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Report no.: GTI20140040F-2

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EMC TEST REPORT

FCC ID.....: 2ACBCQ6

Product name.....: Android touchscreen all in one pc

Trademark: BOCT

A1、A2、A3、A4、A5、A6、A7、A8、A9、A10、B1、B2、
B3、B4、B5、B6、B7、B8、B9、B10、K1、K2、K3、K4、

Model no.....: K5、K6、K7、K8、K9、K10、G1、G2、G3、G4、G5、G6、
G7、G8、G9、G10、Q1、Q2、Q3、Q4、Q5、Q6、Q7、
Q8、Q9、Q10

Test Standards: FCC Part 15.247: Operation within the bands 902-928
MHz, 2400-2483.5 MHz and 5725-5850 MHz

Applicant: ShenZhen BOCT Technology Co., Ltd.

Address of applicant.....: 5-6/F, 3rd Building, Hedong Hangcheng Industrial Area,
Xixiang Street, Bao'an District, Shenzhen, Guangdong, China

Date of Receipt: April 02, 2014

Date of Test Date.....: April 22, 2014 to April 27, 2014

Data of issue.: April 28, 2014

Test result.....:	Pass
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Testing Engineer :

Mart Xiong
(Mart Xiong)

Reviewed By: :

Tony Wang
(Tony Wang)

Approved Signatory :

Walter Chen
(Walter Chen)

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1. TEST SUMMARY

The tests were performed according to following standards:

[FCC Rules Part 15.247](#): Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.

[ANSI C63.10](#): American National Standard for Testing Unlicensed Wireless Devices

[KDB558074 D01 V03](#): Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247

Test Results:

FCC PART 15 15.247		
FCC Part 15.207	AC Power Conducted Emission	PASS
FCC Part 15.247(a)(1)(i)	20dB Bandwidth	PASS
FCC Part 15.247(d)	Spurious RF Conducted Emission	PASS
FCC Part 15.247(b)	Maximum Peak Output Power	PASS
FCC Part 15.247(b)	Pseudorandom Frequency Hopping Sequence	PASS
FCC Part 15.247(a)(1)(iii)	Number of hopping frequency& Time of Occupancy	PASS
FCC Part 15.247(a)(1)	Frequency Separation	PASS
FCC Part 15.109/ 15.205/ 15.209	Radiated Emissions	PASS
FCC Part 15.247(d)	Band Edge Compliance of RF Emission	PASS
FCC Part 15.203/15.247 (b)	Antenna Requirement	PASS

Remark: The measurement uncertainty is not included in the test result.



1.1 TEST FACILITY

1.1.1 Address of the test laboratory

Shenzhen GTI Technology Co., Ltd

1F, 2 Block, Jiaquan Building, Guanlan High-tech Park Baoan District, Shenzhen, Guangdong, China

1.1.2 Laboratory accreditation

The test facility is recognized, certified, or accredited by the following organizations:

IC Registration No.: 9783A

The 3m alternate test site of DTT Services Co.,Ltd. EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 9783A on Aug, 2011.

FCC-Registration No.: 214666

DTT Services Co.,Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 214666, Sep 19, 2011

1.1.3 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	<u>15-35 ° C</u>
Humidity:	<u>30-60 %</u>
Atmospheric pressure:	<u>950-1050mbar</u>

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %

Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.57 dB	(1)
Transmitter power Radiated	2.20 dB	(1)
Conducted spurious emission 9KHz-40 GHz	1.60 dB	(1)
Radiated spurious emission 9KHz-40 GHz	2.20 dB	(1)
Conducted Emission 9KHz-30MHz	3.39 dB	(1)
Radiated Emission 30~1000MHz	4.24 dB	(1)
Radiated Emissio 1~25GHz	5.16 dB	(1)
Occupied Bandwidth	-----	(1)



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Name of EUT	Android touchscreen all in one pc
Model Number	Q6
Adding Model(s):	A1 、 A2 、 A3 、 A4 、 A5 、 A6 、 A7 、 A8 、 A9 、 A10 、 B1 、 B2 、 B3 、 B4 、 B5 、 B6 、 B7 、 B8 、 B9 、 B10 、 K1 、 K2 、 K3 、 K4 、 K5 、 K6 、 K7 、 K8 、 K9 、 K10 、 G1 、 G2 、 G3 、 G4 、 G5 、 G6 、 G7 、 G8 、 G9 、 G10 、 Q1 、 Q2 、 Q3 、 Q4 、 Q5 、 Q7 、 Q8 、 Q9 、 Q10
Model Difference	All the models are similar except for model name, the model Q6 is selected by test
Antenna Type	Internal
WLAN FCC Operation frequency	IEEE 802.11b:2412-2462MHz IEEE 802.11g:2412-2462MHz IEEE 802.11n HT20:2412-2462MHz IEEE 802.11n HT40:2422-2452MHz
BT Operation frequency	2402MHz-2480MHz
WLAN FCC Modulation Type	IEEE 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK)
BT Modulation Type	GFSK,8DPSK, $\pi/4$ DQPSK(BT v2.1+EDR)
Hardware version	PA1336 VER:1.2
Software version	Q6 V200 20140321
Android version	Android 4.4.2
WLAN	Supported 802.11b/802.11g/802.11n
Bluetooth	Supported BT v2.1+EDR

Note:

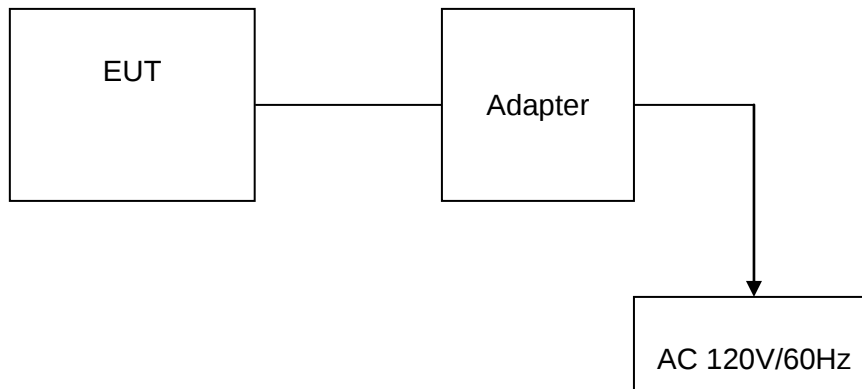
1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.2 DESCRIPTION OF TEST MODES

For IEEE 802.11b/g/n20: Channel1/6/11 were selected as Low/Middle/High channel.

For IEEE 802.11n40: Channel3/6/9 were selected as Low/Middle/High channel.

2.3 DESCRIPTION OF TEST SETUP



2.4 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

Adapter:

Model: ADS-40SG-19-3 19040G
 Input: 100-240V~50/60Hz 1.0A max
 Output: OUTPUT: 19V DC 2.1A
 Power Cable: 120cm
 ◇ Shielded ◆ Unshielded

2.5 MEASUREMENT INSTRUMENTS LIST

Maximum Peak Output Power / Power Spectral Density / 6dB Bandwidth / Band Edge Compliance of RF Emission / Spurious RF Conducted Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	Spectrum Analyzer	Rohde&Schwarz	FSP	1164.4391.40	Oct 25,2014
2	Climate Chamber	ESPEC	EL-10KA	05107008	Oct 25,2014

CONDUCTED EMISSION					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	LISN	R&S	ENV216	101112	Dec. 26, 2014
2	LISN	R&S	ENV216	101113	Dec. 26, 2014
3	EMI Test Receiver	R&S	ESCI	100920	Dec. 26, 2014

Radiated Emission					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100658	Dec 26, 2014
2	High pass filter	Compliance Direction systems	BSU-6	34202	Oct 25,2014
3	Log-Bicon Antenna	Schwarzbeck	CBL6141A	4180	Dec 27, 2014
4	Ultra-Broadband	ShwarzBeck	BBHA9170	25841	Dec 27, 2014



	Antenna				
5	Loop Antenna	LAPLAC INSTRUMENTS LTD	RF300	9138	Nov 15,2014
6	Spectrum Analyzer	HP	8563E	02052	Dec 27, 2014
7	Horn Antenna	Schwarzbeck	BBHA 9120D	648	Dec 27, 2014
8	Pre-Amplifier	HP	8447D	1937A03050	Dec 26, 2014
9	Pre-Amplifier	EMCI	EMC05183 5	980075	Dec 27, 2014
10	Antenna Mast	UC	UC3000	N/A	N/A
11	Turn Table	UC	UC3000	N/A	N/A

3. TEST CONDITIONS AND RESULTS

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

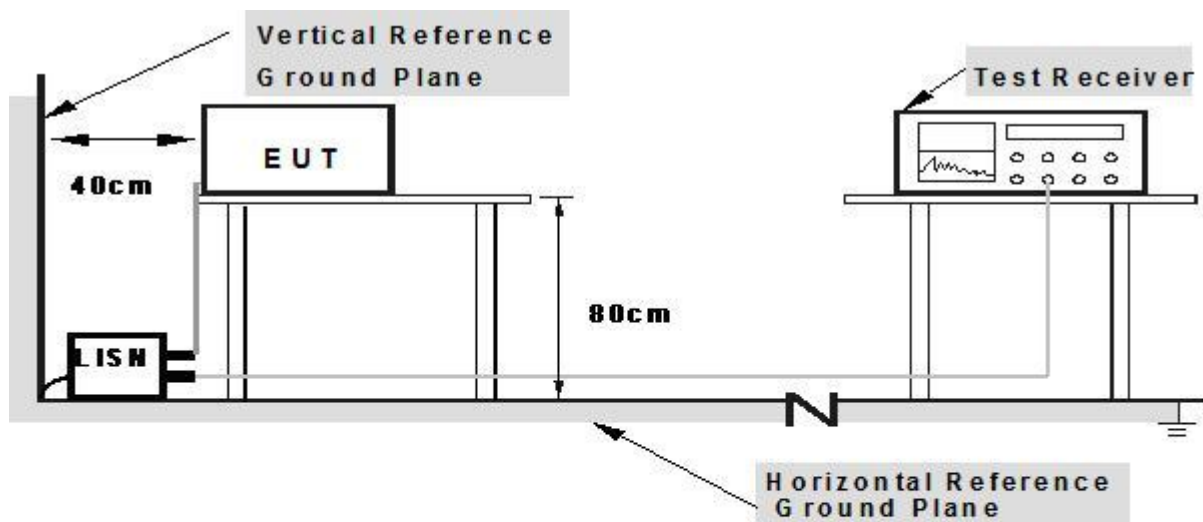
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.1.2 TEST PROCEDURE

- The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN at least 80 cm from nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 TEST SETUP



Note: 1.Support units were connected to second LISN.

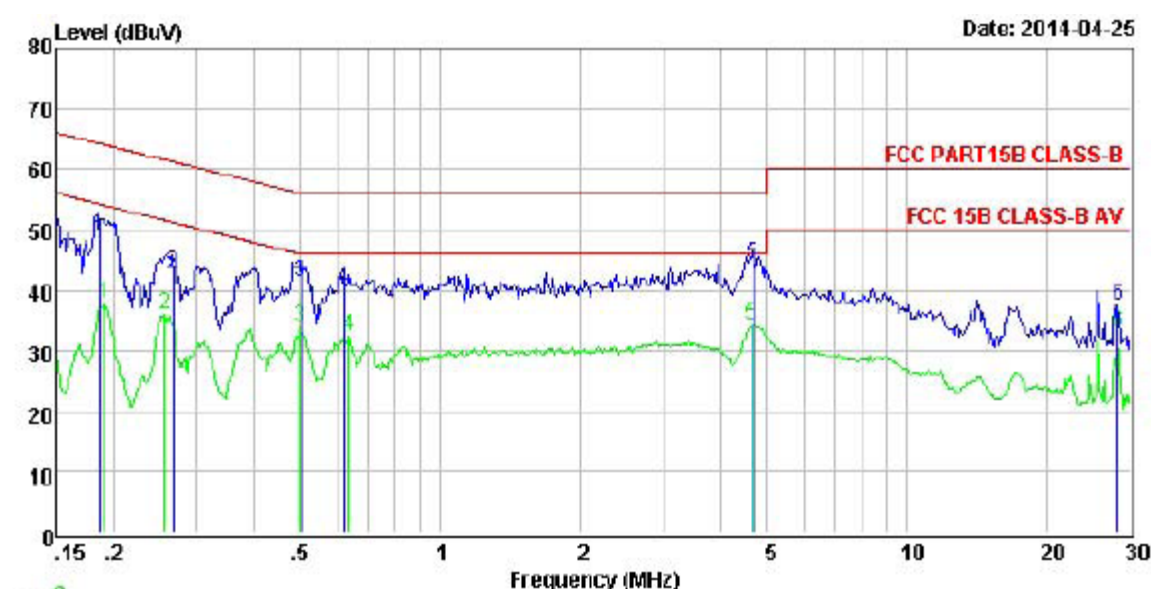
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.2 Unless otherwise a special operating condition is specified in the follows during the testing. We tested all idle mode, recorded worst case at Mode3.

3.1.5 TEST RESULTS

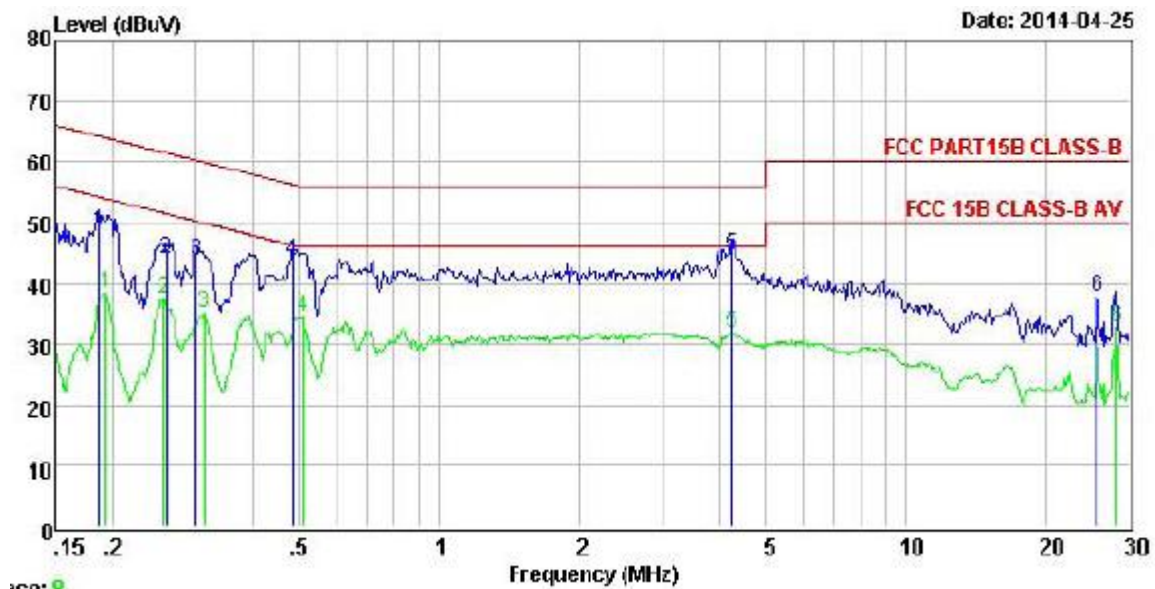
EUT:	Android touchscreen all in one pc	Model Name. :	Q6
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Test Date :	2014-04-25
Test Mode:	Wifi	Phase :	L
Test Voltage :	DC 19V from adapter with AC 120V/60Hz		



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.19	39.08	9.90	48.98	64.24	-15.26	9.85	0.05	QP
2	0.27	32.86	9.88	42.74	61.20	-18.46	9.83	0.05	QP
3	0.50	31.39	9.91	41.30	56.00	-14.70	9.81	0.10	QP
4	0.62	30.08	9.95	40.03	56.00	-15.97	9.80	0.15	QP
5	4.67	33.62	10.57	44.19	56.00	-11.81	9.87	0.70	QP
6	28.30	26.40	11.07	37.47	60.00	-22.53	10.01	1.06	QP

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.19	27.94	9.89	37.83	54.02	-16.19	9.84	0.05	Average
2	0.26	26.25	9.88	36.13	51.56	-15.43	9.83	0.05	Average
3	0.50	23.85	9.91	33.76	46.01	-12.25	9.81	0.10	Average
4	0.63	22.42	9.95	32.37	46.00	-13.63	9.80	0.15	Average
5	4.62	23.69	10.57	34.26	46.00	-11.74	9.87	0.70	Average
6	28.30	22.06	11.07	33.13	50.00	-16.87	10.01	1.06	Average

EUT:	Android touchscreen all in one pc	Model Name. :	Q6
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Test Date :	2014-04-25
Test Mode:	Wifi	Phase :	N
Test Voltage :	DC 19V from adapter with AC 120V/60Hz		



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.19	38.76	9.85	48.61	64.20	-15.59	9.80	0.05	QP
2	0.26	34.06	9.85	43.91	61.42	-17.51	9.80	0.05	QP
3	0.30	33.81	9.87	43.68	60.24	-16.56	9.80	0.07	QP
4	0.48	33.70	9.90	43.60	56.27	-12.67	9.81	0.09	QP
5	4.22	33.98	10.56	44.54	56.00	-11.46	9.86	0.70	QP
6	25.59	26.58	11.05	37.63	60.00	-22.37	10.04	1.01	QP

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	dB	
1	0.19	28.50	9.85	38.35	53.93	-15.58	9.80	0.05	Average
2	0.26	27.68	9.85	37.53	51.56	-14.03	9.80	0.05	Average
3	0.31	25.17	9.87	35.04	49.88	-14.84	9.80	0.07	Average
4	0.51	24.58	9.91	34.49	46.00	-11.51	9.81	0.10	Average
5	4.22	21.27	10.56	31.83	46.00	-14.17	9.86	0.70	Average
6	28.30	21.56	11.11	32.67	50.00	-17.33	10.05	1.06	Average

3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT (Below 1000MHz)

Frequency (MHz)	Distance (Meters)	Radiated (dB μ V/m)	Radiated (μ V/m)
0.009-0.49	300	$20\log(2400/F(\text{kHz}))+80$	$2400/F(\text{kHz})$
0.49-1.705	30	$20\log(24000/F(\text{kHz}))+40$	$24000/F(\text{kHz})$
1.705-30	30	$20\log(30)+40$	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

3.2.2 LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Frequency (MHz)	Distance (Meters)	PEAK (dB μ V/m)	AV (dB μ V/m)
Above 1000	3	74.0	54.0

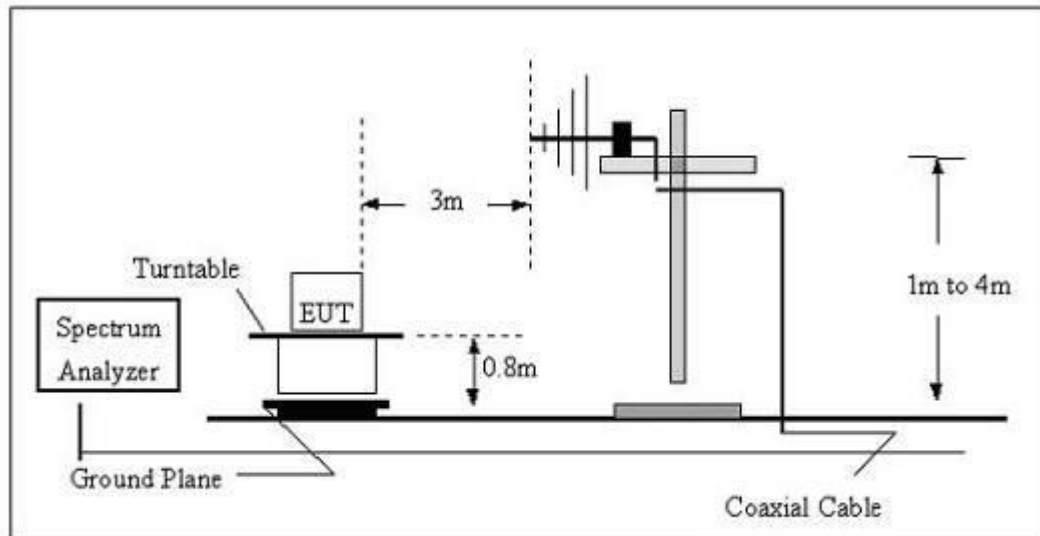
Notes:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dB μ V/m)=20log Emission level (uV/m).

3.2.4 TEST SETUP

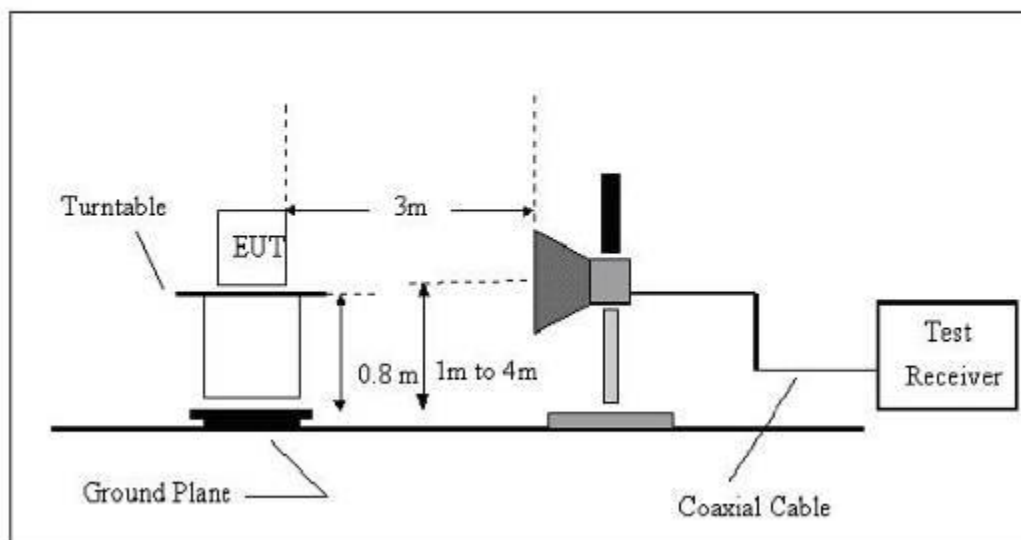
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Above 1GHz

(B) Radiated Emission Test Set-UP Frequency Over 1 GHz

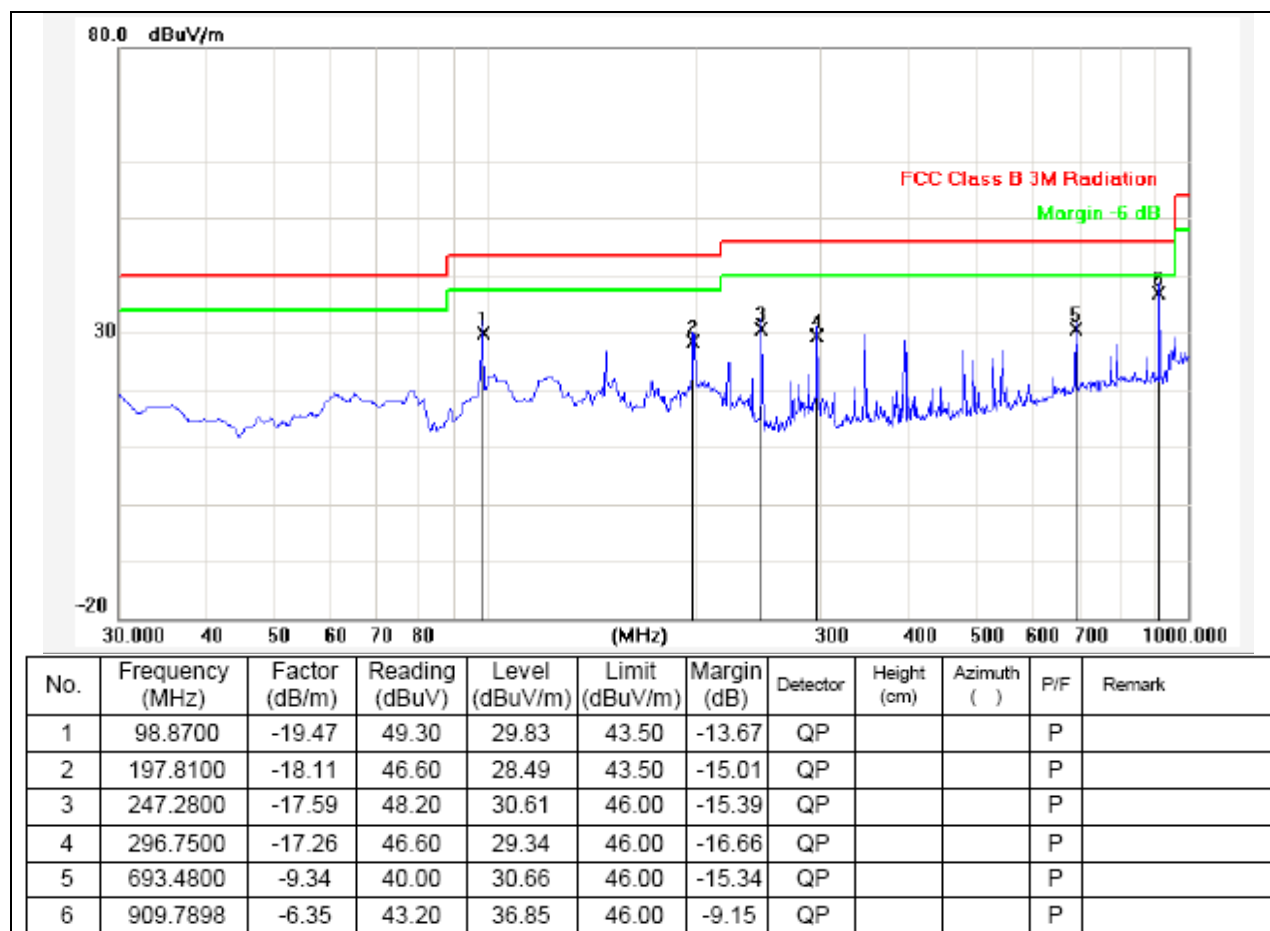


3.2.5 EUT OPERATING CONDITIONS

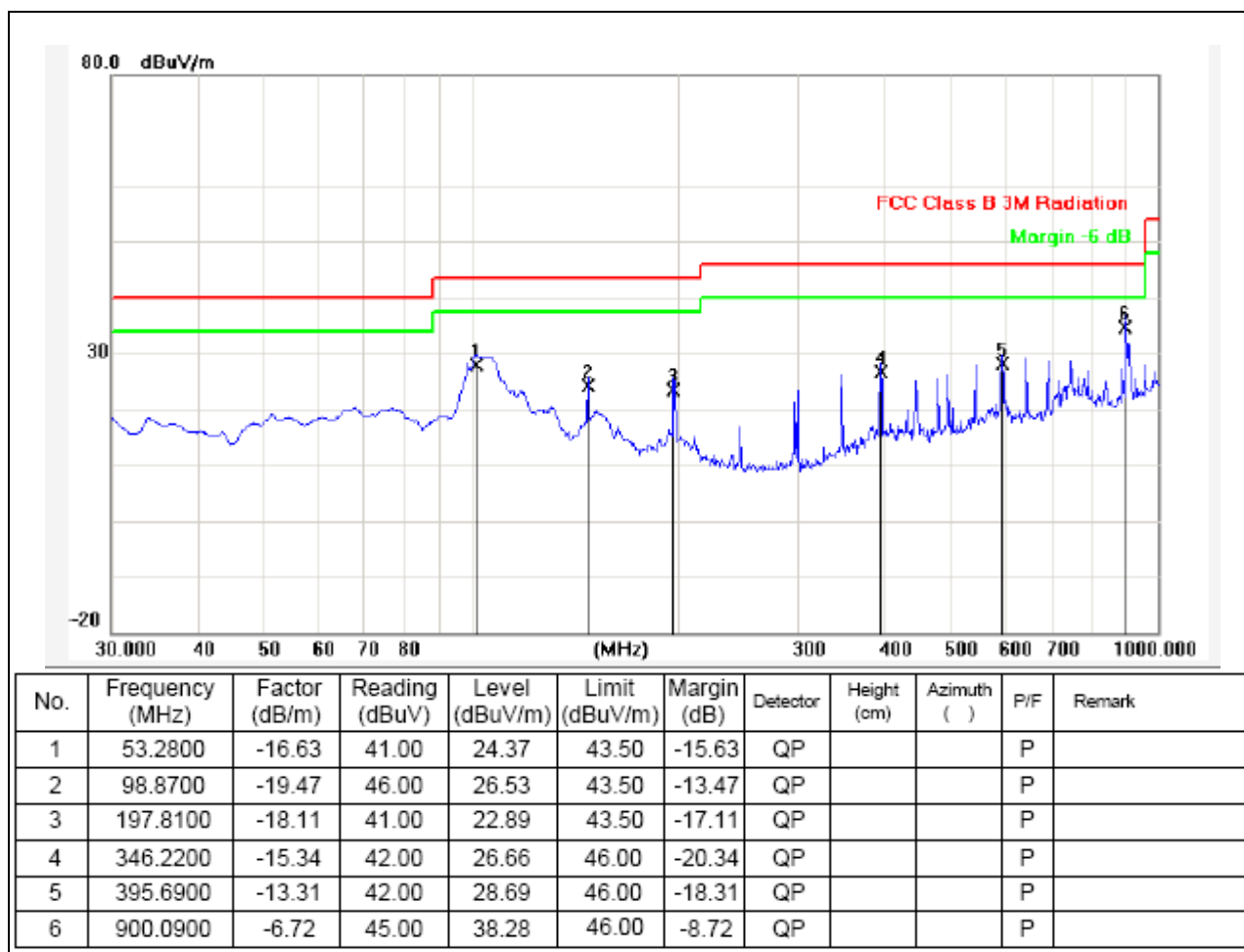
The EUT tested system was configured as the statements of **2.2** Unless otherwise a special operating condition is specified in the follows during the testing. We tested all idle mode, recorded worst case at Mode3.

