

## FCC TEST REPORT

for

**SANHO ELECTRONICS TECHNOLOGY CO., LTD**

Wireless Portable Storage Device

Model Number: iUSBport Mini

FCC ID: AXDWD100130610

Prepared for : SANHO ELECTRONICS TECHNOLOGY CO., LTD  
Address : 1/F, BLOCK 1, #1177 LINGYUN ROAD, NINGBO, CHINA

Prepared by : Keyway Testing Technology Co., Ltd.  
Address : Baishun Industrial Zone, Zhangmutou Town,  
Dongguan, Guangdong, China

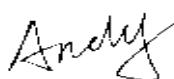
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Report No. : 13KWE08795F  
Date of Test : Jul. 21~28, 2013  
Date of Report : Aug. 1, 2013

## TABLE OF CONTENTS

Test Report Declaration	Page
1. GENERAL PRODUCT INFORMATION.....	4
1.1. Product Function .....	4
1.2. Description of Device (EUT).....	4
1.3. Independent Operation Modes.....	4
2. TEST SITES.....	5
2.1. Test Facilities.....	5
2.2. List of Test and Measurement Instruments.....	6
3. TEST SET-UP AND OPERATION MODES.....	7
3.1. Principle of Configuration Selection .....	7
3.2. Block Diagram of Test Set-up .....	7
3.3. Test Operation Mode and Test Software .....	7
3.4. Special Accessories and Auxiliary Equipment .....	7
3.5. Countermeasures to Achieve EMC Compliance.....	7
4. EMISSION TEST RESULTS.....	8
4.1. Conducted Emission at the Mains Terminals Test.....	8
4.2. Radiated Emission Test .....	11
5. 6 OCCUPY BANDWIDTH.....	51
5.1. Limits .....	51
6. BAND EDGE COMPLIANCE TEST.....	54
6.1. Limits .....	54
6.2. Test setup.....	54
7. OUTPUT POWER TEST.....	59
7.1. Limits .....	59
7.2. Test setup.....	59
7.3. Test result.....	59
8. POWER SPECTRAL DENSITY TEST.....	60
8.1. Limits .....	60
8.2. Test setup.....	60
8.3. Test result.....	60
9. ANTENNA REQUIREMENTS.....	67
9.1. Limits .....	67
9.2. Result .....	67
10. PHOTOGRAPHS OF TEST SET-UP .....	68
10.1. Set-up for Radiated Emission Test .....	68
10.2. Set-up for Radiated Emission Test .....	69
11. PHOTOGRAPHS OF THE EUT .....	70

# Keyway Testing Technology Co., Ltd.

<b>Applicant:</b>	SANHO ELECTRONICS TECHNOLOGY CO., LTD		
<b>Address:</b>	1/F, Block 1, #1177 Lingyun Road, Ningbo, China		
<b>Manufacturer:</b>	SANHO ELECTRONICS TECHNOLOGY CO., LTD		
<b>Address:</b>	1/F, Block 1, #1177 Lingyun Road, Ningbo, China		
<b>E.U.T:</b>	Wireless Portable Storage Device		
<b>Model Number:</b>	iUSBport Mini		
<b>Trade Name:</b>	Hyper Drive	<b>Serial No.:</b>	-----
<b>Date of Receipt:</b>	Jul. 20, 2013	<b>Date of Test:</b>	Jul. 21~28, 2013
<b>Test Specification:</b>	FCC Part 15, Subpart C: Oct. 1, 2012 ANSI C63.4:2003 KDB558074		
<b>Test Result:</b>	The equipment under test was found to be compliance with the requirements of the standards applied.		
<b>Issue Date: Aug. 1, 2013</b>			
Tested by:	Reviewed by:	Approved by:	
			
Andy Gao / Engineer	Jade Yang/ Supervisor	Chris Du / Manager	
<b>Other Aspects:</b>	None.		
Abbreviations: OK/P=passed      fail/F=failed      n.a/N=not applicable      E.U.T=equipment under tested			
This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Keyway Testing Technology Co., Ltd.			

# 1. GENERAL PRODUCT INFORMATION

## 1.1. Product Function

Refer to Technical Construction Form and User Manual.

## 1.2. Description of Device (EUT)

Product Name:	Wireless Portable Storage Device
Model No.:	iUSBport Mini
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g/802.11n(H20)) 2422MHz~2452MHz (802.11n(H40))
Channel numbers:	11 for 802.11b/802.11g/802.11n(H20) ,7 for 802.11n(H40)
Channel separation:	5MHz
Modulation technology: (IEEE 802.11b)	Direct Sequence Spread Spectrum (DSSS)
Modulation technology: (IEEE 802.11g/802.11n)	Orthogonal Frequency Division Multiplexing(OFDM)
Data speed (IEEE 802.11b):	1Mbps, 2Mbps, 5.5Mbps, 11Mbps
Data speed (IEEE 802.11g):	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps,54Mbps
Data speed (IEEE 802.11n):	Up to 150Mbps
Antenna Type:	PCB antenna
Antenna gain:	0dBi (declare by Applicant)
Power supply:	3.7 VDC/ 950mAh Lithium Battery

## 1.3. Independent Operation Modes

The basic operation modes are:

1.3.1. EUT work continues TX mode and frequency as below:

	Channel	Frequency
802.11b	Low	2412MHz
	Middle	2437MHz
	High	2462MHz
802.11g	Low	2412MHz
	Middle	2437MHz
	High	2462MHz
802.11n(HT20)	Low	2412MHz
	Middle	2437MHz
	High	2462MHz
802.11 n(HT40)	Low	2422MHz
	Middle	2437MHz
	High	2452MHz

Remark: According to ANSI C63.4 standards, the test results are both the "worst case" and "worst setup" 1MHz for 802.11b,54MHz for 802.11g,6.5Mbps for 802.11n(H20), 13Mbps for 802.11n(H40).

## 2. TEST SITES

### 2.1. Test Facilities

Lab Qualifications : 944 Shielded Room built by ETS-Lindgren, USA  
Date of completion: March 28, 2011

966 Chamber built by ETS-Lindgren, USA  
Date of completion: March 28, 2011

Certificated by TUV Rheinland, Germany.  
Registration No.: UA 50207153  
Date of registration: July 13, 2011

Certificated by UL, USA  
Registration No.: 100567-237  
Date of registration: September 1, 2011

Certificated by Intertek  
Registration No.: 2011-RTL-L1-31  
Date of registration: October 11, 2011

Certificated by Industry Canada  
Registration No.: 9868A  
Date of registration: December 8, 2011

Certificated by FCC, USA  
Registration No.: 370994  
Date of registration: February 21, 2012

Certificated by CNAS China  
Registration No.: CNAS L5783  
Date of registration: August 8, 2012

Name of Firm : Keyway Testing Technology Co., Ltd.

Site Location : Baishun Industrial Zone, Zhangmutou Town,  
Dongguan, Guangdong, China

## 2.2. List of Test and Measurement Instruments

### 2.2.1. For conducted emission at the mains terminals test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	May 9,13	May 9,14
Artificial Mains Network	Rohde&Schwarz	ENV216	101315	May 9,13	May 9,14
Artificial Mains Network (AUX)	Rohde&Schwarz	ENV216	101314	May 9,13	May 9,14
RF Cable	FUJIKURA	3D-2W	944 Cable	May 9,13	May 9,14

### 2.2.2. For radiated emission test (Below 1GHz)

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESCI	101156	May 9,13	May 9,14
Bilog Antenna	ETS-LINDGREEN	3142D	135452	May 11,13	May 11,14
Spectrum Analyzer	Agilent	E4411B	MY4511304	May 9,13	May 9,14
3m Semi-anechoic Chamber	ETS-LINDGREEN	966	KW01	May 9,13	May 9,14
Signal Amplifier	SONOMA	310	187016	May 9,13	May 9,14
Signal Amplifier	Agilent	8449B	3008A00251	May 9,13	May 9,14
RF Cable	IMRO	IMRO-400	966 Cable 1#	May 9,13	May 9,14
MULTI-DEVICE Controller	ETS-LINDGREEN	2090	126913	N/A	N/A
Antenna Holder	ETS-LINDGREN	2070B	00109601	N/A	N/A

### 2.2.3. For above 1GHz radiated emission, output power, band edge, 6dB bandwidth test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Horn Antenna	DAZE	ZN30701	11003	May 11,13	May 11,14
Horn Antenna	SCHWARZBECK	BBHA9170	9170-068	May 11,13	May 11,14
Spectrum Analyzer	Agilent	8593E	3911A04271	May 9,13	May 9,14
Spectrum Analyzer	Agilent	E4408B	MY44211125	May 9,13	May 9,14
3m Semi-anechoic Chamber	ETS-LINDGREN	966	KW01	May 9,13	May 9,14
Signal Amplifier	DAZE	ZN3380C	11001	May 9,13	May 9,14
Signal Amplifier	Agilent	8449B	3008A00251	May 9,13	May 9,14
High Pass filter	Micro	HPM50111	324216	May 9,13	May 9,14
Power Meter	R&S	NRVS	101824	May 9,13	May 9,14
Peak and Avg Power Sensor	Rohde&Schwarz	URV5-Z7	100655	May 9,13	May 9,14
RF Cable	IMRO	IMRO-400	966 Cable 1#	May 9,13	May 9,14
MULTI-DEVICE Controller	ETS-LINDGREN	2090	126913	N/A	N/A
Antenna Holder	ETS-LINDGREN	2070B	00109601	N/A	N/A

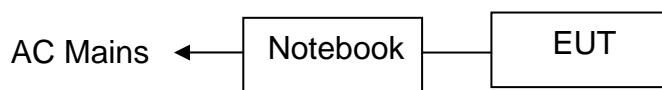
### 3. TEST SET-UP AND OPERATION MODES

#### 3.1. Principle of Configuration Selection

**Emission:** The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the Operating Instructions.

#### 3.2. Block Diagram of Test Set-up

System Diagram of Connections between EUT and Simulators



(EUT: Wireless Portable Storage Device)

*Note: the notebook only use to control the EUT's transmit and charging.*

#### 3.3. Test Operation Mode and Test Software

None.

#### 3.4. Special Accessories and Auxiliary Equipment

Notebook:

Manufacturer:	LENOVO
Model Number:	Lenovo G475
Serial Number:	CB14477457
Adapter:	
Manufacturer:	Lenovo
Model Number:	LN-A0403A3C
Serial Number:	36001672
Input: 100-240V/2.5A,50-60Hz; Output: 20V/2A	
AC Line: Unshielded, Detachable 1.0m	
DC Line: Unshielded, Undetachable 1.8m	

#### 3.5. Countermeasures to Achieve EMC Compliance

None.

## 4. EMISSION TEST RESULTS

### 4.1. Conducted Emission at the Mains Terminals Test

#### 4.1.1. Limit 15.209 limits

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dB $\mu$ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56	56 to 46
0.5-5	56	46
5-30	60	50

#### 4.1.2. Test Setup

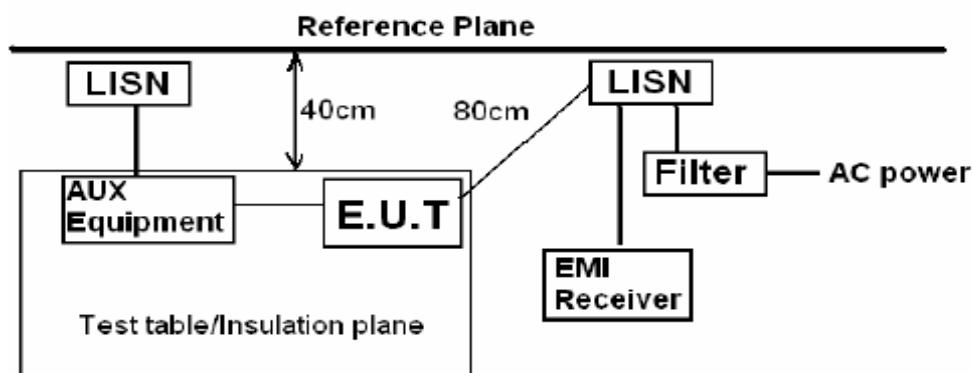
The EUT was put on a wooden table which was 0.8 m high above the ground and connected to the AC mains through the Artificial Mains Network (AMN). Where the mains cable supplied by the manufacture was longer than 0.8 m, the excess was folded back and forth parallel to the cable at the centre so as to form a bundle no longer than 0.4 m.

The EUT was kept 0.4 m from any other earthed conducting surface. Both sides of AC line were checked to find out the maximum conducted emission levels according to the test procedure during the conducted emission test.

The frequency range from 150 kHz to 30 MHz was investigated.

The bandwidth of the test receiver was set at 9 kHz.

Pretest for all mode, The test data of the worst case condition(s) was reported on the following page.



*Remark:*

E.U.T: Equipment Under Test

LISN: Line Impedance Stabilization Network

Test table height=0.8m

#### 4.1.3. Test Mode

Set EUT in TX mode.

## Test Data



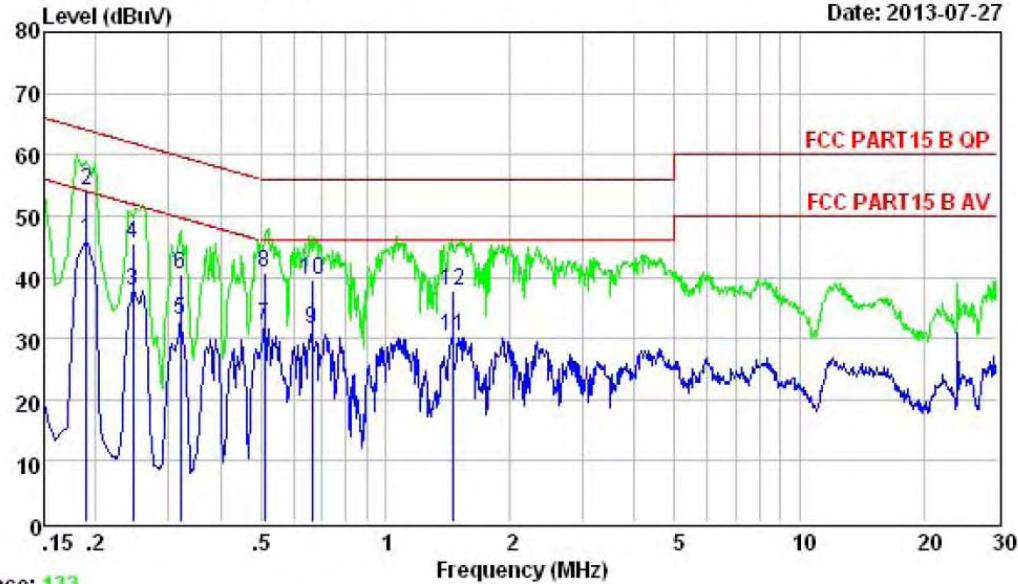
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Data: 134

File: F:\944 Data\conduction\G\GTS.EM6 (136)

Date: 2013-07-27



Trace: 133

Site : 944 Shielded Room  
 Condition : FCC PART15 B QP NEUTRAL  
 EUT : Wireless Portable Storage Device  
 POWER : DC 5V from PC input AC 120V/60Hz  
 M/N : iUSBport Mini  
 Test Engineer: Andy  
 Comment : Temp:24.9';Humi:56%;Press:101.52kPa  
 Test Mode : TX Mode

Freq	Level	Limit		Over	Remark
		MHz	dBuV	Line	dB
1	0.190	46.12	54.02	-7.90	Average
2	0.190	54.20	64.02	-9.82	QP
3	0.246	37.82	51.91	-14.09	Average
4	0.246	45.50	61.91	-16.41	QP
5	0.320	33.12	49.71	-16.59	Average
6	0.320	40.30	59.71	-19.41	QP
7	0.510	32.15	46.00	-13.85	Average
8	0.510	40.60	56.00	-15.40	QP
9	0.665	31.38	46.00	-14.62	Average
10	0.665	39.50	56.00	-16.50	QP
11	1.456	30.40	46.00	-15.60	Average
12	1.456	37.90	56.00	-18.10	QP



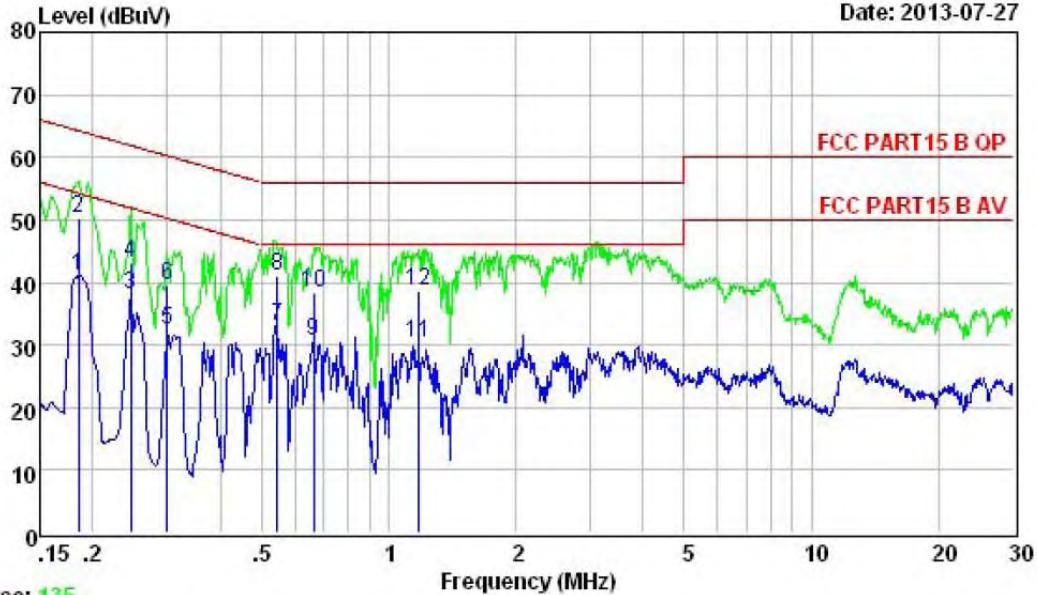
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Data: 136

File: F:\944 Data\conduction\G\GTS.EM6 (136)

Date: 2013-07-27



Trace: 135

Site : 944 Shielded Room  
 Condition : FCC PART15 B QP LINE  
 EUT : Wireless Portable Storage Device  
 POWER : DC 5V from PC input AC 120V/60Hz  
 M/N : iUSBport Mini  
 Test Engineer: Andy  
 Comment : Temp:24.9';Humi:56%;Press:101.52kPa  
 Test Mode : TX Mode

Freq	Level	Limit		Over
		Line	Limit	
MHz	dBuV	dBuV	dB	
1	0.185	41.15	54.24	-13.09 Average
2	0.185	50.20	64.24	-14.04 QP
3	0.246	38.16	51.91	-13.75 Average
4	0.246	43.20	61.91	-18.71 QP
5	0.300	32.29	50.24	-17.95 Average
6	0.300	39.60	60.24	-20.64 QP
7	0.546	33.13	46.00	-12.87 Average
8	0.546	41.10	56.00	-14.90 QP
9	0.665	30.74	46.00	-15.26 Average
10	0.665	38.50	56.00	-17.50 QP
11	1.178	30.29	46.00	-15.71 Average
12	1.178	38.80	56.00	-17.20 QP

## 4.2. Radiated Emission Test

### 4.2.1. Limit 15.209 limits

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		µV/m	dB(µV)/m
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(µV)/m (Peak) 54.0 dB(µV)/m (Average)	

### 4.2.2. Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	( <sup>2</sup> )

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

#### 4.2.3. Test setup

The EUT was placed on a turn table which was 0.8 m above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.

The EUT was tested in the Chamber Site. It was pre-scanned with a Peak detector from the spectrum, and all the final readings from the test receiver were measured with the Quasi-Peak detector.

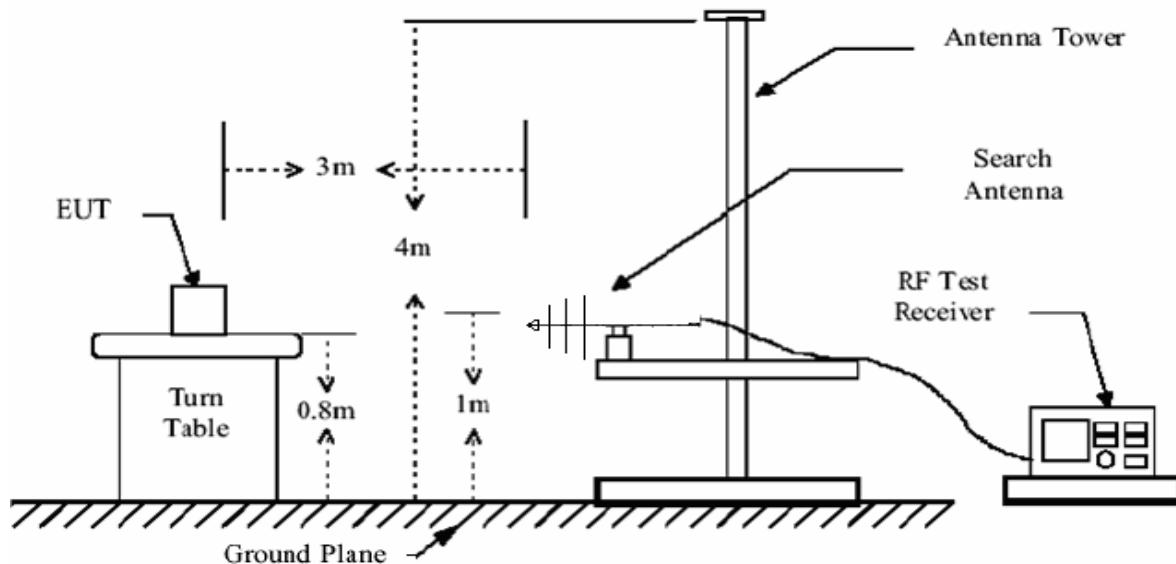
The bandwidth of the EMI test receiver is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz.

The frequency range from 30MHz to 10<sup>th</sup> harmonic (25GHz) are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.

Notes:

1. Emission Level = Antenna Factor + Cable Loss + Meter Reading+Preamp Factor.
2. Measurement Uncertainty:  $\pm 3.6$  dB at a level of confidence of 95%.
3. For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.
4. For emissions below 1GHz, pretest for all mode, The test data of the worst case condition(s) was reported on the following pages.



