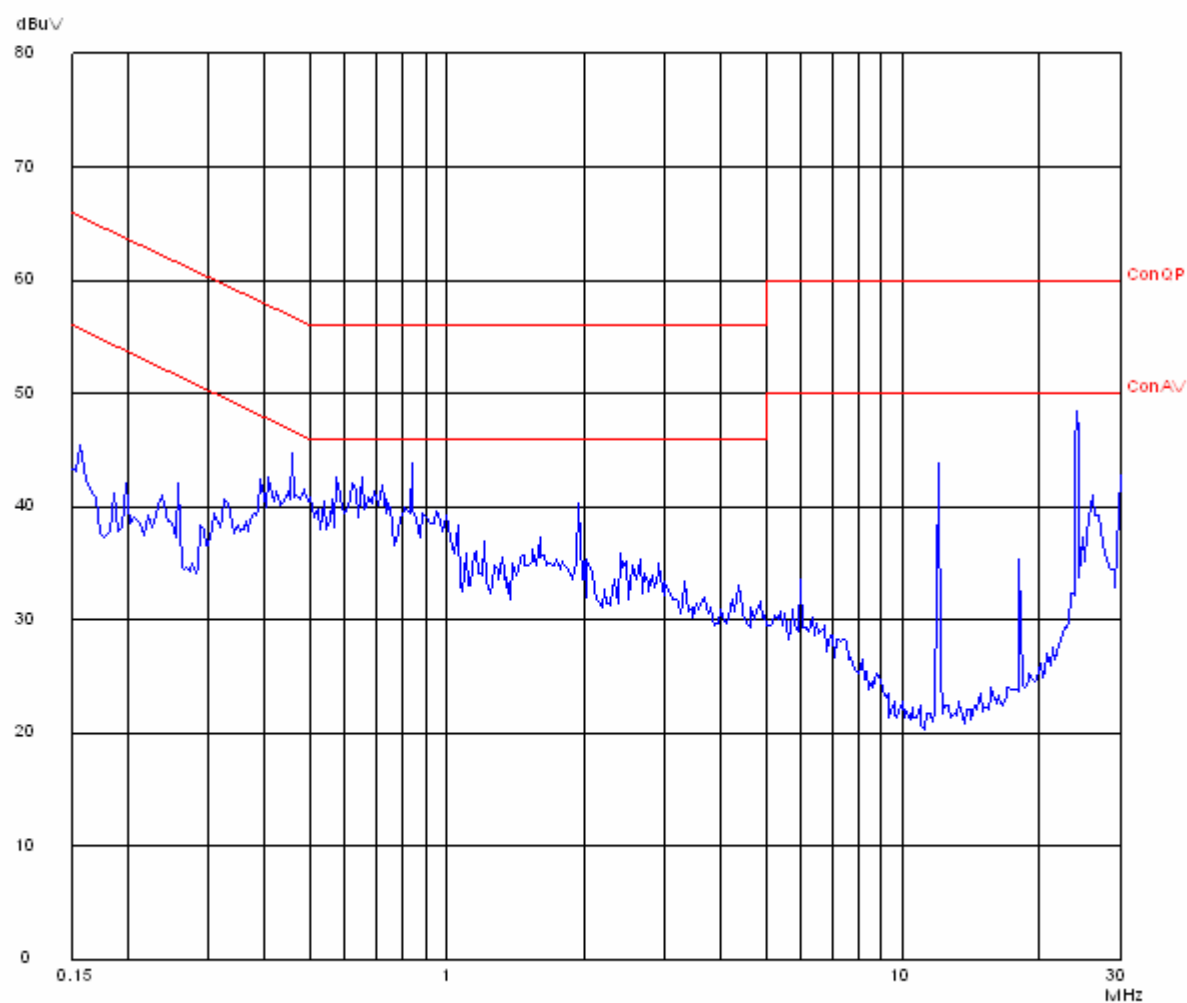
Table 5 Conducted Disturbance Test Data

Model : NC601							
Mode: 1							
Neutral							
Frequency (MHz)	Correction Factor (dB)	Quasi-Peak			Average		
		Reading (dB μ V)	Emission Level (dB μ V)	Limits (dB μ V)	Reading (dB μ V)	Emission Level (dB μ V)	Limits (dB μ V)
0.150	10.1	29.9	40.0	66	29.8	39.9	56
0.208	10.2	24.8	35.0	63.4	7.9	18.1	53.4
0.400	10.1	24.8	34.9	57.8	14.8	24.9	47.8
0.612	10.2	24.6	34.8	56	17.8	28.0	46
12.000	10.2	33.0	43.2	60	32.0	42.2	46
24.000	10.3	37.5	47.8	60	37.0	47.3	50

REMARKS: 1. Emission level(dBuV)=Read Value(dBuV) + Correction Factor(dB)
 2. Correction Factor(dB) =LISN Factor (dB) + Cable Factor (dB)+Limiter Factor(dB)
 3. The other emission levels were very low against the limit.