3.2.6 TEST RESULTS (30-1000MHz)

EUT:	Android touchscreen all in one pc	Model Name. :	Q6
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Test Date :	2014-04-25
Test Mode :	Wifi	Polarization :	Horizontal
Test Power :	DC 19V from adapter with AC 120V/60Hz		



EUT:	Android touchscreen all in one pc	Model Name. :	Q6
Temperature:	26 °C	Relative Humidity:	54%
Pressure:	101kPa	Test Date :	2014-04-25
Test Mode :	Wifi	Polarization :	Vertical
Test Power :	DC 19V from adapter with AC 120V/60Hz		





3.2.7 TEST RESULTS(1GHz-25GHz)

802.11b Mode(above 1GHz)**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11b--2412MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4824.00	61.35 PK	74.00	12.65	1.00 H	39	59.25	31.60	7.00	36.5	2.10
1	4824.00	45.76 AV	54.00	8.24	1.00 H	39	43.66	31.60	7.00	36.5	2.10
2	7236.00	61.91 PK	74.00	12.09	1.00 H	131	50.98	37.33	8.90	35.3	10.93
2	7236.00	46.69 AV	54.00	7.31	1.00 H	131	35.76	37.33	8.90	35.3	10.93

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11b--2412MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4824.00	62.35 PK	74.00	11.65	1.00 H	301	60.25	31.60	7.00	36.5	2.10
1	4824.00	50.16 AV	54.00	3.84	1.00 H	301	48.06	31.60	7.00	36.5	2.10
2	7236.00	60.07 PK	74.00	13.93	1.00 H	157	49.14	37.33	8.90	35.3	10.93
2	7236.00	50.09 AV	54.00	3.91	1.00 H	157	39.16	37.33	8.90	35.3	10.93

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11b--2437MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4874.00	58.70 PK	74.00	15.30	1.00 H	215	56.58	31.02	7.60	36.5	2.12
1	4874.00	47.6 AV	54.00	6.40	1.00 H	215	45.48	31.02	7.60	36.5	2.12
2	7311.00	61.57 PK	74.00	12.43	1.00 H	193	50.49	37.28	8.60	34.8	11.08
2	7311.00	48.66 AV	54.00	5.34	1.00 H	193	37.58	37.28	8.60	34.8	11.08

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11b--2437MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4874.00	58.70 PK	74.00	15.30	1.00 H	131	56.58	31.02	7.60	36.5	2.12
1	4874.00	47.61 AV	54.00	6.39	1.00 H	131	45.49	31.02	7.60	36.5	2.12
2	7311.00	57.66 PK	74.00	16.34	1.00 H	39	46.58	37.28	8.60	34.8	11.08
2	7311.00	47.57 AV	54.00	6.43	1.00 H	39	36.49	37.28	8.60	34.8	11.08

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11b--2462MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4924.00	59.05 PK	74.00	14.95	1.00 H	319	56.67	31.58	7.00	36.2	2.38
1	4924.00	49.14 AV	54.00	4.86	1.00 H	319	46.76	31.58	7.00	36.2	2.38
2	7386.00	61.39 PK	74.00	12.61	1.00 H	127	49.68	38.51	8.50	35.3	11.71
2	7386.00	48.39 AV	54.00	5.61	1.00 H	127	36.68	38.51	8.50	35.3	11.71

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11b--2462MHz)



No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4924.00	62.24 PK	74.00	11.76	1.00 H	312	59.86	31.58	7.00	36.2	2.38
1	4924.00	48.67 AV	54.00	5.33	1.00 H	312	46.29	31.58	7.00	36.2	2.38
2	7386.00	63.44 PK	74.00	10.56	1.00 H	207	51.73	38.51	8.50	35.3	11.71
2	7386.00	48.38 AV	54.00	5.62	1.00 H	207	36.67	38.51	8.50	35.3	11.71

- REMARKS:**
1. Emission level (dBuV/m)=Raw Value(dBuV)+Correction Factor(dB/m)
 2. Correction Factor (dB/m) = Antenna Factor (dB/m)+Cable Factor (dB)-Pre-amplifier Factor
 3. The other emission levels were very low against the limit.
 4. Margin value = Limit value- Emission level.
 5. For Wireless 802.11b mode at 1Mbps.

802.11g Mode(above 1GHz)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11g--2412MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4824.00	56.78 PK	74.00	17.22	1.00 H	30	54.68	31.6	7.00	36.5	2.10
1	4824.00	48.88 AV	54.00	5.12	1.00 H	30	46.78	31.6	7.00	36.5	2.10
2	7236.00	61.35 PK	74.00	12.65	1.00 H	242	50.42	37.33	8.90	35.3	10.93
2	7236.00	48.57 AV	54.00	5.43	1.00 H	242	37.64	37.33	8.90	35.3	10.93

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11g--2412MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4824.00	62.77 PK	74.00	11.23	1.00 H	49	60.67	31.60	7.00	36.5	2.10
1	4824.00	48.88 AV	54.00	5.12	1.00 H	49	46.78	31.60	7.00	36.5	2.10
2	7236.00	60.53 PK	74.00	13.47	1.00 H	290	49.6	37.33	8.90	35.3	10.93
2	7236.00	47.79 AV	54.00	6.21	1.00 H	290	36.86	37.33	8.90	35.3	10.93

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11g--2437MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4874.00	62.04 PK	74.00	11.96	1.00 H	110	59.92	31.02	7.60	36.5	2.12
1	4874.00	48.71 AV	54.00	5.29	1.00 H	110	46.59	31.02	7.60	36.5	2.12
2	7311.00	59.78 PK	74.00	14.22	1.00 H	57	48.70	37.28	8.60	34.8	11.08
2	7311.00	47.65 AV	54.00	6.35	1.00 H	57	36.57	37.28	8.60	34.8	11.08

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11g--2437MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor (dB)	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4874.00	63.11 PK	74.00	10.89	1.00 H	135	60.99	31.02	7.60	36.5	2.12
1	4874.00	49.08 AV	54.00	4.92	1.00 H	135	46.96	31.02	7.60	36.5	2.12
2	7311.00	61.8 PK	74.00	12.20	1.00 H	279	50.72	37.28	8.60	34.8	11.08
2	7311.00	47.06 AV	54.00	6.94	1.00 H	279	35.98	37.28	8.60	34.8	11.08

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11g--2462MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4924.00	59.29 PK	74.00	14.71	1.00 H	324	56.91	31.58	7.00	36.2	2.38
1	4924.00	47.15 AV	54.00	6.85	1.00 H	324	44.77	31.58	7.00	36.2	2.38
2	7311.00	61.78 PK	74.00	12.22	1.00 H	216	50.07	38.51	8.50	35.3	11.71
2	7311.00	48.49 AV	54.00	5.51	1.00 H	216	36.78	38.51	8.50	35.3	11.71

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11g--2462MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4924.00	61.02 PK	74.00	12.98	1.00 H	149	58.64	31.58	7.00	36.2	2.38
1	4924.00	48.06 AV	54.00	5.94	1.00 H	149	45.68	31.58	7.00	36.2	2.38
2	7386.00	63.38 PK	74.00	10.62	1.00 H	21	51.67	38.51	8.50	35.3	11.71
2	7386.00	48.39 AV	54.00	5.61	1.00 H	21	36.68	38.51	8.50	35.3	11.71

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m)
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier Factor
 3. The other emission levels were very low against the limit.
 4. Margin value = Limit value - Emission level.
 5. For Wireless 802.11g mode at 6Mbps.

802.11n(20MHz) Mode(above 1GHz)**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20--2412MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4824.00	63.24 PK	74.00	10.76	1.00 H	70	61.14	31.60	7.00	36.5	2.10
1	4824.00	47.88 AV	54.00	6.12	1.00 H	70	45.78	31.60	7.00	36.5	2.10
2	7236.00	61.6 PK	74.00	12.40	1.00 H	125	50.67	37.33	8.90	35.3	10.93
2	7236.00	47.91 AV	54.00	6.09	1.00 H	125	36.98	37.33	8.90	35.3	10.93

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20--2412MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4824.00	63.10 PK	74.00	10.90	1.00 H	49	61.00	31.60	7.00	36.5	2.10
1	4824.00	48.67 AV	54.00	5.33	1.00 H	49	46.57	31.60	7.00	36.5	2.10
2	7236.00	62.71 PK	74.00	11.29	1.00 H	105	51.78	37.33	8.90	35.3	10.93
2	7236.00	49.05 AV	54.00	4.95	1.00 H	105	38.12	37.33	8.90	35.3	10.93

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20--2437MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4874.00	59.18 PK	74.00	14.82	1.00 H	216	57.06	31.02	7.60	36.5	2.12
1	4874.00	48.80 AV	54.00	5.20	1.00 H	216	46.68	31.02	7.60	36.5	2.12
2	7311.00	61.87 PK	74.00	12.13	1.00 H	109	50.79	37.28	8.60	34.8	11.08
2	7311.00	48.81 AV	54.00	5.19	1.00 H	109	37.73	37.28	8.60	34.8	11.08

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20--2437MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4874.00	59.80 PK	74.00	14.20	1.00 H	240	57.68	31.02	7.60	36.5	2.12
1	4874.00	48.91 AV	54.00	5.09	1.00 H	240	46.79	31.02	7.60	36.5	2.12
2	7311.00	61.14 PK	74.00	12.86	1.00 H	201	50.06	37.28	8.60	34.8	11.08
2	7311.00	49.17 AV	54.00	4.83	1.00 H	201	38.09	37.28	8.60	34.8	11.08

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n20--2462MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4924.00	58.25 PK	74.00	15.75	1.00 H	129	55.87	31.58	7.00	36.2	2.38
1	4924.00	45.36 AV	54.00	8.64	1.00 H	129	42.98	31.58	7.00	36.2	2.38
2	7386.00	60.39 PK	74.00	13.61	1.00 H	221	48.68	38.51	8.50	35.3	11.71
2	7386.00	48.51 AV	54.00	5.49	1.00 H	221	36.80	38.51	8.50	35.3	11.71

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n20--2462MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4924.00	59.19 PK	74.00	14.81	1.00 H	146	56.81	31.58	7.00	36.2	2.38
1	4924.00	48.06 AV	54.00	5.94	1.00 H	146	45.68	31.58	7.00	36.2	2.38
2	7386.00	61.41 PK	74.00	12.59	1.00 H	258	49.70	38.51	8.50	35.3	11.71
2	7386.00	48.47 AV	54.00	5.53	1.00 H	258	36.76	38.51	8.50	35.3	11.71

- REMARKS:**
1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m)
 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier Factor
 3. The other emission levels were very low against the limit.
 4. Margin value = Limit value - Emission level.
 5. For Wireless 802.11n (20MHz) mode at 6.5Mbps.

802.11n(40MHz) Mode(above 1GHz)**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40--2422MHz)**

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4844.00	61.38 PK	74.00	12.62	1.00 H	48	59.27	31.01	7.30	36.2	2.11
1	4844.00	45.77 AV	54.00	8.23	1.00 H	48	43.66	31.01	7.30	36.2	2.11
2	7266.00	61.30 PK	74.00	12.70	1.00 H	157	50.50	36.70	8.90	34.8	10.80
2	7266.00	46.63 AV	54.00	7.37	1.00 H	157	35.83	36.70	8.90	34.8	10.80

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40--2422MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4844.00	59.73 PK	74.00	14.27	1.00 H	334	57.62	31.01	7.30	36.2	2.11
1	4844.00	47.11 AV	54.00	6.89	1.00 H	334	45.00	31.01	7.30	36.2	2.11



2	7266.00	62.04	PK	74.00	11.96	1.00 H	114	51.24	36.70	8.90	34.8	10.80
2	7266.00	47.03	AV	54.00	6.97	1.00 H	114	36.23	36.70	8.90	34.8	10.80

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40--2437MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4874.00	60.79	PK	74.00	13.21	1.00 H	229	58.67	31.02	7.60	36.5	2.12
1	4874.00	48.80	AV	54.00	5.20	1.00 H	229	46.68	31.02	7.60	36.5	2.12
2	7311.00	64.09	PK	74.00	9.91	1.00 H	147	53.01	37.28	8.60	34.8	11.08
2	7311.00	48.75	AV	54.00	5.25	1.00 H	147	37.67	37.28	8.60	34.8	11.08

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40--2437MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4874.00	58.48	PK	74.00	15.52	1.00 H	307	56.36	31.02	7.60	36.5	2.12
1	4874.00	49.32	AV	54.00	4.68	1.00 H	307	47.20	31.02	7.60	36.5	2.12
2	7311.00	63.45	PK	74.00	10.55	1.00 H	159	52.37	37.28	8.60	34.8	11.08
2	7311.00	48.72	AV	54.00	5.28	1.00 H	159	37.64	37.28	8.60	34.8	11.08

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M (802.11n40--2452MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4904.00	57.94	PK	74.00	16.06	1.00 H	38	55.67	31.47	7.00	36.2	2.27
1	4904.00	44.94	AV	54.00	9.06	1.00 H	38	42.67	31.47	7.00	36.2	2.27
2	7356.00	61.06	PK	74.00	12.94	1.00 H	178	49.41	38.45	8.50	35.3	11.65
2	7356.00	47.32	AV	54.00	6.68	1.00 H	178	35.67	38.45	8.50	35.3	11.65

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M (802.11n40--2452MHz)

No.	Frequency (MHz)	Emission Level (dBuV/m)		Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Antenna Factor	Cable Factor (dB)	Pre-amplifier	Correction Factor (dB/m)
1	4904.00	59.84	PK	74.00	14.16	1.00 H	178	57.57	31.47	7.00	36.2	2.27
1	4904.00	45.94	AV	54.00	8.06	1.00 H	178	43.67	31.47	7.00	36.2	2.27
2	7356.00	60.22	PK	74.00	13.78	1.00 H	173	48.57	38.45	8.50	35.3	11.65
2	7356.00	47.25	AV	54.00	6.75	1.00 H	173	35.6	38.45	8.50	35.3	11.65

REMARKS:1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m)

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier Factor

3. The other emission levels were very low against the limit.

4. Margin value = Limit value - Emission level.

5. For Wireless 802.11n (40MHz) mode at 13.5Mbps.

3.2.8 TEST RESULTS(9kHz-30MHz)

Frequency (MHz)	Corrected Reading (dBuV/m) @3m	Limit (dBuV/m)@3m	Margin (dB)	Detector	Result
12.00	42.53	69.54	27.01	QP	PASS
24.00	41.49	69.54	28.05	QP	PASS

3.3 Maximum Peak Output Power

3.2.1 Limit

The Maximum Peak Output Power Measurement is 30dBm.

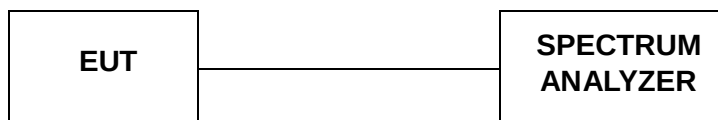
3.2.2 Test Procedure

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

Accoding to KDB558074 D01 V03 Integrated band power method for this procedure may be used when the maximum available RBW of the measurement instrument is less than the DTS bandwidth.

1. Set the RBW = 1 MHz.
2. Set the VBW ≥ 3 RBW
3. Set the span $\geq 1.5 \times$ DTS bandwidth.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select peak detector). If the instrument does not have a band power function, sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS channel bandwidth.

3.2.3 Test Configuration



3.2.4 Test Results

Remark: We measured output power at difference data rate for each mode and recorded woest case for each mode.

802.11b Test Mode

A. Test Verdict

Channel	Frequency (MHz)	Measured Output Peak Power (dBm)	Measured Output Average Power (dBm)	Limits (dBm)	Verdict
1	2412	11.72	9.13	30	PASS
6	2437	12.31	8.92	30	PASS
11	2462	12.33	8.87	30	PASS

Note: 1. For 802.11b mode at finial test to get the worst-case emission at 1Mbps.
2. The test results including the cable lose.

802.11g Test Mode

A. Test Verdict

Channel	Frequency (MHz)	Measured Output Peak Power (dBm)	Measured Output Average Power (dBm)	Limits (dBm)	Verdict
1	2412	10.72	7.31	30	PASS
6	2437	11.31	7.32	30	PASS
11	2462	11.33	7.40	30	PASS

Note: 1. For 802.11g mode at final test to get the worst-case emission at 6Mbps.
2. The test results including the cable loss.

802.11n(20MHz) Test Mode

A. Test Verdict

Channel	Frequency (MHz)	Measured Output Peak Power (dBm)	Measured Output Average Power (dBm)	Limits (dBm)	Verdict
1	2412	10.32	7.11	30	PASS
6	2437	11.12	7.16	30	PASS
11	2462	11.30	7.20	30	PASS

Note: 1. For 802.11n(20MHz) mode at final test to get the worst-case emission at 6.5Mbps.
2. The test results including the cable loss.

802.11n(40MHz) Test Mode

A. Test Verdict

Channel	Frequency (MHz)	Measured Output Peak Power (dBm)	Measured Output Average Power (dBm)	Limits (dBm)	Verdict
3	2422	9.72	6.27	30	PASS
6	2437	10.31	6.22	30	PASS
9	2452	10.33	6.21	30	PASS

Note: 1. For 802.11n(40MHz) mode at final test to get the worst-case emission at 13.5Mbps.
2. The test results including the cable loss.

3.4 Power Spectral Density

3.4.1 Limit

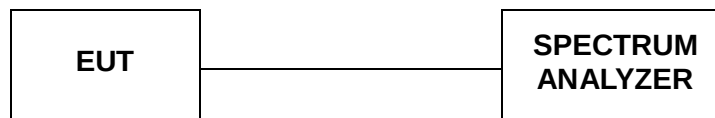
For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

3.4.2 Test Procedure

According to KDB 558074 D01 V03 Method PKPSD (peak PSD) This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance, and is optional if the maximum conducted (average) output power was used to demonstrate compliance.

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
4. Set the VBW $\geq 3 \text{ RBW}$.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

3.4.3 Test Configuration



3.4.4 Test Results

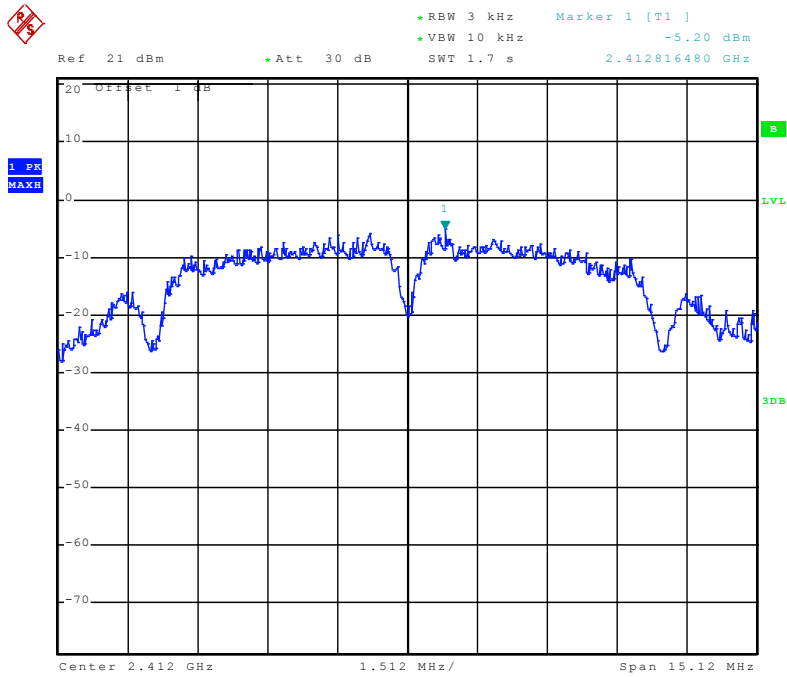
802.11b Test Mode

A. Test Verdict

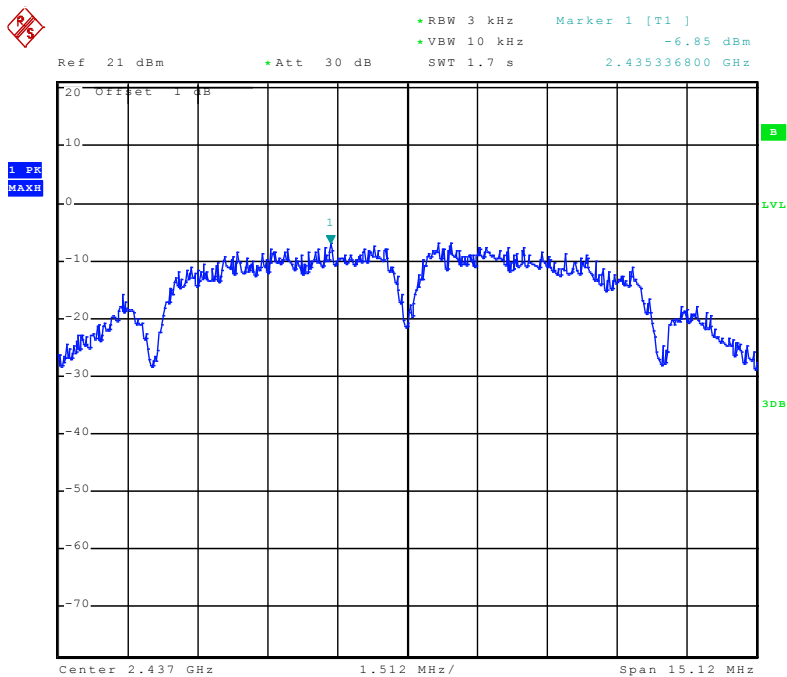
Channel	Frequency (MHz)	Report PSD (dBm/3kHz)	Refer to Plot	Limits (dBm/3KHz)	Verdict
1	2412	-5.20	Plot 3.4.1 A	8	PASS
6	2437	-6.85	Plot 3.4.1 B	8	PASS
11	2462	-6.15	Plot 3.4.1 C	8	PASS

Note: 1. For 802.11b mode at final test to get the worst-case emission at 1Mbps.
2. The test results including the cable loss.

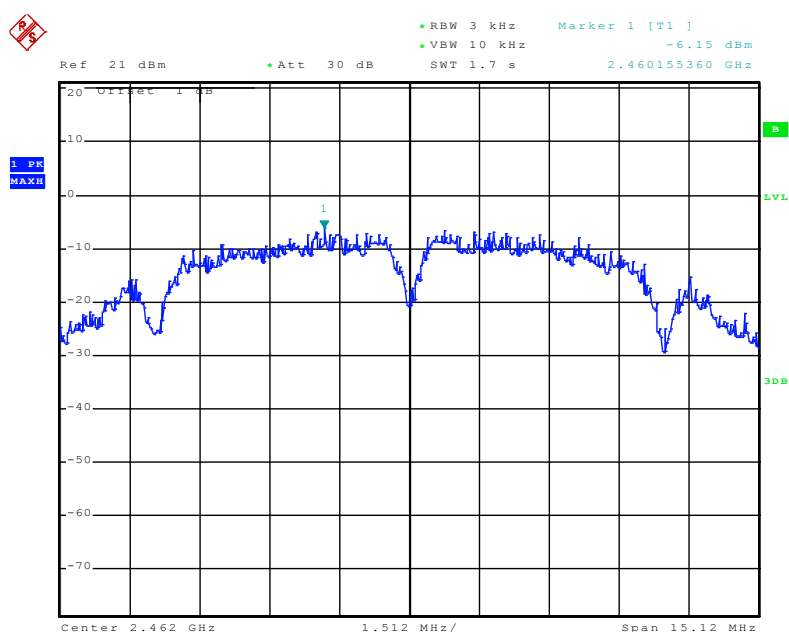
B. Test Plots



(Plot 3.4.1 A: Channel 1: 2412MHz @ 802.11b)



(Plot 3.4.1 B: Channel 6: 2437MHz @ 802.11b)



(Plot 3.4.1 C: Channel 11: 2462MHz @ 802.11b)

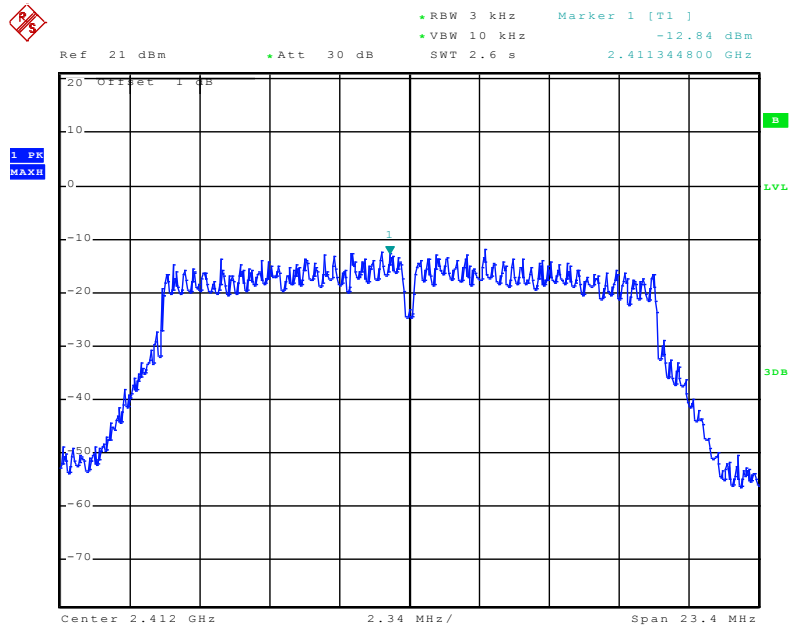
802.11g Test Mode

A. Test Verdict

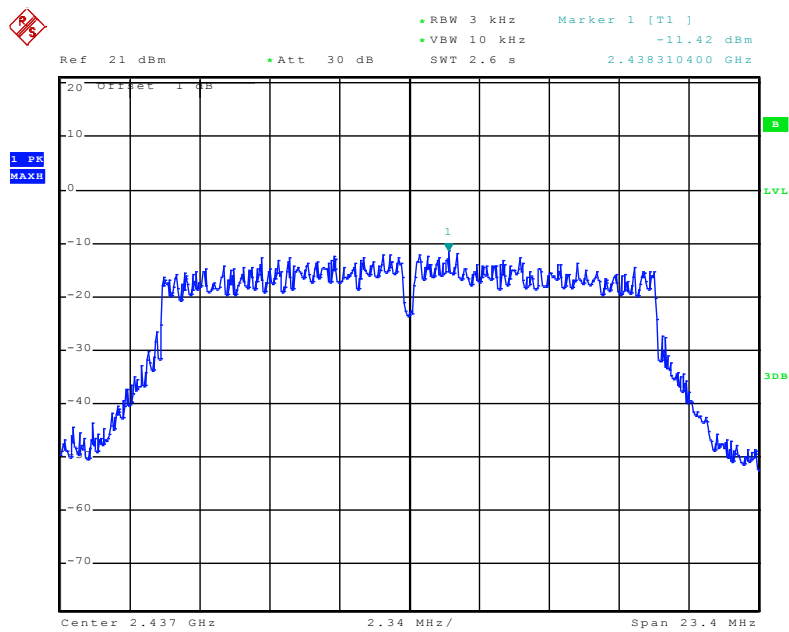
Channel	Frequency (MHz)	Report PSD (dBm/3kHz)	Refer to Plot	Limits (dBm/3KHz)	Verdict
1	2412	-12.84	Plot 3.4.2 A	8	PASS
6	2437	-11.42	Plot 3.4.2 B	8	PASS
11	2462	-12.09	Plot 3.4.2 C	8	PASS

Note: 1. For 802.11g mode at final test to get the worst-case emission at 6Mbps.
2. The test results including the cable loss.

