Test Lab
Cert 2951.01

TEST REPORT

Applicant	TP-LINK TECHNOLOGIES CO., LTD.
Address	Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China

Manufacturer or Supplier	TP-LINK TECHNOLOGIES CO., LTD.
Address	Building 24 (floors 1,3,4,5) and 28 (floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Product	300Mbps Wireless N Outdoor Access Point
Brand Name	TP-LINK
Model	EAP110-Outdoor
Additional Model & Model Difference	N/A
Date of tests	Sep. 01, 2016 ~ Oct. 10, 2016

The tests have been carried out according to the requirements of the following standard:

☒ **FCC Part 15, Subpart C, Section 15.247**

CONCLUSION: The submitted sample was found to <u>COMPLY</u> with the test requirement

Tested by Harry Li Project Engineer/ EMC Department	Approved by Glyn He Supervisor / EMC Department
	Date: Oct. 13, 2016

This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF160901N007	Original release	Oct. 13, 2016

1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit.
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit.
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted Output power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used

2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.70dB
Radiated emissions	9KHz ~ 30MHz	2.90dB
	30MHz ~ 1GMHz	3.83dB
	1GHz ~ 18GHz	4.93dB
	18GHz ~ 40GHz	4.80dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k = 2.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	300Mbps Wireless N Outdoor Access Point
MODEL NO.	EAP110-Outdoor
FCC ID	TE7EAP110OD
NOMINAL VOLTAGE	AC 120V 60Hz
MODULATION TYPE	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
MODULATION TECHNOLOGY	DSSS, OFDM
OPERATING FREQUENCY	2412-2462MHz for 11b/g/n(HT20) 2422-2452MHz for 11n(HT40)
AVERAGE POWER	28.68dBm (Measured Average Power)
ANTENNA TYPE	Dipole Antenna; 5dBi gain
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	N/A

NOTE:

1. The EUT incorporates a MIMO function. Physically, the EUT provides two transmitters and two receivers.

MODULATION MODE	FUNCTION
802.11b	2TX/2RX
802.11g	2TX/2RX
802.11n (HT20)	2TX/2RX
802.11n (HT40)	2TX/2RX

2. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
3. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.
4. Please refer to the EUT photo document (Reference No.: 160901N007) for detailed product photo.
5. The EUT was powered by the following adapter as list as attach.

ADAPTER	
BRAND:	TP-LINK
MODEL:	T240060-2-PoE
INPUT:	AC 100-240V, 50/60Hz 0.4A Max.
OUTPUT:	DC 24V, 0.6A
AC LINE:	Unshielded, Detachable, 1.8m.No core

3.2 DESCRIPTION OF TEST MODES

11 channels are provided for 802.11b, 802.11g and 802.11n(HT20):

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

7 channels are provided for 802.11n (HT40):

CHANNEL	FREQUENCY	CHANNEL	FREQUENCY
3	2422MHz	7	2442MHz
4	2427MHz	8	2447MHz
5	2432MHz	9	2452MHz
6	2437MHz		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

Please see section 5 photographs of the test configuration for reference.

3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports.
The worst case was found when positioned on X axis for radiated emission. Following test modes were selected for the final test, and the final worst case is marked in boldface and recorded in the report:

EUT CONFIGURE MODE	APPLICABLE TO				MODE
	RE<1G	RE≥1G	PLC	APCM	
-	√	√	√	√	**Powered by AC 120V with WIFI function**

Where **RE<1G:** Radiated Emission below 1GHz **RE≥1G:** Radiated Emission above 1GHz
PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

POWER LINE CONDUCTED EMISSION TEST:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	TESTED CONDITION
-	WIFI (2.4G) Link

RADIATED EMISSION TEST (BELOW 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
802.11g	1 to 11	1	OFDM	BPSK	6.0	X

RADIATED EMISSION TEST (ABOVE 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).

☒Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS
802.11b	1 to 11	1,2, 6, 10,11	CCK	DBPSK	1.0	X
802.11g	1 to 11	1,2, 6, 10,11	OFDM	BPSK	6.0	X
802.11n HT20	1 to 11	1,2, 6, 10,11	OFDM	BPSK	6.5	X
802.11n HT40	3 to 9	3,4, 6, 8,9	OFDM	BPSK	13.5	X

BANDEDGE MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 11	CCK	DBPSK	1.0
802.11g	1 to 11	1, 11	OFDM	BPSK	6.0
802.11n HT20	1 to 11	1, 11	OFDM	BPSK	6.5
802.11n HT40	3 to 9	3, 9	OFDM	BPSK	13.5

ANTENNA PORT CONDUCTED MEASUREMENT:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	CCK	DBPSK	1.0
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0
802.11n HT20	1 to 11	1, 6, 11	OFDM	BPSK	6.5
802.11n HT40	3 to 9	3, 6, 9	OFDM	BPSK	13.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	TEST VOLTAGE	TESTED BY
RE<1G	25deg. C, 55%RH	AC 120V 60Hz	Cheng Zhong
RE≥1G	25deg. C, 55%RH	AC 120V 60Hz	Cheng Zhong
PLC	20deg. C, 56%RH	AC 120V 60Hz	Yang
APCM	20deg. C, 55%RH	AC 120V 60Hz	Harry Li

3.3 DUTY CYCLE OF TEST SIGNAL

Chain 0:

Duty cycle of test signal is 100 %

Chain 1:

Duty cycle of test signal is 100 %

3.4 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C, Section 15.247
KDB 558074 D01 DTS Meas Guidance v03r05
KDB 662911 D01 v02r01
ANSI C63.10-2013

All test items have been performed and recorded as per the above standards.

NOTE: It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B(DoC). The test report has been issued separately.

3.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	N/A	N/A	N/A	N/A	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	N/A

4 TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE: 1.The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

4.1.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR7	101588	Jan. 22,16	Jan. 21,17
Artificial Mains Network	Rohde&Schwarz	ENV216	101173	Mar. 04,16	Mar. 03,17
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	100317	Apr. 05,16	Apr. 04,17
Voltage probe	SCHWARZBECK	TK 9421	TK 9421-176	Jan. 08,16	Jan. 07,17
Test software	ADT	ADT_Cond_V7.3.7	N/A	N/A	N/A

NOTE:

1. The test was performed in shielded room 553.
2. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

4.1.3 TEST PROCEDURES

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

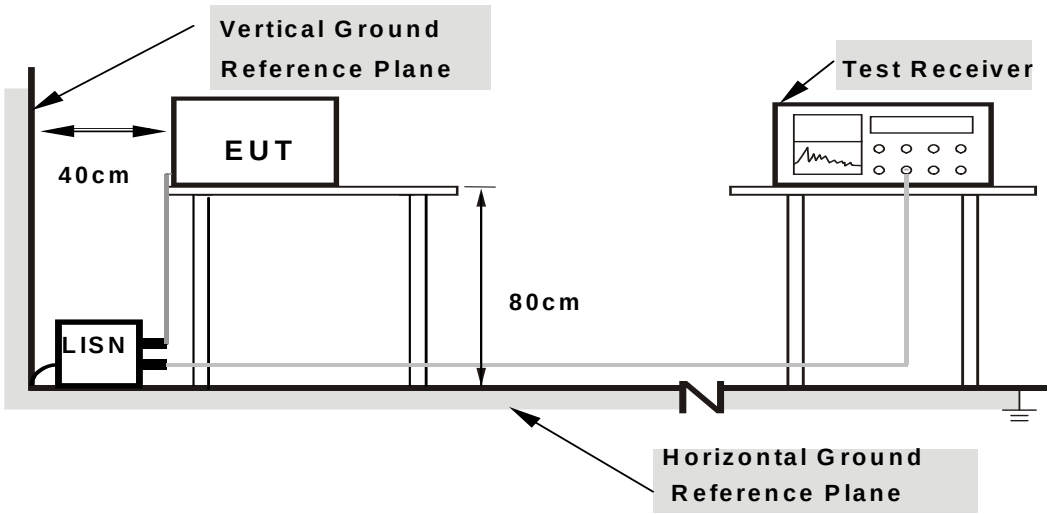
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

4.1.5 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

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT OPERATING CONDITIONS

a. Turned on the power and connected of all equipment.
b. EUT was operated according to the type used was description in manufacturer's specifications or the User's Manual.

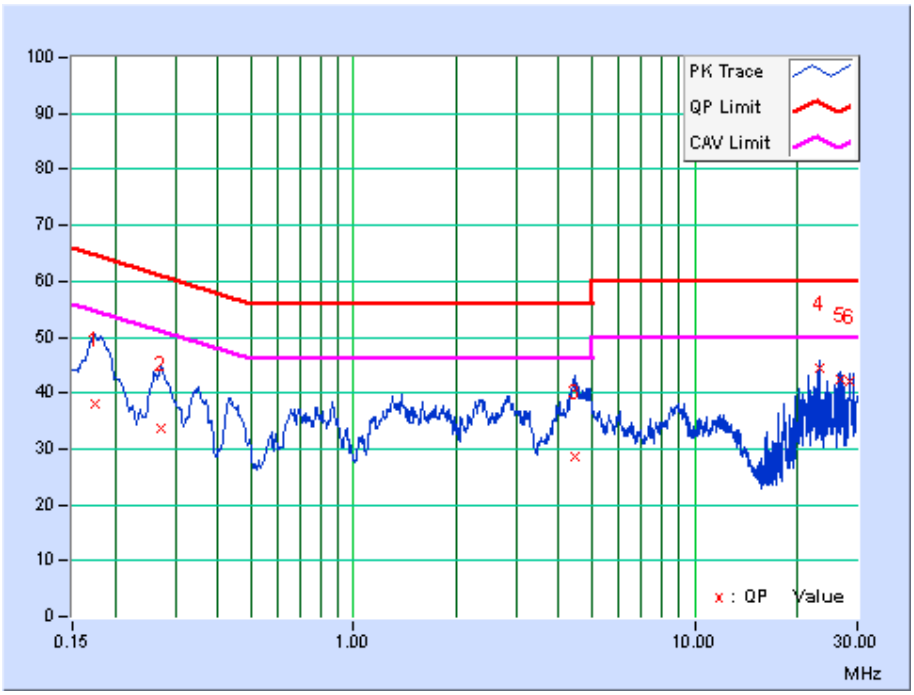
4.1.7 TEST RESULTS

CONDUCTED WORST-CASE DATA: WIFI link mode

PHASE	Line	6dB BANDWIDTH	9kHz

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17374	10.04	28.06	18.14	38.10	28.18	64.78	54.78	-26.68	-26.60
2	0.27360	10.06	23.61	14.60	33.67	24.66	61.01	51.01	-27.33	-26.34
3	4.47675	10.15	18.63	10.34	28.78	20.49	56.00	46.00	-27.22	-25.51
4	23.12700	10.38	34.01	29.90	44.39	40.28	60.00	50.00	-15.61	-9.72
5	26.60775	10.48	31.85	28.02	42.33	38.50	60.00	50.00	-17.67	-11.50
6	28.68450	10.53	31.48	27.56	42.01	38.09	60.00	50.00	-17.99	-11.91

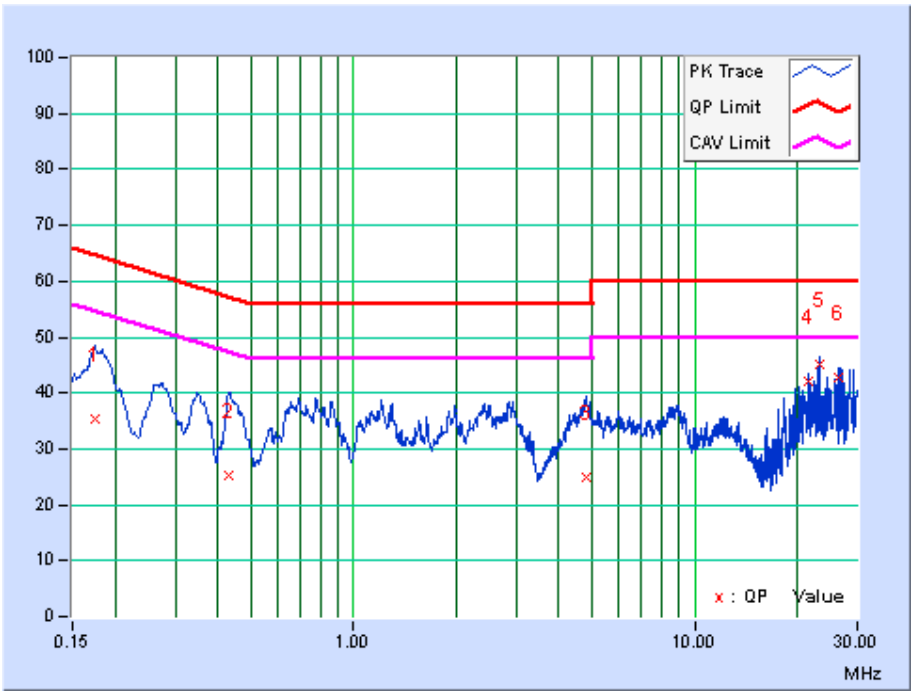
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



PHASE	Neutral	6dB BANDWIDTH	9kHz

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17420	9.84	25.55	15.97	35.39	25.81	64.76	54.76	-29.37	-28.95
2	0.42974	9.85	15.53	5.75	25.38	15.60	57.26	47.26	-31.88	-31.66
3	4.83225	9.94	15.09	7.13	25.03	17.07	56.00	46.00	-30.97	-28.93
4	21.66225	10.26	31.80	27.56	42.06	37.82	60.00	50.00	-17.94	-12.18
5	**23.12700**	**10.31**	**34.84**	**30.72**	**45.15**	**41.03**	**60.00**	**50.00**	**-14.85**	**-8.97**
6	26.48625	10.44	32.48	28.61	42.92	39.05	60.00	50.00	-17.08	-10.95

REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission level - Limit value
5. Correction factor = Insertion loss + Cable loss
6. Emission Level = Correction Factor + Reading Value.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

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).