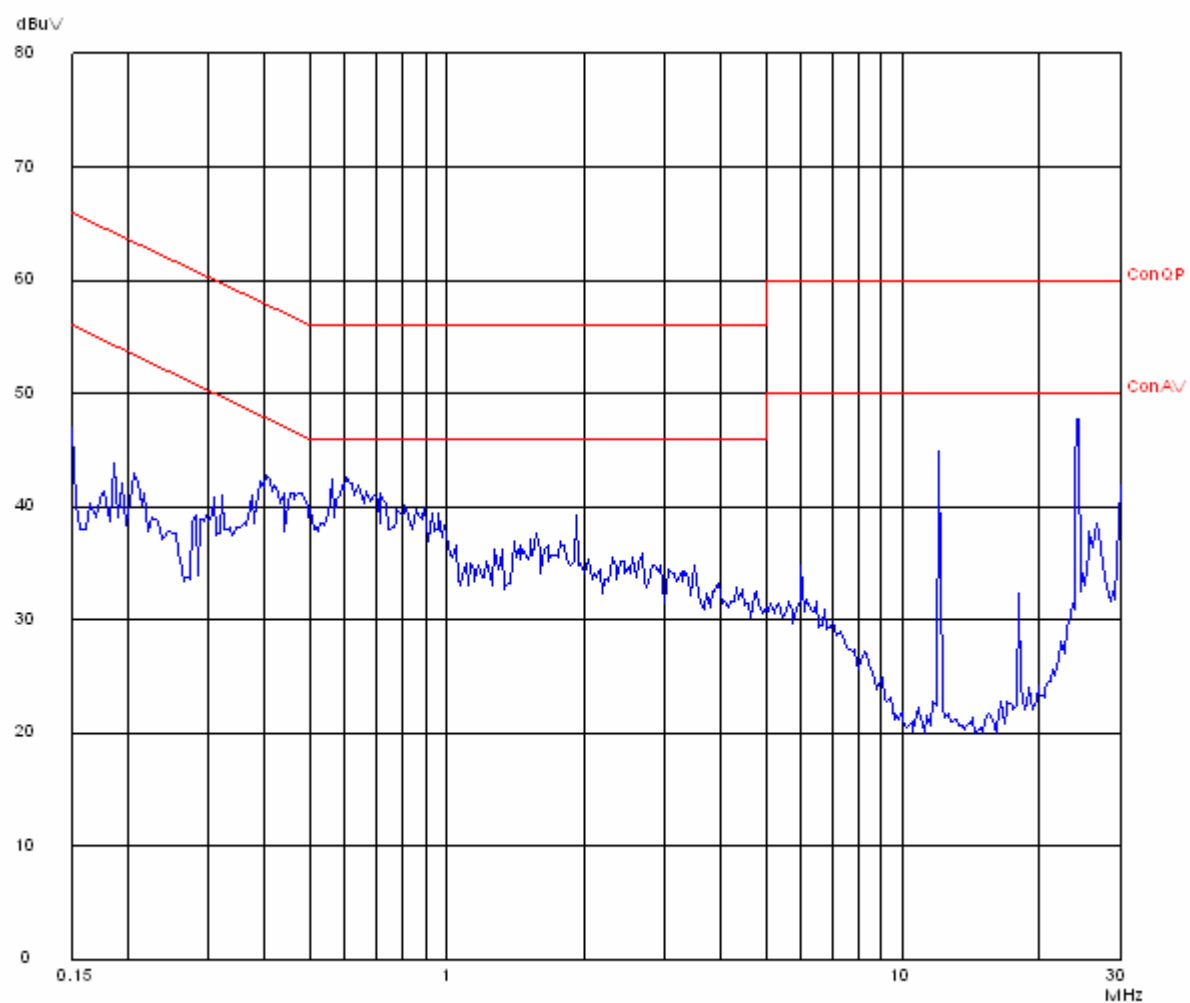
Conducted Disturbance

EUT: M/N:NC601
Op Cond: ON
Test Spec: L
Comment: AC 120V/60Hz



Conducted Disturbance

EUT: M/N:NC601
Op Cond: ON
Test Spec: N
Comment: AC 120V/60Hz



6. RADIATED DISTURBANCE TEST

6.1. Test Standard and Limit

6.1.1. Test Standard

FCC Part 15 15.249:2005

6.1.2. Test Limit

Table 6 Radiated Disturbance Test Limit

FREQUENCY MHz	FIELD STRENGTHS LIMITS ($\mu\text{V/m}$)	FIELD STRENGTHS LIMITS dB ($\mu\text{V/m}$)
Fundamental	50000	94.0
Harmonics	500	54.0
30 ~ 88	100	40.0
88 ~ 216	150	43.5
216 ~ 960	200	46.0
960 ~	500	54.0

* The lower limit shall apply at the transition frequency.

* The test distance is 3m.

6.2. Test Procedure

The EUT is placed on a turntable, which is 0.8 meter above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can move up and down between 1 to 4 meters to find out the maximum emission level. Broadband antenna is used as a receiving antenna. Both horizontal and vertical polarization of the antenna is set on test. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 8 and 13 of ANSI C63.4-2003.

The frequency spectrum from 30 MHz to 1 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 kHz. All readings are above 1 GHz, AV values with a resolution bandwidth of 1 MHz.

Measurements were made at 3 meters

6.3. Test Arrangement

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application. The detailed information refers to test picture.

6.4. Test Data

Emissions don't show below are too low against the limits, the test curves are shown in the APPENDIX

Table 7 General Radiated Emission Data

Below 1GHz Worst-Case Data

Ambient temperature: 24° C						
Relative humidity: 53 %						
Test mode: 2 (ch6 2437MHz)						
Frequency MHz	Emission QP (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
156.352	35.4	23.5	11.9	Horizontal	43.5	---
179.679	36.1	25.2	10.9	Horizontal	43.5	---
274.929	43.6	29.3	14.3	Horizontal	46.0	---
585.951	42.0	22.0	20.0	Horizontal	46.0	---
601.303	43.0	23.0	20.0	Horizontal	46.0	---
674.892	42.1	21.5	20.6	Horizontal	46.0	---
70.821	35.8	28.0	7.8	Vertical	40.0	---
107.755	36.1	22.9	13.2	Vertical	43.5	---
131.082	39.1	25.8	13.3	Vertical	43.5	---
156.352	40.3	28.4	11.9	Vertical	43.5	---
168.016	40.0	28.4	11.6	Vertical	43.6	---
504.308	41.9	22.8	19.1	Vertical	46.0	---
648.156	43.0	22.4	20.6	Vertical	46.0	---
840.601	42.1	19.8	22.3	Vertical	46.0	---

REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)
 3. The other emission levels were very low against the limit.

Emission Up 1GHz

Table 8 Radiated Emission Data

Ambient temperature: 24° C						
Relative humidity: 53 %						
Test mode: 1 (ch4 2412MHz)						
Frequency GHz	Emission AV (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarizatio n	Limits (dBuV/m)	Note
2.412	91.5	95.5	-4.0	Horizontal		Fundamental(PK)
2.412	81.5	85.5	-4.0	Horizontal		Fundamental(AV)
2.412	89.5	93.5	-4.0	Vertical		Fundamental(PK)
2.412	80.5	84.5	-4.0	Vertical		Fundamental(AV)
4.824	50.3	48.3	2.0	Horizontal	74.0	Harmonic(PK)
4.824	41.0	39.0	2.0	Horizontal	54.0	Harmonic(AV)
4.824	52.3	50.3	2.0	Vertical	74.0	Harmonic(PK)
4.824	41.3	39.3	2.0	Vertical	54.0	Harmonic(AV)
7.236	52.7	45.3	7.4	Horizontal	74.0	Harmonic(PK)
7.236	41.7	34.3	7.4	Horizontal	54.0	Harmonic(AV)
7.236	49.7	42.3	7.4	Vertical	74.0	Harmonic(PK)
7.236	38.7	31.3	7.4	Vertical	54.0	Harmonic(AV)
9.648	47.5	38.0	9.5	Horizontal	74.0	Harmonic(PK)
9.648	37.5	28.0	9.5	Horizontal	54.0	Harmonic(AV)
9.648	46.1	36.6	9.5	Vertical	74.0	Harmonic(PK)
9.648	36.0	26.5	9.5	Vertical	54.0	Harmonic(AV)

REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)+Amplifier Factor(dB)
 3. The other emission levels were very low against the limit.

Table 9 Radiated Emission Data

Ambient temperature: 24° C						
Relative humidity: 53 %						
Test mode: 2 (ch6 2437MHz)						
Frequency GHz	Emission AV (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarizatio n	Limits (dBuV/m)	Note
2.437	90.7	94.6	-3.9	Horizontal		Fundamental(PK)
2.437	80.5	84.4	-3.9	Horizontal		Fundamental(AV)
2.437	88.5	92.4	-3.9	Vertical		Fundamental(PK)
2.437	79.5	83.4	-3.9	Vertical		Fundamental(AV)
4.874	51.3	49.2	2.1	Horizontal	74.0	Harmonic(PK)
4.874	41.2	39.1	2.1	Horizontal	54.0	Harmonic(AV)
4.874	51.3	49.2	2.1	Vertical	74.0	Harmonic(PK)
4.874	40.1	38.0	2.1	Vertical	54.0	Harmonic(AV)
7.311	50.1	42.6	7.5	Horizontal	74.0	Harmonic(PK)
7.311	38.7	31.3	7.5	Horizontal	54.0	Harmonic(AV)
7.311	46.5	39.0	7.5	Vertical	74.0	Harmonic(PK)
7.311	36.7	29.2	7.5	Vertical	54.0	Harmonic(AV)
9.748	45.5	35.9	9.6	Horizontal	74.0	Harmonic(PK)
9.748	36.5	26.9	9.6	Horizontal	54.0	Harmonic(AV)
9.748	43.1	33.5	9.6	Vertical	74.0	Harmonic(PK)
9.748	32.0	12.4	9.6	Vertical	54.0	Harmonic(AV)

REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)+Amplifier Factor(dB)
 3. The other emission levels were very low against the limit.