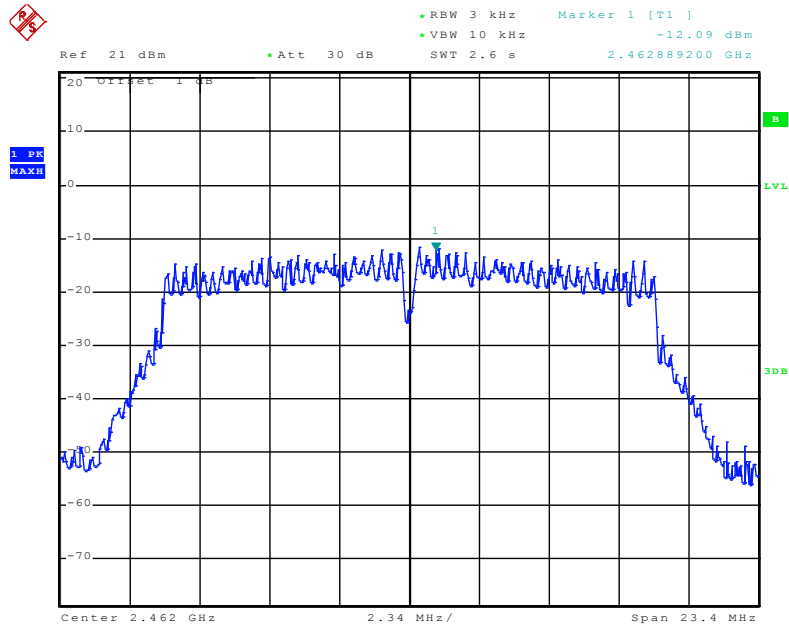
B. Test Plots



(Plot 3.4.2 A: Channel 1: 2412MHz @ 802.11g)



(Plot 3.4.2 B: Channel 6: 2437MHz @ 802.11g)



(Plot 3.4.2 C: Channel 11: 2462MHz @ 802.11g)

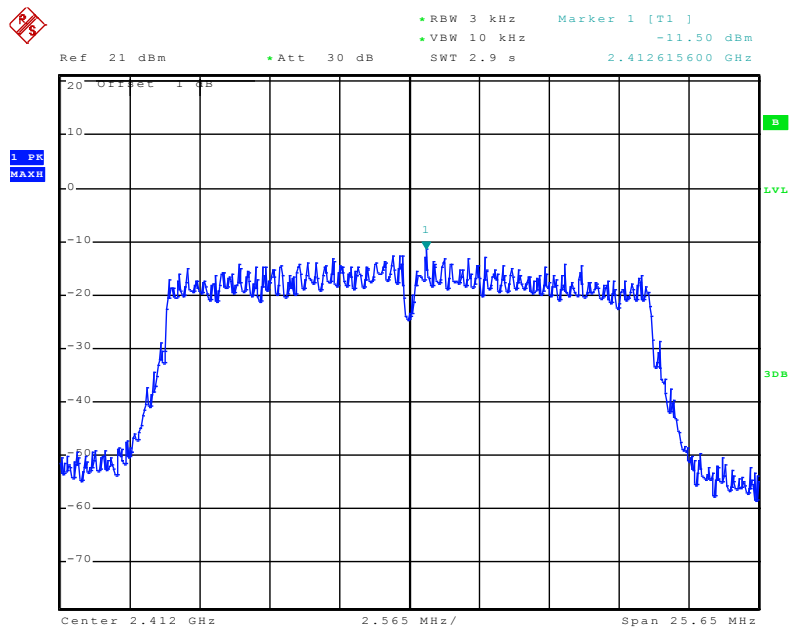
802.11n(20MHz) Test Mode

A. Test Verdict

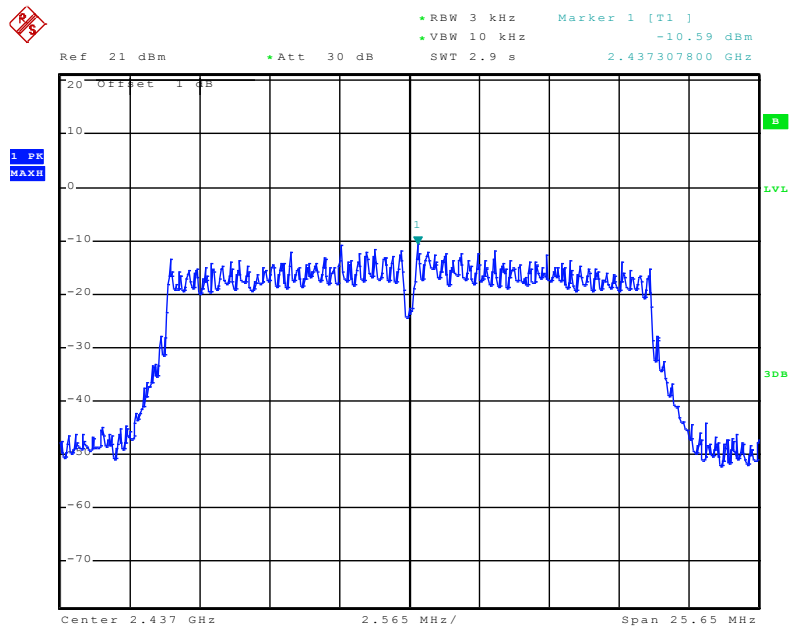
Channel	Frequency (MHz)	Report PSD (dBm/3kHz)	Refer to Plot	Limits (dBm/3KHz)	Verdict
1	2412	-11.50	Plot 3.4.3 A	8	PASS
6	2437	-10.59	Plot 3.4.3 B	8	PASS
11	2462	-12.28	Plot 3.4.3 C	8	PASS

Note: 1. For 802.11n(20MHz) mode at final test to get the worst-case emission at 6.5Mbps.
2. The test results including the cable loss.

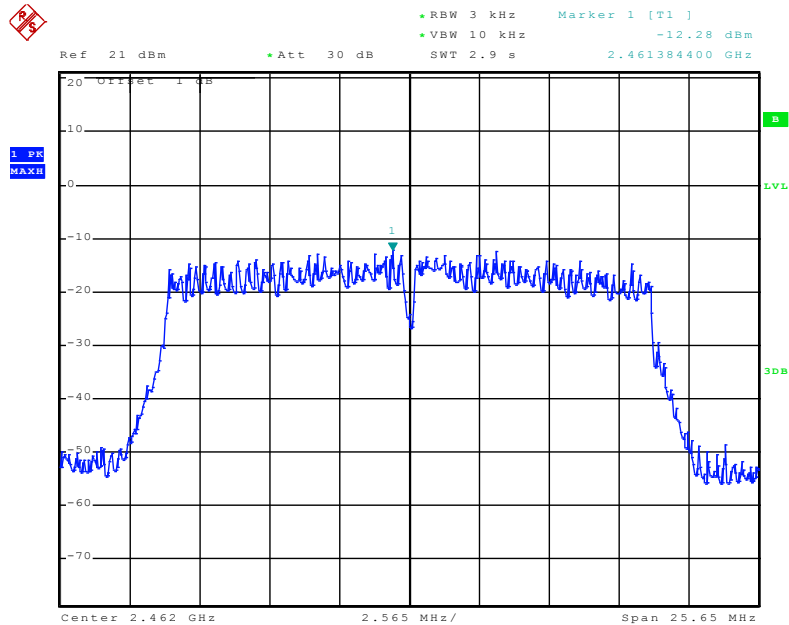
B. Test Plots



(Plot 3.4.3 A: Channel 1: 2412MHz @ 802.11n(20MHz))



(Plot 3.4.3 B: Channel 6: 2437MHz @ 802.11n(20MHz))



(Plot 3.4.3 C: Channel 11: 2462MHz @ 802.11n(20MHz))

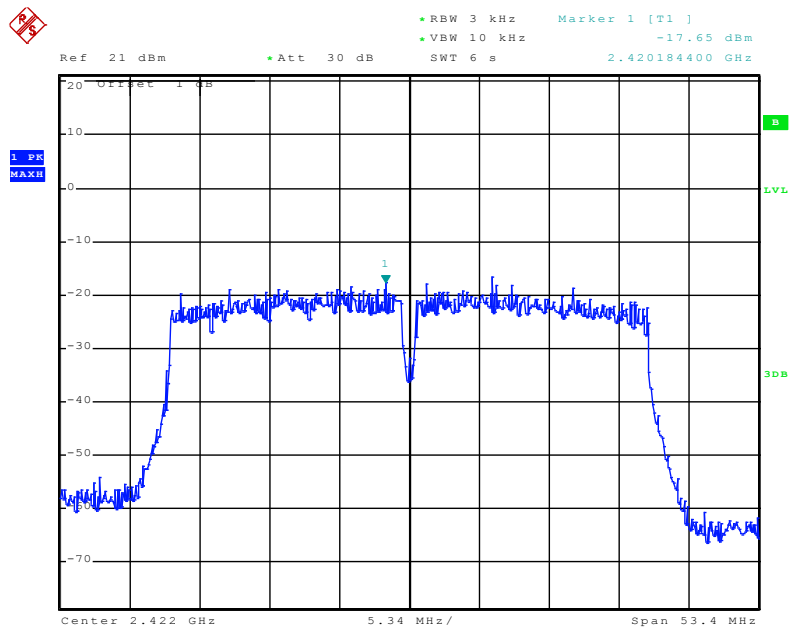
802.11n(40MHz) Test Mode

A. Test Verdict

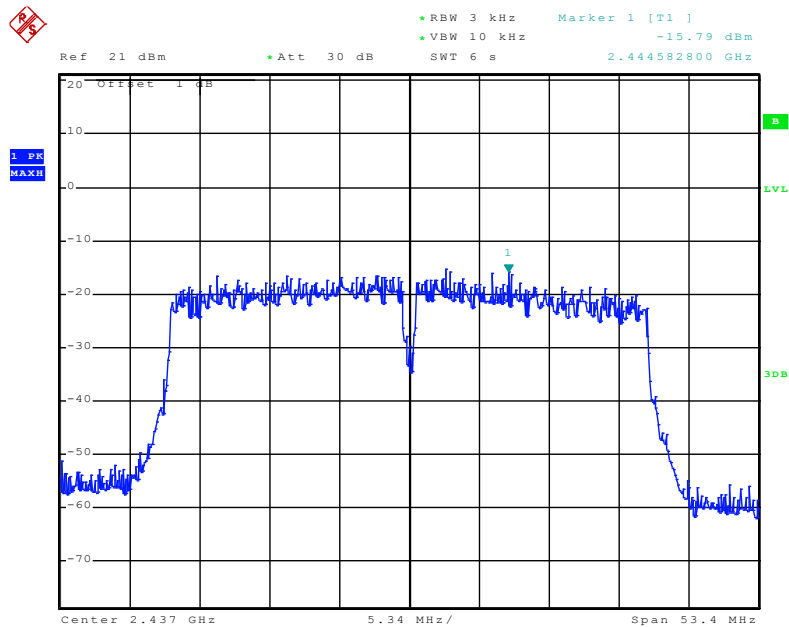
Channel	Frequency (MHz)	Report PSD (dBm/3kHz)	Refer to Plot	Limits (dBm/3KHz)	Verdict
3	2422	-17.65	Plot 3.4.4 A	8	PASS
6	2437	-15.79	Plot 3.4.4 B	8	PASS
9	2452	-17.69	Plot 3.4.4 C	8	PASS

Note: 1. For 802.11n(40MHz) mode at final test to get the worst-case emission at 13.5Mbps.
2.The test results including the cable loss.

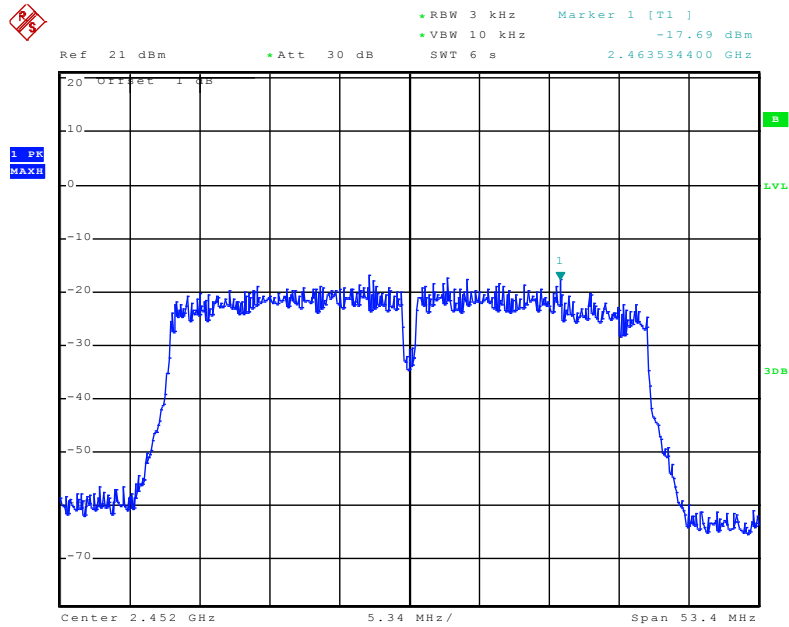
B. Test Plots



(Plot 3.4.4 A: Channel 3: 2422MHz @ 802.11n(40MHz))



(Plot 3.4.4 B: Channel 6: 2437MHz @ 802.11n(40MHz))



(Plot 3.4.4 C: Channel 6: 2452MHz @ 802.11n(40MHz))

3.5 6dB Bandwidth

3.5.1 Limit

For digital modulation systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

3.5.2 Test Procedure

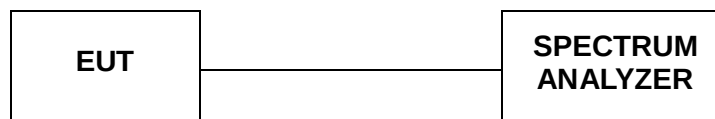
The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 KHz RBW and 300KHz VBW.

The 6dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 6dB.

According to KDB558074 D01 V03 for one of the following procedures may be used to determine the modulated DTS device signal bandwidth.

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥ 3 RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.5.3 Test Configuration



3.5.4 Test Results

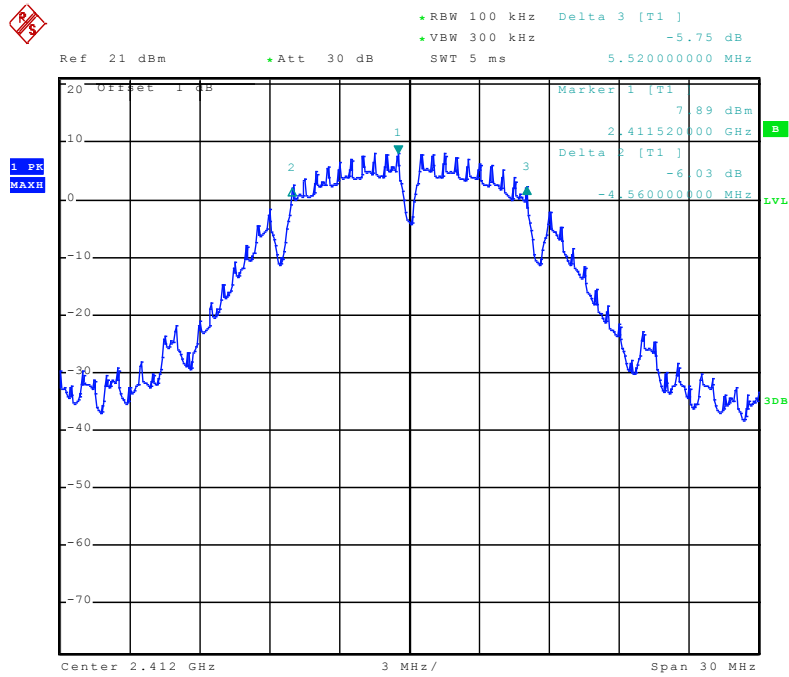
801.11b Test Mode

A. Test Verdict

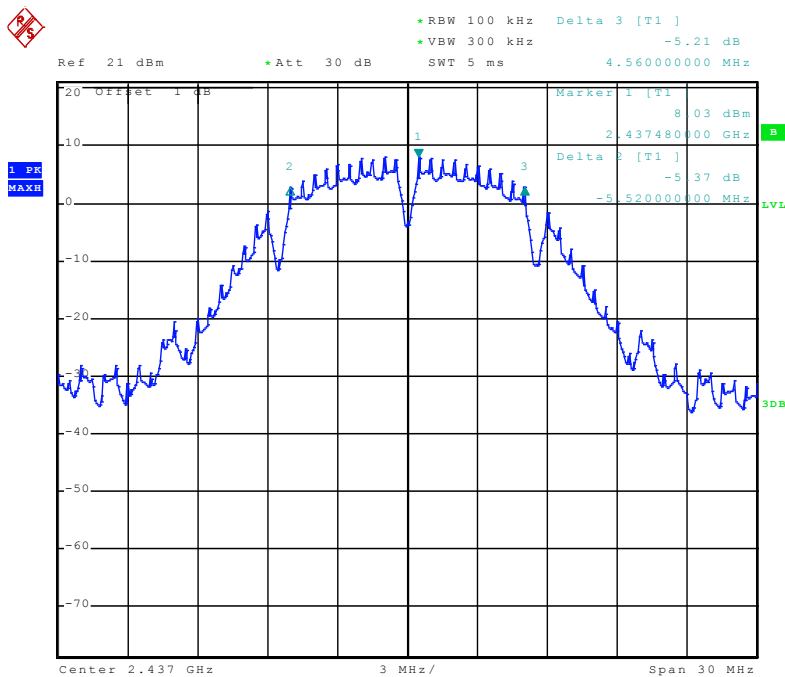
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Refer to Plot	Limits (kHz)	Verdict
1	2412	10.08	Plot 3.5.1 A	≥ 500	PASS
6	2437	10.08	Plot 3.5.1 B	≥ 500	PASS
11	2462	10.08	Plot 3.5.1 C	≥ 500	PASS

Note: 1. For 802.11b mode at final test to get the worst-case emission at 1Mbps.
2. The test results including the cable loss.

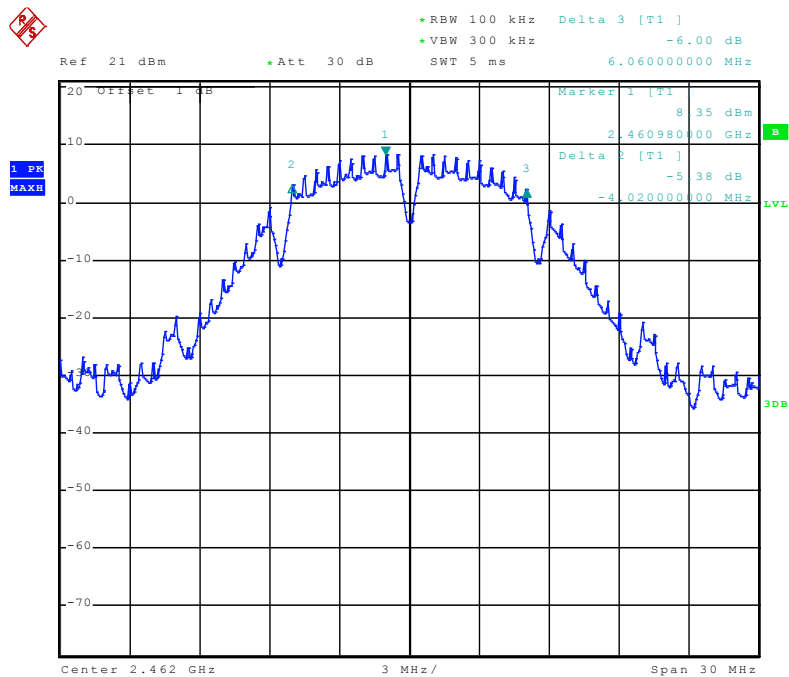
B. Test Plots



(Plot 3.5.1 A: Channel 1: 2412MHz @ 802.11b)



(Plot 3.5.1 B: Channel 6: 2437MHz @ 802.11b)



(Plot 3.5.1 C: Channel 11: 2462MHz @ 802.11b)

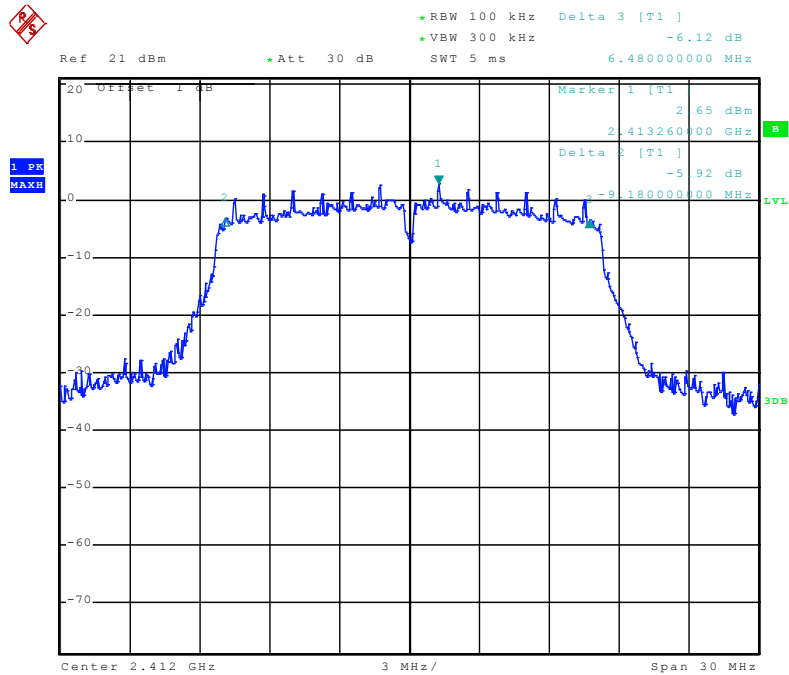
801.11g Test Mode

A. Test Verdict

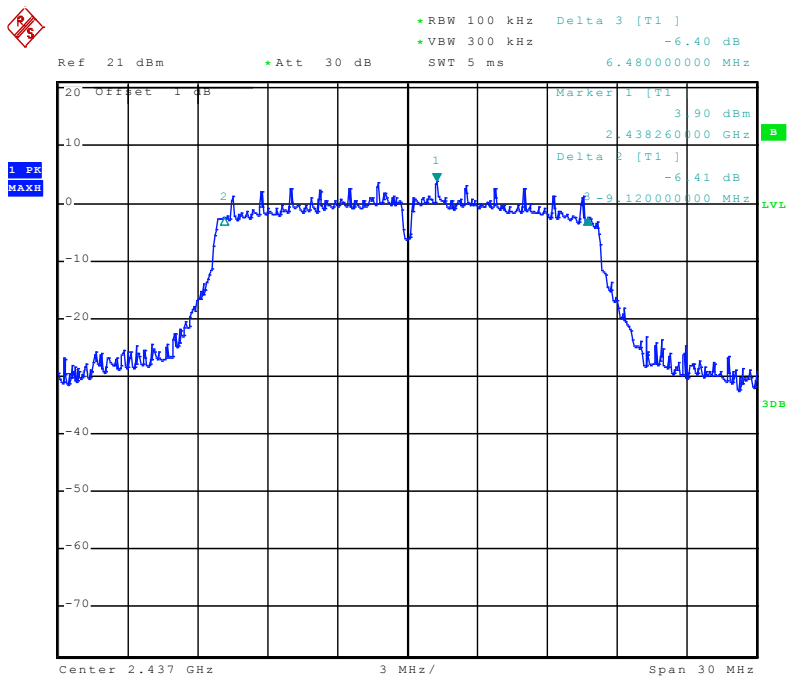
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Refer to Plot	Limits (kHz)	Verdict
1	2412	15.64	Plot 3.5.2 A	≥500	PASS
6	2437	15.60	Plot 3.5.2 B	≥500	PASS
11	2462	15.60	Plot 3.5.2 C	≥500	PASS

Note: 1. For 802.11g mode at final test to get the worst-case emission at 6Mbps.
2. The test results including the cable loss.

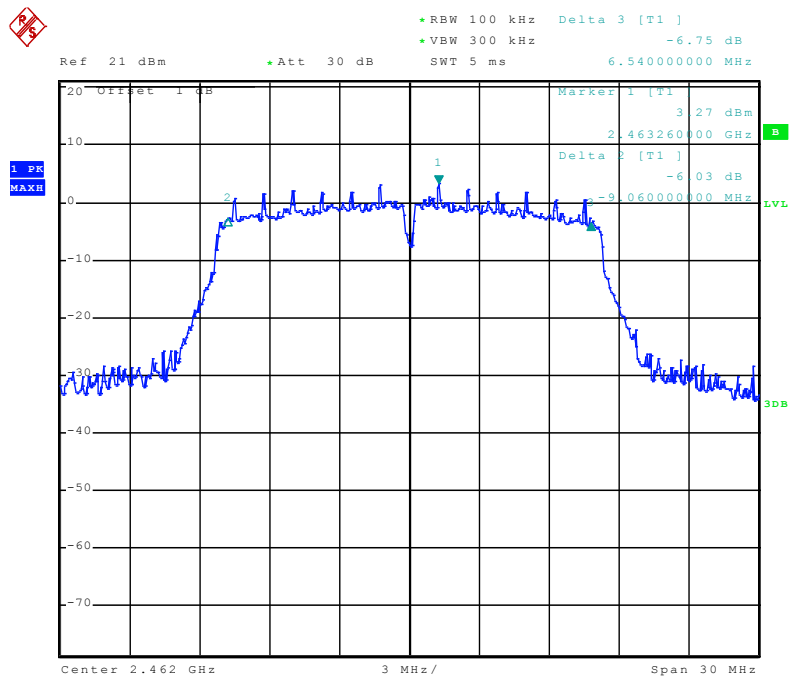
B. Test Plots



(Plot 3.5.2 A: Channel 1: 2412MHz @ 802.11g)



(Plot 3.5.2 B: Channel 6: 2437MHz @ 802.11g)



(Plot 3.5.2 C: Channel 11: 2462MHz @ 802.11g)

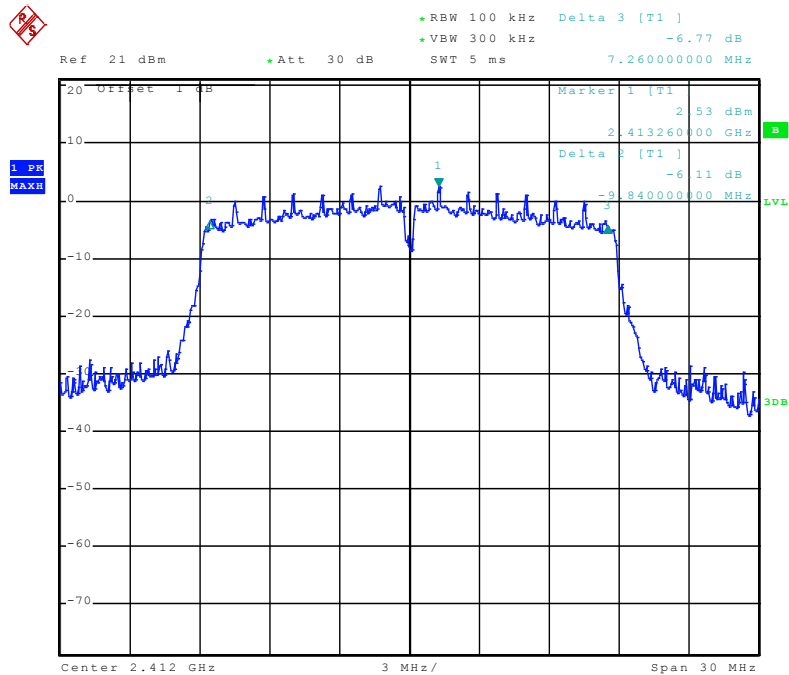
801.11n(20MHz) Test Mode

A. Test Verdict

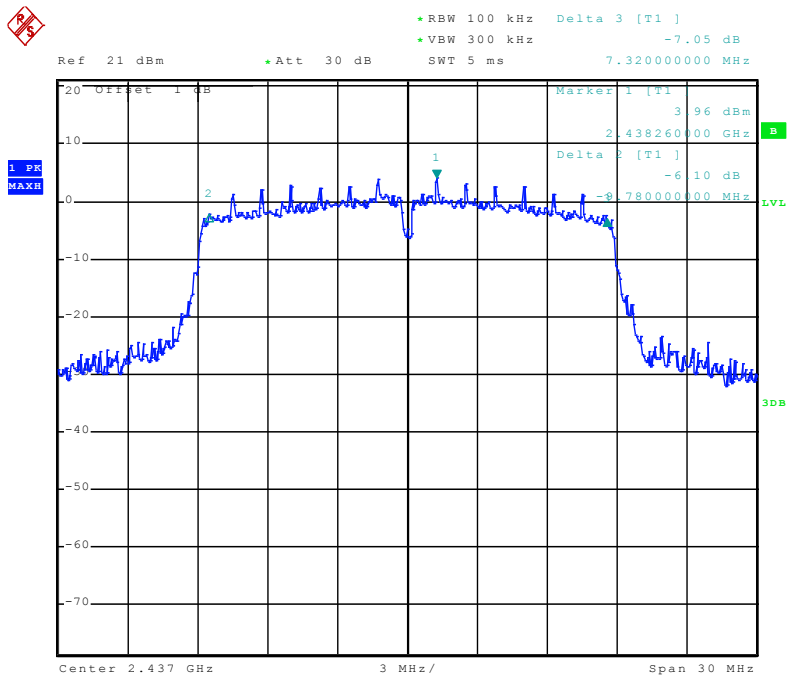
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Refer to Plot	Limits (kHz)	Verdict
1	2412	17.10	Plot 3.5.3 A	≥ 500	PASS
6	2437	17.10	Plot 3.5.3 B	≥ 500	PASS
11	2462	17.04	Plot 3.5.3 C	≥ 500	PASS

Note: 1. For 802.11n(20MHz) mode at final test to get the worst-case emission at 6.5Mbps.
2. The test results including the cable loss.

