

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 Nano Router
Brand Name	TP-LINK
Model	TL-WR802N
Additional Model & Model Difference	N/A
Date of tests	Dec. 05, 2015 ~ Dec. 15, 2015

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 COMPLY with the test requirement

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Project Engineer/ EMC Department

Approved by Chris Chen
Assistant Manager / EMC Department




Date: Dec. 15, 2015

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**BUREAU
VERITAS**

Test Report No.: RF151105N013

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF151105N013	Original release	Dec. 15, 2015



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	2.66dB
Radiated emissions	9KHz ~ 30MHz	2.74dB
	30MHz ~ 1GMHz	3.55dB
	1GHz ~ 18GHz	4.84dB
	18GHz ~ 40GHz	4.84dB

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 Nano Router
MODEL NO.	TL-WR802N
FCC ID	TE7WR802NV2
NOMINAL VOLTAGE	AC 100-240V 50/60Hz
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	23.09dBm (Measured Average Power)
ANTENNA TYPE	Dipole Antenna; 1.5dBi gain
I/O PORTS	Refer to user's manual
CABLE SUPPLIED	USB cable: detachable, shielded, 0.8m

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.: 151105N013) for detailed product photo.
5. The EUT was powered by the following adapters:

ADAPTER	
BRAND:	HUNTKEY
MODEL:	HKA00605010-2B
INPUT:	AC 100-240V, 50/60Hz
OUTPUT:	DC 5V, 1.0A
CABLE:	Shielded, Detachable, 0.8m



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

NOTE: No need to concern of Conducted Emission due to the EUT is powered by battery.

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, 6, 11	CCK	DBPSK	1.0	X
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	X
802.11n HT20	1 to 11	1, 6, 11	OFDM	BPSK	6.5	X
802.11n HT40	3 to 9	3, 6, 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, 6, 11	OFDM	BPSK	6.5
802.11n HT40	3 to 9	3, 6, 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, 11	OFDM	BPSK	6.5
802.11n HT40	3 to 9	3, 9	OFDM	BPSK	13.5

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	TEST VOLTAGE	TESTED BY
RE<1G	26deg. C, 67%RH	AC 120V 60Hz	Sen He
RE≥1G	26deg. C, 67%RH	AC 120V 60Hz	Sen He
PLC	20deg. C, 56%RH	AC 120V 60Hz	Sen He
APCM	20deg. C, 55%RH	AC 120V 60Hz	Blue Zheng

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**
- 558074 D01 DTS Meas Guidance v03r03**
- 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	ESCI	100962	Mar. 05,15	Mar. 04,16
Artificial Mains Network	Rohde&Schwarz	ENV216	101173	April 25,15	Apr. 24,16
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	100317	April 25,15	Apr. 24,16
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.

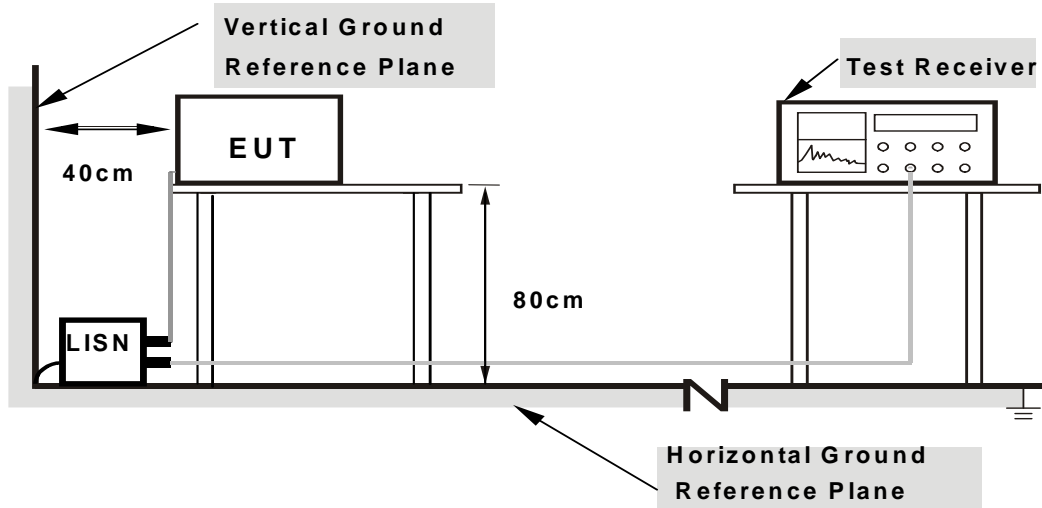
NOTE: All modes of operation were investigated and the worst-case emissions are reported.

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.



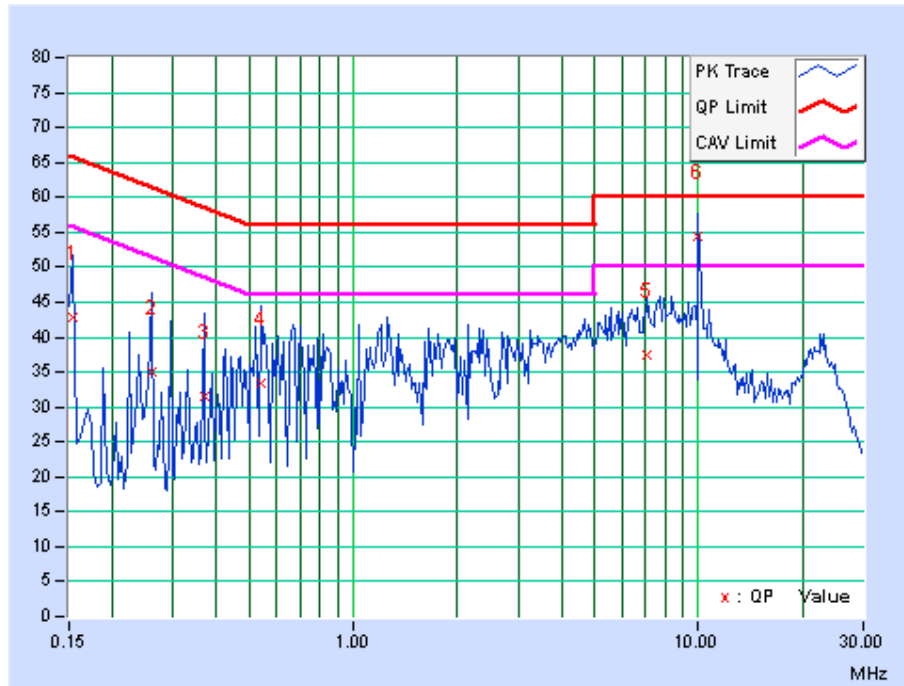
4.1.7 TEST RESULTS

CONDUCTED WORST-CASE DATA: WIFI link

PHASE	Line	6dB BANDWIDTH	9kHz
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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	0.15391	9.75	33.09	11.78	42.84	21.53	65.79	55.79	-22.95	-34.26
2	0.25938	9.72	25.43	7.60	35.15	17.32	61.45	51.45	-26.30	-34.13
3	0.36875	9.75	21.69	7.78	31.44	17.53	58.53	48.53	-27.09	-31.00
4	0.53672	9.78	23.49	11.86	33.27	21.64	56.00	46.00	-22.73	-24.36
5	7.08984	9.83	27.49	11.42	37.32	21.25	60.00	50.00	-22.68	-28.75
6	10.00000	9.83	44.55	25.67	54.38	35.50	60.00	50.00	-5.62	-14.50

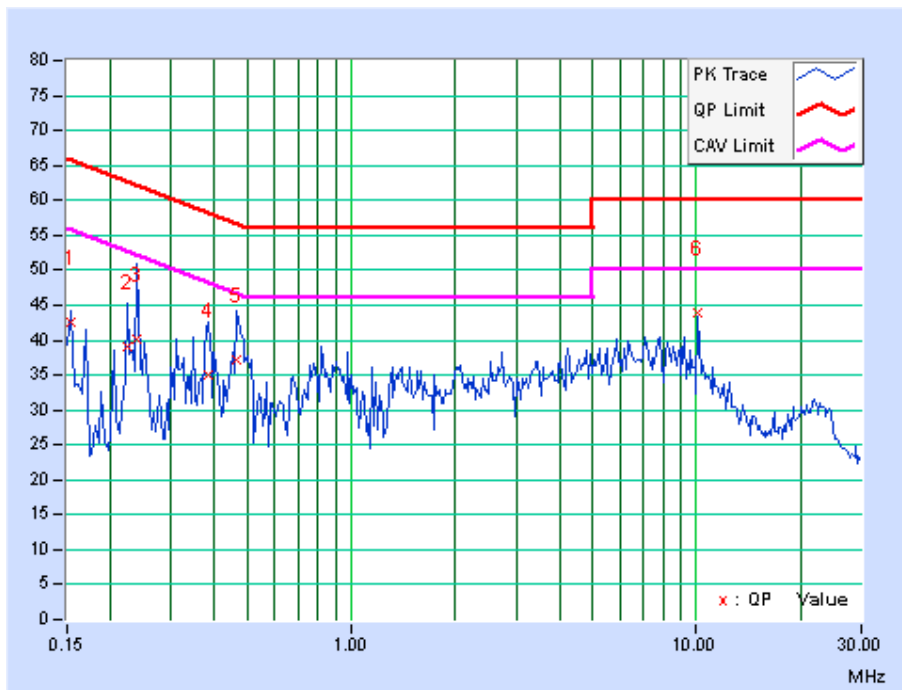
- REMARKS:**
1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
 2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
 3. The emission levels of other frequencies were very low against the limit.
 4. Margin value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



PHASE	Neutral	6dB BANDWIDTH	9kHz
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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	0.15391	9.47	32.99	14.85	42.46	24.32	65.79	55.79	-23.33	-31.47
2	0.22422	9.48	29.61	15.90	39.09	25.38	62.66	52.66	-23.57	-27.28
3	0.23984	9.48	30.58	18.42	40.06	27.90	62.10	52.10	-22.04	-24.20
4	0.38438	9.47	25.57	14.20	35.04	23.67	58.18	48.18	-23.14	-24.51
5	0.46641	9.47	27.63	19.89	37.10	29.36	56.58	46.58	-19.48	-17.22
6	10.00391	9.59	34.23	19.62	43.82	29.21	60.00	50.00	-16.18	-20.79

- 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. 27,15	Apr. 26,16
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV40	101094	Apr. 23,15	Apr. 22,16
Bilog Antenna	Teseq	CBL 6111D	30643	Jul. 16, 15	Jul. 15, 16
Horn Antenna	ETS-Lindgren	3117	00062558	May 30,14	May 29,16
GPS Generator+ Antenna	TOJOIN	GNSS-5000A	E1-010119	Aug. 08, 14	Aug. 07, 16
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	Apr. 19,14	Apr. 18,16
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
Horn Antenna (15GHz-40GHz)	SCHWARZBECK	BBHA 9170	BBHA9170147	Jan. 21,14	Jan. 20,17
Amplifier (9kHz-1GHz)	SONOMA	310D	186955	Mar. 04,15	Mar. 03, 16
Pre-Amplifier(1-18G)	HP	8449B	3008A00409	Apr. 25,15	Apr. 24,16
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	Sep. 01,15	Aug. 31,16

NOTE:

1. The test was performed in 966 Chamber.
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.
3. The horn antenna is used only for the measurement of emission frequency above 1GHz 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 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:

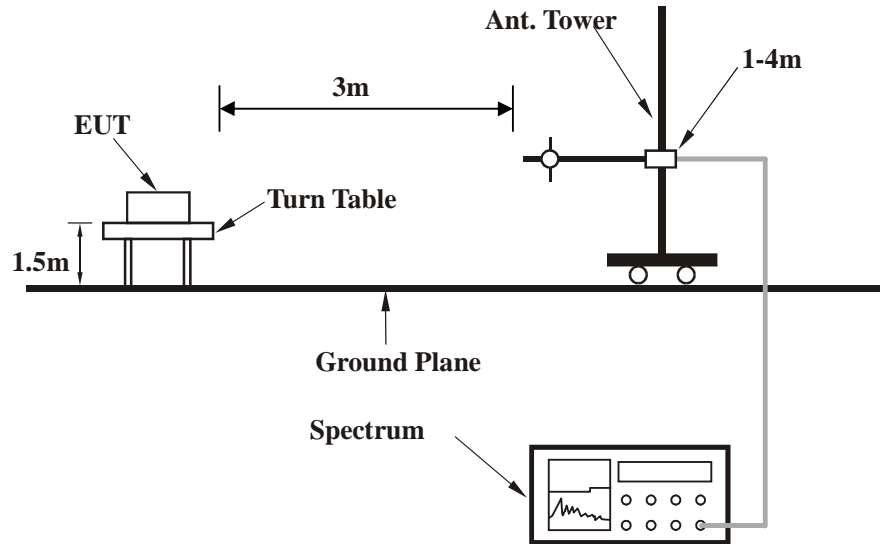
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz 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).