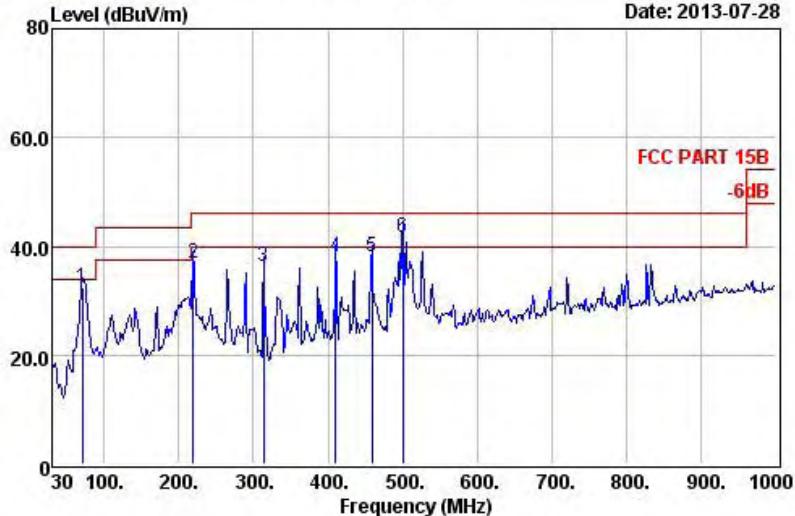
## Test Data



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Data: 148 File: D:\966 data\Gigs.EM6 (149)

Date: 2013-07-28



Site : 966 Chamber  
Condition: FCC PART 15B 3m 3142D VERTICAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7°C Humi:55% Press:101.28kPa  
Test Mode: TX Mode

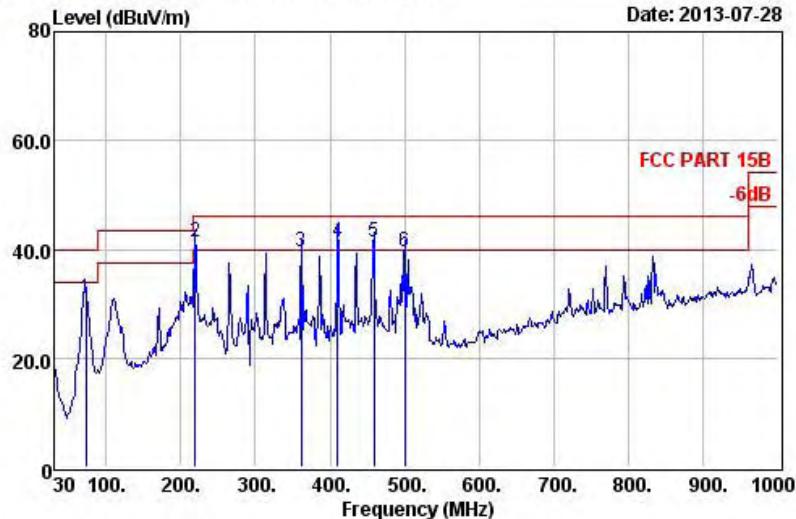
Freq	Preamp Factor	Read Level		Cable Antenna Loss Factor		Limit Level	Line Limit	Over dB	Remark
		MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	
1	70.74	31.32	55.22	0.85	7.54	32.29	40.00	-7.71	QP
2	219.15	30.99	54.56	1.53	11.92	37.02	46.00	-8.98	QP
3	313.24	30.89	50.97	1.94	14.17	36.19	46.00	-9.81	QP
4	410.24	30.64	49.60	2.48	16.63	38.07	46.00	-7.93	QP
5	458.74	30.61	48.31	2.62	17.84	38.16	46.00	-7.84	QP
6	! 500.45	30.60	50.63	2.85	18.71	41.59	46.00	-4.41	QP



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Data: 149 File: D:\966 data\G\gts.EM6 (149)

Date: 2013-07-28



Site : 966 Chamber  
Condition: FCC PART 15B 3m 3142D HORIZONTAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: TX Mode

Freq	Preamp Factor	Read	Cable Antenna		Limit Line	Over Limit	Remark
		Level	Loss Factor	Level			
MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB
1	72.68	31.32	53.84	0.85	7.63	31.00	40.00
2 !	219.15	30.99	58.94	1.53	11.92	41.40	46.00
3	361.74	30.61	51.96	2.18	16.12	39.65	46.00
4 !	410.24	30.64	52.93	2.48	16.63	41.40	46.00
5 !	458.74	30.61	51.41	2.62	17.84	41.26	46.00
6	500.45	30.60	48.58	2.85	18.71	39.54	46.00

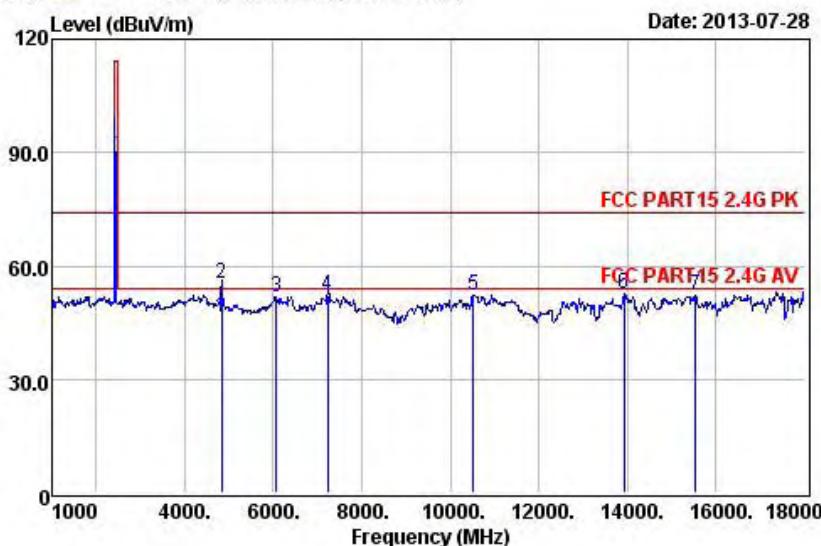


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Data: 124 File: D:\966 data\G\gts.EM6 (149)

Date: 2013-07-28



Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 VERTICAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7°C Humi:55% Press:101.28kPa  
Test Mode: 802.11b 2412MHz

Freq	Preamp Factor	Read Level	Cable Loss	Antenna Factor	Limit		Over Line	Over Limit	Remark
					Level	dB/m			
MHz		dB	dBuV		dB	dB/m	dBuV/m	dBuV/m	
1	4824.00	27.50	28.79	12.01	32.99	46.29	54.00	-7.71	Average
2	4824.00	27.50	37.68	12.01	32.99	55.18	74.00	-18.82	Peak
3	6066.00	27.71	27.67	16.60	35.29	51.85	74.00	-22.15	Peak
4	7236.00	27.95	26.40	16.61	37.30	52.36	74.00	-21.64	Peak
5	10520.00	28.85	24.83	17.07	39.21	52.26	74.00	-21.74	Peak
6	13920.00	29.38	19.23	19.27	43.42	52.54	74.00	-21.46	Peak
7	15535.00	29.63	23.10	20.34	38.53	52.34	74.00	-21.66	Peak

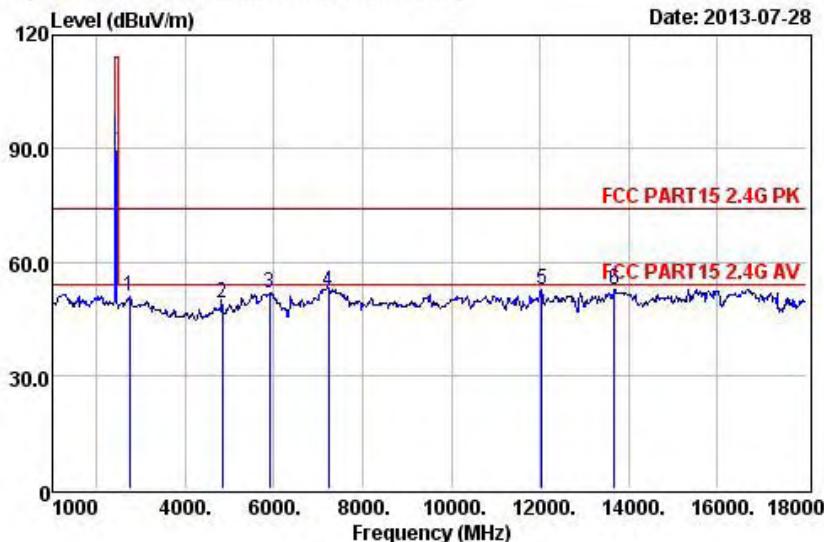


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Data: 125 File: D:\966 data\G\gts.EM6 (149)

Date: 2013-07-28



Site : 966 Chamber

Condition: FCC PART15 2.4G PK 3m ZN30701 HORIZONTAL

EUT : Wireless Portable Storage Device

M/N : iUSBport Mini

Power : DC 5V from PC input AC 120V/60Hz

Test By : Andy

Comment : Temp:24.7°C Humi:55% Press:101.28kPa

Test Mode: 802.11b 2412MHz

	Preamp	Read	Cable	Antenna	Limit	Over		
Freq	Factor	Level	Loss	Factor	Level	Line	Limit	Remark

	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB
Freq	Factor	Level	Loss	Factor	Level	Line	Limit	Remark
1	2734.00	26.42	39.38	8.66	29.36	50.98	74.00	-23.02 Peak
2	4824.00	27.50	31.76	12.01	32.99	49.26	74.00	-24.74 Peak
3	5896.00	27.69	28.57	16.04	34.97	51.89	74.00	-22.11 Peak
4	7236.00	27.95	26.17	16.61	37.30	52.13	74.00	-21.87 Peak
5	12033.00	29.01	24.71	17.40	39.41	52.51	74.00	-21.49 Peak
6	13665.00	29.33	19.90	18.98	43.17	52.72	74.00	-21.28 Peak

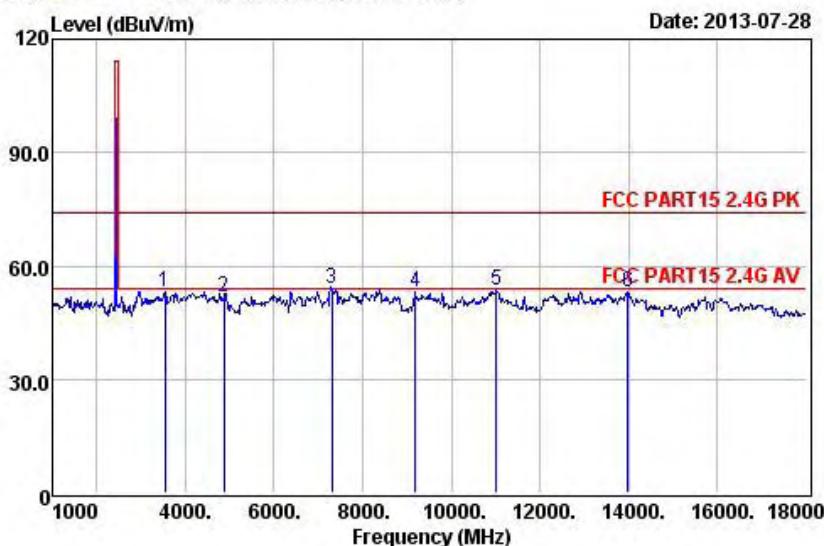


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Data: 126 File: D:\966 data\G\gts.EM6 (149)

Date: 2013-07-28

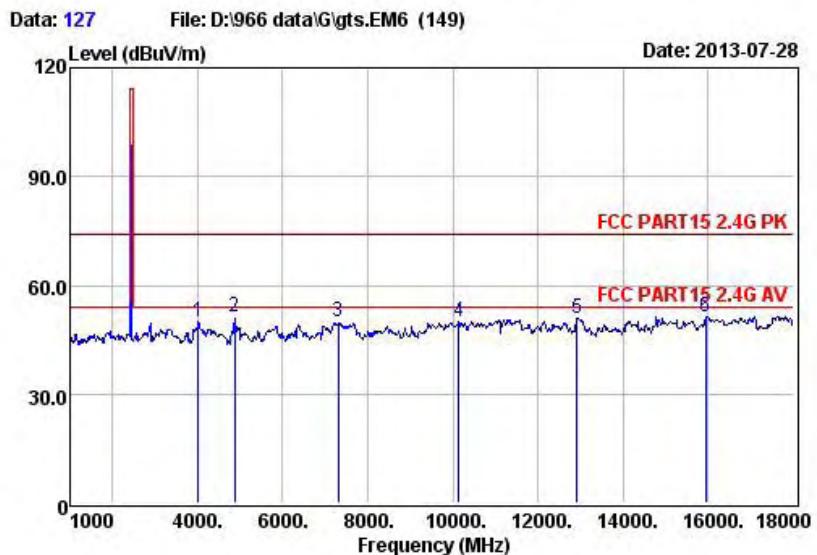


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 VERTICAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7°C Humi:55% Press:101.28kPa  
Test Mode: 802.11b 2437MHz

Freq	Preamp Factor	Read Level	Cable Loss	Antenna Factor	Limit		Over Line Limit	Remark
					dB	dB/m		
MHz					dB	dBuV	dBuV/m	dB
1	3533.00	26.77	39.48	9.99	30.57	53.27	74.00	-20.73 Peak
2	4874.00	27.53	34.15	12.14	33.11	51.87	74.00	-22.13 Peak
3	7311.00	27.96	27.91	16.62	37.32	53.89	74.00	-20.11 Peak
4	9177.00	28.47	26.94	16.89	37.61	52.97	74.00	-21.03 Peak
5	11013.00	28.90	25.61	17.17	39.51	53.39	74.00	-20.61 Peak
6	13971.00	29.39	19.72	19.33	43.47	53.13	74.00	-20.87 Peak



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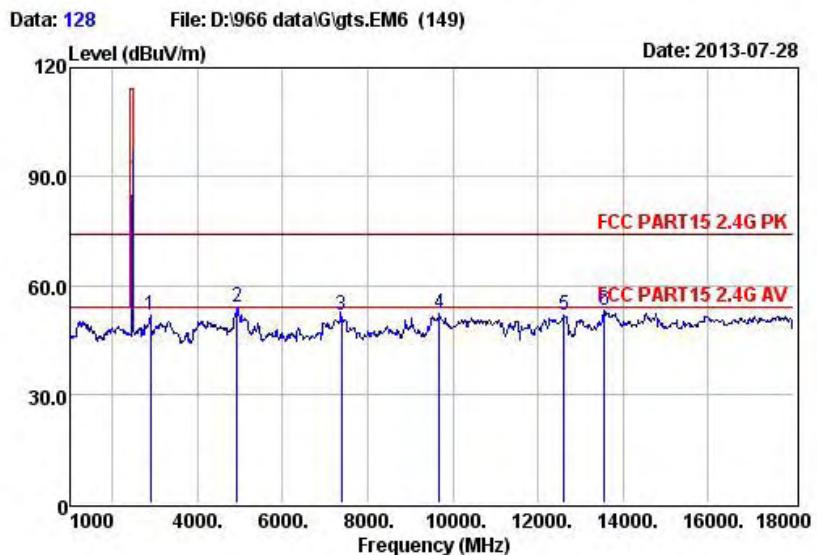


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 HORIZONTAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11b 2437MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark
		Level	dBuV	Loss	dB/m	dBuV/m	dBuV/m	
MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1 4009.00	27.01	34.76	10.50	31.52	49.77	74.00	-24.23	Peak
2 4874.00	27.53	33.46	12.14	33.11	51.18	74.00	-22.82	Peak
3 7311.00	27.96	24.18	16.62	37.32	50.16	74.00	-23.84	Peak
4 10129.00	28.81	23.16	16.99	38.61	49.95	74.00	-24.05	Peak
5 12917.00	29.18	21.56	18.14	40.50	51.02	74.00	-22.98	Peak
6 15943.00	29.69	20.50	20.60	40.10	51.51	74.00	-22.49	Peak



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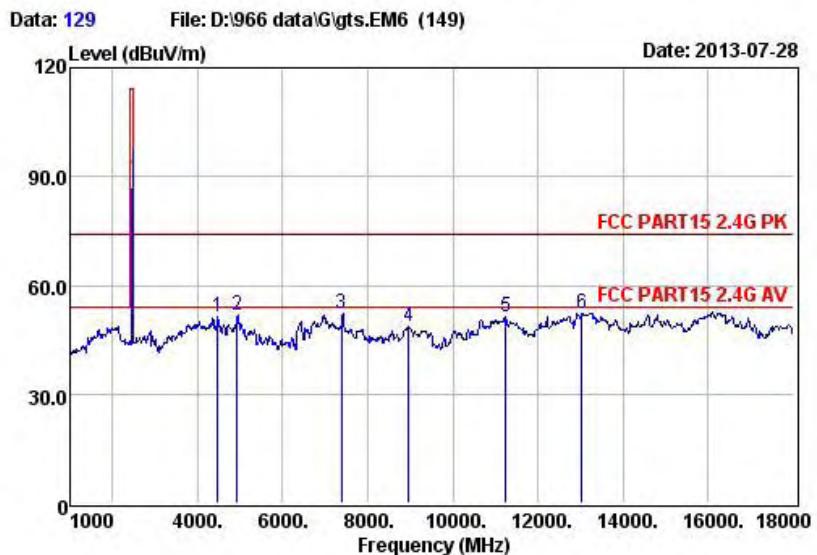


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 VERTICAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11b 2462MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark
		Level	Loss Factor	Level	dBuV/m			
		MHz	dB	dBuV	dB	dBuV/m	dBuV/m	dB
1	2887.00	26.46	39.17	9.38	29.72	51.81	74.00	-22.19 Peak
2	4924.00	27.56	36.03	12.28	33.23	53.98	74.00	-20.02 Peak
3	7386.00	27.98	25.94	16.62	37.36	51.94	74.00	-22.06 Peak
4	9687.00	28.68	25.97	16.94	38.15	52.38	74.00	-21.62 Peak
5	12611.00	29.12	23.09	17.88	39.78	51.63	74.00	-22.37 Peak
6	13563.00	29.31	20.47	18.85	43.07	53.08	74.00	-20.92 Peak



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Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 HORIZONTAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11b 2462MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark
		Level	Loss Factor	Level	dBuV/m			
MHz		dB	dBuV	dB	dBuV/m	dBuV/m	dB	
1	4468.00	27.28	35.29	11.24	32.15	51.40	74.00	-22.60 Peak
2	4924.00	27.56	33.90	12.28	33.23	51.85	74.00	-22.15 Peak
3	7386.00	27.98	26.18	16.62	37.36	52.18	74.00	-21.82 Peak
4	8956.00	28.38	22.97	16.87	37.34	48.80	74.00	-25.20 Peak
5	11234.00	28.92	23.15	17.21	39.69	51.13	74.00	-22.87 Peak
6	13019.00	29.20	22.55	18.24	40.78	52.37	74.00	-21.63 Peak

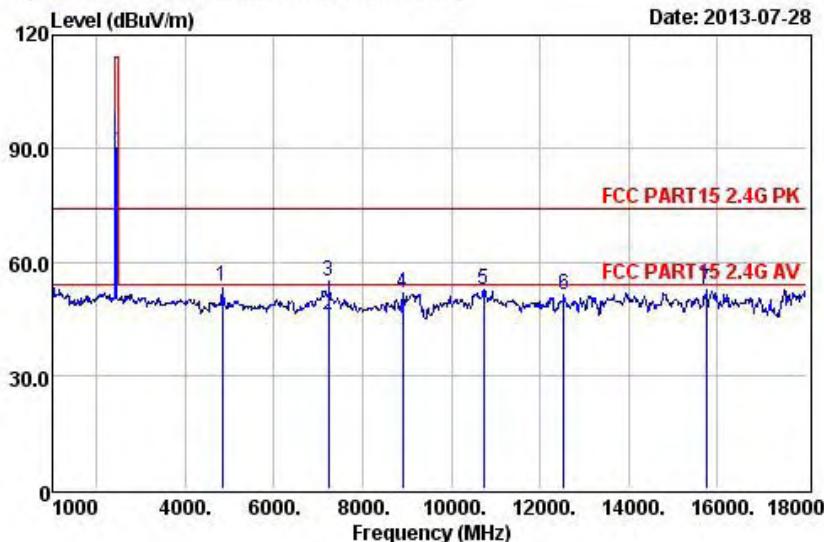


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Data: 130 File: D:\966 data\G\gts.EM6 (149)

Date: 2013-07-28

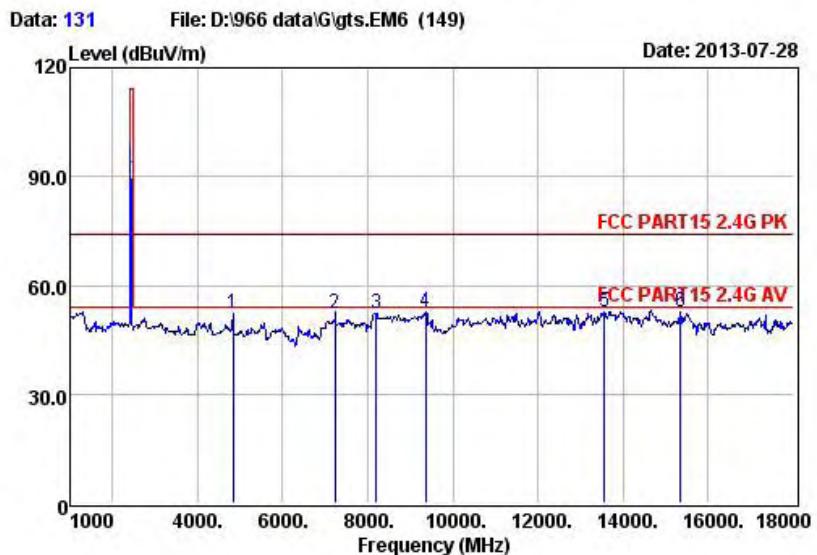


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 VERTICAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11g 2412MHz

Freq	Preamp Factor	Read Level	Cable Loss	Antenna Factor	Limit		Over Line Limit	Remark
					dB	dB/m		
MHz					dB	dBuV	dBuV/m	dB
1	4824.00	27.50	36.12	12.01	32.99	53.62	74.00	-20.38 Peak
2	7236.00	27.95	19.91	16.61	37.30	45.87	54.00	-8.13 Average
3	7236.00	27.95	28.90	16.61	37.30	54.86	74.00	-19.14 Peak
4	8905.00	28.37	25.91	16.86	37.28	51.68	74.00	-22.32 Peak
5	10724.00	28.87	25.00	17.11	39.33	52.57	74.00	-21.43 Peak
6	12526.00	29.11	23.00	17.82	39.58	51.29	74.00	-22.71 Peak
7	15739.00	29.66	22.32	20.47	39.32	52.45	74.00	-21.55 Peak



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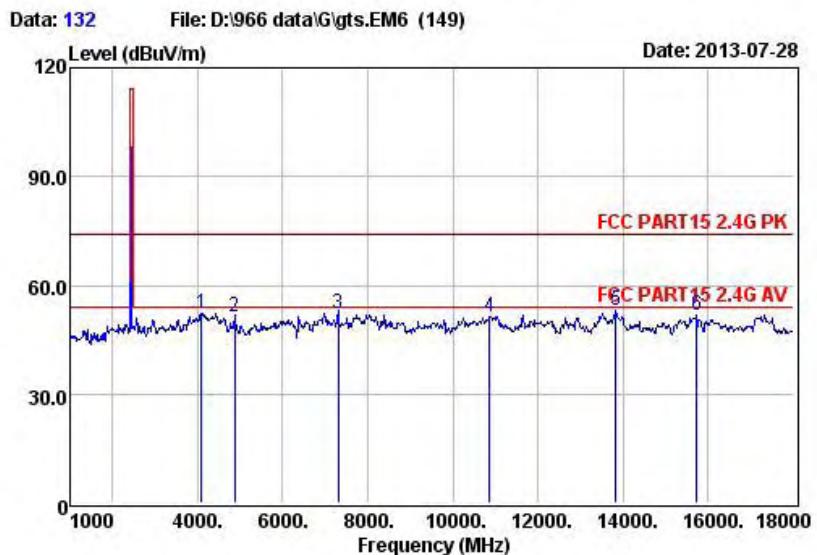


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 HORIZONTAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11g 2412MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark
		Level	Loss Factor	Level	dBuV/m			
MHz		dB	dBuV	dB	dBuV/m	dBuV/m	dB	
1	4824.00	27.50	34.62	12.01	32.99	52.12	74.00	-21.88 Peak
2	7236.00	27.95	26.22	16.61	37.30	52.18	74.00	-21.82 Peak
3	8191.00	28.16	27.11	16.70	36.55	52.20	74.00	-21.80 Peak
4	9364.00	28.54	26.54	16.91	37.83	52.74	74.00	-21.26 Peak
5	13563.00	29.31	20.20	18.85	43.07	52.81	74.00	-21.19 Peak
6	15348.00	29.60	23.72	20.23	38.43	52.78	74.00	-21.22 Peak



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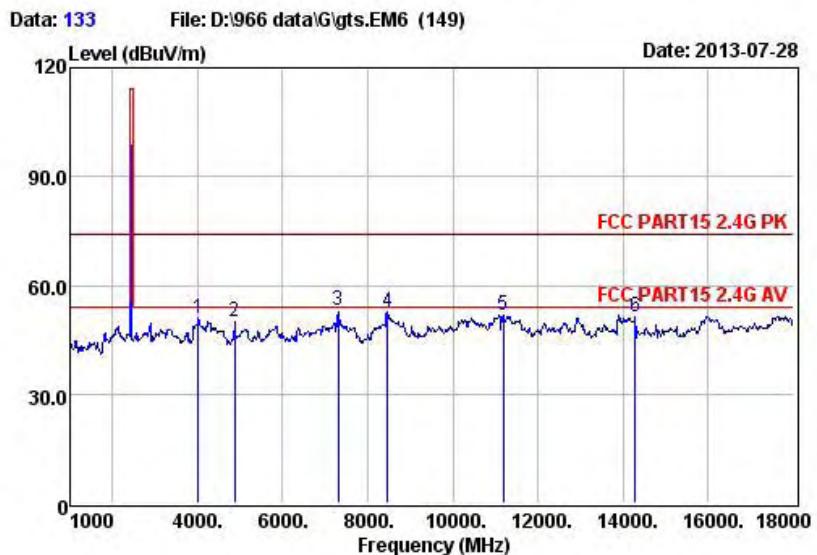