FREQUENCIES (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

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde&Schwarz	ESR7	101494	Apr. 05,16	Apr. 04,17
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV7	102331	Nov. 09,15	Nov. 08,16
Bilog Antenna	Teseq	CBL 6111D	30643	Jul. 14, 16	Jul. 13, 17
Horn Antenna (1GHz -18GHz)	ETS -Lindgren	3117	00062558	May 18,16	May 17,17
GPS Generator+ Antenna	TOJOIN	GNSS-5000A	E1-010119	Aug. 08, 16	Aug. 07, 17
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	Mar. 12,16	Mar. 11,18
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170242	Mar. 12,16	Mar. 11,17
Amplifier (9kHz-1GHz)	SONOMA	310D	186955	Mar. 04,16	Mar. 03, 17
Pre-Amplifier(1-18G)	HP	8449B	3008A00409	Apr. 25,16	Apr. 24,17
Pre-Amplifier (18GHz-40GHz)	EMCI	EMC 184045	980102	Nov. 20,15	Nov. 19,16
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
BLUETOOTH TESTER	Rohde&Schwarz	CBT32	100811	Aug. 08,16	Aug. 07,17

NOTE:

1. The test was performed in 966 Chamber.
2. The calibration interval of the above test instruments are 12, 24 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
3. The horn antenna is used only for the measurement of emission frequency above1GHz if tested.
4. The FCC Site Registration No. is 494399.

4.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 1.5 meters(above 1GHz) and 0.8 meters(below 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using fresh batteries. The turntable was rotated to maximize the emission level.

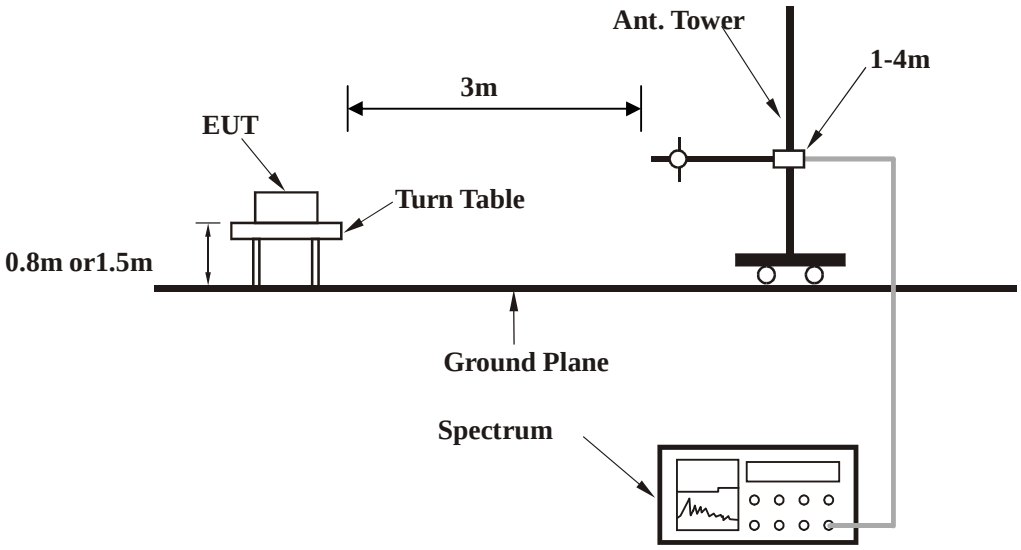
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz(Duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.
5. The testing of the EUT was performed on all 3 orthogonal axes, the worst-case test configuration was reported on the file test setup photo.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation.

4.2.5 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

Note: Above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground and below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters semi-anechoic chamber.

4.2.6 EUT OPERATING CONDITIONS

a. Set the EUT under full load condition and placed them on a testing table.
b. Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
c. The necessary accessories enable the EUT in full functions.

4.2.7 TEST RESULTS

BELOW 1GHz WORST-CASE DATA:

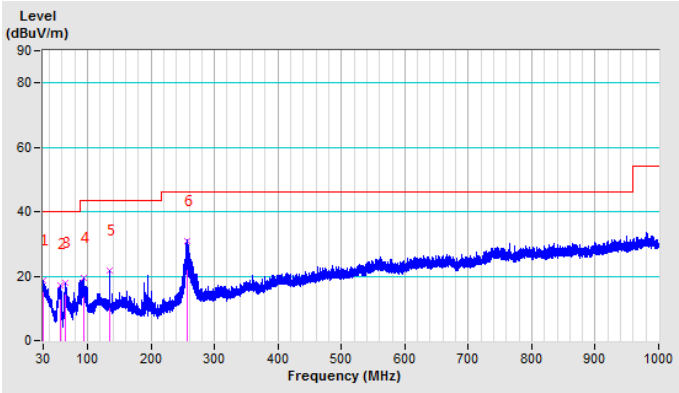
802.11g

CHANNEL	TX Channel 1	**DETECTOR FUNCTION**	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	30.54	18.50	40.00	-21.50	200	221	29.54	-11.04
2	57.24	17.34	40.00	-22.66	100	141	41.01	-23.67
3	64.14	17.76	40.00	-22.24	200	24	42.02	-24.26
4	93.24	19.30	43.50	-24.20	100	334	38.12	-18.82
5	134.97	21.83	43.50	-21.67	100	301	38.86	-17.03
6	256.78	31.01	46.00	-14.99	200	170	44.29	-13.28

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

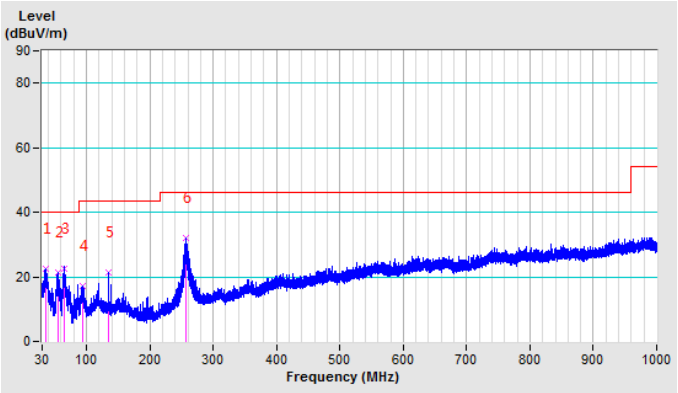


CHANNEL	TX Channel 1	**DETECTOR FUNCTION**	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (cm)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	36.11	22.50	40.00	-17.50	100	304	36.28	-13.78
2	54.73	21.26	40.00	-18.74	100	186	44.33	-23.07
3	64.22	22.45	40.00	-17.55	100	120	46.70	-24.25
4	93.36	17.29	43.50	-26.21	100	207	36.12	-18.83
5	134.97	21.45	43.50	-22.05	200	117	38.48	-17.03
6	**256.66**	**32.14**	**46.00**	**-13.86**	**200**	**55**	**45.45**	**-13.31**

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.



ABOVE 1GHz DATA

802.11b

CHANNEL	TX Channel 1	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	62.7 PK	74.0	-11.3	2.90 H	278	24.01	38.72
2	2390.00	51.8 AV	54.0	-2.2	2.90 H	278	13.11	38.72
3	*2412.00	125.6 PK			2.53 H	79	86.81	38.80
4	*2412.00	119.8 AV			2.53 H	79	81.04	38.80
5	4824.00	42.4 PK	74.0	-31.6	1.10 H	213	-0.73	43.08
6	4824.00	33.0 AV	54.0	-21.0	1.10 H	213	-10.05	43.08
7	#7236.00	47.8 PK	95.6	-47.8	1.00 H	244	0.32	47.43
8	#7236.00	34.6 AV	89.8	-55.2	1.00 H	244	-12.82	47.43
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	61.4 PK	74.0	-12.6	3.42 V	302	57.52	3.87
2	2390.00	53.5 AV	54.0	-0.5	3.42 V	302	49.67	3.87
3	*2412.00	103.3 PK			1.87 V	232	99.33	3.94
4	*2412.00	99.4 AV			1.87 V	232	95.49	3.94
5	4824.00	46.0 PK	74.0	-28.0	1.95 V	178	38.01	8.01
6	4824.00	39.8 AV	54.0	-14.2	1.95 V	178	31.80	8.01
7	#7236.00	47.7 PK	73.3	-25.6	1.00 V	309	33.66	14.00
8	#7236.00	35.6 AV	69.4	-33.8	1.00 V	309	21.61	14.00

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 2	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2417.00	123.8 PK			1.50 H	144	119.79	3.95
2	*2417.00	116.5 AV			1.50 H	144	112.47	3.95
3	2390.00	53.5 PK	74.0	-24.4	1.50 H	144	49.63	3.87
4	2390.00	42.7 AV	54.0	-14.3	1.50 H	144	38.77	3.87
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2417.00	105.2 PK			1.70 V	216	101.20	3.95
2	*2417.00	98.7 AV			1.70 V	216	94.70	3.95
3	2390.00	51.7 PK	74.0	-22.3	1.70V	216	47.82	3.87
4	2390.00	47.8 AV	54.0	-6.2	1.70 V	216	43.96	3.87

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency

CHANNEL	TX Channel 6	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	64.0 PK	74.0	-10.0	1.05 H	80	25.25	38.72
2	2390.00	52.2 AV	54.0	-1.8	1.05 H	80	13.51	38.72
3	*2437.00	126.0 PK			1.00 H	79	87.11	38.89
4	*2437.00	121.4 AV			1.00 H	79	82.48	38.89
5	2483.50	62.8 PK	74.0	-11.2	1.50 H	81	23.70	39.06
6	2483.50	48.7 AV	54.0	-5.3	1.50 H	81	9.60	39.06
7	4874.00	41.3 PK	74.0	-32.7	1.05 H	222	-1.90	43.15
8	4874.00	31.2 AV	54.0	-22.8	1.05 H	222	-11.93	43.15
9	7311.00	48.6 PK	74.0	-25.4	1.60 H	244	1.09	47.52
10	7311.00	37.5 AV	54.0	-16.5	1.60 H	244	-10.02	47.52
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	58.3 PK	74.0	-15.7	3.34 V	18	54.43	3.87
2	2390.00	48.6 AV	54.0	-5.4	3.34 V	18	40.76	3.87
3	*2437.00	114.4 PK			3.16 V	349	110.42	4.01
4	*2437.00	110.5 AV			3.16 V	349	106.51	4.01
5	2483.50	58.3 PK	74.0	-15.7	3.97 V	300	54.09	4.16
6	2483.50	44.2 AV	54.0	-9.8	3.97 V	300	40.08	4.16
7	4874.00	45.4 PK	74.0	-28.6	2.13 V	177	37.32	8.08
8	4874.00	37.4 AV	54.0	-16.6	2.13 V	177	29.35	8.08
9	7311.00	50.2 PK	74.0	-23.8	1.04 V	188	36.07	14.13
10	7311.00	40.6 AV	54.0	-13.4	1.04 V	188	26.42	14.13

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2462.00	117.8 PK			2.71 H	84	113.71	4.09
2	*2462.00	110.1 AV			2.71 H	84	105.98	4.09
3	2483.50	60.5 PK	74.0	-13.5	2.46 H	83	56.33	4.16
4	2483.50	52.5 AV	54.0	-1.5	2.46 H	83	48.37	4.16
5	4924.00	50.4 PK	74.0	-23.6	1.35 H	171	42.25	8.14
6	4924.00	38.6 AV	54.0	-15.4	1.35 H	171	30.47	8.14
7	7386.00	58.0 PK	74.0	-16.0	1.12 H	82	43.75	14.25
8	7386.00	44.3 AV	54.0	-9.7	1.12 H	82	30.05	14.25
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2462.00	112.2 PK			3.50 V	349	73.24	38.98
2	*2462.00	105.6 AV			3.50 V	349	66.64	38.98
3	2483.50	57.6 PK	74.0	-16.4	3.50 V	355	18.56	39.06
4	2483.50	47.2 AV	54.0	-6.8	3.50 V	355	8.10	39.06
5	4924.00	41.8 PK	74.0	-32.2	1.30 V	174	-1.39	43.22
6	4924.00	33.0 AV	54.0	-21.0	1.30 V	174	-10.21	43.22
7	7386.00	48.4 PK	74.0	-25.6	1.10 V	294	0.76	47.60
8	7386.00	35.3 AV	54.0	-18.7	1.10 V	294	-12.35	47.60

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 10	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2457.00	118.1 PK			1.50 H	200	114.01	4.07
2	*2457.00	112.8 AV			1.50 H	200	108.70	4.07
3	2483.50	52.1 PK	74.0	-31.8	1.50 H	200	47.91	4.16
4	2483.50	46.2 AV	54.0	-21.7	1.50 H	200	42.04	4.16
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2457.00	111.2 PK			1.17 V	160	107.10	4.07
2	*2457.00	103.8 AV			1.17 V	160	99.74	4.07
3	2483.50	54.4 PK	74.0	-19.6	1.17 V	160	50.22	4.16
4	2483.50	44.3 AV	54.0	-9.7	1.17 V	160	40.15	4.16

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency

802.11g

CHANNEL	TX Channel 1	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.5 PK	74.0	-6.6	3.01 H	280	63.58	3.87
2	2390.00	53.0 AV	54.0	-1.0	3.01 H	280	49.13	3.87
3	*2412.00	117.6 PK			3.01 H	275	113.63	3.94
4	*2412.00	107.5 AV			3.01 H	275	103.52	3.94
5	4824.00	53.3 PK	74.0	-20.7	1.53 H	106	45.29	8.01
6	4824.00	31.4 AV	54.0	-22.6	1.53 H	106	23.39	8.01
7	#7236.00	56.6 PK	87.6	-31.0	1.10 H	175	42.60	14.00
8	#7236.00	42.6 AV	77.5	-34.9	1.10 H	175	28.57	14.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.2 PK	74.0	-15.8	3.41 V	350	54.32	3.87
2	2390.00	48.6 AV	54.0	-5.4	3.41 V	350	44.68	3.87
3	*2412.00	107.4 PK			3.39 V	356	103.49	3.94
4	*2412.00	97.6 AV			3.39 V	356	93.65	3.94
5	4824.00	51.7 PK	74.0	-22.3	1.80 V	132	43.69	8.01
6	4824.00	34.0 AV	54.0	-20.0	1.80 V	132	25.94	8.01
7	#7236.00	54.9 PK	77.4	-22.5	1.86 V	169	40.92	14.00
8	#7236.00	40.6 AV	67.6	-27.0	1.86 V	169	26.52	14.00