4.2.6 EUT OPERATING CONDITIONS

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



4.2.7 TEST RESULTS

BELOW 1GHz WORST-CASE DATA:

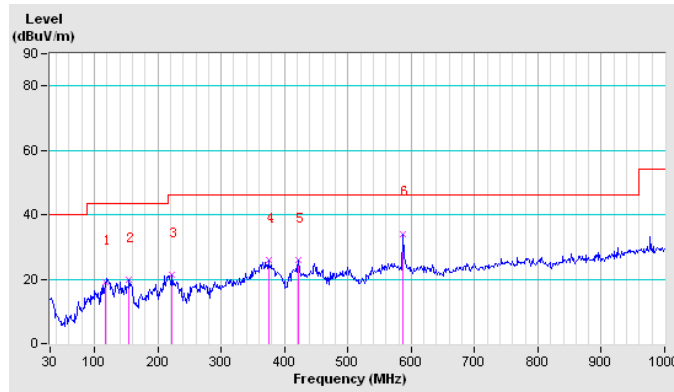
802.11g

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	117.16	19.10	43.50	-24.40	150	57	37.71	-18.61
2	155.12	19.93	43.50	-23.57	200	16	38.75	-18.82
3	222.59	21.34	46.00	-24.66	170	234	40.76	-19.42
4	374.42	26.05	46.00	-19.95	100	309	38.72	-12.67
5	422.22	25.89	46.00	-20.11	100	87	36.61	-10.72
6	586.70	34.11	46.00	-11.89	182	162	39.98	-5.87

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.



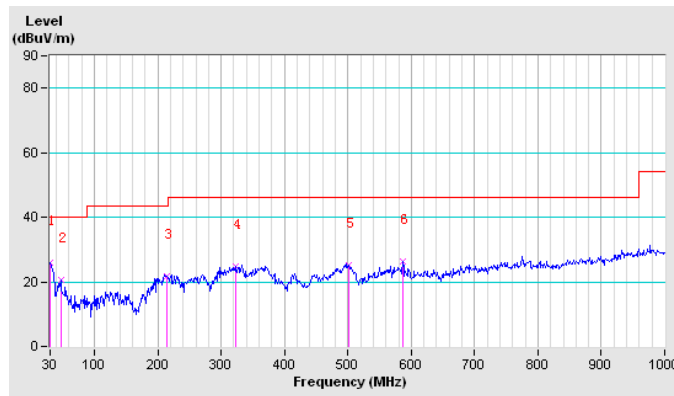


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 1GHz		

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	30.00	25.92	40.00	-14.08	100	357	38.27	-12.35
2	46.87	20.45	40.00	-19.55	100	55	41.26	-20.81
3	214.16	21.80	43.50	-21.70	100	233	41.74	-19.94
4	322.41	24.90	46.00	-21.10	100	126	39.21	-14.31
5	502.35	25.25	46.00	-20.75	100	300	33.56	-8.31
6	586.70	26.14	46.00	-19.86	100	251	32.01	-5.87

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.





ABOVE 1GHz DATA

802.11b

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	*2412.00	108.6 PK			1.02 H	24	71.18	37.45
2	*2412.00	104.8 AV			1.02 H	24	67.39	37.45
3	2390.00	58.9 PK	74.0	-15.1	1.42 H	12	21.55	37.38
4	2390.00	51.9 AV	54.0	-2.1	1.42 H	12	14.49	37.38
5	#2400.00	73.8 PK	78.6	-4.8	1.02 H	24	36.37	37.41
6	#2400.00	65.2 AV	74.8	-9.7	1.02 H	24	27.75	37.41
7	4824.00	60.1 PK	74.0	-13.9	2.04 H	33	17.26	42.85
8	4824.00	52.4 AV	54.0	-1.6	2.04 H	33	9.53	42.85
9	#7236.00	63.5 PK	78.6	-15.1	1.24 H	214	18.14	45.40
10	#7236.00	47.6 AV	74.8	-27.2	1.24 H	214	2.15	45.40

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	*2412.00	112.1 PK			1.52 V	247	74.65	37.45
2	*2412.00	107.9 AV			1.52 V	247	70.45	37.45
3	2390.00	60.0 PK	74.0	-14.0	1.45 V	25	22.60	37.38
4	2390.00	51.6 AV	54.0	-2.4	1.45 V	25	14.20	37.38
5	4824.00	61.2 PK	74.0	-12.8	1.53 V	215	18.38	42.85
6	4824.00	53.8 AV	54.0	-0.2	1.53 V	215	10.98	42.85
7	#7236.00	63.5 PK	82.1	-18.6	1.13 V	52	18.14	45.40
8	#7236.00	49.3 AV	77.9	-28.6	1.13 V	52	3.85	45.40

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 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	*2437.00	111.4 PK			1.57 H	28	73.90	37.53
2	*2437.00	107.8 AV			1.57 H	28	70.30	37.53
3	4874.00	63.5 PK	74.0	-10.5	1.01 H	212	55.04	8.50
4	4874.00	52.2 AV	54.0	-1.8	1.01 H	212	43.73	8.50
5	7311.00	65.2 PK	74.0	-8.8	1.69 H	57	53.55	11.62
6	7311.00	48.3 AV	54.0	-5.7	1.69 H	57	36.70	11.62

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	*2437.00	110.2 PK			1.02 V	215	72.70	37.53
2	*2437.00	106.4 AV			1.02 V	215	68.90	37.53
3	4874.00	64.3 PK	74.0	-9.7	1.45 V	187	21.40	42.92
4	4874.00	53.3 AV	54.0	-0.7	1.45 V	187	10.39	42.92
5	7311.00	66.2 PK	74.0	-7.8	1.45 V	87	20.83	45.38
6	7311.00	48.4 AV	54.0	-5.6	1.45 V	87	3.00	45.38

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)
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	*2462.00	110.9 PK			1.01 H	29	73.30	37.60
2	*2462.00	106.6 AV			1.01 H	29	69.00	37.60
3	2483.50	61.9 PK	74.0	-12.1	1.48 H	247	24.20	37.67
4	2483.50	53.3 AV	54.0	-0.7	1.48 H	247	15.60	37.67
5	4924.00	66.5 PK	74.0	-7.5	2.09 H	208	57.96	8.55
6	4924.00	53.2 AV	54.0	-0.8	2.09 H	208	44.64	8.55
7	7386.00	64.8 PK	74.0	-9.2	1.25 H	215	53.23	11.57
8	7386.00	47.2 AV	54.0	-6.8	1.25 H	215	35.63	11.57

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	111.1 PK			1.14 V	224	73.54	37.60
2	*2462.00	107.9 AV			1.14 V	224	70.31	37.60
3	2483.50	62.2 PK	74.0	-11.8	1.23 V	58	24.53	37.67
4	2483.50	53.4 AV	54.0	-0.6	1.23 V	58	15.73	37.67
5	4924.00	64.3 PK	74.0	-9.7	1.07 V	182	21.27	43.00
6	4924.00	53.2 AV	54.0	-0.8	1.07 V	182	10.17	43.00
7	7386.00	63.9 PK	74.0	-10.1	1.55 V	257	18.49	45.36
8	7386.00	47.7 AV	54.0	-6.3	1.55 V	257	2.33	45.36

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	*2412.00	111.8 PK			1.55 H	325	74.60	37.20
2	*2412.00	100.9 AV			1.55 H	325	63.70	37.20
3	2390.00	70.8 PK	74.0	-3.2	1.01 H	2	33.70	37.10
4	2390.00	53.3 AV	54.0	-0.7	1.01 H	2	16.20	37.10
5	4824.00	61.8 PK	74.0	-12.2	2.12 H	201	55.30	6.50
6	4824.00	47.9 AV	54.0	-6.1	2.12 H	201	41.40	6.50
7	#7236.00	64.5 PK	81.8	-17.3	1.05 H	46	53.70	10.80
8	#7236.00	41.1 AV	70.9	-29.8	1.05 H	46	30.30	10.80

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	*2412.00	106.1 PK			1.01 V	301	68.90	37.20
2	*2412.00	95.6 AV			1.01 V	301	58.40	37.20
3	2390.00	63.7 PK	74.0	-10.3	1.05 V	19	26.60	37.10
4	2390.00	49.5 AV	54.0	-4.5	1.05 V	19	12.40	37.10
5	4824.00	65.6 PK	74.0	-8.4	1.01 V	287	59.10	6.50
6	4824.00	50.5 AV	54.0	-3.5	1.01 V	287	44.00	6.50
7	#7236.00	66.2 PK	76.1	-9.9	1.04 V	213	55.40	10.80
8	#7236.00	42.3 AV	65.6	-23.3	1.04 V	213	31.50	10.80

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 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	*2437.00	113.2 PK			2.04 H	360	75.90	37.30
2	*2437.00	103.5 AV			2.04 H	360	66.20	37.30
3	2390.00	72.5 PK	74.0	-1.5	1.16 H	204	35.40	37.10
4	2390.00	45.0 AV	54.0	-9.0	1.16 H	204	7.90	37.10
5	2483.50	63.1 PK	74.0	-10.9	1.04 H	76	25.70	37.40
6	2483.50	43.0 AV	54.0	-11.0	1.04 H	76	5.60	37.40
7	4874.00	59.3 PK	74.0	-14.7	1.38 H	61	52.60	6.70
8	4874.00	48.8 AV	54.0	-5.2	1.38 H	61	42.10	6.70
9	7311.00	60.6 PK	74.0	-13.4	1.01 H	139	49.80	10.80
10	7311.00	41.5 AV	54.0	-12.5	1.01 H	139	30.70	10.80
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	*2437.00	110.7 PK			1.76 V	13	73.40	37.30
2	*2437.00	101.7 AV			1.76 V	13	64.40	37.30
3	2390.00	62.3 PK	74.0	-11.7	1.07 V	62	25.20	37.10
4	2390.00	42.4 AV	54.0	-11.6	1.07 V	62	5.30	37.10
5	2483.50	66.2 PK	74.0	-7.8	1.32 V	107	28.80	37.40
6	2483.50	42.2 AV	54.0	-11.8	1.32 V	107	4.80	37.40
7	4874.00	63.4 PK	74.0	-10.6	1.61 V	122	56.70	6.70
8	4874.00	49.6 AV	54.0	-4.4	1.61 V	122	42.90	6.70
9	7311.00	65.5 PK	74.0	-8.5	1.03 V	52	54.70	10.80
10	7311.00	41.7 AV	54.0	-12.3	1.03 V	52	30.90	10.80

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)
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	*2462.00	109.7 PK			1.45 H	357	72.30	37.40
2	*2462.00	99.2 AV			1.45 H	357	61.80	37.40
3	2483.50	73.5 PK	74.0	-0.5	1.24 H	61	36.10	37.40
4	2483.50	49.6 AV	54.0	-4.4	1.24 H	61	12.20	37.40
5	4924.00	59.6 PK	74.0	-14.4	1.00 H	21	52.70	6.90
6	4924.00	42.7 AV	54.0	-11.3	1.00 H	21	35.80	6.90
7	7386.00	60.2 PK	74.0	-13.8	1.02 H	227	49.40	10.80
8	7386.00	41.1 AV	54.0	-12.9	1.02 H	227	30.30	10.80
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	108.4 PK			1.66 V	128	71.00	37.40
2	*2462.00	97.9 AV			1.66 V	128	60.50	37.40
3	2483.50	66.0 PK	74.0	-8.0	1.46 V	81	28.60	37.40
4	2483.50	45.9 AV	54.0	-8.1	1.46 V	81	8.50	37.40
5	4924.00	58.4 PK	74.0	-15.6	1.03 V	312	51.50	6.90
6	4924.00	43.5 AV	54.0	-10.5	1.03 V	312	36.60	6.90
7	7386.00	63.3 PK	74.0	-10.7	1.01 V	177	52.50	10.80
8	7386.00	40.8 AV	54.0	-13.2	1.01 V	177	30.00	10.80