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 VERTICAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11g 2437MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark
		Level	Loss Factor	Level	dBuV/m			
MHz	dB	dBuV	dB	dBuV/m	dBuV/m	dB		
1 4094.00	27.06	37.14	10.61	31.64	52.33	74.00	-21.67	Peak
2 4874.00	27.53	33.51	12.14	33.11	51.23	74.00	-22.77	Peak
3 7311.00	27.96	26.31	16.62	37.32	52.29	74.00	-21.71	Peak
4 10860.00	28.89	23.76	17.14	39.42	51.43	74.00	-22.57	Peak
5 13818.00	29.36	19.77	19.14	43.32	52.87	74.00	-21.13	Peak
6 15722.00	29.66	21.65	20.45	39.25	51.69	74.00	-22.31	Peak



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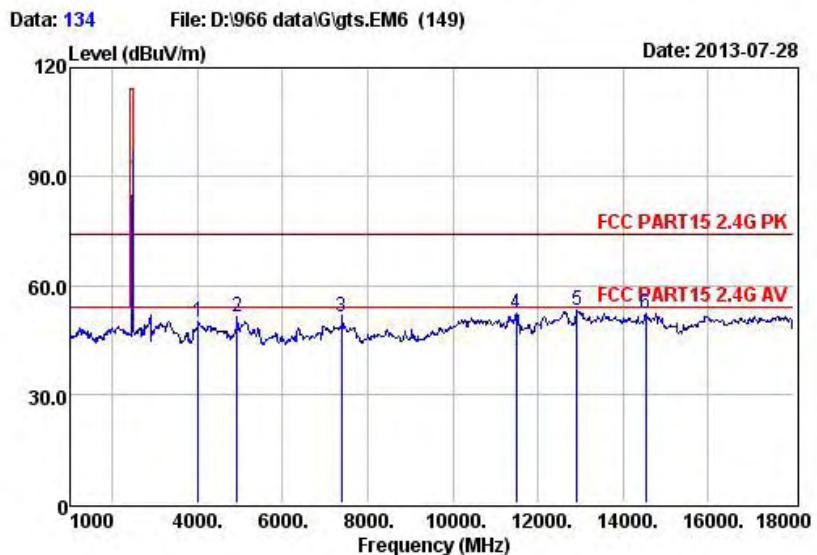


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 HORIZONTAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11g 2437MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark	
		MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB
1	4009.00	27.01	35.76	10.50	31.52	50.77	74.00	-23.23	Peak
2	4874.00	27.53	32.15	12.14	33.11	49.87	74.00	-24.13	Peak
3	7311.00	27.96	27.18	16.62	37.32	53.16	74.00	-20.84	Peak
4	8463.00	28.24	27.34	16.76	36.77	52.63	74.00	-21.37	Peak
5	11183.00	28.92	23.65	17.20	39.65	51.58	74.00	-22.42	Peak
6	14277.00	29.44	19.10	19.54	41.90	51.10	74.00	-22.90	Peak



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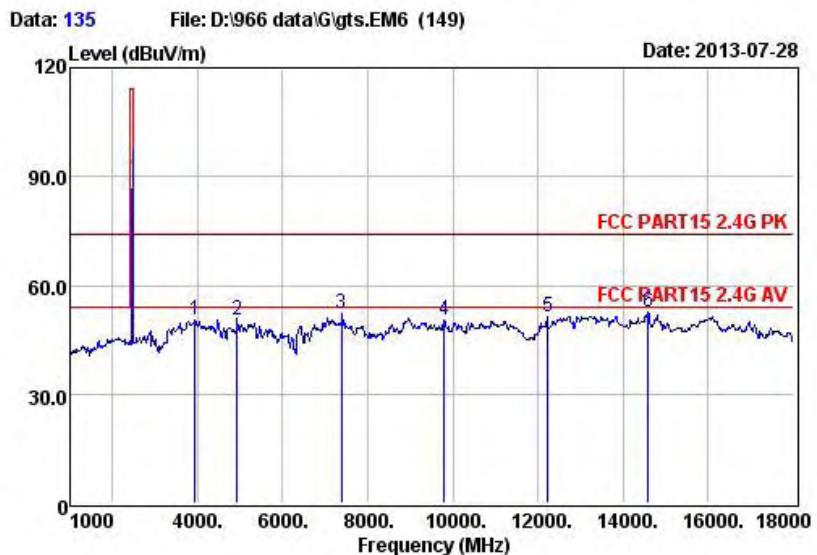


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 VERTICAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11g 2462MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark	
		MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB
1	4009.00	27.01	34.76	10.50	31.52	49.77	74.00	-24.23	Peak
2	4924.00	27.56	33.26	12.28	33.23	51.21	74.00	-22.79	Peak
3	7386.00	27.98	25.37	16.62	37.36	51.37	74.00	-22.63	Peak
4	11489.00	28.95	23.78	17.26	39.89	51.98	74.00	-22.02	Peak
5	12917.00	29.18	23.56	18.14	40.50	53.02	74.00	-20.98	Peak
6	14532.00	29.48	21.53	19.70	40.46	52.21	74.00	-21.79	Peak



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Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 HORIZONTAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11g 2462MHz

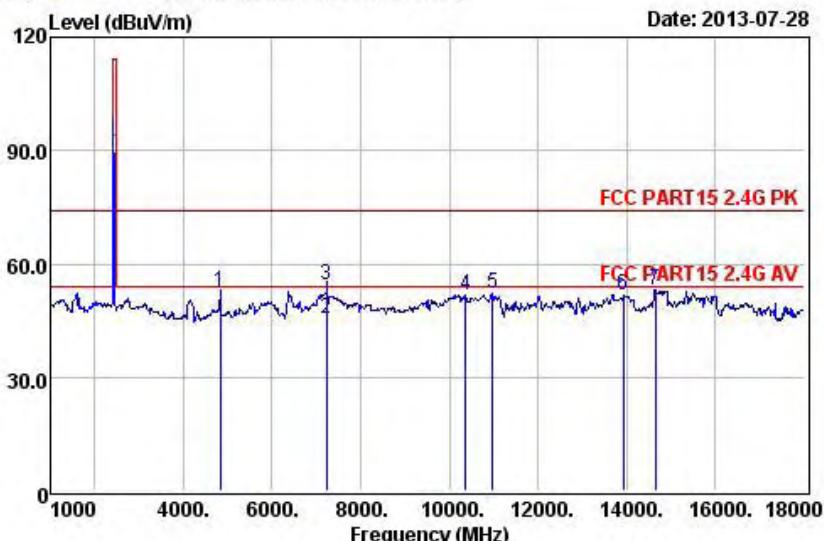
Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark
		Level	Loss Factor	Level	dBuV/m			
MHz		dB	dBuV	dB	dBuV/m	dBuV/m	dB	
1	3941.00	26.97	35.35	10.41	31.40	50.19	74.00	-23.81 Peak
2	4924.00	27.56	32.38	12.28	33.23	50.33	74.00	-23.67 Peak
3	7386.00	27.98	26.08	16.62	37.36	52.08	74.00	-21.92 Peak
4	9789.00	28.72	23.94	16.95	38.23	50.40	74.00	-23.60 Peak
5	12220.00	29.04	23.18	17.56	39.44	51.14	74.00	-22.86 Peak
6	14583.00	29.49	22.10	19.73	40.25	52.59	74.00	-21.41 Peak



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Data: 136 File: D:\966 data\G\gts.EM6 (149)



Site : 966 Chamber

Condition: FCC PART15 2.4G PK 3m ZN30701 HORIZONTAL

EUT : Wireless Portable Storage Device

M/N : iUSBport Mini

Power : DC 5V from PC input AC 120V/60Hz

Test By : Andy

Comment : Temp:24.7°C Humi:55% Press:101.28kPa

Test Mode: 802.11n(HT20) 2412MHz

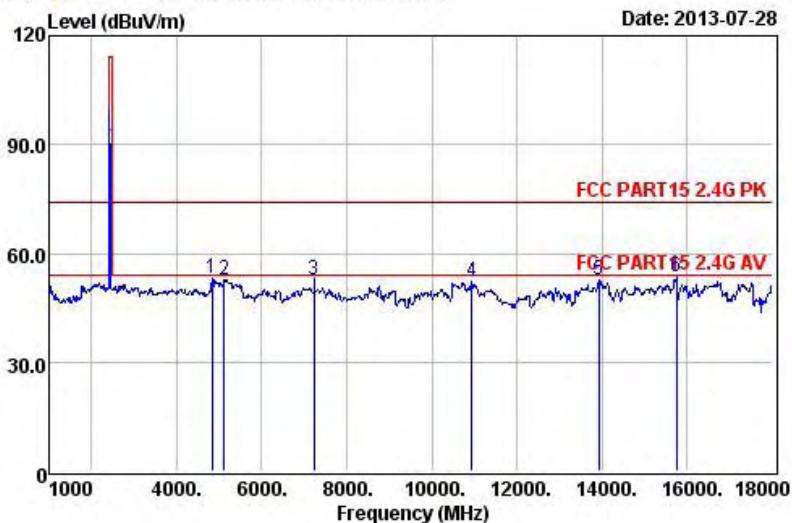
Preamp	Read	Cable	Antenna	Limit	Over			
Freq	Factor	Level	Loss	Factor	Level	Line	Limit	Remark

	MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB
1	4824.00	27.50	35.35	12.01	32.99	52.85	74.00	-21.15 Peak
2	7236.00	27.95	19.63	16.61	37.30	45.59	54.00	-8.41 Average
3	7236.00	27.95	28.52	16.61	37.30	54.48	74.00	-19.52 Peak
4	10367.00	28.84	24.60	17.04	38.99	51.79	74.00	-22.21 Peak
5	10979.00	28.90	24.26	17.16	39.49	52.01	74.00	-21.99 Peak
6	13920.00	29.38	18.48	19.27	43.42	51.79	74.00	-22.21 Peak
7	14651.00	29.50	22.83	19.78	39.97	53.08	74.00	-20.92 Peak



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Data: 137 File: D:\966 data\G\gts.EM6 (149)

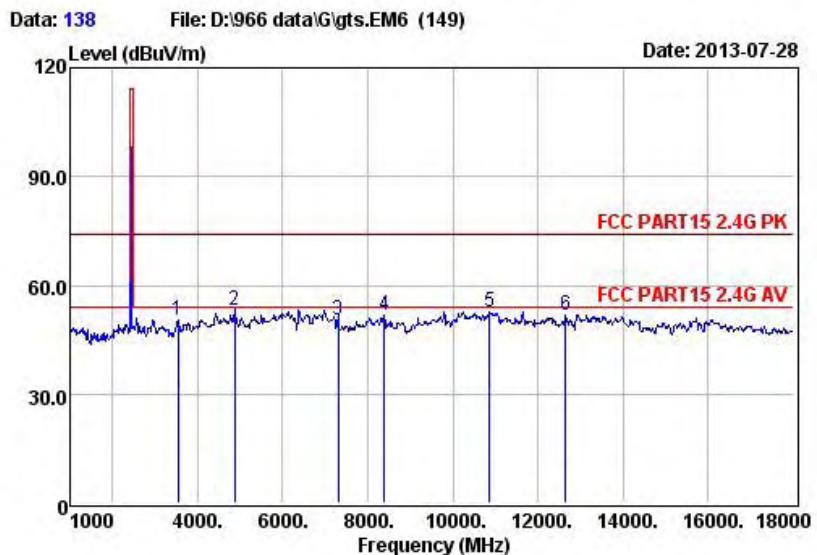


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 VERTICAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11n(HT20) 2412MHz

Freq	Preamp Factor	Read		Cable		Antenna Loss Factor	Limit Level	Line Limit	Over dB	Remark
		Level	dBuV	dB	dB/m					
1	4824.00	27.50	35.63	12.01	32.99	53.13	74.00	-20.87	Peak	
2	5114.00	27.61	34.06	12.72	33.56	52.73	74.00	-21.27	Peak	
3	7236.00	27.95	26.52	16.61	37.30	52.48	74.00	-21.52	Peak	
4	10928.00	28.89	24.44	17.15	39.46	52.16	74.00	-21.84	Peak	
5	13920.00	29.38	19.23	19.27	43.42	52.54	74.00	-21.46	Peak	
6	15739.00	29.66	23.32	20.47	39.32	53.45	74.00	-20.55	Peak	



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Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 VERTICAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11n(HT20) 2437MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark
		Level	Loss Factor	Level	dBuV/m			
MHz		dB	dBuV	dB	dBuV/m	dBuV/m	dB	
1	3533.00	26.77	36.48	9.99	30.57	50.27	74.00	-23.73 Peak
2	4874.00	27.53	35.39	12.14	33.11	53.11	74.00	-20.89 Peak
3	7311.00	27.96	24.26	16.62	37.32	50.24	74.00	-23.76 Peak
4	8395.00	28.22	26.54	16.75	36.72	51.79	74.00	-22.21 Peak
5	10860.00	28.89	24.76	17.14	39.42	52.43	74.00	-21.57 Peak
6	12645.00	29.13	23.13	17.91	39.86	51.77	74.00	-22.23 Peak

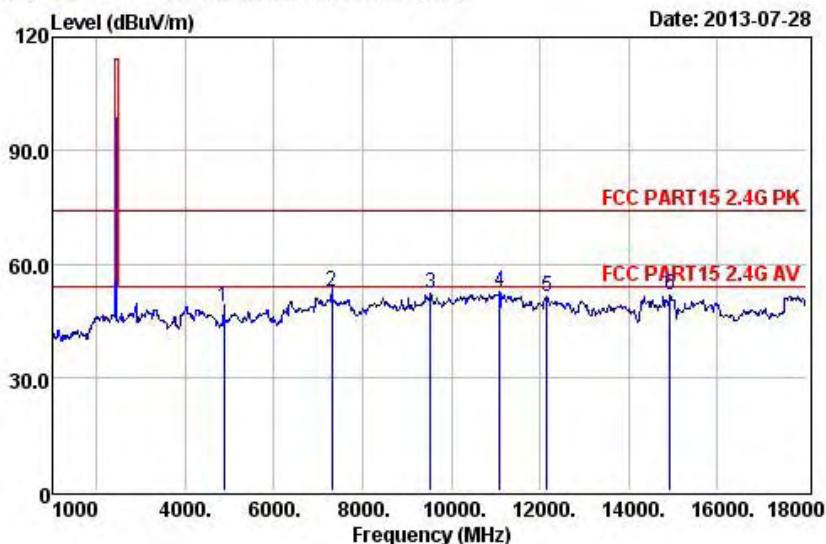


Keyway  
Testing

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Data: 139 File: D:\966 data\G\gts.EM6 (149)

Date: 2013-07-28



Site : 966 Chamber

Condition: FCC PART15 2.4G PK 3m ZN30701 HORIZONTAL

EUT : Wireless Portable Storage Device

M/N : iUSBport Mini

Power : DC 5V from PC input AC 120V/60Hz

Test By : Andy

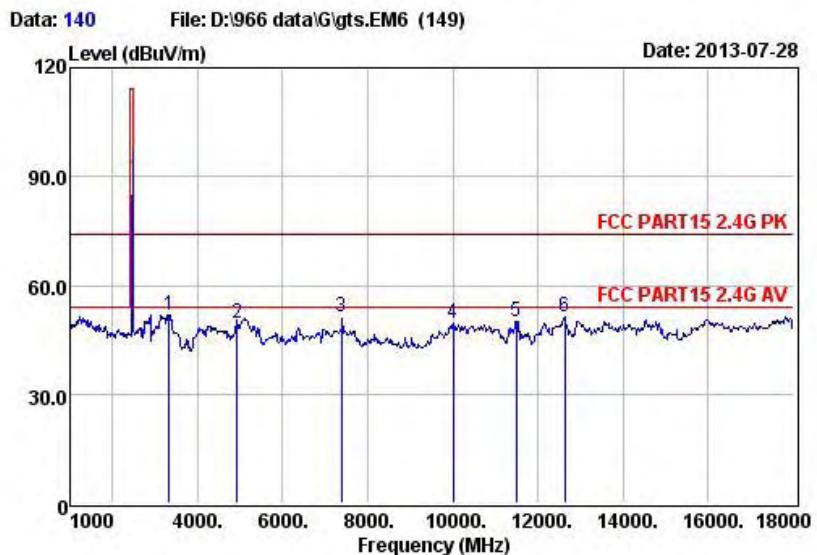
Comment : Temp:24.7°C Humi:55% Press:101.28kPa

Test Mode: 802.11n(HT20) 2437MHz

Freq	Preamp Factor	Read		Cable		Antenna Loss Factor	Limit Level	Line Level	Over Limit	Remark
		dB	dBuV	dB	dB/m					
1	4874.00	27.53	30.87	12.14	33.11	48.59	74.00	-25.41	Peak	
2	7311.00	27.96	26.61	16.62	37.32	52.59	74.00	-21.41	Peak	
3	9534.00	28.61	25.65	16.92	38.03	51.99	74.00	-22.01	Peak	
4	11081.00	28.91	24.70	17.18	39.57	52.54	74.00	-21.46	Peak	
5	12152.00	29.03	23.57	17.50	39.43	51.47	74.00	-22.53	Peak	
6	14923.00	29.54	22.52	19.95	38.85	51.78	74.00	-22.22	Peak	



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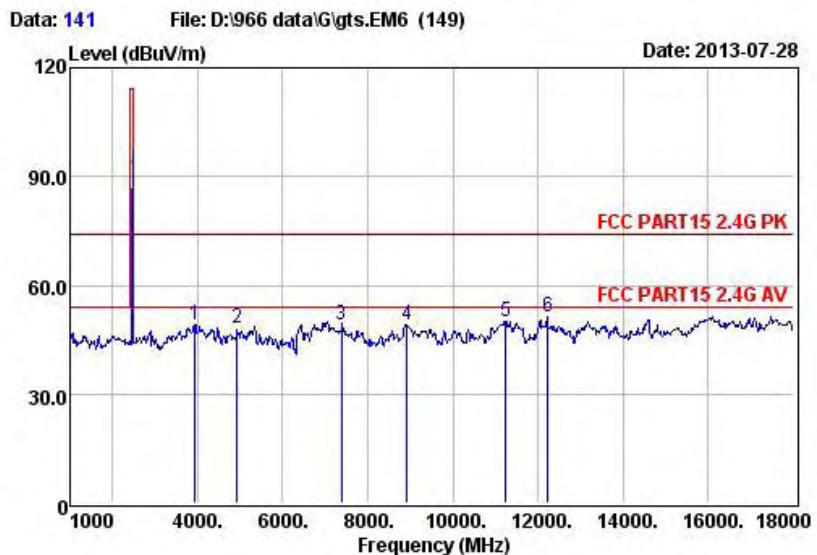


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 VERTICAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11n(HT20) 2462MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark
		Level	Loss Factor	Level	dBuV/m			
MHz		dB	dBuV	dB	dBuV/m	dBuV/m	dB	
1	3329.00	26.66	38.32	9.96	30.33	51.95	74.00	-22.05 Peak
2	4924.00	27.56	31.74	12.28	33.23	49.69	74.00	-24.31 Peak
3	7386.00	27.98	25.11	16.62	37.36	51.11	74.00	-22.89 Peak
4	10010.00	28.80	22.90	16.97	38.43	49.50	74.00	-24.50 Peak
5	11489.00	28.95	21.78	17.26	39.89	49.98	74.00	-24.02 Peak
6	12628.00	29.13	22.92	17.90	39.82	51.51	74.00	-22.49 Peak



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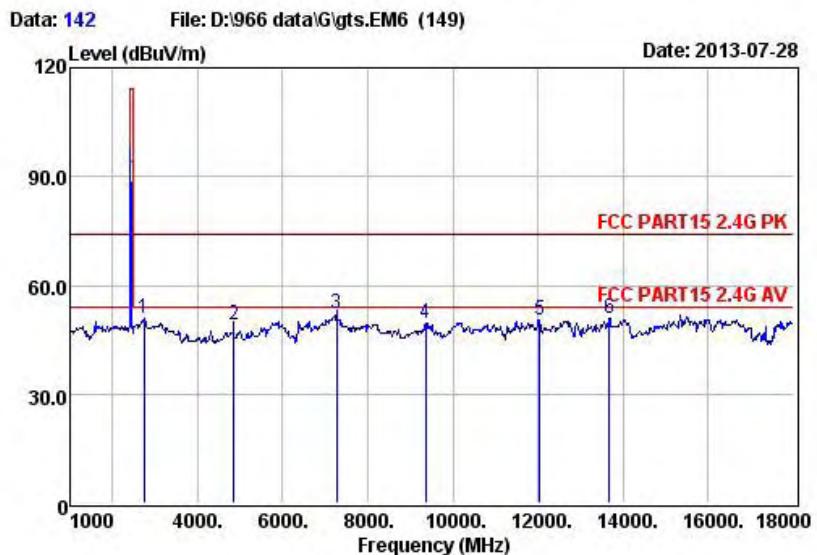


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 HORIZONTAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11n(HT20) 2462MHz

Freq	Preamp Factor	Read Level		Cable Loss Factor		Antenna Level		Limit Line	Over Limit	Remark
		MHz	dB	dBuV	dB	dB/m	dBuV/m			
1	3941.00	26.97	34.35	10.41	31.40	49.19	74.00	-24.81	Peak	
2	4924.00	27.56	30.33	12.28	33.23	48.28	74.00	-25.72	Peak	
3	7386.00	27.98	23.18	16.62	37.36	49.18	74.00	-24.82	Peak	
4	8922.00	28.37	23.34	16.86	37.30	49.13	74.00	-24.87	Peak	
5	11234.00	28.92	22.15	17.21	39.69	50.13	74.00	-23.87	Peak	
6	12220.00	29.04	23.18	17.56	39.44	51.14	74.00	-22.86	Peak	



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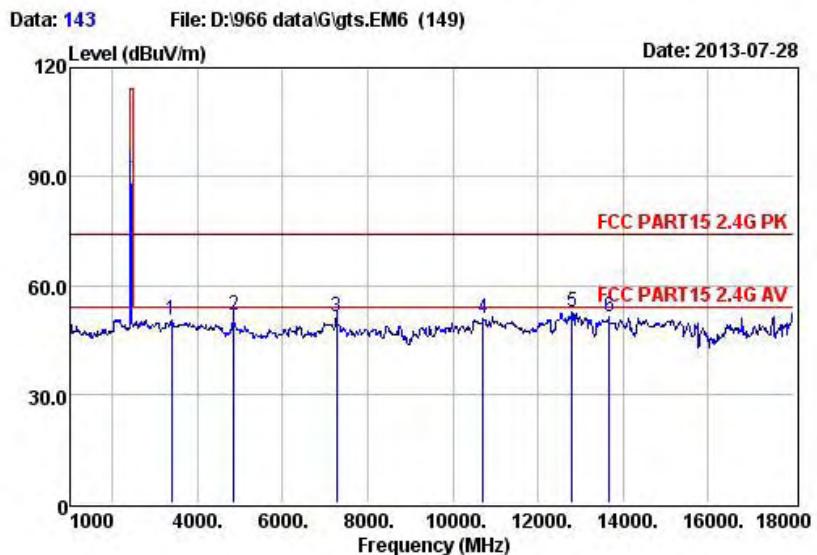


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 HORIZONTAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11n(HT40) 2422MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark
		Level	Loss Factor	Level	dB/m	dBuV/m	dBuV/m	
MHz	dB	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1 2734.00	26.42	39.38	8.66	29.36	50.98	74.00	-23.02	Peak
2 4844.00	27.51	31.59	12.05	33.03	49.16	74.00	-24.84	Peak
3 7266.00	27.95	26.15	16.61	37.31	52.12	74.00	-21.88	Peak
4 9364.00	28.54	23.54	16.91	37.83	49.74	74.00	-24.26	Peak
5 12033.00	29.01	22.71	17.40	39.41	50.51	74.00	-23.49	Peak
6 13665.00	29.33	17.90	18.98	43.17	50.72	74.00	-23.28	Peak