Table 10 Radiated Emission Data

Ambient temperature: 24° C						
Relative humidity: 53 %						
Test mode: 2 (ch6 2437MHz)						
Frequency GHz	Emission AV (dBuV/m)	Read Value (dBuV)	Correction Factor (dB/m)	Polarization	Limits (dBuV/m)	Note
2.462	90.5	94.2	-3.7	Horizontal		Fundamental(PK)
2.462	80.0	83.7	-3.7	Horizontal		Fundamental(AV)
2.462	86.5	90.2	-3.7	Vertical		Fundamental(PK)
2.462	78.3	82.0	-3.7	Vertical		Fundamental(AV)
4.924	50.3	48.0	2.3	Horizontal	74.0	Harmonic(PK)
4.924	41.5	39.2	2.3	Horizontal	54.0	Harmonic(AV)
4.924	52.3	50.0	2.3	Vertical	74.0	Harmonic(PK)
4.924	41.1	38.8	2.3	Vertical	54.0	Harmonic(AV)
7.386	50.5	42.8	7.7	Horizontal	74.0	Harmonic(PK)
7.386	38.9	31.2	7.7	Horizontal	54.0	Harmonic(AV)
7.386	44.5	36.8	7.7	Vertical	74.0	Harmonic(PK)
7.386	35.7	28.0	7.7	Vertical	54.0	Harmonic(AV)

REMARKS: 1. Emission level(dBuV/m)=Read Value(dBuV) + Correction Factor(dB/m)
 2. Correction Factor(dB/m) = Antenna Factor (dB/m) + Cable Factor (dB)+Amplifier Factor(dB)
 3. The other emission levels were very low against the limit.

7. 6DB BANDWIDTH MEASUREMENT

7.1. LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

7.2. TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100kHz RBW and 100kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

7.3. TEST SETUP



7.4. EUT OPERATING CONDITIONS

Model
Mode 2
Mode 3

7.5. Test Data

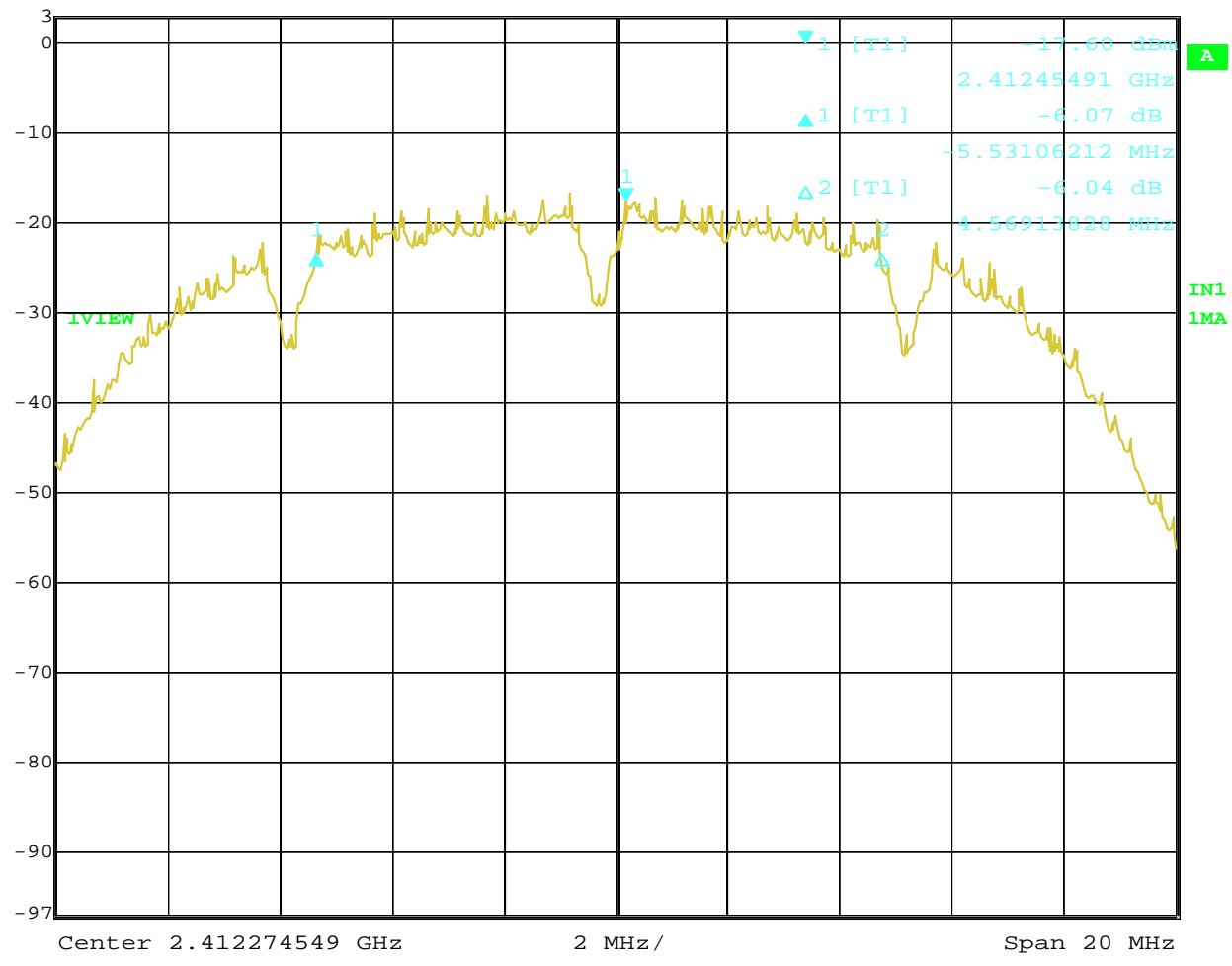
Table 11 Test Data

CHANNEL	6dB BANDWIDTH (MHz)	MINIMUM LIMIT (MHz)	results
Ch1	10.9	0.5	Pass
Ch6	8.5	0.5	Pass
Ch11	9.1	0.5	Pass

Ch1 2412MHz



Delta 1 [T1] RBW 100 kHz RF Att 30 dB
Ref Lvl -6.07 dB VBW 100 kHz
3 dBm -5.53106212 MHz SWT 1 s Unit dBm