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)
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	*2412.00	106.9 PK			1.05 H	207	69.70	37.20
2	*2412.00	95.5 AV			1.05 H	207	58.30	37.20
3	2390.00	66.7 PK	74.0	-7.3	1.36 H	334	29.60	37.10
4	2390.00	53.4 AV	54.0	-0.6	1.36 H	334	16.30	37.10
5	4824.00	59.8 PK	74.0	-14.2	1.02 H	31	53.30	6.50
6	4824.00	45.2 AV	54.0	-8.8	1.02 H	31	38.70	6.50
7	#7236.00	53.6 PK	76.9	-23.3	1.15 H	216	42.80	10.80
8	#7236.00	40.7 AV	65.5	-24.8	1.15 H	216	29.90	10.80

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	*2412.00	107.5 PK			1.31 V	45	70.30	37.20
2	*2412.00	98.9 AV			1.31 V	45	61.70	37.20
3	2390.00	67.4 PK	74.0	-6.6	1.84 V	283	30.30	37.10
4	2390.00	53.2 AV	54.0	-0.8	1.84 V	283	16.10	37.10
5	4824.00	58.9 PK	74.0	-15.1	1.51 V	166	52.40	6.50
6	4824.00	44.7 AV	54.0	-9.3	1.51 V	166	38.20	6.50
7	#7236.00	54.2 PK	77.5	-23.3	1.00 V	287	43.40	10.80
8	#7236.00	41.6 AV	68.9	-27.3	1.00 V	287	30.80	10.80

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 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	*2437.00	110.1 PK			1.16 H	302	72.80	37.30
2	*2437.00	100.7 AV			1.16 H	302	63.40	37.30
3	2390.00	72.8 PK	74.0	-1.2	1.04 H	212	35.70	37.10
4	2390.00	44.7 AV	54.0	-9.3	1.04 H	212	7.60	37.10
5	2483.50	72.5 PK	74.0	-1.5	1.11 H	200	35.10	37.40
6	2483.50	42.3 AV	54.0	-11.7	1.11 H	200	4.90	37.40
7	4874.00	66.7 PK	74.0	-7.3	1.22 H	303	60.00	6.70
8	4874.00	51.1 AV	54.0	-2.9	1.22 H	303	44.40	6.70
9	7311.00	56.8 PK	74.0	-17.2	1.00 H	74	46.00	10.80
10	7311.00	41.4 AV	54.0	-12.6	1.00 H	74	30.60	10.80

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	*2437.00	108.1 PK			1.74 V	215	70.80	37.30
2	*2437.00	97.4 AV			1.74 V	215	60.10	37.30
3	2390.00	56.7 PK	74.0	-17.3	1.04 V	328	19.60	37.10
4	2390.00	44.3 AV	54.0	-9.7	1.04 V	328	7.20	37.10
5	2483.50	62.7 PK	74.0	-11.3	1.55 V	21	25.30	37.40
6	2483.50	46.5 AV	54.0	-7.5	1.55 V	21	9.10	37.40
7	4874.00	64.2 PK	74.0	-9.8	1.10 V	105	57.50	6.70
8	4874.00	50.8 AV	54.0	-3.2	1.10 V	105	44.10	6.70
9	7311.00	57.2 PK	74.0	-16.8	1.02 V	316	46.40	10.80
10	7311.00	41.9 AV	54.0	-12.1	1.02 V	316	31.10	10.80

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)
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	*2462.00	107.0 PK			1.99 H	314	69.60	37.40
2	*2462.00	97.1 AV			1.99 H	314	59.70	37.40
3	2483.50	66.8 PK	74.0	-7.2	1.02 H	44	29.40	37.40
4	2483.50	52.7 AV	54.0	-1.3	1.02 H	44	15.30	37.40
5	4924.00	52.6 PK	74.0	-21.4	1.06 H	193	45.70	6.90
6	4924.00	47.9 AV	54.0	-6.1	1.06 H	193	41.00	6.90
7	7386.00	54.6 PK	74.0	-19.4	1.01 H	200	43.80	10.80
8	7386.00	41.5 AV	54.0	-12.5	1.01 H	200	30.70	10.80

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	111.0 PK			1.13 V	63	73.60	37.40
2	*2462.00	100.2 AV			1.13 V	63	62.80	37.40
3	2483.50	71.0 PK	74.0	-3.0	1.42 V	218	33.60	37.40
4	2483.50	53.6 AV	54.0	-0.4	1.42 V	218	16.20	37.40
5	4924.00	60.3 PK	74.0	-13.7	1.62 V	210	53.40	6.90
6	4924.00	45.2 AV	54.0	-8.8	1.62 V	210	38.30	6.90
7	7386.00	54.8 PK	74.0	-19.2	1.00 V	255	44.00	10.80
8	7386.00	41.7 AV	54.0	-12.3	1.00 V	255	30.90	10.80

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)
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	*2422.00	104.8 PK			1.07 H	341	67.60	37.20
2	*2422.00	93.0 AV			1.07 H	341	55.80	37.20
3	2390.00	65.9 PK	74.0	-8.1	1.12 H	355	28.80	37.10
4	2390.00	53.6 AV	54.0	-0.4	1.12 H	355	16.50	37.10
5	4844.00	57.2 PK	74.0	-16.8	1.04 H	75	50.50	6.70
6	4844.00	39.8 AV	54.0	-14.2	1.04 H	75	33.10	6.70
7	7266.00	54.7 PK	74.0	-19.3	1.20 H	217	43.90	10.80
8	7266.00	41.3 AV	54.0	-12.7	1.20 H	217	30.50	10.80

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	*2422.00	103.7 PK			1.61 V	174	66.50	37.20
2	*2422.00	93.9 AV			1.61 V	174	56.70	37.20
3	2390.00	65.0 PK	74.0	-9.0	1.02 V	162	27.90	37.10
4	2390.00	53.3 AV	54.0	-0.7	1.02 V	162	16.20	37.10
5	4844.00	56.6 PK	74.0	-17.4	1.02 V	215	49.90	6.70
6	4844.00	39.6 AV	54.0	-14.4	1.02 V	215	32.90	6.70
7	7266.00	54.1 PK	74.0	-19.9	1.10 V	44	43.30	10.80
8	7266.00	40.7 AV	54.0	-13.3	1.10 V	44	29.90	10.80

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	*2437.00	111.9 PK			1.85 H	137	74.60	37.30
2	*2437.00	103.1 AV			1.85 H	137	65.80	37.30
3	2390.00	61.9 PK	74.0	-12.1	1.05 H	52	24.80	37.10
4	2390.00	47.7 AV	54.0	-6.3	1.05 H	52	10.60	37.10
5	2483.50	66.3 PK	74.0	-7.7	1.01 H	217	28.90	37.40
6	2483.50	53.5 AV	54.0	-0.5	1.01 H	217	16.10	37.40
7	4874.00	57.1 PK	74.0	-16.9	1.16 H	275	50.40	6.70
8	4874.00	43.3 AV	54.0	-10.7	1.16 H	275	36.60	6.70
9	7311.00	55.2 PK	74.0	-18.8	1.02 H	88	44.40	10.80
10	7311.00	41.6 AV	54.0	-12.4	1.02 H	88	30.80	10.80

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	*2437.00	108.6 PK			1.46 V	81	71.30	37.30
2	*2437.00	99.9 AV			1.46 V	81	62.60	37.30
3	2390.00	59.2 PK	74.0	-14.8	1.05 V	209	22.10	37.10
4	2390.00	45.8 AV	54.0	-8.2	1.05 V	209	8.70	37.10
5	2483.50	62.6 PK	74.0	-11.4	1.22 V	167	25.20	37.40
6	2483.50	51.3 AV	54.0	-2.7	1.22 V	167	13.90	37.40
7	4874.00	56.7 PK	74.0	-17.3	1.01 V	52	50.00	6.70
8	4874.00	42.1 AV	54.0	-11.9	1.01 V	52	35.40	6.70
9	7311.00	54.6 PK	74.0	-19.4	1.01 V	92	43.80	10.80
10	7311.00	40.8 AV	54.0	-13.2	1.01 V	92	30.00	10.80

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)
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	*2452.00	106.2 PK			1.52 H	57	68.90	37.30
2	*2452.00	95.0 AV			1.52 H	57	57.70	37.30
3	2483.50	64.6 PK	74.0	-9.4	1.83 H	163	27.20	37.40
4	2483.50	53.5 AV	54.0	-0.5	1.83 H	163	16.10	37.40
5	4904.00	57.9 PK	74.0	-16.1	1.00 H	54	51.00	6.90
6	4904.00	39.7 AV	54.0	-14.3	1.00 H	54	32.80	6.90
7	7356.00	55.2 PK	74.0	-18.8	1.02 H	139	44.40	10.80
8	7356.00	41.7 AV	54.0	-12.3	1.02 H	139	30.90	10.80
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	102.5 PK			1.28 V	312	65.20	37.30
2	*2452.00	94.0 AV			1.28 V	312	56.70	37.30
3	2483.50	63.7 PK	74.0	-10.3	1.06 V	91	26.30	37.40
4	2483.50	52.3 AV	54.0	-1.7	1.06 V	91	14.90	37.40
5	4904.00	56.8 PK	74.0	-17.2	1.08 V	190	49.90	6.90
6	4904.00	40.1 AV	54.0	-13.9	1.08 V	190	33.20	6.90
7	7356.00	54.7 PK	74.0	-19.3	1.00 V	352	43.90	10.80
8	7356.00	40.9 AV	54.0	-13.1	1.00 V	352	30.10	10.80

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	Feb. 18,15	Feb. 17,16
Power Sensor	Keysight	U2021XA	MY55060018	Feb. 18,15	Feb. 17,16
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 12, 15	Oct.11, 16
Humid & Temp Programmable Tester	Haida	HD-2257	110807201	Sep.07,15	Sep. 06,16
Oscilloscope	Agilent	DSO9254A	MY51260160	Nov. 28,15	Nov. 27,16
Signal Analyzer	Rohde & Schwarz	FSV7	102331	Nov. 05,15	Nov. 04,16
Signal Generator	Agilent	N5183A	MY50140980	Nov. 05,15	Nov. 04,16
ESG Vector Signal Generator	Agilent	E4438C	MY49072505	Apr. 22, 15	Apr. 21, 16
BLUETOOTH TESTER	Rohde&Schwarz	CBT32	100811	Sep. 01,15	Aug. 31,16

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

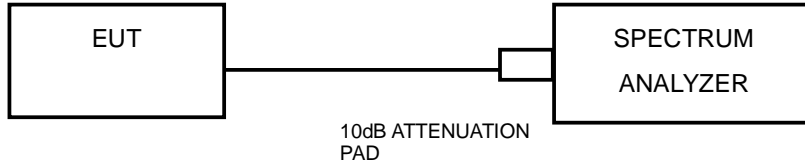
1. Set resolution bandwidth (RBW) = 100KHz
2. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
3. Trace mode = max hold.
4. Sweep = auto couple.
5. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that 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	9.59	9.58	0.5	PASS
6	2437	10.11	10.08	0.5	PASS
11	2462	10.06	10.04	0.5	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	15.10	15.12	0.5	PASS
6	2437	14.47	15.13	0.5	PASS
11	2462	15.10	15.13	0.5	PASS



802.11n 20MHz

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	15.14	15.15	0.5	PASS
6	2437	15.17	15.14	0.5	PASS
11	2462	15.13	15.11	0.5	PASS