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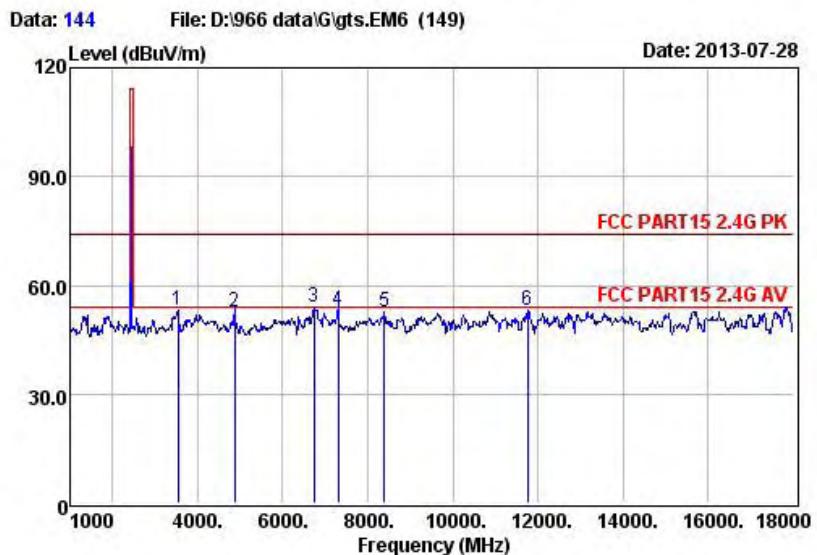


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 VERTICAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11n(HT40) 2422MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark
		Level	Loss Factor	Level	dBuV/m			
MHz		dB	dBuV	dB	dBuV/m	dBuV/m	dB	
1	3380.00	26.69	36.55	9.97	30.38	50.21	74.00	-23.79 Peak
2	4844.00	27.51	34.14	12.05	33.03	51.71	74.00	-22.29 Peak
3	7266.00	27.95	25.16	16.61	37.31	51.13	74.00	-22.87 Peak
4	10707.00	28.87	23.26	17.11	39.32	50.82	74.00	-23.18 Peak
5	12798.00	29.16	23.49	18.05	40.22	52.60	74.00	-21.40 Peak
6	13665.00	29.33	18.36	18.98	43.17	51.18	74.00	-22.82 Peak



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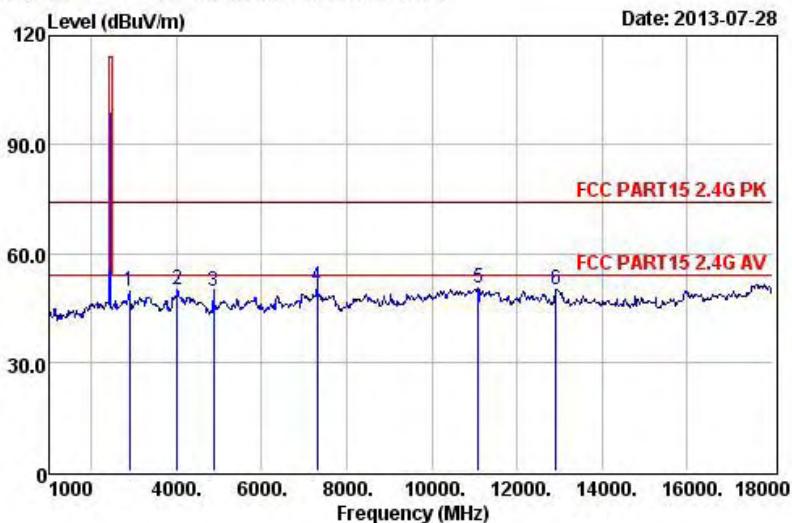
Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 VERTICAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11n(HT40) 2437MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark
		Level	Loss Factor	Level	dBuV/m			
MHz		dB	dBuV	dB	dBuV/m	dBuV/m	dB	
1	3533.00	26.77	39.48	9.99	30.57	53.27	74.00	-20.73 Peak
2	4874.00	27.53	34.74	12.14	33.11	52.46	74.00	-21.54 Peak
3	6729.00	27.85	28.60	16.60	36.48	53.83	74.00	-20.17 Peak
4	7311.00	27.96	26.91	16.62	37.32	52.89	74.00	-21.11 Peak
5	8395.00	28.22	27.54	16.75	36.72	52.79	74.00	-21.21 Peak
6	11744.00	28.97	25.18	17.31	39.66	53.18	74.00	-20.82 Peak



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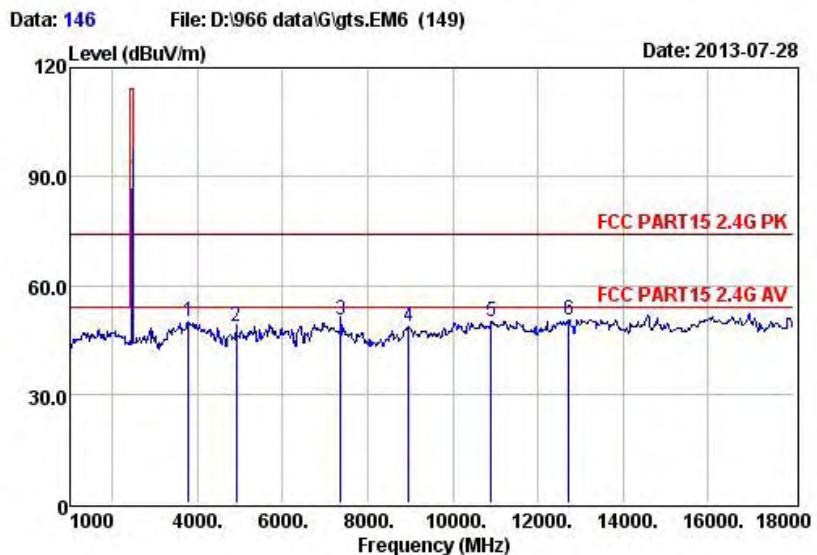


Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 HORIZONTAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11n(HT40) 2437MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark
		Level	Loss Factor	Level	dBuV/m			
MHz		dB	dBuV	dB	dBuV/m	dBuV/m	dB	
1	2887.00	26.46	37.09	9.38	29.72	49.73	74.00	-24.27 Peak
2	4009.00	27.01	34.76	10.50	31.52	49.77	74.00	-24.23 Peak
3	4874.00	27.53	31.59	12.14	33.11	49.31	74.00	-24.69 Peak
4	7311.00	27.96	25.08	16.62	37.32	51.06	74.00	-22.94 Peak
5	11081.00	28.91	22.70	17.18	39.57	50.54	74.00	-23.46 Peak
6	12917.00	29.18	20.56	18.14	40.50	50.02	74.00	-23.98 Peak



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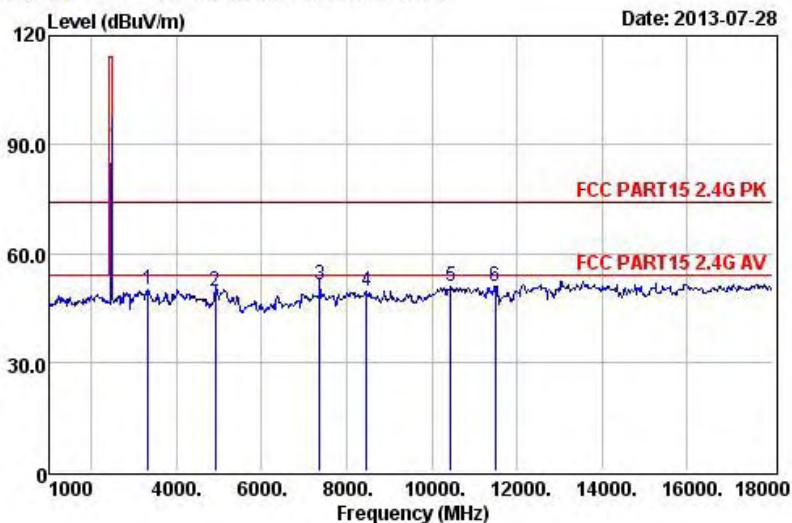
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Condition: FCC PART15 2.4G PK 3m ZN30701 HORIZONTAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11n(HT40) 2452MHz

Freq	Preamp Factor	Read			Cable Loss	Antenna Factor	Limit Level	Line Limit	Over Limit	Remark
		MHz	dB	dBuV						
1	3788.00	26.90	35.53	10.24	31.09	49.96	74.00	-24.04	Peak	
2	4904.00	27.55	30.70	12.23	33.19	48.57	74.00	-25.43	Peak	
3	7356.00	27.97	24.30	16.62	37.34	50.29	74.00	-23.71	Peak	
4	8956.00	28.38	22.97	16.87	37.34	48.80	74.00	-25.20	Peak	
5	10894.00	28.89	22.35	17.15	39.44	50.05	74.00	-23.95	Peak	
6	12730.00	29.15	21.60	17.99	40.06	50.50	74.00	-23.50	Peak	



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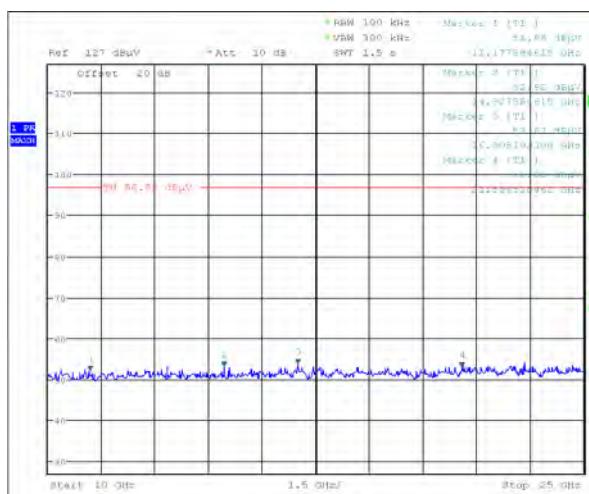
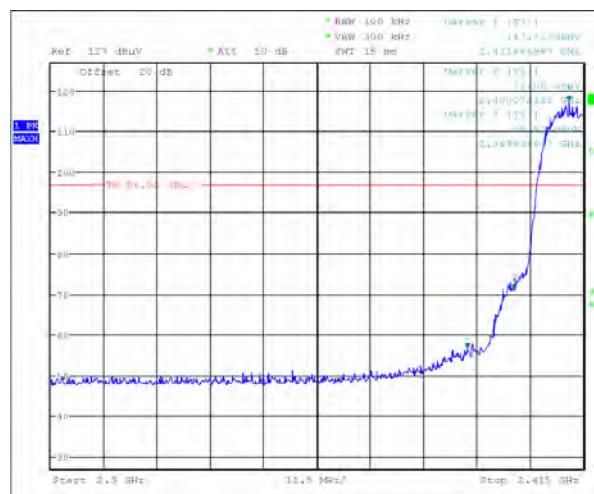
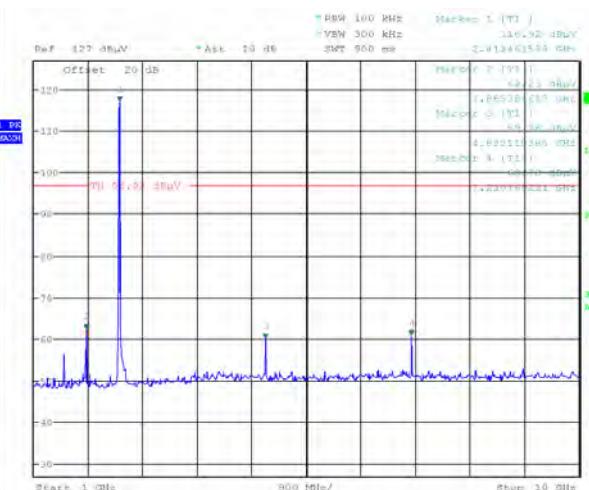
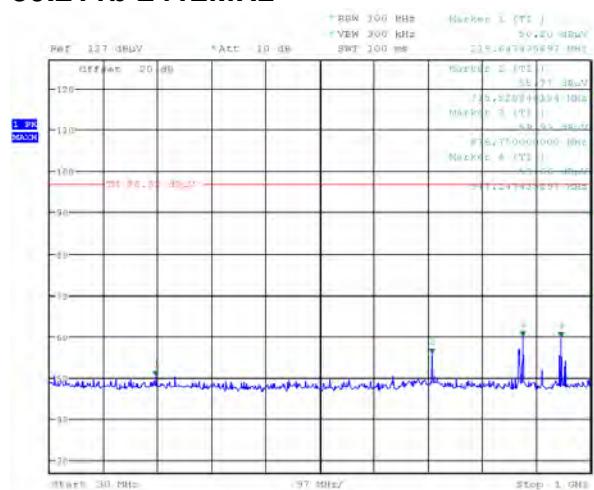
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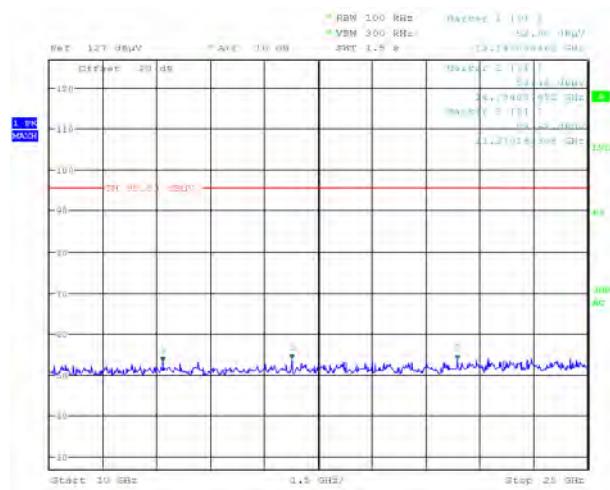
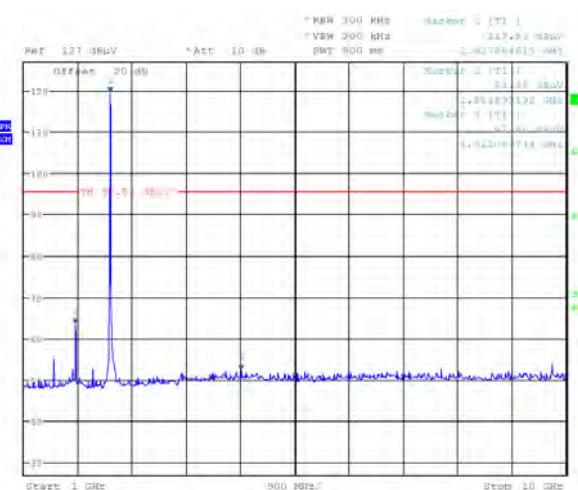
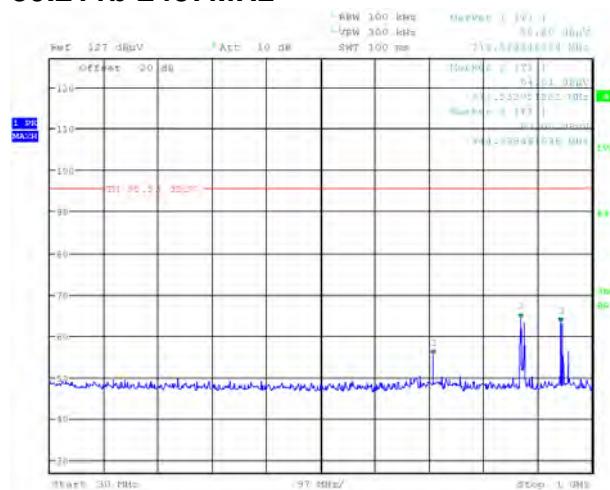
Site : 966 Chamber  
Condition: FCC PART15 2.4G PK 3m ZN30701 VERTICAL  
EUT : Wireless Portable Storage Device  
M/N : iUSBport Mini  
Power : DC 5V from PC input AC 120V/60Hz  
Test By : Andy  
Comment : Temp:24.7'C Humi:55% Press:101.28kPa  
Test Mode: 802.11n(HT40) 2452MHz

Freq	Preamp Factor	Read		Cable Antenna		Limit Line	Over Limit	Remark
		Level	Loss Factor	Level	dBuV/m			
MHz		dB	dBuV	dB	dBuV/m	dBuV/m	dB	
1	3329.00	26.66	36.32	9.96	30.33	49.95	74.00	-24.05 Peak
2	4904.00	27.55	31.82	12.23	33.19	49.69	74.00	-24.31 Peak
3	7356.00	27.97	25.20	16.62	37.34	51.19	74.00	-22.81 Peak
4	8463.00	28.24	24.34	16.76	36.77	49.63	74.00	-24.37 Peak
5	10435.00	28.84	23.50	17.05	39.09	50.80	74.00	-23.20 Peak
6	11489.00	28.95	22.78	17.26	39.89	50.98	74.00	-23.02 Peak

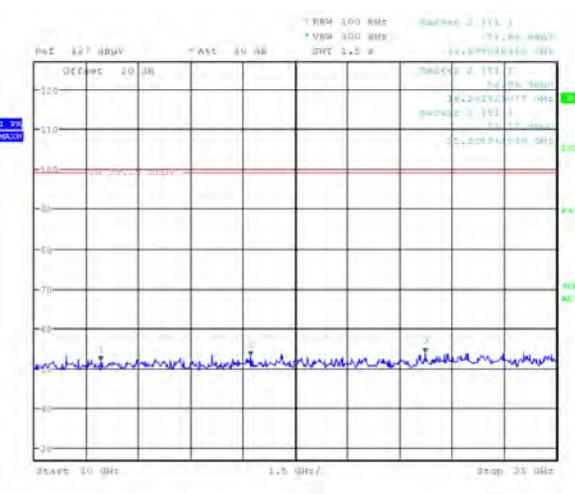
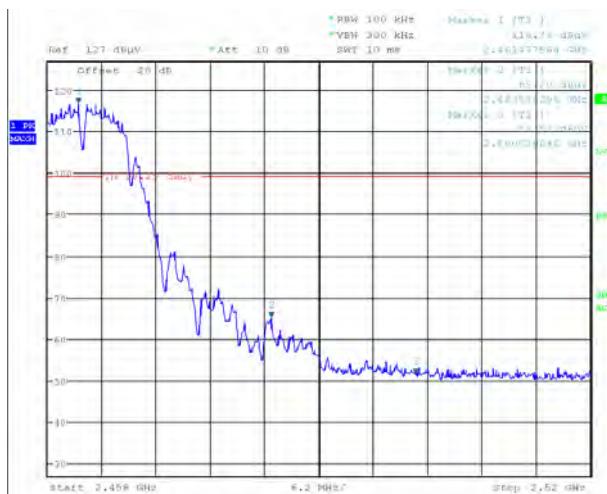
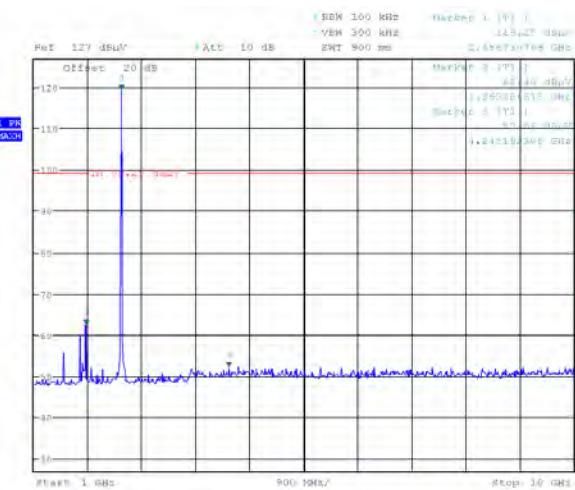
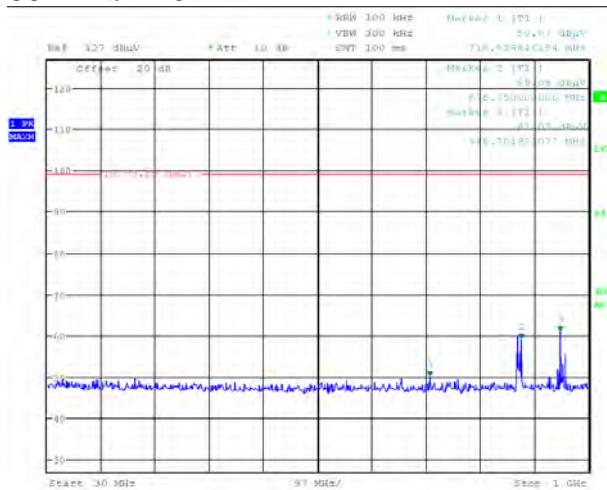
**For conducted test**  
**80.211b 2412MHz**



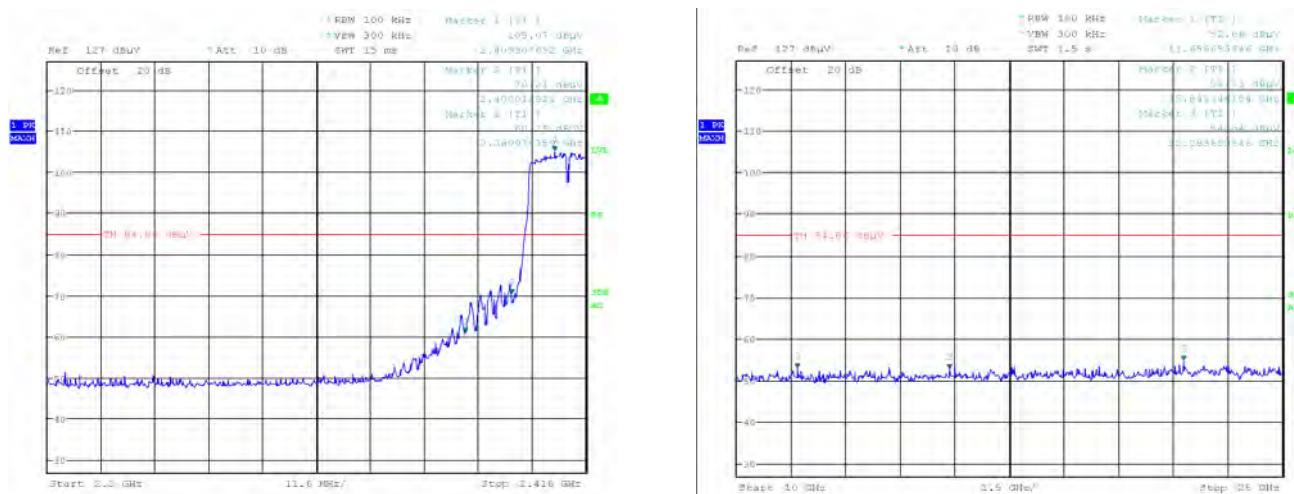
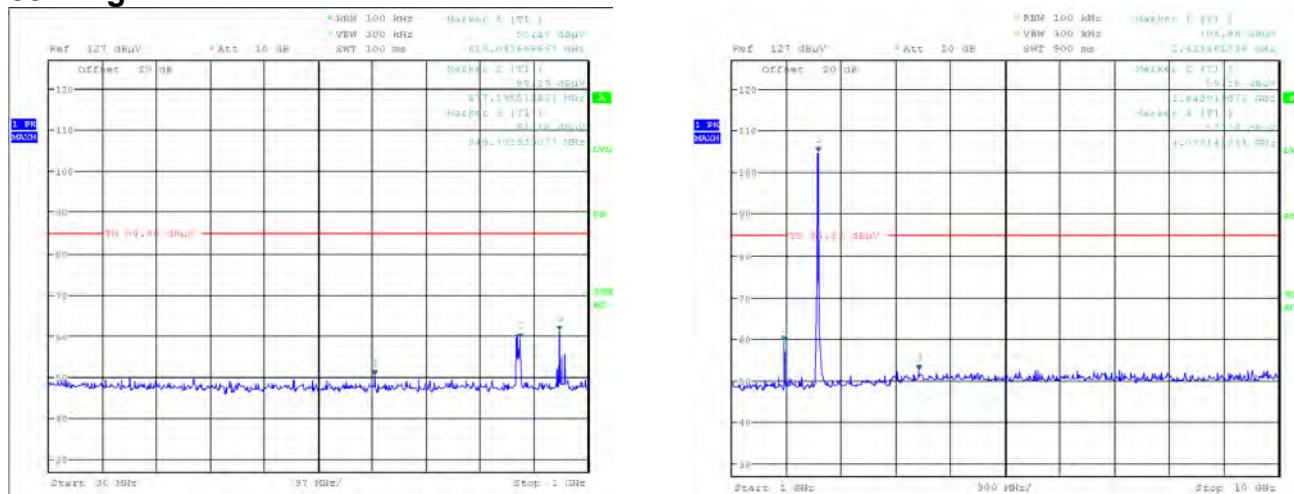
## 80.211b 2437MHz