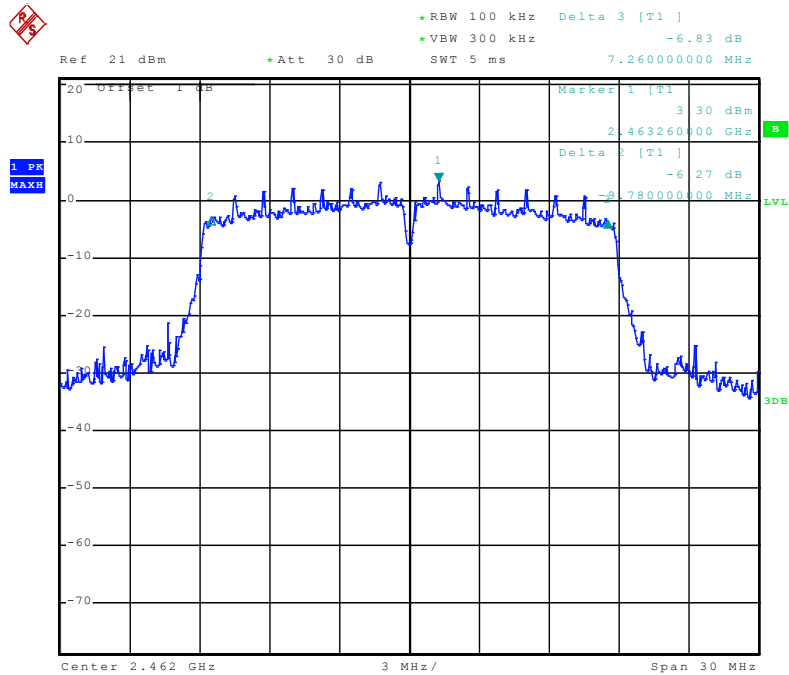
B. Test Plots



(Plot 3.5.3 A: Channel 1: 2412MHz @ 802.11n(20MHz))



(Plot 3.5.3 B: Channel 6: 2437MHz @ 802.11n(20MHz))



(Plot 3.5.3 C: Channel 11: 2462MHz @ 802.11n(20MHz))

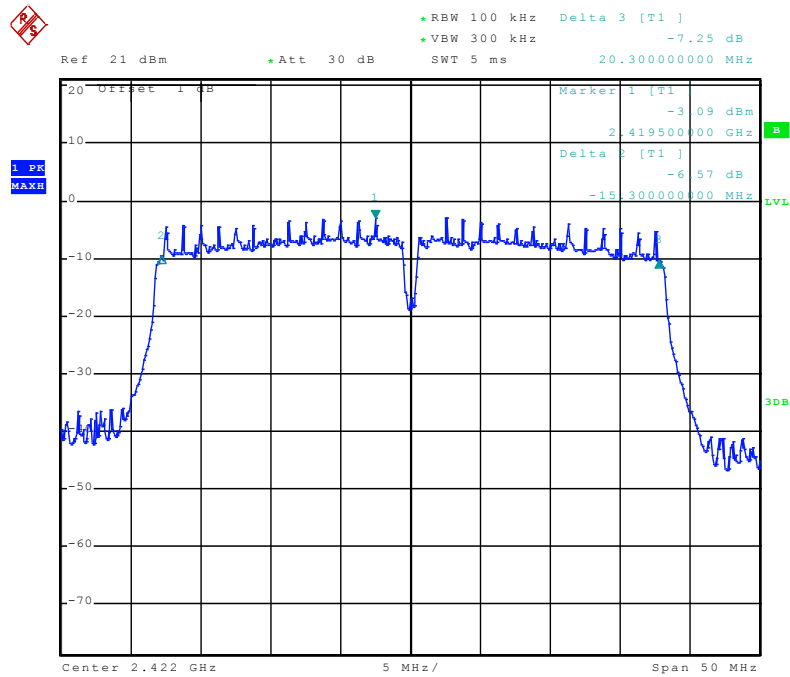
801.11n(40MHz) Test Mode

A. Test Verdict

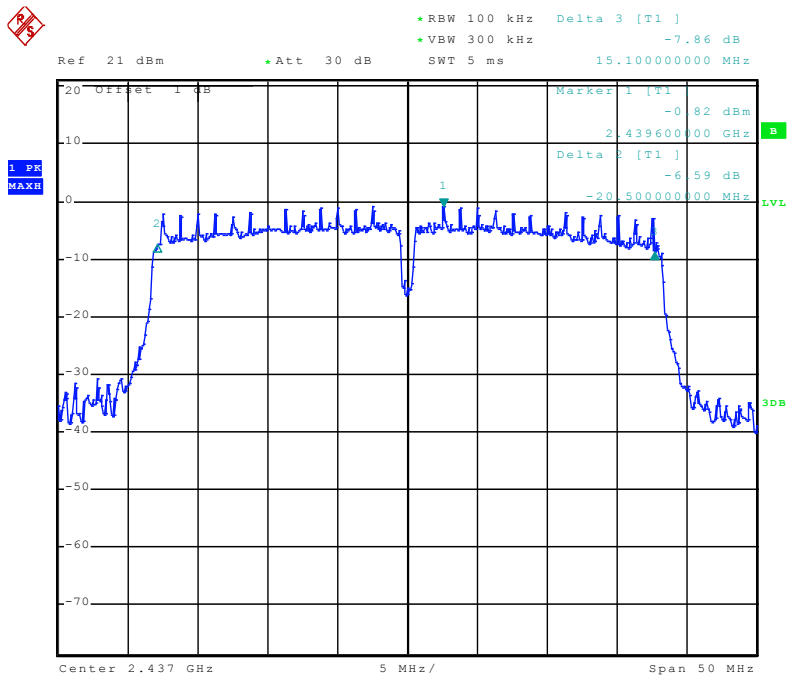
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Refer to Plot	Limits (kHz)	Verdict
3	2422	35.60	Plot 3.5.4 A	≥ 500	PASS
6	2437	35.60	Plot 3.5.4 B	≥ 500	PASS
9	2452	35.60	Plot 3.5.4 C	≥ 500	PASS

Note: 1. For 802.11n(40MHz) mode at final test to get the worst-case emission at 13.5Mbps.
 2. The test results including the cable loss.

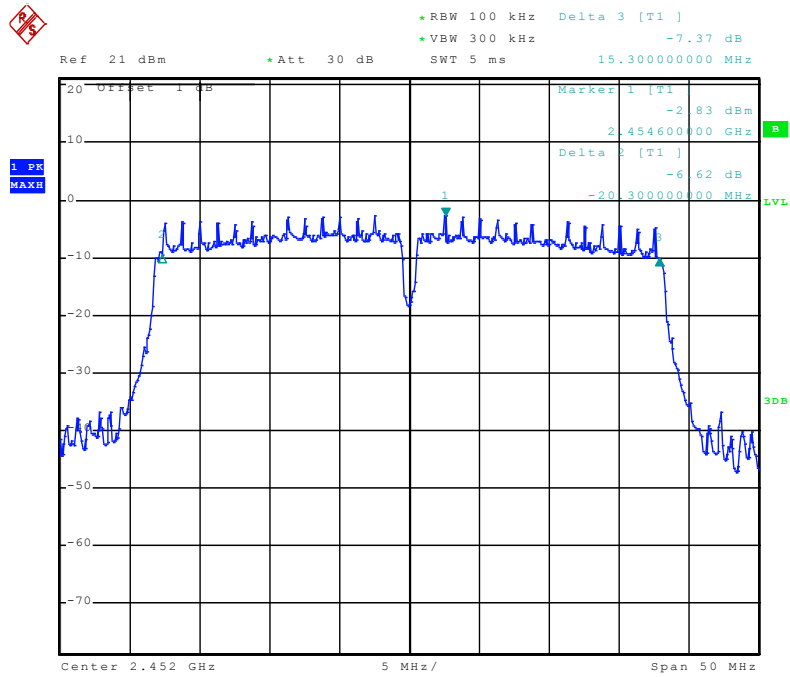
B. Test Plots



(Plot 3.5.4 A: Channel 3: 2422MHz @ 802.11n(40MHz))



(Plot 3.5.4 B: Channel 6: 2437MHz @ 802.11n(40MHz))



(Plot 3.5.4 C: Channel 9: 2452MHz @ 802.11n(40MHz))

3.6 Band Edge Compliance of RF Emission

3.6.1 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

3.6.2 Test Procedure

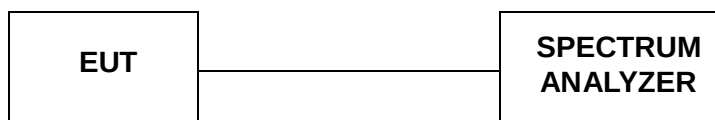
According to KDB 558074 D01 V03 for Antenna-port conducted measurement. Antenna-port conducted measurements may also be used as an alternative to radiated measurements for demonstrating compliance in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case spurious emissions is required.

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Remove the antenna from the EUT and then connect to a low loss RF cable from the antenna port to a EMI test receiver, then turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.
3. Set both RBW and VBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100kHz bandwidth from band edge, for Radiated emissions restricted band RBW=1MHz, VBW=3MHz for peak detector and RBW=1MHz, VBW=10Hz for average detector.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.
6. Measure the conducted output power (in dBm) using the detector specified by the appropriate regulatory agency (see 12.2.2, 12.2.3, and 12.2.4 for guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).
7. Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see 12.2.5 for guidance on determining the applicable antenna gain)

8. Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).
9. For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).
10. Convert the resultant EIRP level to an equivalent electric field strength using the following relationship:

$$E = \text{EIRP} - 20\log D + 104.8$$
 where:
 E = electric field strength in dB μ V/m,
 EIRP = equivalent isotropic radiated power in dBm
 D = specified measurement distance in meters.
11. Since the out-of-band characteristics of the EUT transmit antenna will often be unknown, the use of a conservative antenna gain value is necessary. Thus, when determining the EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2 dBi, whichever is greater. However, for devices that operate in multiple frequency bands while using the same transmit antenna, the highest gain of the antenna within the operating band nearest in frequency to the restricted band emission being measured may be used in lieu of the overall highest gain when the emission is at a frequency that is within 20 percent of the nearest band edge frequency, but in no case shall a value less than 2 dBi be used.
12. Compare the resultant electric field strength level to the applicable regulatory limit.
13. Perform radiated spurious emission test dures until all measured frequencies were complete.

3.6.3 Test Configuration



3.6.4 Test Results

Below -20dB of the highest emission level in operating band.

Radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a).

TEST RESULTS

Remark: The Bandedge was measured at difference data rate for each mode and recorded worst case for each mode.

802.11b Test Mode

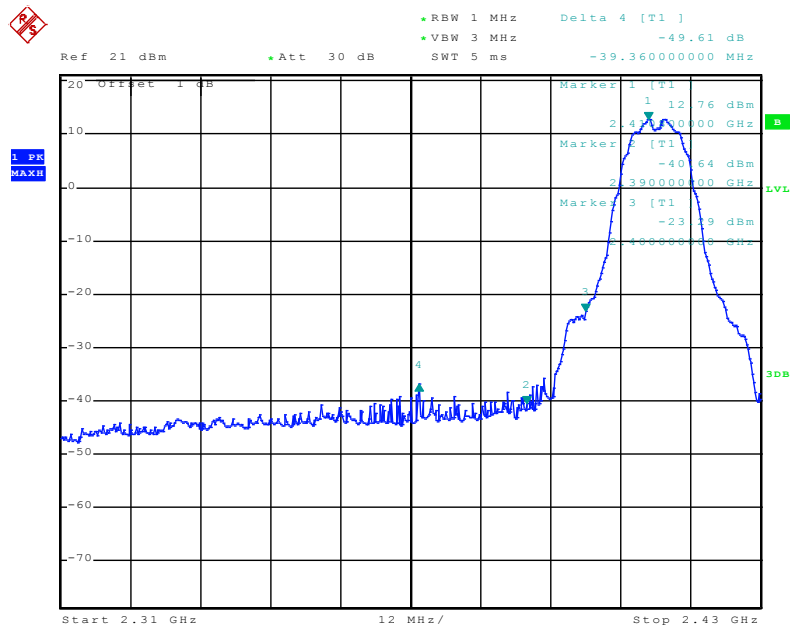
A. Test Verdict

Frequency	Conducted	Antenna	Ground	Covert	Detector	Limit	Refer to
-----------	-----------	---------	--------	--------	----------	-------	----------

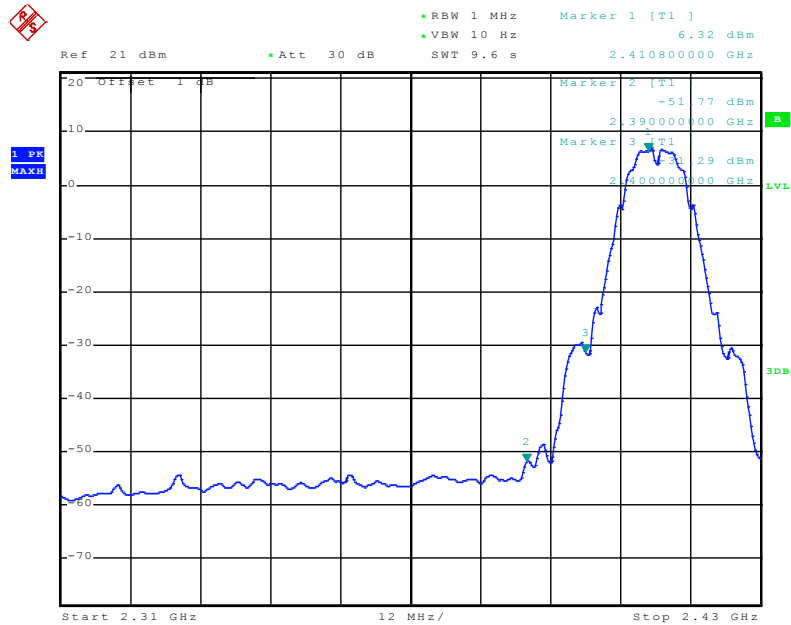
(MHz)	Power (dBm)	Gain (dBi)	Reflection Factor (dB)	Radiated E Level At 3m (dBuV/m)		(dBuV/m)	Plot
2390.00	-40.64	2.00	0.00	56.92	Peak	74.00	Plot 3.6.1 A1
2390.00	-51.77	2.00	0.00	45.79	AV	54.00	Plot 3.6.1 A2
2410.80	12.76	2.00	0.00	110.32	Peak	---	Plot 3.6.1 A1
2410.80	6.32	2.00	0.00	103.88	AV	---	Plot 3.6.1 A2
2461.30	12.10	2.00	0.00	109.66	Peak	---	Plot 3.6.1 A3
2461.25	7.36	2.00	0.00	104.92	AV	---	Plot 3.6.1 A4
2483.50	-40.34	2.00	0.00	57.22	Peak	74.00	Plot 3.6.1 A3
2483.50	-46.43	2.00	0.00	51.13	AV	54.00	Plot 3.6.1 A4

Note: 1. For 802.11b mode at final test to get the worst-case emission at 1Mbps.
2. The test results including the cable loss.
3. “---” means that the fundamental frequency not for 15.209 limits requirement.

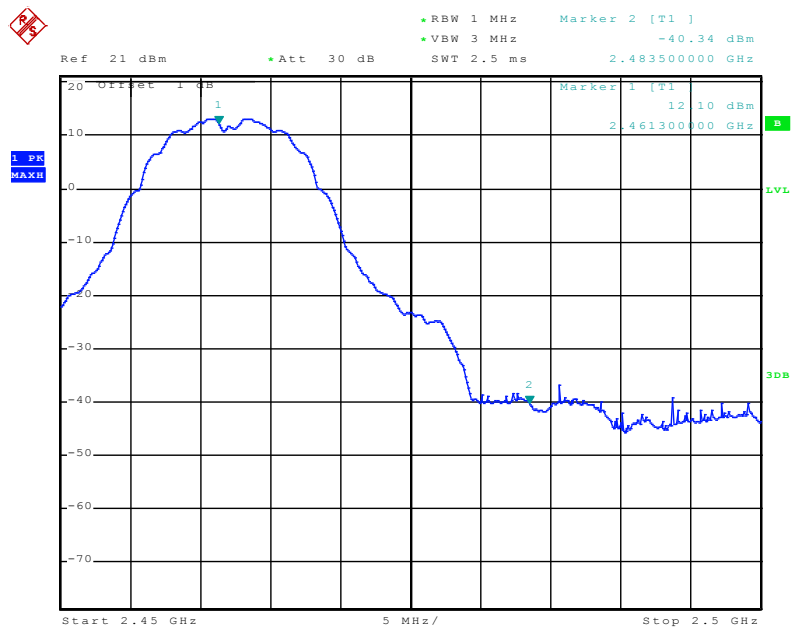
B. Test Plots



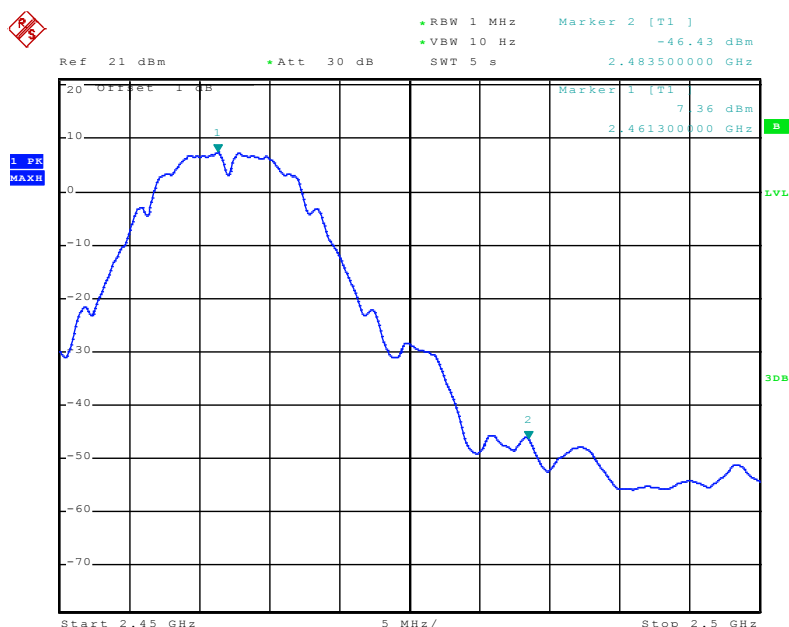
(Plot 3.6.1 A1: Channel 1: 2412MHz @ 802.11b)



(Plot 3.6.1 A2: Channel 1: 2412MHz @ 802.11b)



(Plot 3.6.1 A3: Channel 11: 2462MHz @ 802.11b)



(Plot 3.6.1 A4: Channel 11: 2462MHz @ 802.11b)

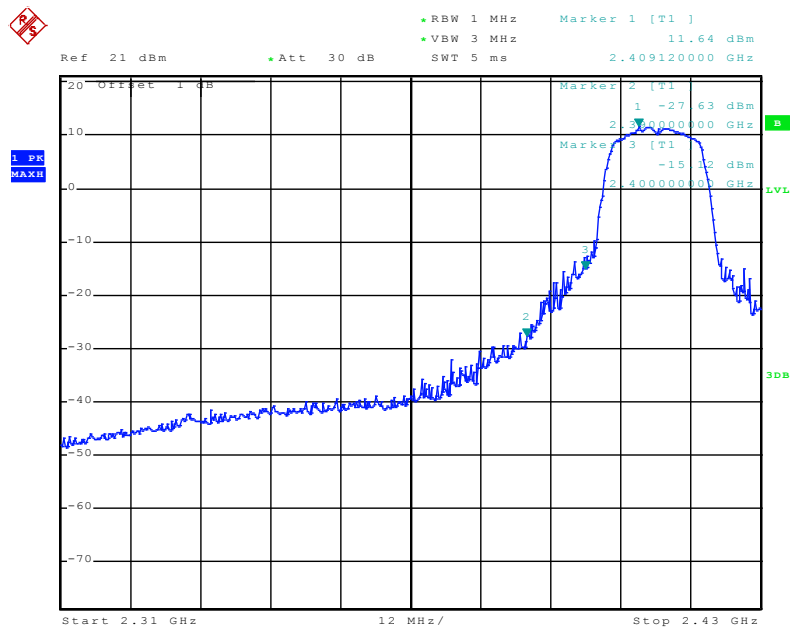
802.11g Test Mode

A. Test Verdict

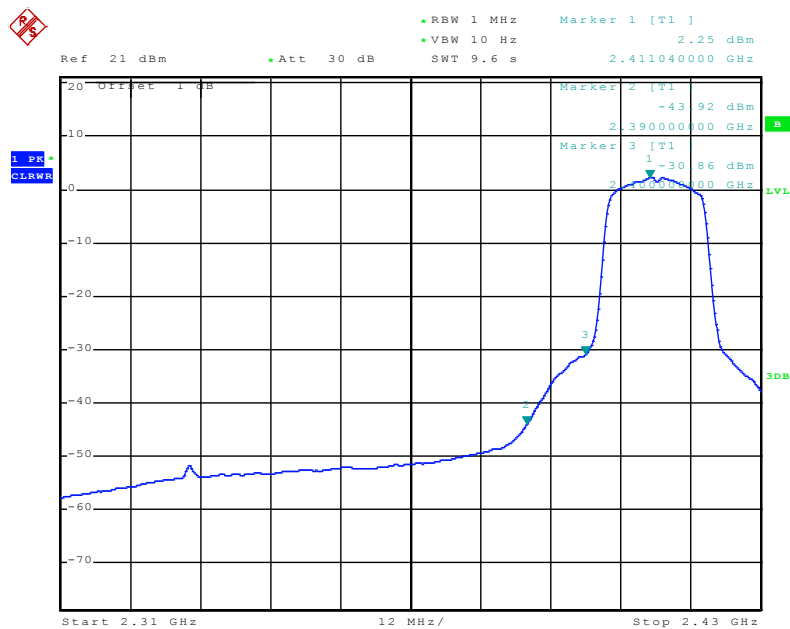
Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Ground Reflection Factor (dB)	Covert Radiated E Level At 3m (dBuV/m)	Detector	Limit (dBuV/m)	Refer to Plot
2390.00	-27.63	2.00	0.00	69.93	Peak	74.00	Plot 3.6.2 A1
2390.00	-43.92	2.00	0.00	53.64	AV	54.00	Plot 3.6.2 A2
2409.12	11.64	2.00	0.00	109.20	Peak	---	Plot 3.6.2 A1
2411.04	2.25	2.00	0.00	99.81	AV	---	Plot 3.6.2 A2
2460.50	12.13	2.00	0.00	109.69	Peak	---	Plot 3.6.2 A3
2460.90	2.02	2.00	0.00	99.58	AV	---	Plot 3.6.2 A4
2483.50	-24.73	2.00	0.00	72.83	Peak	74.00	Plot 3.6.2 A3
2483.50	-45.94	2.00	0.00	51.62	AV	54.00	Plot 3.6.2 A4

- Note:
1. For 802.11g mode at final test to get the worst-case emission at 6Mbps.
 2. The test results including the cable loss.
 3. "—" means that the fundamental frequency not for 15.209 limits requirement.

