

FCC RF Test Report

APPLICANT : HTC Corporation
EQUIPMENT : Smartphone
MODEL NAME : PM35110
FCC ID : NM8PM35110
STANDARD : FCC Part 15 Subpart C §15.247
CLASSIFICATION : (DTS) Digital Transmission System

The product was received on Aug. 14, 2012 and completely tested on Sep. 04, 2012. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:



Jones Tsai / Manager



SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.



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SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.1	15.247(a)(2)	A8.2(a)	6dB Bandwidth	$\geq 0.5\text{MHz}$	Pass	-
3.2	15.247(b)	A8.4	Power Output Measurement	$\leq 30\text{dBm}$	Pass	-
3.3	15.247(e)	A8.2(b)	Power Spectral Density	$\leq 8\text{dBm}/3\text{kHz}$	Pass	-
3.4	15.247(d)	A8.5	Conducted Band Edges	$\leq 20\text{dBc}$	Pass	-
			Conducted Spurious Emission		Pass	-
3.5	15.247(d)	A8.5	Radiated Band Edges	15.209(a) & 15.247(d)	Pass	-
			Radiated Spurious Emission		Pass	Under limit 0.41 dB at 2390.000 MHz
3.6	15.207	Gen 7.2.4	AC Conducted Emission	15.207(a)	Pass	Under limit 5.90 dB at 32.970 MHz
3.7	15.203 & 15.247(b)	A8.4	Antenna Requirement	N/A	Pass	-



1 General Description

1.1 Applicant

HTC Corporation

No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan

1.2 Manufacturer

HTC Corporation

No. 23, Xinghua Rd., Taoyuan City, Taoyuan County 330, Taiwan



1.3 Feature of Equipment Under Test

Product Feature	
Equipment	Smartphone
Model Name	PM35110
FCC ID	NM8PM35110
Sample 1	EUT with LCM 1, Camera Front 1, Camera Main 1, DDR Memory 1 and Battery 1
Sample 2	EUT with LCM 2, Camera Front 1, Camera Main 2, DDR Memory 2 and Battery 2
Sample 3	EUT with LCM 1, Camera Front 1, Camera Main 1, DDR Memory 3 and Battery 1
Sample 4	EUT with LCM 2, Camera Front 2, Camera Main 2, DDR Memory 3 and Battery 2
EUT supports Radios application	GSM/EGPRS/WCDMA/HSPA/ WLAN 11abgn / Bluetooth / NFC
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Product Specification subjective to this standard	
Tx/Rx Channel Frequency Range	802.11b/g/n : 2412 MHz ~ 2462 MHz 802.11a/n: 5745~5825MHz.
Maximum Output Power to Antenna	<2412 MHz ~ 2462 MHz> 802.11b : 21.27 dBm (0.1687 W) 802.11g : 25.80 dBm (0.3802 W) 802.11n HT20 : 26.22 dBm (0.4188 W) 802.11n HT40 : 25.41 dBm (0.3475 W) <5745 MHz ~ 5825 MHz> 802.11a : 23.68 dBm (0.2333 W) 802.11n HT20 : 23.22 dBm (0.2099 W) 802.11n HT40 : 23.20 dBm (0.2089 W)
Antenna Type	802.11b/g/n : PIFA Antenna type with gain -0.40 dBi 802.11a/n : PIFA Antenna type with gain -0.08 dBi
Type of Modulation	802.11b : DSSS (BPSK / QPSK / CCK) 802.11a/g/n : OFDM (BPSK / QPSK / 16QAM / 64QAM)

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.			
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-3273456 / FAX: +886-3-3284978			
Test Site No.	Sporton Site No.			FCC/IC Registration No.
	TH02-HY	CO05-HY	03CH05-HY	722060/4086B-1

1.5 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart C §15.247
- ♦ FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v01
- ♦ FCC TCB Workshop 2012, April
- ♦ ANSI C63.4-2003 and ANSI C63.10-2009
- ♦ IC RSS-210 Issue 8
- ♦ IC RSS-Gen Issue 3

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	GPS Station	Pendulum	GSG-54	N/A	N/A	Unshielded, 1.8 m
3.	WLAN AP	D-Link	DIR-628	KA2DIR628A2	N/A	Unshielded, 1.8 m
4.	Notebook	DELL	Latitude E6320	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m
5.	Bluetooth Earphone	Sony Ericsson	MW600	PY7DDA-2029	N/A	N/A

2 Test Configuration of Equipment Under Test

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conducted emission (150 KHz to 30 MHz) and radiated emission (9 KHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (Y plane for 5G & H plane for 2.4G plane) were recorded in this report.

The final configuration from all the combinations and the worst-case data rates were investigated by measuring the maximum power across all the data rates and modulation modes under section 2.2.

Based on the worst configuration found above, the RF power setting is set individually to meet FCC compliance limit for the final conducted and radiated tests shown in section 2.3.

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
2400-2483.5 MHz	1	2412	7	2442
	2	2417	8	2447
	3	2422	9	2452
	4	2427	10	2457
	5	2432	11	2462
	6	2437		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5725-5850 MHz Band 4	149	5745	159	5795
	151	5755	161	5805
	157	5785	165	5825

2.2 Pre-Scanned RF Power

Preliminary tests were performed in different data rate and antenna configurations as following table and the highest power data rates were chosen for full test in the following tables. Final Output Power equals to Measured Output Power adds the duty factor.

2.4GHz 802.11b mode				
Data Rate (MHz)	1M bps	2M bps	5.5M bps	11M bps
Peak Power (dBm)	21.27	21.1	21.04	21.15

2.4GHz 802.11g mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	25.80	25.76	25.58	25.61	25.70	25.74	25.73	23.86

2.4GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	26.22	26.12	26.17	26.17	26.16	24.74	24.67	23.88

2.4GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	25.41	25.20	24.91	25.39	24.87	25.03	24.91	25.26

5GHz 802.11a mode								
Data Rate (MHz)	6M bps	9M bps	12M bps	18M bps	24M bps	36M bps	48M bps	54M bps
Peak Power (dBm)	23.68	23.52	23.31	23.26	23.52	23.55	23.37	21.98

5GHz 802.11n HT20 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	23.22	22.95	23.04	23.07	22.97	22.84	22.66	21.95

5GHz 802.11n HT40 mode								
Data Rate (MHz)	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Peak Power (dBm)	23.20	23.11	23.04	23.17	23.01	22.58	22.34	22.09



2.3 Test Mode

Final results of test modes, data rates and test channels are shown as following table.

<2.4GHz>

Test Cases					
	Test Items	Mode	Data Rate	Test Channel	Remark
Conducted TCs	6dB Power Spectral Density	802.11b	1 Mbps	1/6/11	Sample 1
		802.11g	6 Mbps	1/6/11	
		802.11n HT20	6.5 Mbps	1/6/11	
		802.11n HT40	13.5 Mbps	3/6/9	
	Output Power	802.11b	1 Mbps	1/6/11	Sample 1
		802.11g	6 Mbps	1/6/11	
		802.11n HT20	6.5 Mbps	1/6/11	
		802.11n HT40	13.5 Mbps	3/6/9	
	Conducted Band Edge	802.11b	1 Mbps	1/11	Sample 1
		802.11g	6 Mbps	1/11	
		802.11n HT20	6.5 Mbps	1/11	
		802.11n HT40	13.5 Mbps	3/9	
	Conducted Spurious Emission	802.11b	1 Mbps	1/6/11	Sample 1
		802.11g	6 Mbps	1/6/11	
		802.11n HT20	6.5 Mbps	1/6/11	
		802.11n HT40	13.5 Mbps	3/6/9	
Radiated TCs	Radiated Band Edge	802.11b	1 Mbps	1/11	Sample 1
		802.11g	6 Mbps	1/11	
		802.11n HT20	6.5 Mbps	1/11	
		802.11n HT40	13.5 Mbps	3/9	
	Radiated Spurious Emission	802.11n HT40	13.5 Mbps	3	Sample 2
		802.11b	1 Mbps	1/6/11	Sample 1
		802.11g	6 Mbps	1/6/11	
		802.11n HT20	6.5 Mbps	1/6/11	
		802.11n HT40	13.5 Mbps	3/6/9	
		802.11n HT40	13.5 Mbps	3	Sample 2



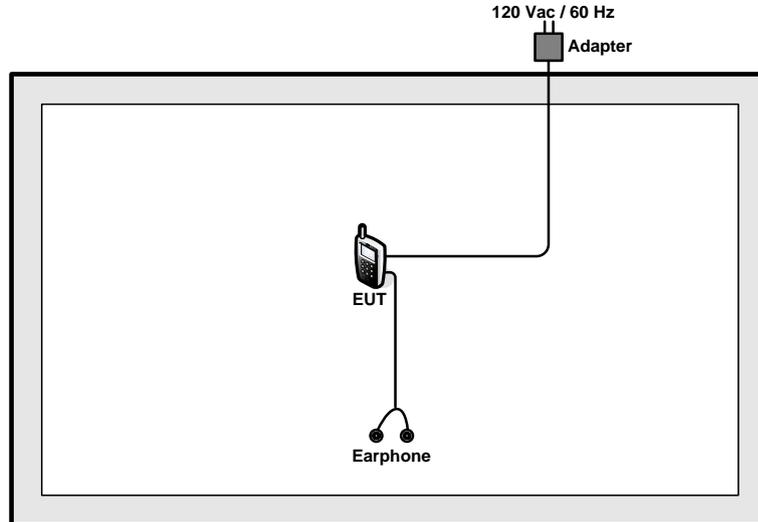
<5GHz>

Test Cases					
	Test Items	Mode	Data Rate	Test Channel	Remark
Conducted TCs	6dB Power Spectral Density	802.11a	6 Mbps	149/157/165	Sample 1
		802.11n HT20	6.5 Mbps	149/157/165	
		802.11n HT40	13.5 Mbps	151/159	
	Output Power	802.11a	6 Mbps	149/157/165	Sample 1
		802.11n HT20	6.5 Mbps	149/157/165	
		802.11n HT40	13.5 Mbps	151/159	
	Conducted Band Edge	802.11a	6 Mbps	149/165	Sample 1
		802.11n HT20	6.5 Mbps	149/165	
		802.11n HT40	13.5 Mbps	151/159	
	Conducted Spurious Emission	802.11a	6 Mbps	149/157/165	Sample 1
		802.11n HT20	6.5 Mbps	149/157/165	
		802.11n HT40	13.5 Mbps	151/159	
Radiated TCs	Radiated Band Edge	802.11a	6 Mbps	149/165	Sample 1
		802.11n HT20	6.5 Mbps	149/165	
		802.11n HT40	13.5 Mbps	151/159	
		802.11n HT40	13.5 Mbps	151	Sample 2
	Radiated Spurious Emission	802.11a	6 Mbps	149/157/165	Sample 1
		802.11n HT20	6.5 Mbps	149/157/165	
		802.11n HT40	13.5 Mbps	151/159	
		802.11n HT40	13.5 Mbps	151	Sample 2

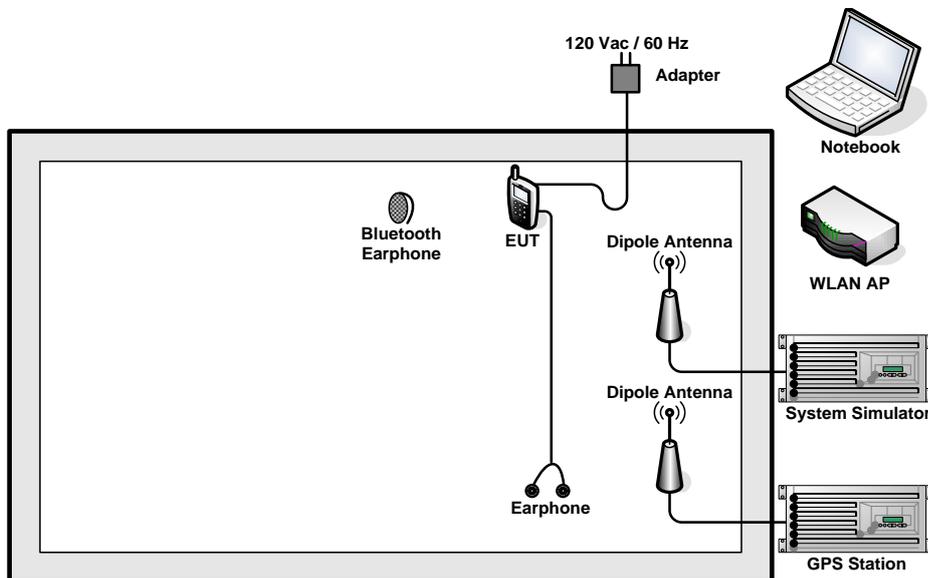
Test Cases	
AC Conducted Emission	Mode 1 : GSM850 Idle + Bluetooth Link + WLAN (2.4G) Link + GPS Rx + Earphone 1 + Battery + USB Cable 1 (Charging from Adapter 5) for Sample 1
	Mode 2 GSM850 Idle + Bluetooth Link + WLAN (5G) Link + GPS Rx + Earphone 1 + Battery + USB Cable 1 (Charging from Adapter 5) for Sample 1
	Mode 3 GSM850 Idle + Bluetooth Link + WLAN (5G) Link + GPS Rx + Earphone 1 + Battery + USB Cable 1 (Charging from Adapter 5) for Sample 2
Remark:	
1. The worst case of conducted emission is mode 3; only the test data of it was reported.	
2. For Radiated TCs, the test was performed with adapter 5, earphone 1, and USB cable 1.	

2.4 Connection Diagram of Test System

<WLAN Tx Mode>



<AC Conducted Emission Mode>



2.5 RF Utility

For WLAN function, programmed RF utility, "Remote 432X controller (P2.01)" installed in the notebook make the EUT provides functions like channel selection and power level for continuous transmitting and receiving signals.

3 Test Result

3.1 6dB Bandwidth Measurement

3.1.1 Limit of 6dB Bandwidth

The minimum 6 dB bandwidth shall be at least 500 KHz.

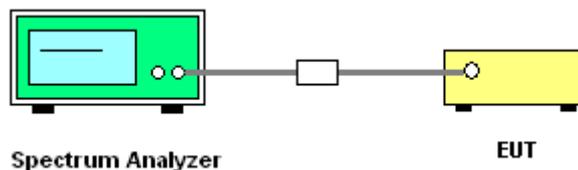
3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance and TCB Workshop 2012, April.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 1-5% of the emission bandwidth (EBW). Set the Video bandwidth (VBW) $\geq 3 * RBW$. In order to make an accurate measurement. The 6 dB bandwidth must be greater than 500 KHz.

3.1.4 Test Setup





3.1.5 Test Result of 6dB Bandwidth

Test Mode :	802.11b	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11b 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	8.12	0.5	Pass
06	2437	8.08	0.5	Pass
11	2462	8.12	0.5	Pass

Test Mode :	802.11g	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11g 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	16.66	0.5	Pass
06	2437	16.64	0.5	Pass
11	2462	16.72	0.5	Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	2.4GHz 802.11n HT20 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
01	2412	17.84	0.5	Pass
06	2437	17.96	0.5	Pass
11	2462	17.84	0.5	Pass

Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	2.4GHz 802.11n HT40 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
03	2422	37.20	0.5	Pass
06	2437	36.96	0.5	Pass
09	2452	37.36	0.5	Pass



Test Mode :	802.11a	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
149	5745	16.60	0.5	Pass
157	5785	16.76	0.5	Pass
165	5825	16.76	0.5	Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	5GHz 802.11n HT20 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
149	5745	17.84	0.5	Pass
157	5785	17.86	0.5	Pass
165	5825	18.00	0.5	Pass

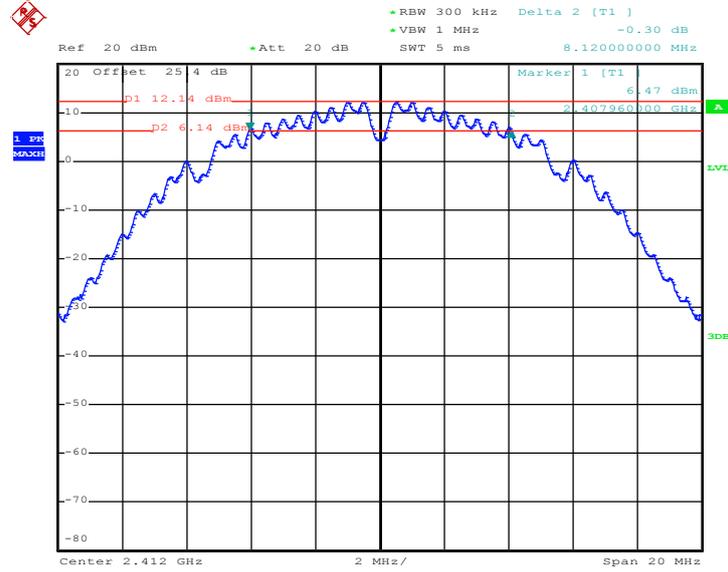
Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	5GHz 802.11n HT40 6dB Bandwidth (MHz)	6dB Bandwidth Min. Limit (MHz)	Pass/Fail
151	5755	37.28	0.5	Pass
159	5795	37.36	0.5	Pass



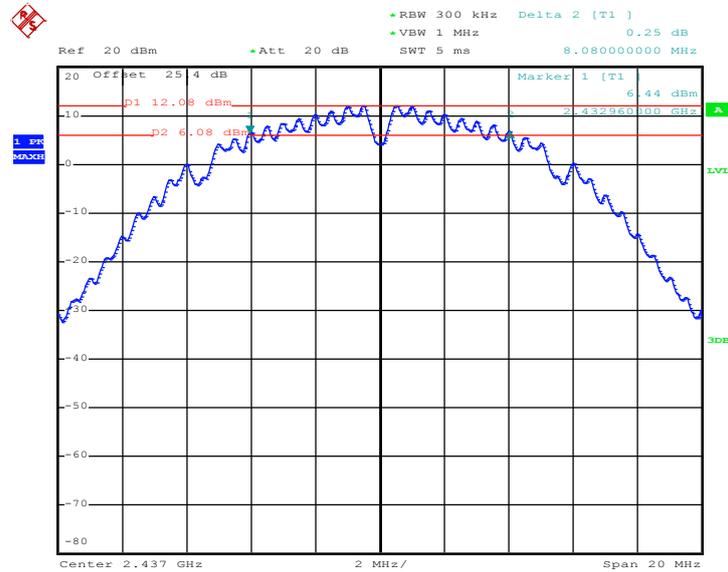
3.1.6 Test Result of 6dB Bandwidth Plots

6 dB Bandwidth Plot on 802.11b Channel 01



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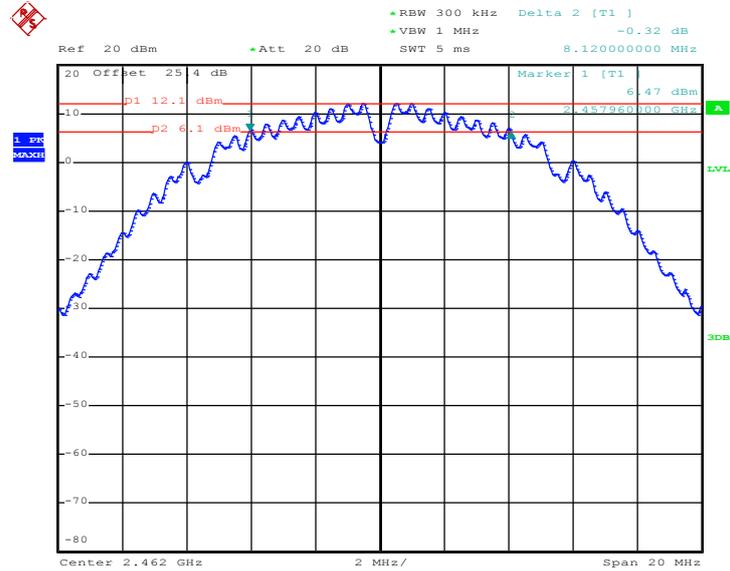
6 dB Bandwidth Plot on 802.11b Channel 06



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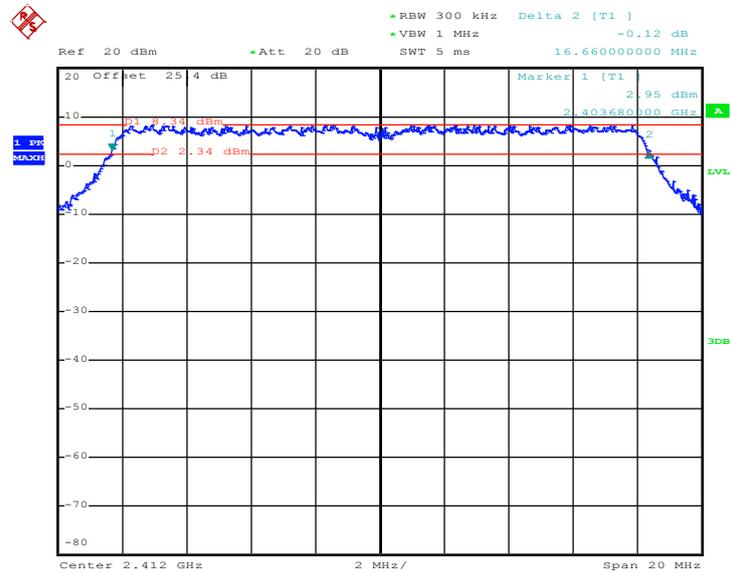


6 dB Bandwidth Plot on 802.11b Channel 11



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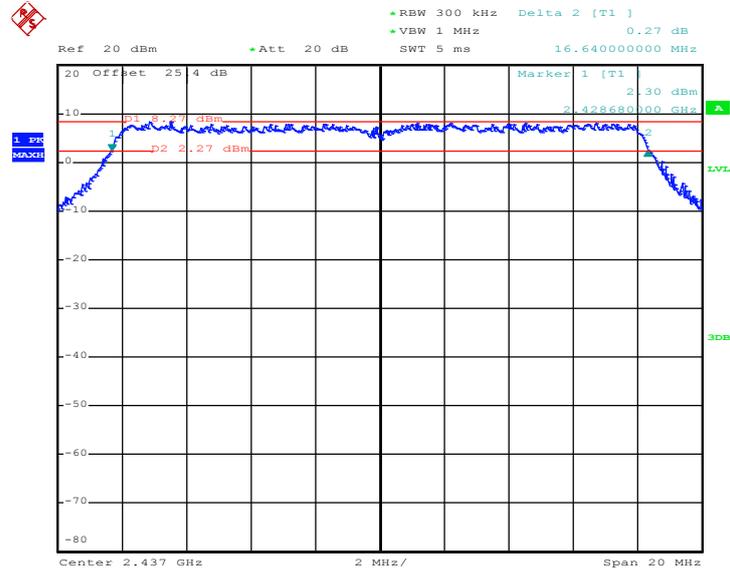
6 dB Bandwidth Plot on 802.11g Channel 01



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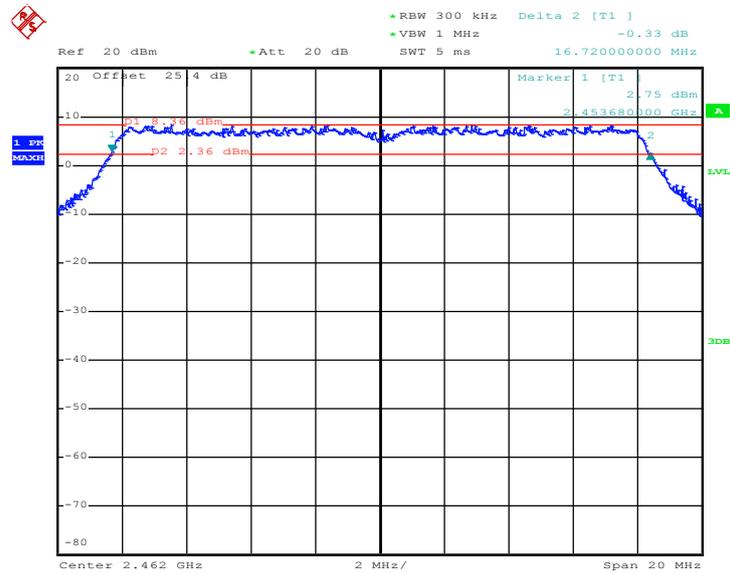


6 dB Bandwidth Plot on 802.11g Channel 06



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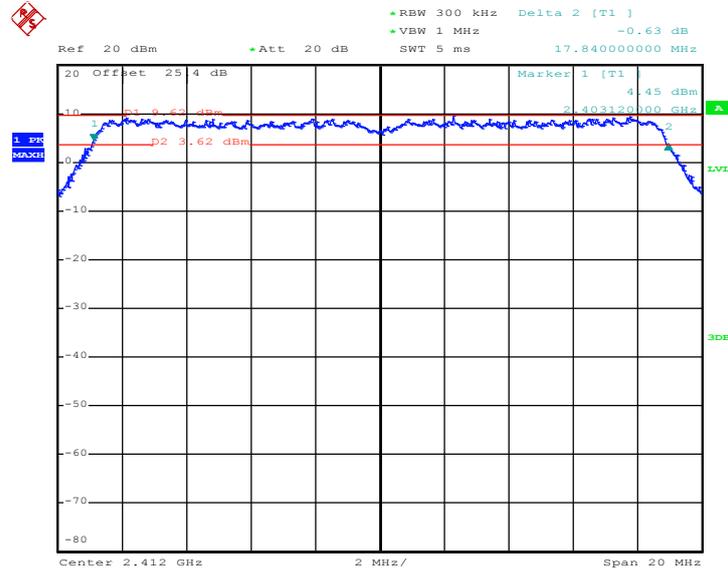
6 dB Bandwidth Plot on 802.11g Channel 11