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 2	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2417.00	118.3 PK			1.75 H	214	113.30	3.95
2	*2417.00	111.6 AV			1.75 H	214	107.62	3.95
3	2390.00	57.7 PK	74.0	-16.3	1.75 H	214	54.81	3.87
4	2390.00	48.9 AV	54.0	-5.1	1.75 H	214	44.99	3.87
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2417.00	107.4PK			1.33 V	109	103.47	3.95
2	*2417.00	99.7 AV			1.33 V	109	95.74	3.95
3	2390.00	54.2 PK	74.0	-19.8	1.33 V	109	50.22	3.87
4	2390.00	44.0 AV	54.0	-10.0	1.33 V	109	40.10	3.87

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency

CHANNEL	TX Channel 6	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	70.8 PK	74.0	-3.2	3.40 H	272	66.93	3.87
2	2390.00	52.3 AV	54.0	-1.7	3.40 H	272	48.46	3.87
3	*2437.00	123.7 PK			3.50 H	273	119.64	4.01
4	*2437.00	114.6 AV			3.50 H	273	110.62	4.01
5	2483.50	72.8 PK	74.0	-1.2	3.49 H	271	68.63	4.16
6	2483.50	52.9 AV	54.0	-1.1	3.49 H	271	48.73	4.16
7	4874.00	57.6 PK	74.0	-16.4	2.16 H	299	49.54	8.08
8	4874.00	40.2 AV	54.0	-13.8	2.16 H	299	32.08	8.08
9	7311.00	58.3 PK	74.0	-15.7	1.50 H	316	44.17	14.13
10	7311.00	40.3 AV	54.0	-13.7	1.50 H	316	26.12	14.13
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	58.2 PK	74.0	-15.8	3.69 V	350	54.34	3.87
2	2390.00	45.5 AV	54.0	-8.5	3.69 V	350	41.67	3.87
3	*2437.00	119.1 PK			3.52 V	360	115.04	4.01
4	*2437.00	109.3 AV			3.52 V	360	105.29	4.01
5	2483.50	59.0 PK	74.0	-15.0	3.35 V	360	54.79	4.16
6	2483.50	44.5 AV	54.0	-9.5	3.35 V	360	40.38	4.16
7	4874.00	53.3 PK	74.0	-20.7	2.10 V	326	45.22	8.08
8	4874.00	42.1 AV	54.0	-11.9	2.10 V	326	34.02	8.08
9	7311.00	53.8 PK	74.0	-20.2	1.60 V	300	39.69	14.13
10	7311.00	39.1 AV	54.0	-14.9	1.60 V	300	25.01	14.13

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2462.00	119.9 PK			3.45 H	275	115.78	4.09
2	*2462.00	110.2 AV			3.45 H	275	106.11	4.09
3	2483.50	70.5 PK	74.0	-3.5	2.61 H	275	66.37	4.16
4	2483.50	53.4 AV	54.0	-0.6	2.61 H	275	49.26	4.16
5	4924.00	52.0 PK	74.0	-22.0	3.00 H	257	43.82	8.14
6	4924.00	33.7 AV	54.0	-20.3	3.00 H	257	25.56	8.14
7	7386.00	54.4 PK	74.0	-19.6	1.20 H	262	40.12	14.25
8	7386.00	35.2 AV	54.0	-18.8	1.20 H	262	20.93	14.25
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2462.00	114.2 PK			3.51 V	357	110.09	4.09
2	*2462.00	104.3 AV			3.51 V	357	100.16	4.09
3	2483.50	59.9 PK	74.0	-14.1	3.45 V	344	55.70	4.16
4	2483.50	45.0 AV	54.0	-9.0	3.45 V	344	40.85	4.16
5	4924.00	46.6 PK	74.0	-27.4	3.56 V	237	38.43	8.14
6	4924.00	29.3 AV	54.0	-24.7	3.56 V	237	21.11	8.14
7	7386.00	48.6 PK	74.0	-25.4	1.00 V	291	34.31	14.25
8	7386.00	35.2 AV	54.0	-18.8	1.00 V	291	20.95	14.25

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 10	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2457.00	119.1 PK			1.12 V	250	115.04	4.07
2	*2457.00	111.6 AV			1.12 V	250	107.51	4.07
3	2483.50	61.9 PK	74.0	-14.1	1.12 V	250	57.73	4.16
4	2483.50	48.5AV	54.0	-5.5	1.12 V	250	44.38	4.16
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2457.00	116.6 PK			1.20 V	180	112.55	4.07
2	*2457.00	105.9 AV			1.20 V	180	101.78	4.07
3	2483.50	56.1 PK	74.0	-10.9	1.20 V	180	51.93	4.16
4	2483.50	44.2 AV	54.0	-9.8	1.20 V	180	40.01	4.16

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency

802.11n 20MHz

CHANNEL	TX Channel 1	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	68.4 PK	74.0	-5.6	2.63 H	87	64.57	3.87
2	2390.00	53.0 AV	54.0	-1.0	2.63 H	87	49.16	3.87
3	*2412.00	118.1 PK			2.96 H	93	114.18	3.94
4	*2412.00	108.5 AV			2.96 H	93	104.59	3.94
5	4824.00	53.7 PK	74.0	-20.3	1.79 H	119	45.66	8.01
6	4824.00	35.6 AV	54.0	-18.4	1.79 H	119	27.59	8.01
7	#7236.00	56.4 PK	88.1	-31.6	2.10 H	107	42.43	14.00
8	#7236.00	34.6 AV	78.5	-43.9	2.10 H	107	20.61	14.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	50.4 PK	74.0	-23.6	3.38 V	151	46.49	3.87
2	2390.00	42.6 AV	54.0	-11.4	3.38 V	151	38.74	3.87
3	*2412.00	109.5 PK			3.25 V	350	105.55	3.94
4	*2412.00	99.7 AV			3.25 V	350	95.74	3.94
5	4824.00	53.1 PK	74.0	-20.9	2.14 V	153	45.06	8.01
6	4824.00	30.7 AV	54.0	-23.3	2.14 V	153	22.72	8.01
7	#7236.00	57.5 PK	79.5	-22.0	1.50 V	180	43.45	14.00
8	#7236.00	34.9 AV	69.7	-34.8	1.50 V	180	20.88	14.00

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 2	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2417.00	120.9 PK			1.35 H	126	116.91	3.95
2	*2417.00	110.8 AV			1.35 H	126	106.88	3.95
3	2390.00	58.3 PK	74.0	-15.7	1.35 H	126	54.40	3.87
4	2390.00	47.4 AV	54.0	-6.6	1.35 H	126	43.54	3.87
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2417.00	110.7 PK			1.24 V	146	106.60	3.95
2	*2417.00	104.5 AV			1.24 V	146	100.52	3.95
3	2390.00	54.5 PK	74.0	-19.5	1.24 V	146	50.63	3.87
4	2390.00	44.8 AV	54.0	-9.2	1.24 V	146	40.93	3.87

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency

CHANNEL	TX Channel 6	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	67.3 PK	74.0	-6.7	2.98 H	284	63.47	3.87
2	2390.00	52.2 AV	54.0	-1.8	2.98 H	284	48.30	3.87
3	*2437.00	123.8 PK			3.52 H	88	119.75	4.01
4	*2437.00	114.5 AV			3.52 H	88	110.51	4.01
5	2483.50	71.8 PK	74.0	-2.2	2.98 H	282	67.60	4.16
6	2483.50	52.4 AV	54.0	-1.6	2.98 H	282	48.23	4.16
7	4874.00	49.8 PK	74.0	-24.2	2.45 H	110	41.72	8.08
8	4874.00	36.2 AV	54.0	-17.8	2.45 H	110	28.07	8.08
9	7331.00	51.1 PK	74.0	-22.9	3.20 H	191	36.94	14.16
10	7331.00	35.6 AV	54.0	-18.4	3.20 H	191	21.44	14.16
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	55.4 PK	74.0	-18.6	3.52 V	14	51.48	3.87
2	2390.00	43.1 AV	54.0	-10.9	3.52 V	14	39.23	3.87
3	*2437.00	117.4 PK			3.65 V	28	113.39	4.01
4	*2437.00	107.6 AV			3.65 V	28	103.60	4.01
5	2483.50	55.6 PK	74.0	-18.4	3.04 V	20	51.39	4.16
6	2483.50	41.7 AV	54.0	-12.3	3.04 V	20	37.51	4.16
7	4874.00	46.7 PK	74.0	-27.3	1.98 V	269	38.66	8.08
8	4874.00	31.2 AV	54.0	-22.8	1.98 V	269	23.15	8.08
9	7331.00	53.7 PK	74.0	-20.3	1.52 V	78	39.58	14.16
10	7331.00	37.0 AV	54.0	-17.0	1.52 V	78	22.82	14.16

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	120.1 PK			3.47 H	290	116.02	4.09
2	*2462.00	110.1 AV			3.47 H	290	106.00	4.09
3	2483.50	70.8 PK	74.0	-3.2	3.90 H	293	66.62	4.16
4	2483.50	53.3 AV	54.0	-0.7	3.90 H	293	49.10	4.16
5	4924.00	48.0 PK	74.0	-26.0	1.07 H	258	39.82	8.14
6	4924.00	31.7 AV	54.0	-22.3	1.07 H	258	23.58	8.14
7	7386.00	50.9 PK	74.0	-23.1	1.68 H	210	36.66	14.25
8	7386.00	36.8 AV	54.0	-17.2	1.68 H	210	22.55	14.25
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	114.3 PK			3.17 V	8	110.23	4.09
2	*2462.00	104.4 AV			3.17 V	8	100.28	4.09
3	2483.50	62.6 PK	74.0	-11.4	3.97 V	6	58.48	4.16
4	2483.50	48.6 AV	54.0	-5.4	3.97 V	6	44.48	4.16
5	4924.00	48.8 PK	74.0	-25.2	2.20 V	262	40.62	8.14
6	4924.00	30.1 AV	54.0	-23.9	2.20 V	262	21.98	8.14
7	7386.00	52.2 PK	74.0	-21.8	1.12 V	288	37.95	14.25
8	7386.00	34.8 AV	54.0	-19.2	1.12 V	288	20.55	14.25

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 10	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2457.00	120.5 PK			1.90 H	15	116.40	4.07
2	*2457.00	111.5 AV			1.90 H	15	107.39	4.07
3	2483.50	62.1 PK	74.0	-11.9	1.90 H	15	57.91	4.16
4	2483.50	49.3 AV	54.0	-4.3	1.90 H	15	45.10	4.16
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2457.00	112.8 PK			1.58 V	210	109.37	4.07
2	*2457.00	103.0 AV			1.58 V	210	97.93	4.07
3	2483.50	59.5 PK	74.0	-14.5	1.58 V	210	55.31	4.16
4	2483.50	45.9 AV	54.0	-9.1	1.58 V	210	41.79	4.16

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency

802.11n 40MHz

CHANNEL	TX Channel 3	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	67.8 PK	74.0	-6.2	2.98 H	282	63.92	3.87
2	**2390.00**	**53.5 AV**	**54.0**	**0.5**	**2.98 H**	**282**	**49.64**	**3.87**
3	*2422.00	111.3 PK			2.98 H	285	107.39	3.94
4	*2422.00	101.3 AV			2.98 H	285	97.35	3.94
5	4844.00	49.5 PK	74.0	-24.5	1.20 H	296	41.50	8.01
6	4844.00	30.3 AV	54.0	-23.7	1.20 H	296	22.26	8.01
7	7266.00	51.7 PK	74.0	-22.3	1.98 H	258	37.65	14.00
8	7266.00	35.5 AV	54.0	-18.5	1.98 H	258	21.50	14.00
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	58.9 PK	74.0	-15.1	3.54 V	20	54.98	3.87
2	2390.00	46.1 AV	54.0	-7.9	3.54 V	20	41.23	3.87
3	*2422.00	102.7 PK			3.63 V	8	98.79	3.94
4	*2422.00	92.4 AV			3.63 V	8	88.45	3.94
5	4844.00	47.6 PK	74.0	-26.4	1.10 V	274	39.57	8.01
6	4844.00	30.2 AV	54.0	-23.8	1.10 V	274	22.14	8.01
7	7266.00	53.2 PK	74.0	-20.8	1.64 V	276	39.21	14.00
8	7266.00	34.6 AV	54.0	-19.4	1.64 V	276	20.58	14.00

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 4	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2427.00	111.2 PK			1.50 H	290	107.44	3.98
2	*2427.00	101.5 AV			1.50 H	290	97.48	3.98
3	2390.00	52.2 PK	74.0	-21.8	1.50 H	290	48.55	3.87
4	2390.00	43.3 AV	54.0	-10.7	1.50 H	290	39.40	3.87
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2427.00	103.8 PK			1.60 V	114	99.82	3.98
2	*2427.00	92.2 AV			1.60 V	114	88.24	3.98
3	2390.00	50.8 PK	74.0	-23.2	1.60 V	114	46.96	3.87
4	2390.00	40.7 AV	54.0	-13.3	1.60 V	114	36.83	3.87

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	54.4 PK	74.0	-19.6	3.02 H	90	50.51	3.87
2	2390.00	41.4 AV	54.0	-12.6	3.02 H	90	37.50	3.87
3	*2437.00	112.1 PK			3.01 H	281	108.05	4.01
4	*2437.00	101.8 AV			3.01 H	281	97.81	4.01
5	2483.50	66.8 PK	74.0	-7.2	3.00 H	90	62.67	4.16
6	2483.50	52.5 AV	54.0	-1.5	3.00 H	90	48.34	4.16
7	4874.00	50.4 PK	74.0	-23.6	1.35 H	274	42.29	8.08
8	4874.00	29.5 AV	54.0	-24.5	1.35 H	274	21.42	8.08
9	7311.00	53.2 PK	74.0	-20.8	1.68 H	220	39.05	14.13
10	7311.00	33.6 AV	54.0	-20.4	1.68 H	220	19.47	14.13
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	44.4 PK	74.0	-29.6	3.02 V	6	40.52	3.87
2	2390.00	32.5 AV	54.0	-21.5	3.02 V	6	28.59	3.87
3	*2437.00	104.6 PK			3.57 V	10	100.61	4.01
4	*2437.00	94.4 AV			3.57 V	10	90.40	4.01
5	2483.50	57.1 PK	74.0	-16.9	3.46 V	16	52.94	4.16
6	2483.50	43.1 AV	54.0	-10.9	3.46 V	16	38.97	4.16
7	4874.00	47.6 PK	74.0	-26.4	2.00 V	297	39.52	8.08
8	4874.00	30.7 AV	54.0	-23.3	2.00 V	297	22.62	8.08
9	7311.00	55.2 PK	74.0	-18.8	1.50 V	271	41.08	14.13
10	7311.00	32.7 AV	54.0	-21.3	1.50 V	271	18.55	14.13