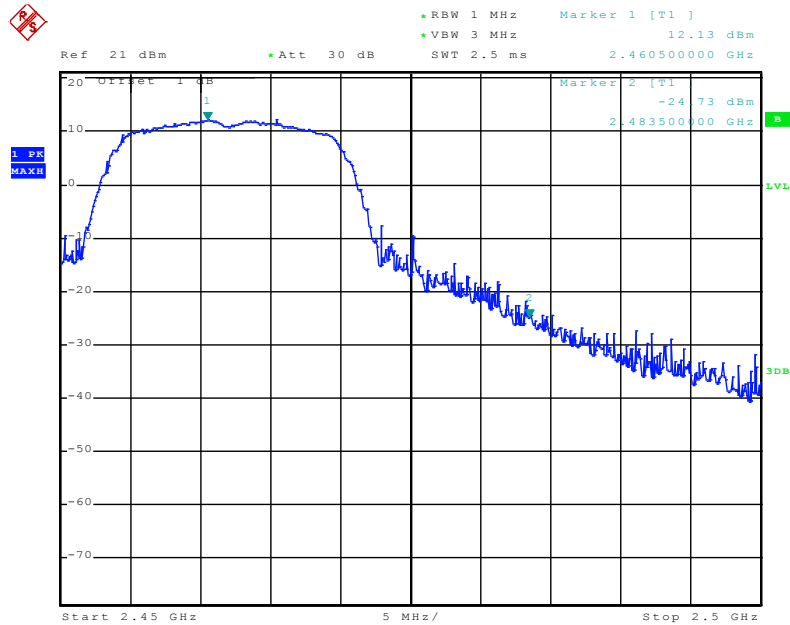
B. Test Plots



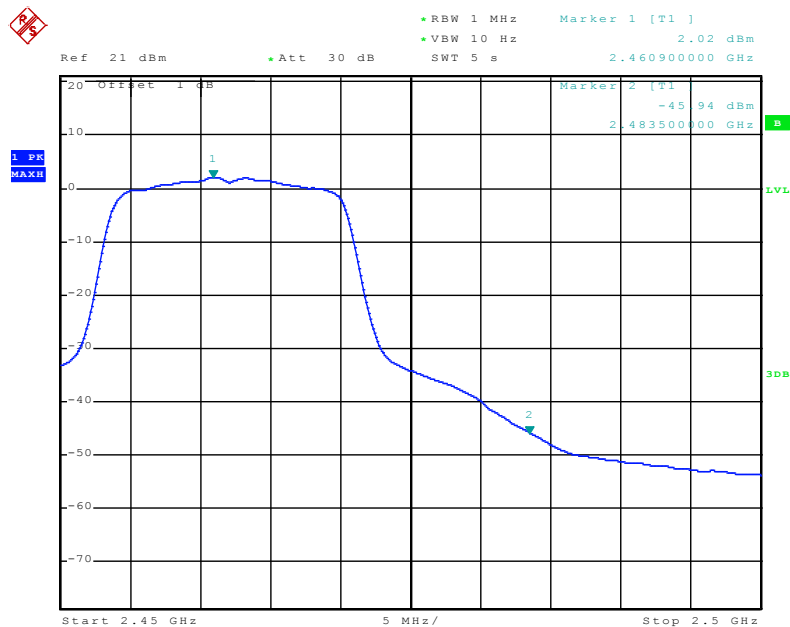
(Plot 3.6.2 A1: Channel 1: 2412MHz @ 802.11g)



(Plot 3.6.2 A2: Channel 1: 2412MHz @ 802.11g)



(Plot 3.6.2 A3: Channel 11: 2462MHz @ 802.11g)



(Plot 3.6.2 A4: Channel 11: 2462MHz @ 802.11g)

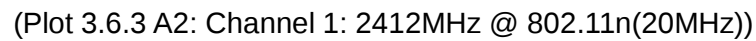
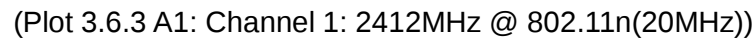
802.11n(20MHz) Test Mode

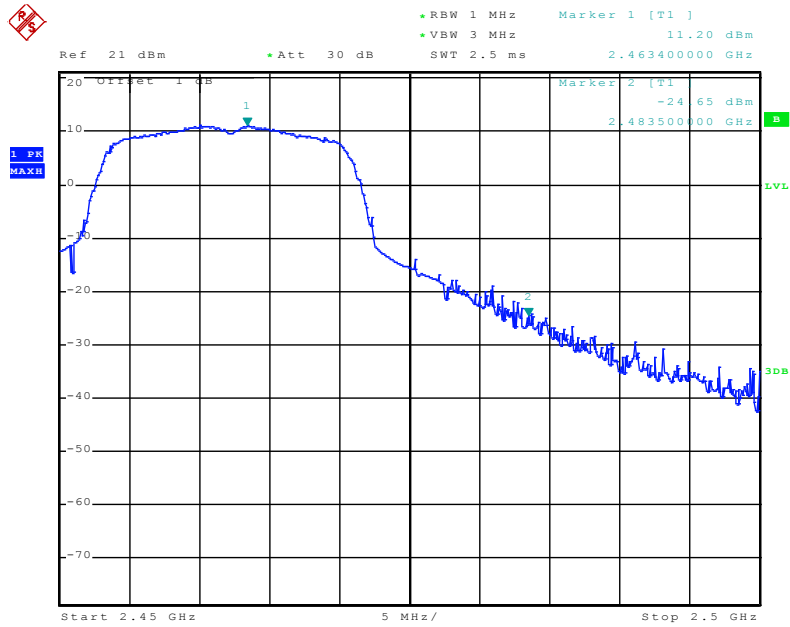
A. Test Verdict

Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Ground Reflection Factor (dB)	Covert Radiated E Level At 3m (dBuV/m)	Detector	Limit (dBuV/m)	Refer to Plot
2390.00	-25.50	2.00	0.00	72.06	Peak	74.00	Plot 3.6.3 A1
2390.00	-46.37	2.00	0.00	51.19	AV	54.00	Plot 3.6.3 A2
2410.08	11.29	2.00	0.00	108.85	Peak	---	Plot 3.6.3 A1
2410.80	2.25	2.00	0.00	99.81	AV	---	Plot 3.6.3 A2
2463.40	11.20	2.00	0.00	108.76	Peak	---	Plot 3.6.3 A3
2460.50	2.44	2.00	0.00	100.00	AV	---	Plot 3.6.3 A4
2483.50	-24.65	2.00	0.00	72.91	Peak	74.00	Plot 3.6.3 A3
2483.50	-48.45	2.00	0.00	49.11	AV	54.00	Plot 3.6.3 A4

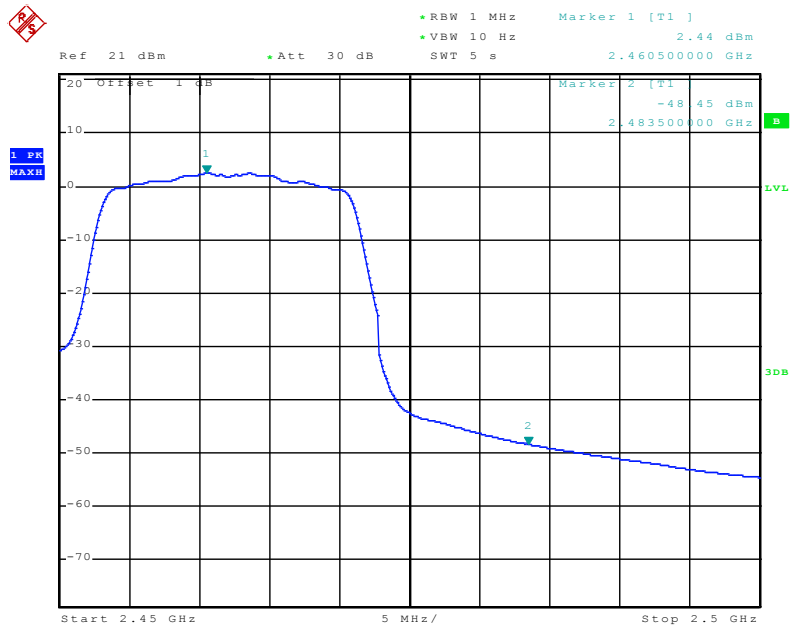
Note: 1. For 802.11n(20MHz) mode at final test to get the worst-case emission at 6.5Mbps.
2. The test results including the cable loss.
3. "—" means that the fundamental frequency not for 15.209 limits requirement.

B. Test Plots





(Plot 3.6.3 A3: Channel 11: 2462MHz @ 802.11n(20MHz))



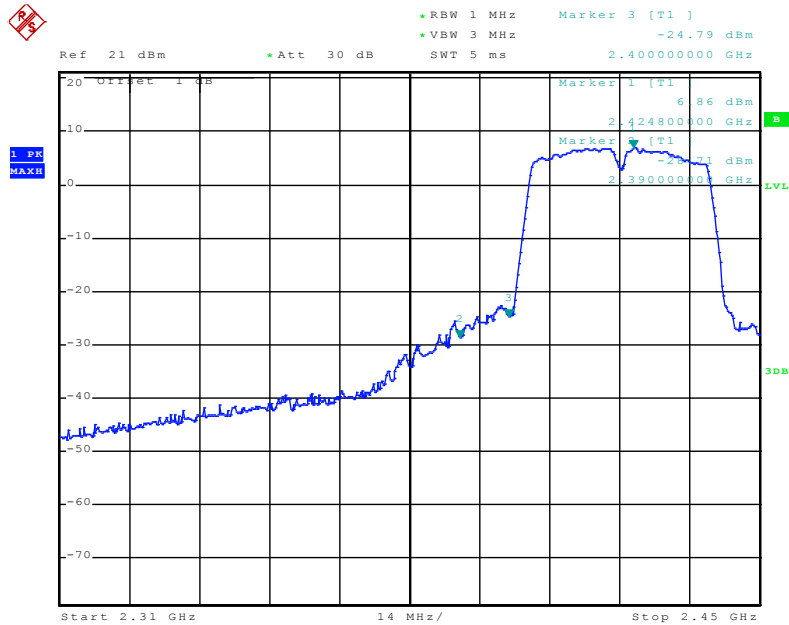
(Plot 3.6.3 A4: Channel 11: 2462MHz @ 802.11n(20MHz))

**802.11n(40MHz) Test Mode****A. Test Verdict**

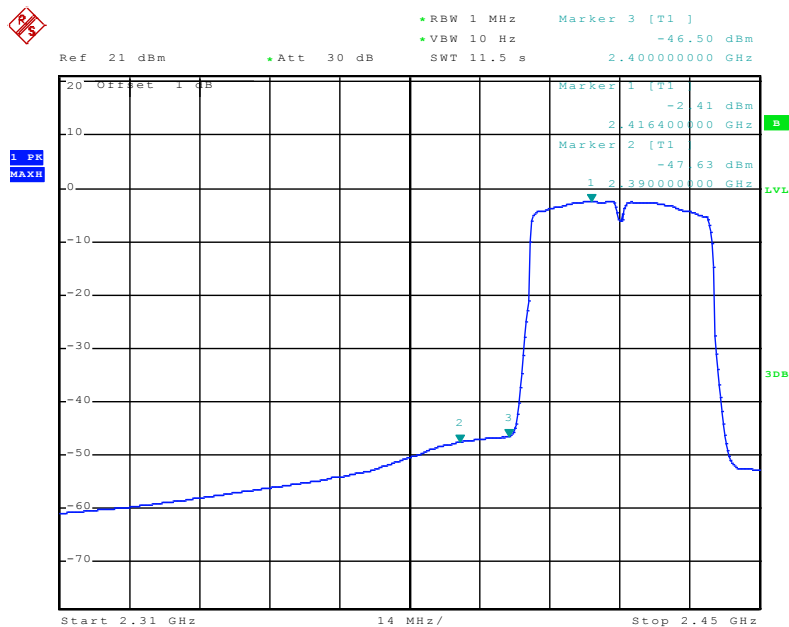
Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Ground Reflection Factor (dB)	Covert Radiated E Level At 3m (dBuV/m)	Detector	Limit (dBuV/m)	Refer to Plot
2390.00	-28.71	2.00	0.00	68.85	Peak	74.00	Plot 3.6.4 A1
2390.00	-47.63	2.00	0.00	49.93	AV	54.00	Plot 3.6.4 A2
2424.80	6.86	2.00	0.00	104.42	Peak	---	Plot 3.6.4 A1
2416.40	-2.41	2.00	0.00	95.15	AV	---	Plot 3.6.4 A2
2454.92	7.21	2.00	0.00	104.77	Peak	---	Plot 3.6.4 A3
2446.38	-3.15	2.00	0.00	94.41	AV	---	Plot 3.6.4 A4
2483.50	-27.25	2.00	0.00	70.31	Peak	74.00	Plot 3.6.4 A3
2483.50	-44.94	2.00	0.00	52.62	AV	54.00	Plot 3.6.4 A4

Note: 1. For 802.11n(40MHz) mode at final test to get the worst-case emission at 13.5Mbps.
2. The test results including the cable loss.
3. "----" means that the fundamental frequency not for 15.209 limits requirement.

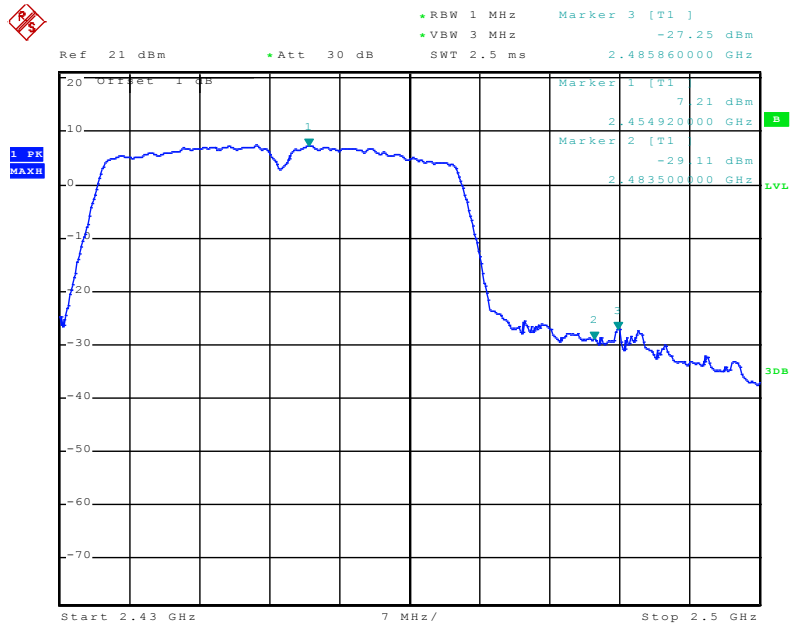
B. Test Plots



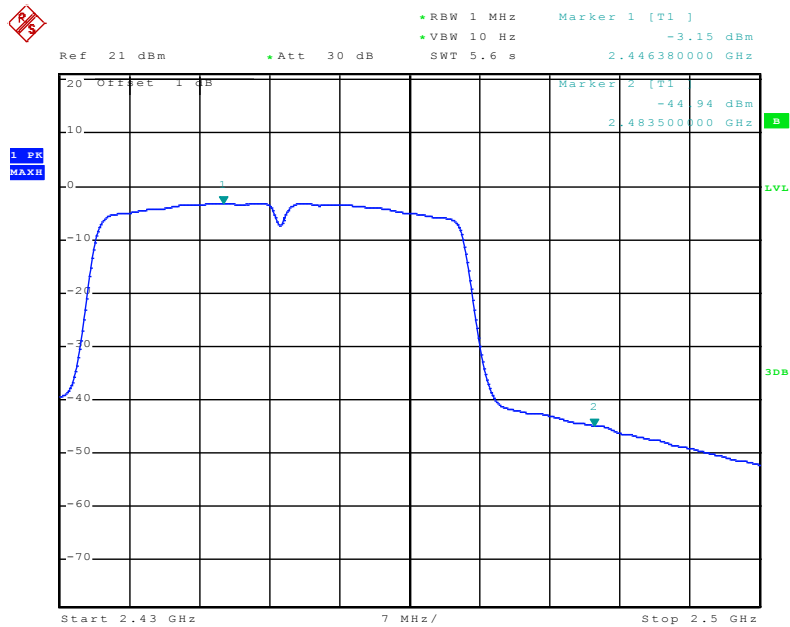
(Plot 3.6.4 A1: Channel 3: 2422MHz @ 802.11n(40MHz))



(Plot 3.6.4 A2: Channel 3: 2422MHz @ 802.11n(40MHz))



(Plot 3.6.4 A3: Channel 9: 2452MHz @ 802.11n(40MHz))



(Plot 3.6.4 A4: Channel 9: 2452MHz @ 802.11n(40MHz))

3.7 Spurious RF Conducted Emission

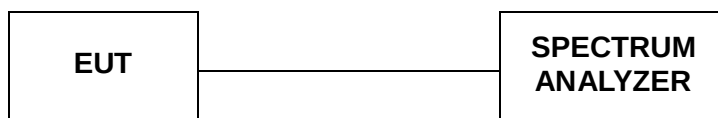
3.7.1 Limit

1. Below -20dB of the highest emission level in operating band.
2. Fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209.

3.7.2 Test Procedure

The Spurious RF conducted emissions compliance of RF radiated emission should be measured by following the guidance in ANSI C63.10-2009 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization etc. Set RBW=100kHz and VBM=300KHz to measure the peak field strength, and measurement frequency range from 30MHz to 26.5GHz.

3.7.3 Test Configuration



3.7.4 Test Results

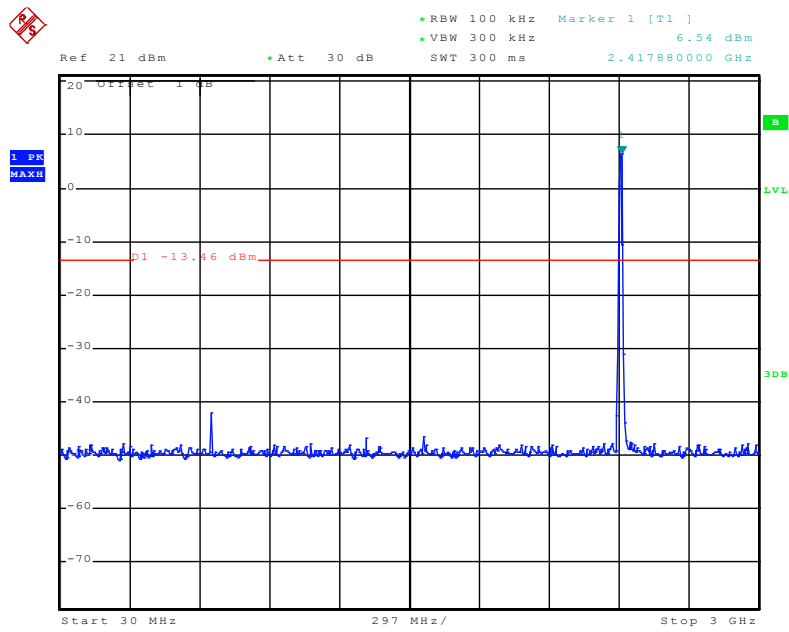
A. Test Verdict

Channel	Frequency (MHz)	Refer to Plot	Limit (dBc)	Verdict
1	2412	Plot 3.7.1 A1	-20	PASS
		Plot 3.7.1 A2	-20	PASS
		Plot 3.7.1 A3	-20	PASS
6	2437	Plot 3.7.1 B1	-20	PASS
		Plot 3.7.1 B2	-20	PASS
		Plot 3.7.1 B3	-20	PASS
11	2462	Plot 3.7.1 C1	-20	PASS
		Plot 3.7.1 C2	-20	PASS
		Plot 3.7.1 C3	-20	PASS

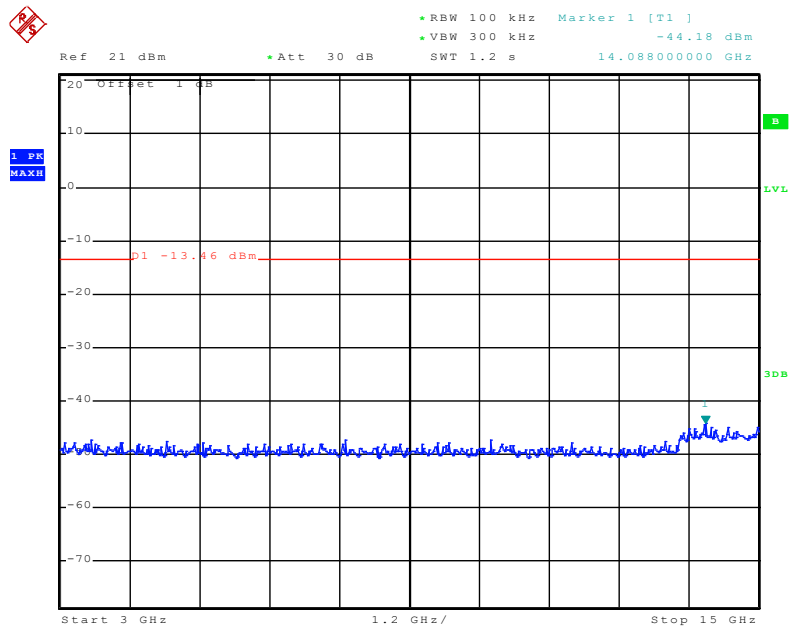
Frequency (MHz)	Delta Peak to Band emission (dBc)	Detector	Limit (dBc)	Refer to Plot	Verdict
2400.00	-40.20	Peak	-20	Plot 3.7.1 D	PASS
2483.50	-53.57	Peak	-20	Plot 3.7.1 E	PASS

Note: 1. For 802.11b mode at final test to get the worst-case emission at 1Mbps.
2. The test results including the cable loss.

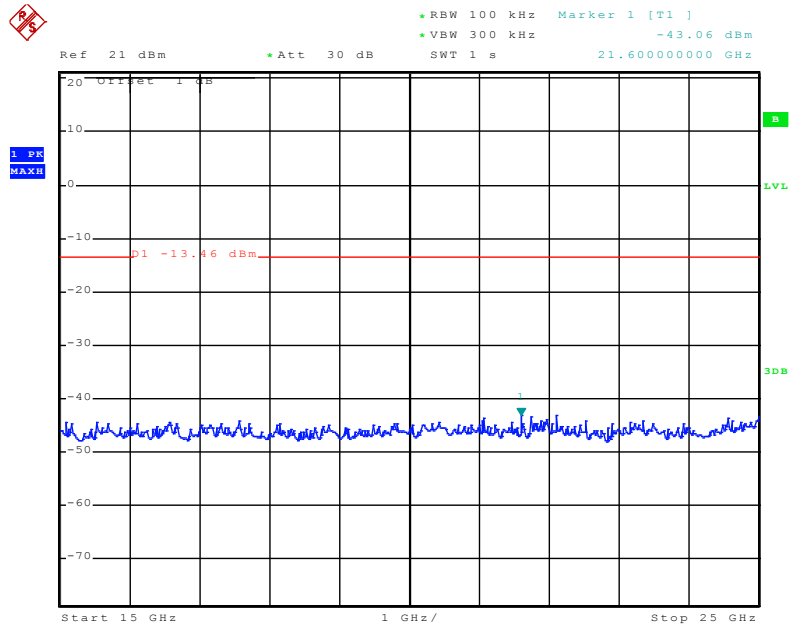
B. Test Plots



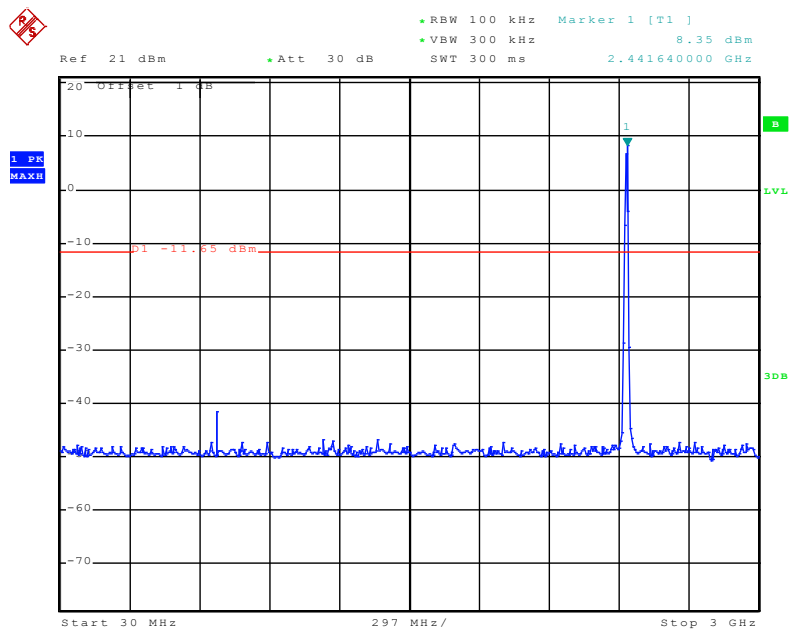
(Plot 3.7.1 A1: Channel 1: 2412MHz @ 802.11b)



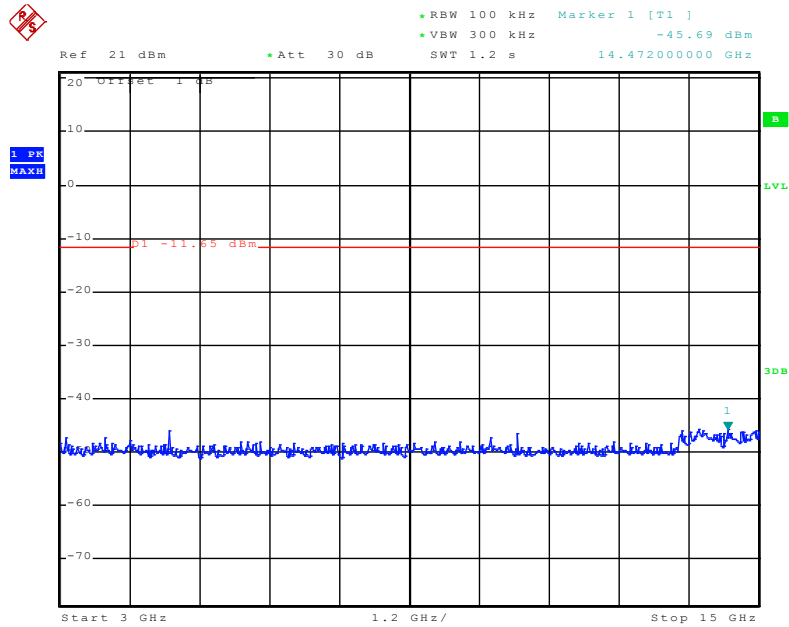
(Plot 3.7.1 A2: Channel 1: 2412MHz @ 802.11b)



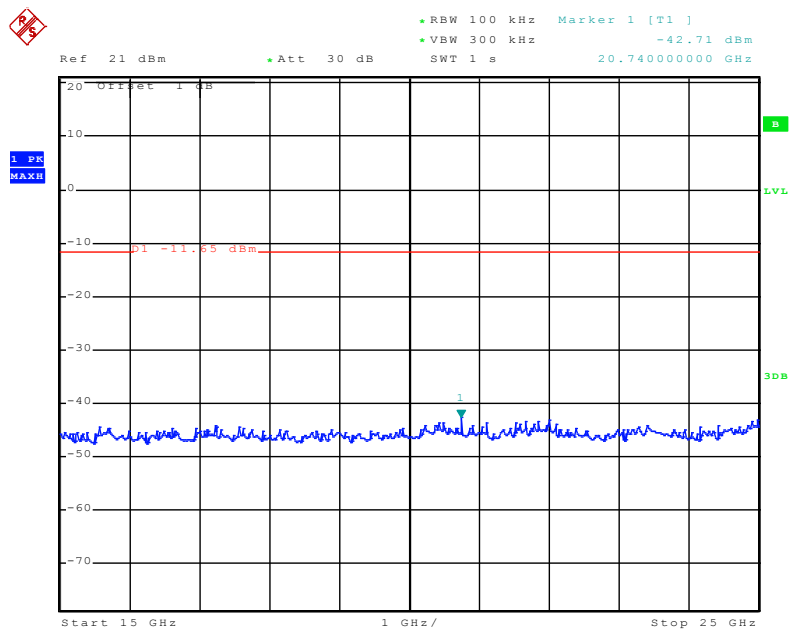
(Plot 3.7.1 A3: Channel 1: 2412MHz @ 802.11b)



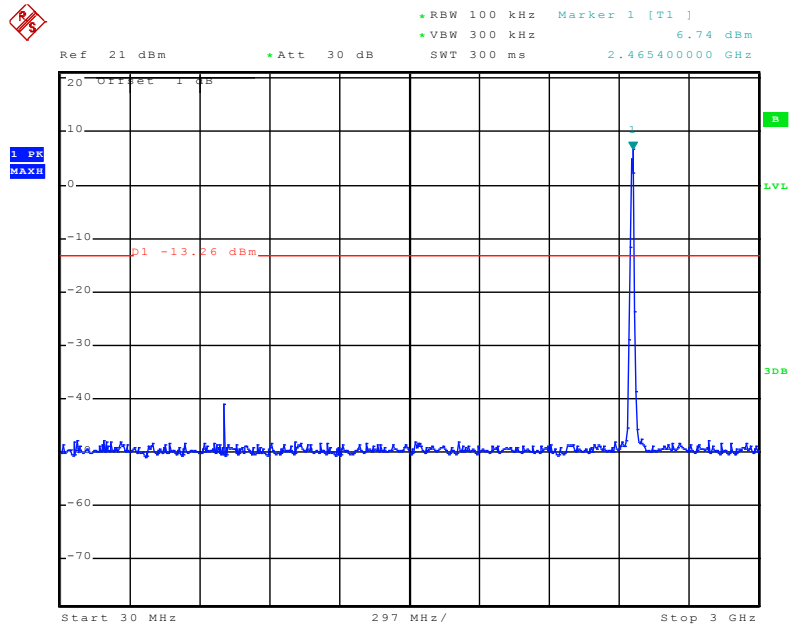
(Plot 3.7.1 B1: Channel 6: 2437MHz @ 802.11b)



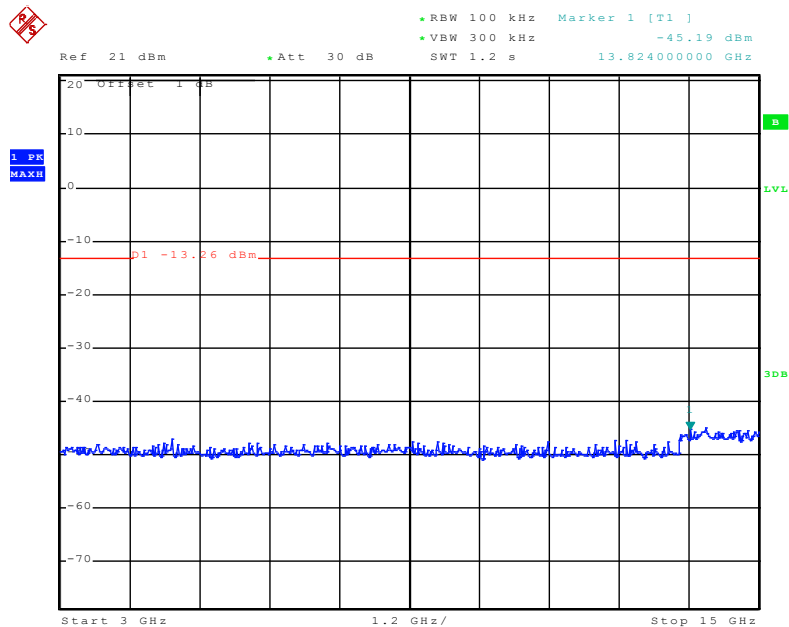
(Plot 3.7.1 B2: Channel 6: 2437MHz @ 802.11b)