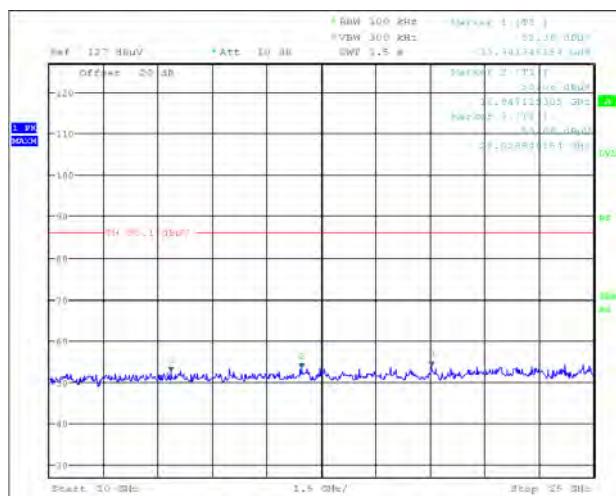
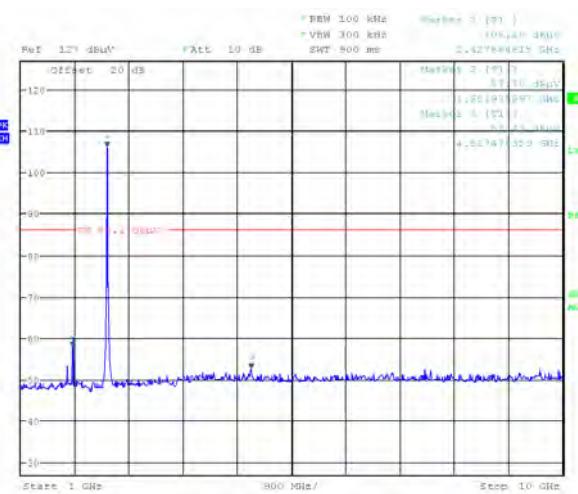
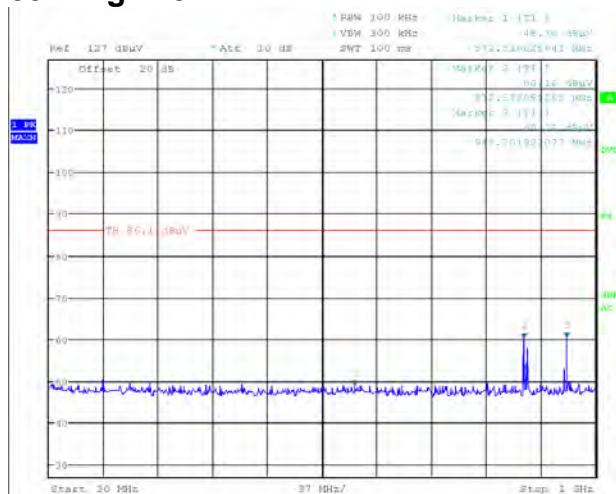
**80.211b 2462MHz**



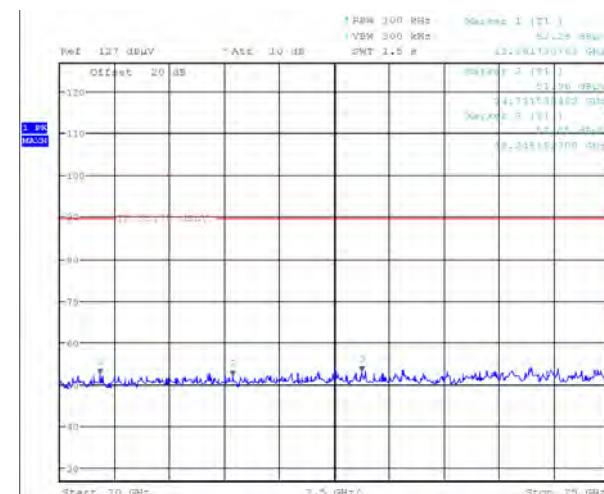
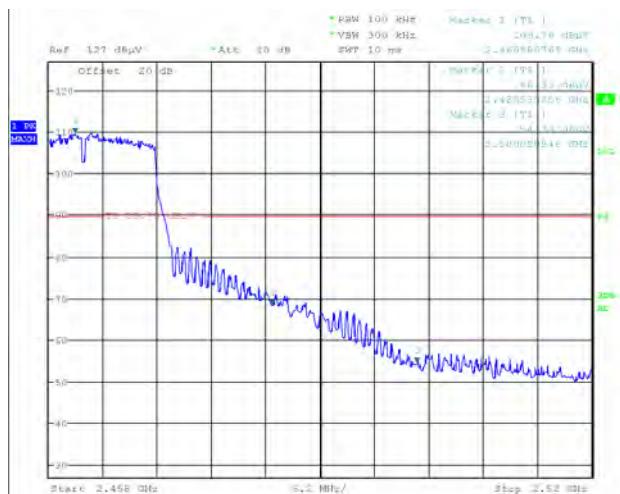
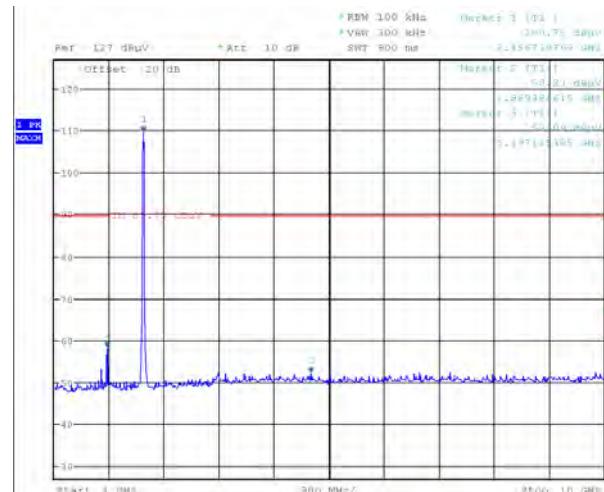
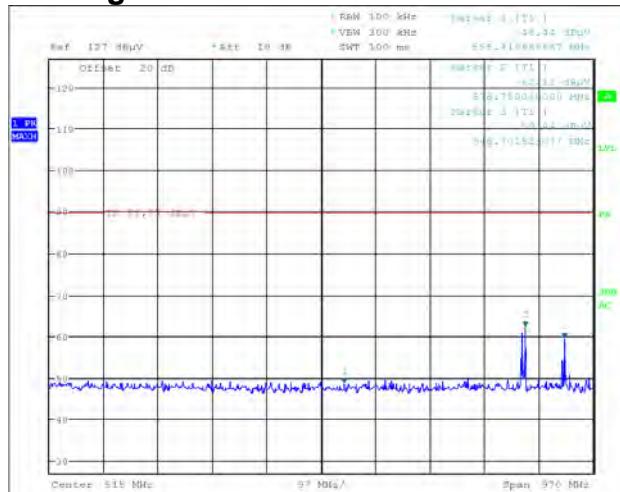
## 80.211g 2412MHz



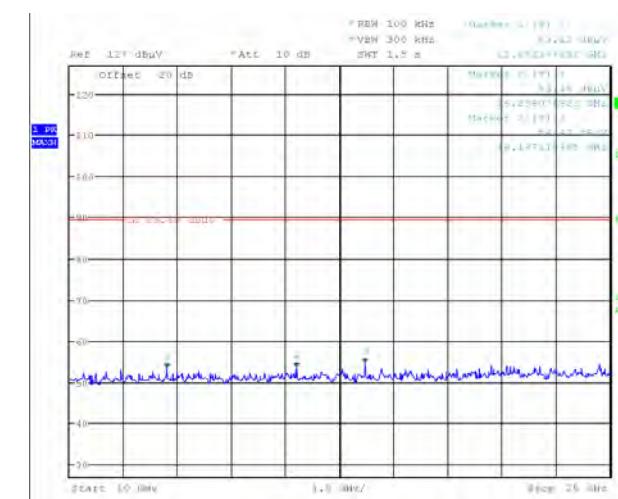
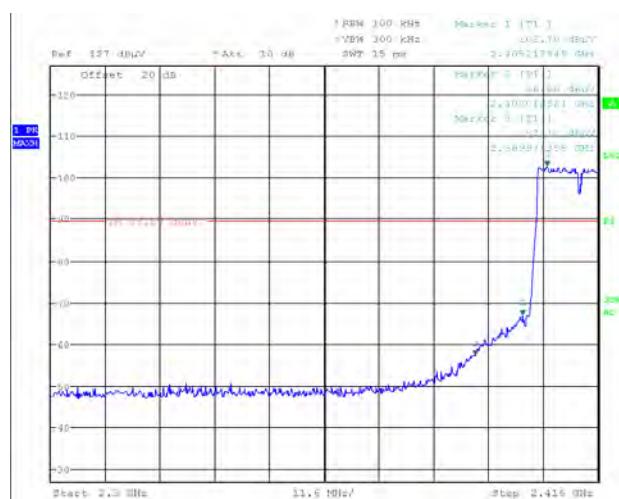
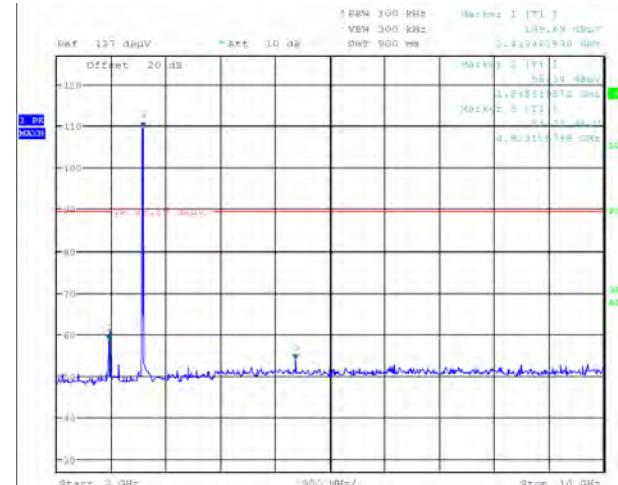
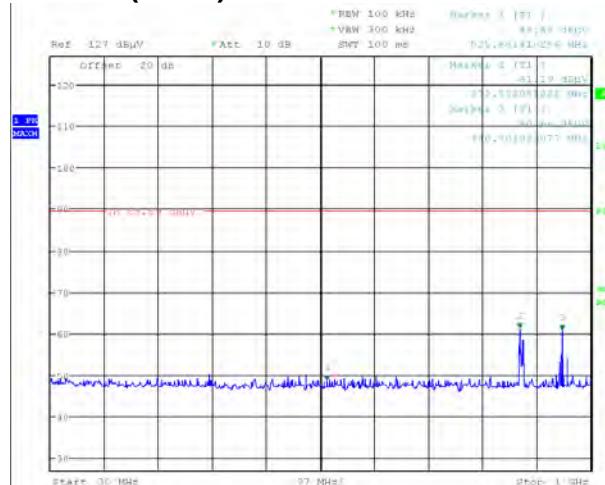
## 80.211g 2437MHz



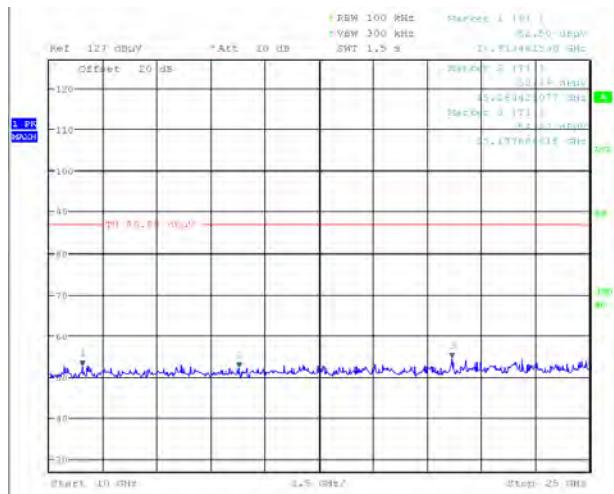
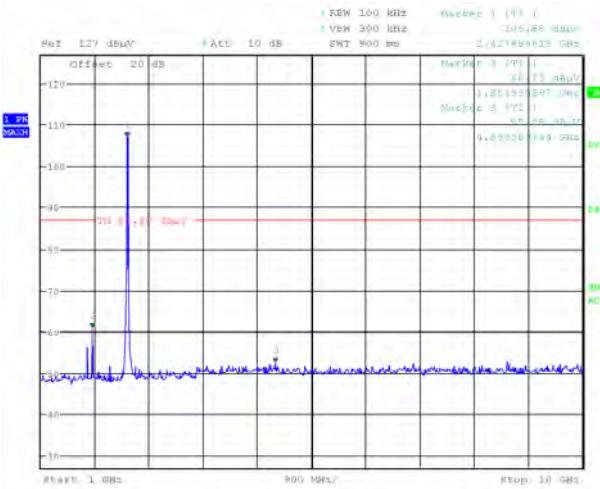
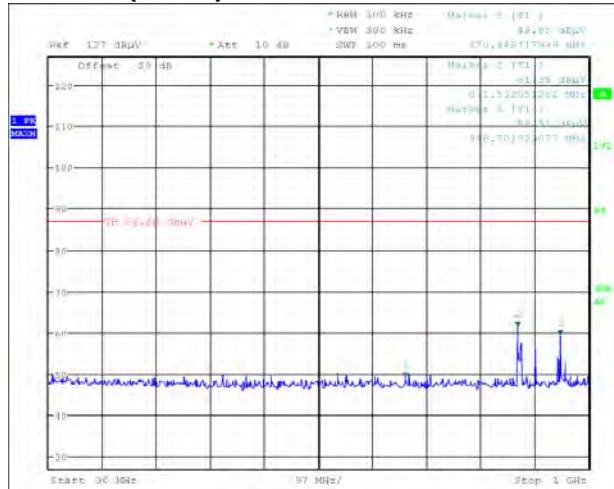
## 80.211g 2462MHz



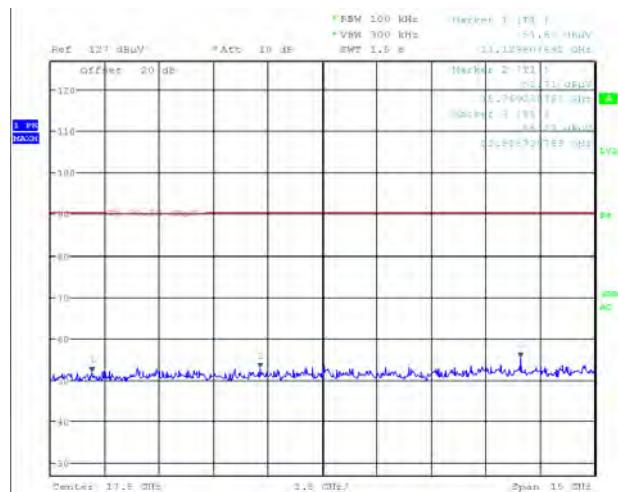
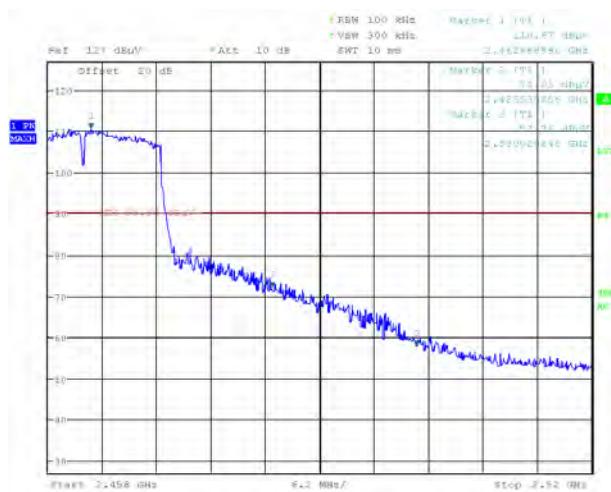
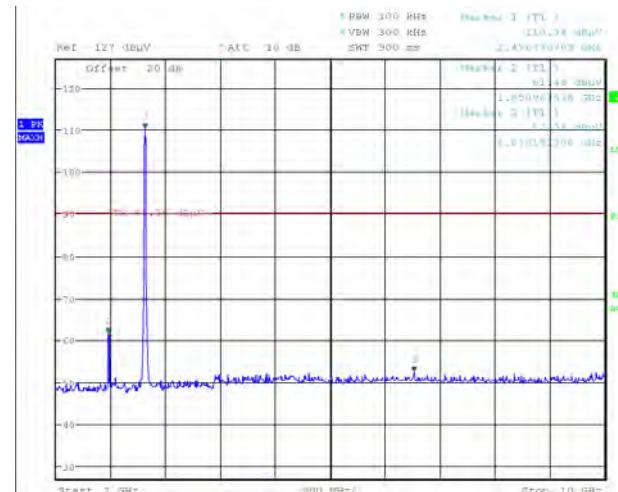
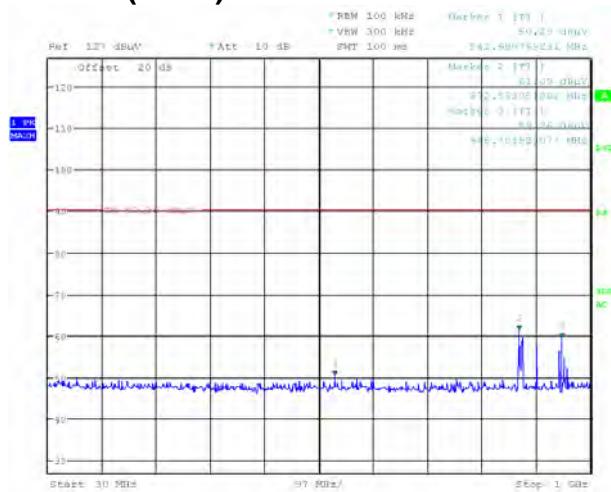
## 80.211n(HT20) 2412MHz



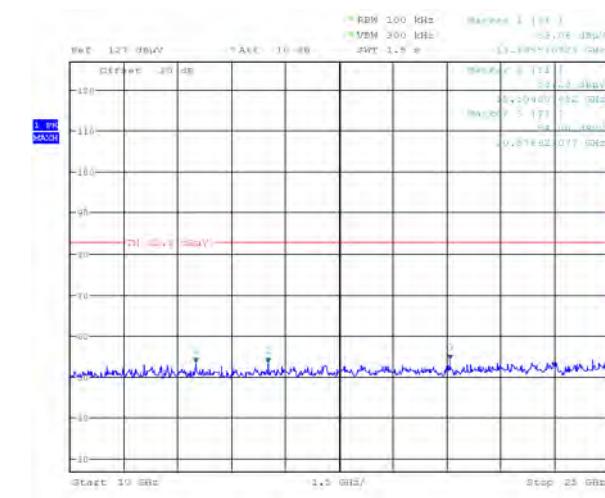
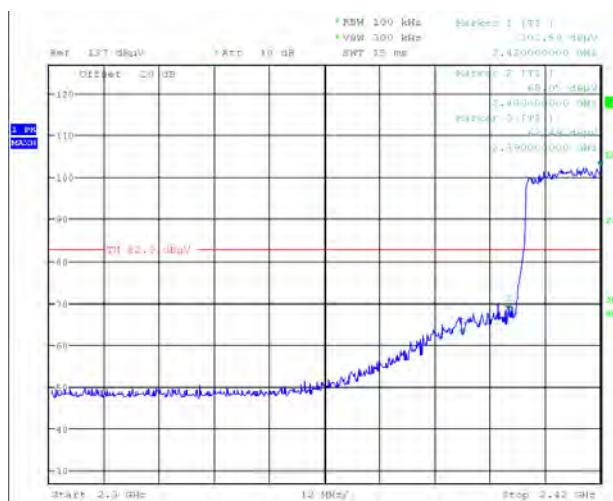
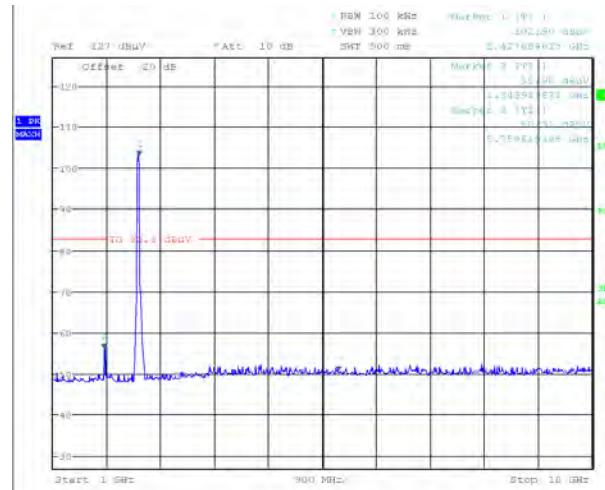
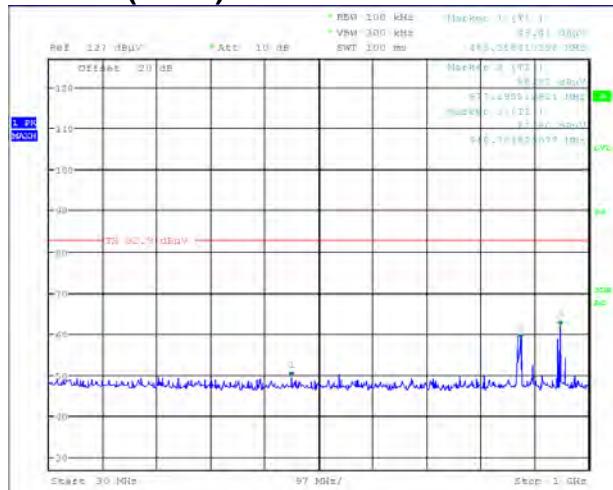
80.211n(HT20) 2437MHz



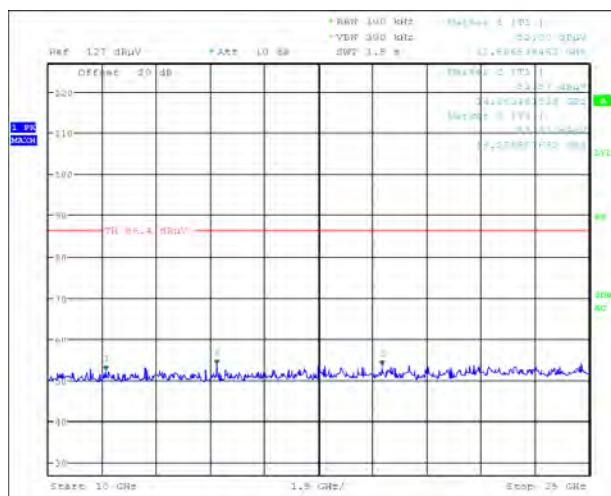
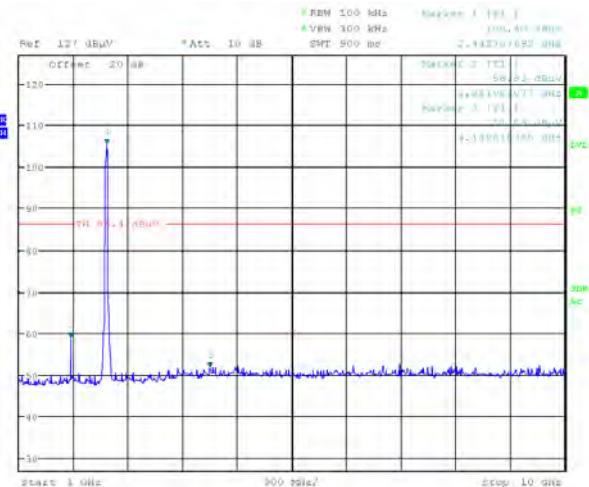
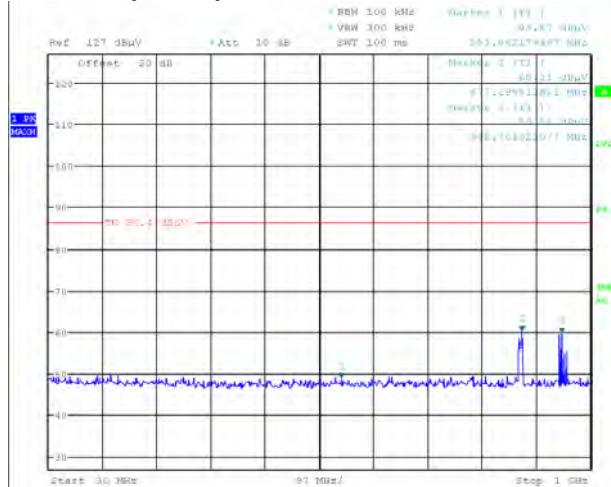
## 80.211n(HT20) 2462MHz