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 9	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	111.6 PK			3.74 H	184	72.65	4.11
2	*2452.00	102.1 AV			3.74 H	184	63.11	4.11
3	2483.50	65.7 PK	74.0	-8.3	2.07 H	181	26.67	4.16
4	2483.50	53.0 AV	54.0	-1.0	2.07 H	181	13.96	4.16
5	4904.00	50.4 PK	74.0	-23.6	135 H	274	42.36	8.08
6	4904.00	29.5 AV	54.0	-24.5	135 H	274	21.40	8.08
7	7356.00	53.2 PK	74.0	-20.8	168 H	220	39.17	14.13
8	7356.00	33.6 AV	54.0	-20.4	168 H	220	19.50	14.13
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	101.1 PK			3.49 V	260	97.00	4.11
2	*2452.00	89.3 AV			3.49 V	260	85.15	4.11
3	2483.50	57.2 PK	74.0	-16.8	3.17 V	247	53.52	4.16
4	2483.50	45.7 AV	54.0	-8.3	3.17 V	247	41.67	4.16
5	4904.00	46.6 PK	74.0	-27.4	110 V	274	38.58	8.01
6	4904.00	30.2 AV	54.0	-23.8	110 V	274	22.15	8.01
7	7356.00	53.3 PK	74.0	-20.7	164 V	276	39.27	14.00
8	7356.00	34.6 AV	54.0	-19.4	164 V	276	20.58	14.00

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 8	**DETECTOR FUNCTION**	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2447.00	110.1 PK			1.72 H	150	105.97	4.10
2	*2447.00	100.3 AV			1.72 H	150	96.21	4.10
3	2483.5	60.2 PK	74	-13.8	1.72 H	150	56.04	4.16
4	2483.5	47.1 AV	54	-6.93	1.72 H	150	42.87	4.16
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	*2447.00	100.0 PK			1.85 V	170	95.94	4.10
2	*2447.00	89.1 AV			1.85 V	170	85.04	4.10
3	2483.5	50.2 PK	74	-23.8	1.85 V	170	45.97	4.16
4	2483.5	44.7 AV	54	-9.6	1.85 V	170	40.53	4.16

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).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency

4.3 6dB BANDWIDTH MEASUREMENT

4.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Sensor	Keysight	U2021XA	MY55060016	May 04,16	May 03,17
Power Sensor	Keysight	U2021XA	MY55060018	May 04,16	May 03,17
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 12, 15	Oct.11, 16
Humid & Temp Programmable Tester	Haida	HD-2257	110807201	Sep.05, 16	Sep. 04,17
Oscilloscope	Agilent	DSO9254A	MY51260160	Nov. 28,15	Nov. 27,16
Signal Analyzer	Rohde & Schwarz	FSV7	102331	Nov. 09,15	Nov. 08,16
Signal Generator	Agilent	N5183A	MY50140980	Nov. 09,15	Nov. 08,16
Agile Signal Generator	Agilent	8645A	Agilent	Aug.08, 16	Aug.07, 17
ESG Vector Signal Generator	Agilent	E4438C	MY49072505	Apr. 22, 16	Apr. 21, 17
BLUETOOTH TESTER	Rohde&Schwarz	CBT32	100811	Aug.08, 16	Aug.07, 17

NOTE:

1. The test was performed in RF Oven room.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

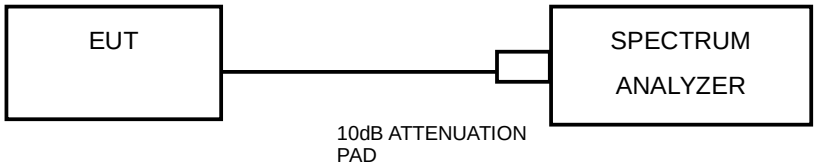
4.3.3 TEST PROCEDURE

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

4.3.4 DEVIATION FROM TEST STANDARD

No deviation.

4.3.5 TEST SETUP



4.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 TEST RESULTS

802.11b

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	9.61	10.06	0.5	PASS
6	2437	10.09	10.10	0.5	PASS
11	2462	9.57	9.56	0.5	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	14.71	15.47	0.5	PASS
6	2437	14.68	16.32	0.5	PASS
11	2462	14.44	15.73	0.5	PASS

802.11n 20MHz

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	14.44	15.29	0.5	PASS
6	2437	14.43	15.63	0.5	PASS
11	2462	17.08	16.83	0.5	PASS

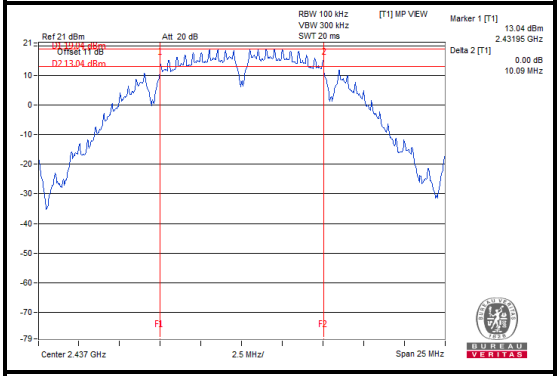
802.11n 40MHz

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
3	2422	32.01	32.93	0.5	PASS
6	2437	35.67	33.03	0.5	PASS
9	2452	34.15	33.67	0.5	PASS

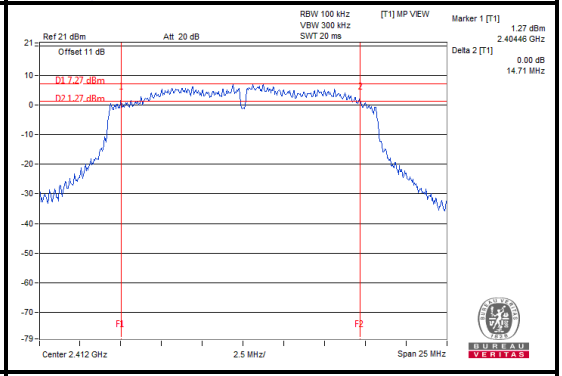
CHAIN 0

SPECTRUM PLOT OF WORST VALUE

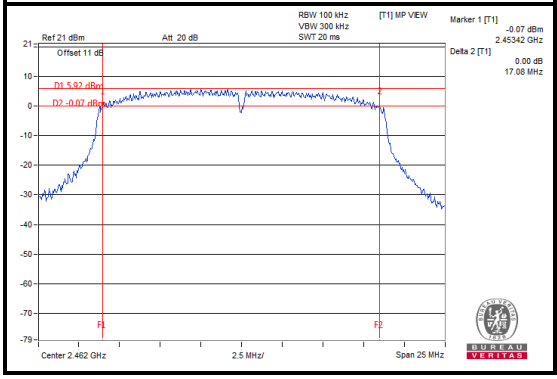
802.11b



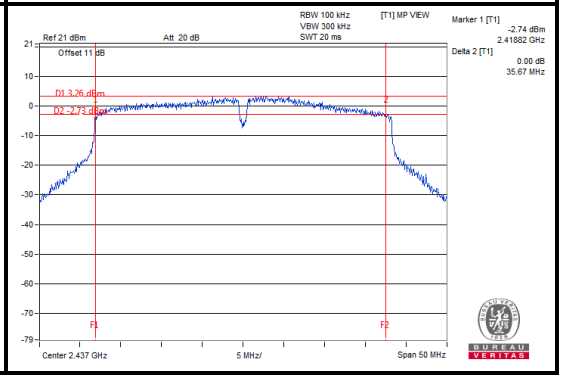
802.11g



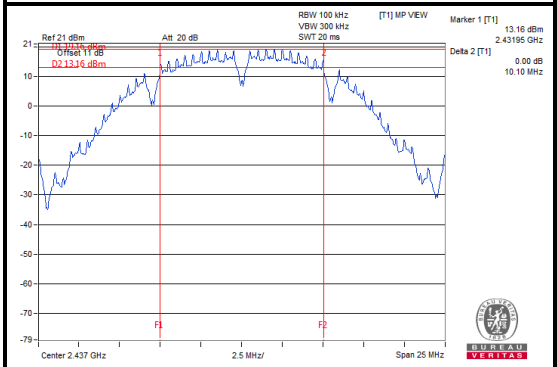
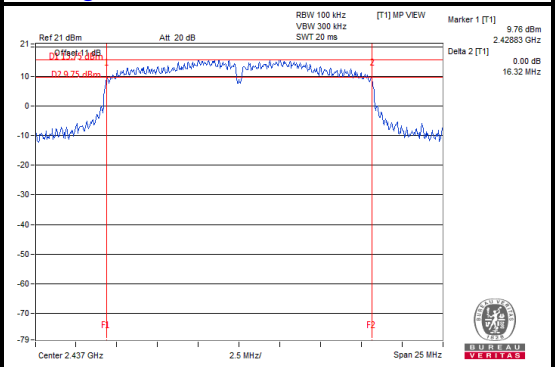
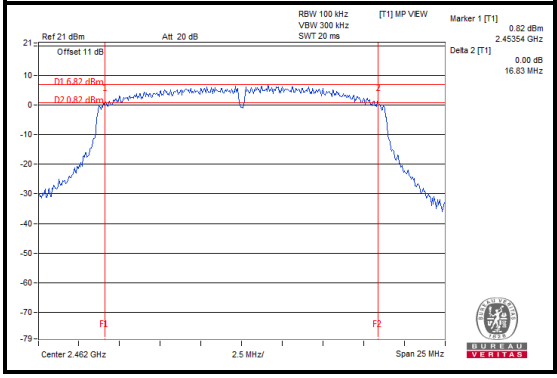
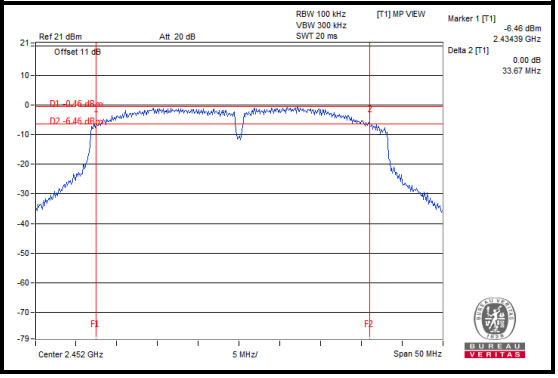
802.11n 20MHz



802.11n 40MHz



CHAIN 1

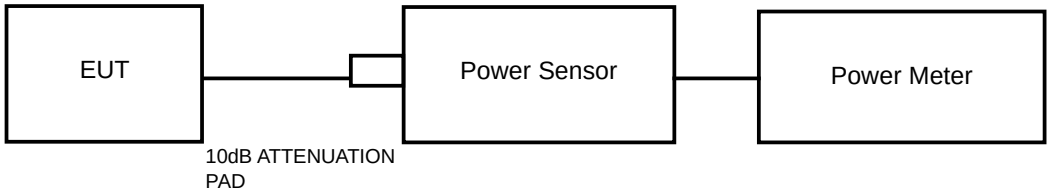
SPECTRUM PLOT OF WORST VALUE	
802.11b	**802.11g**
	
802.11n 20MHz	**802.11n 40MHz**
	

4.4 CONDUCTED OUTPUT POWER

4.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 2400–2483.5 MHz band: 1 Watt (30dBm).

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Power Sensor	Keysight	U2021XA	MY55060016	May 04,16	May 03,17
Power Sensor	Keysight	U2021XA	MY55060018	May 04,16	May 03,17
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 12, 15	Oct.11, 16
Humid & Temp Programmable Tester	Haida	HD-2257	110807201	Sep.05, 16	Sep. 04,17
Oscilloscope	Agilent	DSO9254A	MY51260160	Nov. 28,15	Nov. 27,16
Signal Analyzer	Rohde & Schwarz	FSV7	102331	Nov. 09,15	Nov. 08,16
Signal Generator	Agilent	N5183A	MY50140980	Nov. 09,15	Nov. 08,16
Agile Signal Generator	Agilent	8645A	Agilent	Aug.08, 16	Aug.07, 17
ESG Vector Signal Generator	Agilent	E4438C	MY49072505	Apr. 22, 16	Apr. 21, 17
BLUETOOTH TESTER	Rohde&Schwarz	CBT32	100811	Aug.08, 16	Aug.07, 17

NOTE:

1. The test was performed in RF Oven room.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

4.4.4 TEST PROCEDURES

An Average power sensor was used on the output port of the EUT. An Average power meter was used to read the response of the Average power sensor. Record the Average power level.

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.4.7 TEST RESULTS

802.11b

CHAN.	FREQ. (MHz)	AVG. POWER (dBm)		AVG. POWER (mW)		TOTAL POWER (mW)	TOTAL POWER (dBm)	AVG. POWER LIMIT (W)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2412	20.48	19.73	111.686	93.972	205.658	23.13	30	PASS
6	2437	25.71	25.63	372.392	365.595	**737.987**	**28.68**	30	PASS
11	2462	20.43	20.54	110.408	113.240	223.648	23.50	30	PASS

802.11g

CHAN.	FREQ. (MHz)	AVG. POWER (dBm)		AVG. POWER (mW)		TOTAL POWER (mW)	TOTAL POWER (dBm)	AVG. POWER LIMIT (W)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2412	17.36	16.56	54.450	45.290	99.740	19.99	30	PASS
6	2437	25.31	25.27	339.625	336.512	676.137	28.30	30	PASS
11	2462	19.03	19.21	79.983	83.368	163.351	22.13	30	PASS

802.11n 20MHz

CHAN.	FREQ. (MHz)	AVG. POWER (dBm)		AVG. POWER (mW)		TOTAL POWER (mW)	TOTAL POWER (dBm)	AVG. POWER LIMIT (W)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2412	16.52	15.94	44.875	39.264	84.139	19.25	30	PASS
6	2437	24.72	24.63	296.483	290.402	586.885	27.69	30	PASS
11	2462	18.62	18.42	72.778	69.502	142.280	21.53	30	PASS

802.11n 40MHz

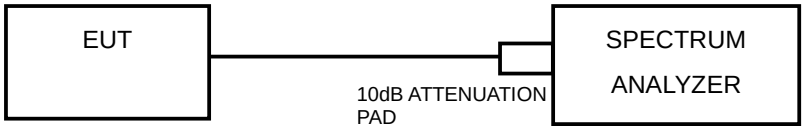
CHAN.	FREQ. (MHz)	AVG. POWER (dBm)		AVG. POWER (mW)		TOTAL POWER (mW)	TOTAL POWER (dBm)	AVG. POWER LIMIT (W)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
3	2422	13.42	12.86	21.979	19.320	41.299	16.16	30	PASS
6	2437	18.09	17.62	64.417	57.810	122.227	20.87	30	PASS
9	2452	15.84	15.61	38.371	36.392	74.763	18.74	30	PASS

4.5 POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm/3KHz.

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.3.2 to get information of above instrument.