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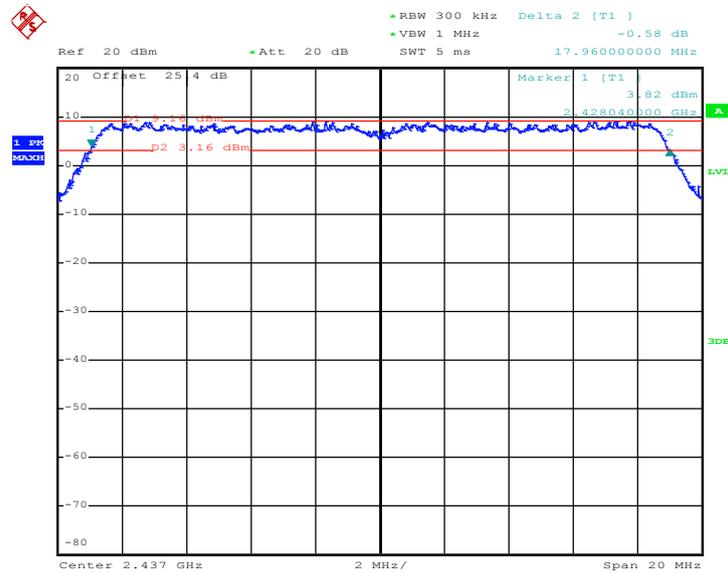


6 dB Bandwidth Plot on 2.4G 802.11n HT20 Channel 01



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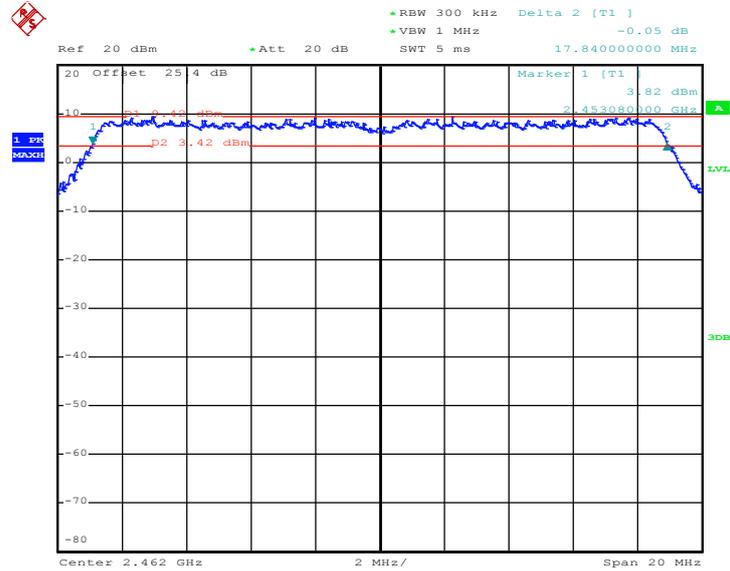
6 dB Bandwidth Plot on 2.4G 802.11n HT20 Channel 06



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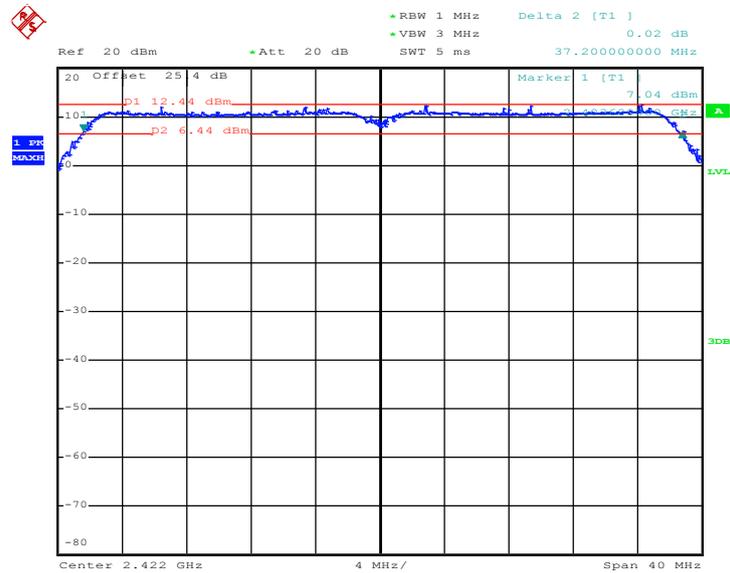


6 dB Bandwidth Plot on 2.4G 802.11n HT20 Channel 11



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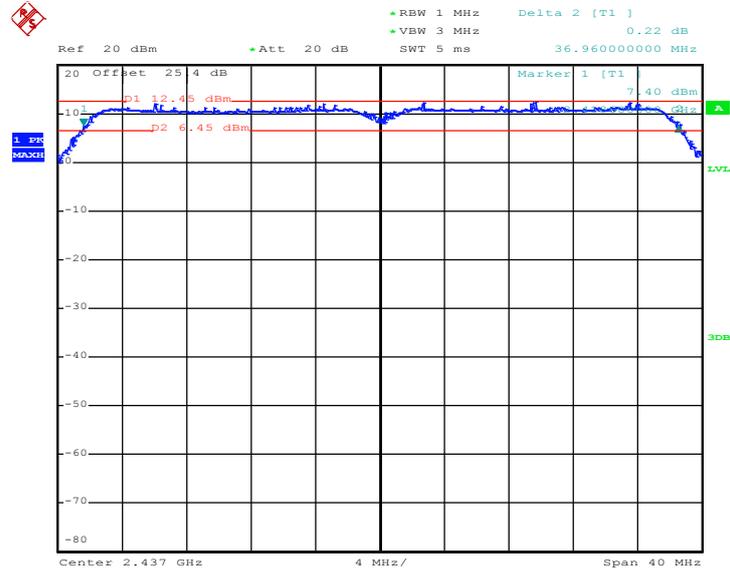
6 dB Bandwidth Plot on 2.4G 802.11n HT40 Channel 03



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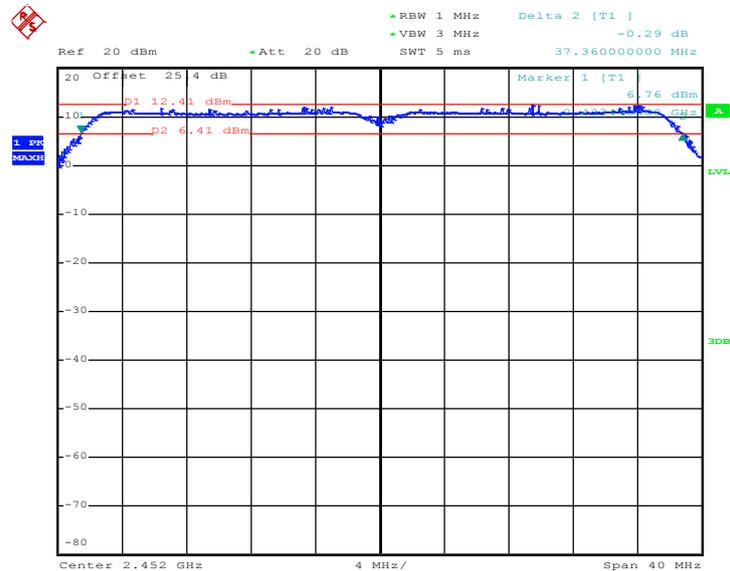


6 dB Bandwidth Plot on 2.4G 802.11n HT40 Channel 06



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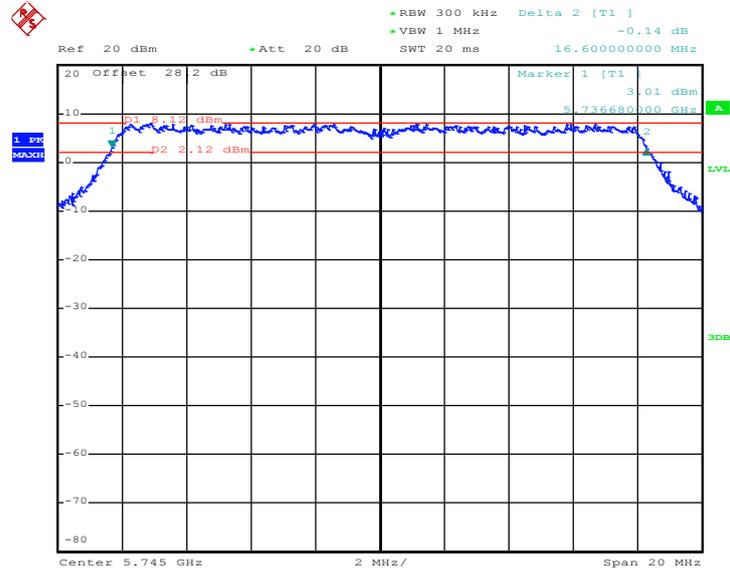
6 dB Bandwidth Plot on 2.4G 802.11n HT40 Channel 09



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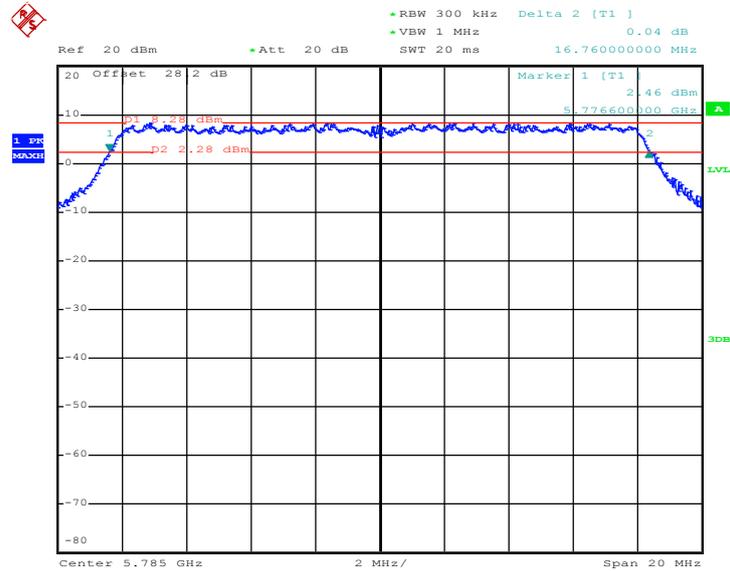


6 dB Bandwidth Plot on 802.11a Channel 149



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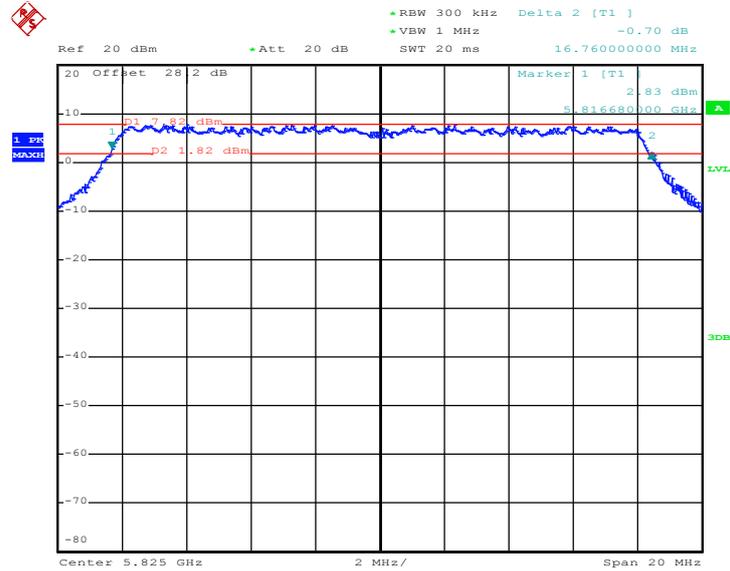
6 dB Bandwidth Plot on 802.11a Channel 157



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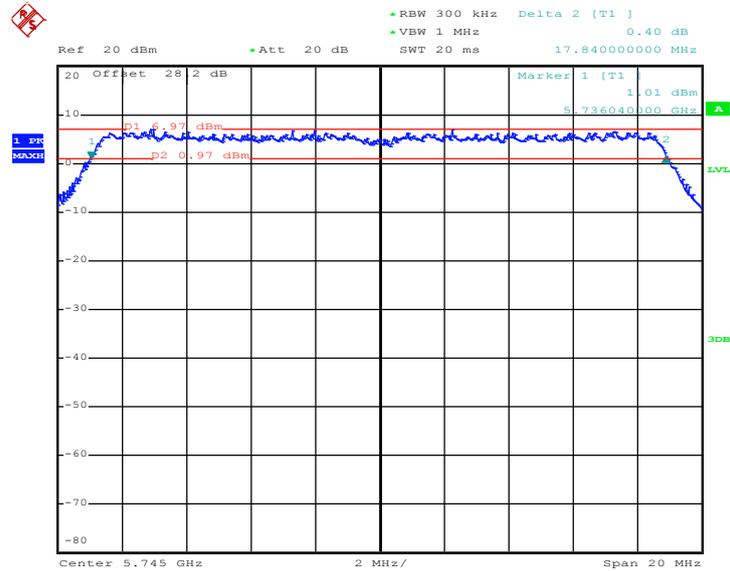


6 dB Bandwidth Plot on 802.11a Channel 165



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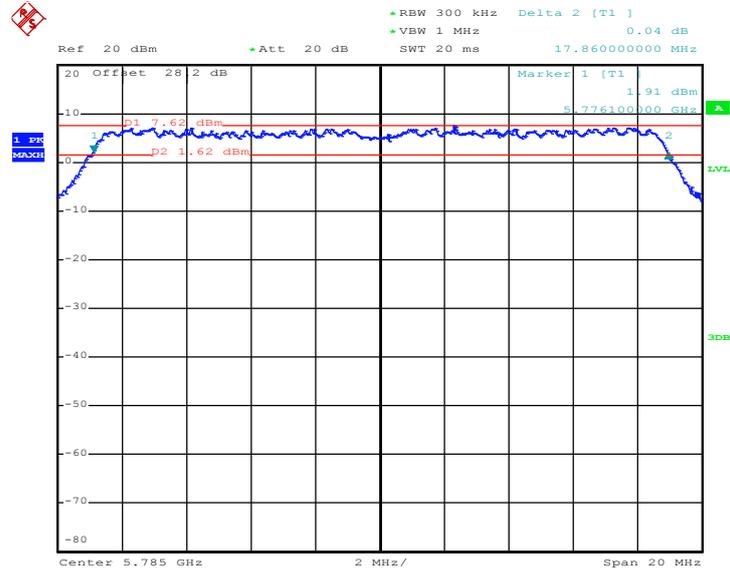
6 dB Bandwidth Plot on 5G 802.11n HT20 Channel 149



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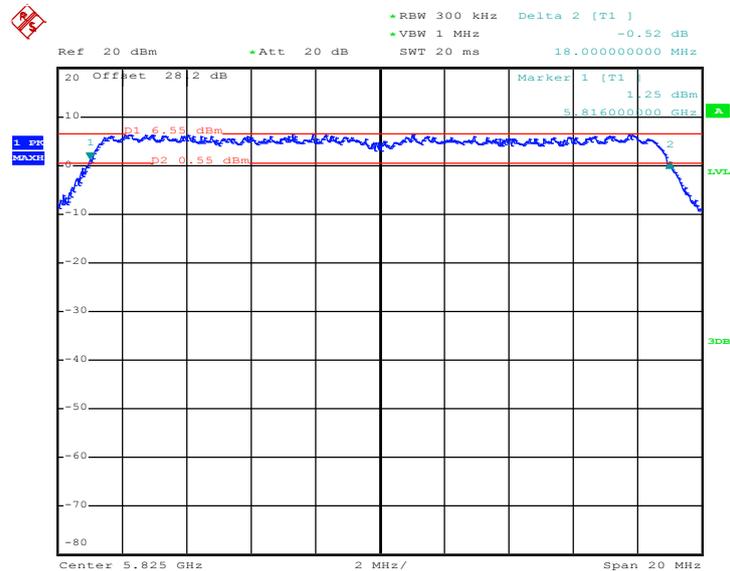


6 dB Bandwidth Plot on 5G 802.11n HT20 Channel 157



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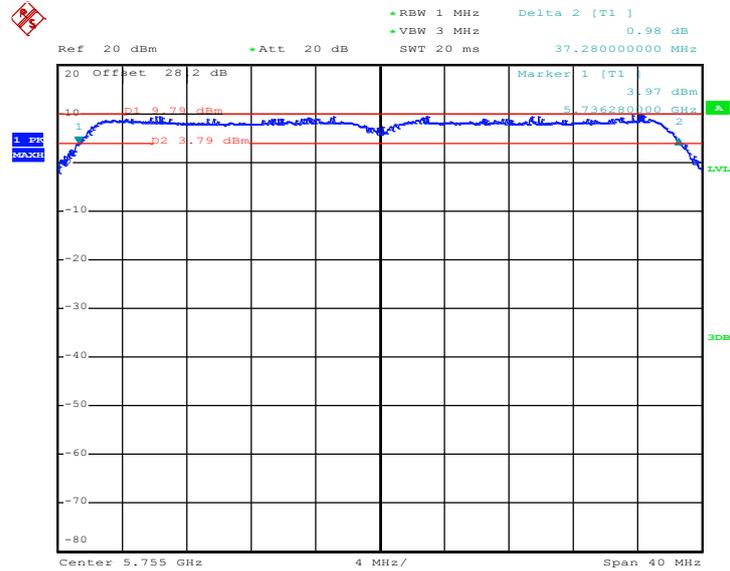
6 dB Bandwidth Plot on 5G 802.11n HT20 Channel 165



Date: 25.AUG.2012 14:03:40

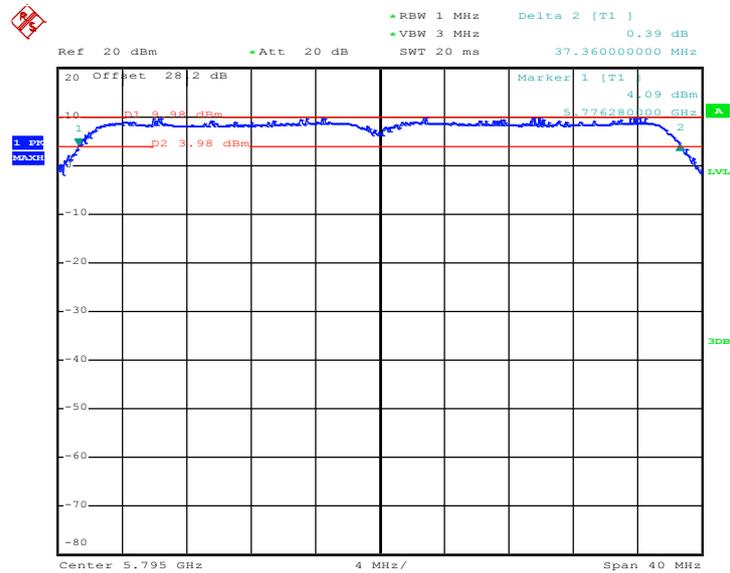


6 dB Bandwidth Plot on 5G 802.11n HT40 Channel 151



Date: 25.AUG.2012 14:10:15

6 dB Bandwidth Plot on 5G 802.11n HT40 Channel 159



Date: 25.AUG.2012 14:14:57

3.2 Output Power Measurement

3.2.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz and 5725-5850MHz, the limit for peak output power is 30dBm. If transmitting Antenna of directional gain greater than 6dBi are used the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the Antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the Antenna exceeds 6dBi.

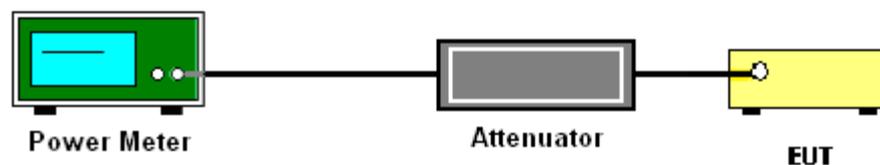
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas. Guidance and TCB Workshop 2012, April.
2. The RF output of EUT was connected to the power meter by a low loss cable
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.

3.2.4 Test Setup





3.2.5 Test Result of Peak Output Power

Test Mode :	802.11b	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11b Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	21.27	30	Pass
06	2437	21.09	30	Pass
11	2462	21.02	30	Pass

Test Mode :	802.11g	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11g Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	25.80	30	Pass
06	2437	25.71	30	Pass
11	2462	25.44	30	Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	2.4G 802.11n HT20 Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
01	2412	26.22	30	Pass
06	2437	26.09	30	Pass
11	2462	24.22	30	Pass

Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	2.4G 802.11n HT40 Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
03	2422	24.66	30	Pass
06	2437	25.41	30	Pass
09	2452	23.91	30	Pass



Test Mode :	802.11 a	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
149	5745	23.49	30	Pass
157	5785	23.68	30	Pass
165	5825	23.63	30	Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	5G 802.11n HT20 Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
149	5745	22.81	30	Pass
157	5785	23.22	30	Pass
165	5825	23.18	30	Pass

Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	5G 802.11n HT40 Peak Output Power (dBm)	Max. Limits (dBm)	Pass/Fail
151	5755	22.70	30	Pass
159	5795	23.20	30	Pass



3.2.6 Test Result of Average output Power (Reporting Only)

Test Mode :	802.11b	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%
Duty Cycle:	99.20%	Duty Factor:	0.03dB

Channel	Frequency (MHz)	802.11b Average Output Power (dBm)
01	2412	18.29
06	2437	18.21
11	2462	18.14

Test Mode :	802.11g	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%
Duty Cycle:	95.39%	Duty Factor:	0.20dB

Channel	Frequency (MHz)	802.11g Average Output Power (dBm)
01	2412	16.72
06	2437	16.48
11	2462	14.47

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%
Duty Cycle:	95.05%	Duty Factor:	0.22dB

Channel	Frequency (MHz)	802.11n HT20 Average Output Power (dBm)
01	2412	17.39
06	2437	17.43
11	2462	13.57

Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%
Duty Cycle:	86.98%	Duty Factor:	0.61dB

Channel	Frequency (MHz)	802.11n HT40 Average Output Power (dBm)
03	2422	14.51
06	2437	15.57
09	2452	13.46



Test Mode :	802.11a	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%
Duty Cycle:	95.03%	Duty Factor:	0.22dB

Channel	Frequency (MHz)	802.11a Average Output Power (dBm)
149	5745	14.59
157	5785	15.05
165	5825	14.91

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%
Duty Cycle:	95.17%	Duty Factor:	0.22dB

Channel	Frequency (MHz)	802.11n HT20 Average Output Power (dBm)
149	5745	13.55
157	5785	13.93
165	5825	13.79

Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%
Duty Cycle:	86.98%	Duty Factor:	0.61dB

Channel	Frequency (MHz)	802.11n HT40 Average Output Power (dBm)
151	5755	13.23
159	5795	13.68

3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

The peak power spectral density shall not be greater than 8dBm in any 3KHz band at any time interval of continuous transmission.

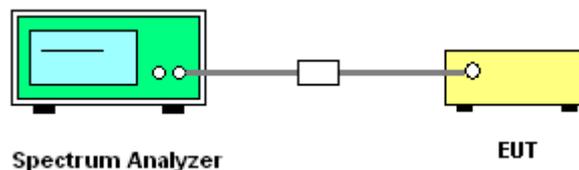
3.3.2 Measuring Instruments

See list of measuring instruments of this test report.

3.3.3 Test Procedures

1. The testing follows Measurement Procedure 5.3.1 (Peak PSD) of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance and TCB Workshop 2012, April.
2. The RF output of EUT was connected to the spectrum analyzer by a low loss cable. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 KHz. Video bandwidth (VBW) \geq 300 KHz In order to make an accurate measurement, set the span to 5-30% greater than Emission Bandwidth (EBW)
5. Detector = peak, Sweep time = auto couple, Trace mode = max hold, Allow trace to fully stabilize. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.
6. Record the measurement data derived from spectrum analyzer.
7. Scale the observed power level to an equivalent value in 3 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(3 \text{ kHz}/100 \text{ kHz} = -15.2 \text{ dB})$.