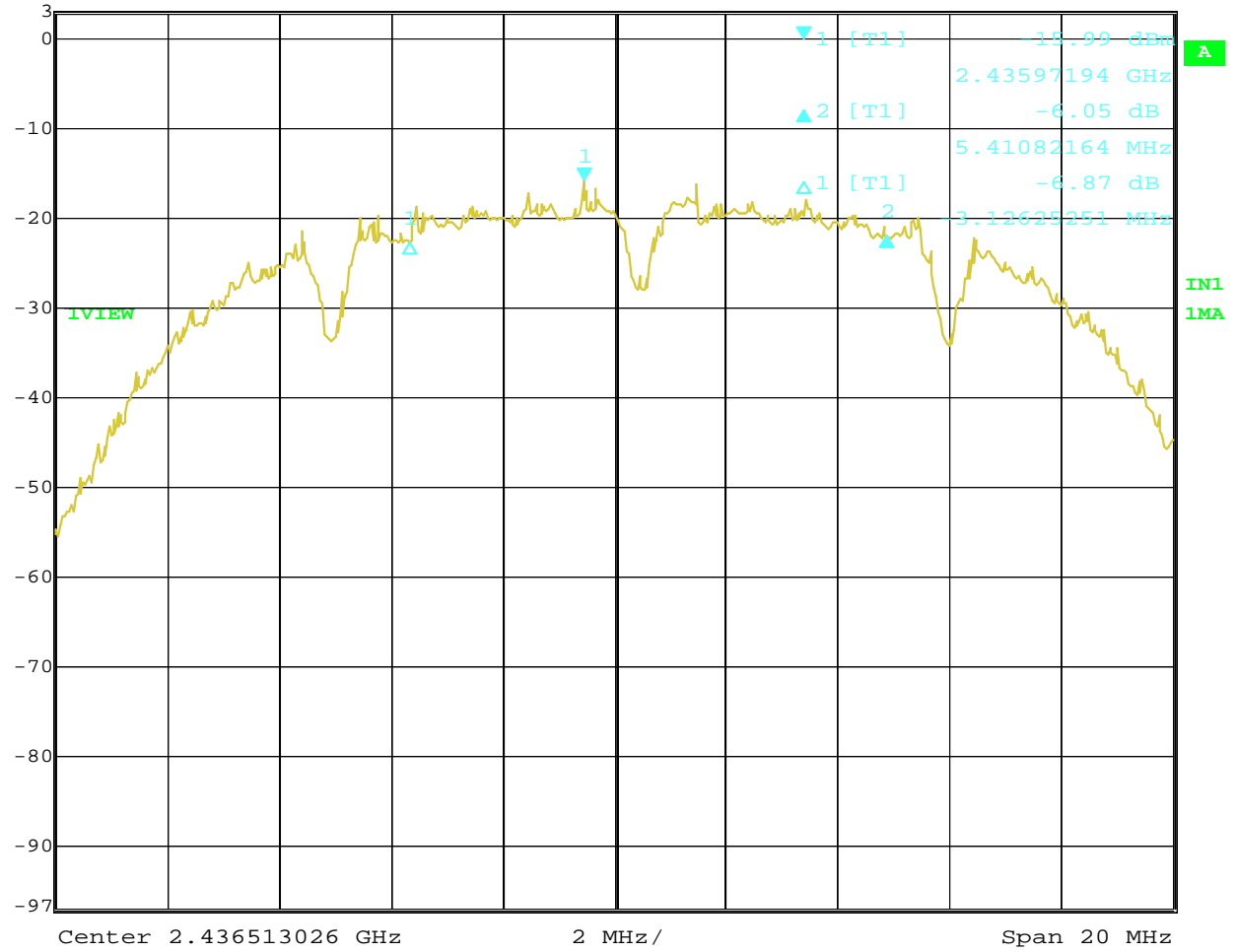


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Ch 6 (2438MHz)



Delta 2 [T1] RBW 100 kHz RF Att 30 dB
Ref Lvl -6.05 dB VBW 100 kHz
3 dBm 5.41082164 MHz SWT 1 s Unit dBm

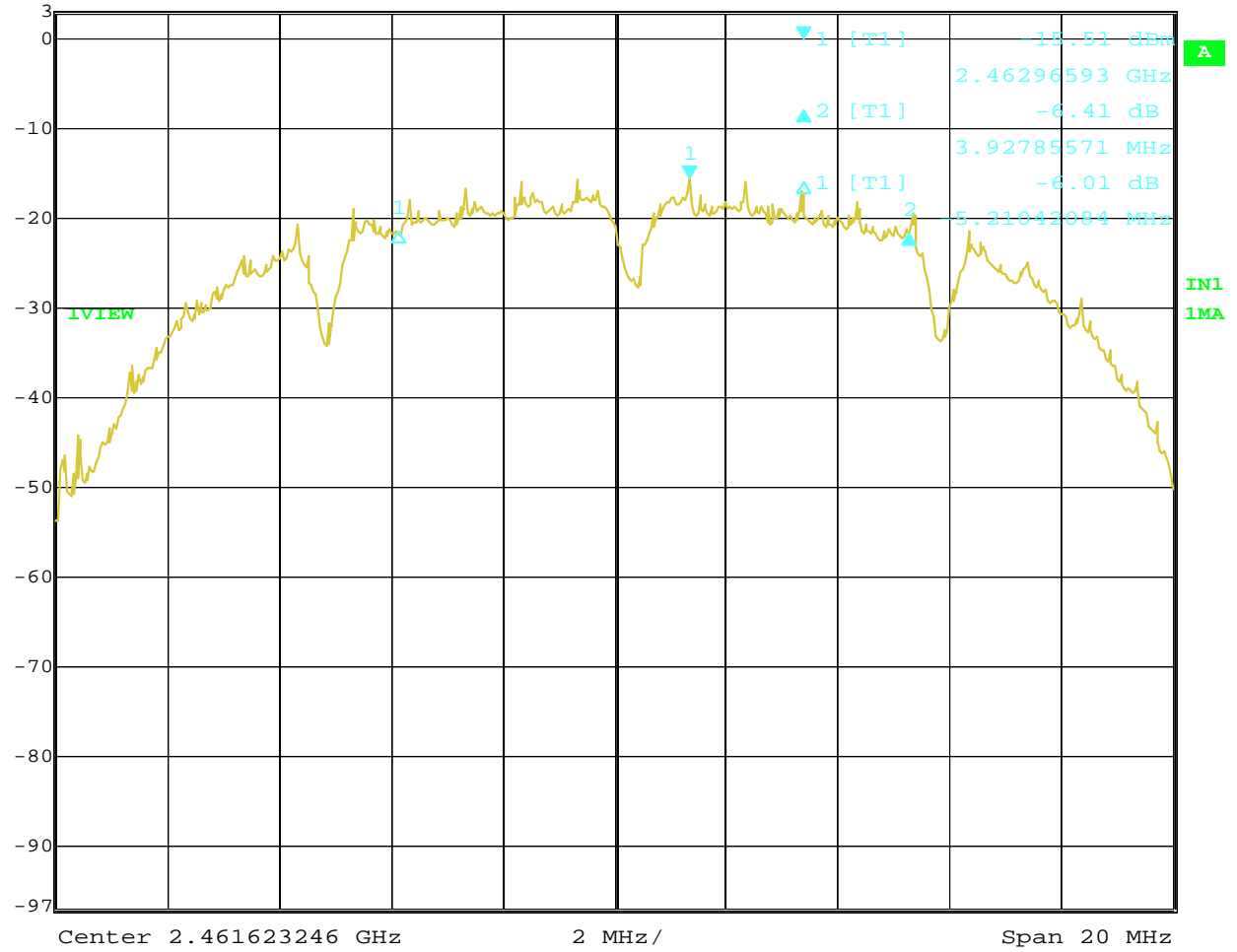


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Ch11 (2462MHz)