802.11n 40MHz

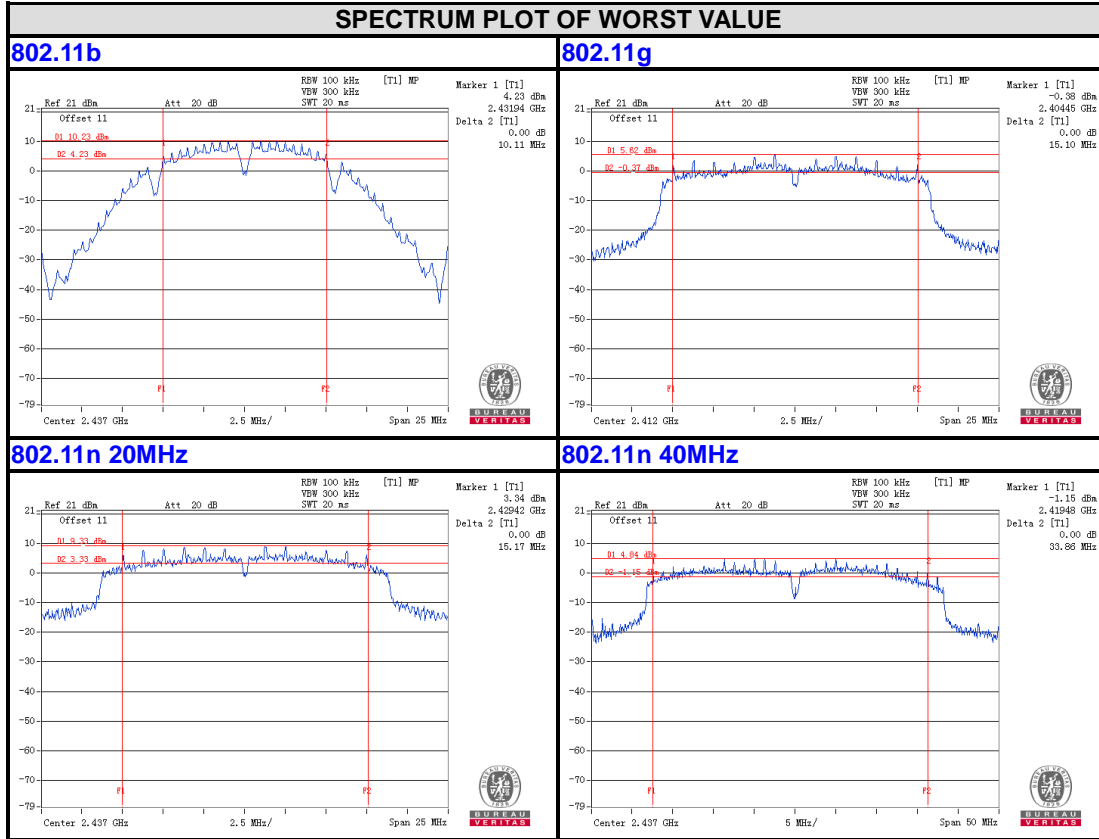
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
3	2422	32.00	32.66	0.5	PASS
6	2437	33.86	32.70	0.5	PASS
9	2452	33.82	32.68	0.5	PASS



BUREAU VERITAS

Test Report No.: RF151105N013

CHAIN 0

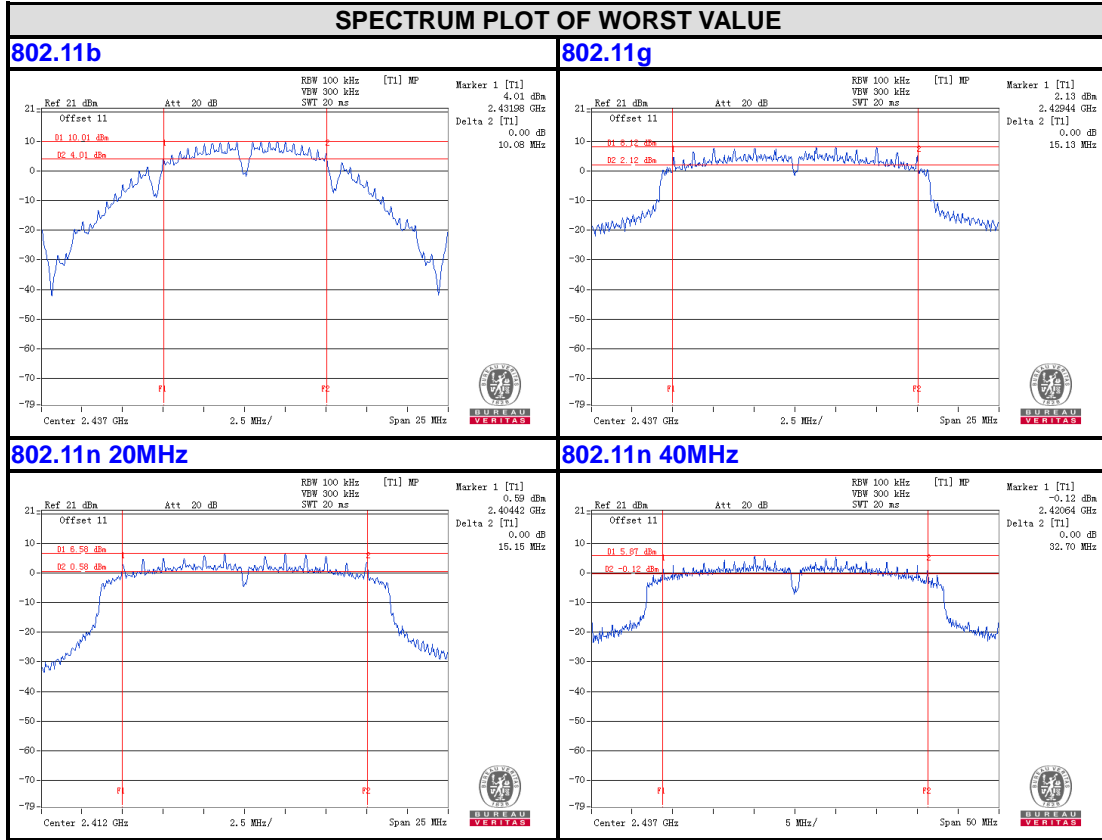




BUREAU VERITAS

Test Report No.: RF151105N013

CHAIN 1



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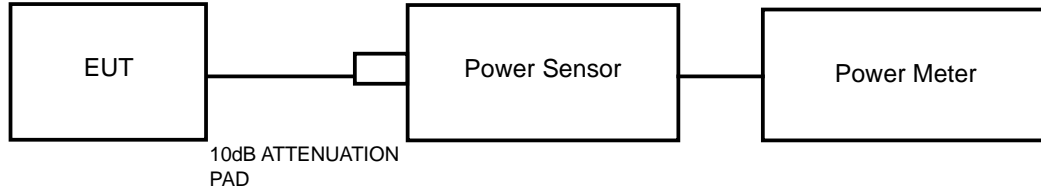


4.4 CONDUCTED OUTPUT POWER

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	Feb. 18,15	Feb. 17,16
Power Sensor	Keysight	U2021XA	MY55060018	Feb. 18,15	Feb. 17,16
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 12, 15	Oct.11, 16
Humid & Temp Programmable Tester	Haida	HD-2257	110807201	Sep.07,15	Sep. 06,16
Oscilloscope	Agilent	DSO9254A	MY51260160	Nov. 28,15	Nov. 27,16
Signal Analyzer	Rohde & Schwarz	FSV7	102331	Nov. 05,15	Nov. 04,16
Signal Generator	Agilent	N5183A	MY50140980	Nov. 05,15	Nov. 04,16
ESG Vector Signal Generator	Agilent	E4438C	MY49072505	Apr. 22, 15	Apr. 21, 16
BLUETOOTH TESTER	Rohde&Schwarz	CBT32	100811	Sep. 01,15	Aug. 31,16

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	19.84	20.16	96.383	103.753	200.136	23.01	30	PASS
6	2437	19.82	20.14	95.940	103.276	199.216	22.99	30	PASS
11	2462	19.31	19.51	85.310	89.331	174.641	22.42	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	17.05	17.33	50.699	54.075	104.774	20.20	30	PASS
6	2437	19.89	20.14	97.499	103.276	200.775	23.03	30	PASS
11	2462	17.45	17.75	55.590	59.566	115.156	20.61	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	17.43	17.61	55.335	57.677	113.012	20.53	30	PASS
6	2437	19.96	20.19	99.083	104.472	203.555	23.09	30	PASS
11	2462	17.44	17.54	55.463	56.754	112.217	20.50	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	14.06	14.22	25.468	26.424	51.892	17.15	30	PASS
6	2437	18.37	18.49	68.707	70.632	139.339	21.44	30	PASS
9	2452	14.17	13.99	26.122	25.061	51.183	17.09	30	PASS

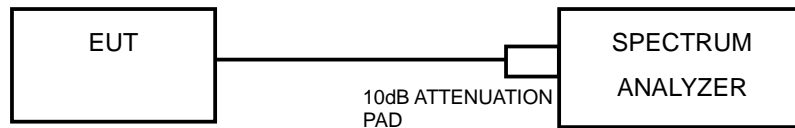


4.5 POWER SPECTRAL DENSITY MEASUREMENT

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 $\geq 3 \times$ RBW.
- e) Detector = peak
- f) Ensure that the number of measurement points in the sweep $\geq 2 \times$ 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	-9.34	3.01	-6.33	8	PASS
	6	2437	-8.66	3.01	-5.65	8	PASS
	11	2462	-10.88	3.01	-7.87	8	PASS
1	1	2412	-9.24	3.01	-6.23	8	PASS
	6	2437	-9.34	3.01	-6.33	8	PASS
	11	2462	-10.06	3.01	-7.05	8	PASS

Note:

- 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.
- Directional gain = 1.5dBi+10log(2)=4.51,so the power density limit no need to reduce.

802.11g

TX chain	Channel	Freq. (MHz)	PSD (dBm)	10 log (N=2) dB	TOTAL PSD (dBm)	Limit (dBm)	PASS /FAIL
0	1	2412	-14.40	3.01	-11.39	8	PASS
	6	2437	-10.53	3.01	-7.52	8	PASS
	11	2462	-13.80	3.01	-10.79	8	PASS
1	1	2412	-13.55	3.01	-10.54	8	PASS
	6	2437	-11.65	3.01	-8.64	8	PASS
	11	2462	-13.74	3.01	-10.73	8	PASS

Note:

- 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.
- Directional gain = 1.5dBi+10log(2)=4.51,so the power density limit no need to reduce.



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	-12.50	3.01	-9.49	8	PASS
	6	2437	-11.36	3.01	-8.35	8	PASS
	11	2462	-13.58	3.01	-10.57	8	PASS
1	1	2412	-14.02	3.01	-11.01	8	PASS
	6	2437	-10.02	3.01	-7.01	8	PASS
	11	2462	-13.68	3.01	-10.67	8	PASS

Note:

- 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.
- Directional gain = 1.5dBi+10log(2)=4.51,so the power density limit no need to reduce.

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	-18.91	3.01	-15.90	8	PASS
	6	2437	-14.92	3.01	-11.91	8	PASS
	9	2452	-19.45	3.01	-16.44	8	PASS
1	3	2422	-20.07	3.01	-17.06	8	PASS
	6	2437	-14.69	3.01	-11.68	8	PASS
	9	2452	-19.86	3.01	-16.85	8	PASS

Note:

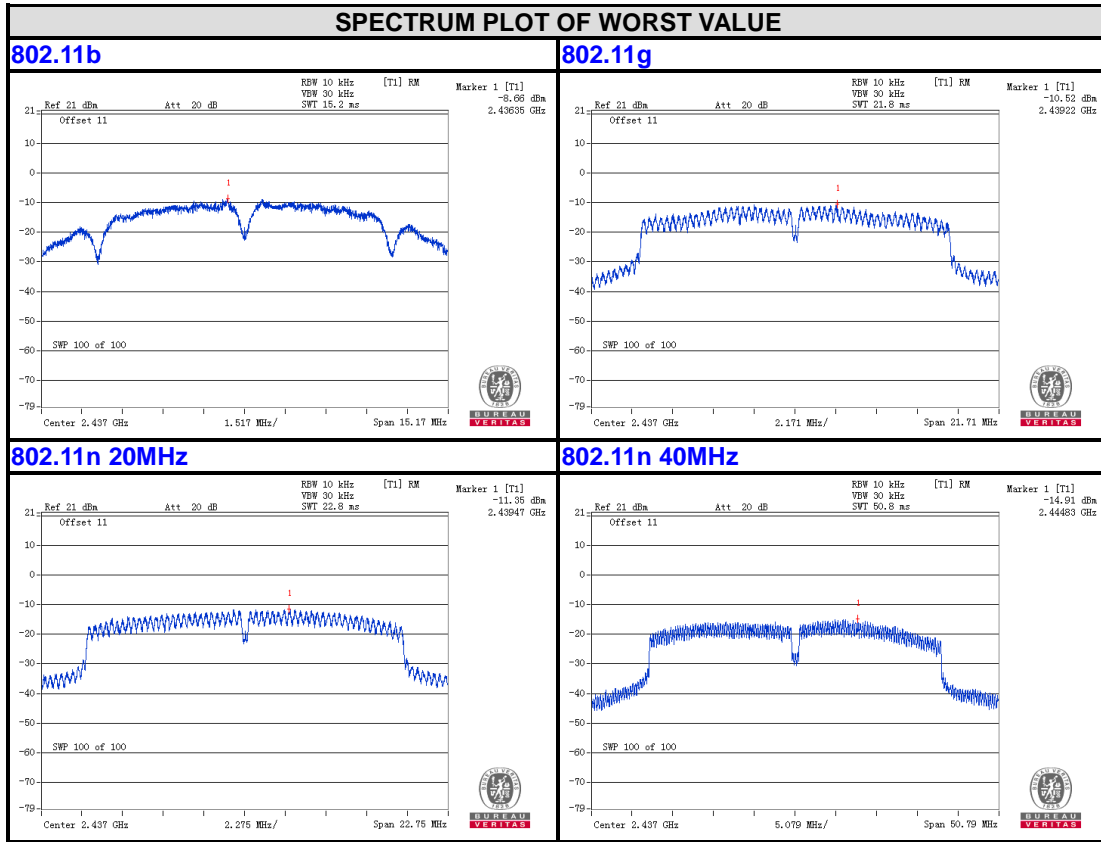
- Method 1 of power density measurement of KDB 662911 is using for calculating total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = 1.5dBi+10log(2)=4.51,so the power density limit no need to reduce.