3.3.4 Test Setup





3.3.5 Test Result of Power Spectral Density

Test Mode :	802.11b	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11b Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	11.51	-3.69	8	Pass
06	2437	11.67	-3.53	8	Pass
11	2462	11.64	-3.56	8	Pass

Test Mode :	802.11g	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11g Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	5.14	-10.06	8	Pass
06	2437	5.02	-10.18	8	Pass
11	2462	4.97	-10.23	8	Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	2.4G 802.11n HT20 Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
01	2412	6.03	-9.17	8	Pass
06	2437	5.89	-9.31	8	Pass
11	2462	6.02	-9.18	8	Pass



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	2.4G 802.11n HT40 Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
03	2422	2.61	-12.59	8	Pass
06	2437	2.62	-12.58	8	Pass
09	2452	2.60	-12.60	8	Pass

Test Mode :	802.11a	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	802.11a Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
149	5745	4.51	-10.69	8	Pass
157	5785	4.91	-10.29	8	Pass
165	5825	4.21	-10.99	8	Pass

Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

Channel	Frequency (MHz)	5G 802.11n HT20 Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
149	5745	3.30	-11.90	8	Pass
157	5785	3.51	-11.69	8	Pass
165	5825	3.05	-12.15	8	Pass



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Engineer :	Book Lin	Relative Humidity :	50~53%

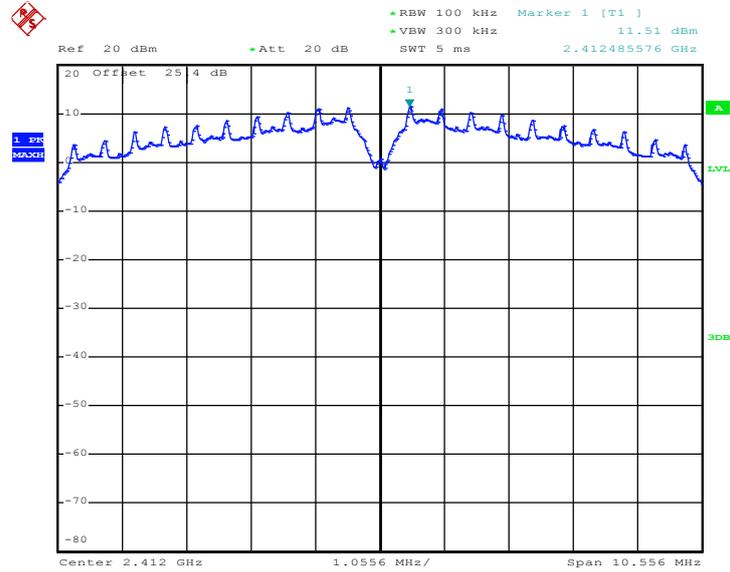
Channel	Frequency (MHz)	5G 802.11n HT40 Power Density		Max. Limits (dBm)	Pass/Fail
		Measured PSD/100KHz (dBm)	PSD/3KHz (dBm)		
151	5755	0.04	-15.16	8	Pass
159	5795	0.32	-14.88	8	Pass

Note:

1. Measured power density (dBm) has offset with cable loss.
2. BWCF (dB) = $10 \log (3k/100k) = -15.2 \text{ dB}$
3. Power Density/ 3kHz (dBm) = Measured power density/ 100KHz (dBm) + BWCF (dB)

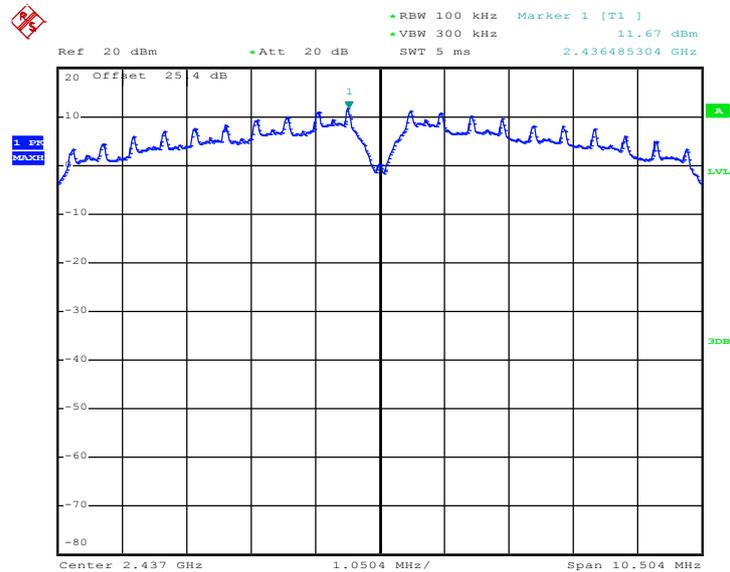
3.3.6 Test Result of Power Spectral Density Plots

PSD Plot on 802.11b Channel 01



Date: 25.AUG.2012 12:56:48

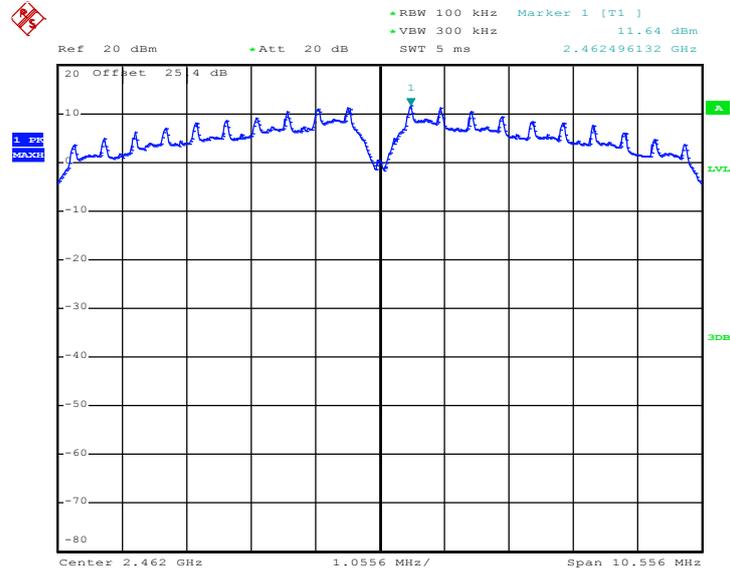
PSD Plot on 802.11b Channel 06



Date: 25.AUG.2012 13:00:15

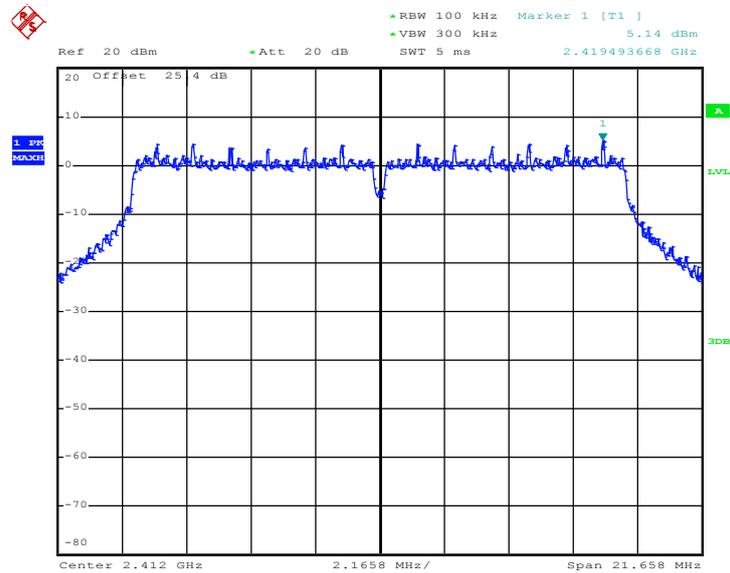


PSD Plot on 802.11b Channel 11



Date: 25.AUG.2012 13:03:18

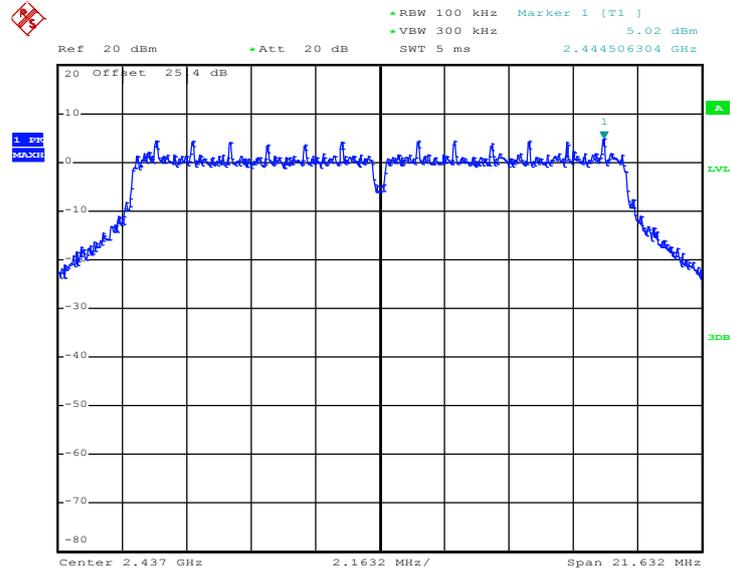
PSD Plot on 802.11g Channel 01



Date: 25.AUG.2012 13:08:01

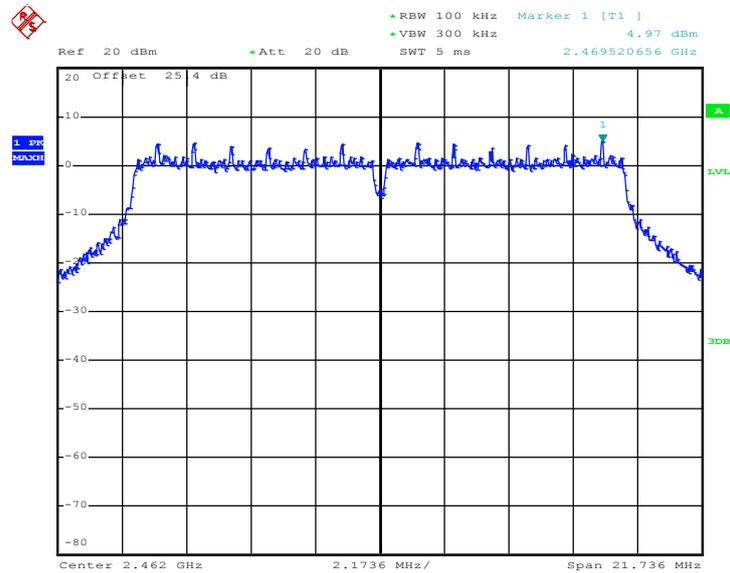


PSD Plot on 802.11g Channel 06



Date: 25.AUG.2012 13:11:06

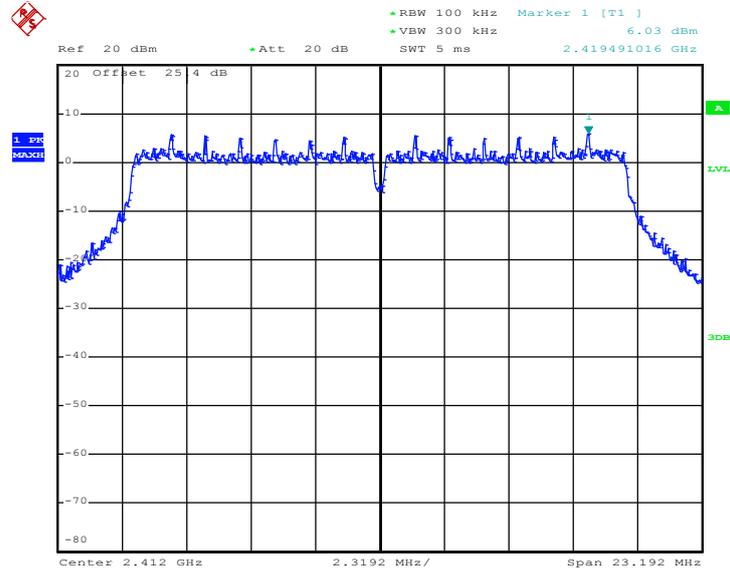
PSD Plot on 802.11g Channel 11



Date: 25.AUG.2012 13:13:42

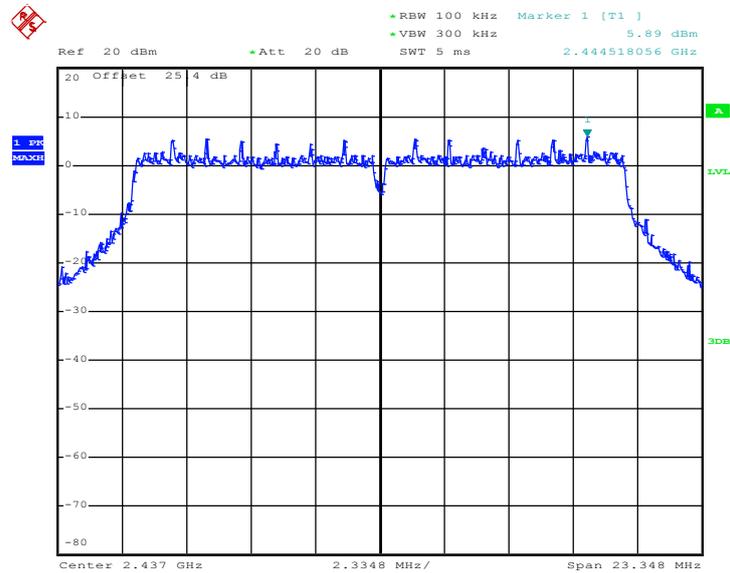


PSD Plot on 2.4G 802.11n HT20 Channel 01



Date: 25.AUG.2012 13:20:11

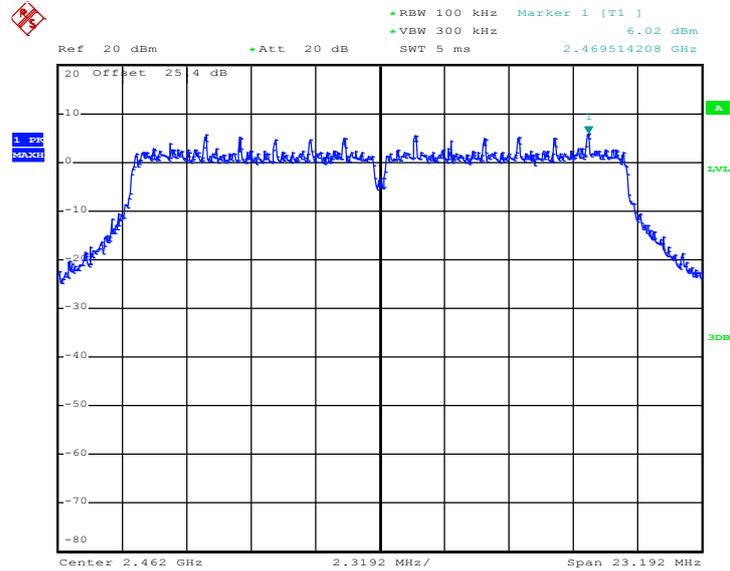
PSD Plot on 2.4G 802.11n HT20 Channel 06



Date: 25.AUG.2012 13:27:01

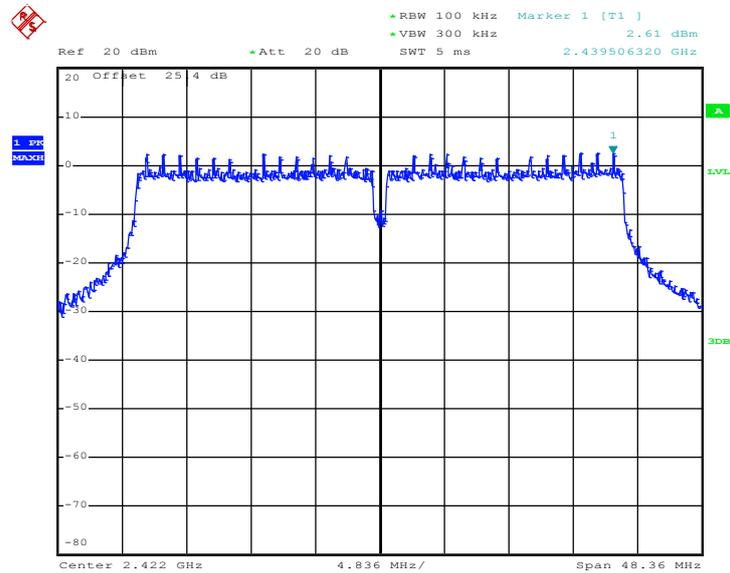


PSD Plot on 2.4G 802.11n HT20 Channel 11



Date: 25.AUG.2012 13:30:39

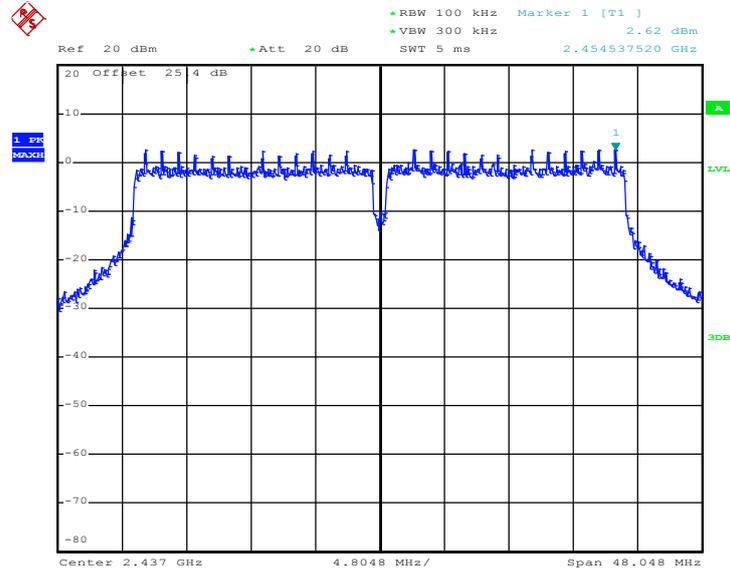
PSD Plot on 2.4G 802.11n HT40 Channel 03



Date: 25.AUG.2012 14:21:09

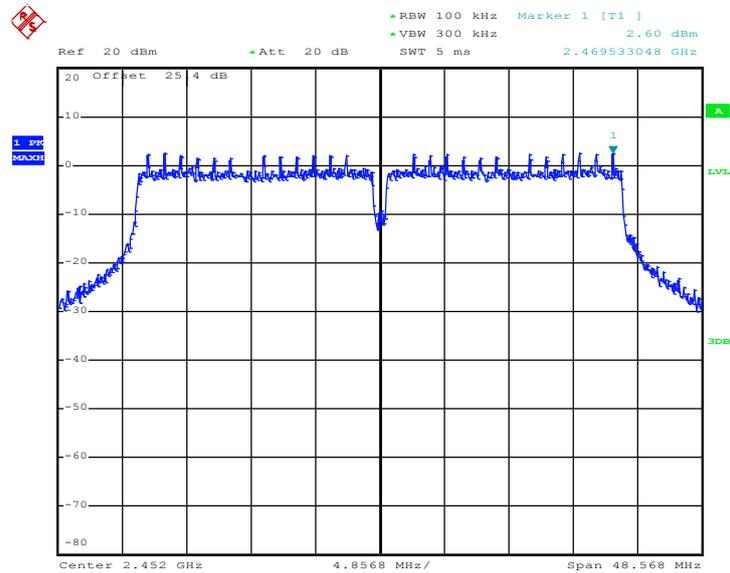


PSD Plot on 2.4G 802.11n HT40 Channel 06



Date: 25.AUG.2012 14:33:43

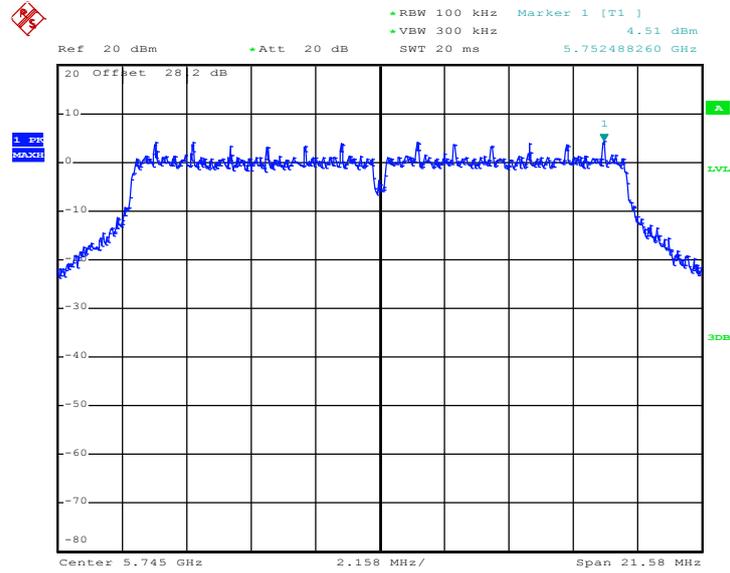
PSD Plot on 2.4G 802.11n HT40 Channel 09



Date: 25.AUG.2012 14:42:48

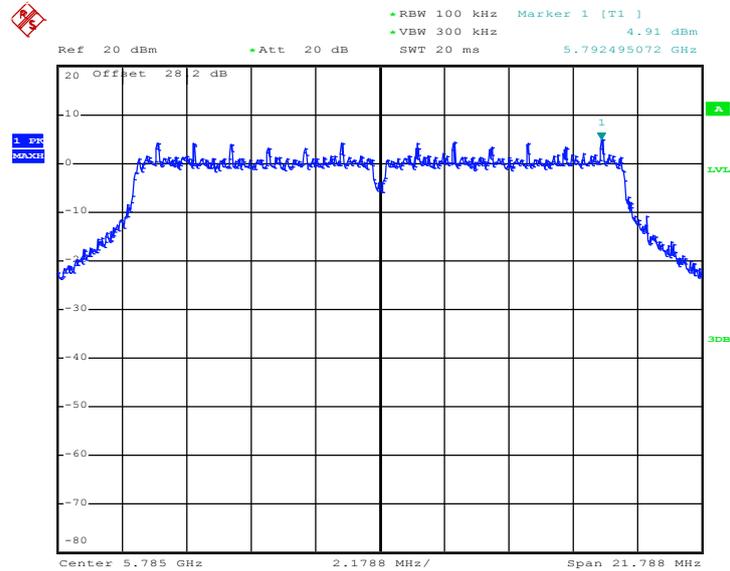


PSD Plot on 802.11a Channel 149



Date: 25.AUG.2012 13:37:03

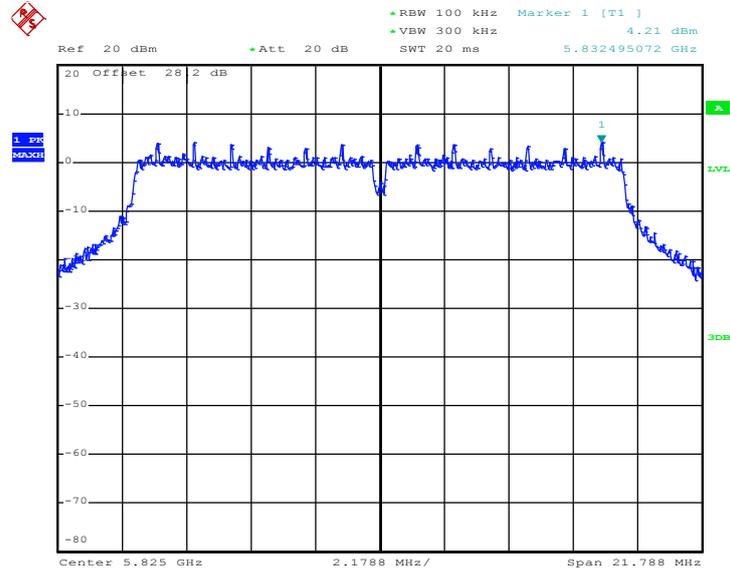
PSD Plot on 802.11a Channel 157



Date: 25.AUG.2012 13:43:58

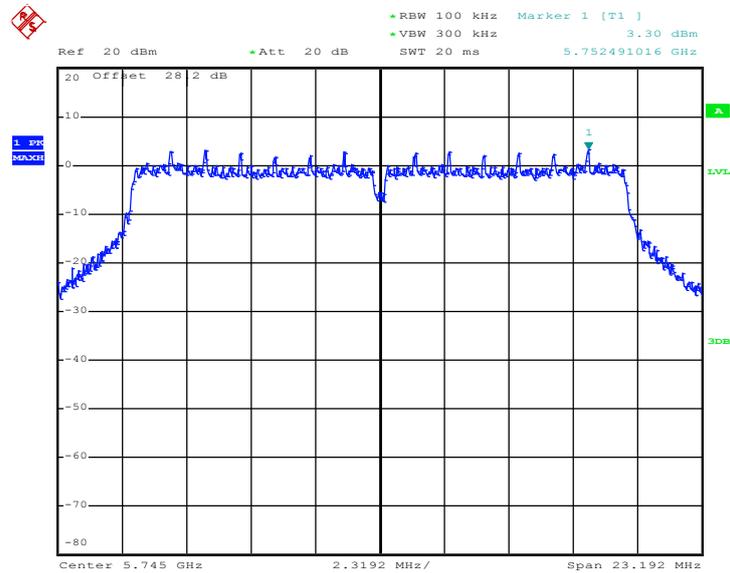


PSD Plot on 802.11a Channel 165



Date: 25.AUG.2012 13:48:14

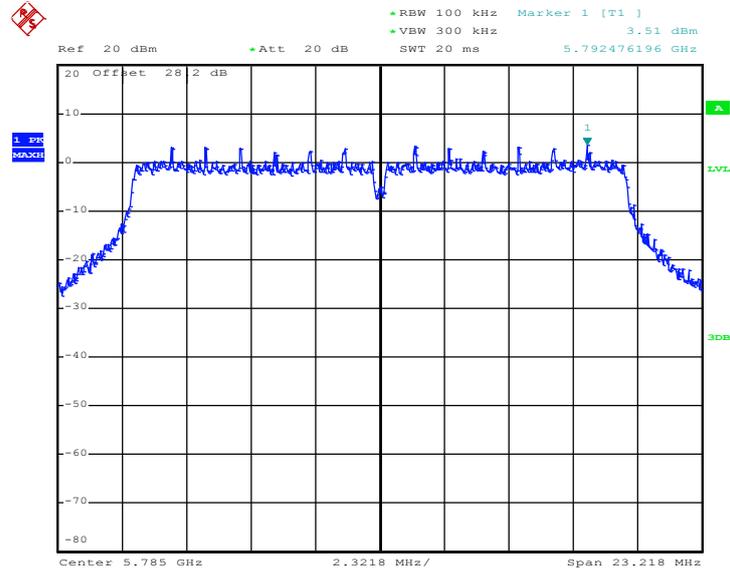
PSD Plot on 5G 802.11n HT20 Channel 149



Date: 25.AUG.2012 13:52:31

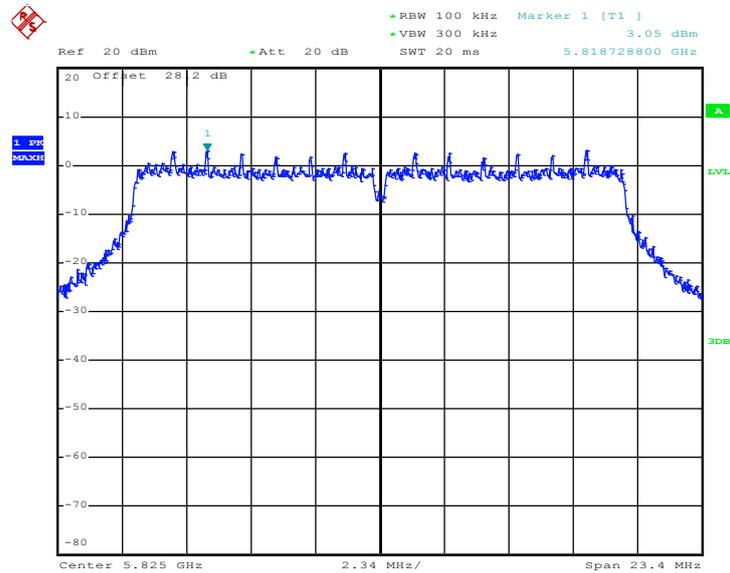


PSD Plot on 5G 802.11n HT20 Channel 157



Date: 25.AUG.2012 14:00:55

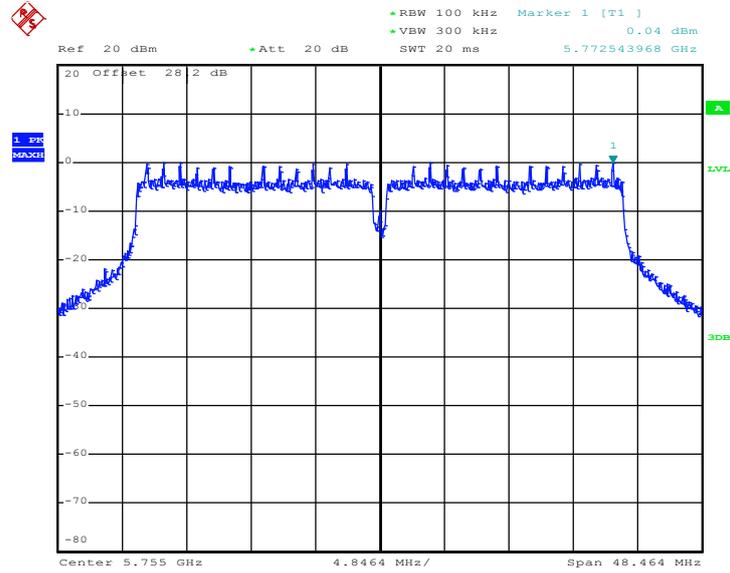
PSD Plot on 5G 802.11n HT20 Channel 165



Date: 25.AUG.2012 14:04:20

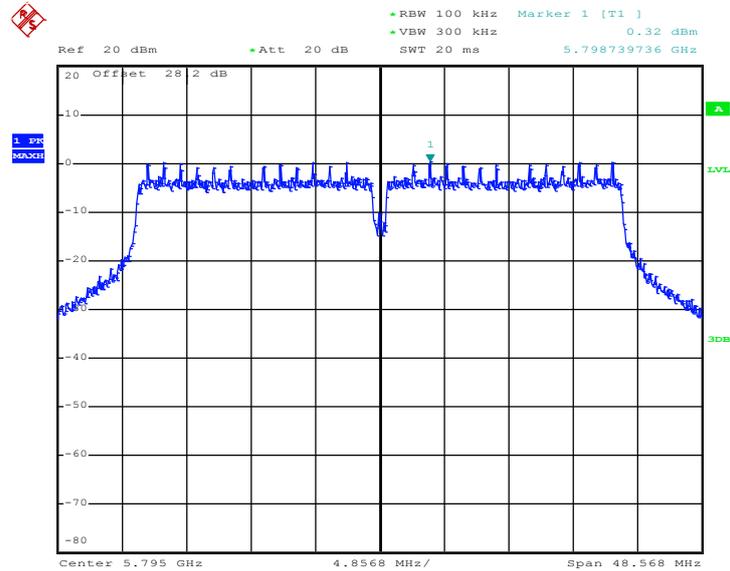


PSD Plot on 5G 802.11n HT40 Channel 151



Date: 25.AUG.2012 14:10:48

PSD Plot on 5G 802.11n HT40 Channel 159



Date: 25.AUG.2012 14:15:26

3.4 Conducted Band Edges and Spurious Emission Measurement

3.4.1 Limit of Conducted Band Edges and Spurious Emission Measurement

In any 100 kHz bandwidth outside of the authorized frequency band, the emissions which fall in the non-restricted bands shall be attenuated at least 20 dB / 30dB relative to the maximum PSD level in 100 kHz by RF conducted measurement and radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