Delta 2 [T1] RBW 100 kHz RF Att 30 dB
Ref Lvl -6.41 dB VBW 100 kHz
3 dBm 3.92785571 MHz SWT 1 s Unit dBm



Date: 12.JUN.2006 15:45:28

8. MAXIMUM PEAK OUTPUT POWER

8.1. LIMITS OF MAXIMUM PEAK OUTPUT POWER MEASUREMENT

The Maximum Peak Output Power Measurement is 30dBm.

8.2. TEST PROCEDURES

1. A detector was used on the output port of the EUT. An oscilloscope was used to read the response of the detector.
2. Replaced the EUT by the signal generator. The center frequency of the S.G was adjusted to the center frequency of the measured channel.
3. Adjusted the power to have the same reading on oscilloscope. Record the power level.

8.3. TEST SETUP



8.4. EUT OPERATING CONDITIONS

Same as Item 4.3.6

8.5. Test Data

Table 12 Test Data

CHANNEL	Peak Power Output (dBm)	LIMIT (dBm)	results
Ch1	-6.0	30dBm	Pass
Ch6	-6.3	30dBm	Pass
Ch11	-7.0	30dBm	Pass

9. POWER SPECTRAL DENSITY MEASUREMENT

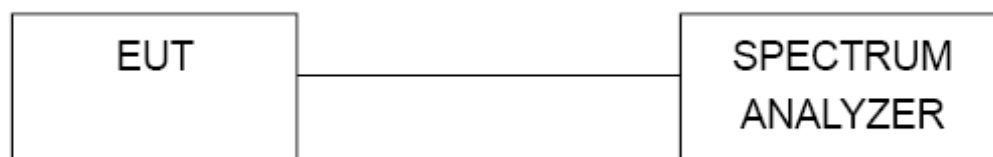
9.1. LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

9.2. TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer through an attenuator, the bandwidth of the fundamental frequency was measured with the spectrum analyzer using 3kHz RBW and 30kHz VBW, set sweep time = span/3kHz. The power spectral density was measured and recorded. The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