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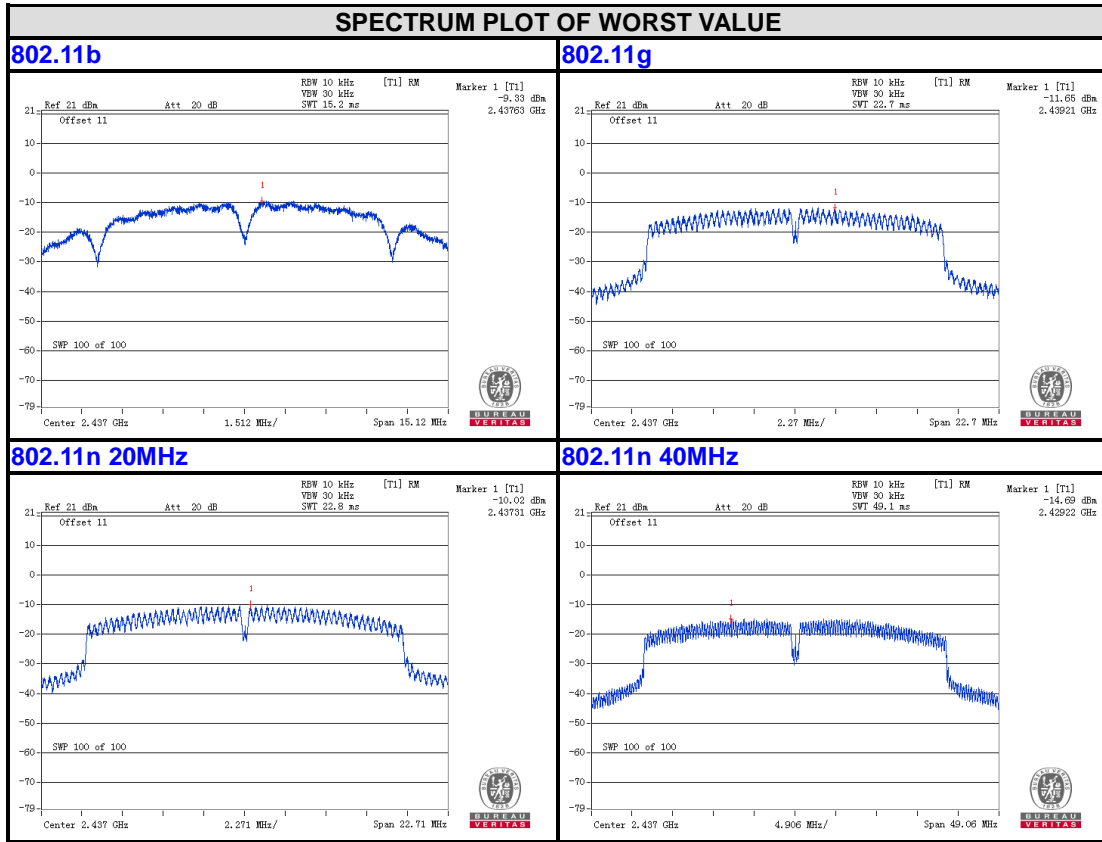
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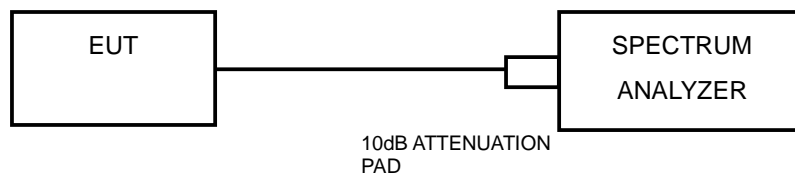


4.6 OUT OF BAND EMISSION MEASUREMENT

4.6.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

Below -20dB 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 \geq 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 \geq 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



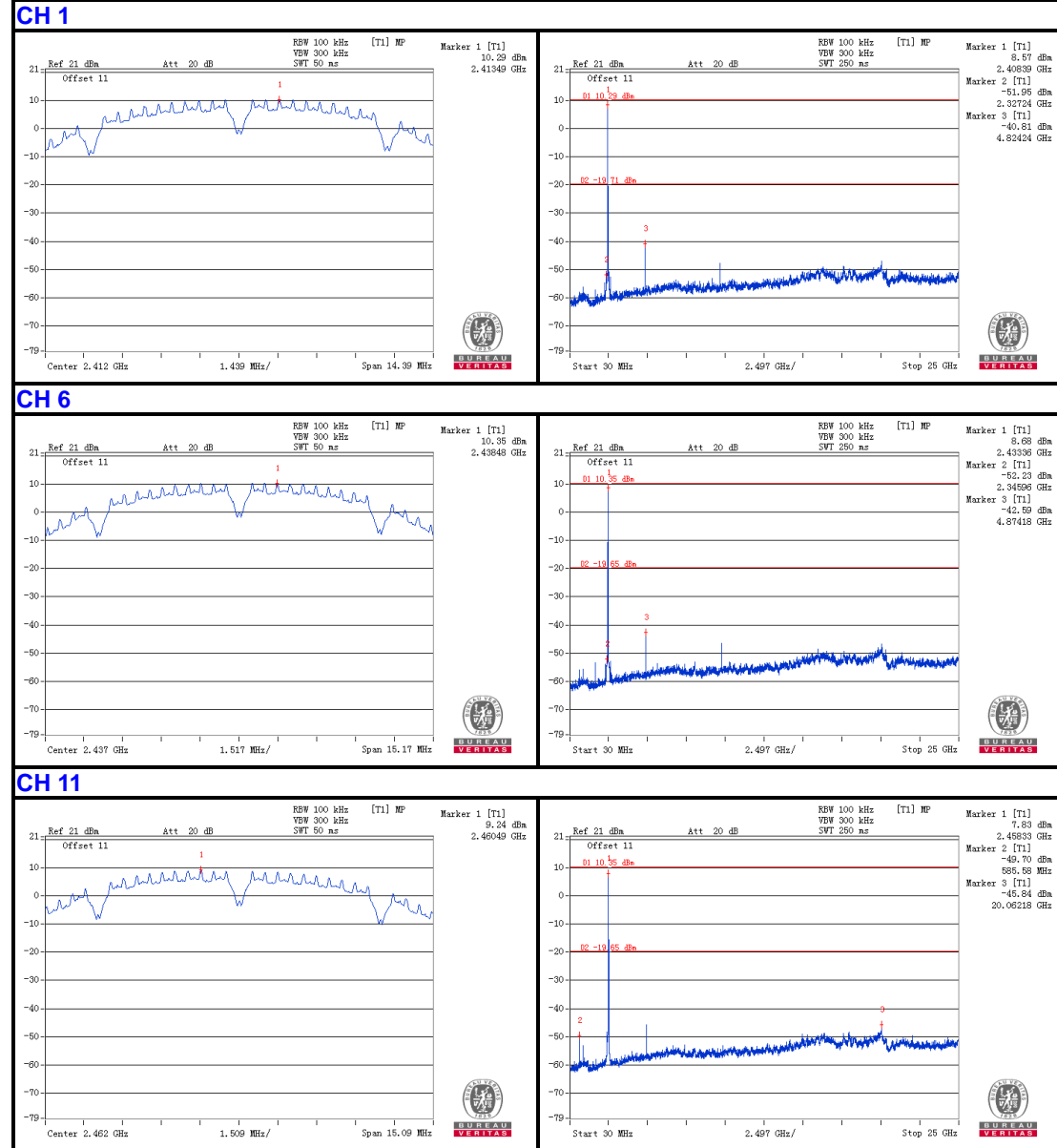
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4.6.7 TEST RESULTS

802.11b

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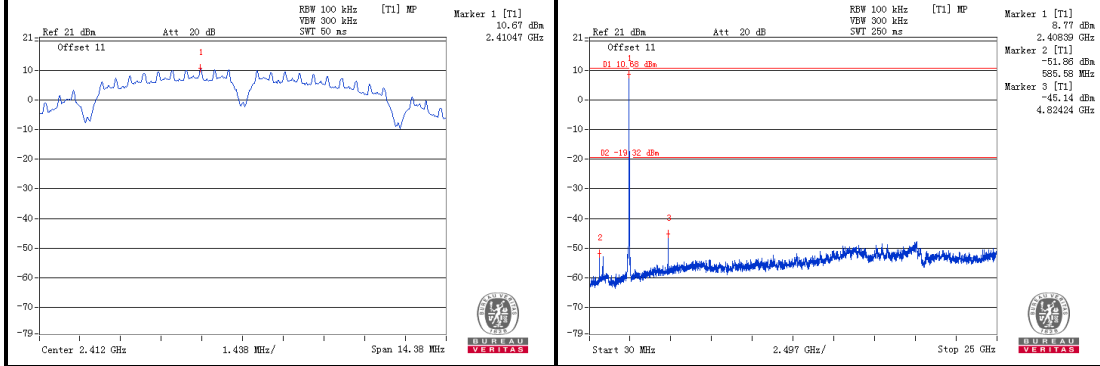


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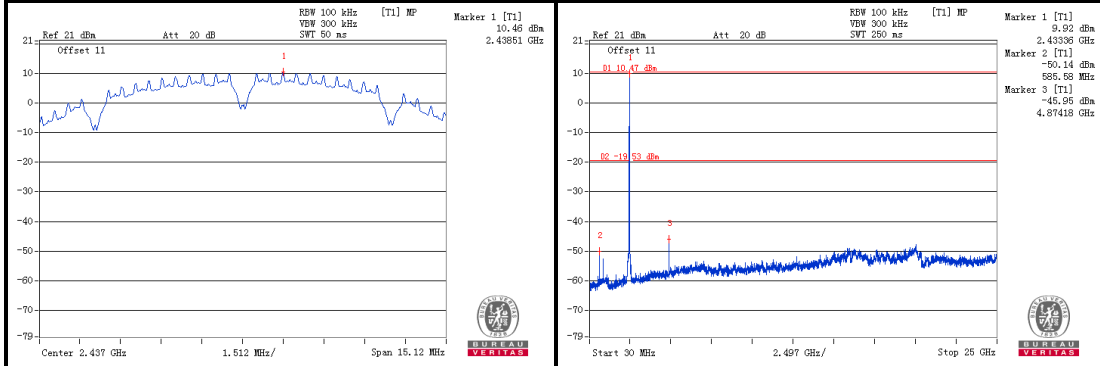
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CHAIN 1