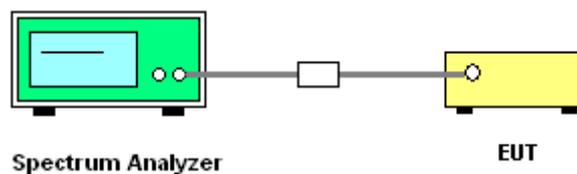
3.4.2 Measuring Instruments

See list of measuring instruments of this test report.

3.4.3 Test Procedures

1. The testing follows the guidelines in the Measurement Procedure of FCC KDB Publication No. 558074 D01 DTS Meas. Guidance and TCB Workshop 2012, April.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Set RBW = 100 KHz, VBW=300 KHz, Peak Detector. Unwanted Emissions measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz, when maximum peak conducted output power procedure is used. The attenuation is set to 30dB, when maximum conducted output power procedure is used.
4. Measure and record the results in the test report.

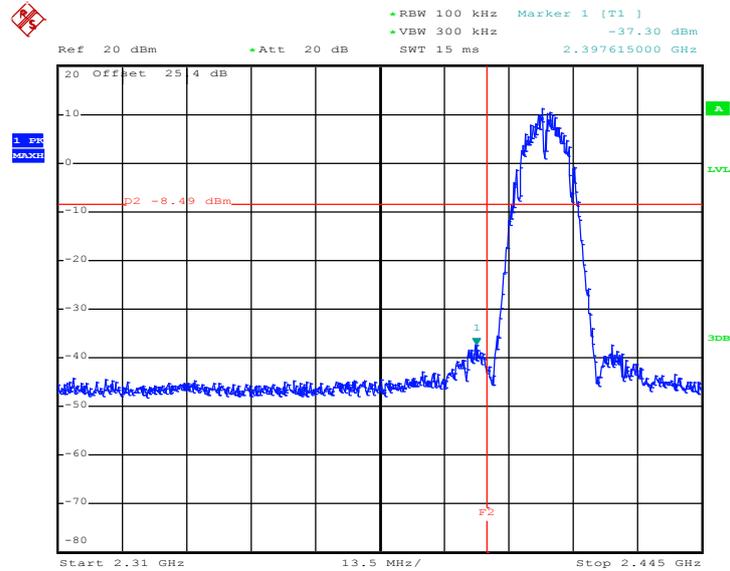
3.4.4 Test Setup



3.4.6 Test Result of Conducted Spurious at Band Edges

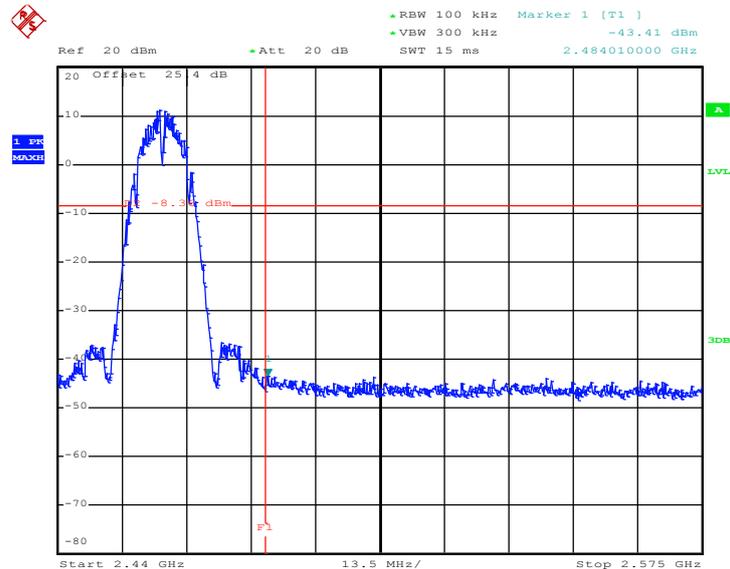
Test Mode :	802.11b	Temperature :	24~26°C
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	01 and 11	Test Engineer :	Book Lin

Low Band Edge Plot on 802.11b Channel 01



Date: 25.AUG.2012 12:57:14

High Band Edge Plot on 802.11b Channel 11

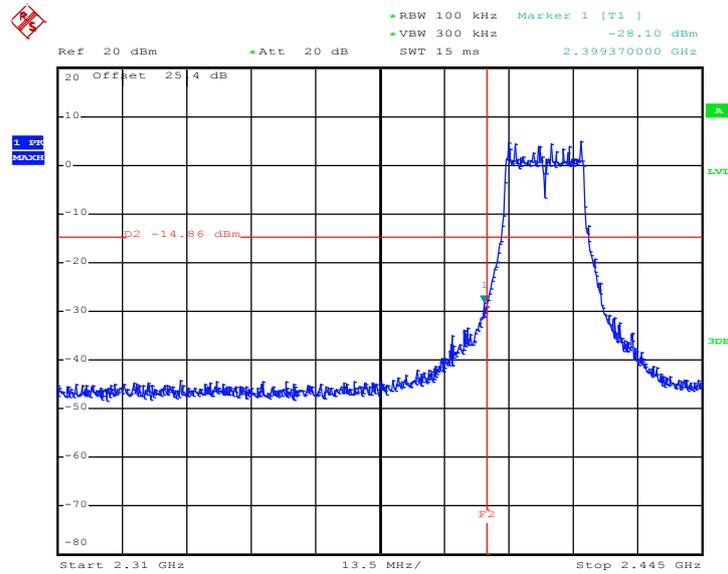


Date: 25.AUG.2012 13:03:41



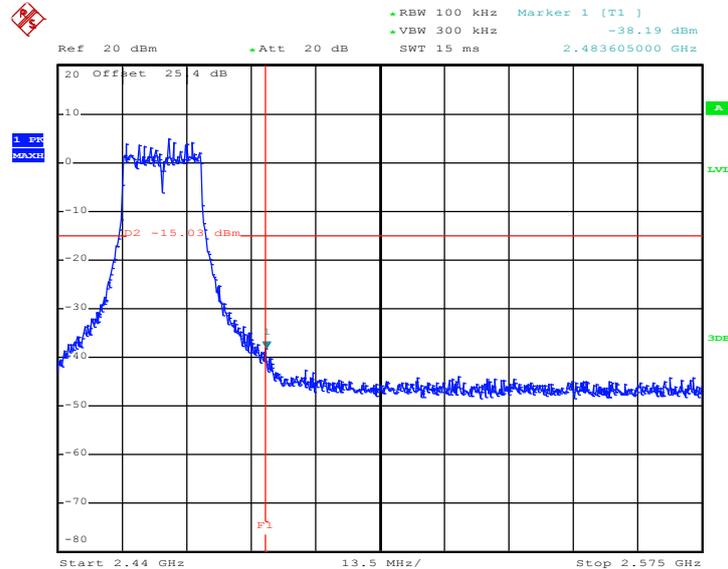
Test Mode :	802.11g	Temperature :	24~26°C
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	01 and 11	Test Engineer :	Book Lin

Low Band Edge Plot on 802.11g Channel 01



Date: 25.AUG.2012 13:08:16

High Band Edge Plot on 802.11g Channel 11

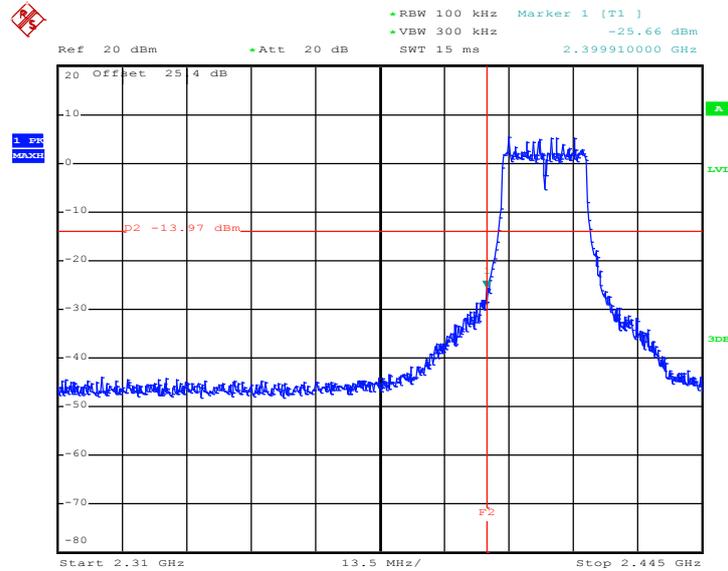


Date: 25.AUG.2012 13:14:00



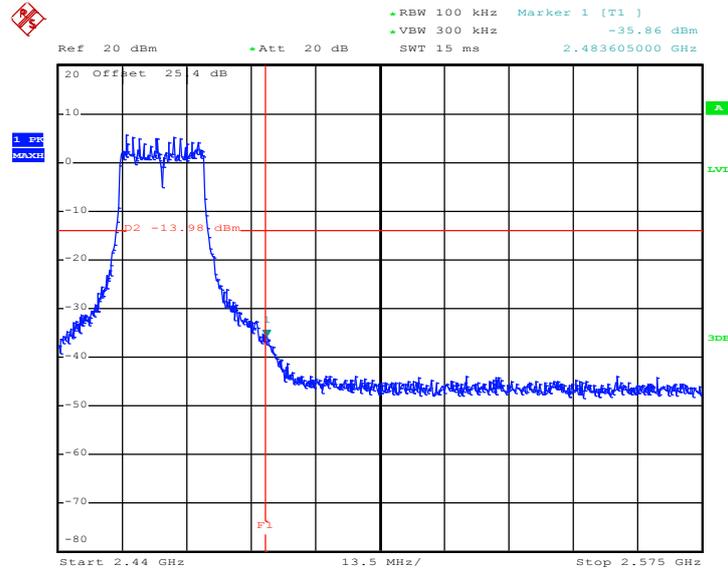
Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	01 and 11	Test Engineer :	Book Lin

Low Band Edge Plot on 2.4G 802.11n HT20 Channel 01



Date: 25.AUG.2012 13:20:26

High Band Edge Plot on 2.4G 802.11n HT20 Channel 11

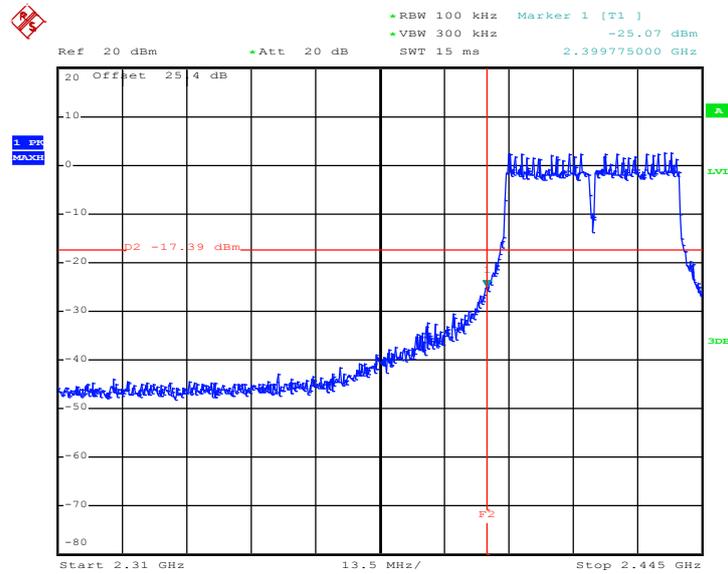


Date: 25.AUG.2012 13:30:55



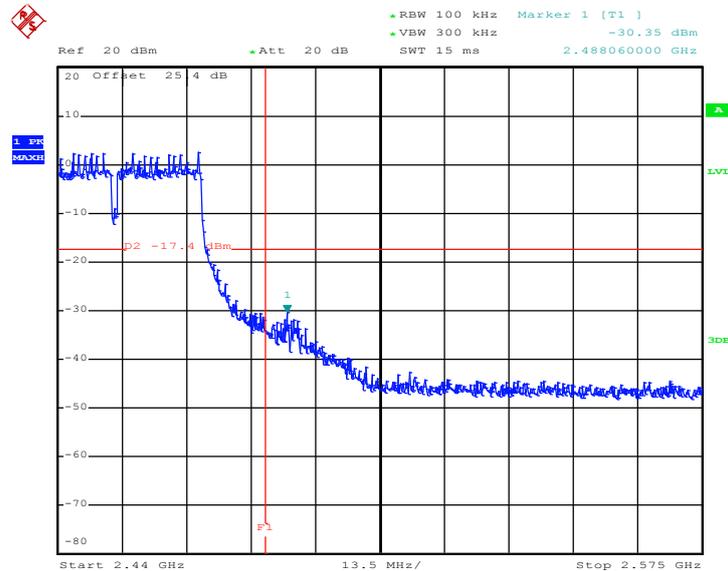
Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	03 and 09	Test Engineer :	Book Lin

Low Band Edge Plot on 2.4G 802.11n HT40 Channel 03



Date: 25.AUG.2012 14:21:25

High Band Edge Plot on 2.4G 802.11n HT40 Channel 09

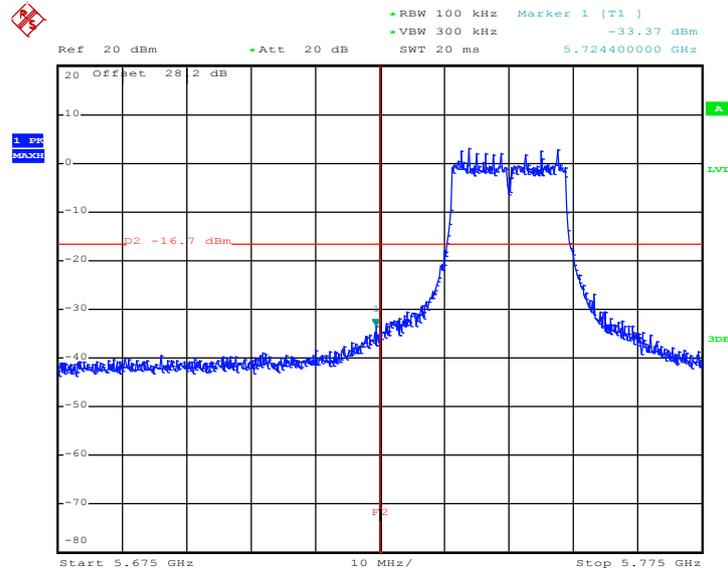


Date: 25.AUG.2012 14:43:11



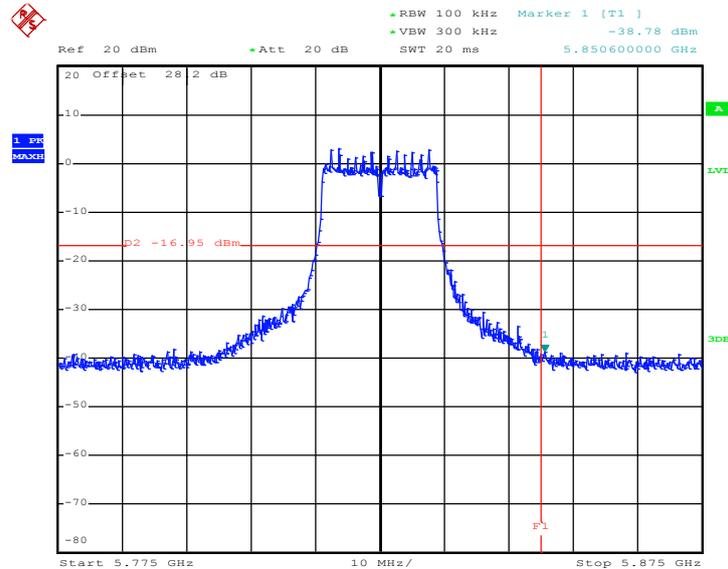
Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	149 and 165	Test Engineer :	Book Lin

Low Band Edge Plot on 5G 802.11n HT20 Channel 149



Date: 25.AUG.2012 13:52:47

High Band Edge Plot on 5G 802.11n HT20 Channel 165

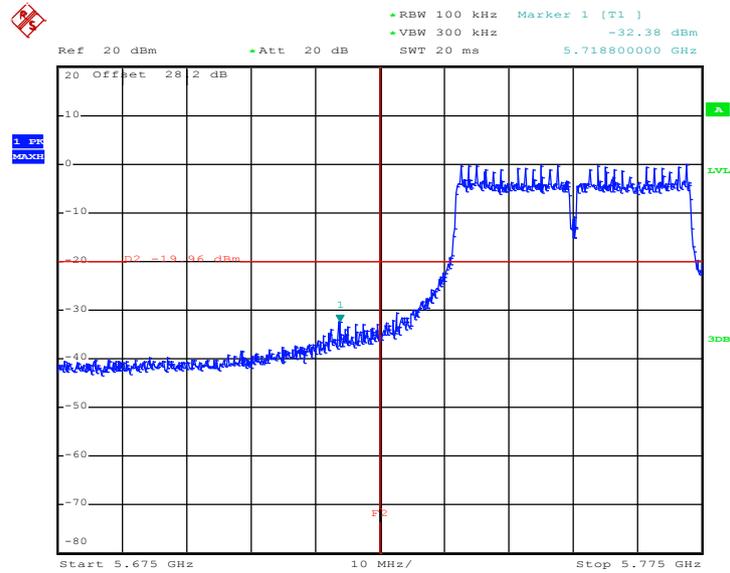


Date: 25.AUG.2012 14:04:37



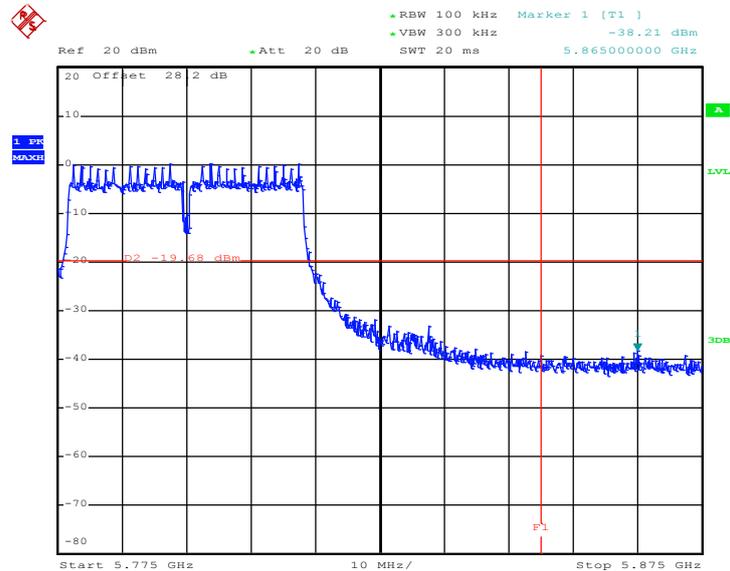
Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Band :	Low and High	Relative Humidity :	50~53%
Test Channel :	151 and 159	Test Engineer :	Book Lin

Low Band Edge Plot on 5G 802.11n HT40 Channel 151



Date: 25.AUG.2012 14:11:03

High Band Edge Plot on 5G 802.11n HT40 Channel 159



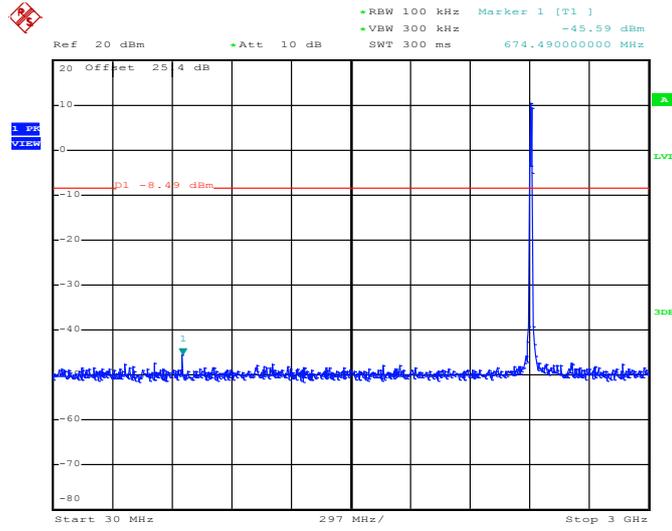
Date: 25.AUG.2012 14:15:47

3.4.7 Test Result of Conducted Spurious Emission

Test Mode :	802.11b	Temperature :	24~26°C
Test Band :	30MHz-3GHz and 2G-25GHz	Relative Humidity :	50~53%
Test Channel :	01, 06, 11	Test Engineer :	Book Lin

802.11b 30 MHz~3 GHz

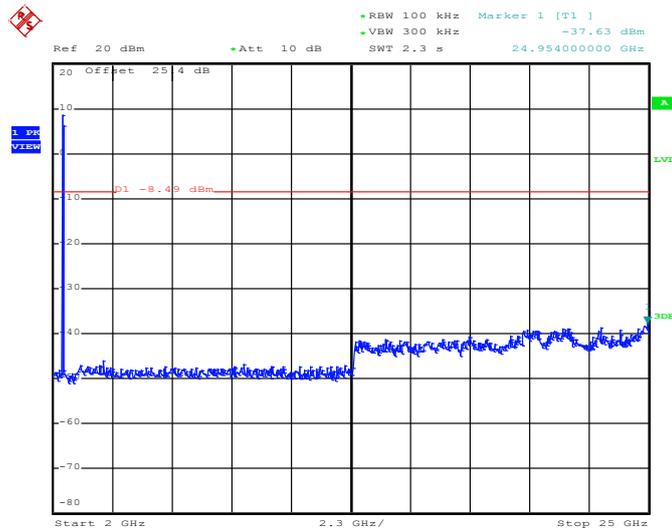
Conducted Spurious Emission Plot on Channel 01