4.5.4 TEST PROCEDURE

a) Set instrument center frequency to DTS channel center frequency.
b) Set span to at least 1.5 times the OBW.
c) Set RBW to: 10 kHz.
d) Set VBW ≥3 x RBW.
e) Detector = peak
f) Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
g) Sweep time = auto couple.
h) Use the peak marker function to determine the maximum amplitude level.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITION

Same as item 4.3.6.

4.5.7 TEST RESULTS

802.11b

TX chain	Channel	Freq. (MHz)	PSD (dBm)	10 log (N=2) dB	TOTAL PSD (dBm)	Limit (dBm)	PASS /FAIL
0	1	2412	-6.13	3.01	-3.12	5.99	PASS
	6	2437	-0.60	3.01	2.41	5.99	PASS
	11	2462	-6.41	3.01	-3.40	5.99	PASS
1	1	2412	-7.11	3.01	-4.10	5.99	PASS
	6	2437	-0.51	3.01	2.50	5.99	PASS
	11	2462	-6.15	3.01	-3.14	5.99	PASS

NOTE:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5dBi+10log(2)=8.01,so the limit about power density need to reduce 2.01dB.

802.11g

TX chain	Channel	Freq. (MHz)	PSD (dBm)	10 log (N=2) dB	TOTAL PSD (dBm)	Limit (dBm)	PASS /FAIL
0	1	2412	-10.87	3.01	-7.86	5.99	PASS
	6	2437	-1.91	3.01	1.10	5.99	PASS
	11	2462	-9.58	3.01	-6.57	5.99	PASS
1	1	2412	-12.04	3.01	-9.03	5.99	PASS
	6	2437	-1.86	3.01	1.15	5.99	PASS
	11	2462	-9.48	3.01	-6.47	5.99	PASS

NOTE:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5dBi+10log(2)=8.01,so the limit about power density need to reduce 2.01dB.

802.11n 20MHz

TX chain	Channel	Freq. (MHz)	PSD (dBm)	10 log (N=2) dB	TOTAL PSD (dBm)	Limit (dBm)	PASS /FAIL
0	1	2412	-10.85	3.01	-7.84	5.99	PASS
	6	2437	-3.23	3.01	-0.22	5.99	PASS
	11	2462	-11.90	3.01	-8.89	5.99	PASS
1	1	2412	-12.58	3.01	-9.57	5.99	PASS
	6	2437	-3.19	3.01	-0.18	5.99	PASS
	11	2462	-10.86	3.01	-7.85	5.99	PASS

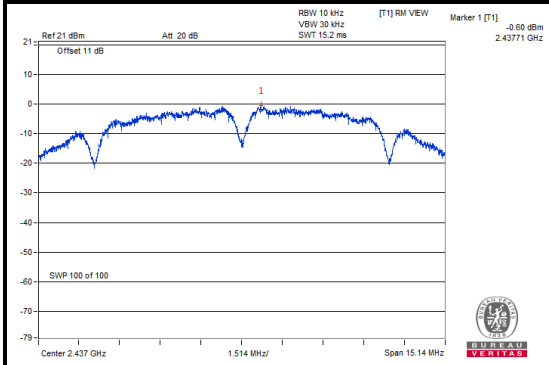
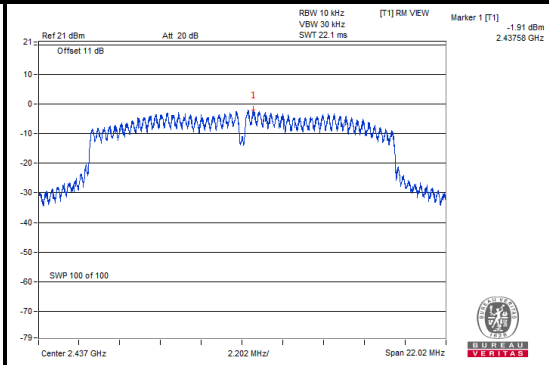
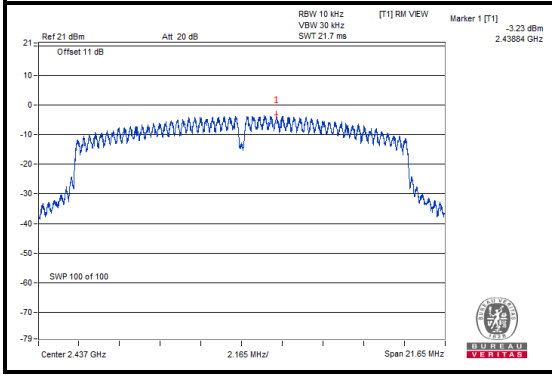
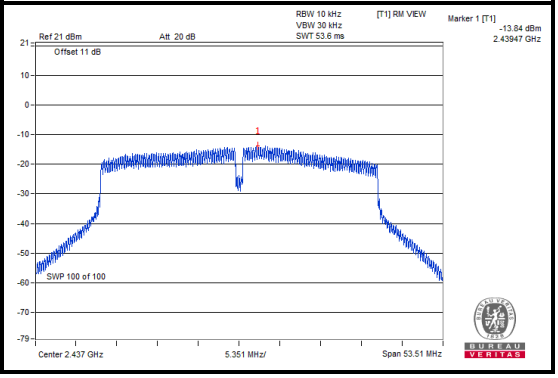
NOTE:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5dBi+10log(2)=8.01,so the limit about power density need to reduce 2.01dB.

802.11n 40MHz

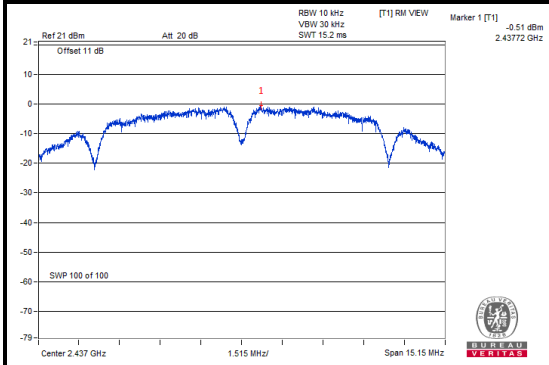
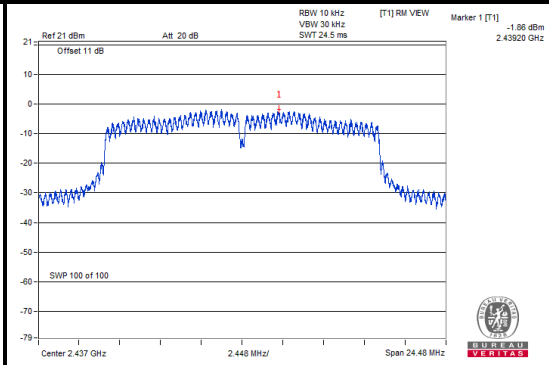
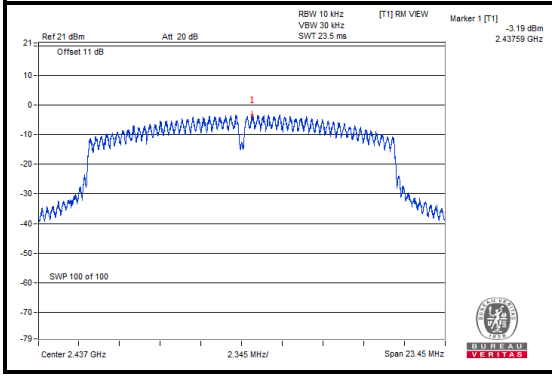
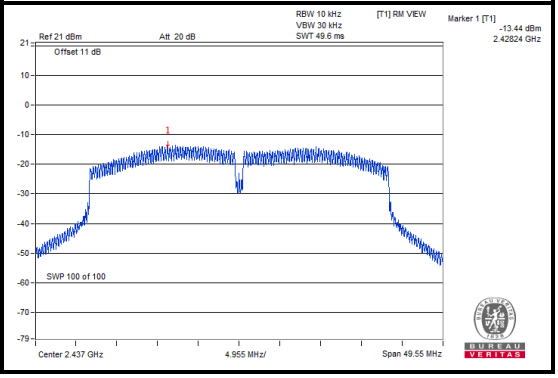
TX chain	Channel	Freq. (MHz)	PSD (dBm)	10 log (N=2) dB	TOTAL PSD (dBm)	Limit (dBm)	PASS /FAIL
0	3	2422	-18.39	3.01	-15.38	5.99	PASS
	6	2437	-13.84	3.01	-10.83	5.99	PASS
	9	2452	-17.54	3.01	-14.53	5.99	PASS
1	3	2422	-19.22	3.01	-16.21	5.99	PASS
	6	2437	-13.44	3.01	-10.43	5.99	PASS
	9	2452	-17.65	3.01	-14.64	5.99	PASS

NOTE:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 5dBi+10log(2)=8.01,so the limit about power density need to reduce 2.01dB.

CHAIN 0

SPECTRUM PLOT OF WORST VALUE	
802.11b	**802.11g**
	
802.11n 20MHz	**802.11n 40MHz**
	

CHAIN 1

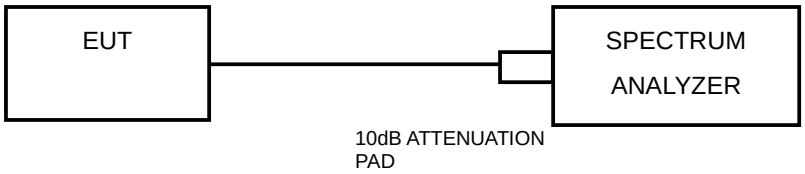
SPECTRUM PLOT OF WORST VALUE	
802.11b	**802.11g**
	
802.11n 20MHz	**802.11n 40MHz**
	

4.6 OUT OF BAND EMISSION MEASUREMENT

4.6.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

Below –30dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 TEST SETUP



4.6.3 TEST INSTRUMENTS

Refer to section 4.3.2 to get information of above instrument.

4.6.4 TEST PROCEDURE

Measurement Procedure - Reference Level

1. Set the RBW = 100 kHz.
2. Set the VBW ≥ 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

Measurement Procedure –Unwanted Emission Level

1. Set RBW = 100 kHz.
2. Set VBW ≥ 300 kHz.
3. Set span to encompass the spectrum to be examined
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.

4.6.5 DEVIATION FROM TEST STANDARD

No deviation.

4.6.6 EUT OPERATING CONDITION

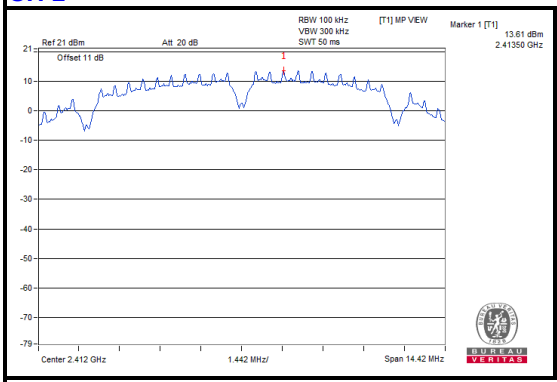
Same as item 4.3.6

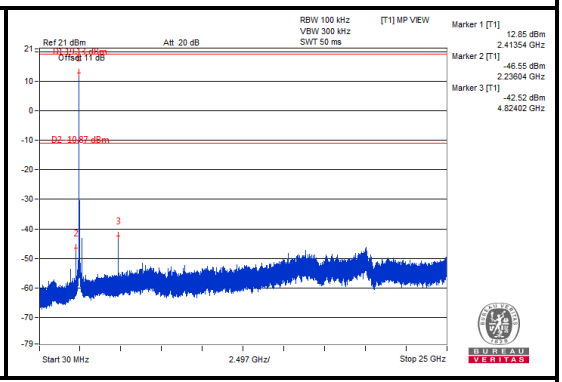
4.6.7 TEST RESULTS

802.11b

CHAIN 0

CH 1





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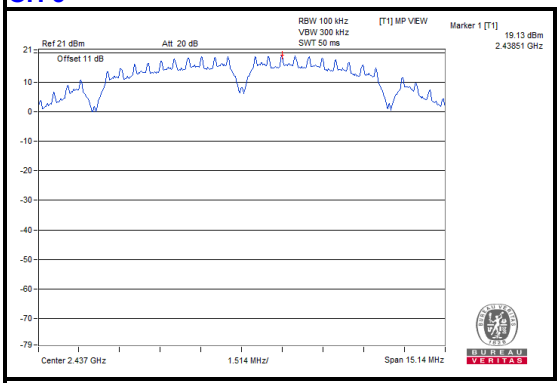

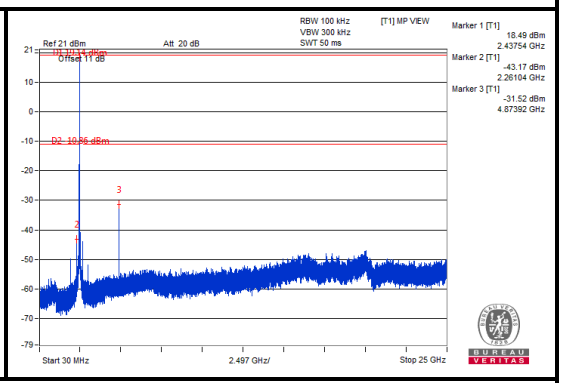

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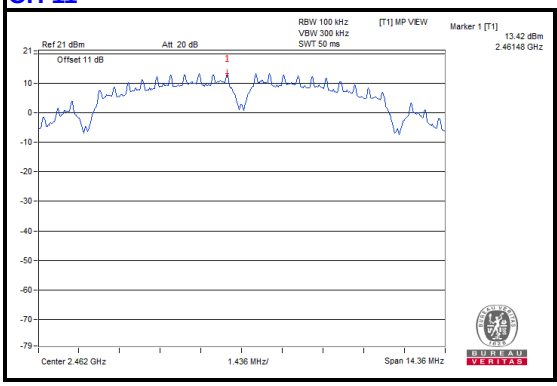