9.3. 4.5.5 TEST SETUP



9.4. 4.5.6 EUT OPERATING CONDITION

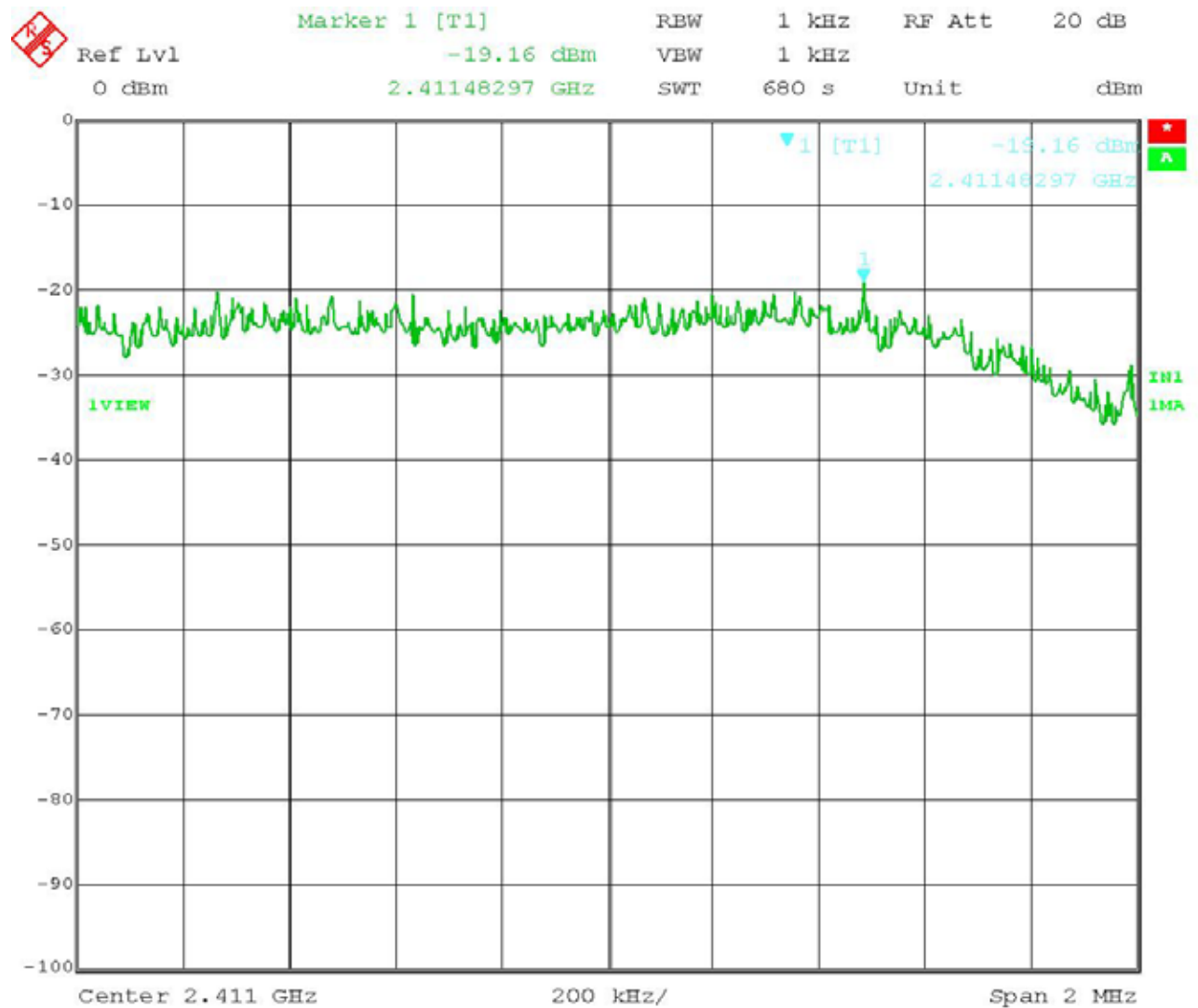
Model
Mode 2
Mode 3

9.5. Test Data

Table 13 Test Data

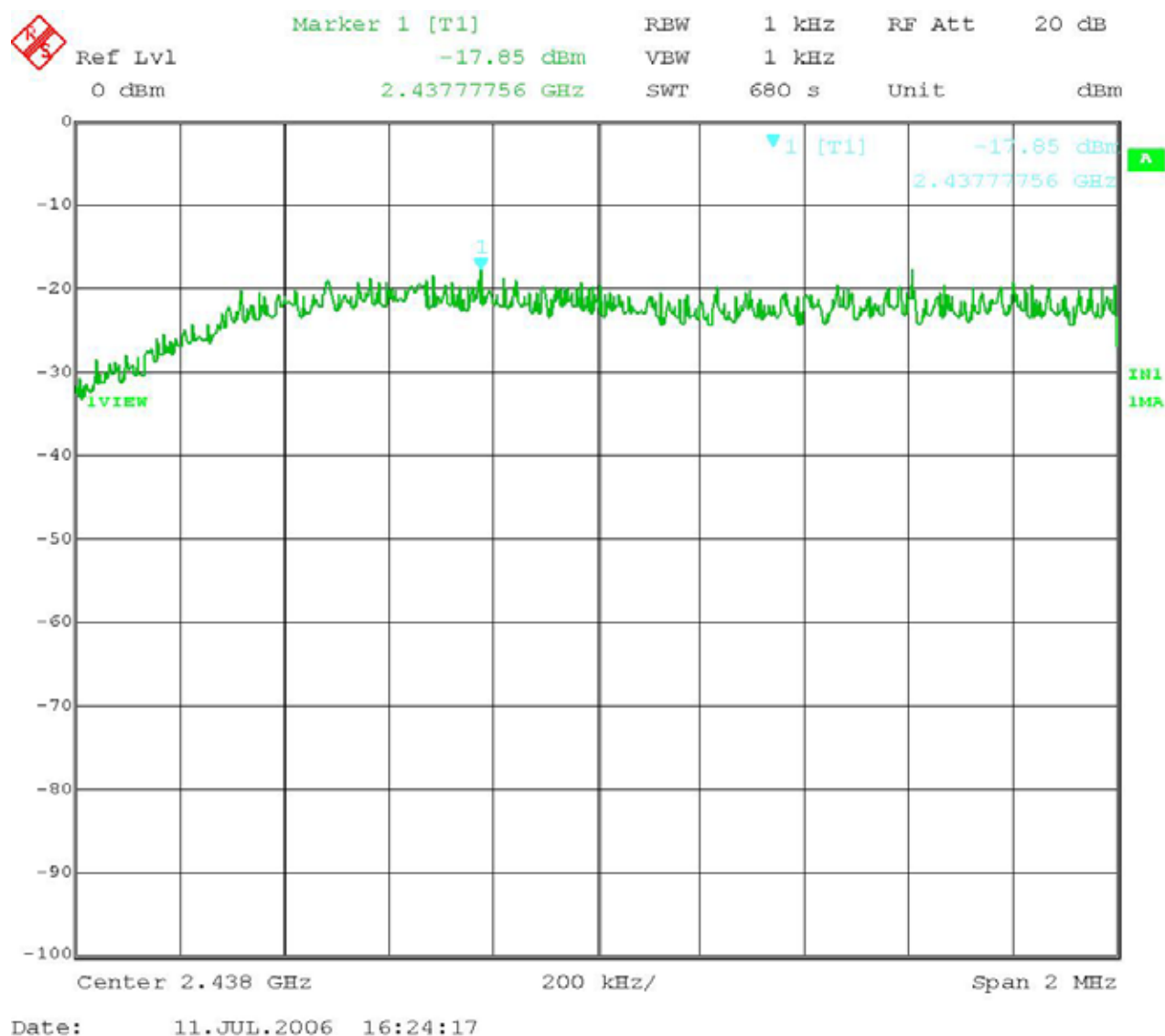
CHANNEL	RF POWER LEVEL IN 3kHz BW (dBm)	MAXIMUM LIMIT (dBm)	results
Ch1	-19.1	8	Pass
Ch6	-17.8	8	Pass
Ch11	-23.6	8	Pass

Ch1

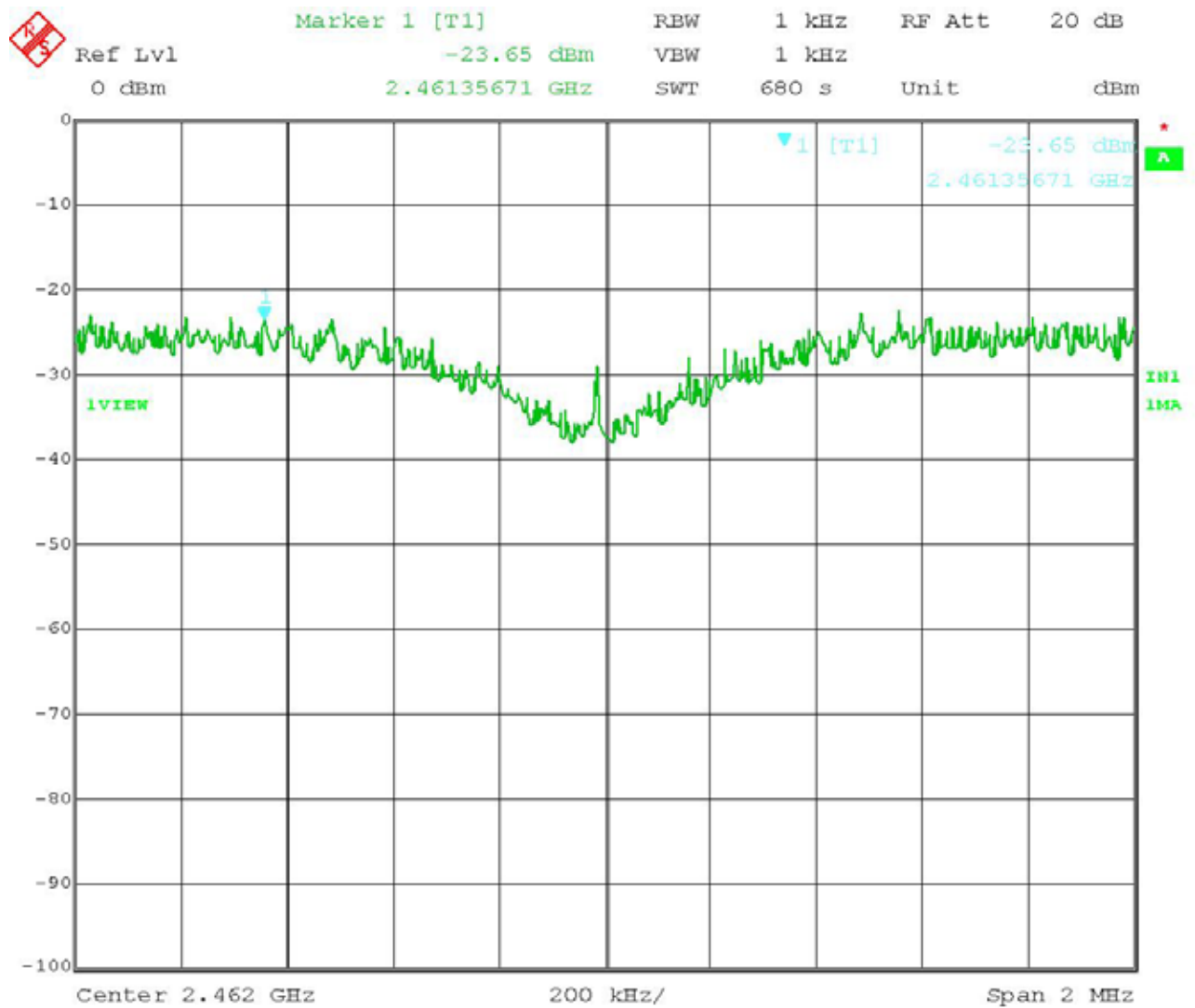


Date: 11.JUL.2006 16:47:23

Ch6



Ch11



Date: 11.JUL.2006 16:02:17

10. BAND EDGES MEASUREMENT

10.1.LIMITS OF BAND EDGES MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

10.2.TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100kHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

The spectrum plots (Peak RBW=VBW=100kHz) are attached on the following pages.