Date: 25.AUG.2012 12:57:44

802.11b 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 01

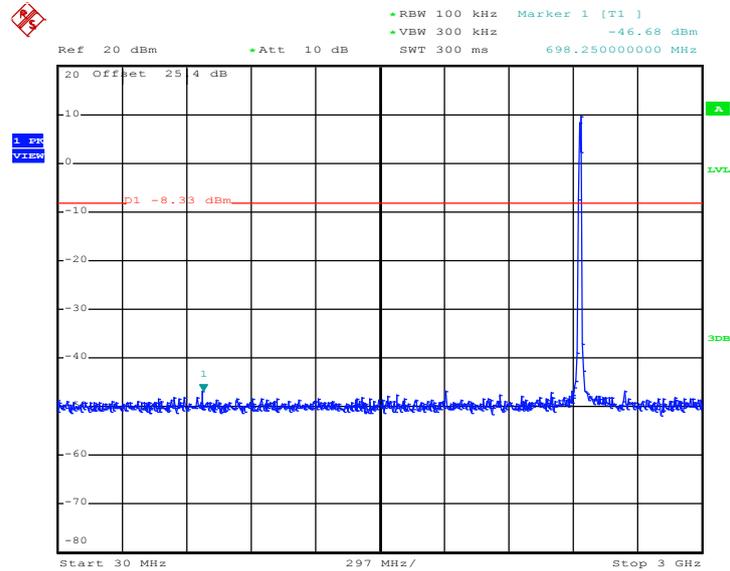


Date: 25.AUG.2012 12:58:02



802.11b 30 MHz~3 GHz

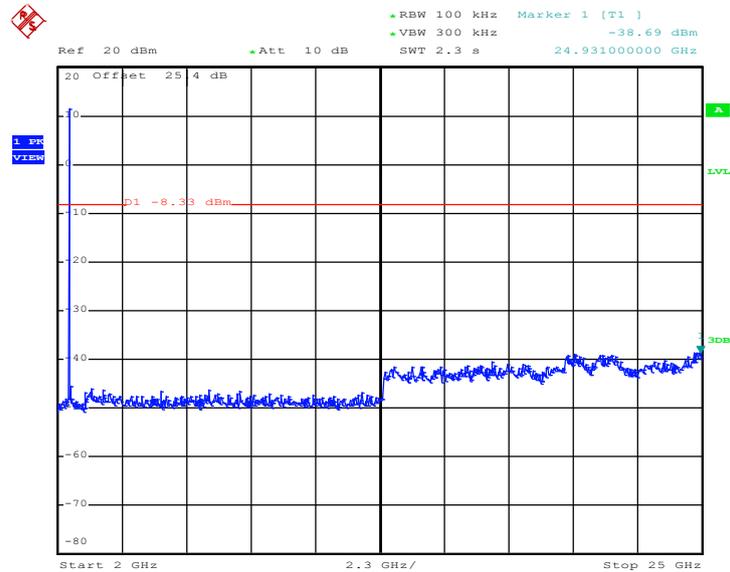
Conducted Spurious Emission Plot on Channel 06



Date: 25.AUG.2012 13:00:36

802.11b 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 06

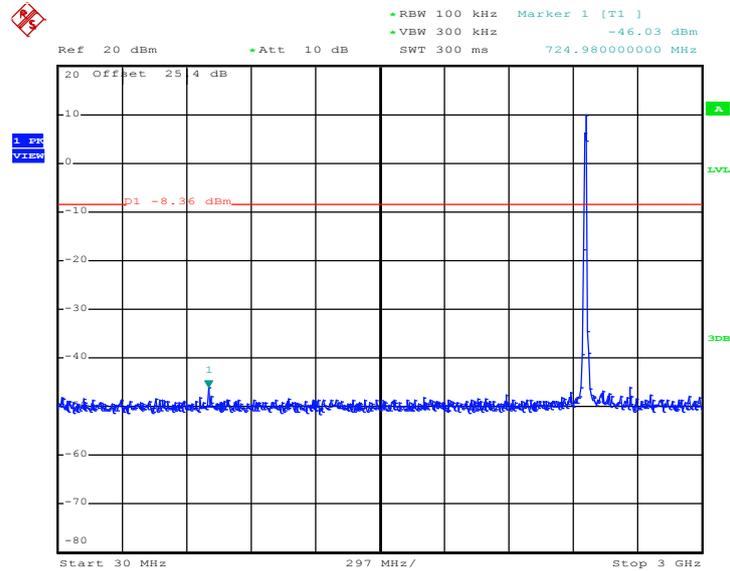


Date: 25.AUG.2012 13:00:53



802.11b 30 MHz~3 GHz

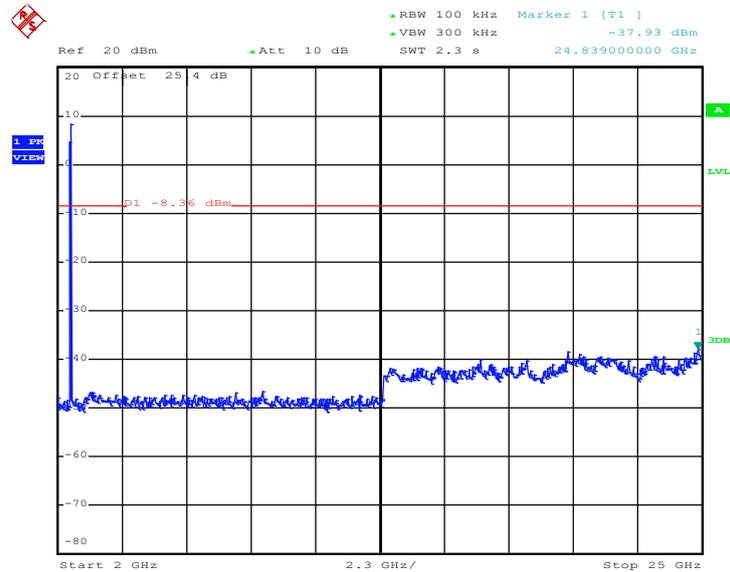
Conducted Spurious Emission Plot on Channel 11



Date: 25.AUG.2012 13:04:24

802.11b 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 11



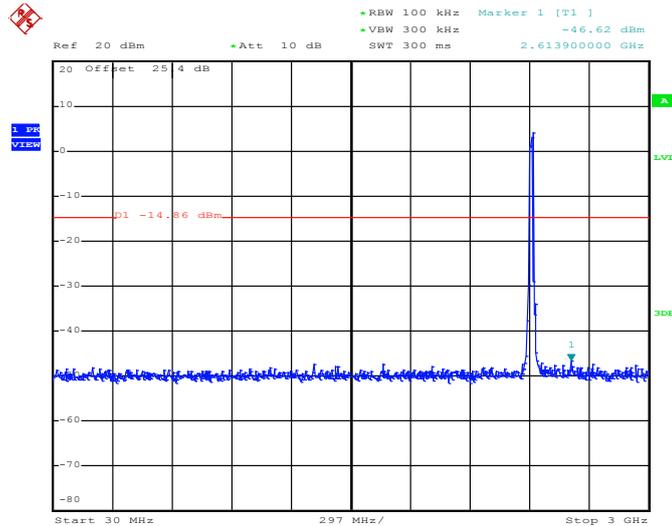
Date: 25.AUG.2012 13:04:42



Test Mode :	802.11g	Temperature :	24~26°C
Test Band :	30MHz-3GHz and 2G-25GHz	Relative Humidity :	50~53%
Test Channel :	01, 06, 11	Test Engineer :	Book Lin

802.11g 30 MHz~3 GHz

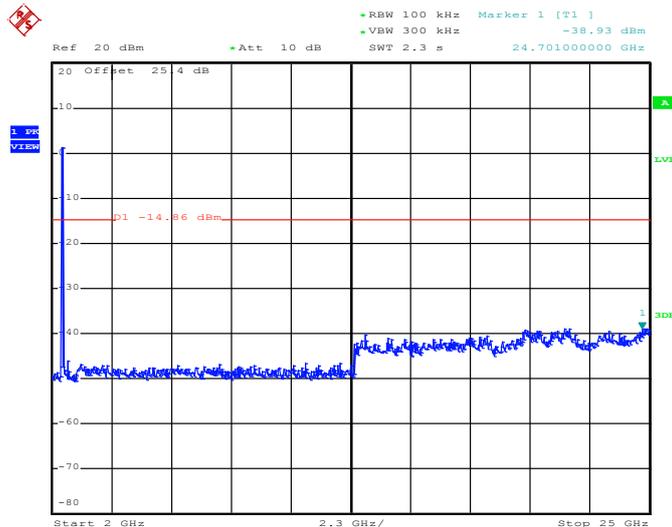
Conducted Spurious Emission Plot on Channel 01



Date: 25.AUG.2012 13:08:38

802.11g 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 01

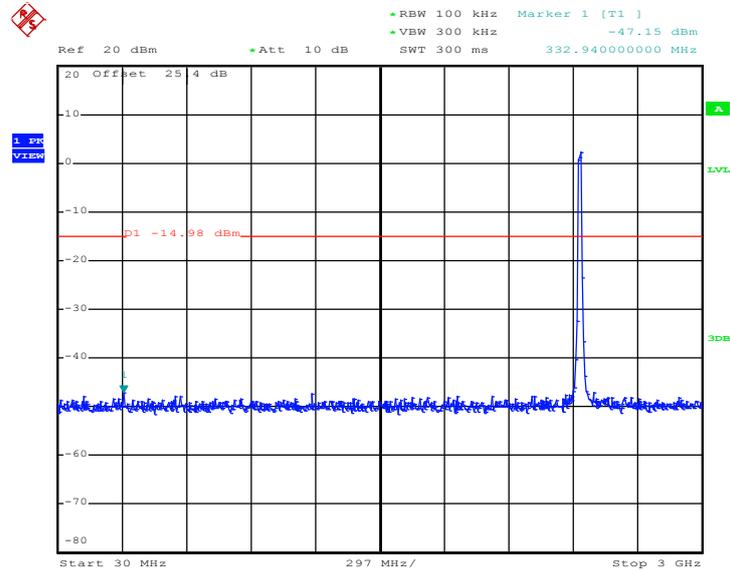


Date: 25.AUG.2012 13:08:56



802.11g 30 MHz~3 GHz

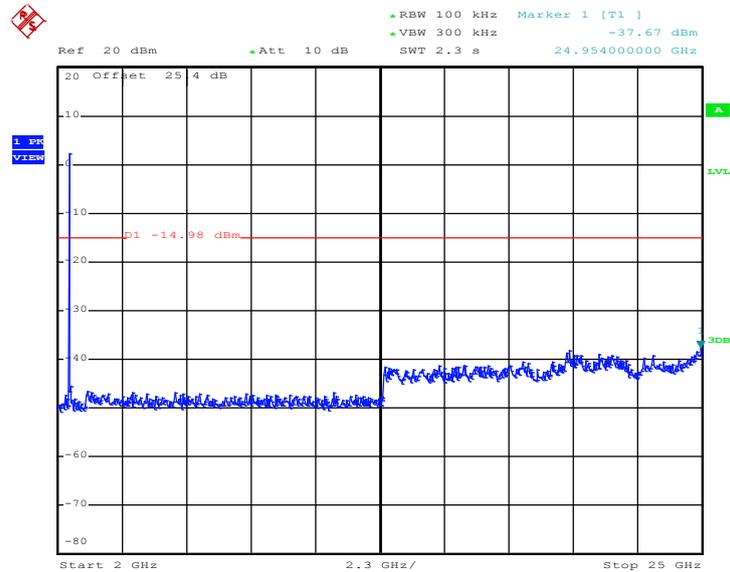
Conducted Spurious Emission Plot on Channel 06



Date: 25.AUG.2012 13:11:28

802.11g 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 06

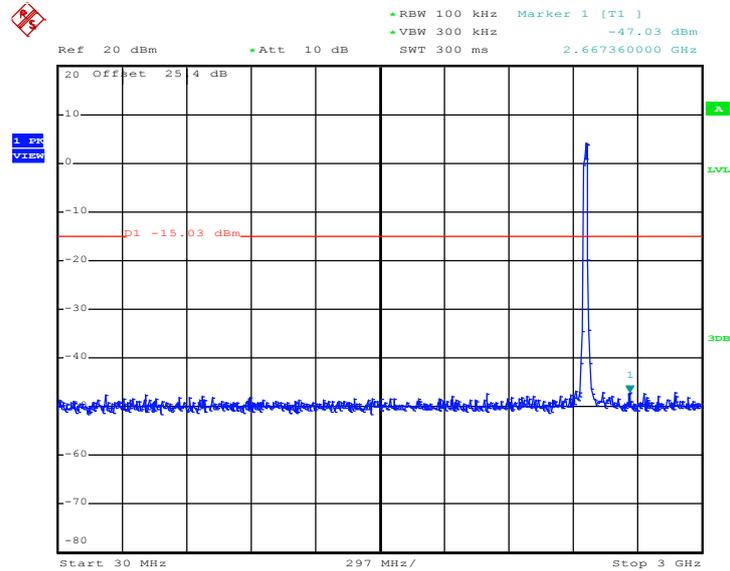


Date: 25.AUG.2012 13:11:45



802.11g 30 MHz~3 GHz

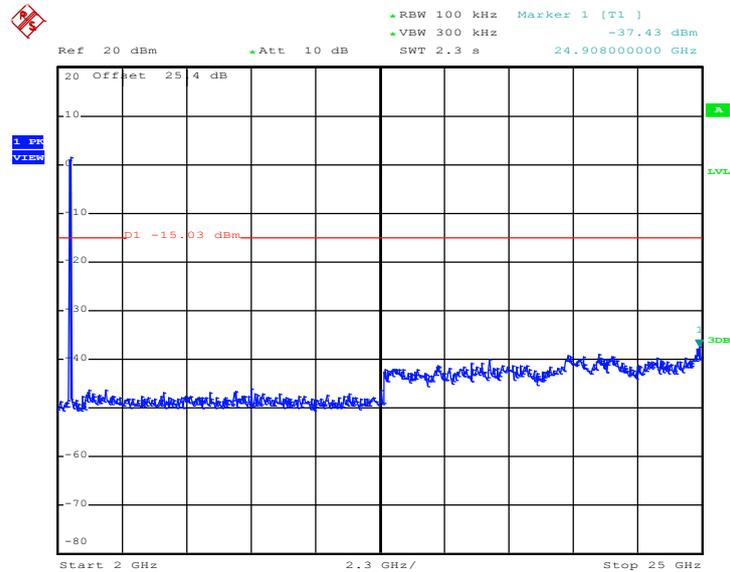
Conducted Spurious Emission Plot on Channel 11



Date: 25.AUG.2012 13:14:25

802.11g 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 11



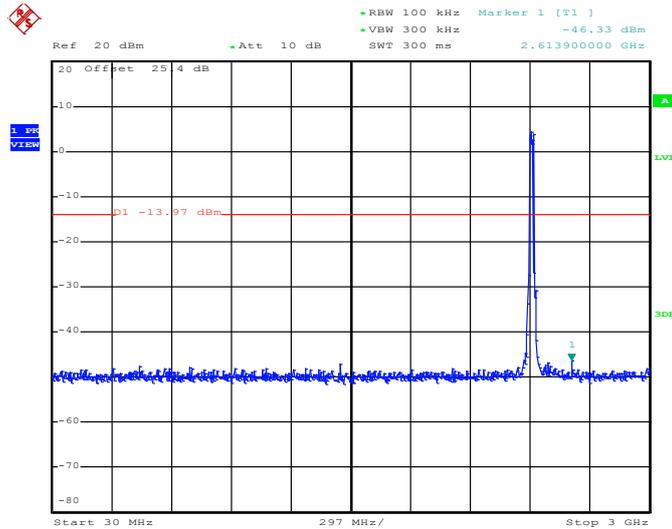
Date: 25.AUG.2012 13:14:42



Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Band :	30MHz-3GHz and 2G-25GHz	Relative Humidity :	50~53%
Test Channel :	01, 06, 11	Test Engineer :	Book Lin

2.4G 802.11n HT20 30 MHz~3 GHz

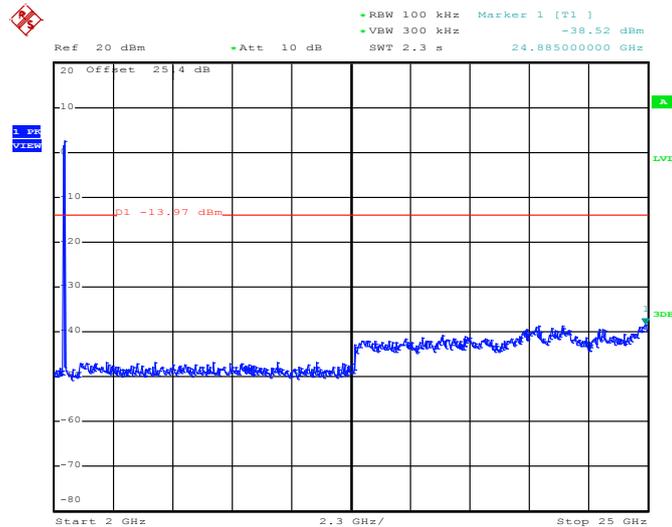
Conducted Spurious Emission Plot on Channel 01



Date: 25.AUG.2012 13:20:57

2.4G 802.11n HT20 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 01

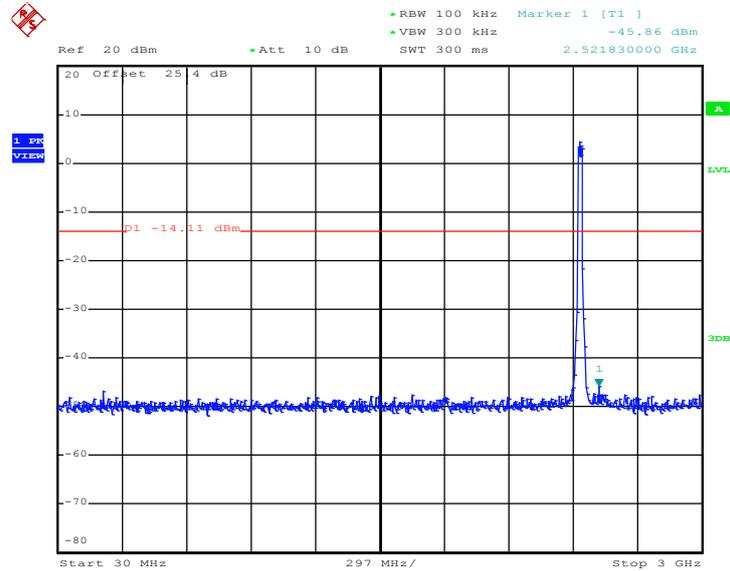


Date: 25.AUG.2012 13:21:14



2.4G 802.11n HT20 30 MHz~3 GHz

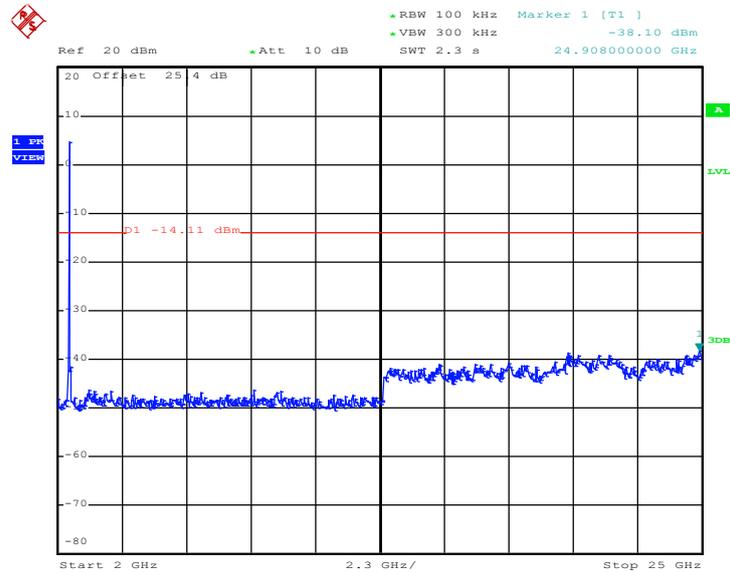
Conducted Spurious Emission Plot on Channel 06



Date: 25.AUG.2012 13:27:27

2.4G 802.11n HT20 2 GHz~25 GHz

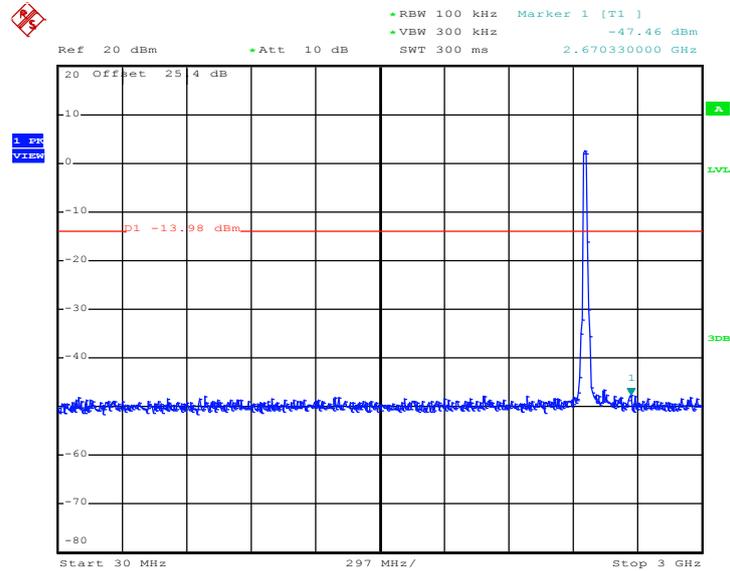
Conducted Spurious Emission Plot on Channel 06



Date: 25.AUG.2012 13:27:44

2.4G 802.11n HT20 30 MHz~3 GHz

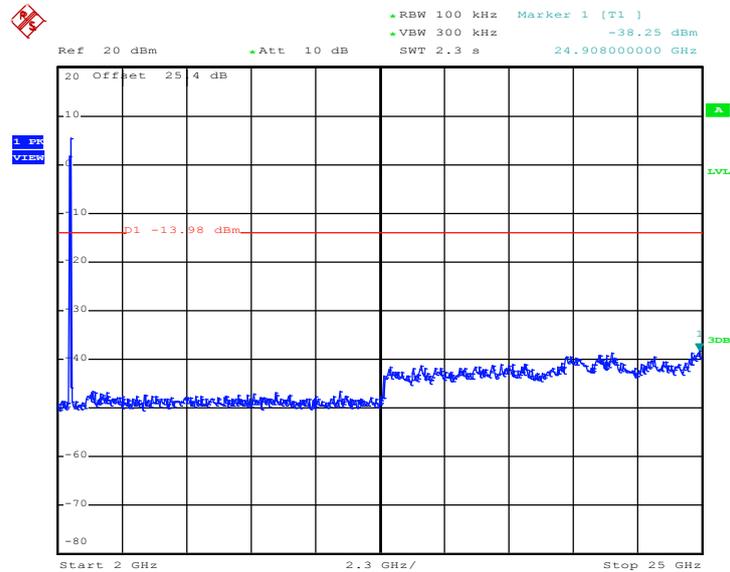
Conducted Spurious Emission Plot on Channel 11



Date: 25.AUG.2012 13:31:25

2.4G 802.11n HT20 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 11



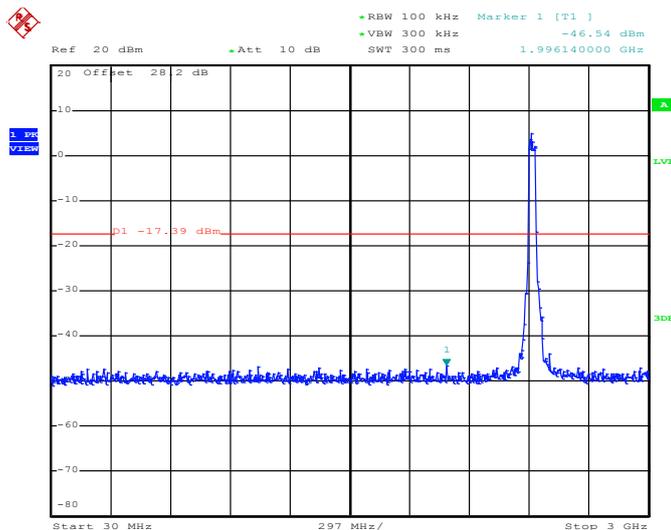
Date: 25.AUG.2012 13:31:43



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Band :	30MHz-3GHz and 2G-25GHz	Relative Humidity :	50~53%
Test Channel :	03, 06, 09	Test Engineer :	Book Lin

2.4G 802.11n HT40 30 MHz~3 GHz

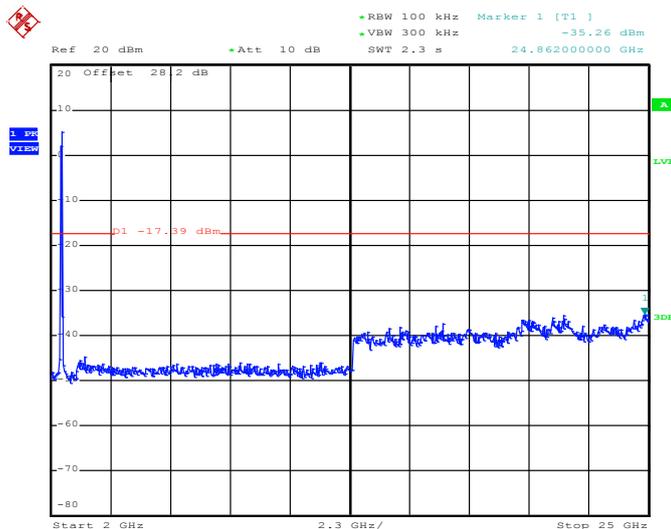
Conducted Spurious Emission Plot on Channel 01