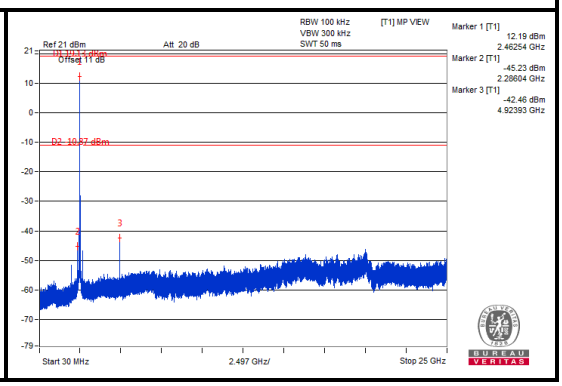

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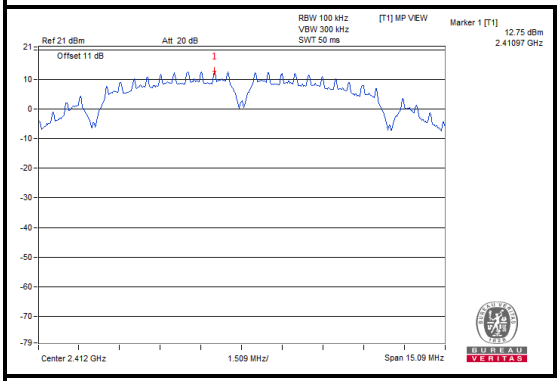

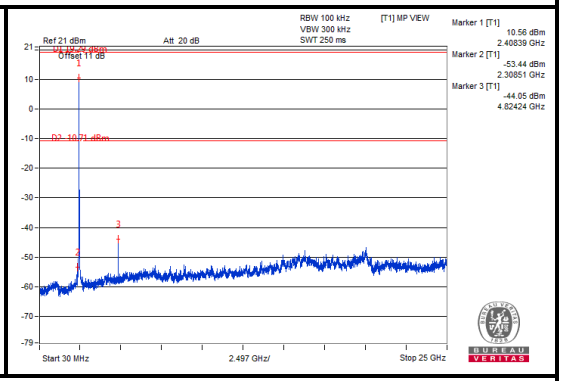

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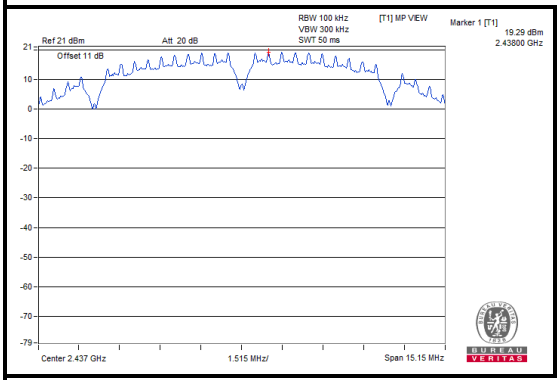

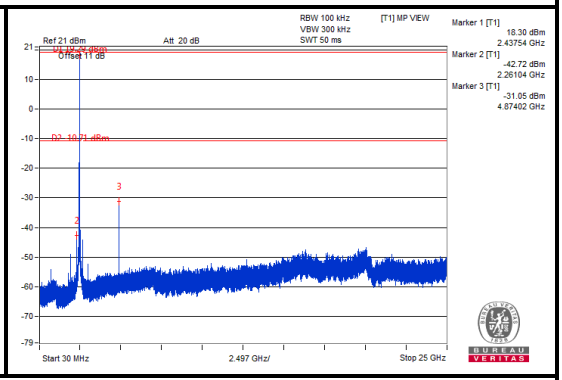

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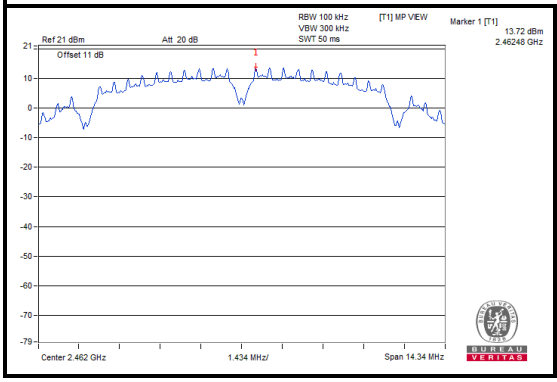
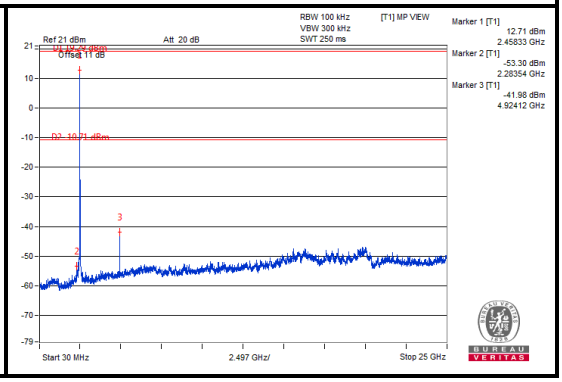
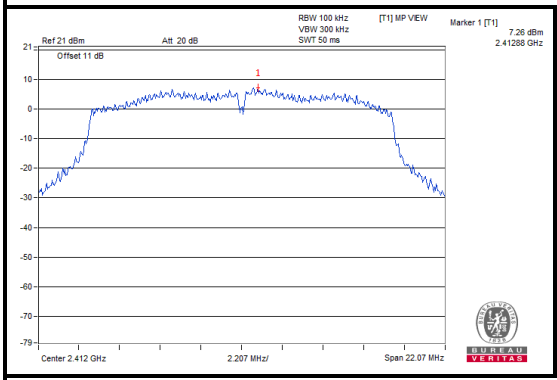


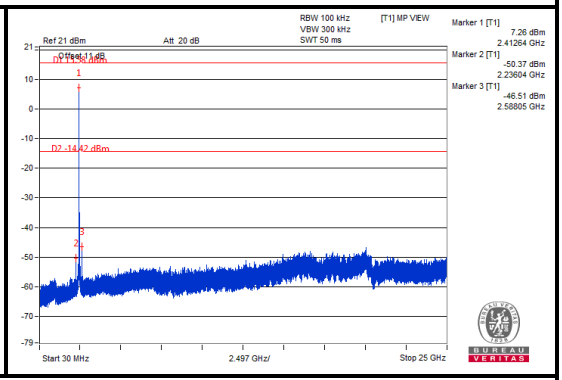


802.11g

CHAIN 0

CH 1





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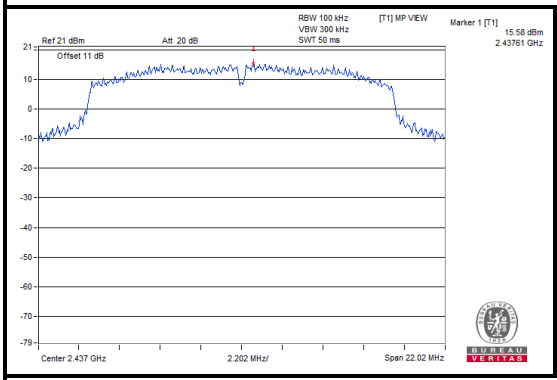

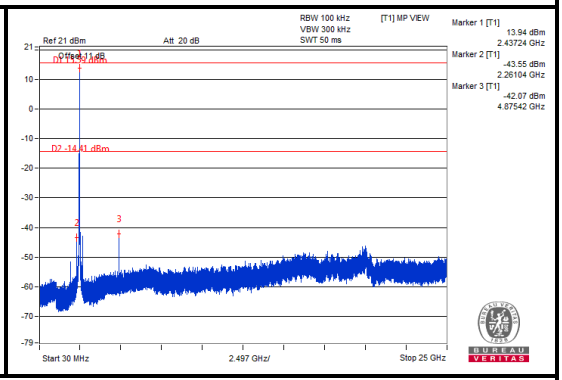

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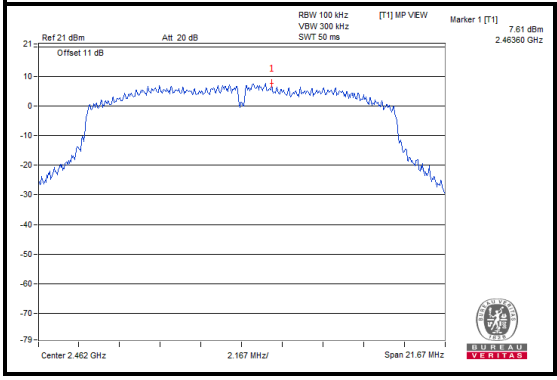

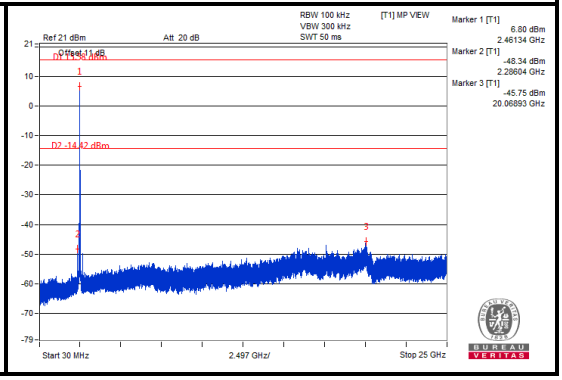

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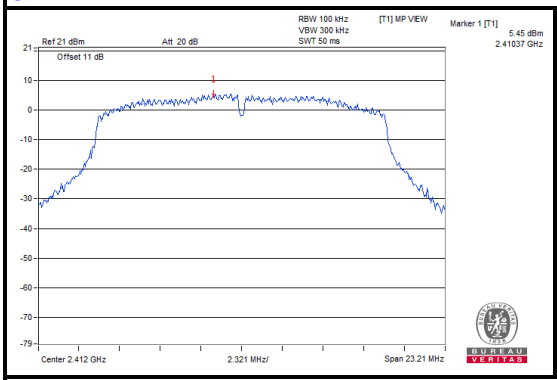

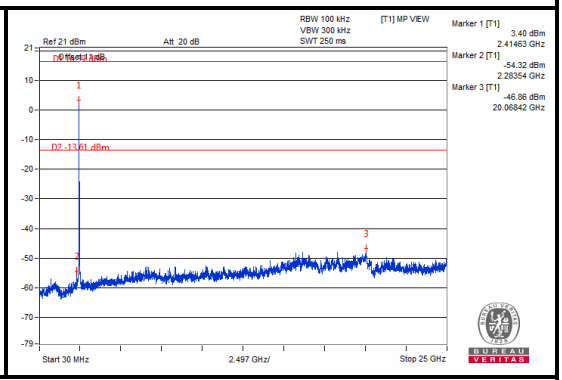

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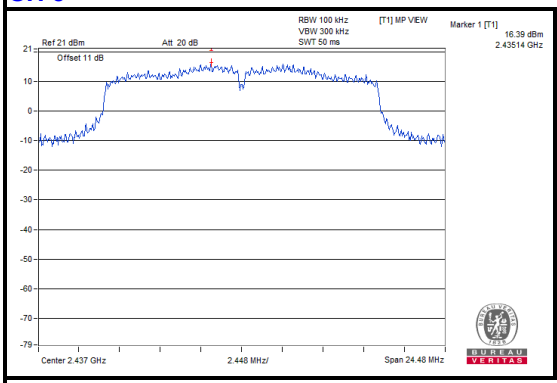

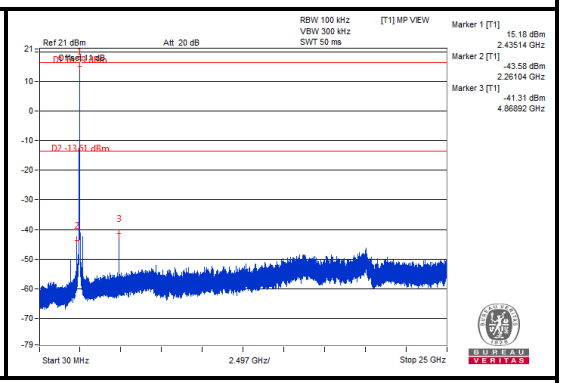

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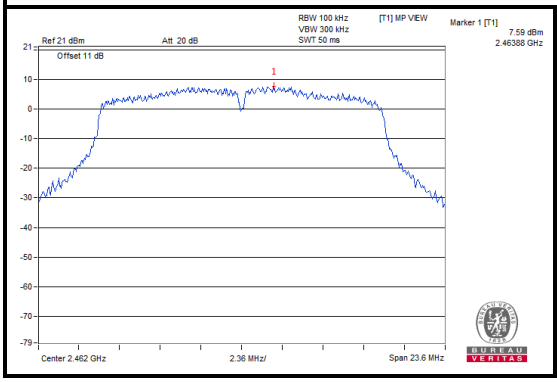
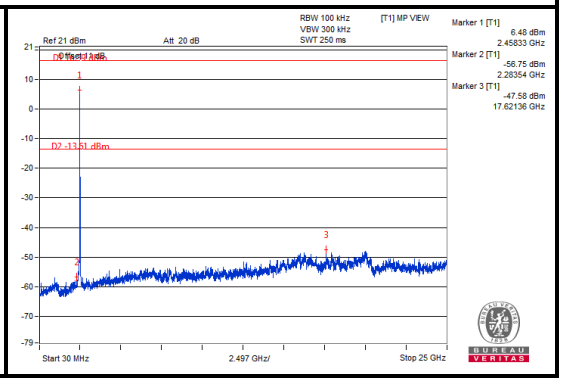
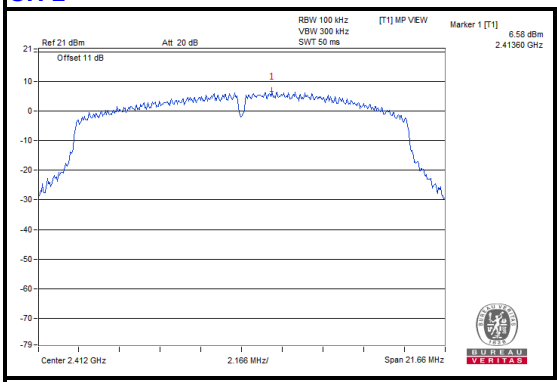