10.3.EUT OPERATING CONDITION

Model1

Mode 2

Mode 3

10.4.TEST RESULTS

The spectrum plots are attached on the following 3 images. It shows compliance with the requirement in part 15.247(d).

NOTE 1: The band edge emission plot of on page 30 ch1 shows 30.1dBc. The emission of carrier strength list in the test result of channel 1 is 91.5dBuV/m (Peak), so the maximum field strength in restrict band is $91.5-30.1=61.4$ dBuV/m which is under 74dBuV/m limit.

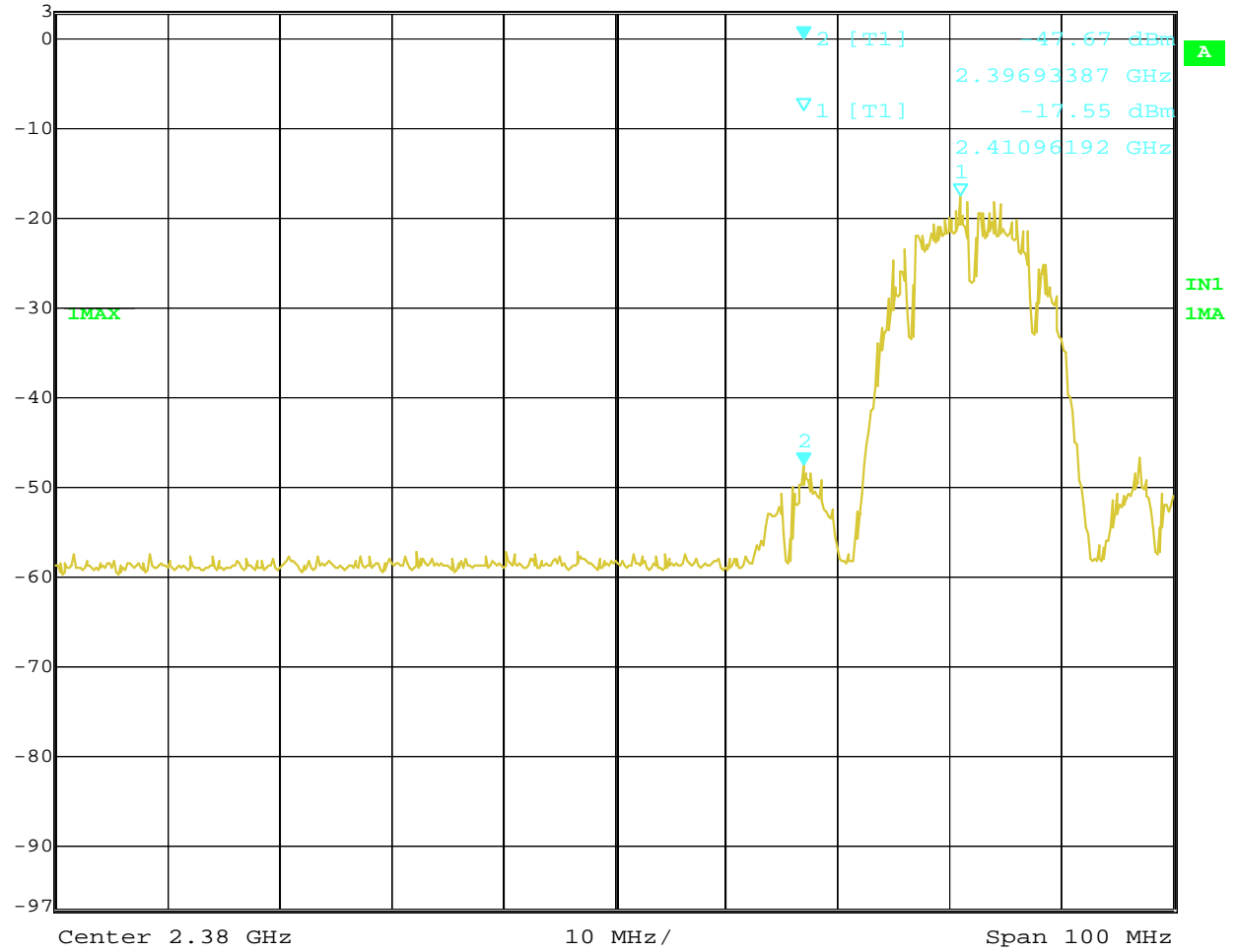
The band edge emission plot of on page 31 ch6 shows32.0dBc. The emission of carrier strength list in the test result of channel 1 is 90.7dBuV/m (Peak), so the maximum field strength in restrict band is $90.7-32.0=58.7$ dBuV/m which is under 74dBuV/m limit.

The band edge emission plot of on page 32 ch11 shows 28.2dBc. The emission of carrier strength list in the test result of channel 1 is 90.5dBuV/m (Peak), so the maximum field strength in restrict band is $90.5-28.2=62.3$ dBuV/m which is under 74dBuV/m limit.

Ch1



Ref Lvl	Marker 2 [T1]	RBW	100 kHz	RF Att	30 dB
3 dBm	-47.67 dBm	VBW	100 kHz		
	2.39693387 GHz	SWT	1 s	Unit	dBm