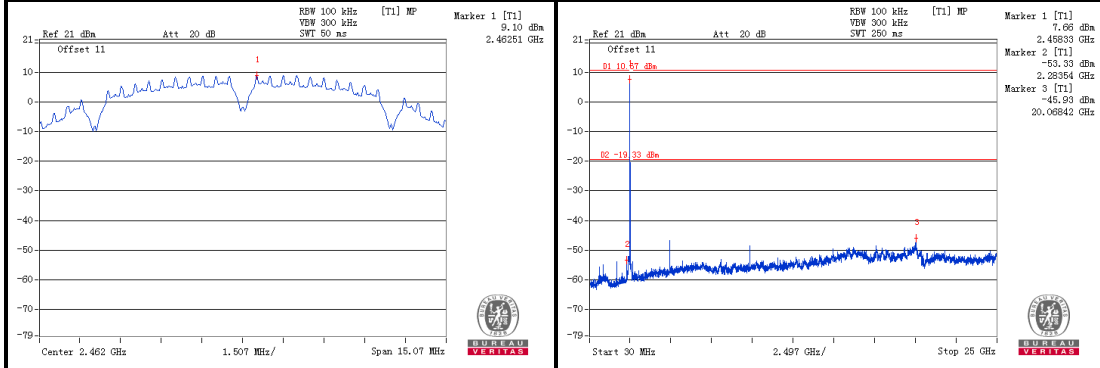
CH 1



CH 6



CH 11



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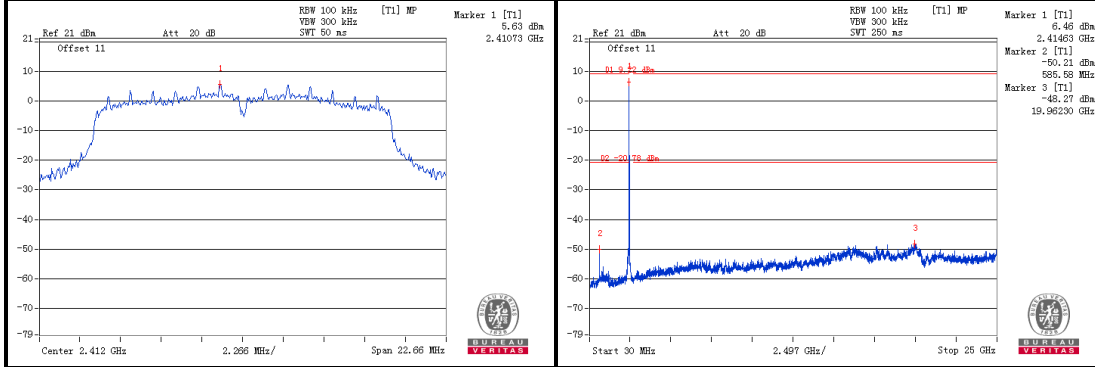
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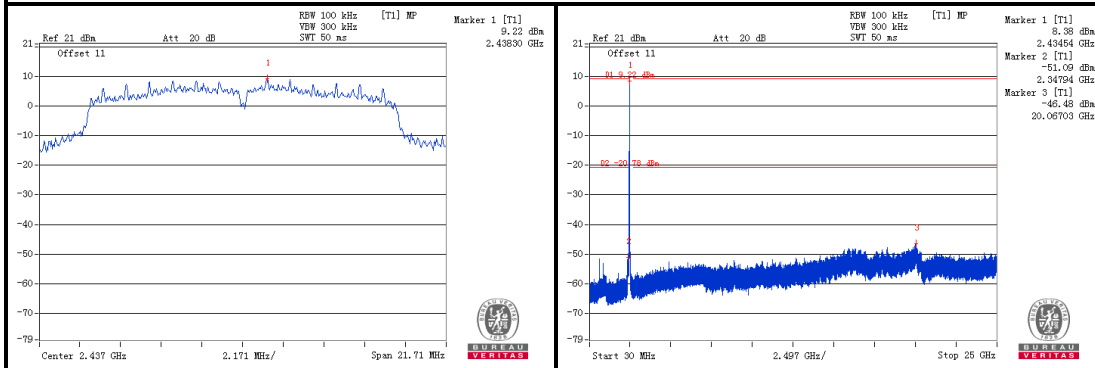
802.11g

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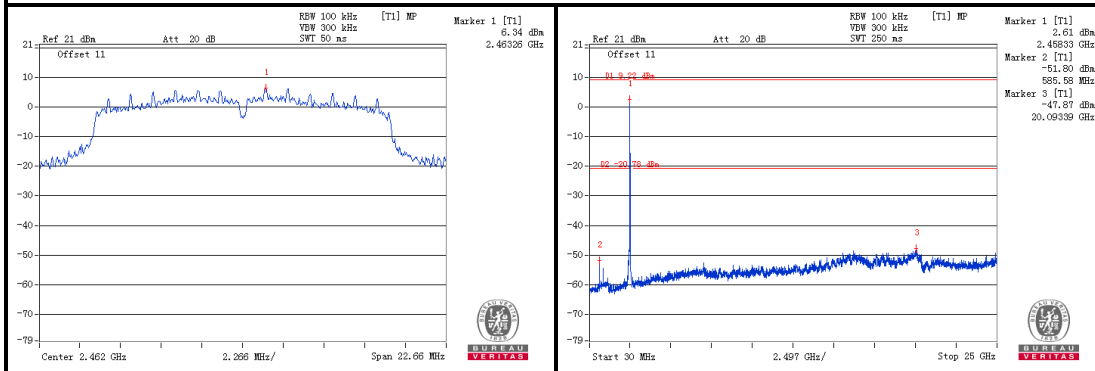
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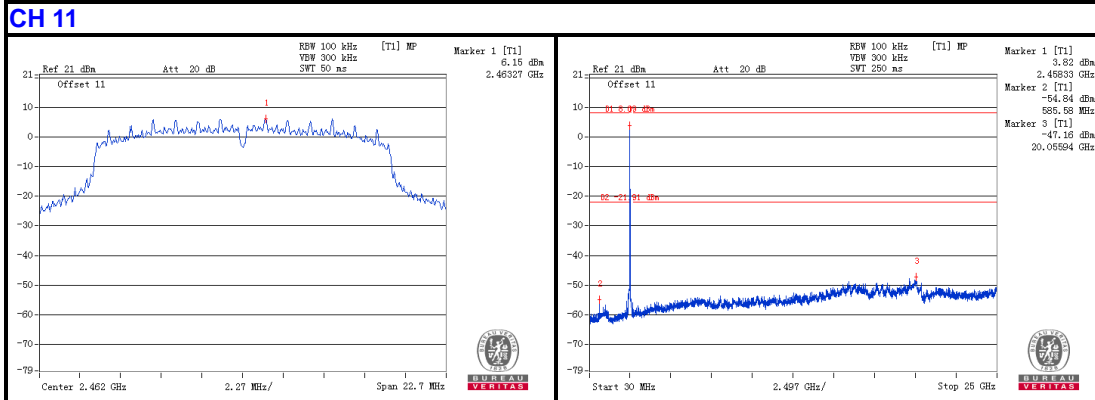
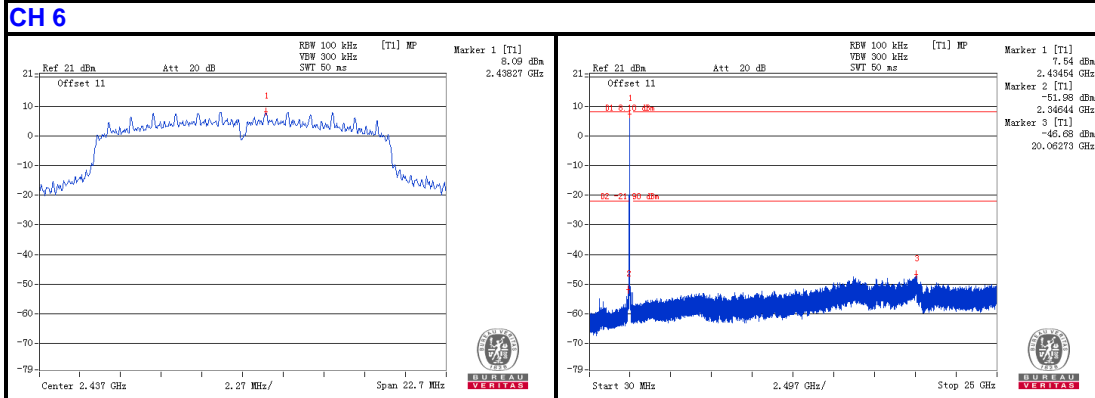
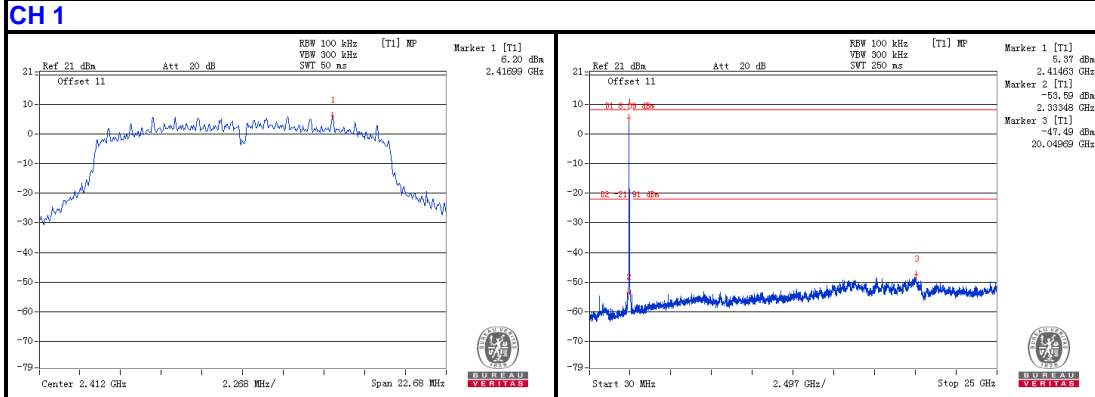
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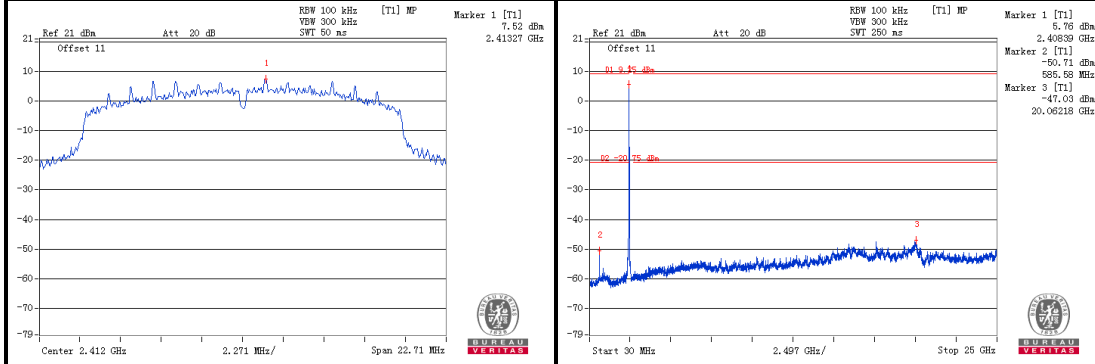
BUREAU VERITAS