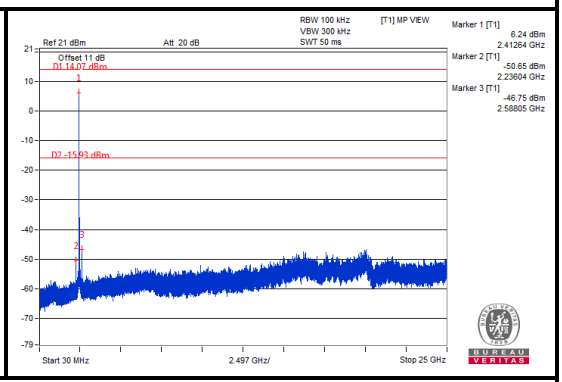


802.11n 20MHz

CHAIN 0

CH 1





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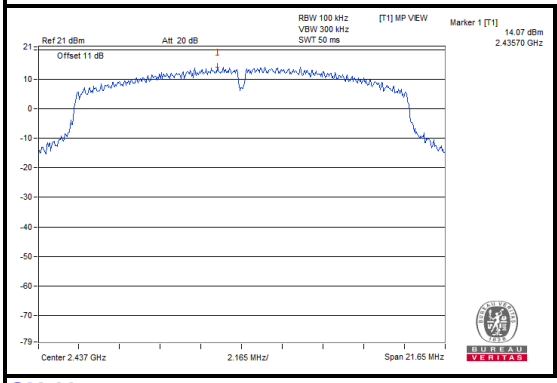

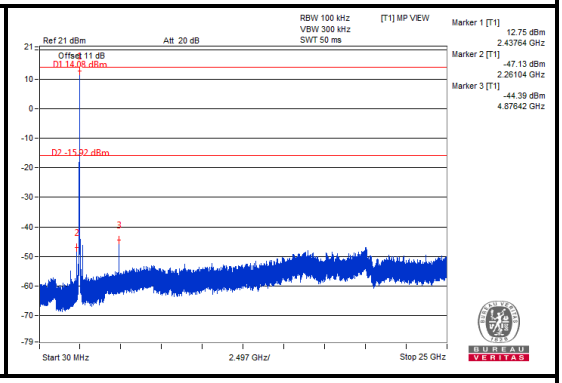

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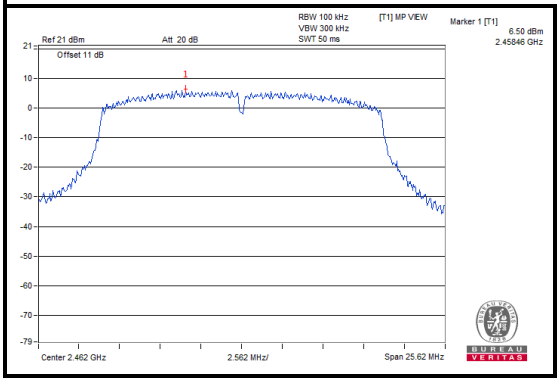
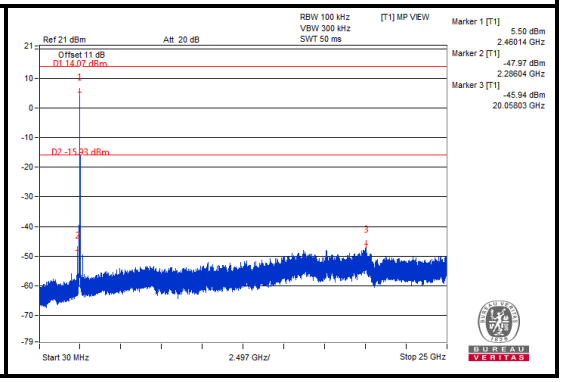
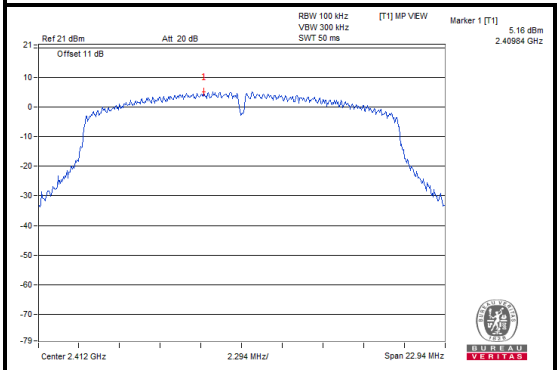
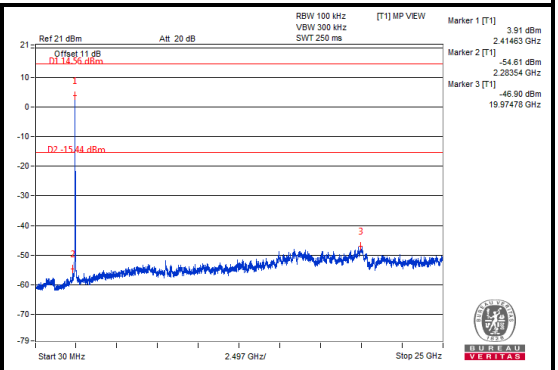




CHAIN 1

CH 1





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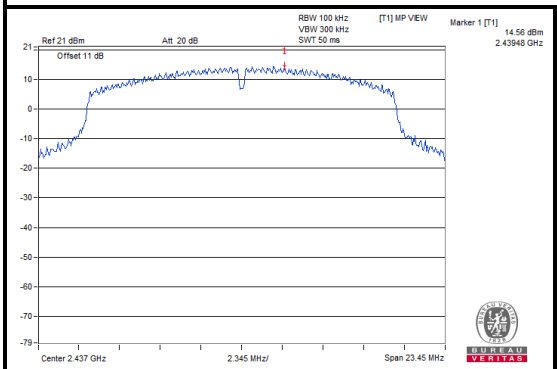

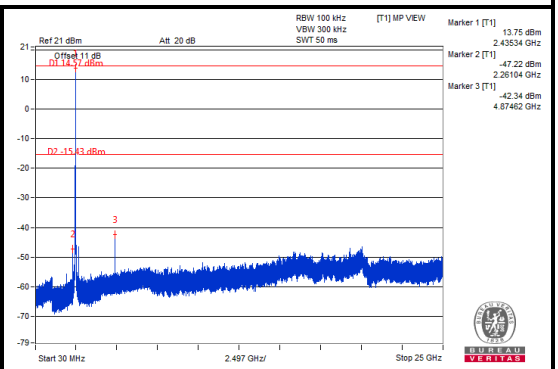

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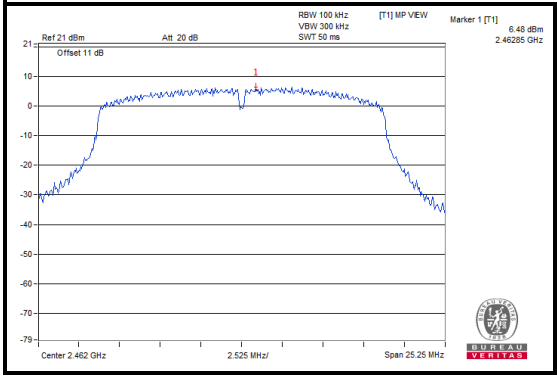

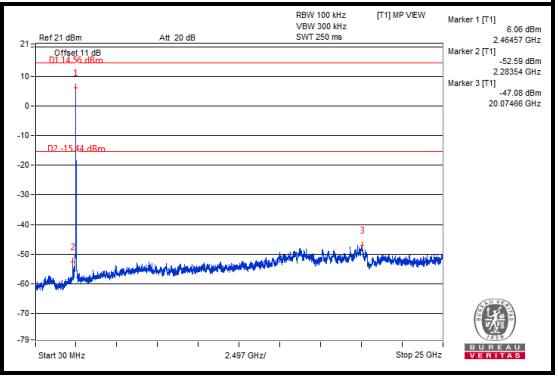

802.11n 40MHz

CHAIN 0

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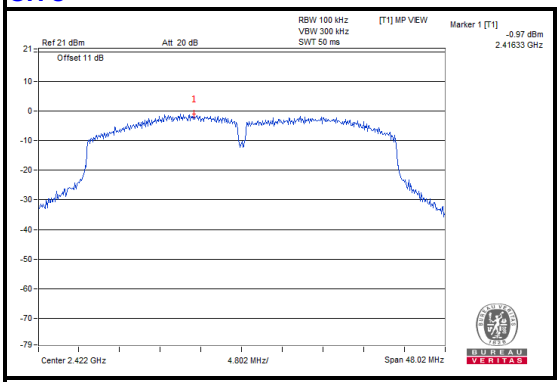

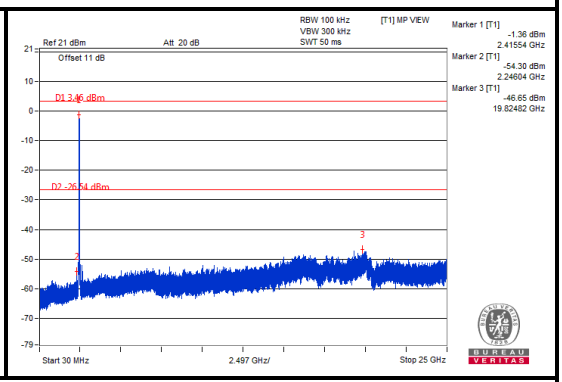

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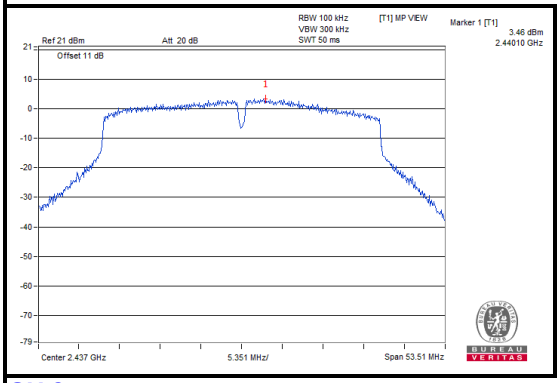

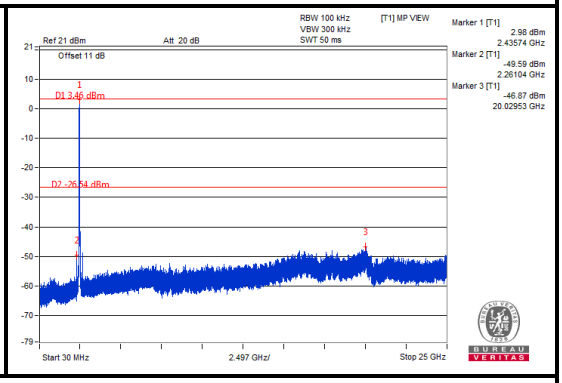

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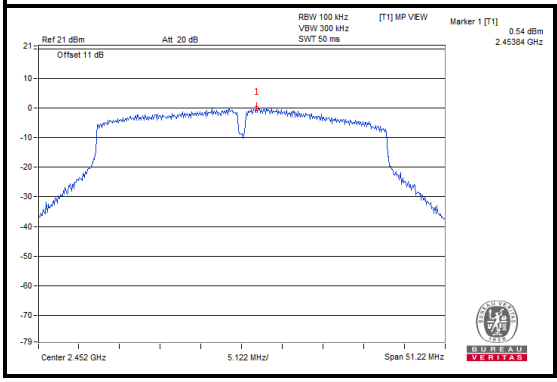

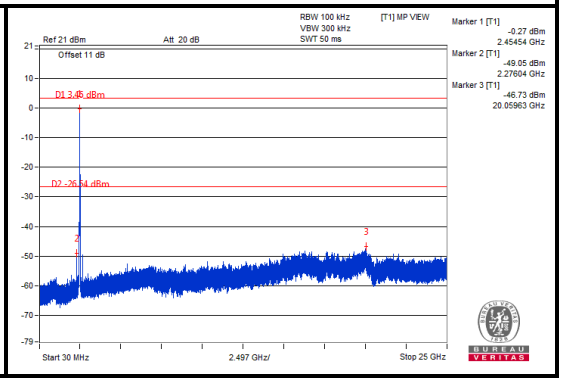

CHAIN 1

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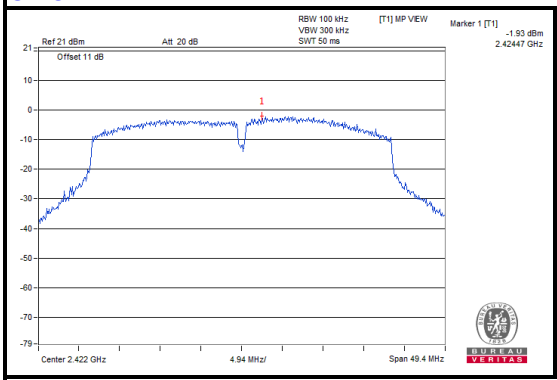

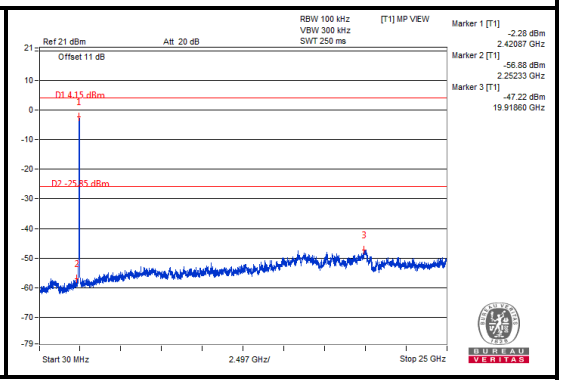

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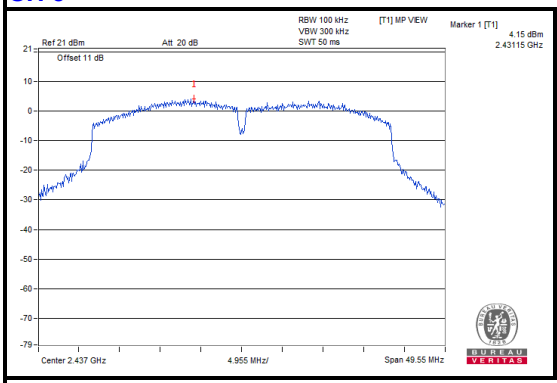