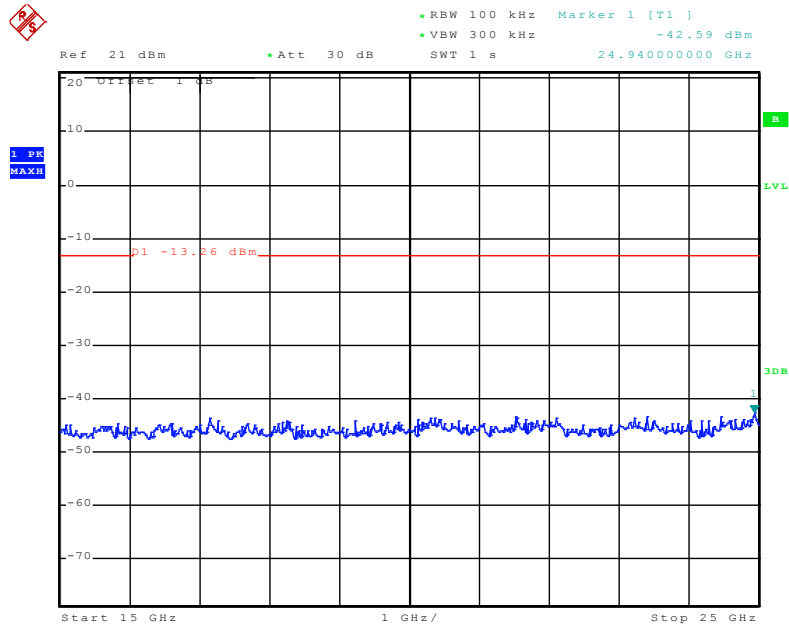
(Plot 3.7.1 B3: Channel 6: 2437MHz @ 802.11b)



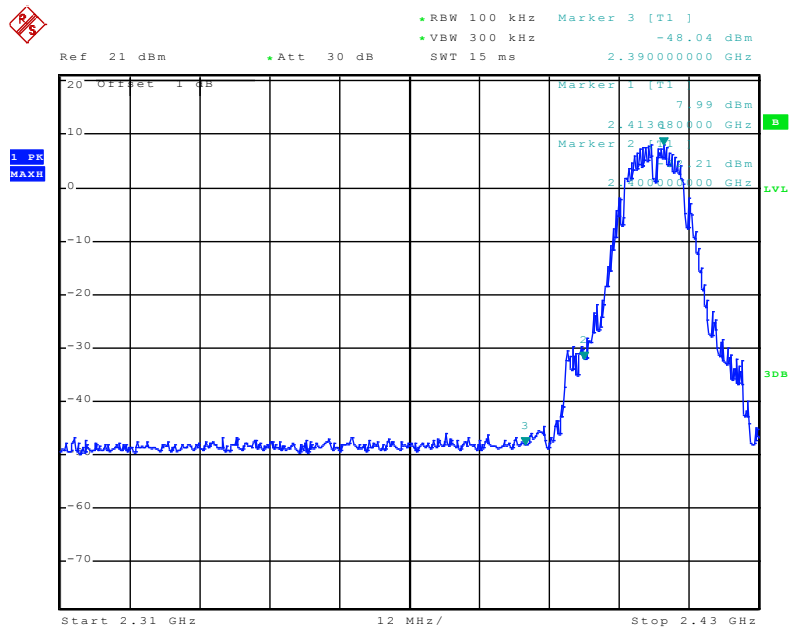
(Plot 3.7.1 C1: Channel 11: 2462MHz @ 802.11b)



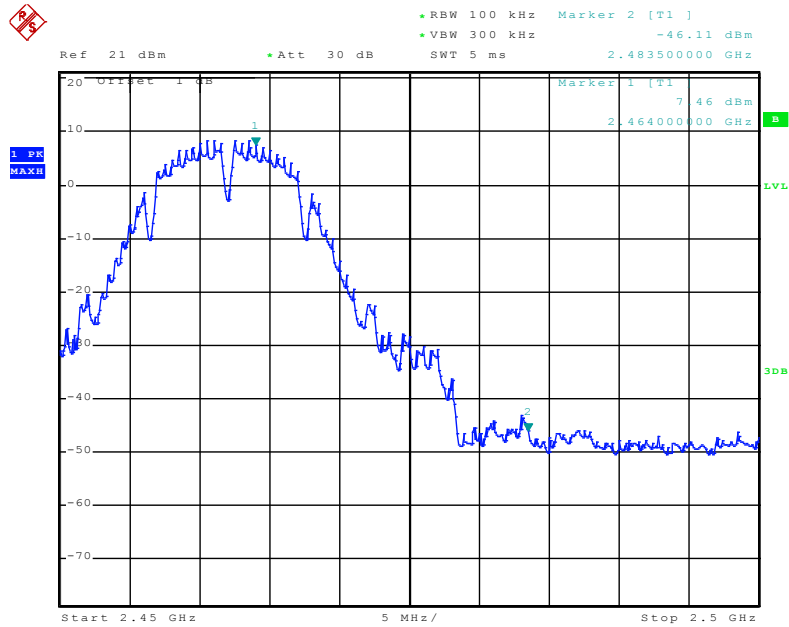
(Plot 3.7.1 C2: Channel 11: 2462MHz @ 802.11b)



(Plot 3.7.1 C3: Channel 11: 2462MHz @ 802.11b)



(Plot 3.7.1 D: Channel 1: 2412MHz @ 802.11b)



(Plot 3.7.1 E: Channel 11: 2462MHz @ 802.11b)

802.11g Test Mode

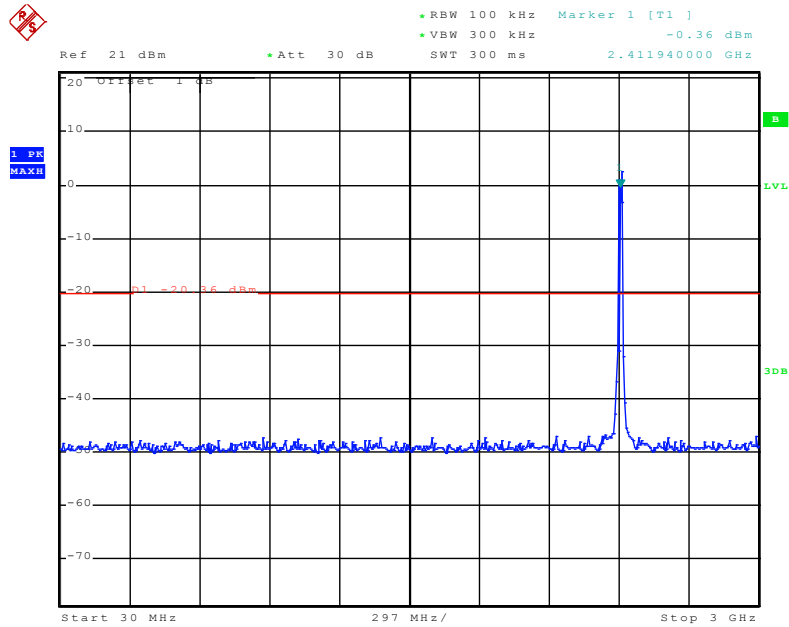
A. Test Verdict

Channel	Frequency (MHz)	Refer to Plot	Limit (dBc)	Verdict
1	2412	Plot 3.7.2 A1	-20	PASS
		Plot 3.7.2 A2	-20	PASS
		Plot 3.7.2 A3	-20	PASS
6	2437	Plot 3.7.2 B1	-20	PASS
		Plot 3.7.2 B2	-20	PASS
		Plot 3.7.2 B3	-20	PASS
11	2462	Plot 3.7.2 C1	-20	PASS
		Plot 3.7.2 C2	-20	PASS
		Plot 3.7.2 C3	-20	PASS

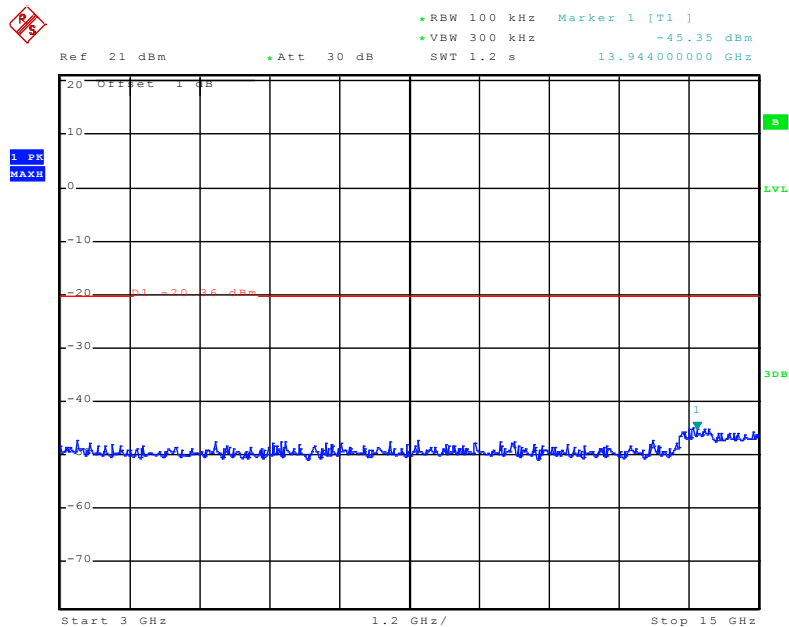
Frequency (MHz)	Delta Peak to Band emission (dBc)	Detector	Limit (dBc)	Refer to Plot	Verdict
2400.00	-35.95	Peak	-20	Plot 3.7.2 D	PASS
2483.50	-43.16	Peak	-20	Plot 3.7.2 E	PASS

Note: 1. For 802.11g mode at final test to get the worst-case emission at 6Mbps.
2. The test results including the cable loss.

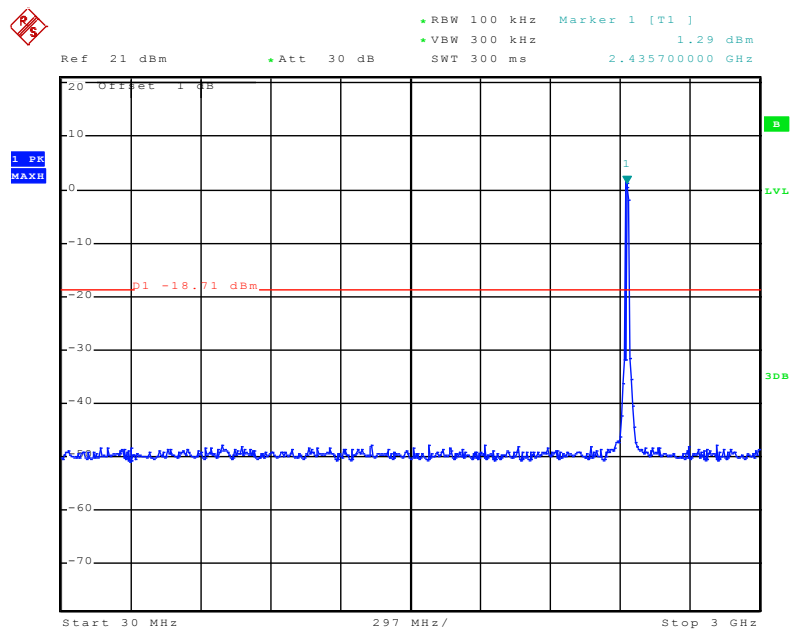
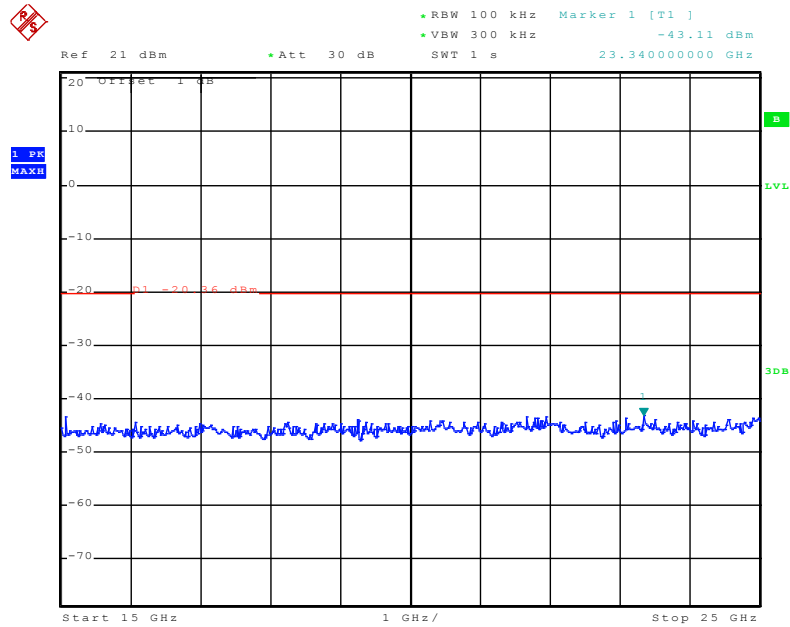
B. Test Plots

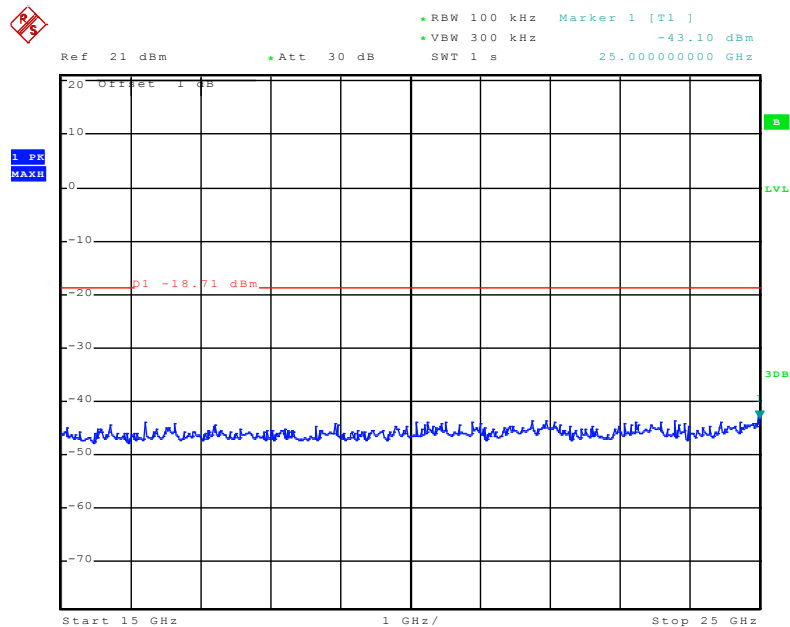
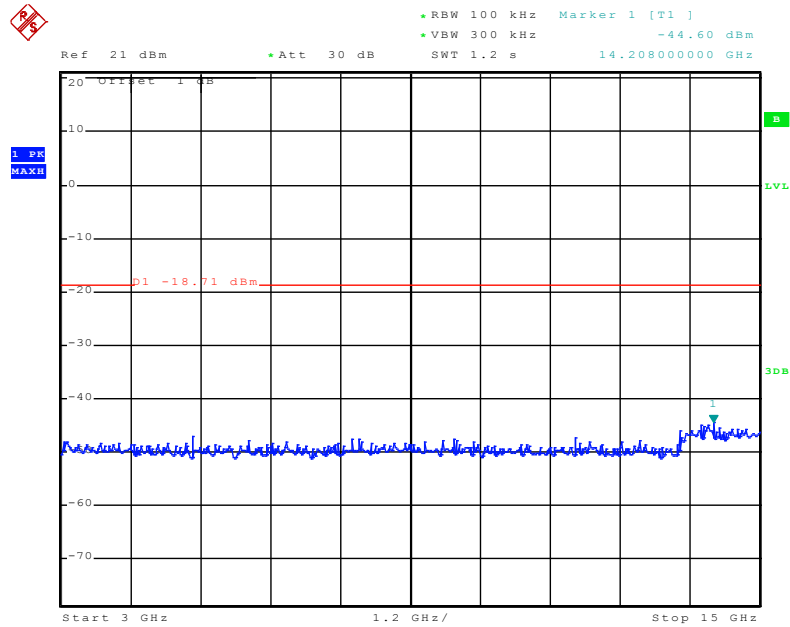


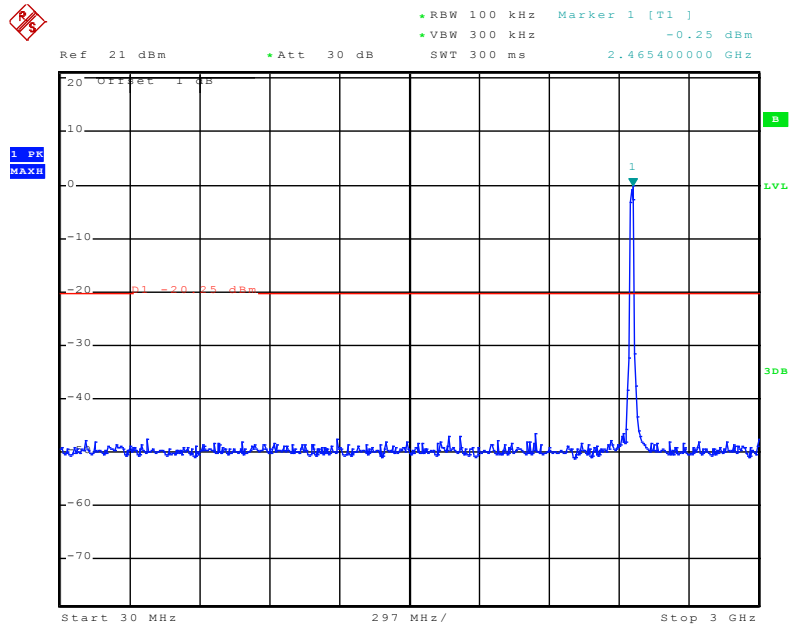
(Plot 3.7.2 A1: Channel 1: 2412MHz @ 802.11g)



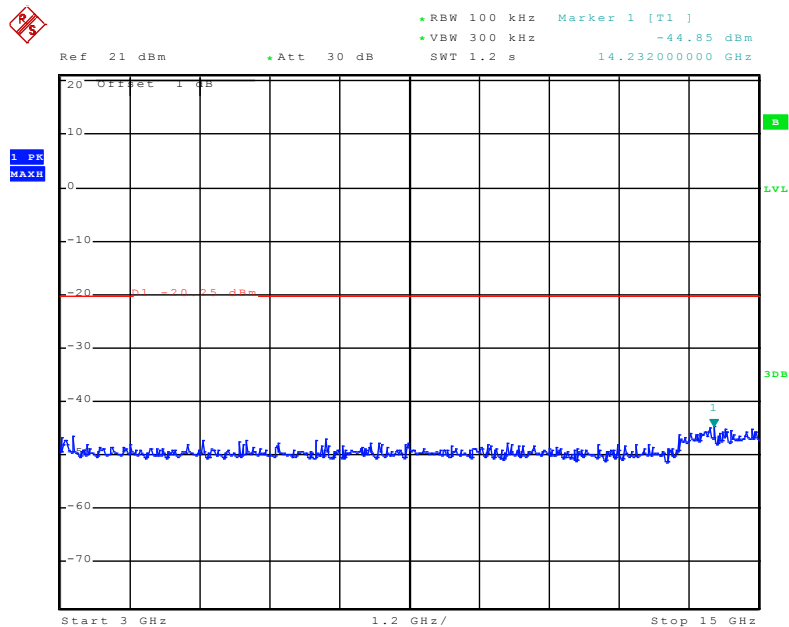
(Plot 3.7.2 A2: Channel 1: 2412MHz @ 802.11g)



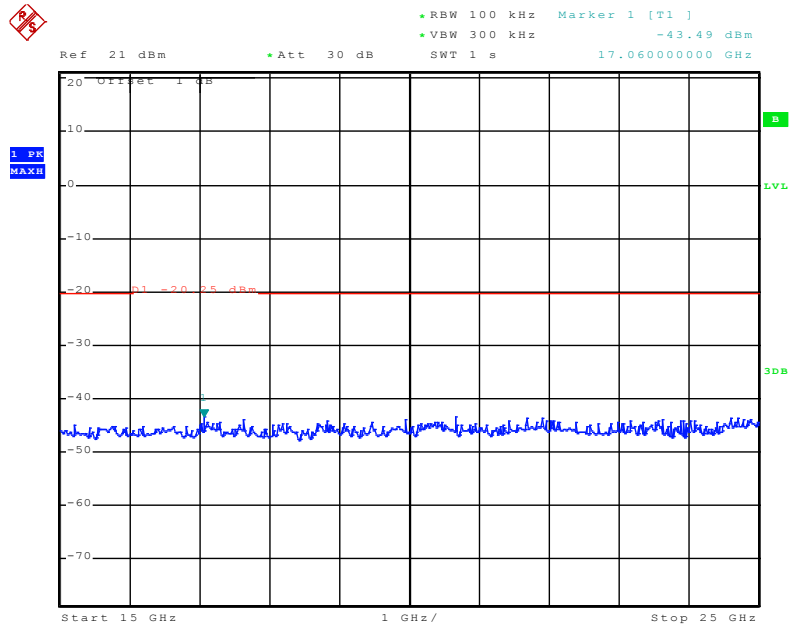




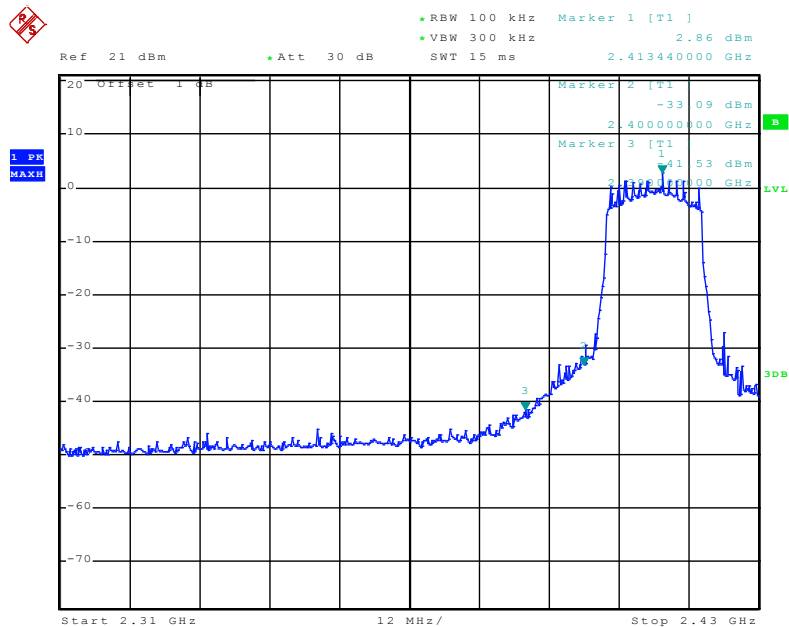
(Plot 3.7.2 C1: Channel 11: 2462MHz @ 802.11g)



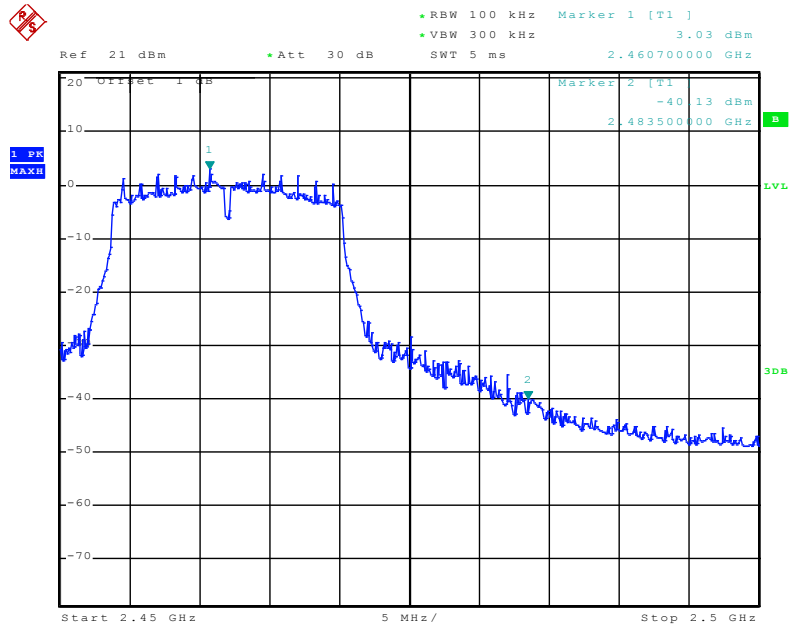
(Plot 3.7.2 C2: Channel 11: 2462MHz @ 802.11g)



(Plot 3.7.2 C3: Channel 11: 2462MHz @ 802.11g)



(Plot 3.7.2 D: Channel 1: 2412MHz @ 802.11g)



(Plot 3.7.2 E: Channel 11: 2462MHz @ 802.11g)

802.11n(20MHz) Test Mode

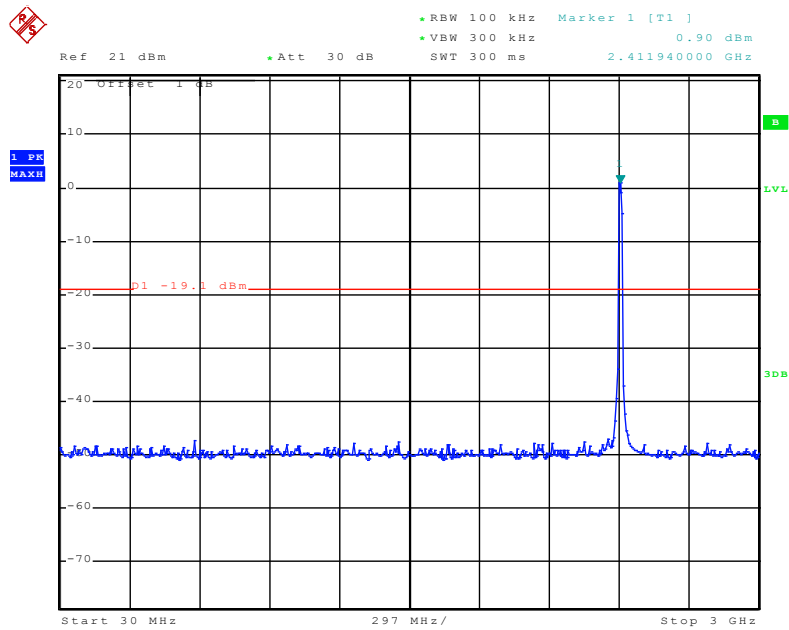
A. Test Verdict

Channel	Frequency (MHz)	Refer to Plot	Limit (dBc)	Verdict
1	2412	Plot 3.7.3 A1	-20	PASS
		Plot 3.7.3 A2	-20	PASS
		Plot 3.7.3 A3	-20	PASS
6	2437	Plot 3.7.3 B1	-20	PASS
		Plot 3.7.3 B2	-20	PASS
		Plot 3.7.3 B3	-20	PASS
11	2462	Plot 3.7.3 C1	-20	PASS
		Plot 3.7.3 C2	-20	PASS
		Plot 3.7.3 C3	-20	PASS

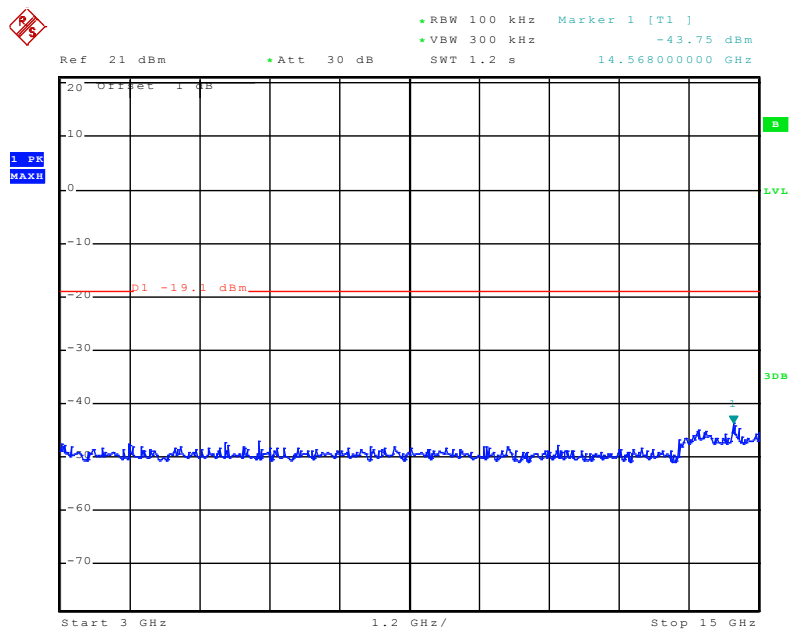
Frequency (MHz)	Delta Peak to Band emission (dBc)	Detector	Limit (dBc)	Refer to Plot	Verdict
2400.00	-34.70	Peak	-20	Plot 3.7.3 D	PASS
2483.50	-42.51	Peak	-20	Plot 3.7.3 E	PASS

Note: 1. For 802.11n(20MHz) mode at final test to get the worst-case emission at 6.5Mbps.
2.The test results including the cable lose.