Test Report No.: RF151105N013

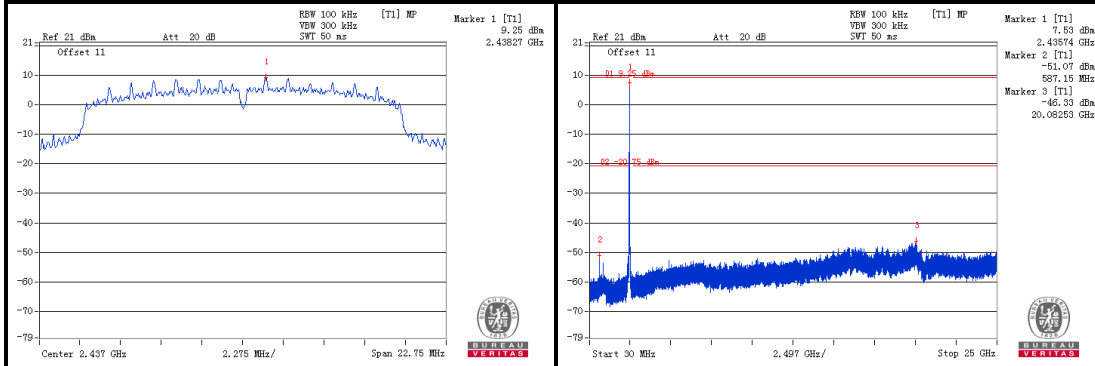
802.11n 20MHz

CHAIN 0

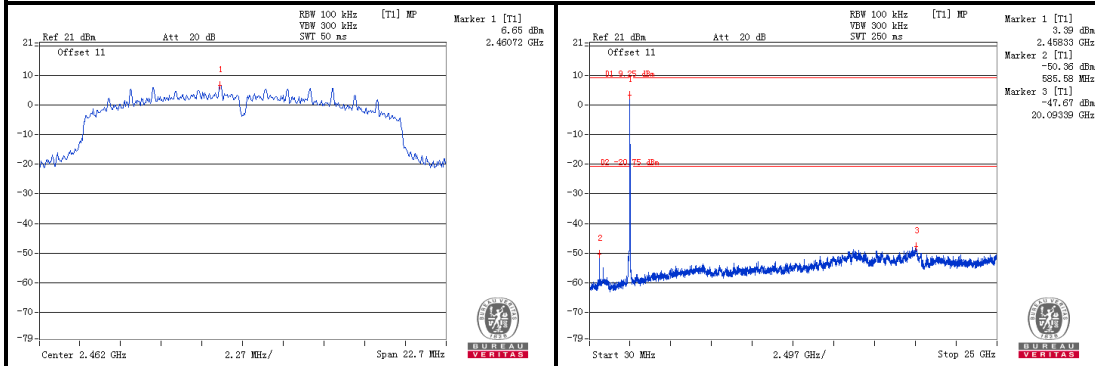
CH 1



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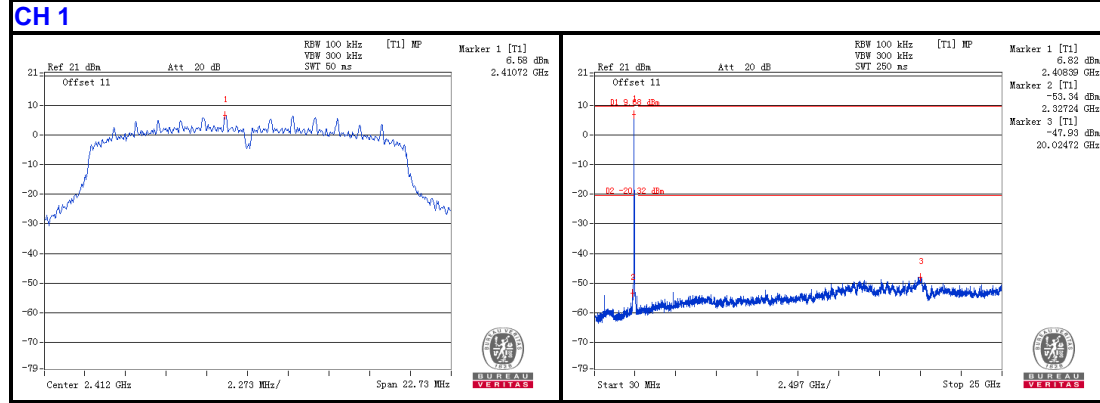
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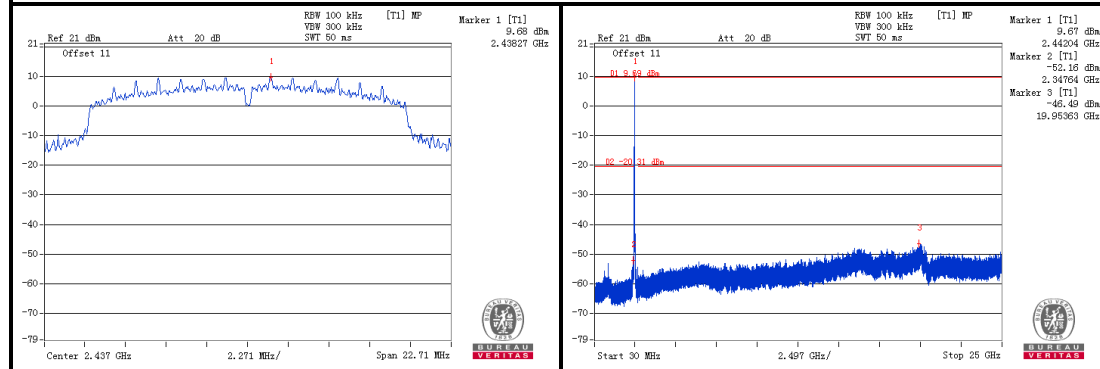
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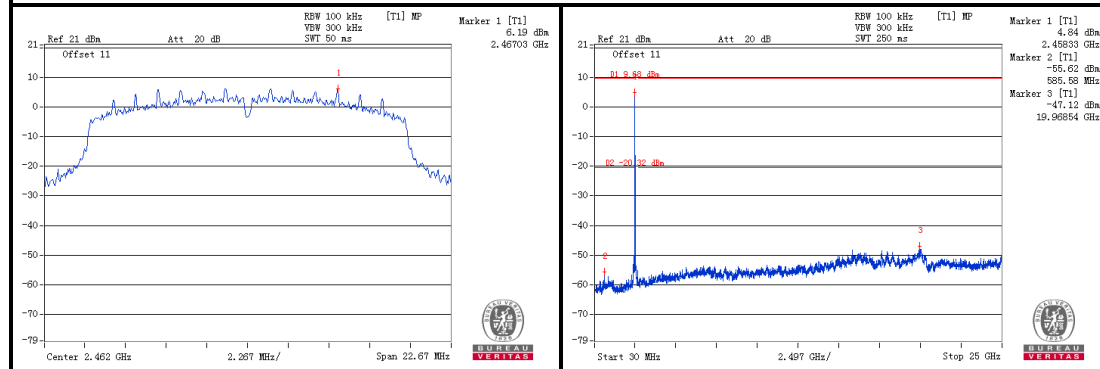
CHAIN 1



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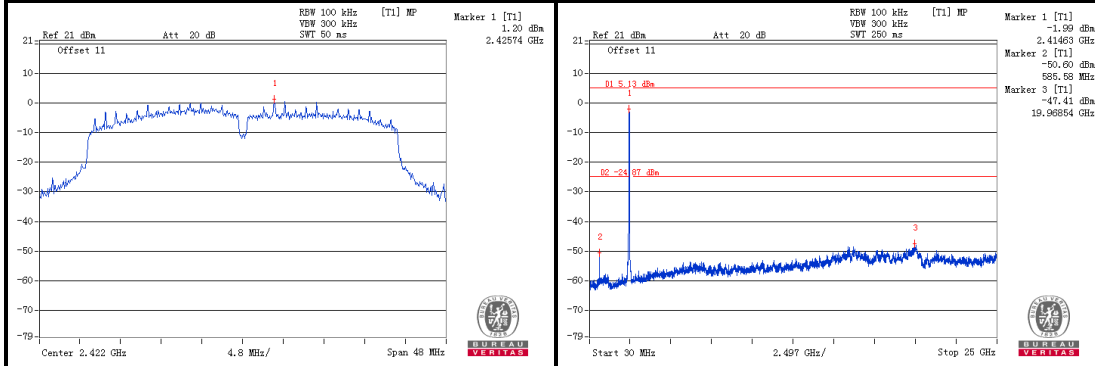
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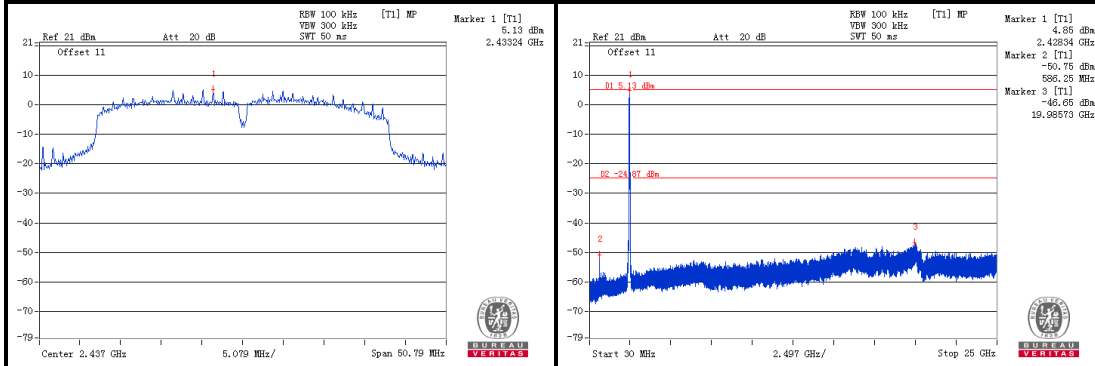
802.11n 40MHz

CHAIN 0

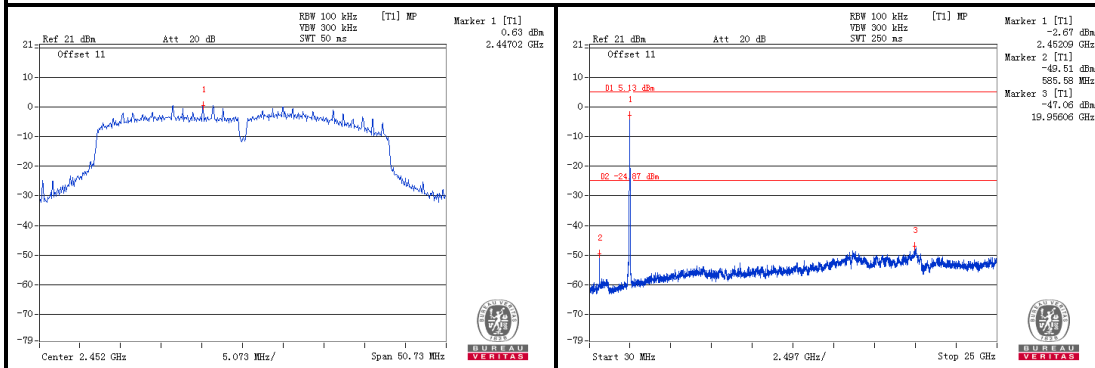
CH 3



CH 6



CH 9



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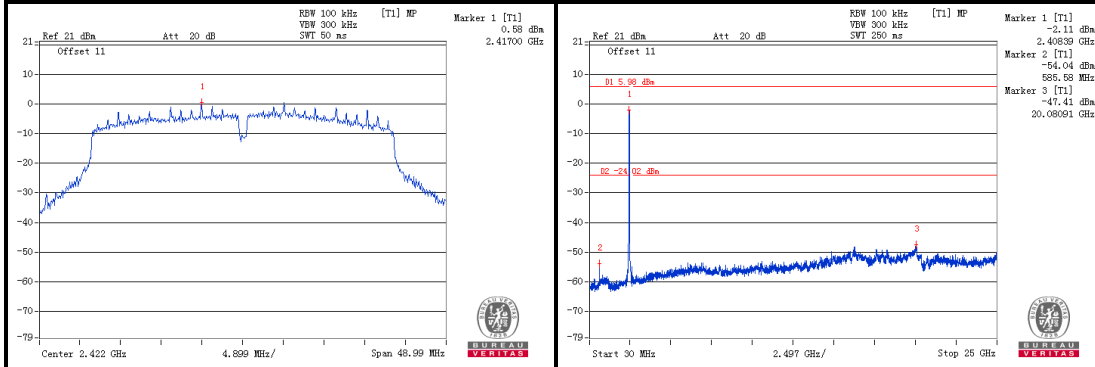


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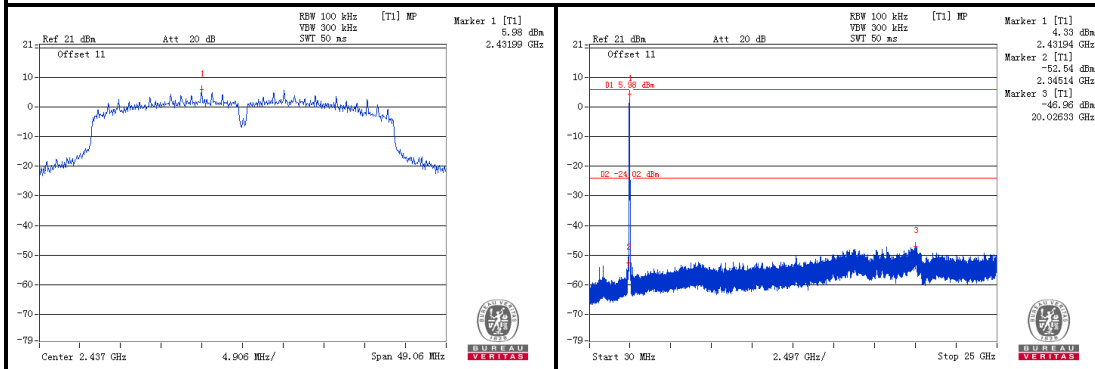
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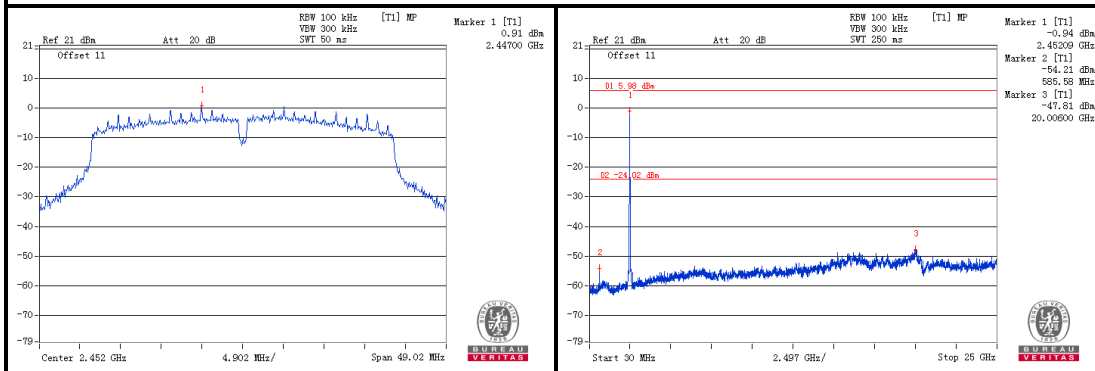
CH 3