Date: 25.AUG.2012 14:24:46

2.4G 802.11n HT40 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 01

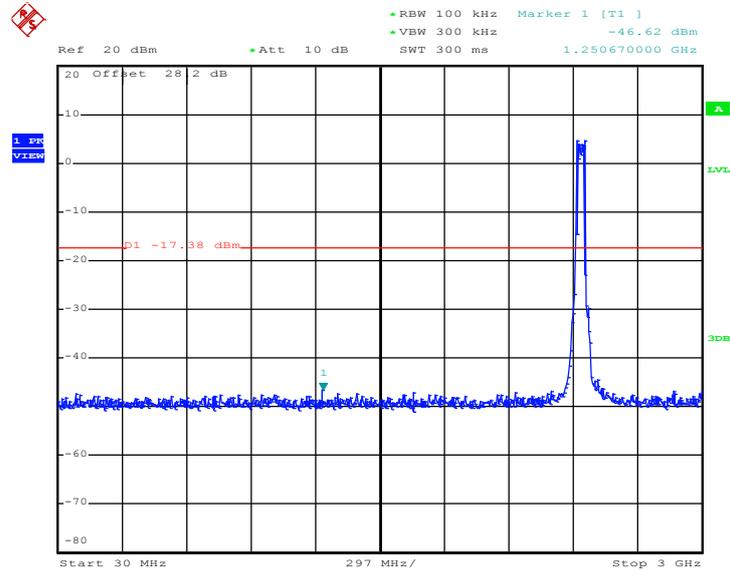


Date: 25.AUG.2012 14:23:30



2.4G 802.11n HT40 30 MHz~3 GHz

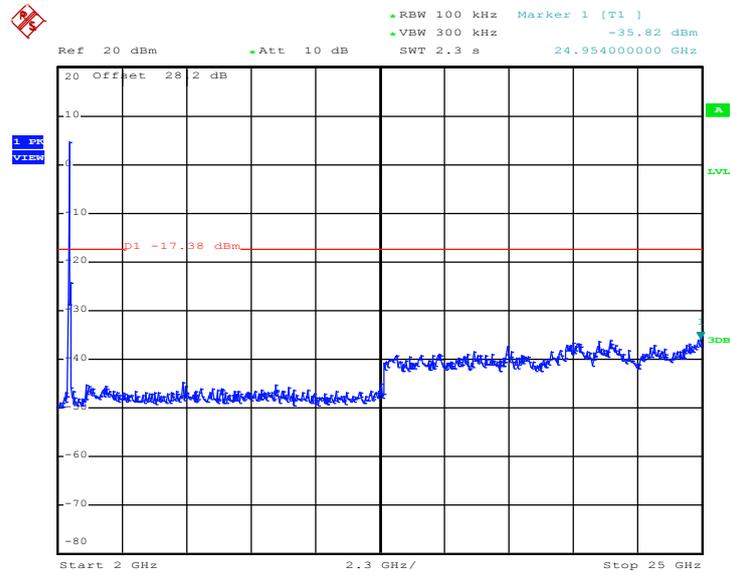
Conducted Spurious Emission Plot on Channel 06



Date: 25.AUG.2012 14:38:08

2.4G 802.11n HT40 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 06

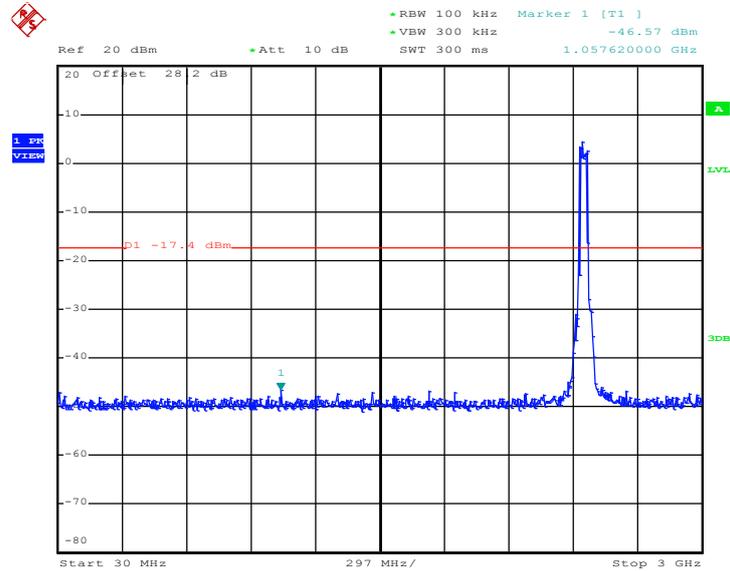


Date: 25.AUG.2012 14:37:06



2.4G 802.11n HT40 30 MHz~3 GHz

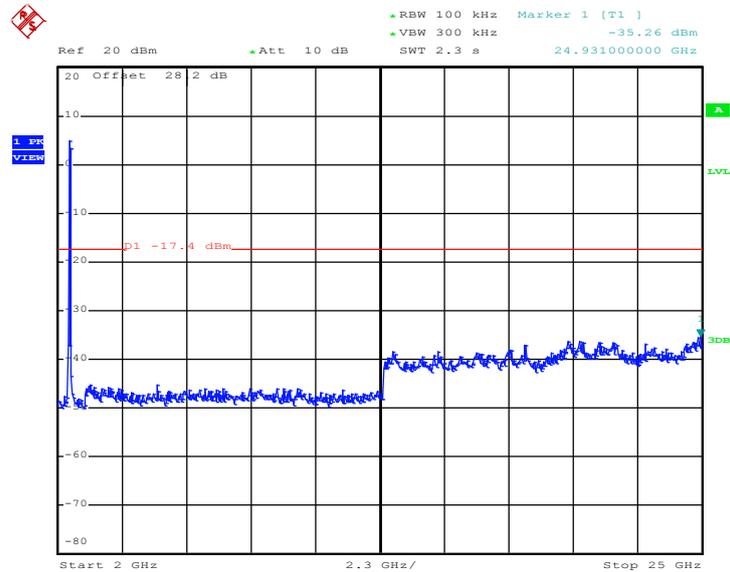
Conducted Spurious Emission Plot on Channel 11



Date: 25.AUG.2012 14:44:15

2.4G 802.11n HT40 2 GHz~25 GHz

Conducted Spurious Emission Plot on Channel 11



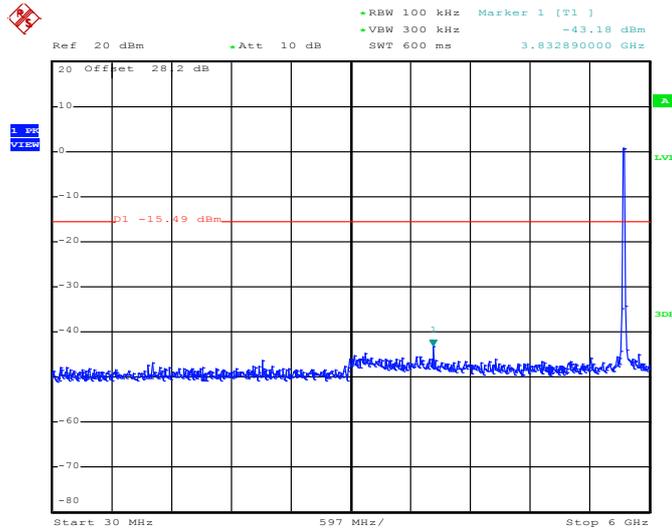
Date: 25.AUG.2012 14:44:32



Test Mode :	802.11a	Temperature :	24~26°C
Test Band :	30MHz-6GHz and 5G-40GHz	Relative Humidity :	50~53%
Test Channel :	149, 157, 165	Test Engineer :	Book Lin

802.11a 30 MHz~6 GHz

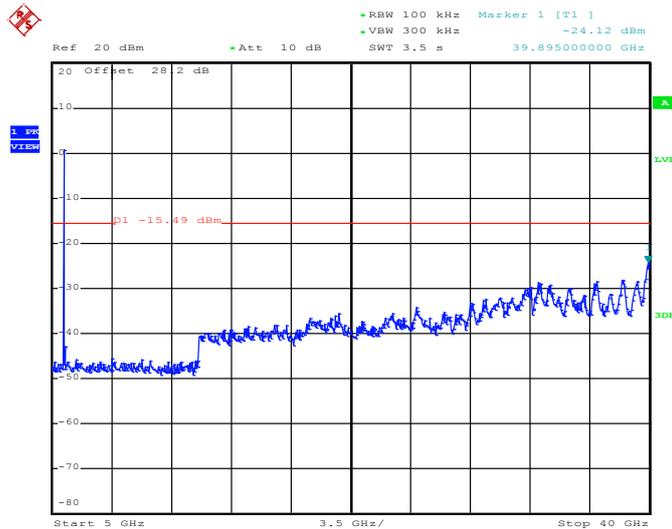
Conducted Spurious Emission Plot on Channel 149



Date: 25.AUG.2012 13:37:54

802.11a 5 GHz~40 GHz

Conducted Spurious Emission Plot on Channel 149

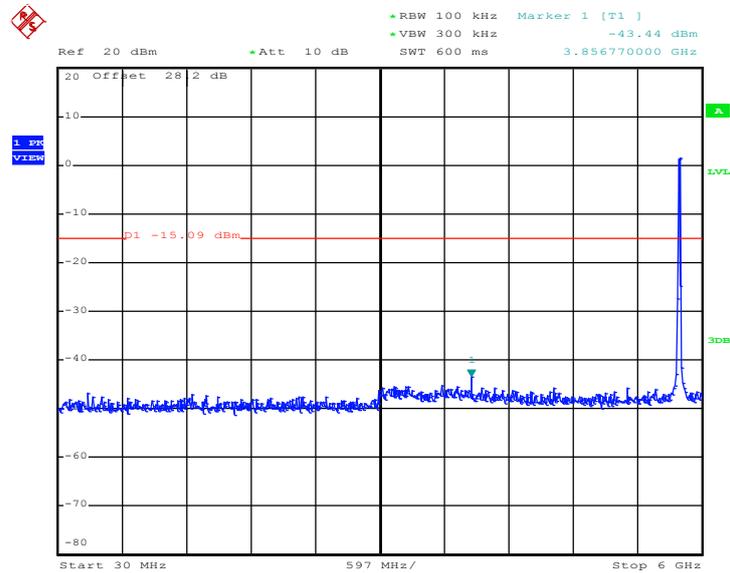


Date: 25.AUG.2012 13:38:11



802.11a 30 MHz~6 GHz

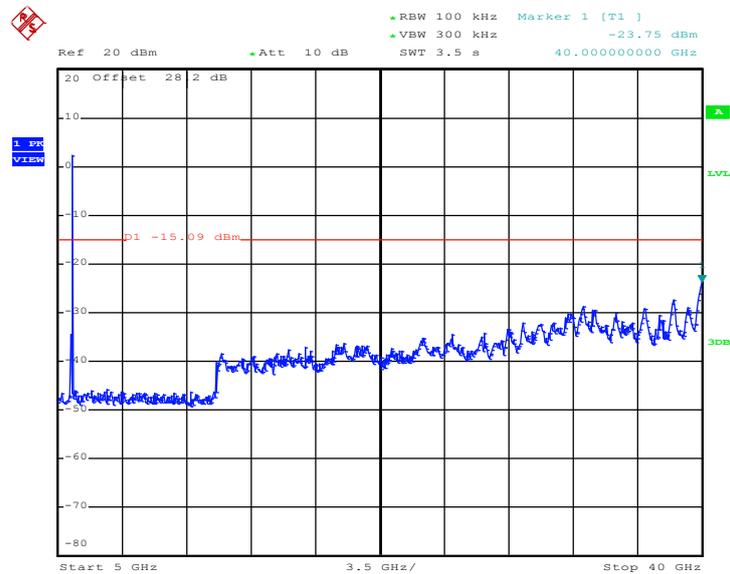
Conducted Spurious Emission Plot on Channel 157



Date: 25.AUG.2012 13:44:31

802.11a 5 GHz~40 GHz

Conducted Spurious Emission Plot on Channel 157

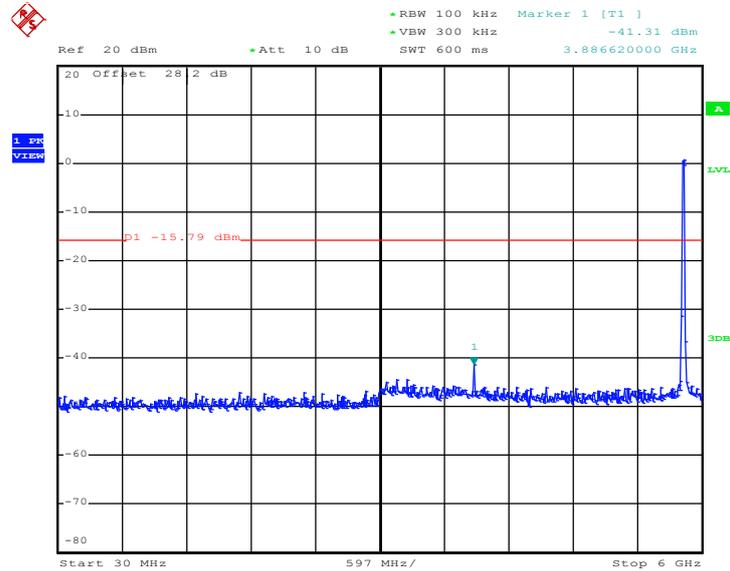


Date: 25.AUG.2012 13:44:49



802.11a 30 MHz~6 GHz

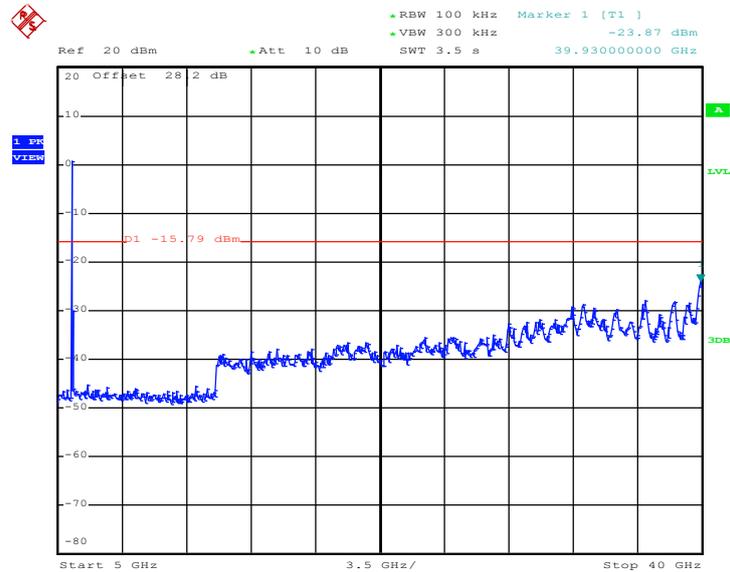
Conducted Spurious Emission Plot on Channel 165



Date: 25.AUG.2012 13:49:23

802.11a 5 GHz~40 GHz

Conducted Spurious Emission Plot on Channel 165



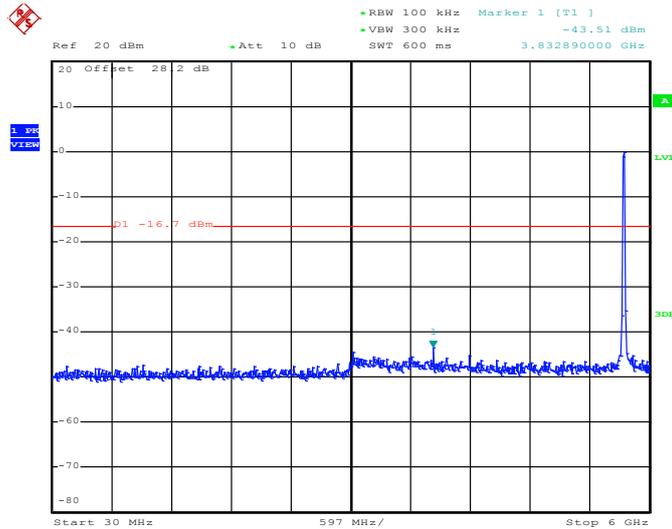
Date: 25.AUG.2012 13:49:40



Test Mode :	802.11n HT20	Temperature :	24~26°C
Test Band :	30MHz-6GHz and 5G-40GHz	Relative Humidity :	50~53%
Test Channel :	149, 157, 165	Test Engineer :	Book Lin

5G 802.11n HT20 30 MHz~ 6 GHz

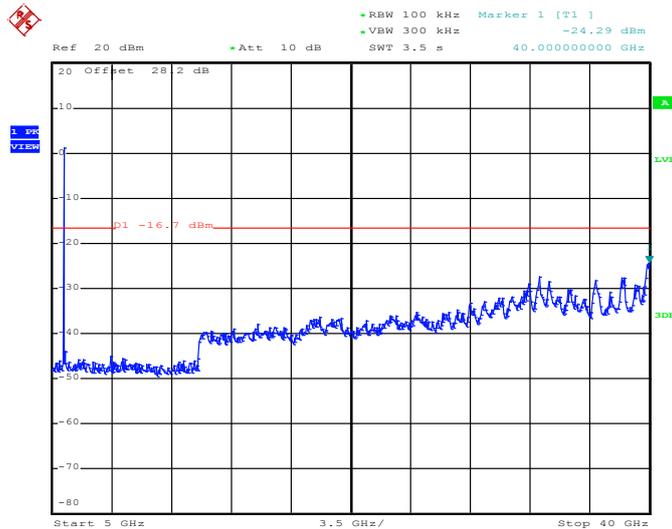
Conducted Spurious Emission Plot on Channel 149



Date: 25.AUG.2012 13:53:11

5G 802.11n HT20 5 GHz~40 GHz

Conducted Spurious Emission Plot on Channel 149

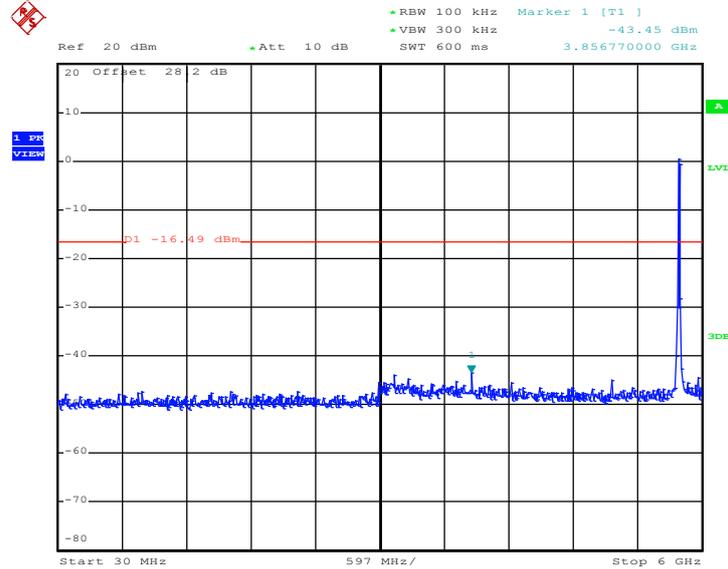


Date: 25.AUG.2012 13:53:28



5G 802.11n HT20 30 MHz~6 GHz

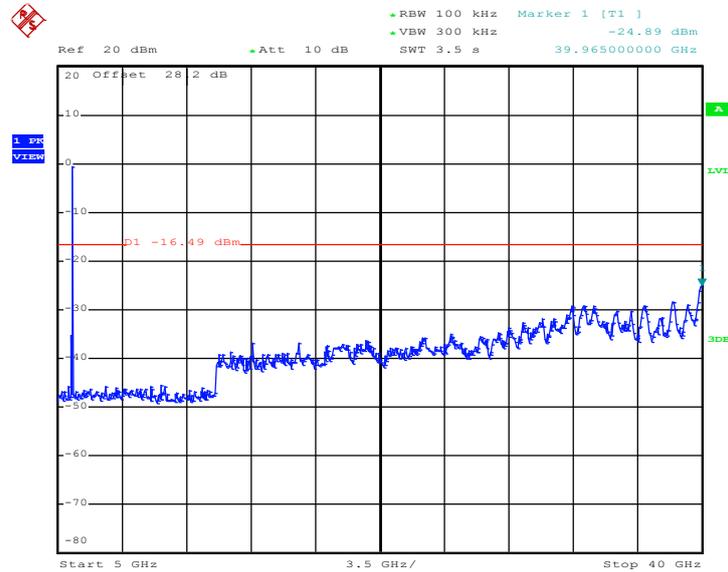
Conducted Spurious Emission Plot on Channel 157



Date: 25.AUG.2012 14:52:08

5G 802.11n HT20 5 GHz~40 GHz

Conducted Spurious Emission Plot on Channel 157

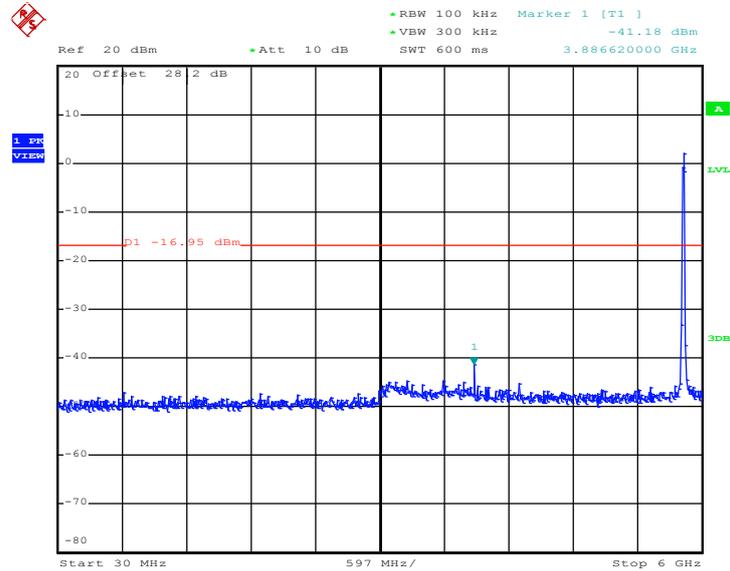


Date: 25.AUG.2012 14:52:26



5G 802.11n HT20 30 MHz~6 GHz

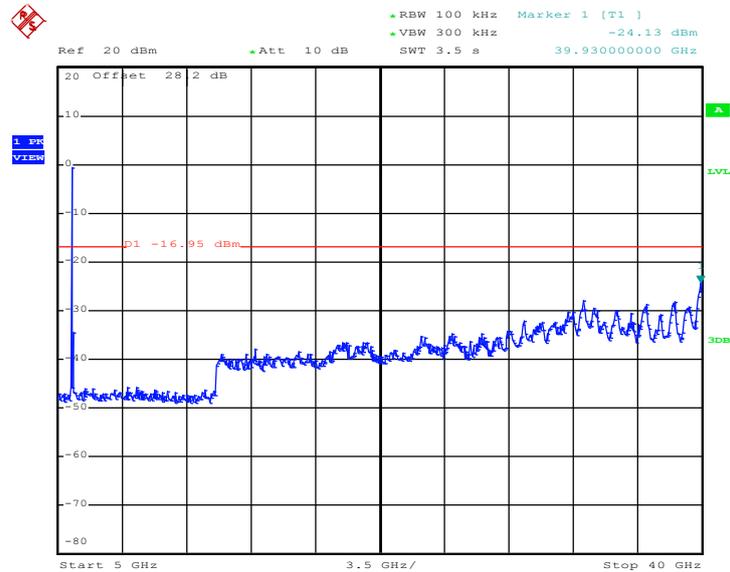
Conducted Spurious Emission Plot on Channel 165



Date: 25.AUG.2012 14:05:19

5G 802.11n HT20 5 GHz~40 GHz

Conducted Spurious Emission Plot on Channel 165



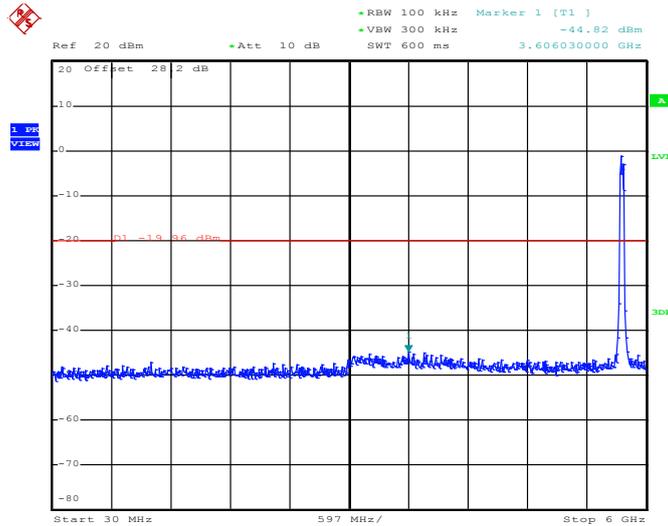
Date: 25.AUG.2012 14:05:36



Test Mode :	802.11n HT40	Temperature :	24~26°C
Test Band :	30MHz-6GHz and 5G-40GHz	Relative Humidity :	50~53%
Test Channel :	151 and 159	Test Engineer :	Book Lin

5G 802.11n HT40 30 MHz~6 GHz

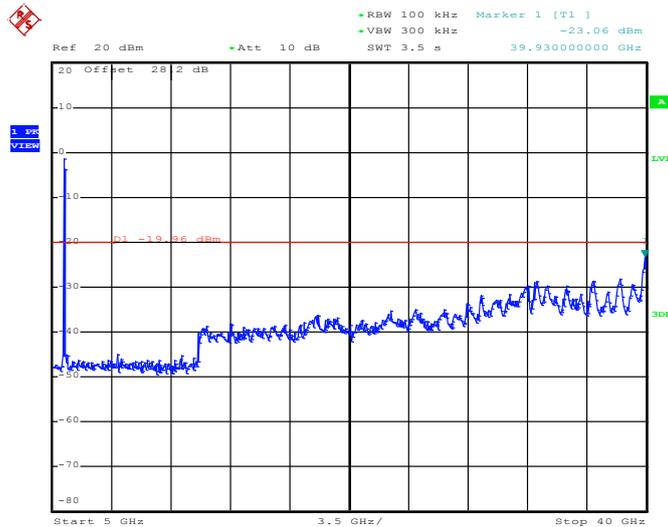
Conducted Spurious Emission Plot on Channel 151



Date: 25.AUG.2012 14:11:32

5G 802.11n HT40 5 GHz~40 GHz

Conducted Spurious Emission Plot on Channel 151

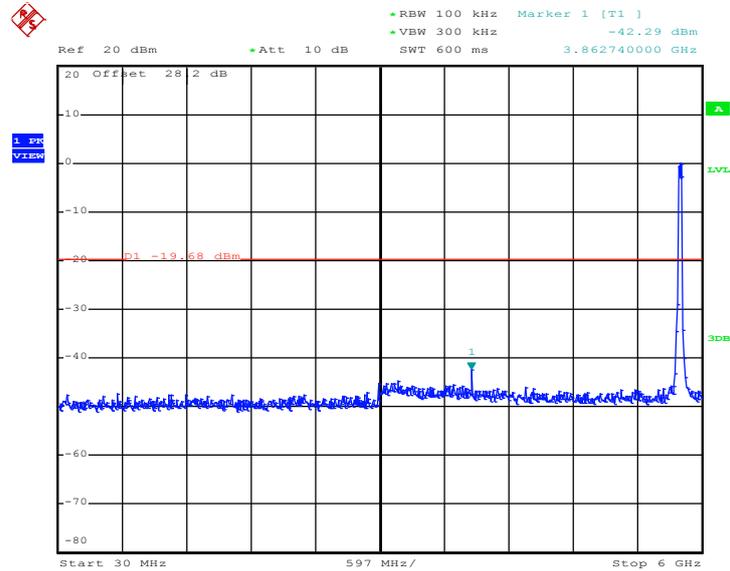


Date: 25.AUG.2012 14:11:49



5G 802.11n HT40 30 MHz~6 GHz

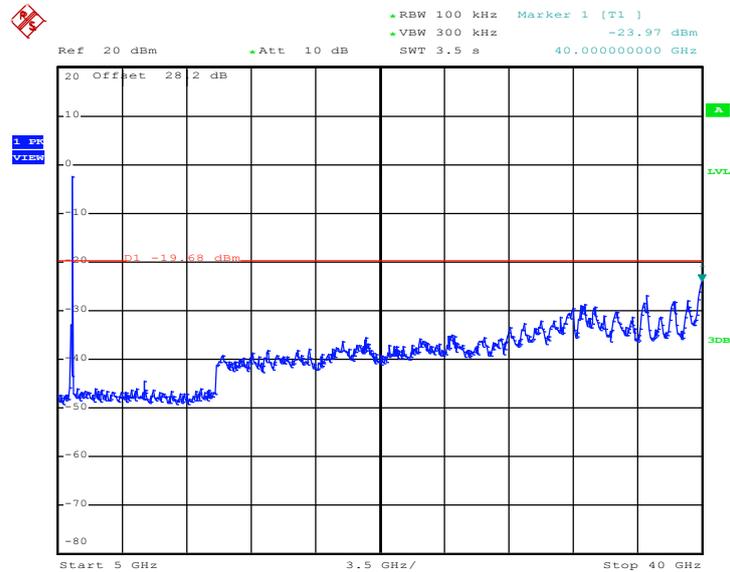
Conducted Spurious Emission Plot on Channel 159



Date: 25.AUG.2012 14:17:22

5G 802.11n HT40 5 MHz~40 GHz

Conducted Spurious Emission Plot on Channel 159



Date: 25.AUG.2012 14:17:39



3.5 Radiated Band Edges and Spurious Emission Measurement

3.5.1 Limit of Radiated band edge and Spurious Emission Measurement

In any 100 KHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the FCC section 15.209 limits as below.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(KHz)	300
0.490 – 1.705	24000/F(KHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

3.5.2 Measuring Instruments

See list of measuring instruments of this test report.