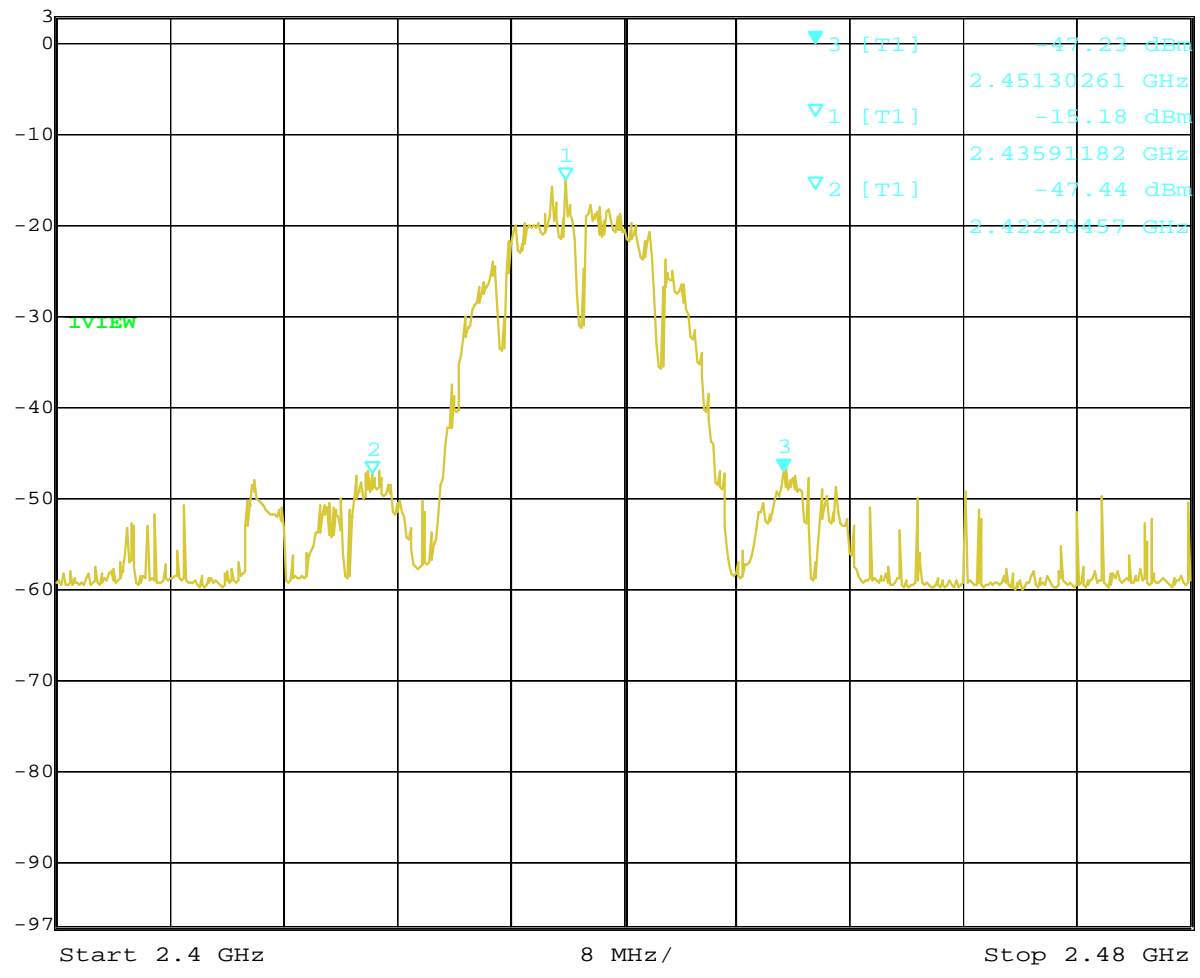


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Ch6



Marker 3 [T1] RBW 100 kHz RF Att 30 dB
Ref Lvl -47.23 dBm VBW 100 kHz
3 dBm 2.45130261 GHz SWT 1 s Unit dBm

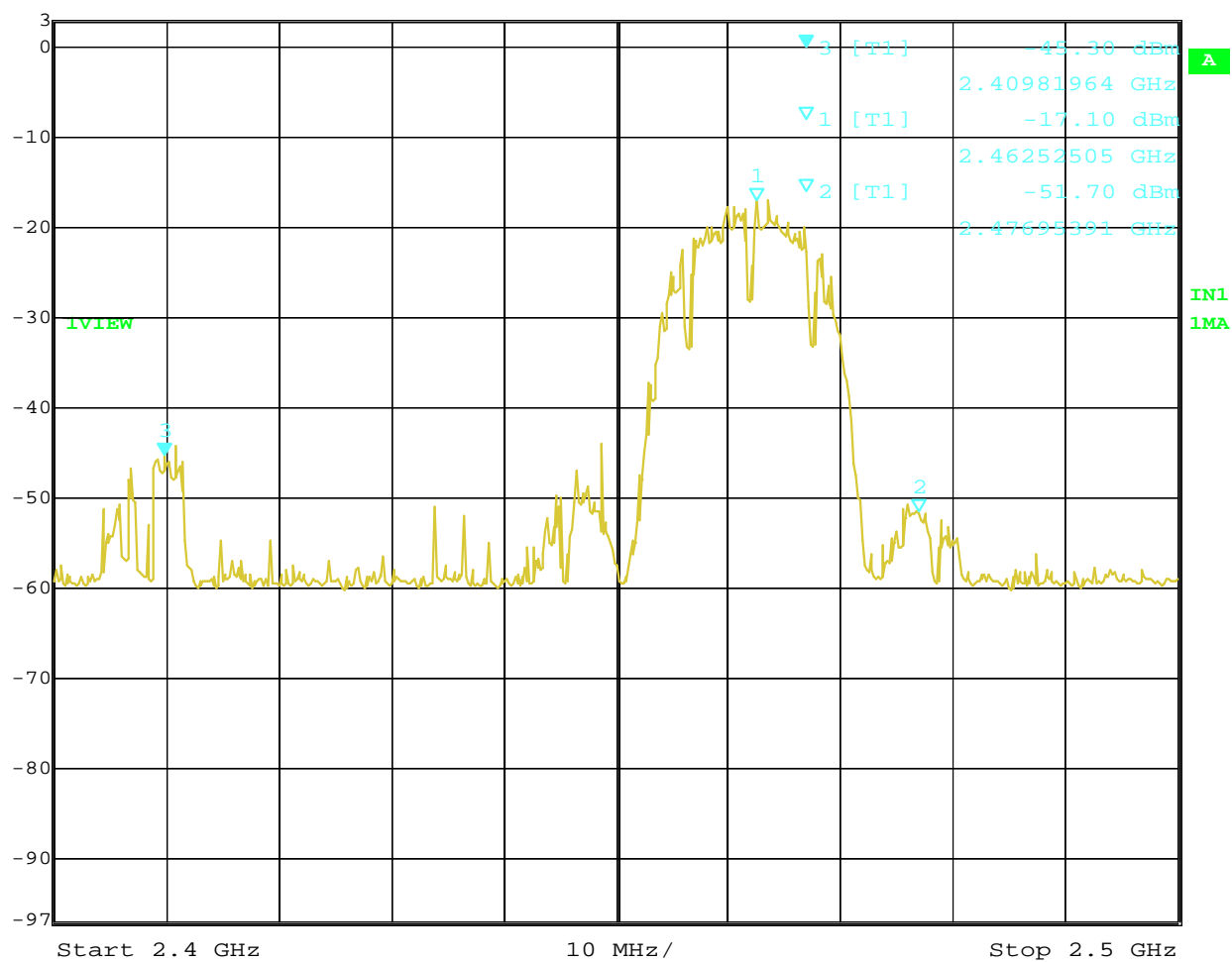


Date: 12.JUN.2006 15:25:19

Ch11



Marker 3 [T1] RBW 100 kHz RF Att 30 dB
 Ref Lvl -45.30 dBm VBW 100 kHz
 3 dBm 2.40981964 GHz SWT 1 s Unit dBm



Date: 12.JUN.2006 15:52:14

11. ANTENNA REQUIREMENT

11.1. STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 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 FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2. ANTENNA CONNECTED CONSTRUCTION

The antenna used in this product is Chip antenna without connector. The maximum Gain of the antenna is 3.0dBi.