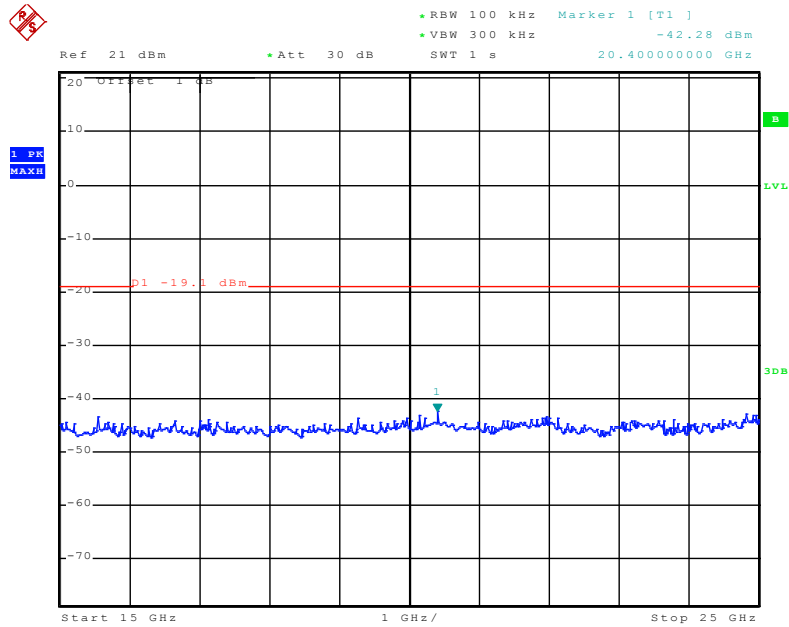
B. Test Plots



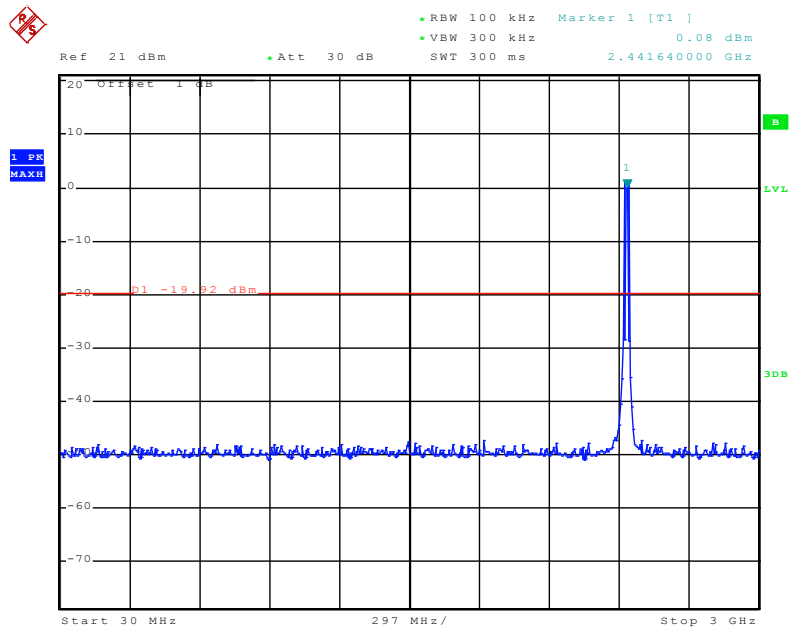
(Plot 3.7.3 A1: Channel 1: 2412MHz @ 802.11n(20MHz))



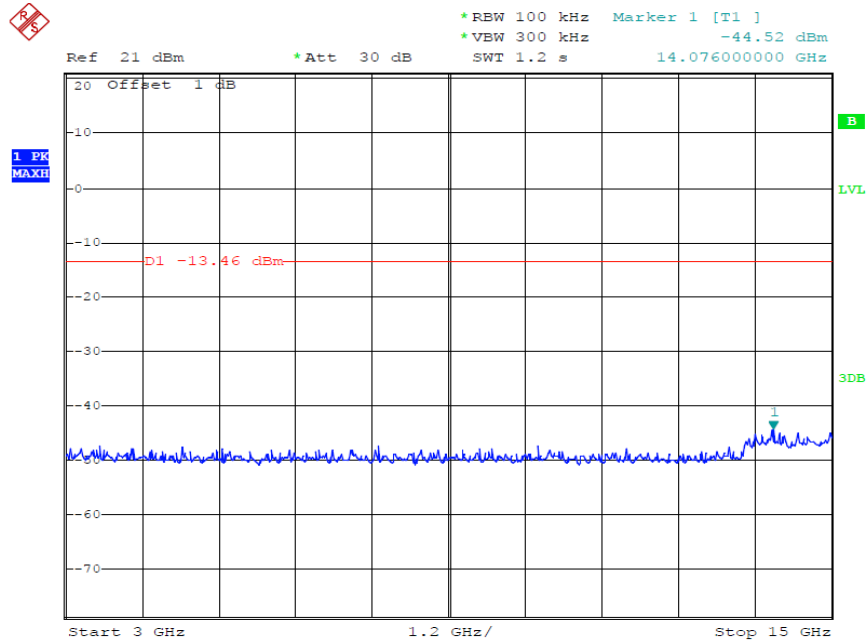
(Plot 3.7.3 A2: Channel 1: 2412MHz @ 802.11n(20MHz))



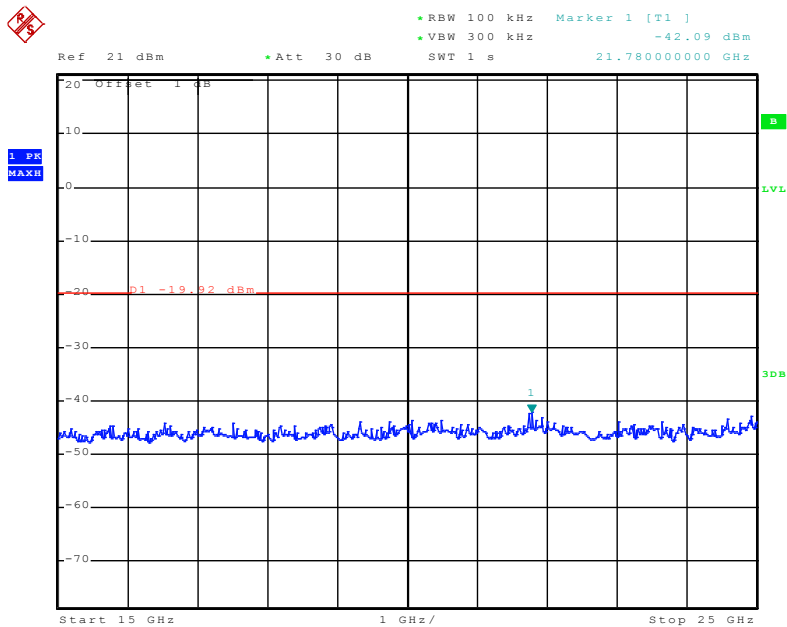
(Plot 3.7.3 A3: Channel 1: 2412MHz @ 802.11n(20MHz))



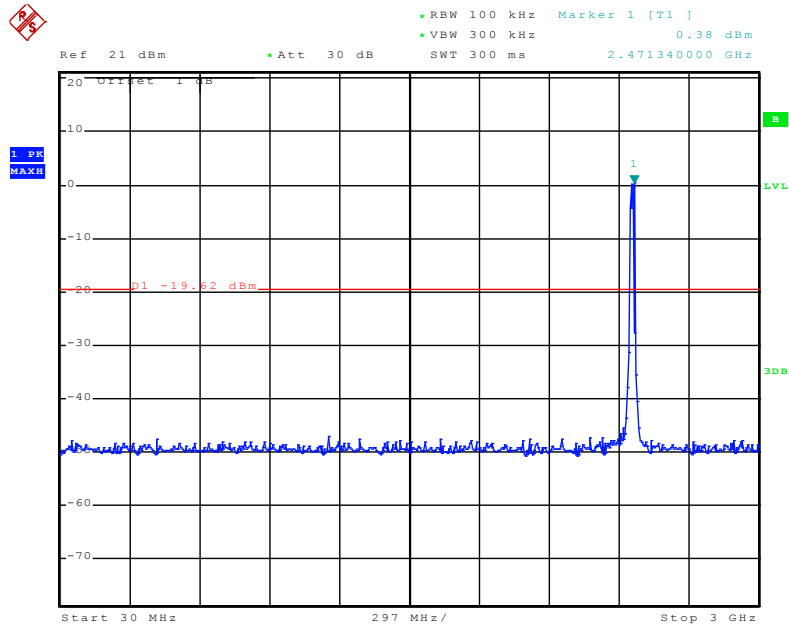
(Plot 3.7.3 B1: Channel 6: 2437MHz @ 802.11n(20MHz))



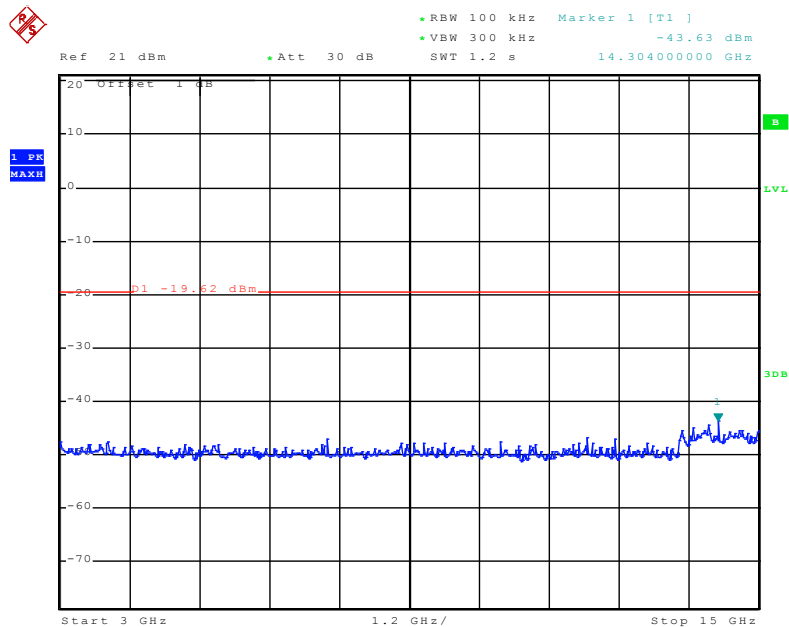
(Plot 3.7.3 B2: Channel 6: 2437MHz @ 802.11n(20MHz))



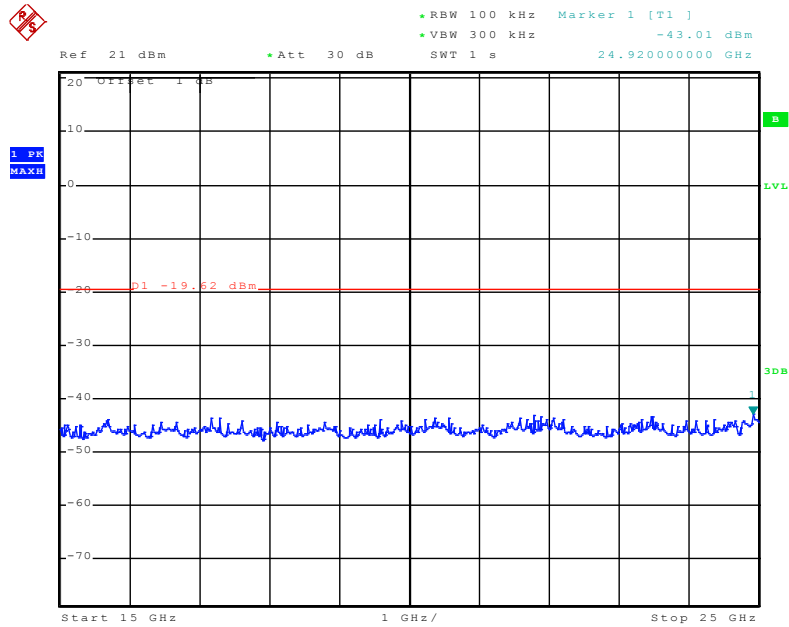
(Plot 3.7.3 B3: Channel 6: 2437MHz @ 802.11n(20MHz))



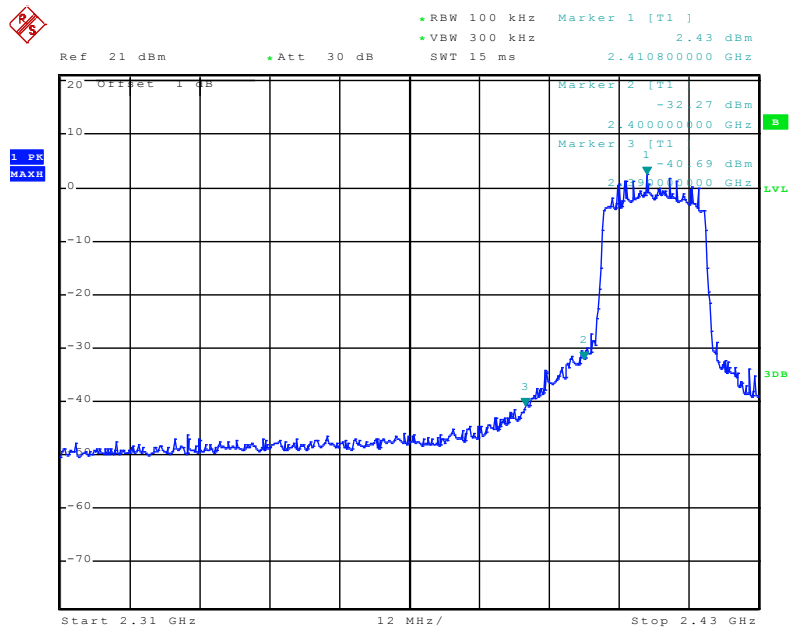
(Plot 3.7.3 C1: Channel 11: 2462MHz @ 802.11n(20MHz))



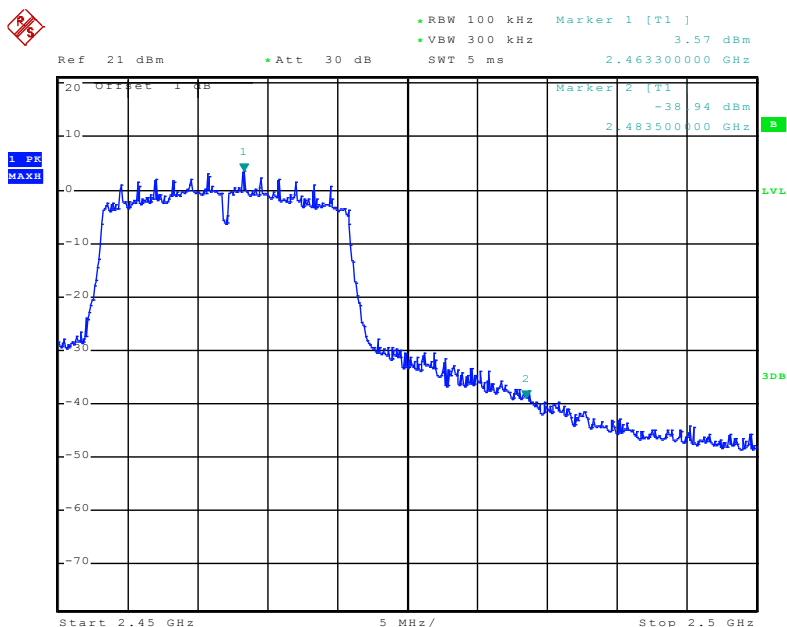
(Plot 3.7.3 C2: Channel 11: 2462MHz @ 802.11n(20MHz))



(Plot 3.7.3 C3: Channel 11: 2462MHz @ 802.11n(20MHz))



(Plot 3.7.3 D: Channel 1: 2412MHz @ 802.11n(20MHz))



(Plot 3.7.3 E: Channel 11: 2462MHz @ 802.11n(20MHz))

802.11n(40MHz) Test Mode

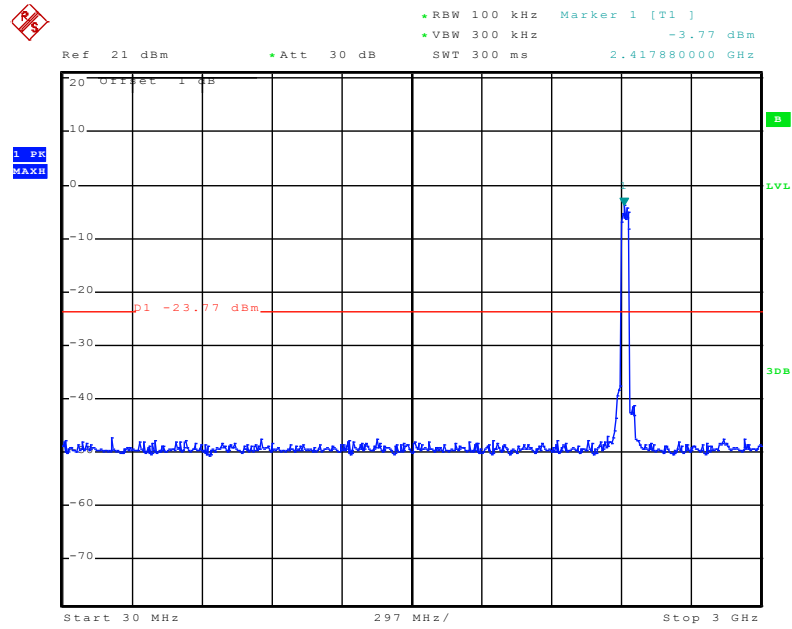
A. Test Verdict

Channel	Frequency (MHz)	Refer to Plot	Limit (dBc)	Verdict
3	2422	Plot 3.7.4 A1	-20	PASS
		Plot 3.7.4 A2	-20	PASS
		Plot 3.7.4 A3	-20	PASS
6	2437	Plot 3.7.4 B1	-20	PASS
		Plot 3.7.4 B2	-20	PASS
		Plot 3.7.4 B3	-20	PASS
9	2452	Plot 3.7.4 C1	-20	PASS
		Plot 3.7.4 C2	-20	PASS
		Plot 3.7.4 C3	-20	PASS

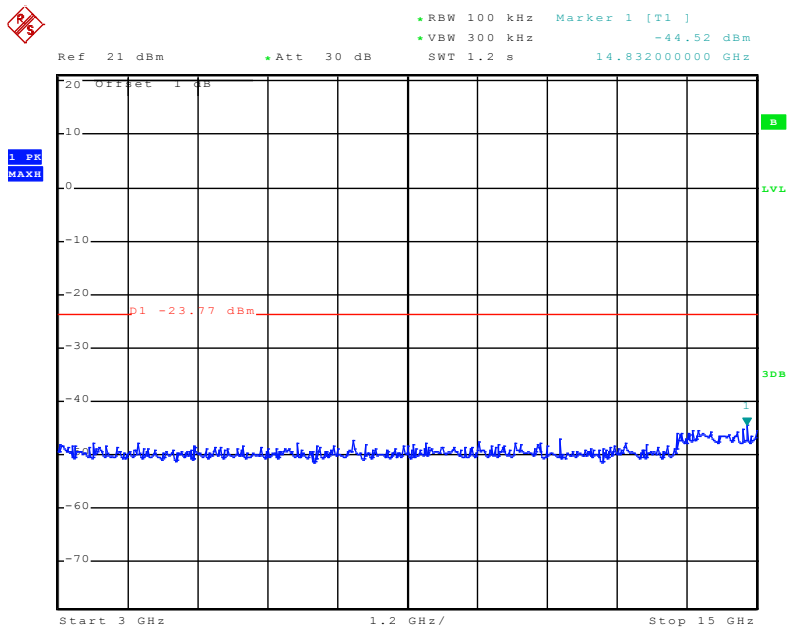
Frequency (MHz)	Delta Peak to Band emission (dBc)	Detector	Limit (dBc)	Refer to Plot	Verdict
2400.00	-34.34	Peak	-20	Plot 3.7.4 D	PASS
2483.50	-38.20	Peak	-20	Plot 3.7.4 E	PASS

Note: 1. For 802.11n(40MHz) mode at final test to get the worst-case emission at 13.5Mbps.
2. The test results including the cable loss.

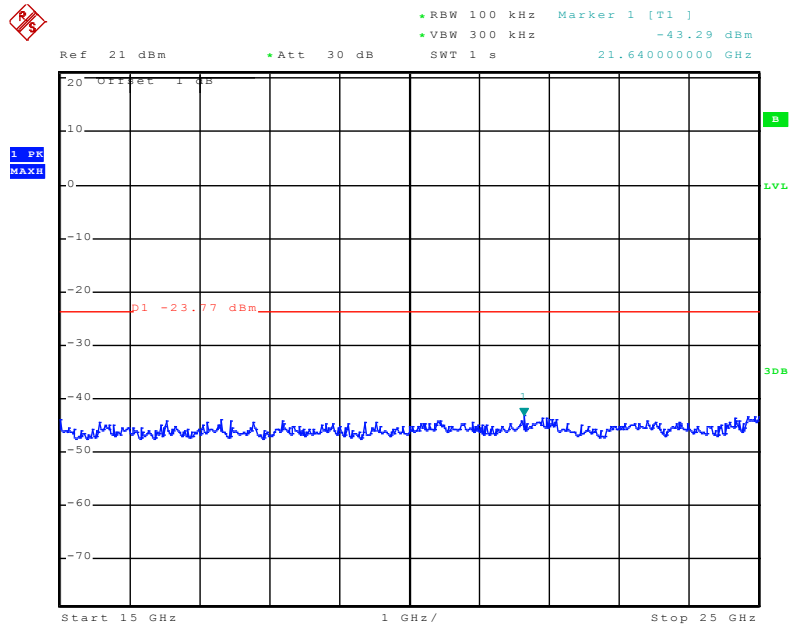
B. Test Plots



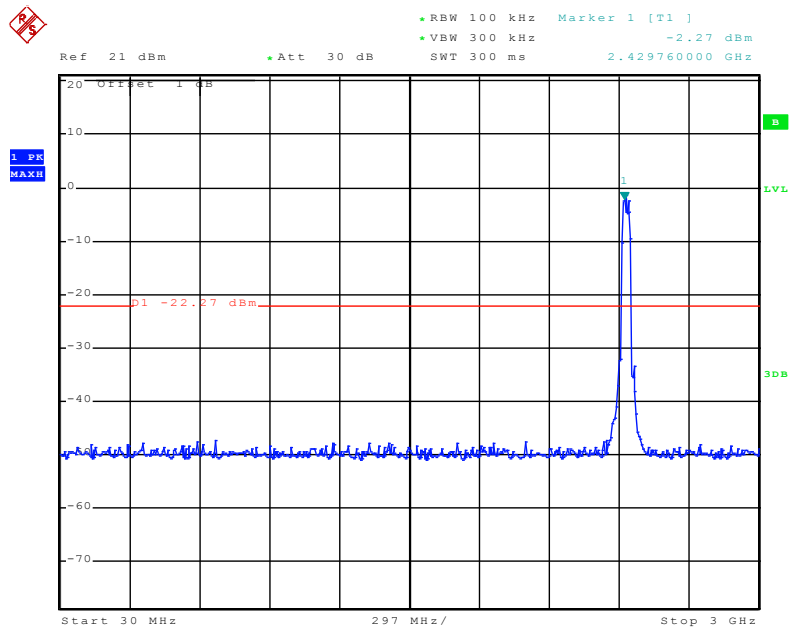
(Plot 3.7.4 A1: Channel 3: 2422MHz @ 802.11n(40MHz))



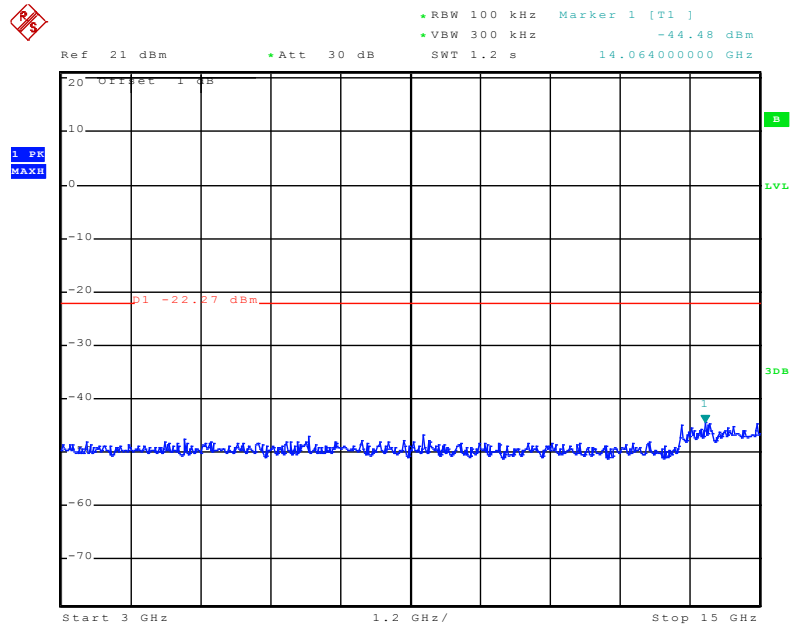
(Plot 3.7.4 A2: Channel 3: 2422MHz @ 802.11n(40MHz))



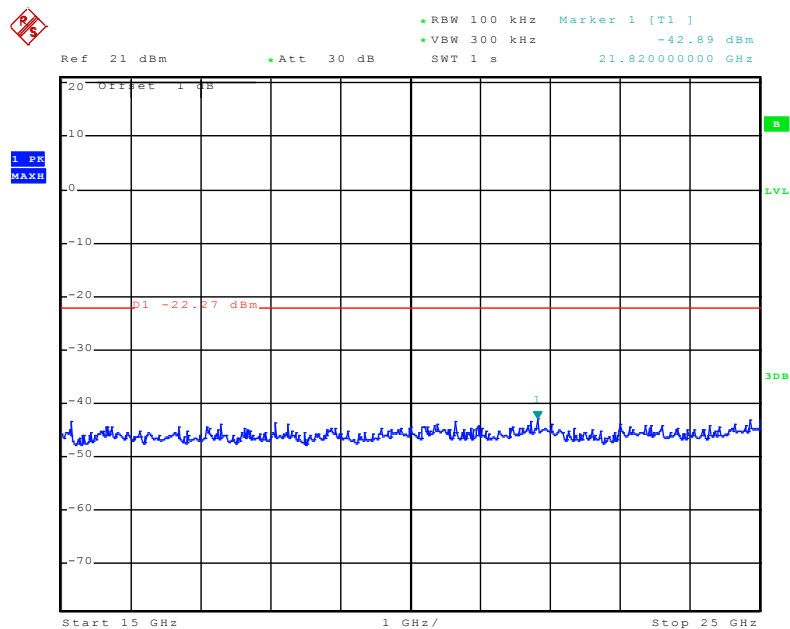
(Plot 3.7.4 A3: Channel 3: 2422MHz @ 802.11n(40MHz))



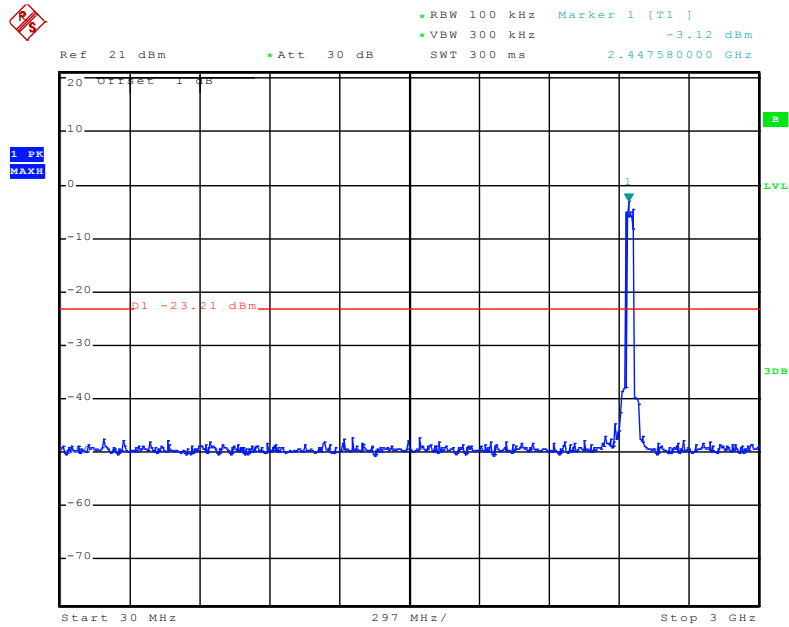
(Plot 3.7.4 B1: Channel 6: 2437MHz @ 802.11n(40MHz))