3.5.3 Test Procedures

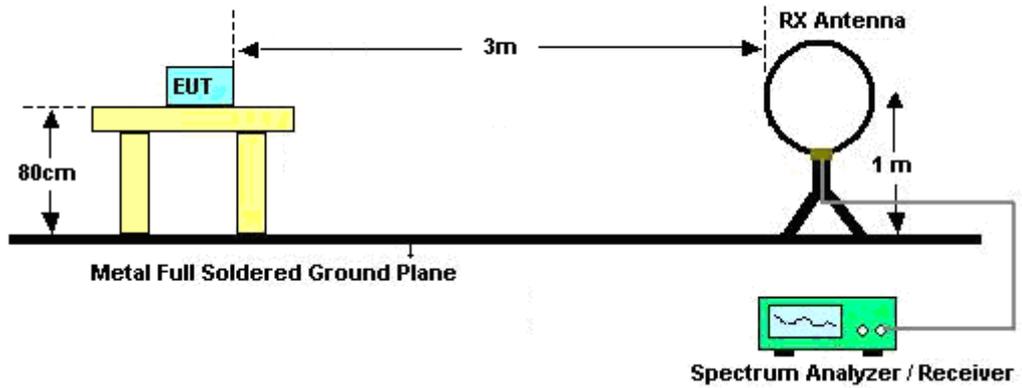
1. The testing follows the guidelines in ANSI C63. 10-2009
2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
3. The EUT was placed on a turntable with 0.8 meter above ground.
4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
5. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
7. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 KHz for $f < 1$ GHz; $VBW \geq RBW$; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, $VBW = 3$ MHz for $f \geq 1$ GHz for peak measurement.
 For average measurement:
 - $VBW = 10$ Hz, when duty cycle is no less than 98 percent.
 - $VBW \geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

Band	Duty Cycle(%)	T(ms)	1/T(KHz)	VBW Setting
802.11b	99.20	-	-	10Hz
802.11g	95.39	2.066	0.484	1KHz
2.4G 802.11n HT20	95.05	1.923	0.520	1KHz
2.4G 802.11n HT40	86.98	0.668	1.497	3KHz
802.11a	95.03	2.064	0.484	1KHz
5G 802.11n HT20	95.17	1.929	0.518	1KHz
5G 802.11n HT40	86.98	0.668	1.497	3KHz

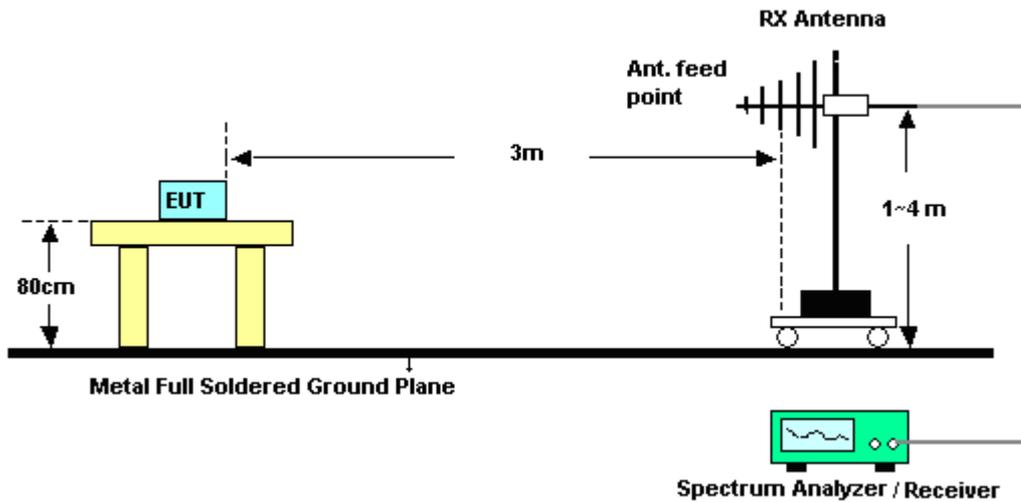
Note: For average measurement with duty cycle < 98%, use reduced VBW measurement method 4.2.3.2.3 in ANSI C63.10.

3.5.4 Test Setup

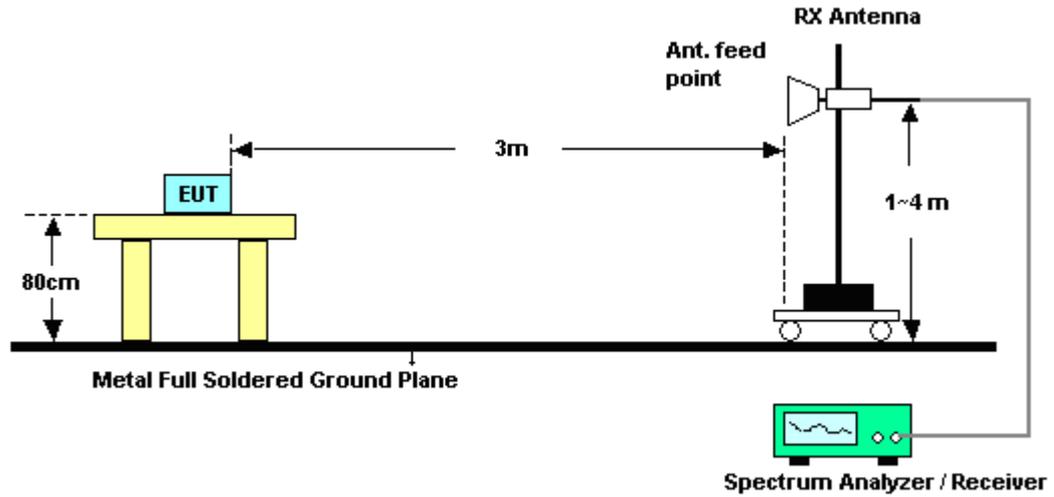
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.5.5 Test Results of Radiated Emissions (9KHz ~ 30MHz)

The low frequency, which started from 9 KHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

3.5.6 Test Result of Radiated Band Edges

<Sample 1>

Test Mode :	802.11b	Temperature :	21~23°C
Test Band :	Low	Relative Humidity :	49~51%
Test Channel :	01	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2387.49	59.16	-14.84	74	58.28	32.18	4.58	35.88	100	6	Peak
2390	46.49	-7.51	54	45.59	32.18	4.58	35.86	100	6	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2384.7	57.14	-16.86	74	56.28	32.16	4.58	35.88	135	359	Peak
2385.15	44.47	-9.53	54	43.61	32.16	4.58	35.88	135	359	Average

Test Mode :	802.11b	Temperature :	21~23°C
Test Band :	High	Relative Humidity :	49~51%
Test Channel :	11	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.48	61.92	-12.08	74	60.81	32.28	4.64	35.81	123	12	Peak
2483.5	47.94	-6.06	54	46.83	32.28	4.64	35.81	123	12	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2486.08	59.55	-14.45	74	58.44	32.28	4.64	35.81	106	360	Peak
2485.4	44.93	-9.07	54	43.82	32.28	4.64	35.81	106	360	Average



Test Mode :	802.11g	Temperature :	21~23°C
Test Band :	Low	Relative Humidity :	49~51%
Test Channel :	01	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.56	70.61	-3.39	74	69.73	32.18	4.58	35.88	100	36	Peak
2389.92	51.6	-2.4	54	50.7	32.18	4.58	35.86	100	36	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.92	68.87	-5.13	74	67.97	32.18	4.58	35.86	134	360	Peak
2390	49.99	-4.01	54	49.09	32.18	4.58	35.86	134	360	Average

Test Mode :	802.11g	Temperature :	21~23°C
Test Band :	High	Relative Humidity :	49~51%
Test Channel :	11	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484	71.28	-2.72	74	70.17	32.28	4.64	35.81	121	55	Peak
2483.5	51.75	-2.25	54	50.64	32.28	4.64	35.81	121	55	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2483.62	67.76	-6.24	74	66.65	32.28	4.64	35.81	161	15	Peak
2483.5	48.46	-5.54	54	47.35	32.28	4.64	35.81	161	15	Average



Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Band :	Low	Relative Humidity :	49~51%
Test Channel :	01	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.75	73.06	-0.94	74	72.18	32.18	4.58	35.88	102	29	Peak
2390	52.8	-1.2	54	51.9	32.18	4.58	35.86	102	29	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.29	69.81	-4.19	74	68.93	32.18	4.58	35.88	132	359	Peak
2389.92	49.98	-4.02	54	49.08	32.18	4.58	35.86	132	359	Average

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Band :	High	Relative Humidity :	49~51%
Test Channel :	11	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.32	73.25	-0.75	74	72.14	32.28	4.64	35.81	181	26	Peak
2483.52	52.82	-1.18	54	51.71	32.28	4.64	35.81	181	26	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2484.34	68.18	-5.82	74	67.07	32.28	4.64	35.81	129	360	Peak
2483.52	50.21	-3.79	54	49.1	32.28	4.64	35.81	129	360	Average



Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Band :	Low	Relative Humidity :	49~51%
Test Channel :	03	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2387.4	70.81	-3.19	74	69.93	32.18	4.58	35.88	100	10	Peak
2390	53.59	-0.41	54	52.69	32.18	4.58	35.86	100	10	Average
2483.92	59.63	-14.37	74	58.52	32.28	4.64	35.81	100	10	Peak
2484.02	42.85	-11.15	54	41.74	32.28	4.64	35.81	100	10	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.92	67.75	-6.25	74	66.85	32.18	4.58	35.86	106	5	Peak
2389.83	49.38	-4.62	54	48.48	32.18	4.58	35.86	106	5	Average
2492.06	57.85	-16.15	74	56.71	32.3	4.64	35.8	106	5	Peak
2488.64	40.91	-13.09	54	39.78	32.3	4.64	35.81	106	5	Average



Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Band :	High	Relative Humidity :	49~51%
Test Channel :	09	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.2	54.02	-19.98	74	53.14	32.18	4.58	35.88	100	15	Peak
2388.93	39.81	-14.19	54	38.93	32.18	4.58	35.88	100	15	Average
2488.1	71.19	-2.81	74	70.06	32.3	4.64	35.81	100	15	Peak
2483.68	53.38	-0.62	54	52.27	32.28	4.64	35.81	100	15	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2388.39	52.81	-21.19	74	51.93	32.18	4.58	35.88	131	355	Peak
2389.11	39.12	-14.88	54	38.24	32.18	4.58	35.88	131	355	Average
2488.12	70.96	-3.04	74	69.83	32.3	4.64	35.81	131	355	Peak
2483.5	52.52	-1.48	54	51.41	32.28	4.64	35.81	131	355	Average



<Sample 2>

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Band :	Low	Relative Humidity :	49~51%
Test Channel :	03	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.92	68.81	-5.19	74	67.91	32.18	4.58	35.86	100	61	Peak
2389.65	52.8	-1.2	54	51.92	32.18	4.58	35.88	100	61	Average
2496.3	59.03	-14.97	74	57.89	32.3	4.64	35.8	100	61	Peak
2483.6	43.03	-10.97	54	41.92	32.28	4.64	35.81	100	61	Average

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2389.74	62.27	-11.73	74	61.39	32.18	4.58	35.88	165	3	Peak
2389.56	45.41	-8.59	54	44.53	32.18	4.58	35.88	165	3	Average
2484.46	50.67	-23.33	74	49.56	32.28	4.64	35.81	165	3	Peak
2484.16	37.42	-16.58	54	36.31	32.28	4.64	35.81	165	3	Average



<Sample 1>

Test Mode :	802.11a	Temperature :	21~23°C
Test Band :	Low	Relative Humidity :	49~51%
Test Channel :	149	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	71.35	-16.21	87.56	63.96	35.07	7.17	34.85	100	320	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	73.24	-13.08	86.32	65.85	35.07	7.17	34.85	104	108	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Band :	High	Relative Humidity :	49~51%
Test Channel :	165	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	61.53	-25.73	87.26	53.9	35.21	7.29	34.87	100	29	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	60.56	-25.77	86.33	52.93	35.21	7.29	34.87	103	99	Peak



Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Band :	Low	Relative Humidity :	49~51%
Test Channel :	149	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	69.05	-17.2	86.25	61.66	35.07	7.17	34.85	100	320	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	71.5	-13.37	84.87	64.11	35.07	7.17	34.85	103	108	Peak

Test Mode :	802.11n HT20	Temperature :	21~23°C
Test Band :	High	Relative Humidity :	49~51%
Test Channel :	165	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	64.87	-21.5	86.37	57.24	35.21	7.29	34.87	100	30	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5850	60.76	-23.87	84.63	53.13	35.21	7.29	34.87	103	105	Peak



Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Band :	Low	Relative Humidity :	49~51%
Test Channel :	151	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	71.02	-12.36	83.38	63.63	35.07	7.17	34.85	100	321	Peak
5850	52.09	-31.29	83.38	44.46	35.21	7.29	34.87	100	321	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	70.37	-11.38	81.75	62.98	35.07	7.17	34.85	103	99	Peak
5850	53.51	-28.24	81.75	45.88	35.21	7.29	34.87	103	99	Peak

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Band :	High	Relative Humidity :	49~51%
Test Channel :	159	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	54.81	-28.74	83.55	47.42	35.07	7.17	34.85	100	318	Peak
5850	54.2	-29.35	83.55	46.57	35.21	7.29	34.87	100	318	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	57.25	-25.13	82.38	49.86	35.07	7.17	34.85	103	108	Peak
5850	55.43	-26.95	82.38	47.8	35.21	7.29	34.87	103	108	Peak



<Sample 2>

Test Mode :	802.11n HT40	Temperature :	21~23°C
Test Band :	Low	Relative Humidity :	49~51%
Test Channel :	151	Test Engineer :	David Yang

ANTENNA POLARITY : HORIZONTAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	69.87	-13.19	83.06	62.48	35.07	7.17	34.85	100	61	Peak
5850	52.31	-30.75	83.06	44.68	35.21	7.29	34.87	100	61	Peak

ANTENNA POLARITY : VERTICAL										
Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5725	66.12	-11.92	78.04	58.73	35.07	7.17	34.85	103	247	Peak
5850	51.2	-26.84	78.04	43.57	35.21	7.29	34.87	103	247	Peak

3.5.7 Test Result of Radiated Emission (30MHz ~ 10th Harmonic)

<Sample 1>

Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	01	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	107.93	-	-	107	32.2	4.59	35.86	100	6	Average
2412	113.02	-	-	112.09	32.2	4.59	35.86	100	6	Peak

Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	01	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	106.24	-	-	105.31	32.2	4.59	35.86	135	359	Average
2412	110.97	-	-	110.04	32.2	4.59	35.86	135	359	Peak



Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	107.37	-	-	106.36	32.24	4.61	35.84	100	6	Average
2437	112.79	-	-	111.78	32.24	4.61	35.84	100	6	Peak

Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	106.02	-	-	105.01	32.24	4.61	35.84	133	1	Average
2437	110.86	-	-	109.85	32.24	4.61	35.84	133	1	Peak



Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	108.36	-	-	107.31	32.26	4.62	35.83	123	12	Average
2462	113	-	-	111.95	32.26	4.62	35.83	123	12	Peak

Test Mode :	802.11b	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	106.39	-	-	105.34	32.26	4.62	35.83	106	360	Average
2462	111.4	-	-	110.35	32.26	4.62	35.83	106	360	Peak



Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	01	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	99.88	-	-	98.95	32.2	4.59	35.86	100	36	Average
2412	110.84	-	-	109.91	32.2	4.59	35.86	100	36	Peak

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	01	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	98.44	-	-	97.51	32.2	4.59	35.86	134	360	Average
2412	109.17	-	-	108.24	32.2	4.59	35.86	134	360	Peak



Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	100.46	-	-	99.45	32.24	4.61	35.84	100	28	Average
2437	110.87	-	-	109.86	32.24	4.61	35.84	100	28	Peak

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	98.89	-	-	97.88	32.24	4.61	35.84	129	0	Average
2437	109.06	-	-	108.05	32.24	4.61	35.84	129	0	Peak



Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	98.7	-	-	97.65	32.26	4.62	35.83	121	55	Average
2462	109.02	-	-	107.97	32.26	4.62	35.83	121	55	Peak

Test Mode :	802.11g	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	96.07	-	-	95.02	32.26	4.62	35.83	161	15	Average
2462	106.42	-	-	105.35	32.26	4.62	35.81	161	15	Peak



Test Mode :	2.4G 802.11n-HT20	Temperature :	21~23°C
Test Channel :	01	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	99.64	-	-	98.71	32.2	4.59	35.86	102	29	Average
2412	109.96	-	-	109.03	32.2	4.59	35.86	102	29	Peak

Test Mode :	2.4G 802.11n-HT20	Temperature :	21~23°C
Test Channel :	01	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 2412 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2412	97.17	-	-	96.24	32.2	4.59	35.86	132	359	Average
2412	107.42	-	-	106.49	32.2	4.59	35.86	132	359	Peak



Test Mode :	2.4G 802.11n-HT20	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	101.34	-	-	100.33	32.24	4.61	35.84	100	21	Average
2437	111.4	-	-	110.39	32.24	4.61	35.84	100	21	Peak

Test Mode :	2.4G 802.11n-HT20	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	99.68	-	-	98.67	32.24	4.61	35.84	138	354	Average
2437	109.63	-	-	108.62	32.24	4.61	35.84	138	354	Peak



Test Mode :	2.4G 802.11n-HT20	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	98.58	-	-	97.53	32.26	4.62	35.83	181	26	Average
2462	108.92	-	-	107.87	32.26	4.62	35.83	181	26	Peak

Test Mode :	2.4G 802.11n-HT20	Temperature :	21~23°C
Test Channel :	11	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 2462 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2462	96.42	-	-	95.37	32.26	4.62	35.83	129	360	Average
2462	107.12	-	-	106.07	32.26	4.62	35.83	129	360	Peak



Test Mode :	2.4G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	03	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 2422 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
111.54	26.96	-16.54	43.5	45.92	11.4	1.15	31.51	-	-	Peak
206.04	31.65	-11.85	43.5	52.18	9.15	1.48	31.16	134	201	Peak
223.59	33.72	-12.28	46	53.44	9.66	1.56	30.94	-	-	Peak
311.2	28.89	-17.11	46	44.68	13.32	1.81	30.92	-	-	Peak
468	20.47	-25.53	46	31.63	17.56	2.17	30.89	-	-	Peak
850.9	25.81	-20.19	46	29.2	23.39	2.92	29.7	-	-	Peak
2422	94.95	-	-	93.98	32.22	4.59	35.84	100	10	Average
2422	106	-	-	105.03	32.22	4.59	35.84	100	10	Peak



Test Mode :	2.4G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	03	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 2422 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
31.08	33.95	-6.05	40	45.76	19.12	0.71	31.64	100	355	Peak
109.65	33.49	-10.01	43.5	52.7	11.2	1.14	31.55	-	-	Peak
161.22	26.01	-17.49	43.5	45.44	10.42	1.35	31.2	-	-	Peak
312.6	23.5	-22.5	46	39.27	13.34	1.81	30.92	-	-	Peak
454.7	21.36	-24.64	46	32.9	17.3	2.15	30.99	-	-	Peak
772.5	25.42	-20.58	46	30.47	22.18	2.79	30.02	-	-	Peak
2422	93.39	-	-	92.42	32.22	4.59	35.84	106	5	Average
2422	104.02	-	-	103.05	32.22	4.59	35.84	106	5	Peak



Test Mode :	2.4G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	97.76	-	-	96.75	32.24	4.61	35.84	100	11	Average
2437	108.36	-	-	107.35	32.24	4.61	35.84	100	11	Peak

Test Mode :	2.4G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	06	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 2437 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2437	95.37	-	-	94.36	32.24	4.61	35.84	106	5	Average
2437	106.53	-	-	105.52	32.24	4.61	35.84	106	5	Peak



Test Mode :	2.4G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	09	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 2452 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2452	94.88	-	-	93.86	32.24	4.61	35.83	100	15	Average
2452	104.76	-	-	103.74	32.24	4.61	35.83	100	15	Peak

Test Mode :	2.4G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	09	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 2452 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2452	93.9	-	-	92.88	32.24	4.61	35.83	131	355	Average
2452	104.03	-	-	103.01	32.24	4.61	35.83	131	355	Peak



<Sample 2>

Test Mode :	2.4G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	03	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 2422 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
109.65	26.54	-16.96	43.5	45.75	11.2	1.14	31.55	-	-	Peak
162.03	25.79	-17.71	43.5	45.29	10.34	1.35	31.19	-	-	Peak
227.91	34.57	-11.43	46	53.91	10.02	1.57	30.93	145	273	Peak
321	29.44	-16.56	46	44.99	13.53	1.83	30.91	-	-	Peak
562.5	21.12	-24.88	46	29.48	20.19	2.35	30.9	-	-	Peak
794.2	24.26	-21.74	46	29.31	21.98	2.82	29.85	-	-	Peak
2422	96.66	-	-	95.69	32.22	4.59	35.84	100	61	Average
2422	106.87	-	-	105.9	32.22	4.59	35.84	100	61	Peak



Test Mode :	2.4G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	03	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 2422 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
31.35	34.58	-5.42	40	46.39	19.12	0.71	31.64	103	95	Peak
108.03	33.66	-9.84	43.5	53.06	11	1.13	31.53	-	-	Peak
165.81	26.73	-16.77	43.5	46.54	9.98	1.36	31.15	-	-	Peak
306.3	23.12	-22.88	46	38.91	13.34	1.8	30.93	-	-	Peak
426	20.69	-25.31	46	32.98	16.66	2.08	31.03	-	-	Peak
857.2	25.39	-20.61	46	28.87	23.33	2.93	29.74	-	-	Peak
2422	90.49	-	-	89.52	32.22	4.59	35.84	165	3	Average
2422	100.33	-	-	99.36	32.22	4.59	35.84	165	3	Peak



<Sample 1>

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	149	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5745	97.45	-	-	90.02	35.09	7.19	34.85	100	320	Average
5745	107.56	-	-	100.15	35.09	7.17	34.85	100	320	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	149	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5745	95.88	-	-	88.45	35.09	7.19	34.85	104	108	Average
5745	106.32	-	-	98.91	35.09	7.17	34.85	104	108	Peak



Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	157	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5785	96.28	-	-	88.79	35.13	7.22	34.86	100	343	Average
5785	107.04	-	-	99.55	35.13	7.22	34.86	100	343	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	157	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5785	96.02	-	-	88.53	35.13	7.22	34.86	104	107	Average
5785	106.39	-	-	98.9	35.13	7.22	34.86	104	107	Peak



Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	165	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5825	96.92	-	-	89.33	35.19	7.27	34.87	100	29	Average
5825	107.26	-	-	99.69	35.17	7.27	34.87	100	29	Peak

Test Mode :	802.11a	Temperature :	21~23°C
Test Channel :	165	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5825	95.76	-	-	88.17	35.19	7.27	34.87	103	99	Average
5825	106.33	-	-	98.74	35.19	7.27	34.87	103	99	Peak