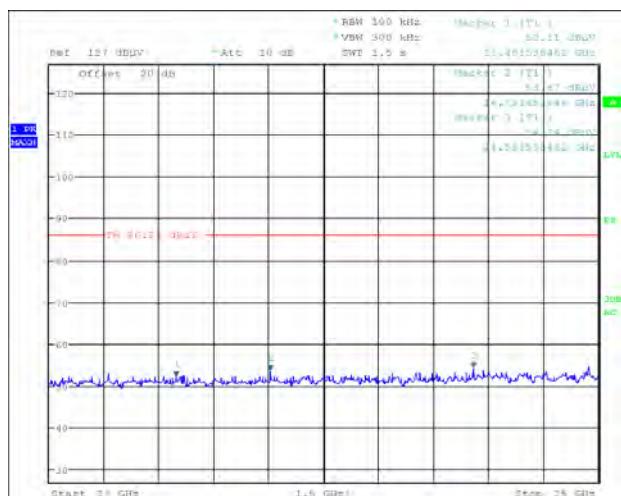
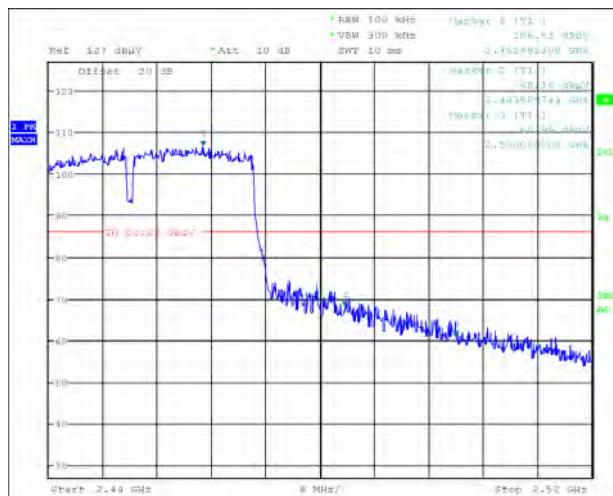
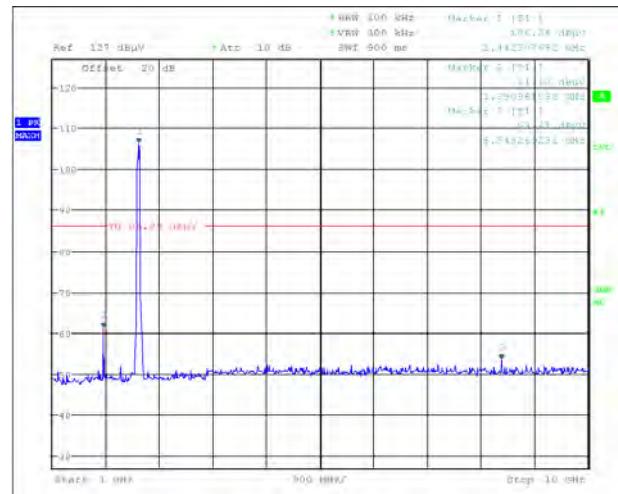
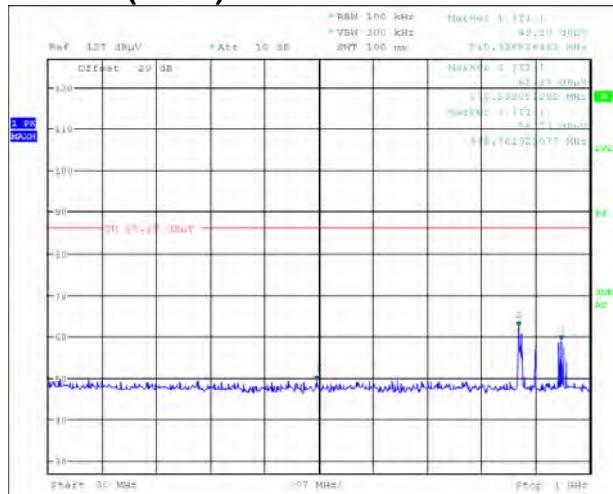
80.211n(HT40) 2422MHz



80.211n(HT40) 2437MHz



80.211n(HT40) 2452MHz



## 5.6 OCCUPY BANDWIDTH

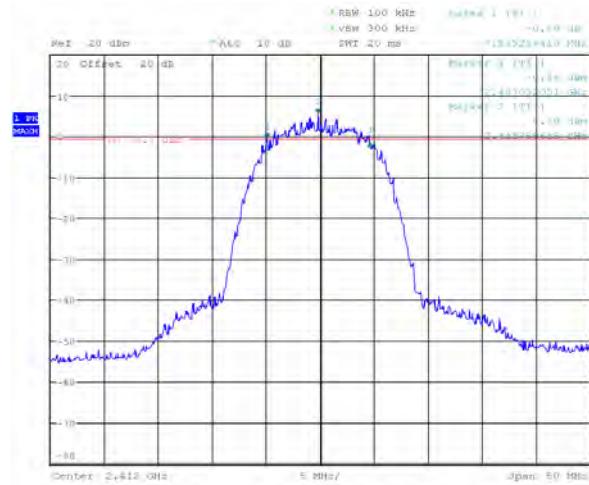
### 5.1. Limits

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz Test data:

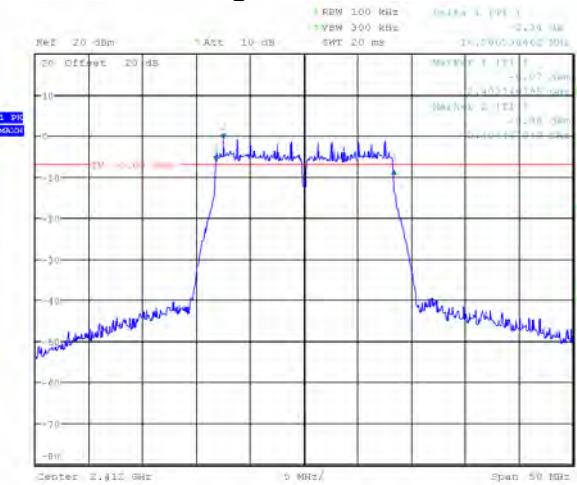
	Channel Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	2412	9.53	>0.5	Pass
	2437	10.01	>0.5	Pass
	2462	9.86	>0.5	Pass
802.11g	2412	15.59	>0.5	Pass
	2437	16.67	>0.5	Pass
	2462	16.67	>0.5	Pass
802.11n(HT20)	2412	17.95	>0.5	Pass
	2437	17.95	>0.5	Pass
	2462	17.95	>0.5	Pass
802.11n(HT40)	2422	35.77	>0.5	Pass
	2437	36.44	>0.5	Pass
	2452	36.44	>0.5	Pass

Test plot as follows:

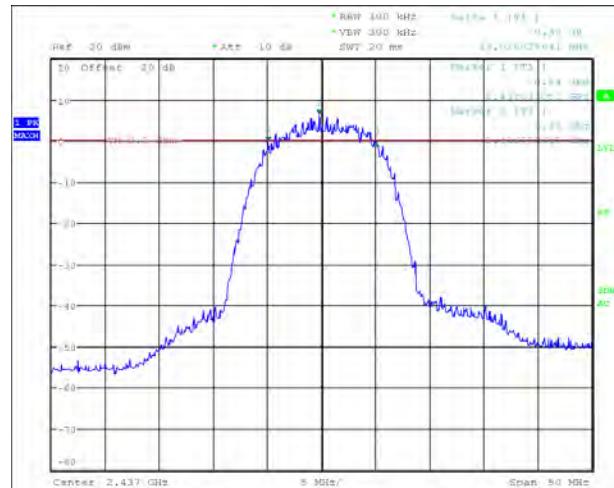
### 802.11b 2412MHz



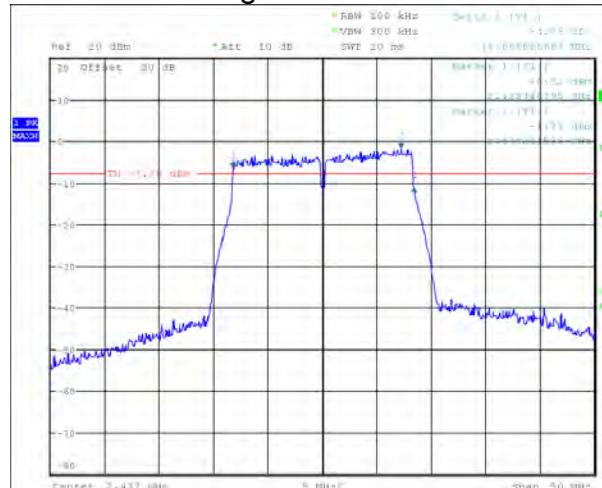
### 802.11g 2412MHz



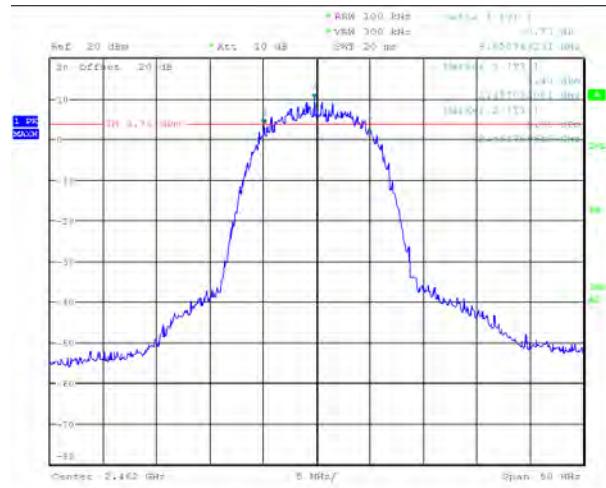
### 802.11b 2437MHz



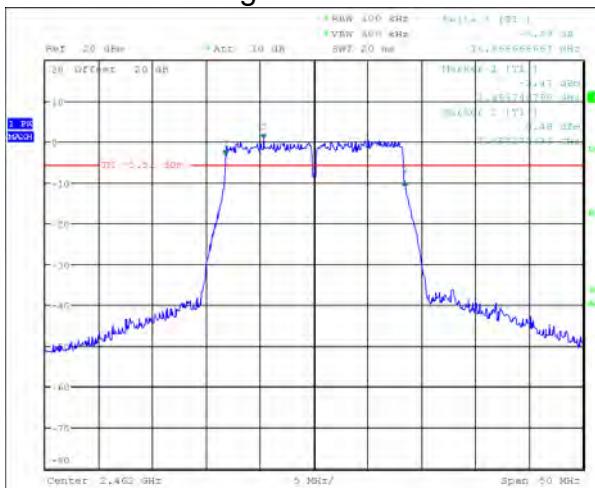
### 802.11g 2437MHz



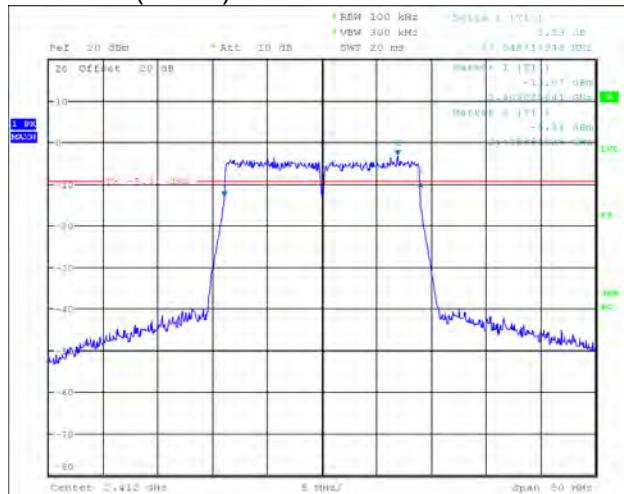
### 802.11b 2462MHz



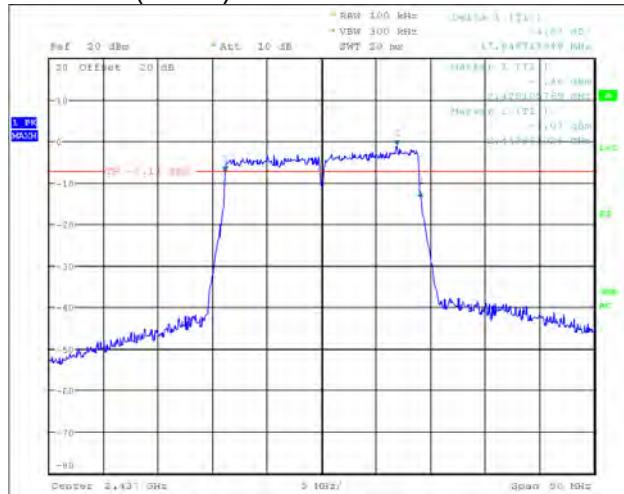
### 802.11g 2462MHz



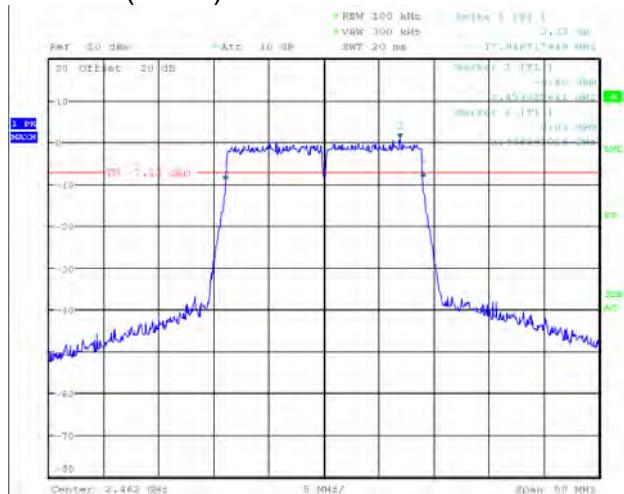
802.11n (HT20) 2412MHz



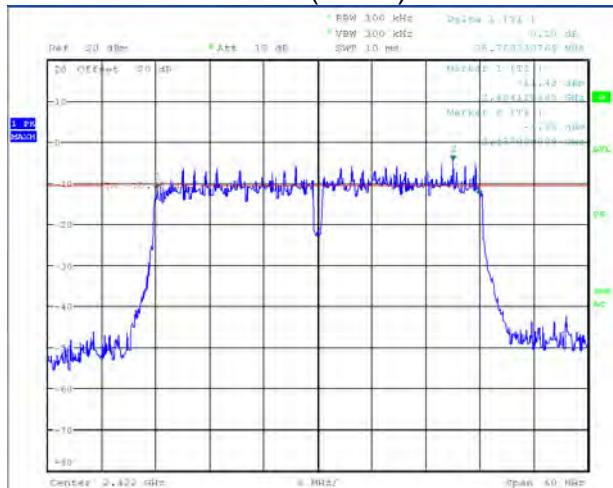
802.11n (HT20) 2437MHz



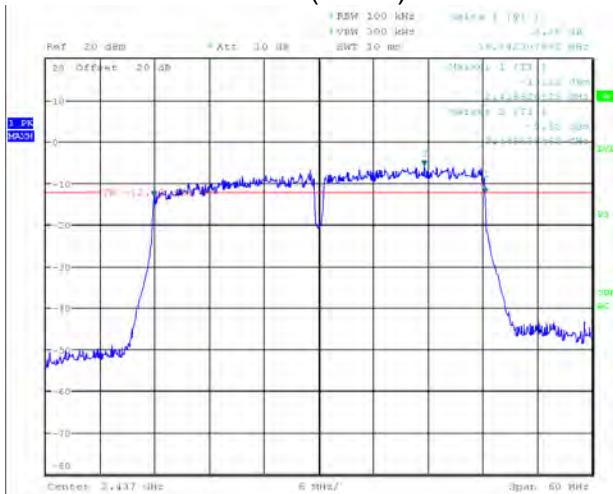
802.11n(HT20) 2462MHz



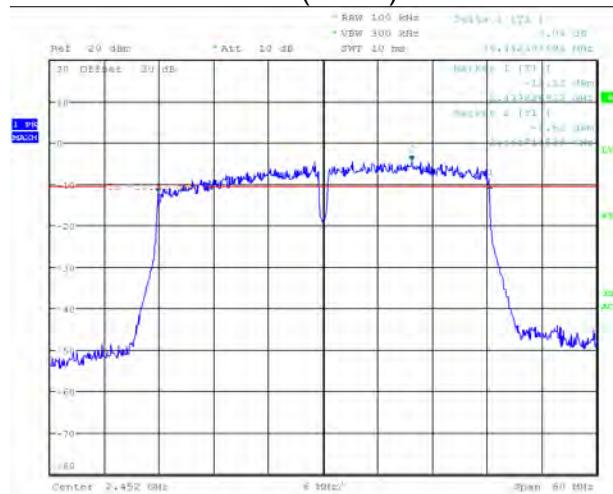
802.11 n (HT40) 2422MHz



802.11 n (HT40) 2437MHz



802.11 n (HT40)2452MHz



## 6. BAND EDGE COMPLIANCE TEST

### 6.1. Limits

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

### 6.2. Test setup

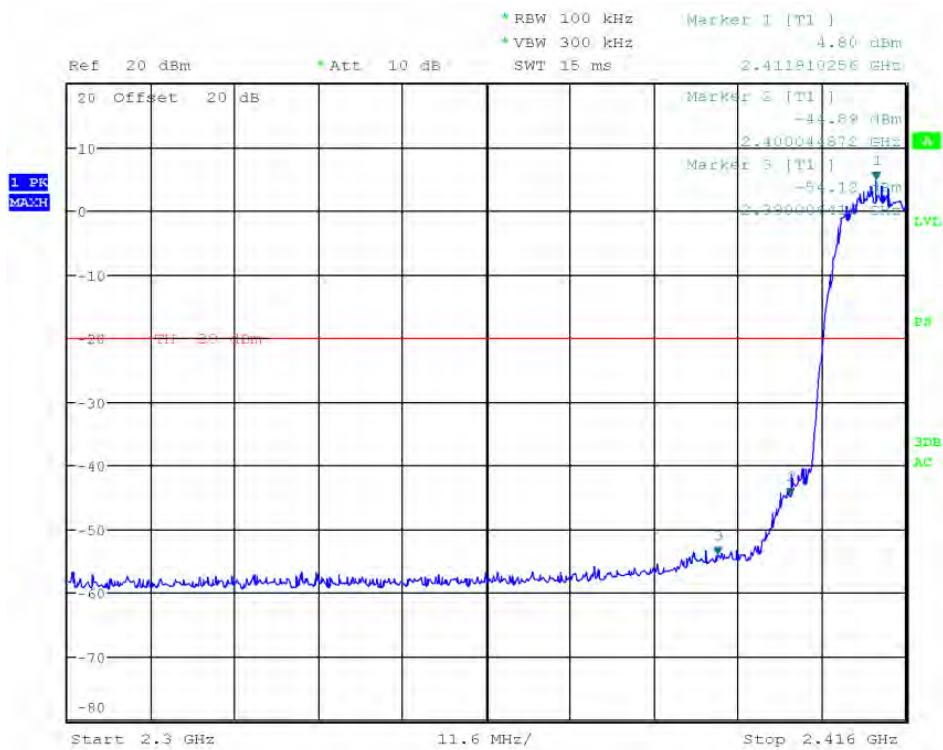
The EUT was placed on a turn table which was 0.8 m above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was set 3 m away from the receiving antenna which was mounted on an antenna tower. The measuring antenna moved up and down to find out the maximum emission level. It moved from 1 m to 4 m for both horizontal and vertical polarizations.

The bandwidth of the Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure.

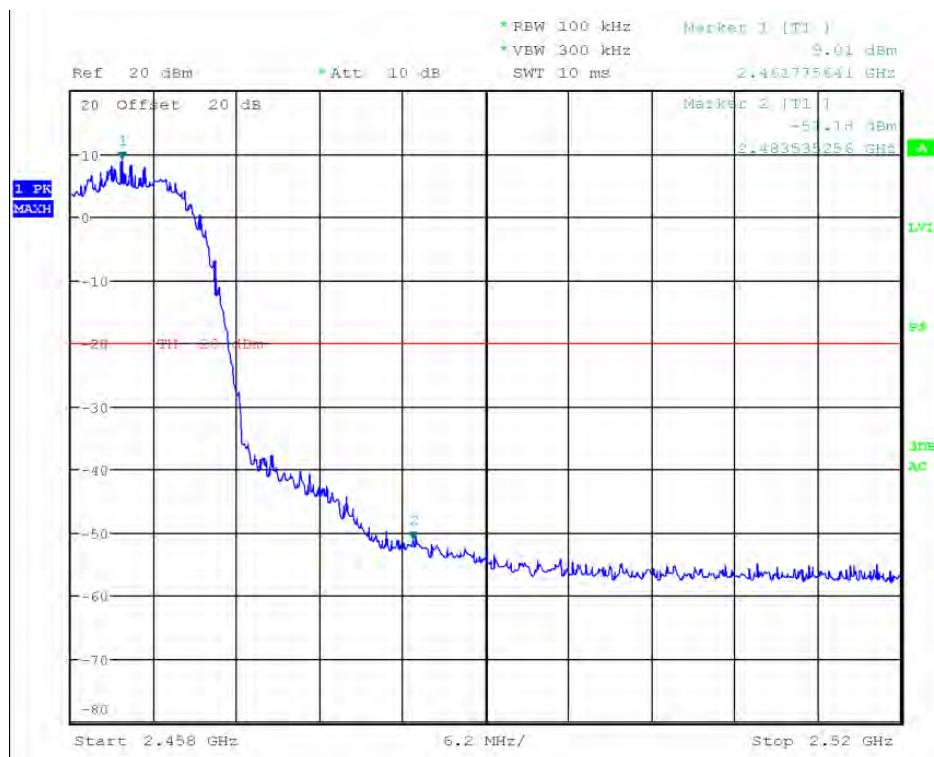
Note: If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

Test plot as follows:

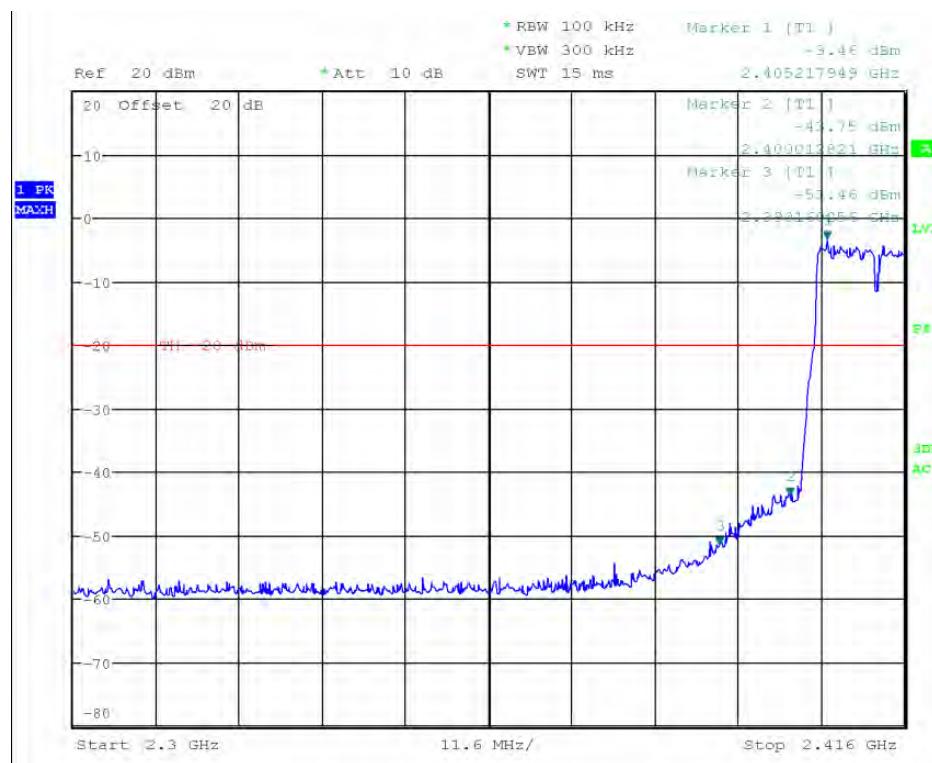
## 802.11b 2412MHz



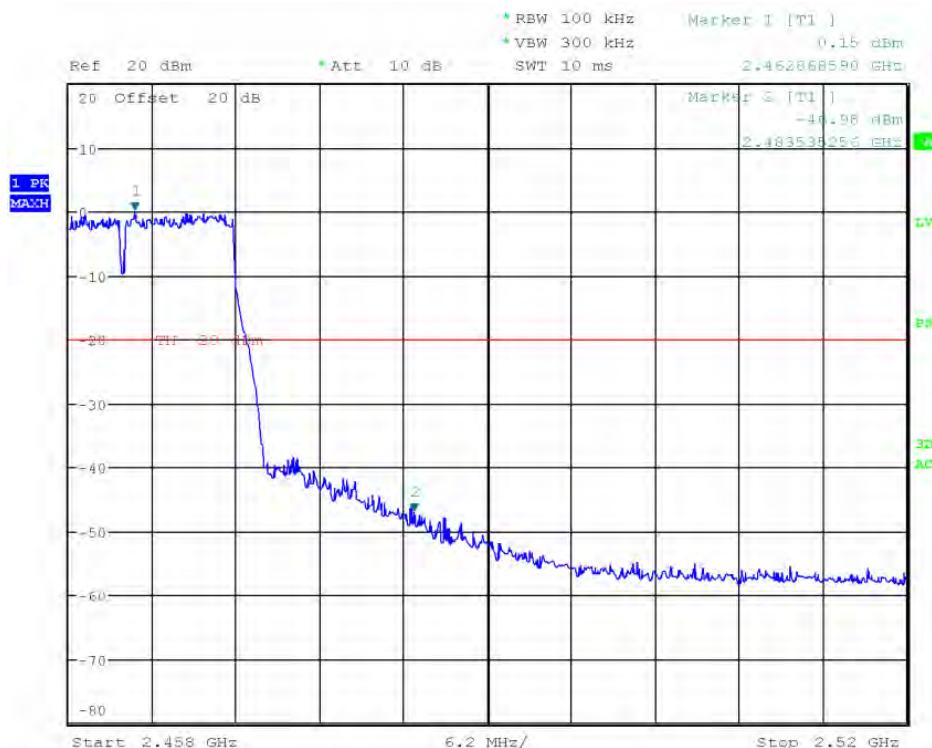
## 802.11b 2462MHz



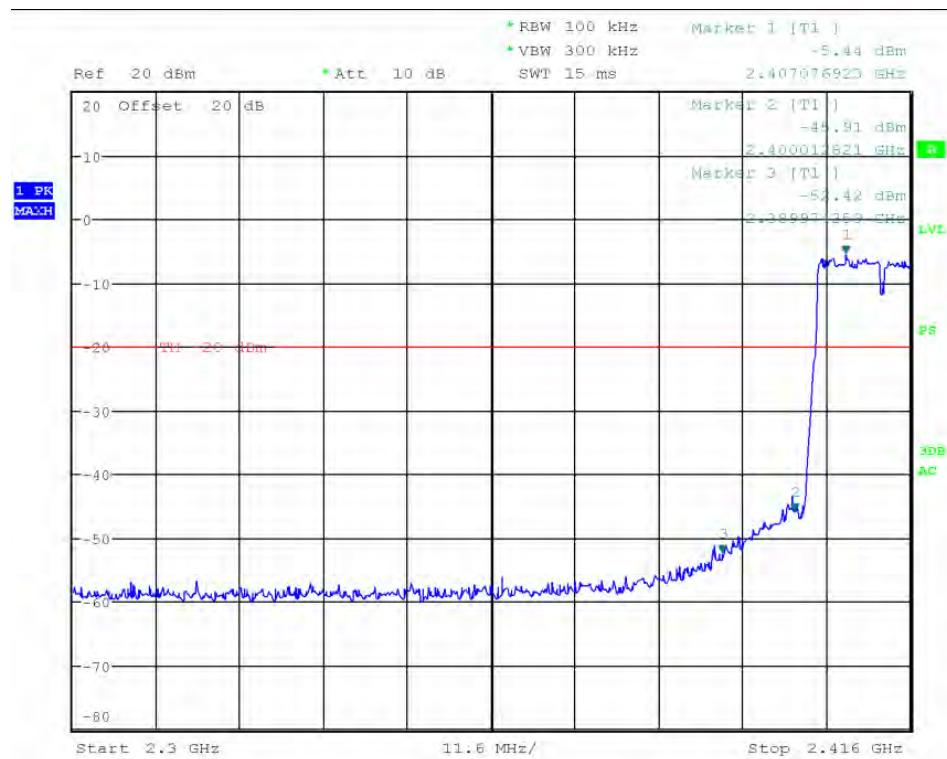
## 802.11g 2412MHz



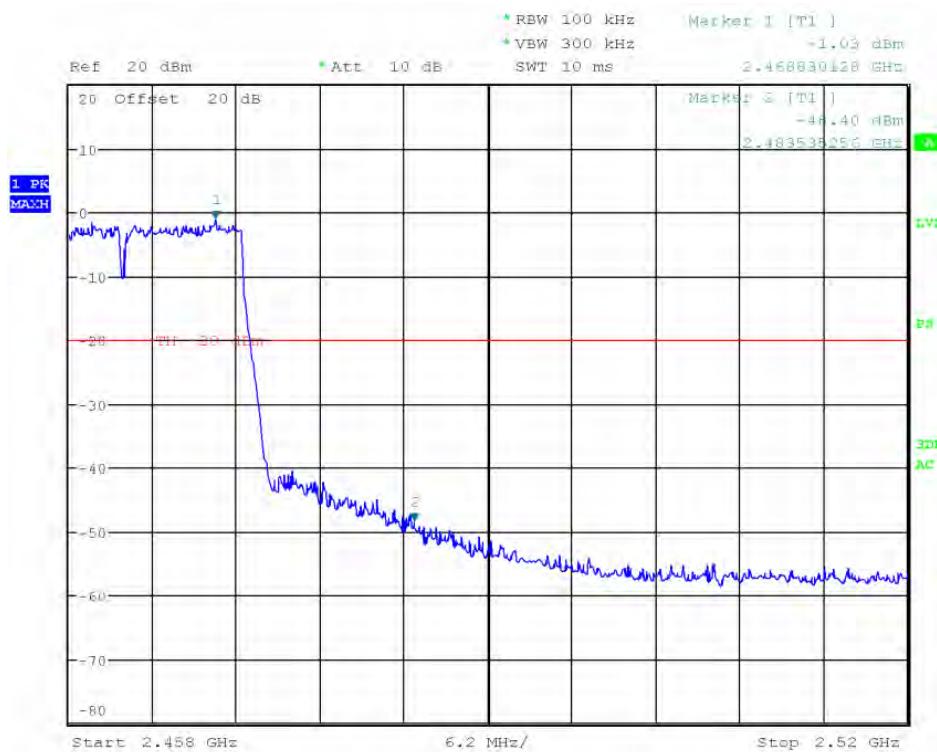
## 802.11g 2462MHz



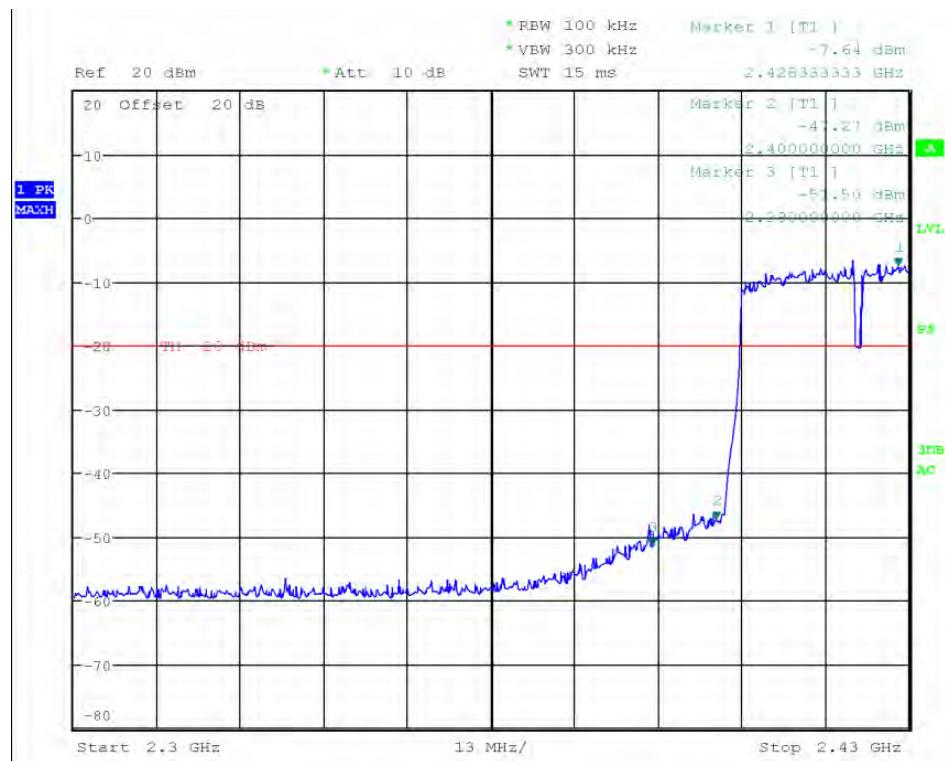
## 802.11n(HT20) 2412MHz



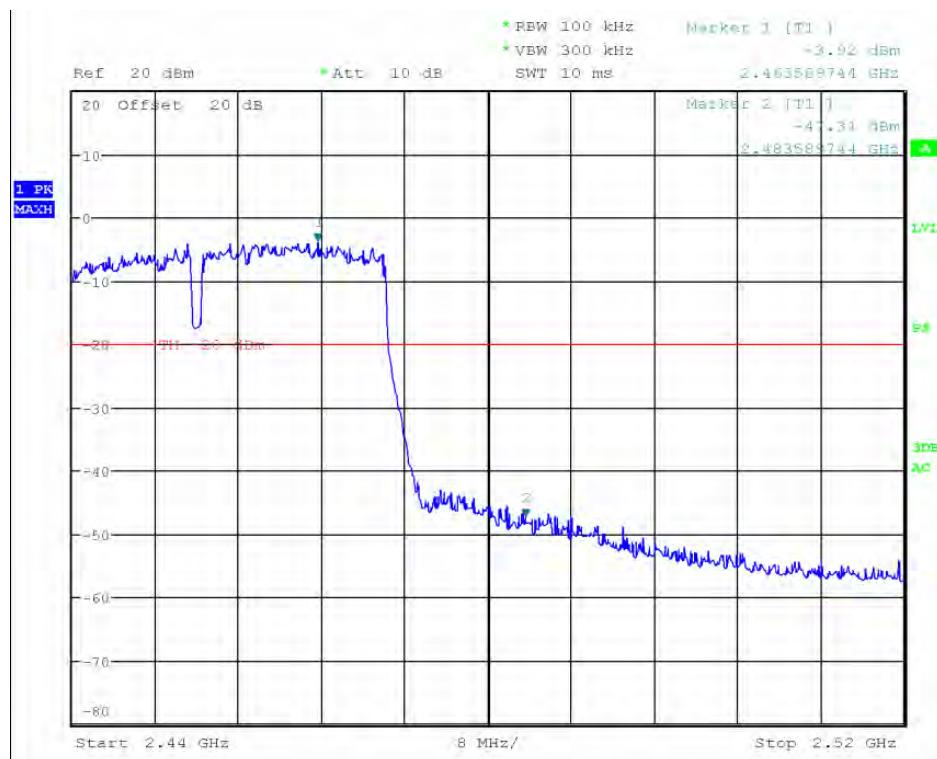
## 802.11 n(HT20) 2462MHz



## 802.11n(HT40) 2422MHz



## 802.11 n(HT40) 2452MHz



## 7. OUTPUT POWER TEST

### 7.1. Limits

For systems using digital modulation in the 2400~2483.5MHz, The Peak output Power shall not exceed 1W(30dBm)

### 7.2. Test setup

1. The Transmitter output (antenna port) was connected to the power meter.
2. Turn on the EUT and power meter and then record the peak power value.
3. Repeat above procedures on all channels needed to be tested.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

### 7.3. Test result

	Channel Frequency (MHz)	Peak output Power	Limit (dBm)	Result
802.11b	2412	18.68	30	Pass
	2437	18.67	30	Pass
	2462	18.59	30	Pass
802.11g	2412	15.57	30	Pass
	2437	15.37	30	Pass
	2462	15.43	30	Pass
802.11n(HT20)	2412	15.37	30	Pass
	2437	15.41	30	Pass
	2462	15.38	30	Pass
802.11n(HT40)	2422	14.27	30	Pass
	2437	14.36	30	Pass
	2452	14.23	30	Pass

## 8. POWER SPECTRAL DENSITY TEST

### 8.1. Limits

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

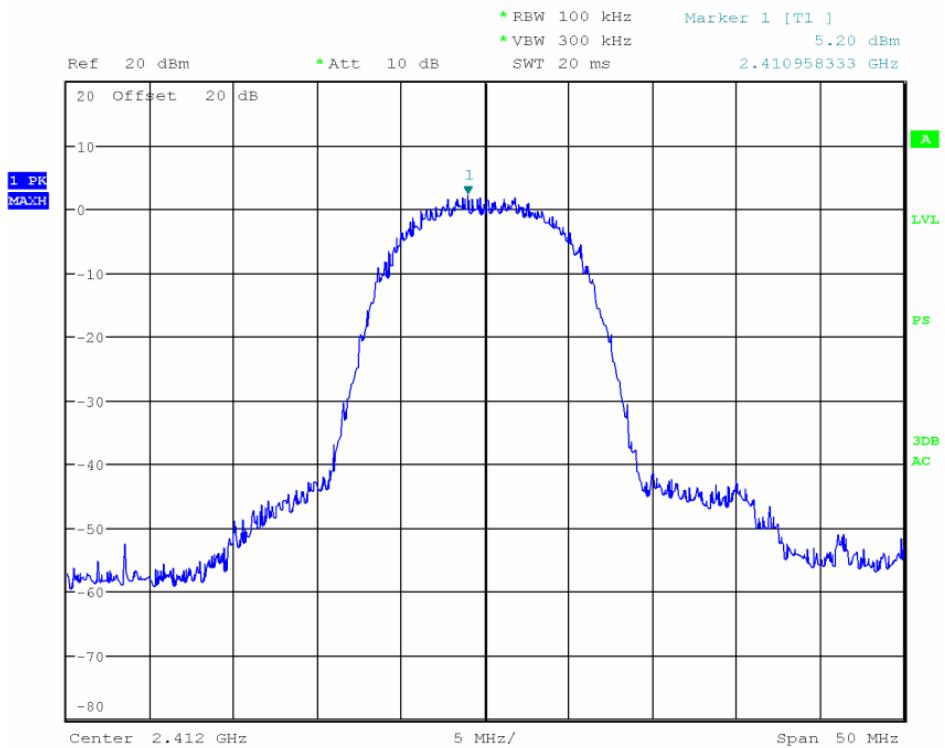
### 8.2. Test setup

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW =100kHz.
4. Set the VBW = 300 RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.

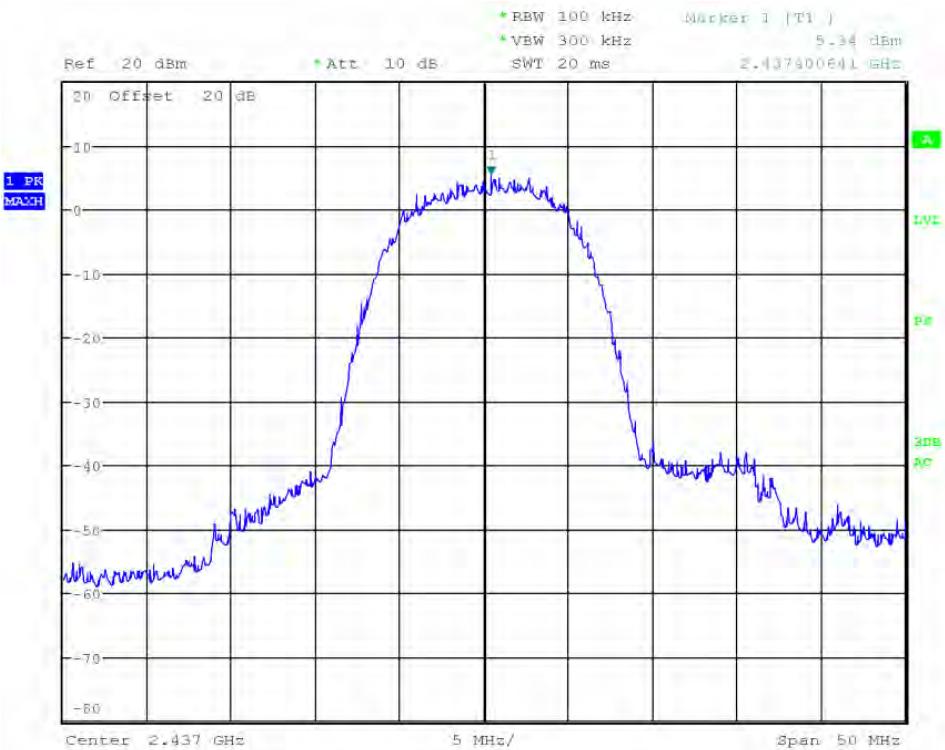
### 8.3. Test result

	Channel Frequency (MHz)	Power density (dBm/100KHz)	Limit (dBm/3KHz)	Result
802.11b	2412	5.20	8	Pass
	2437	5.34	8	Pass
	2462	5.14	8	Pass
802.11g	2412	-2.14	8	Pass
	2437	0.60	8	Pass
	2462	0.94	8	Pass
802.11n (HT20)	2412	-2.08	8	Pass
	2437	0.55	8	Pass
	2462	0.16	8	Pass
802.11n (HT40)	2422	-5.55	8	Pass
	2437	-4.11	8	Pass
	2452	-4.16	8	Pass