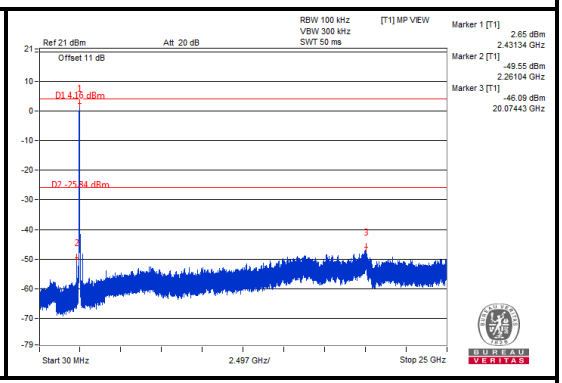

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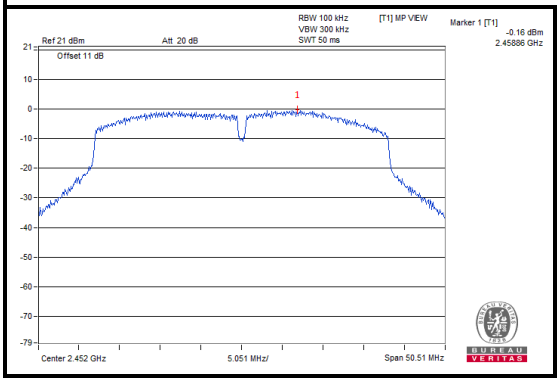
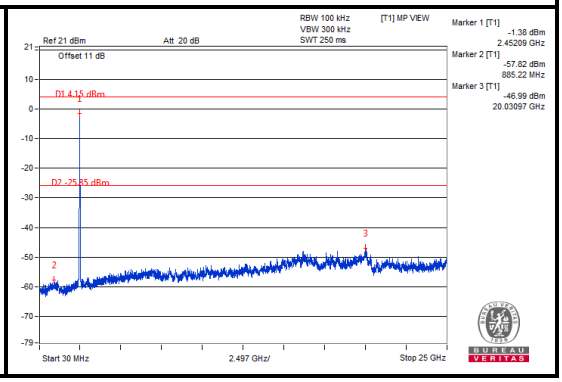
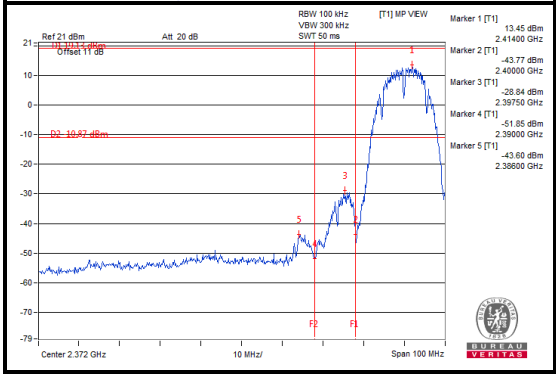
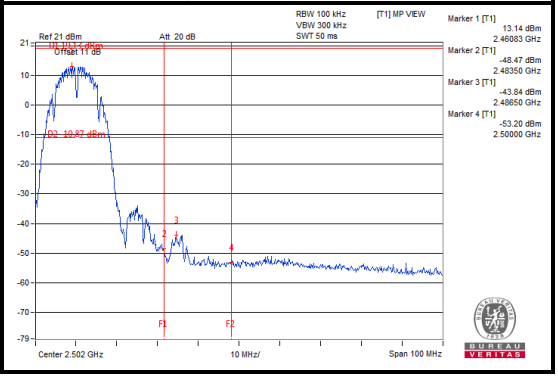


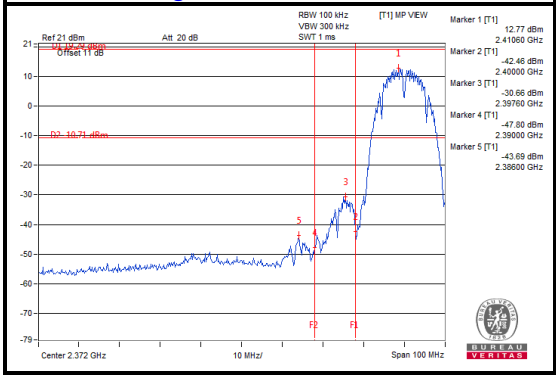
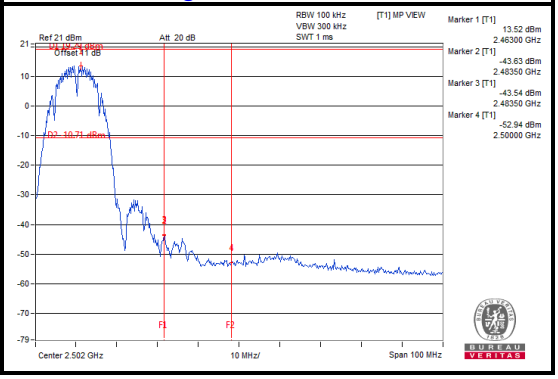


802.11b

CHAIN 0

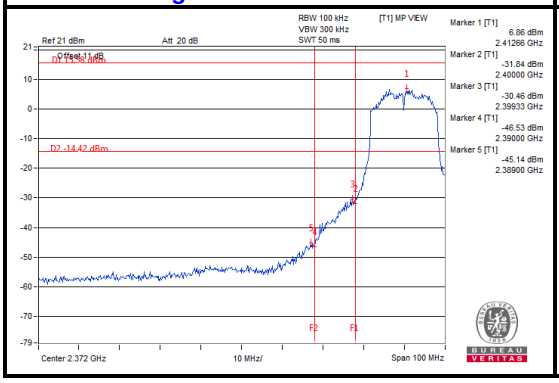
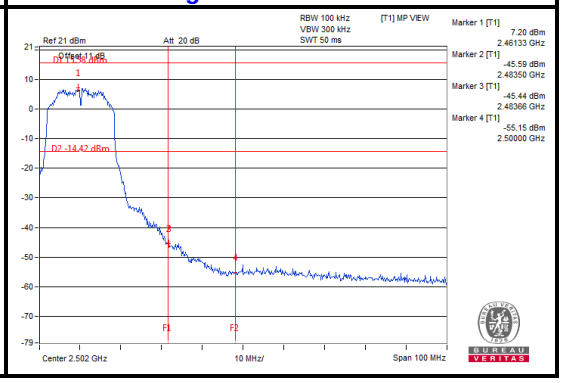
CH 1 Band edge	CH 11 Band edge
	

CHAIN 1

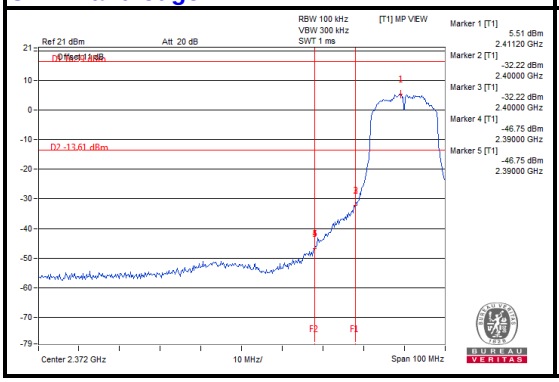
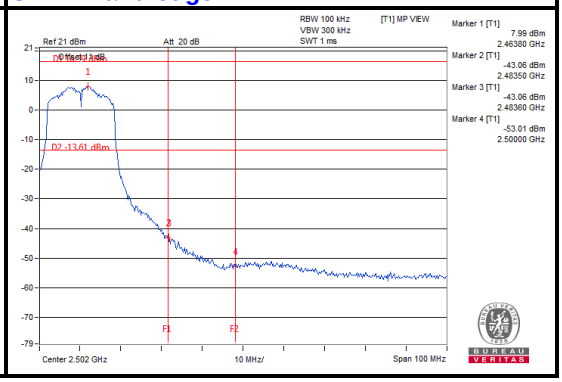
CH 1 Band edge	CH 11 Band edge
	

802.11g

CHAIN 0

CH 1 Band edge	CH 11 Band edge
	

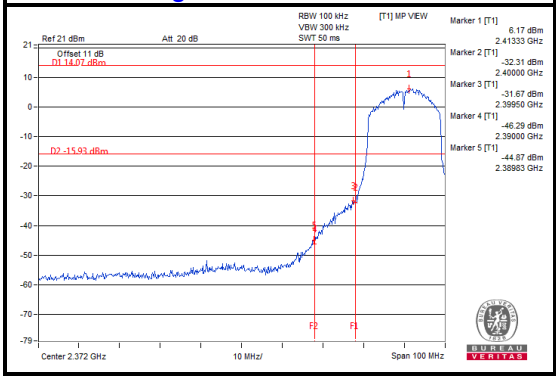
CHAIN 1

CH 1 Band edge	CH 11 Band edge
	

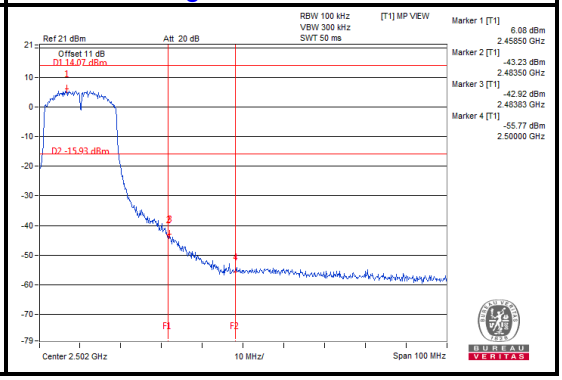
802.11n 20MHz

CHAIN 0

CH 1 Band edge

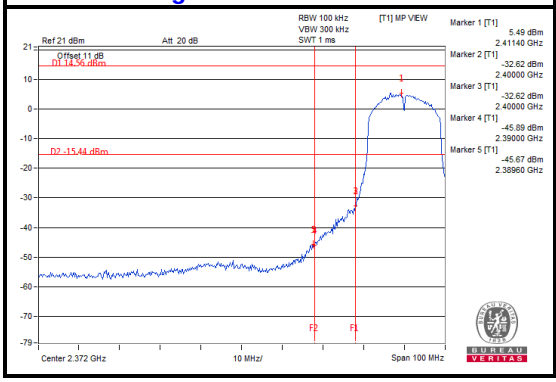


CH 11 Band edge

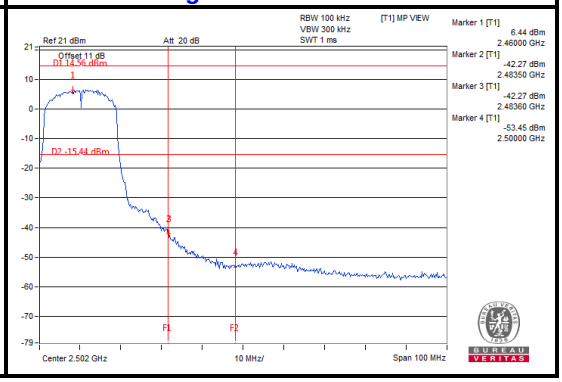


CHAIN 1

CH 1 Band edge

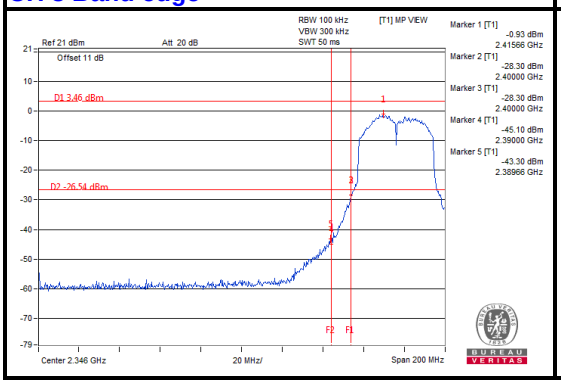
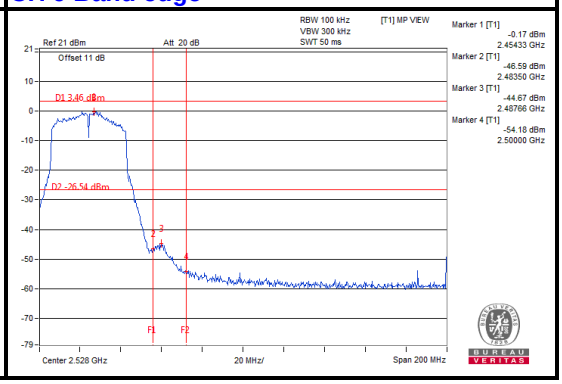


CH 11 Band edge

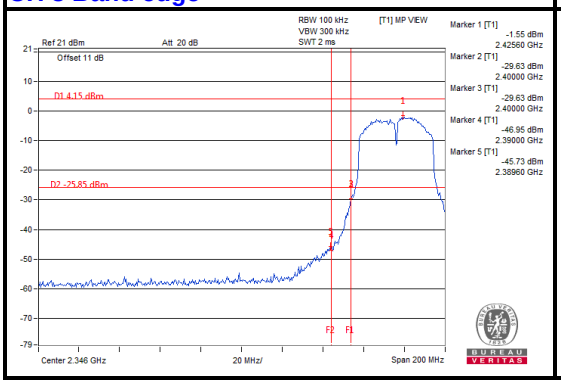
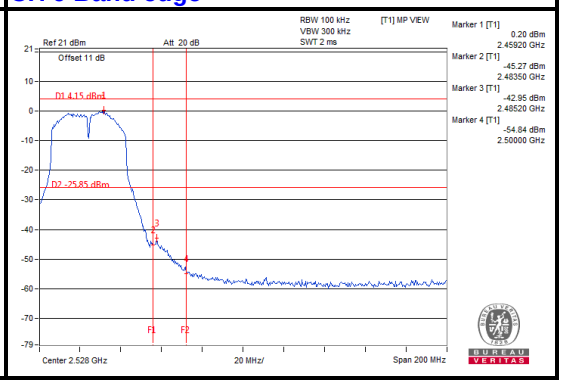


802.11n 40MHz

CHAIN 0

CH 3 Band edge	CH 9 Band edge
	

CHAIN 1

CH 3 Band edge	CH 9 Band edge
	

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

6 APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---