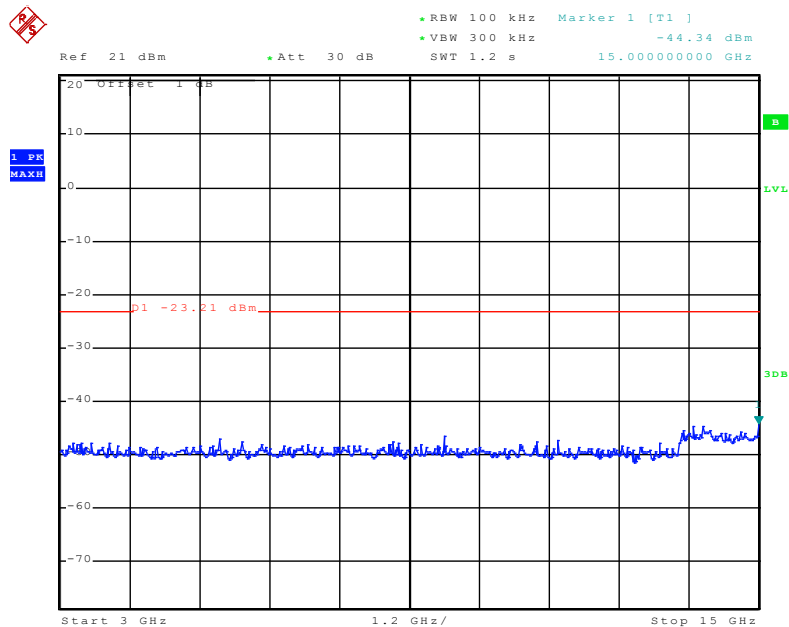
(Plot 3.7.4 B2: Channel 6: 2437MHz @ 802.11n(40MHz))



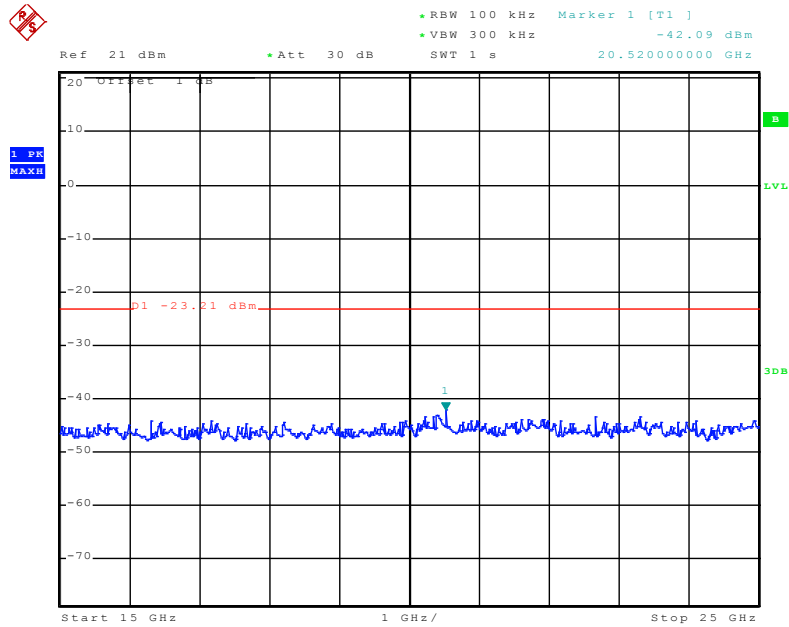
(Plot 3.7.4 B3: Channel 6: 2437MHz @ 802.11n(40MHz))



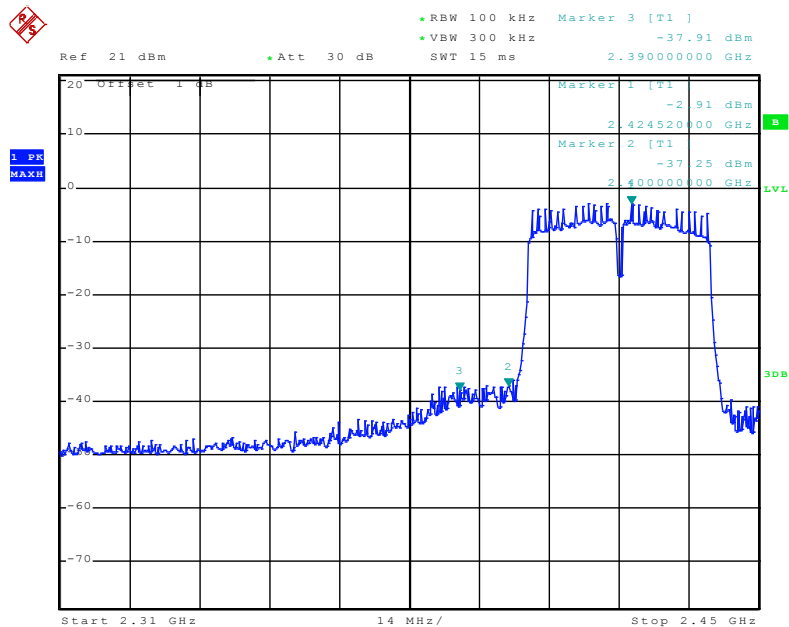
(Plot 3.7.4 C1: Channel 9: 2452MHz @ 802.11n(40MHz))



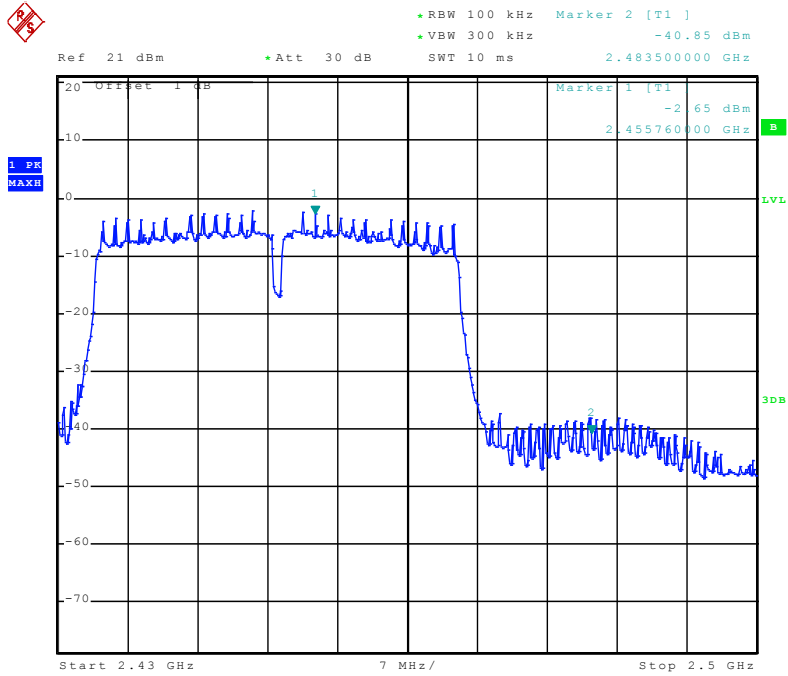
(Plot 3.7.4 C2: Channel 9: 2452MHz @ 802.11n(40MHz))



(Plot 3.7.4 C3: Channel 9: 2452MHz @ 802.11n(40MHz))



(Plot 3.7.4 D: Channel 3: 2422MHz @ 802.11n(40MHz))



(Plot 3.7.4 E: Channel 9: 2452MHz @ 802.11n(40MHz))

3.8 Antenna Requirement

Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

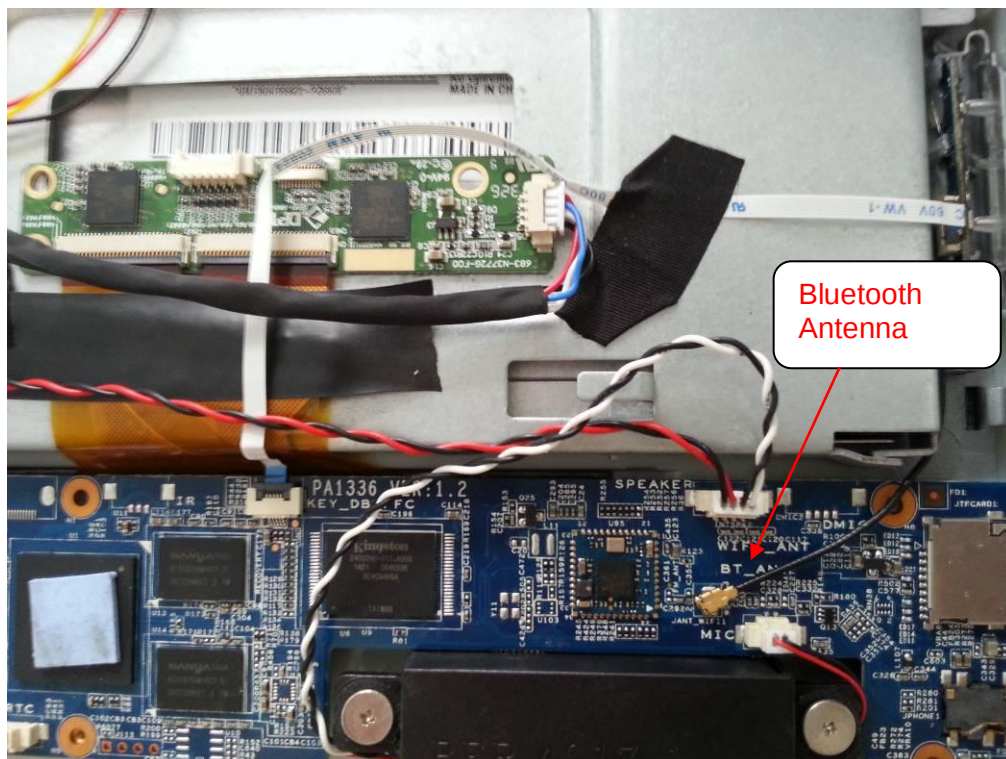
And according to FCC 47 CFR Section 15.247 (c), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Refer to statement below for compliance.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

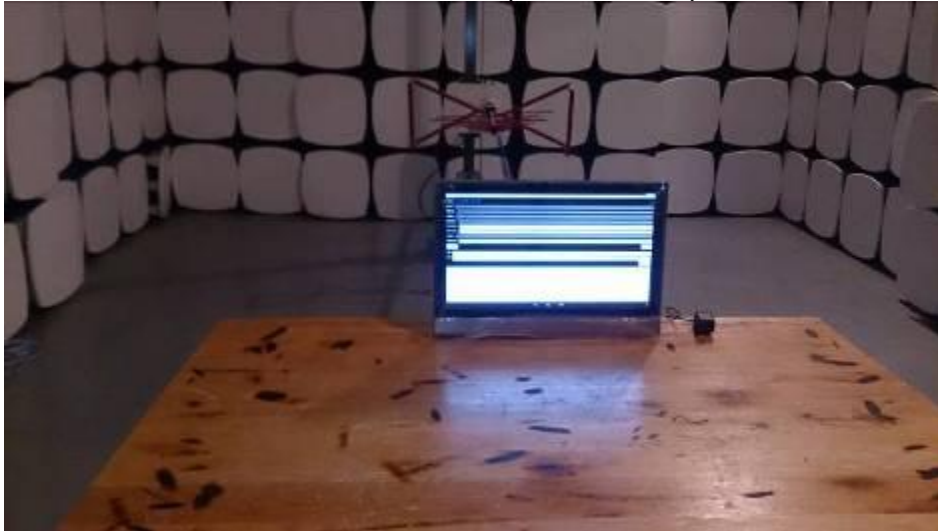
Antenna Connected Construction

The WLAN and Bluetooth Share same antenna and the maximum antenna gain of Bluetooth used was 2.3dBi.



4. EUT TEST PHOTO

Radiated Emission (30MHz-1GHz)



Radiated Emission (above 1GHz)



Conducted Emission (AC Mains)



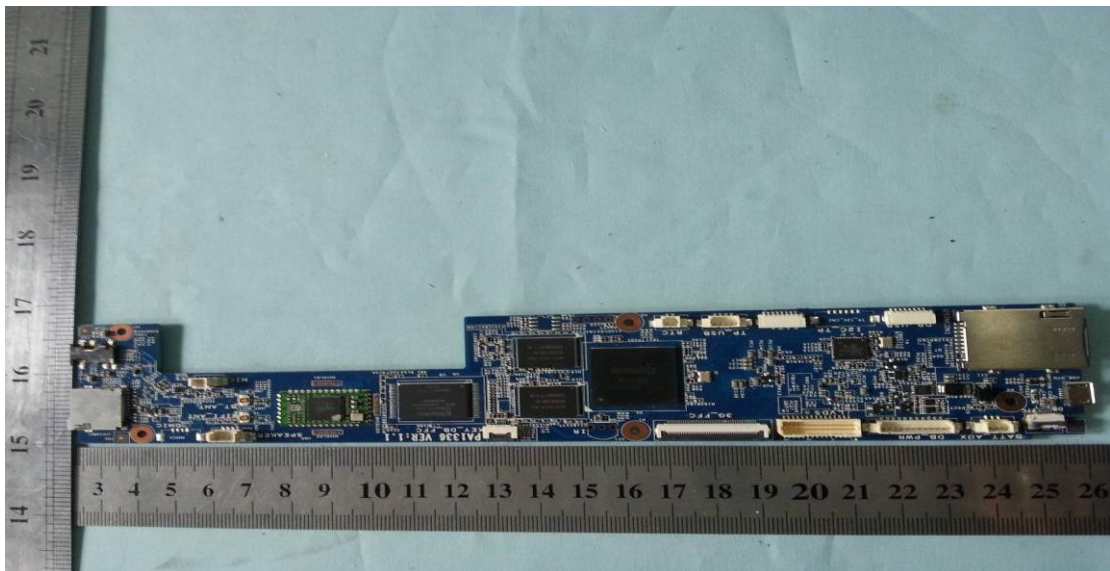
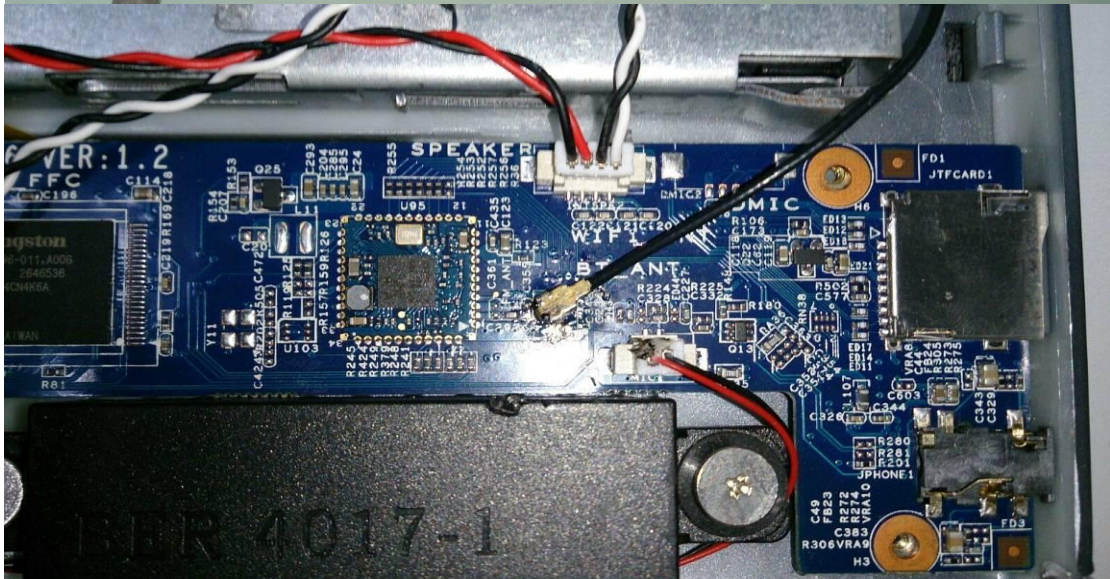
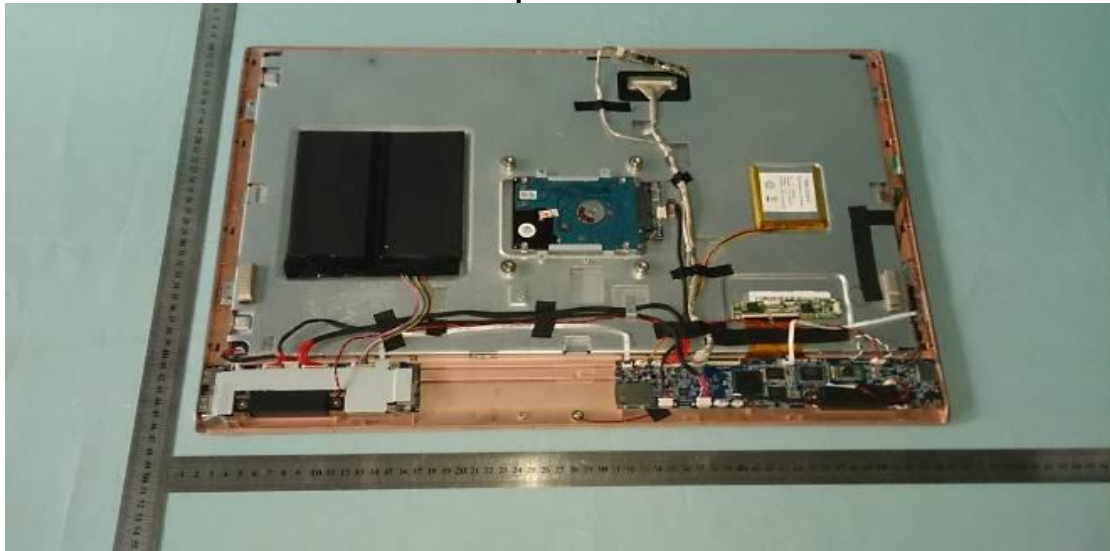
5 APPENDIX-PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS

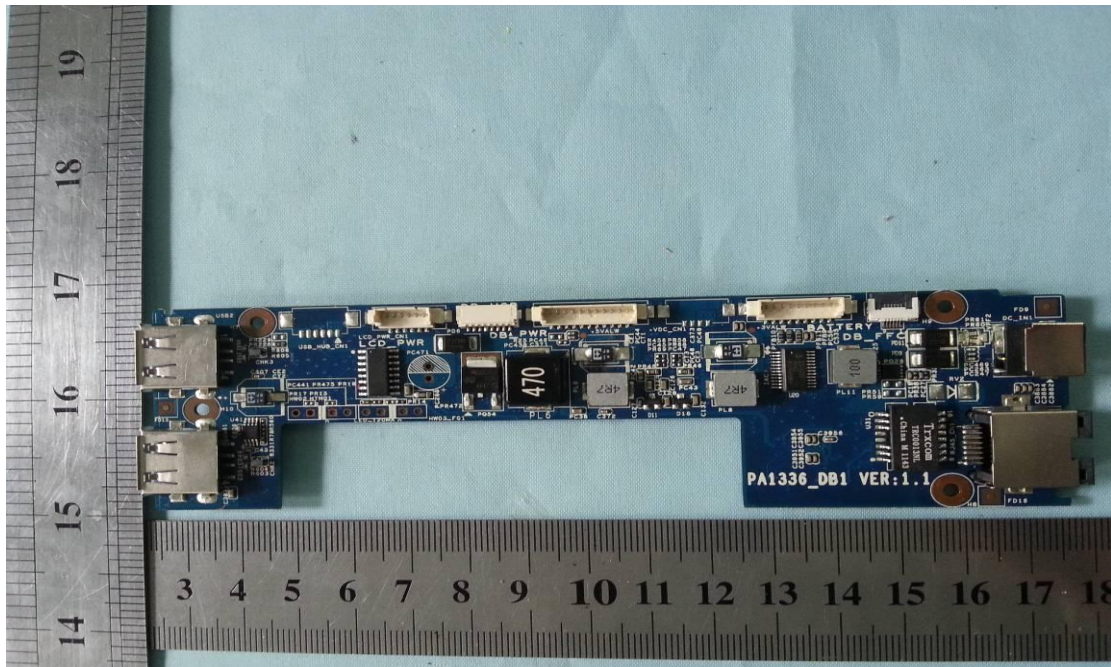
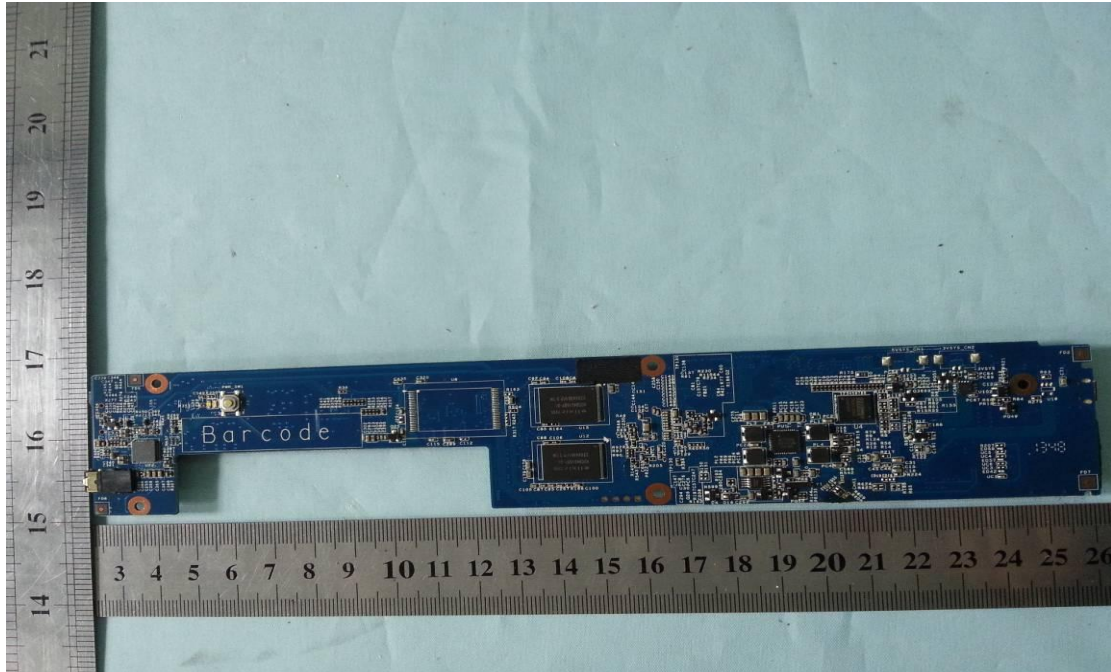
External photos of EUT

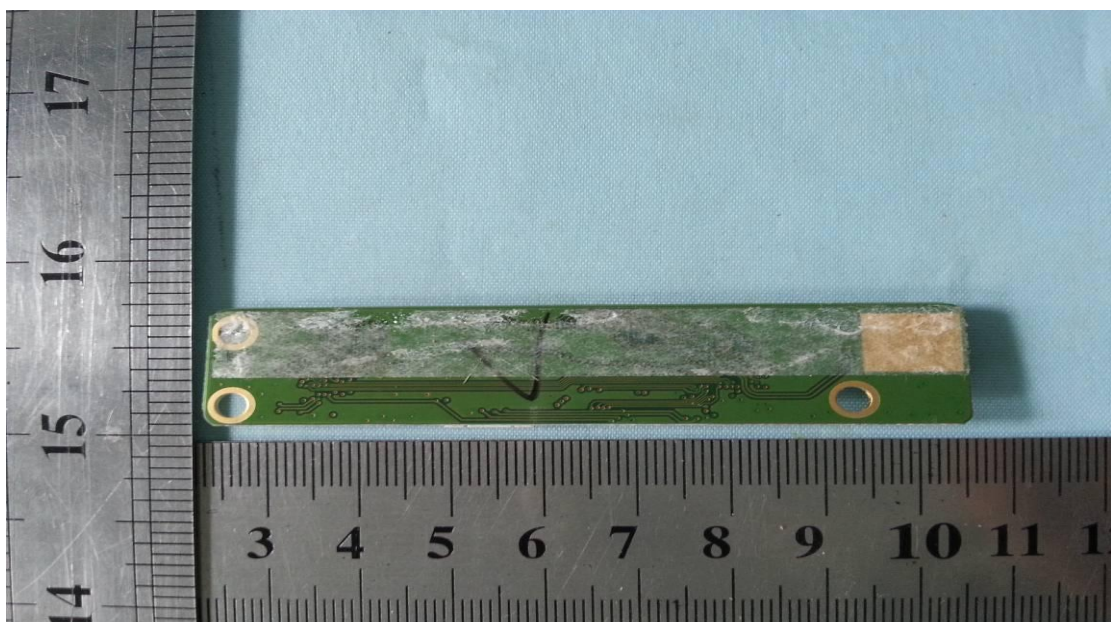
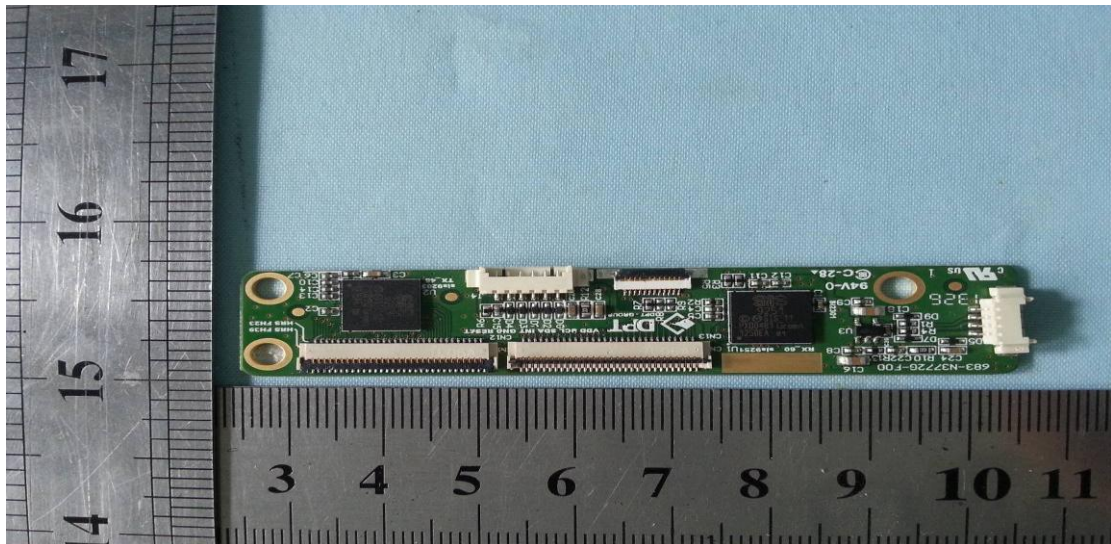
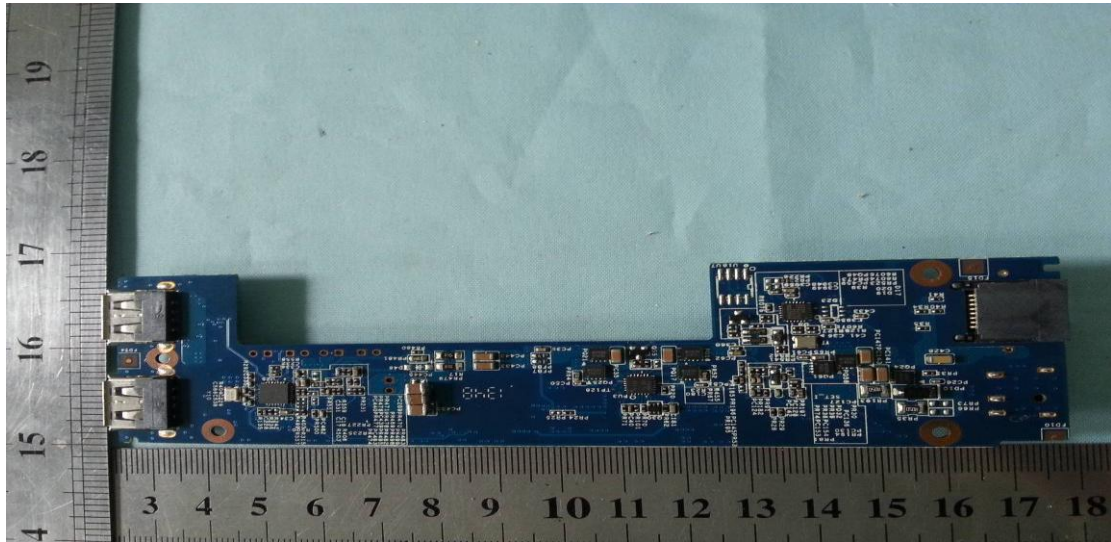




Internal photos of EUT









*****THE END*****