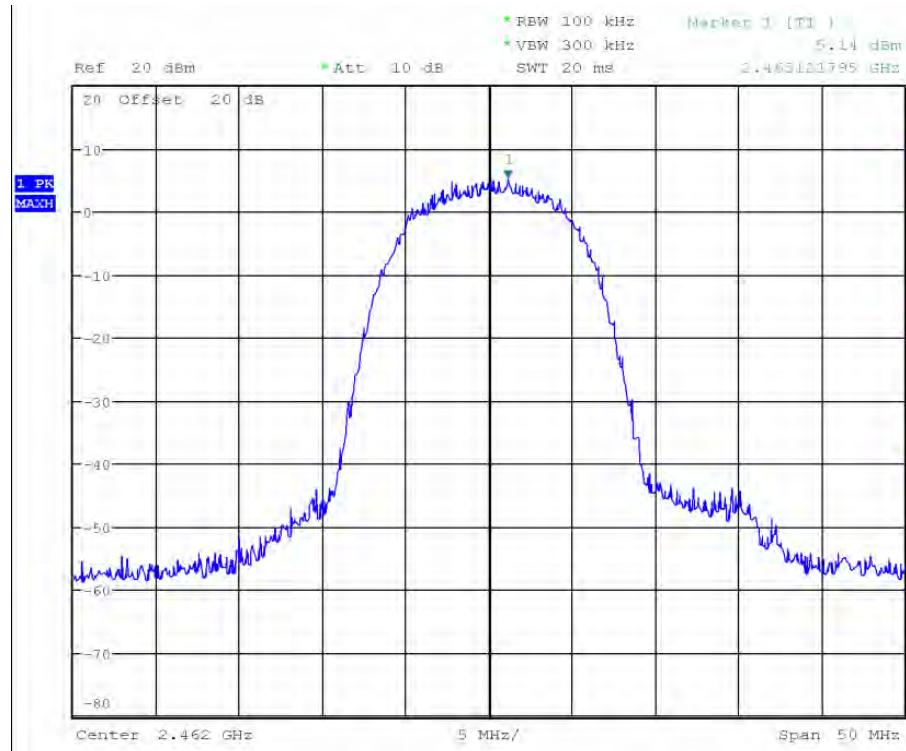
## 802.11b 2412MHz



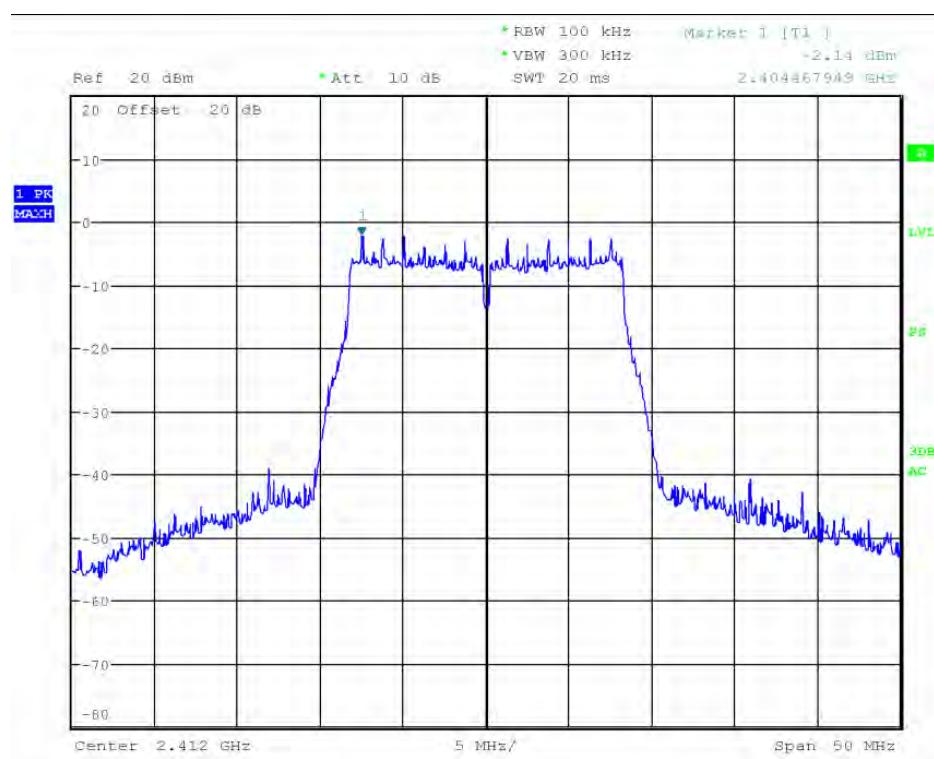
## 802.11b 2437MHz



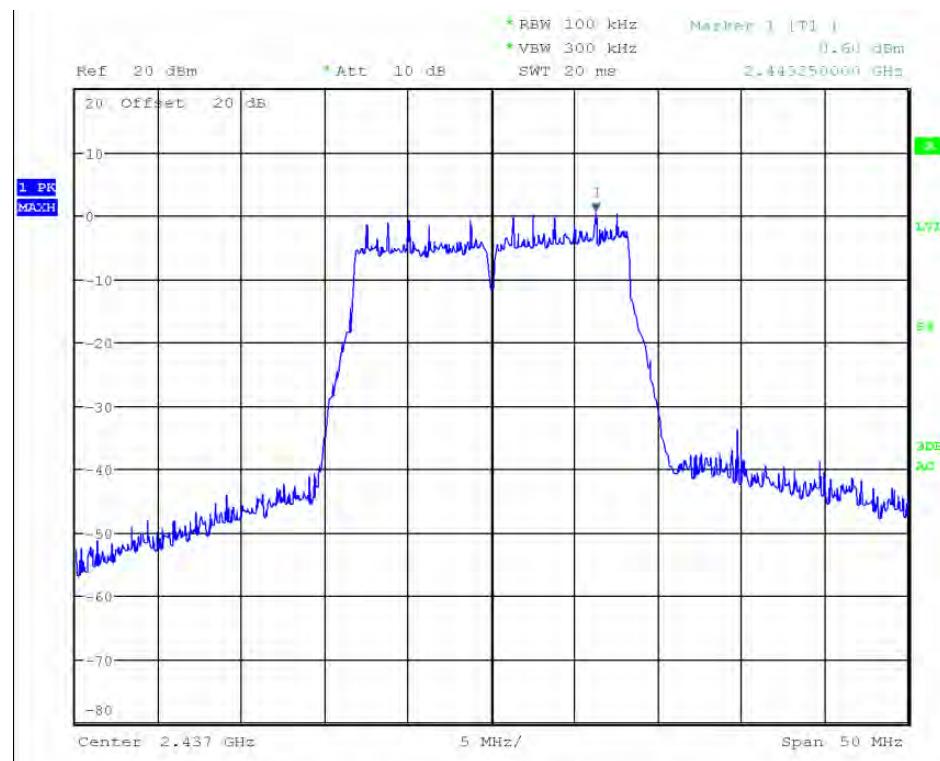
## 802.11b 2462MHz



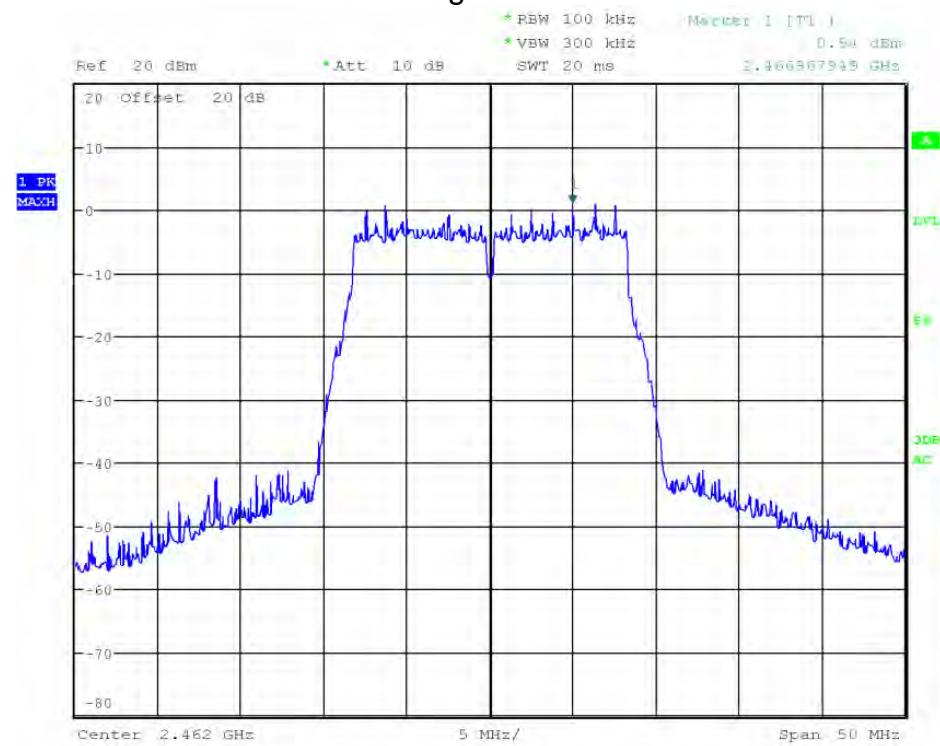
## 802.11g 2412MHz



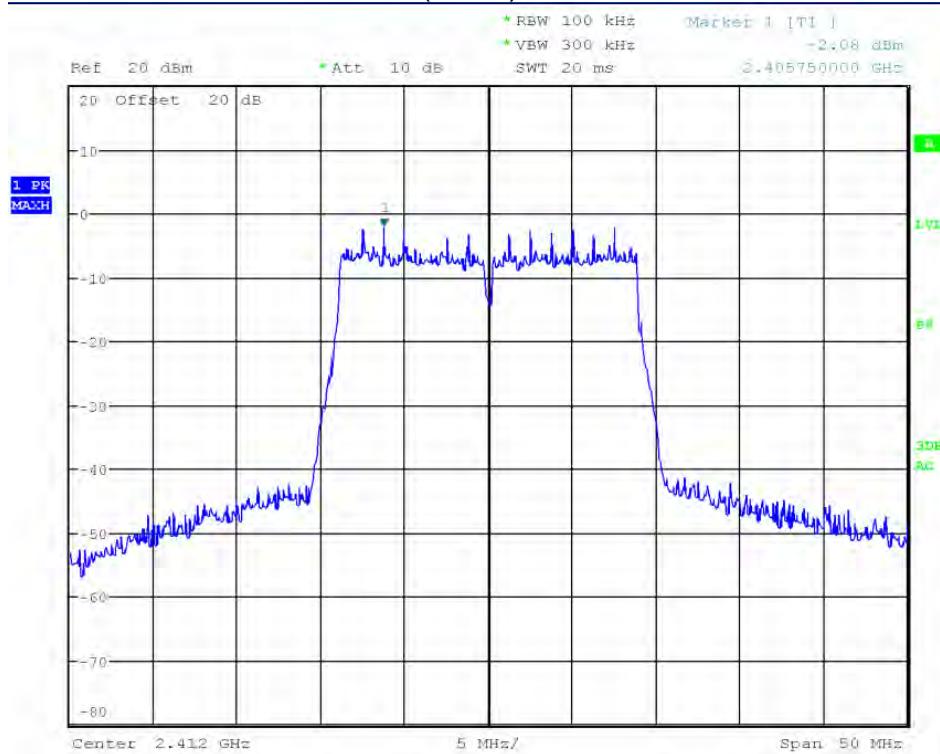
802.11g 2437MHz



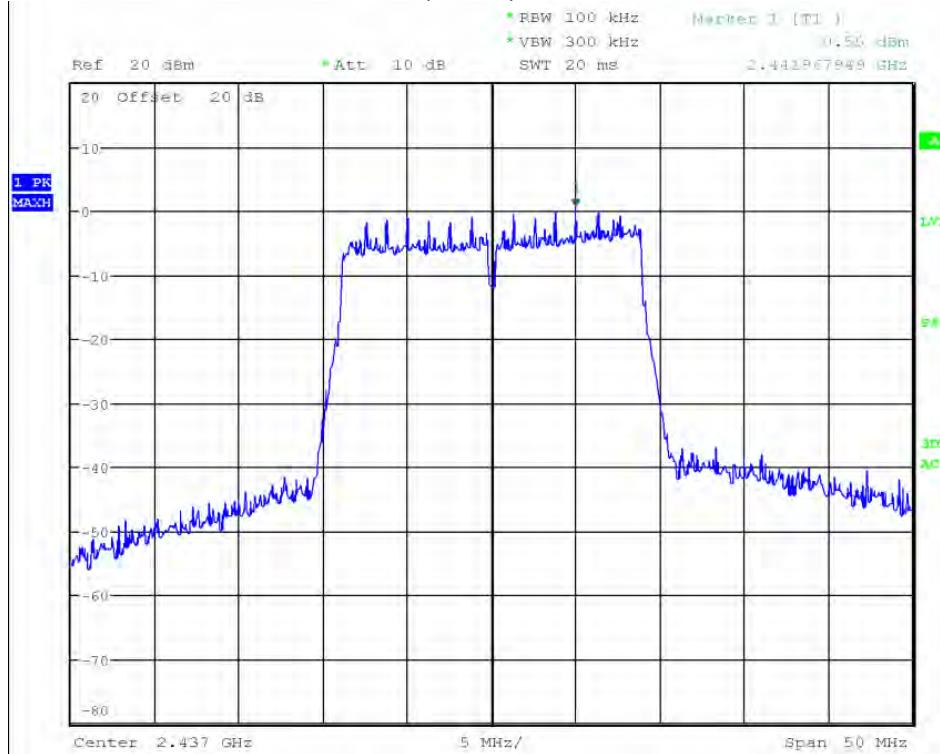
802.11g 2462MHz



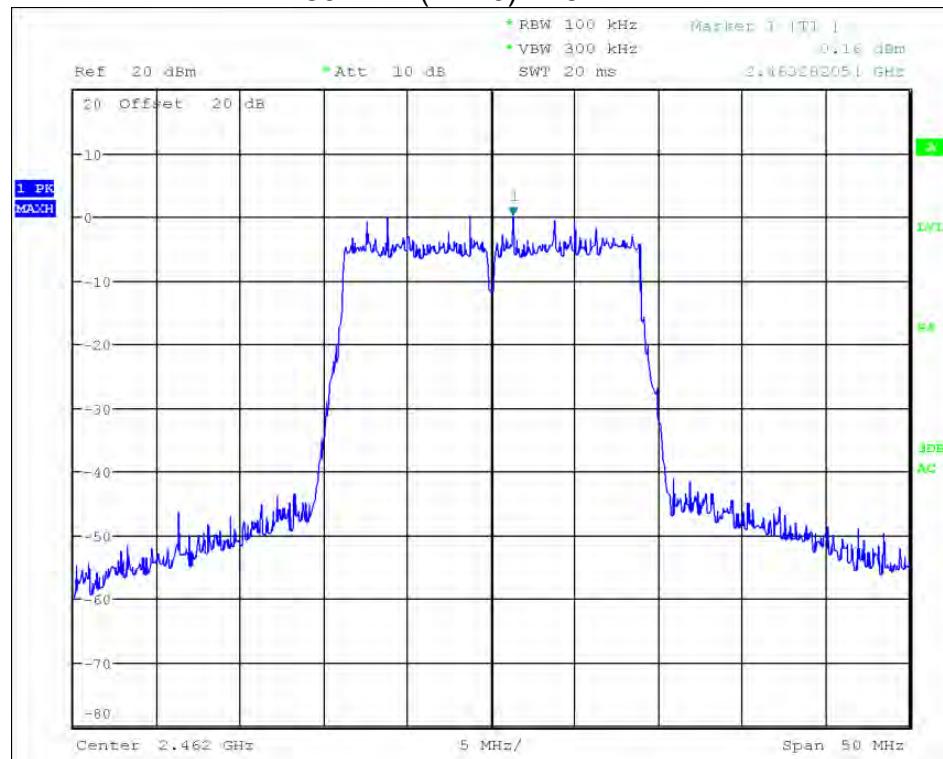
## 802.11n (HT20) 2412MHz



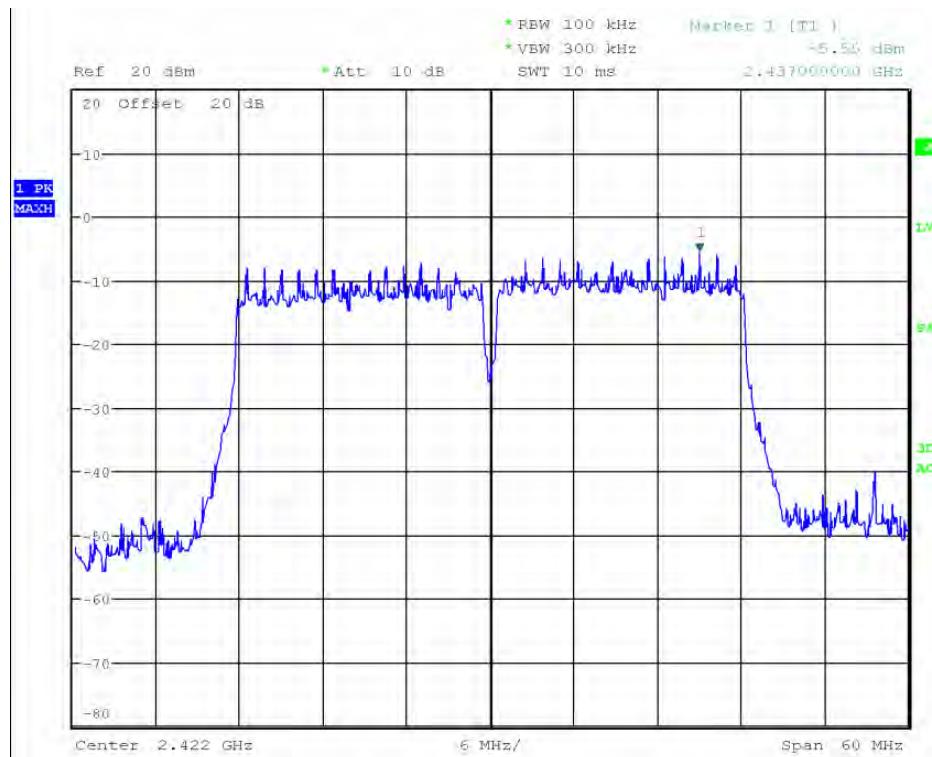
## 802.11n (HT20) 2437MHz



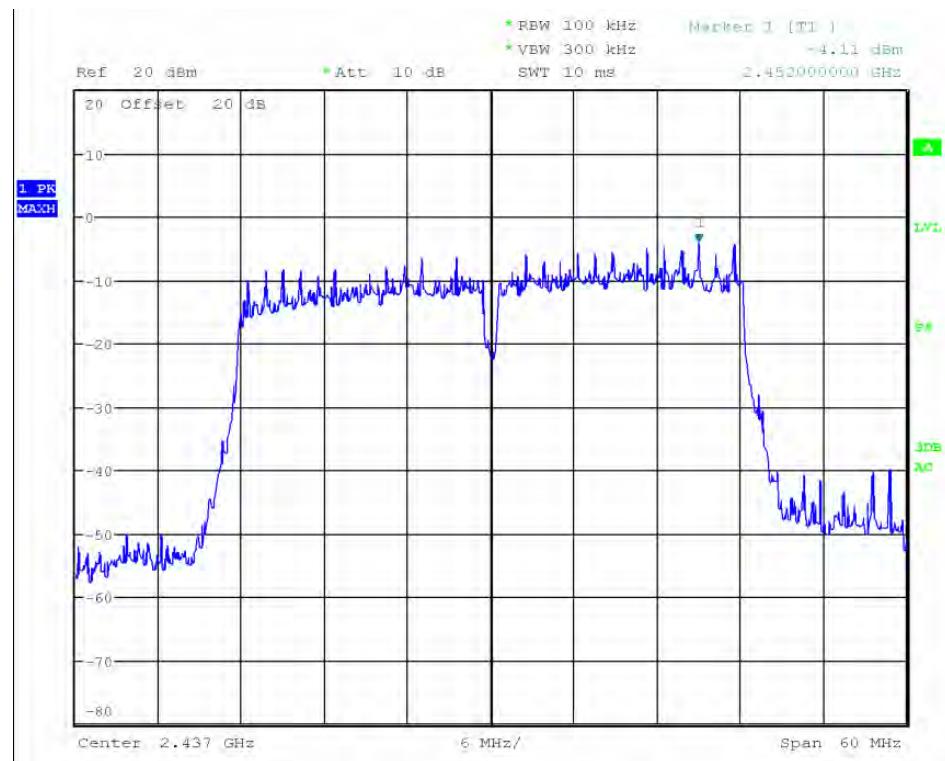
## 802.11n(HT20) 2462MHz



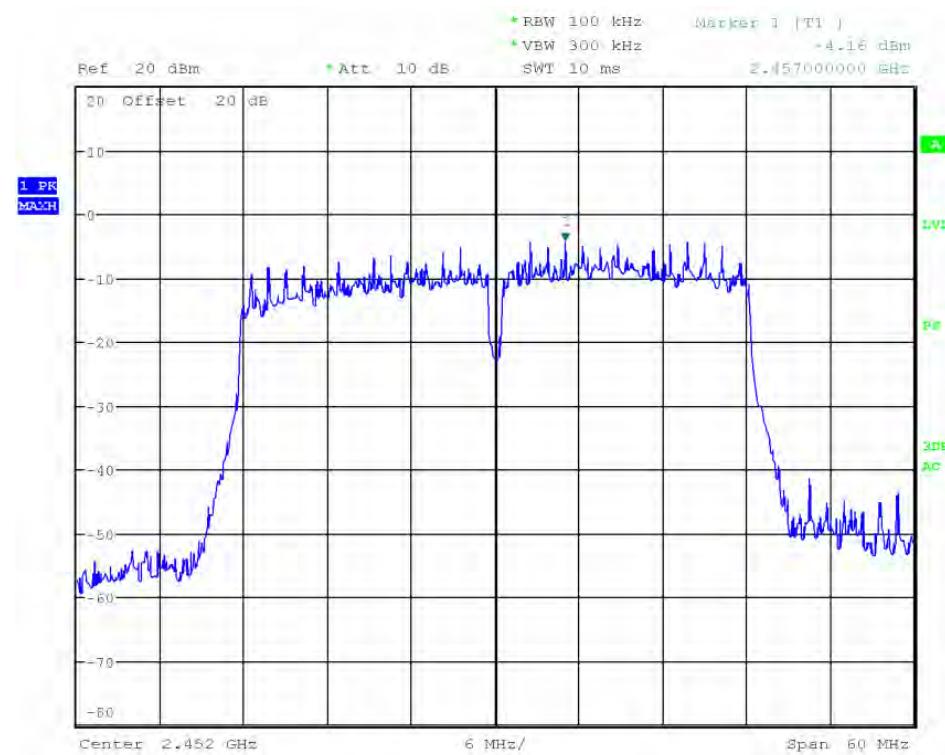
## 802.11 n (HT40) 2422MHz



## 802.11 n (HT40) 2437MHz



## 802.11 n (HT40)2452MHz



## 9. ANTENNA REQUIREMENTS

### 9.1. Limits

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.

### 9.2. Result

The antennas used for this product are integral Patch Antenna and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain of the transmit antenna is only 0 dBi.

## 10. PHOTOGRAPHS OF TEST SET-UP

### 10.1. Set-up for Radiated Emission Test



## 10.2. Set-up for Radiated Emission Test



## 11. PHOTOGRAPHS OF THE EUT

Figure 1  
General Appearance of the EUT



Figure 2  
General Appearance of the EUT

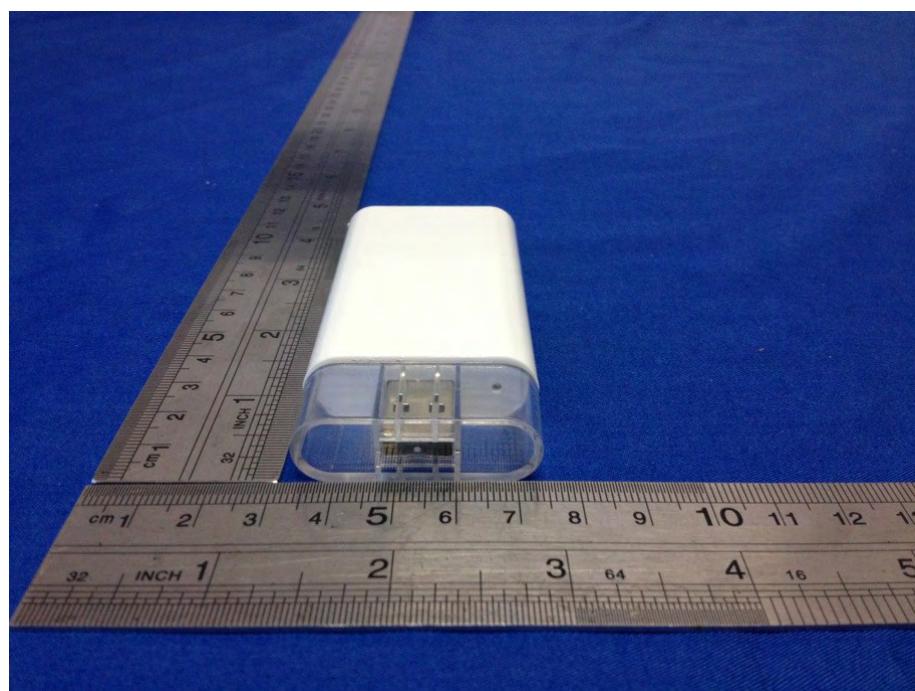


Figure 3  
General Appearance of the PCB

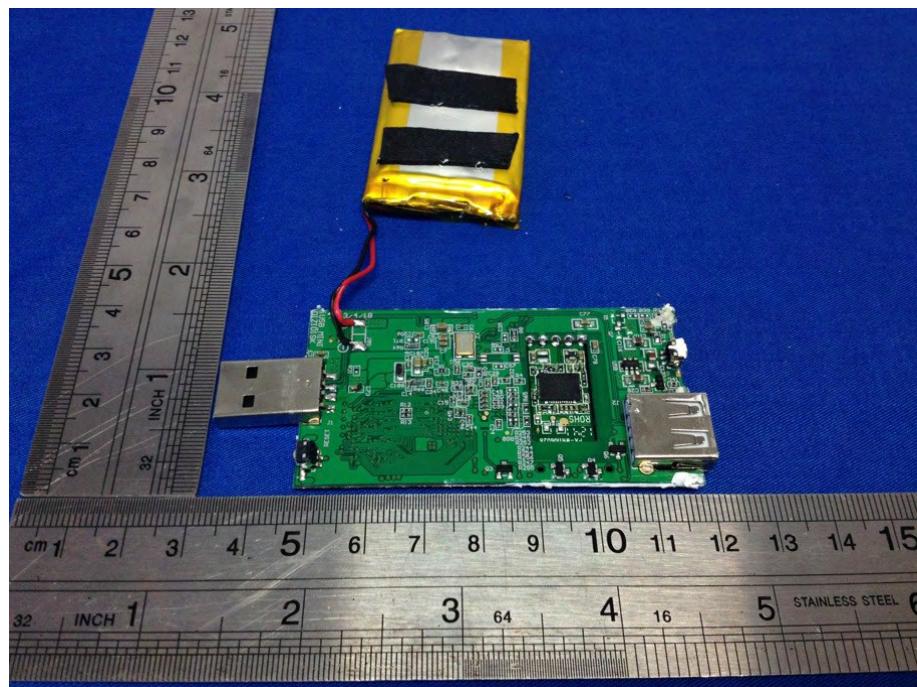
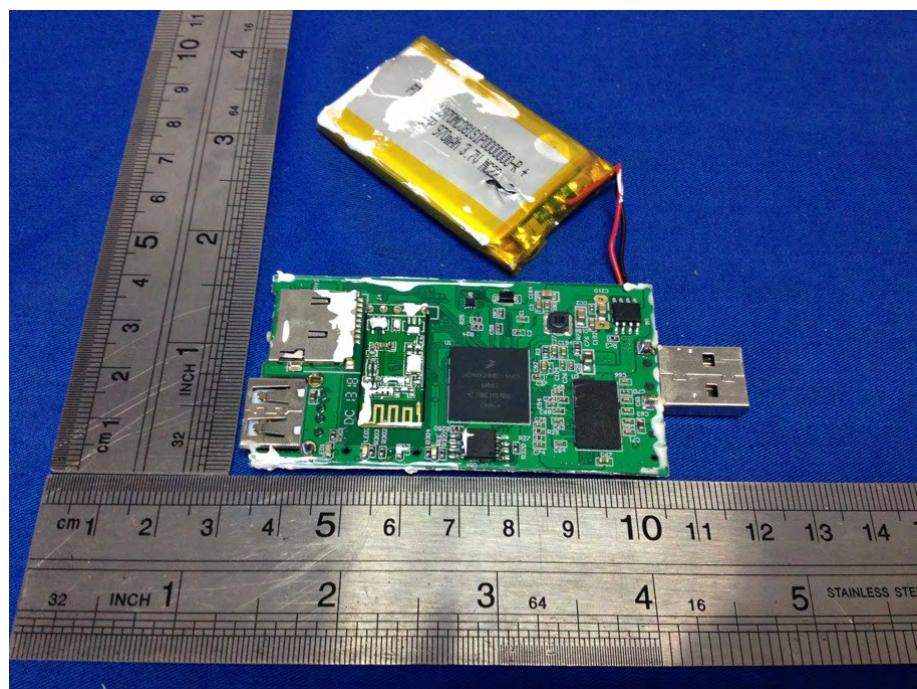


Figure 4  
General Appearance of the PCB



END.