Test Mode :	5G 802.11n-HT20	Temperature :	21~23°C
Test Channel :	149	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5745	96.33	-	-	88.9	35.09	7.19	34.85	100	320	Average
5745	106.25	-	-	98.84	35.09	7.17	34.85	100	320	Peak

Test Mode :	5G 802.11n-HT20	Temperature :	21~23°C
Test Channel :	149	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 5745 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5745	94.78	-	-	87.35	35.09	7.19	34.85	103	108	Average
5745	104.87	-	-	97.46	35.09	7.17	34.85	103	108	Peak



Test Mode :	5G 802.11n-HT20	Temperature :	21~23°C
Test Channel :	157	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5785	95.94	-	-	88.45	35.13	7.22	34.86	100	320	Average
5785	106.27	-	-	98.77	35.13	7.22	34.85	100	320	Peak

Test Mode :	5G 802.11n-HT20	Temperature :	21~23°C
Test Channel :	157	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 5785 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5785	94.81	-	-	87.32	35.13	7.22	34.86	104	103	Average
5785	105.07	-	-	97.56	35.15	7.22	34.86	104	103	Peak



Test Mode :	5G 802.11n-HT20	Temperature :	21~23°C
Test Channel :	165	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5825	95.85	-	-	88.26	35.19	7.27	34.87	100	30	Average
5825	106.37	-	-	98.8	35.17	7.27	34.87	100	30	Peak

Test Mode :	5G 802.11n-HT20	Temperature :	21~23°C
Test Channel :	165	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 5825 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5825	94.13	-	-	86.54	35.19	7.27	34.87	103	105	Average
5825	104.63	-	-	97.04	35.19	7.27	34.87	103	105	Peak



Test Mode :	5G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	151	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 5755 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
109.65	27.39	-16.11	43.5	46.6	11.2	1.14	31.55	-	-	Peak
204.69	31.09	-12.41	43.5	51.61	9.15	1.48	31.15	-	-	Peak
226.29	33.84	-12.16	46	53.37	9.84	1.56	30.93	114	162	Peak
312.6	29.21	-16.79	46	44.98	13.34	1.81	30.92	-	-	Peak
481.3	21.19	-24.81	46	31.96	17.72	2.2	30.69	-	-	Peak
839.7	25.15	-20.85	46	28.66	23.3	2.9	29.71	-	-	Peak
5755	93.75	-	-	86.3	35.11	7.19	34.85	100	321	Average
5755	103.38	-	-	95.97	35.09	7.17	34.85	100	321	Peak



Test Mode :	5G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	151	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 5755 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
31.08	33.93	-6.07	40	45.74	19.12	0.71	31.64	100	274	Peak
108.84	33.36	-10.14	43.5	52.67	11.1	1.13	31.54	-	-	Peak
161.49	25.14	-18.36	43.5	44.65	10.34	1.35	31.2	-	-	Peak
309.8	23.21	-22.79	46	39.02	13.31	1.8	30.92	-	-	Peak
426.7	22.02	-23.98	46	34.3	16.67	2.08	31.03	-	-	Peak
750.1	24.08	-21.92	46	29.12	22.4	2.75	30.19	-	-	Peak
5755	91.85	-	-	84.4	35.11	7.19	34.85	103	99	Average
5755	101.75	-	-	94.3	35.11	7.19	34.85	103	99	Peak



Test Mode :	5G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	159	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 5795 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5795	93.03	-	-	85.5	35.15	7.24	34.86	100	318	Average
5795	103.55	-	-	96.05	35.13	7.22	34.85	100	318	Peak

Test Mode :	5G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	159	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 5795 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
5795	92.77	-	-	85.24	35.15	7.24	34.86	103	108	Average
5795	102.38	-	-	94.88	35.13	7.22	34.85	103	108	Peak



<Sample 2>

Test Mode :	5G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	151	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	1. 5755 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
112.35	28.89	-14.61	43.5	47.72	11.5	1.16	31.49	-	-	Peak
206.31	32.97	-10.53	43.5	53.48	9.16	1.49	31.16	118	332	Peak
231.42	34.41	-11.59	46	53.31	10.44	1.59	30.93	-	-	Peak
317.5	28.28	-17.72	46	43.93	13.44	1.82	30.91	-	-	Peak
471.5	21.07	-24.93	46	32.11	17.61	2.18	30.83	-	-	Peak
737.5	24.57	-21.43	46	29.83	22.21	2.72	30.19	-	-	Peak
5755	92.84	-	-	85.39	35.11	7.19	34.85	100	61	Average
5755	103.06	-	-	95.61	35.11	7.19	34.85	100	61	Peak



Test Mode :	5G 802.11n-HT40	Temperature :	21~23°C
Test Channel :	151	Relative Humidity :	49~51%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	1. 5755 MHz is fundamental signal which can be ignored. 2. Test result of emissions which are 20 dB lower than the limit is not reported per15.31.		

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
32.97	33.99	-6.01	40	47.14	17.76	0.72	31.63	100	213	Peak
110.73	34.04	-9.46	43.5	53.12	11.3	1.15	31.53	-	-	Peak
235.2	28.93	-17.07	46	47.35	10.92	1.6	30.94	-	-	Peak
317.5	23.41	-22.59	46	39.06	13.44	1.82	30.91	-	-	Peak
589.8	23.58	-22.42	46	31.92	19.8	2.4	30.54	-	-	Peak
773.2	24.4	-21.6	46	29.46	22.17	2.79	30.02	-	-	Peak
5755	88.39	-	-	80.94	35.11	7.19	34.85	103	247	Average
5755	98.04	-	-	90.59	35.11	7.19	34.85	103	247	Peak

3.6 AC Conducted Emission Measurement

3.6.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 KHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

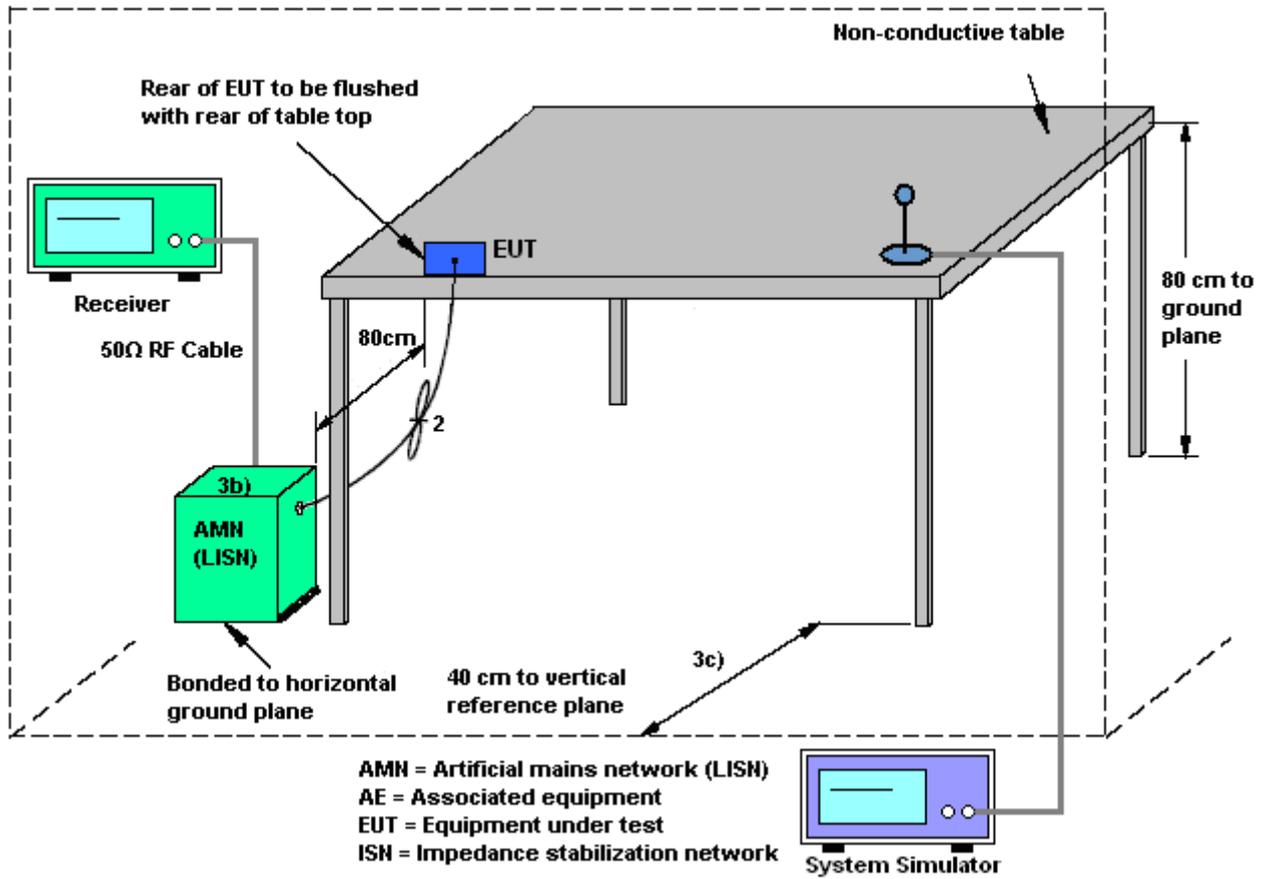
3.6.2 Measuring Instruments

See list of measuring instruments of this test report.

3.6.3 Test Procedures

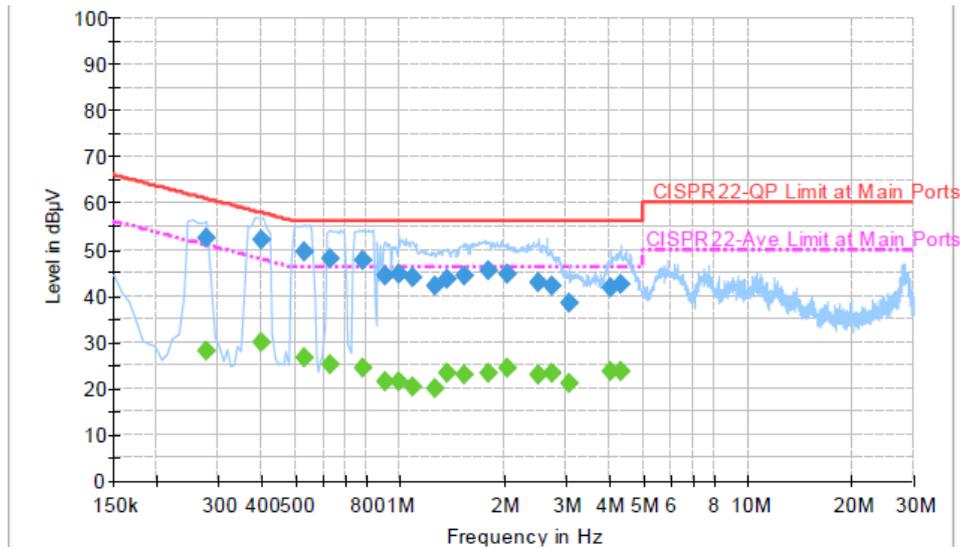
1. The testing follows the guidelines in ANSI C63.4-2003 and ANSI C63.10-2009.
2. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN).
4. All the support units are connecting to the other LISN.
5. The LISN provides 50 ohm coupling impedance for the measuring instrument.
6. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
7. Both sides of AC line were checked for maximum conducted interference.
8. The frequency range from 150 KHz to 30 MHz was searched.
9. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.6.4 Test Setup



3.6.5 Test Result of AC Conducted Emission

Test Mode :	Mode 3	Temperature :	21~22°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	49~50%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + GPS Rx + Earphone 1 + Battery + USB Cable 1 (Charging from Adapter 5) for Sample 2		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		

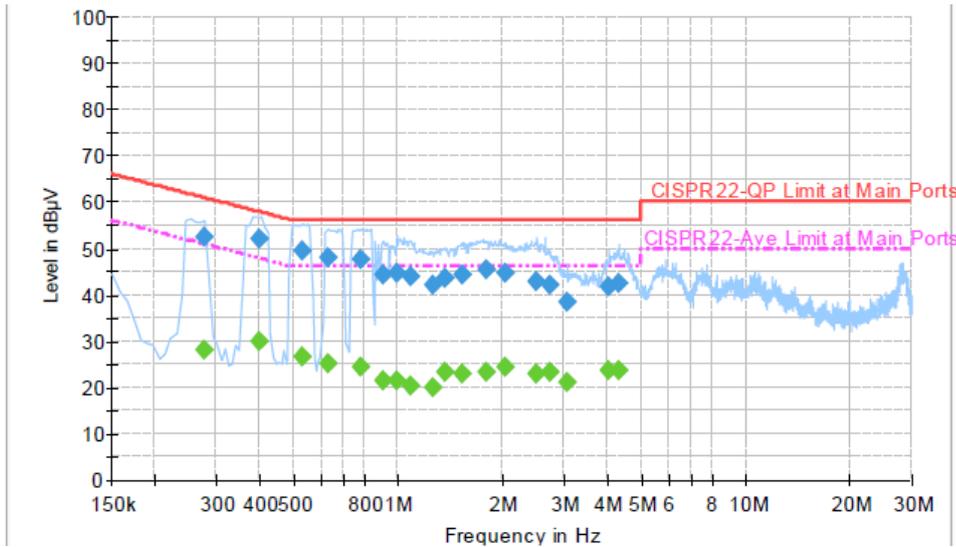


Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.278000	52.3	Off	L1	19.4	8.6	60.9
0.398000	52.0	Off	L1	19.4	5.9	57.9
0.534000	49.5	Off	L1	19.4	6.5	56.0
0.630000	48.1	Off	L1	19.5	7.9	56.0
0.782000	47.6	Off	L1	19.4	8.4	56.0
0.910000	44.1	Off	L1	19.4	11.9	56.0
0.990000	44.7	Off	L1	19.4	11.3	56.0
1.094000	44.0	Off	L1	19.4	12.0	56.0
1.262000	42.1	Off	L1	19.4	13.9	56.0
1.366000	43.4	Off	L1	19.4	12.6	56.0
1.526000	44.3	Off	L1	19.4	11.7	56.0
1.806000	45.4	Off	L1	19.6	10.6	56.0
2.030000	44.6	Off	L1	19.5	11.4	56.0
2.510000	42.9	Off	L1	19.6	13.1	56.0
2.734000	42.0	Off	L1	19.6	14.0	56.0
3.070000	38.3	Off	L1	19.6	17.7	56.0
4.038000	41.7	Off	L1	19.6	14.3	56.0
4.318000	42.3	Off	L1	19.6	13.7	56.0



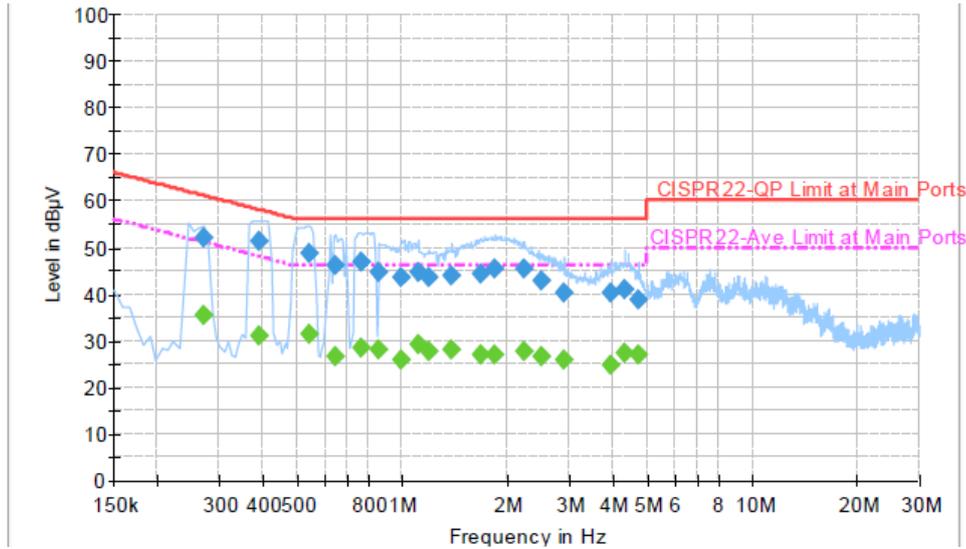
Test Mode :	Mode 3	Temperature :	21~22°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	49~50%
Test Voltage :	120Vac / 60Hz	Phase :	Line
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + GPS Rx + Earphone 1 + Battery + USB Cable 1 (Charging from Adapter 5) for Sample 2		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.278000	27.9	Off	L1	19.4	23.0	50.9
0.398000	30.0	Off	L1	19.4	17.9	47.9
0.534000	26.8	Off	L1	19.4	19.2	46.0
0.630000	25.0	Off	L1	19.5	21.0	46.0
0.782000	24.3	Off	L1	19.4	21.7	46.0
0.910000	21.5	Off	L1	19.4	24.5	46.0
0.990000	21.5	Off	L1	19.4	24.5	46.0
1.094000	20.4	Off	L1	19.4	25.6	46.0
1.262000	19.9	Off	L1	19.4	26.1	46.0
1.366000	23.2	Off	L1	19.4	22.8	46.0
1.526000	23.0	Off	L1	19.4	23.0	46.0
1.806000	23.3	Off	L1	19.6	22.7	46.0
2.030000	24.2	Off	L1	19.5	21.8	46.0
2.510000	22.7	Off	L1	19.6	23.3	46.0
2.734000	23.1	Off	L1	19.6	22.9	46.0
3.070000	21.2	Off	L1	19.6	24.8	46.0
4.038000	23.6	Off	L1	19.6	22.4	46.0
4.318000	23.8	Off	L1	19.6	22.2	46.0

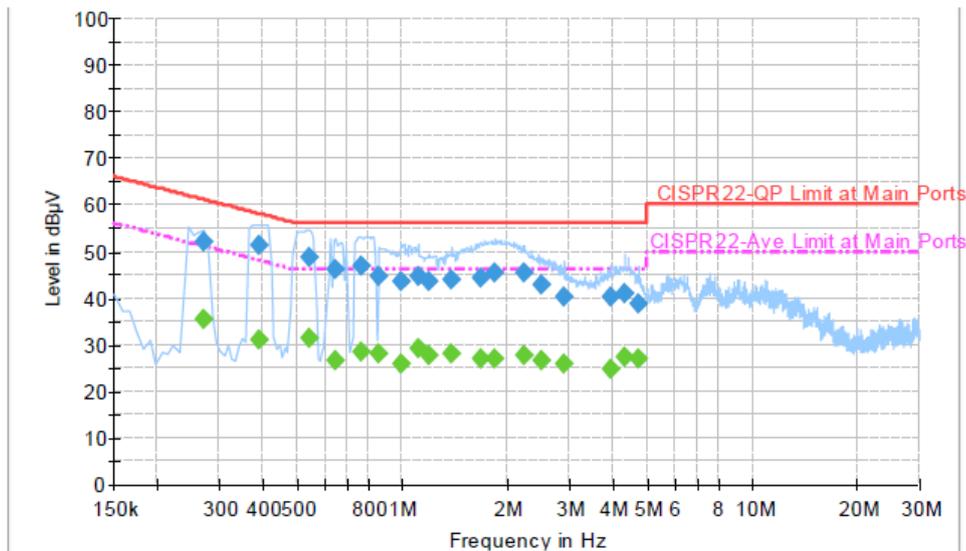
Test Mode :	Mode 3	Temperature :	21~22°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	49~50%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + GPS Rx + Earphone 1 + Battery + USB Cable 1 (Charging from Adapter 5) for Sample 2		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.270000	52.0	Off	N	19.4	9.1	61.1
0.390000	51.2	Off	N	19.3	6.9	58.1
0.542000	48.6	Off	N	19.4	7.4	56.0
0.646000	46.2	Off	N	19.4	9.8	56.0
0.766000	46.7	Off	N	19.4	9.3	56.0
0.862000	44.6	Off	N	19.4	11.4	56.0
0.990000	43.6	Off	N	19.5	12.4	56.0
1.110000	44.7	Off	N	19.4	11.3	56.0
1.190000	43.4	Off	N	19.5	12.6	56.0
1.390000	43.8	Off	N	19.5	12.2	56.0
1.670000	44.1	Off	N	19.5	11.9	56.0
1.838000	45.3	Off	N	19.6	10.7	56.0
2.222000	45.2	Off	N	19.6	10.8	56.0
2.502000	42.7	Off	N	19.6	13.3	56.0
2.918000	40.4	Off	N	19.6	15.6	56.0
3.950000	40.1	Off	N	19.6	15.9	56.0
4.310000	40.9	Off	N	19.6	15.1	56.0
4.726000	38.7	Off	N	19.7	17.3	56.0

Test Mode :	Mode 3	Temperature :	21~22°C
Test Engineer :	Kai-Chun Chu	Relative Humidity :	49~50%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Function Type :	GSM850 Idle + Bluetooth Link + WLAN (5G) Link + GPS Rx + Earphone 1 + Battery + USB Cable 1 (Charging from Adapter 5) for Sample 2		
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result : Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.270000	35.5	Off	N	19.4	15.6	51.1
0.390000	31.0	Off	N	19.3	17.1	48.1
0.542000	31.5	Off	N	19.4	14.5	46.0
0.646000	26.5	Off	N	19.4	19.5	46.0
0.766000	28.2	Off	N	19.4	17.8	46.0
0.862000	27.9	Off	N	19.4	18.1	46.0
0.990000	25.7	Off	N	19.5	20.3	46.0
1.110000	29.3	Off	N	19.4	16.7	46.0
1.190000	27.7	Off	N	19.5	18.3	46.0
1.390000	28.1	Off	N	19.5	17.9	46.0
1.670000	27.1	Off	N	19.5	18.9	46.0
1.838000	26.9	Off	N	19.6	19.1	46.0
2.222000	27.6	Off	N	19.6	18.4	46.0
2.502000	26.6	Off	N	19.6	19.4	46.0
2.918000	25.7	Off	N	19.6	20.3	46.0
3.950000	24.8	Off	N	19.6	21.2	46.0
4.310000	27.1	Off	N	19.6	18.9	46.0
4.726000	26.9	Off	N	19.7	19.1	46.0



3.7 Antenna Requirements

3.7.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

3.7.2 Antenna Connected Construction

Non-standard connector used.

3.7.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100055	9kHz~40GHz	Jun. 06, 2012	Aug. 21, 2012 ~ Aug. 25, 2012	Jun. 05, 2013	Conducted (TH02-HY)
Power Meter	Anritsu	ML2495A	0932001	N/A	Sep. 18, 2011	Aug. 21, 2012 ~ Aug. 25, 2012	Sep. 17, 2012	Conducted (TH02-HY)
Power Sensor	Anritsu	MA2411B	0846202	N/A	Sep. 18, 2011	Aug. 21, 2012 ~ Aug. 25, 2012	Sep. 17, 2012	Conducted (TH02-HY)
Spectrum Analyzer	R&S	ESU26	100390	20Hz ~ 26.5GHz	Dec. 22, 2011	Aug. 27, 2012 ~ Sep. 04, 2012	Dec. 21, 2012	Radiation (03CH05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2725	30MHz ~ 2GHz	Oct. 22, 2011	Aug. 27, 2012 ~ Sep. 04, 2012	Oct. 21, 2012	Radiation (03CH05-HY)
Turn Table	HD	Deis HD 2000	420/611	0 ~ 360 degree	N/A	Aug. 27, 2012 ~ Sep. 04, 2012	N/A	Radiation (03CH05-HY)
Antenna Mast	HD	MA 240	240/666	1 m ~ 4 m	N/A	Aug. 27, 2012 ~ Sep. 04, 2012	N/A	Radiation (03CH05-HY)
Horn Antenna	ESCO	3117	66584	1GHz~18GHz	Aug. 10, 2012	Aug. 27, 2012 ~ Sep. 04, 2012	Aug. 09, 2013	Radiation (03CH05-HY)
Pre Amplifier	COM-POWER	PA-103A	161075	10Hz ~ 1000MHz Gain:32dB	Feb. 27, 2012	Aug. 27, 2012 ~ Sep. 04, 2012	Feb. 26, 2013	Radiation (03CH05-HY)
Pre Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	159087	1GHz~18GHz	Feb. 27, 2012	Aug. 27, 2012 ~ Sep. 04, 2012	Feb. 26, 2013	Radiation (03CH05-HY)
Pre Amplifier	Agilent	8449B	3008A019 17	1GHz~26.5GHz	Apr. 13, 2012	Aug. 27, 2012 ~ Sep. 04, 2012	Apr. 12, 2013	Radiation (03CH05-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170 251	15GHz ~ 40GHz	Oct. 21, 2011	Aug. 27, 2012 ~ Sep. 04, 2012	Oct. 20, 2012	Radiation (03CH05-HY)
Loop Antenna	R&S	HFH2-Z2	860004/00 1	9KHz ~ 30MHz	Jul. 03, 2012	Aug. 27, 2012 ~ Sep. 04, 2012	Jul. 02, 2014	Radiation (03CH05-HY)
EMI Test Receiver	R&S	ESCS 30	100356	9KHz ~ 2.75GHz	Oct. 27, 2011	Aug. 26, 2012	Oct. 26, 2012	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100081	9KHz ~ 30MHz	Dec. 09, 2011	Aug. 26, 2012	Dec. 08, 2012	Conduction (CO05-HY)
Two-LISN	R&S	ENV216	11-100080	9KHz ~ 30MHz	Dec. 06, 2011	Aug. 26, 2012	Dec. 05, 2012	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Aug. 26, 2012	N/A	Conduction (CO05-HY)
GPS Station	Pendulum	GSG-54	N/A	N/A	N/A	Aug. 26, 2012	N/A	Conduction (CO05-HY)
System Simulator	R&S	CMU200	117997	N/A	Aug. 22, 2011	Aug. 26, 2012	Aug. 21, 2013	Conduction (CO05-HY)



5 Uncertainty of Evaluation

Uncertainty of Conducted Emission Measurement (150KHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.26
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Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	2.54
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Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.72
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