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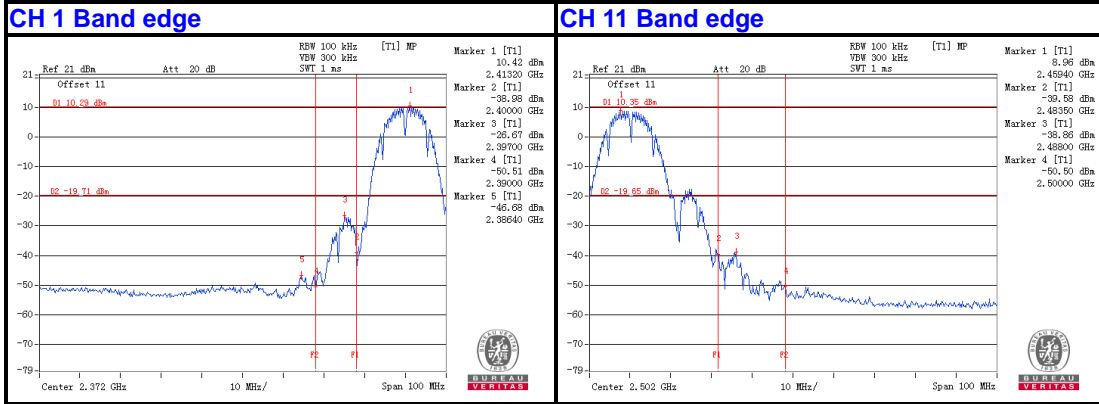


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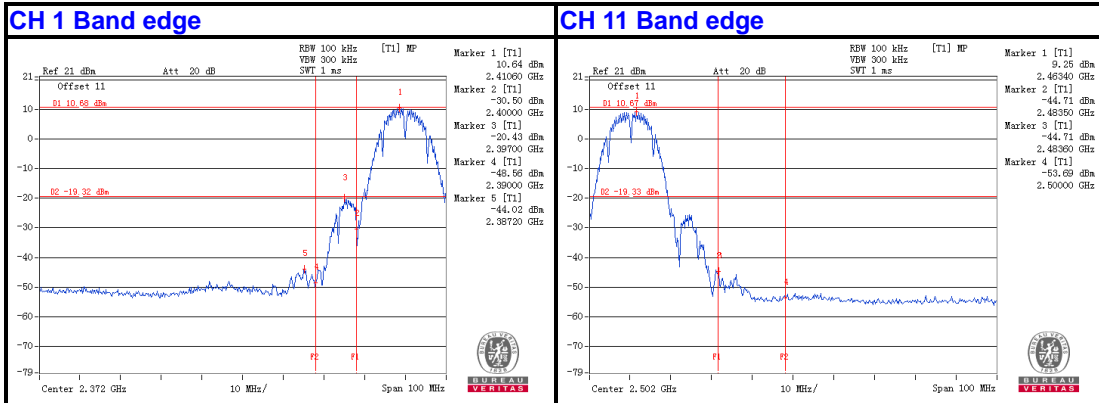
Test Report No.: RF151105N013

802.11b

CHAIN 0



CHAIN 1





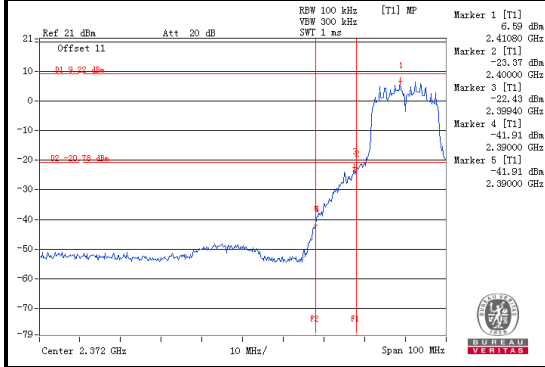
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Test Report No.: RF151105N013

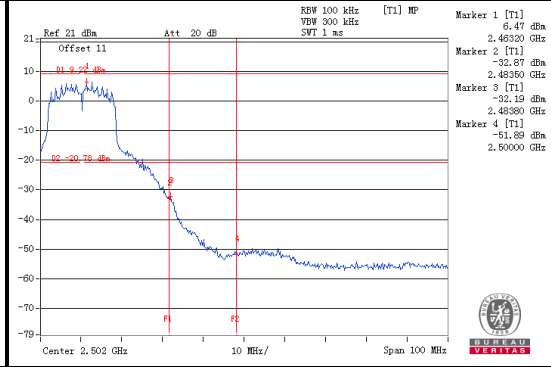
802.11g

CHAIN 0

CH 1 Band edge

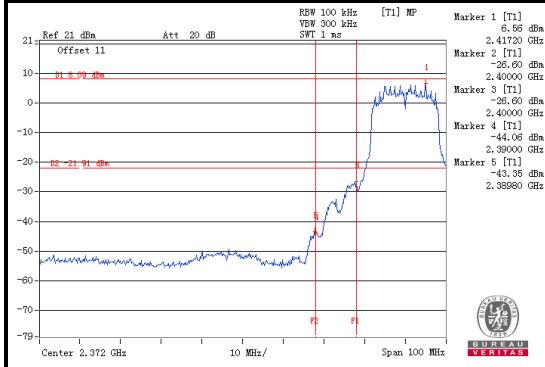


CH 11 Band edge

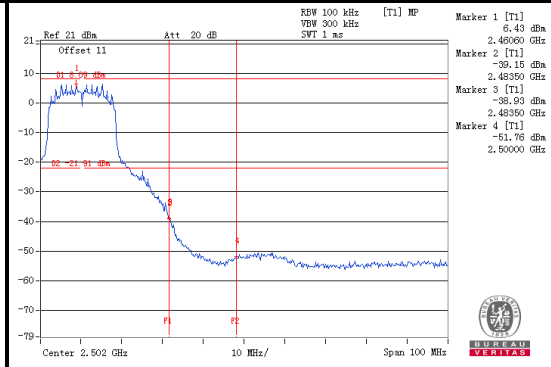


CHAIN 1

CH 1 Band edge



CH 11 Band edge



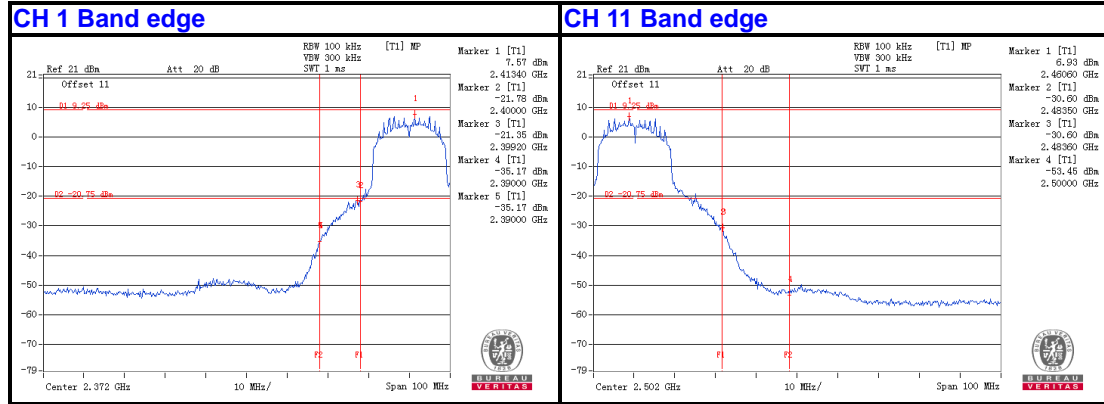


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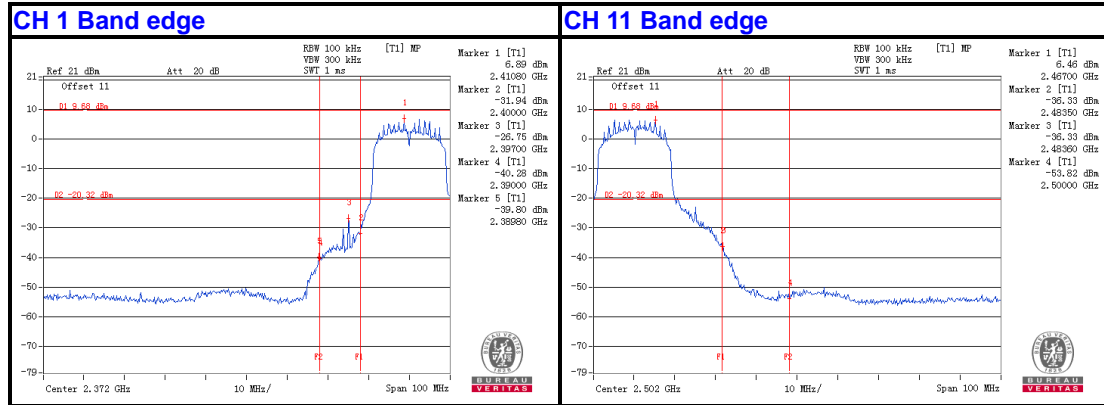
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802.11n 20MHz

CHAIN 0



CHAIN 1





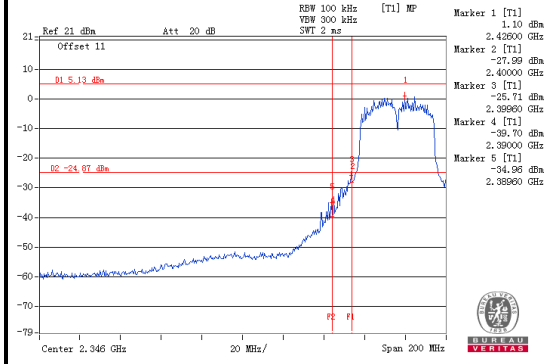
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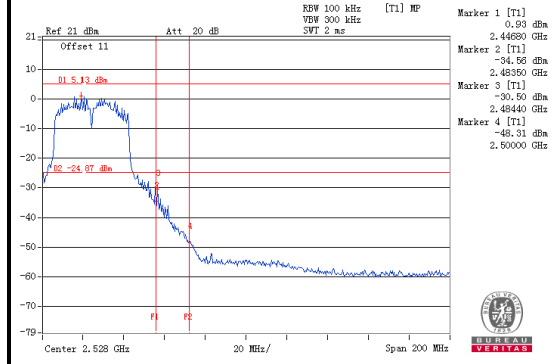
802.11n 40MHz

CHAIN 0

CH 3 Band edge

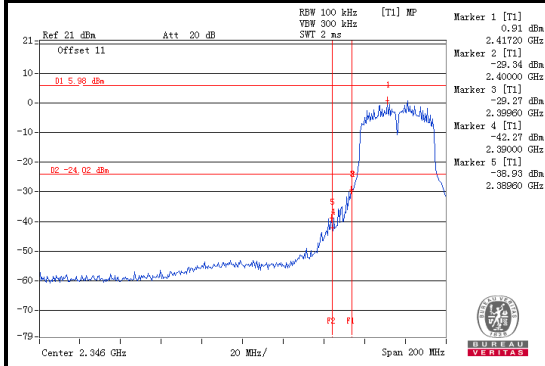


CH 9 Band edge

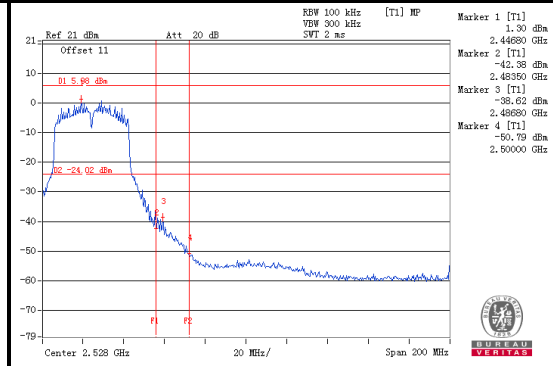


CHAIN 1

CH 3 Band edge



CH 9 Band edge





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5 PHOTOGRAPHS OF THE TEST CONFIGURATION

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



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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---