TEST REPORT

Applicant	TP-Link Technologies Co., Ltd.
Address	Building 24(floors1,3,4,5) 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(floors1,3,4,5) and 28(floors1-4) Central Science and Technology Park, Shennan Rd, Nanshan, Shenzhen, China
Product	AC1200 Wireless Dual Band Gigabit Router
Brand Name	tp-link
Model	Archer C5
Additional Model & Model Difference	Archer C1210; TSP EC220-G5U; See item 3.1
Date of tests	Oct. 25, 2017 ~ Nov. 27, 2017

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

Tested by Harry Li Project Engineer/ EMC Department	Approved by Glyn He Supervisor / EMC Department
	 Date: Dec. 11, 2017

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF171025N006-1	Original release	Dec. 11, 2017

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	2.16dB
	30MHz ~ 1GMHz	3.83dB
	1GHz ~ 18GHz	4.66dB
	18GHz ~ 40GHz	4.67dB

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	AC1200 Wireless Dual Band Gigabit Router
MODEL NO.	Archer C5
ADDITIONAL MODEL	Archer C1210; TSP EC220-G5U
DEVIATION AMONG MODELS	Model name only
FCC ID	TE7C5SPV4
NOMINAL VOLTAGE	DC 12V From Adapter
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	23.61dBm (Max.)
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.: 171025N006) for detailed product photo.
5. The additional model: Archer C1210; and TSP EC220-G5U only difference the model name of Archer C5.
6. The EUT can be powered by adapter as list as attach:

ADAPTER	
BRAND:	AMIGO
MODEL:	AMS159A-1201000FU
INPUT:	AC 100-240V, 50/60Hz
OUTPUT:	DC 12V, 1A
DC LINE:	Unshielded, Non-detachable, 1.5m

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 Y 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	
A	√	√	√	√	**2.4G Wifi MIMO mode (Antenna0+1)**
B	√	√	-	-	2.4G Wifi SISO mode (Antenna0)
C	√	√	-	-	2.4G Wifi SISO mode (Antenna1)
D	√	√	-	-	2.4G+5G Wifi MIMO mode (Antenna0+1)

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
A	Powered by Adapter with WIFI 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	FUNCTION
802.11g	1 to 11	1	OFDM	BPSK	6.0	Y	MIMO

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. The worst case mode was MIMO transmitting mode.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)	AXIS	FUNCTION
802.11b	1 to 11	1, 6, 11	CCK	DBPSK	1.0	Y	MIMO
802.11g	1 to 11	1,2, 6,10, 11	OFDM	BPSK	6.0	Y	MIMO
802.11n HT20	1 to 11	1,2, 6,10, 11	OFDM	BPSK	MCS0	Y	MIMO
802.11n HT40	3 to 9	3,4, 6, 8,9	OFDM	BPSK	MCS0	Y	MIMO

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)	FUNCTION
802.11b	1 to 11	1, 11	CCK	DBPSK	1.0	MIMO
802.11g	1 to 11	1, 11	OFDM	BPSK	6.0	MIMO
802.11n HT20	1 to 11	1, 11	OFDM	BPSK	MCS0	MIMO
802.11n HT40	3 to 9	3, 9	OFDM	BPSK	MCS0	MIMO

ANTENNA PORT CONDUCTED MEASUREMENT:

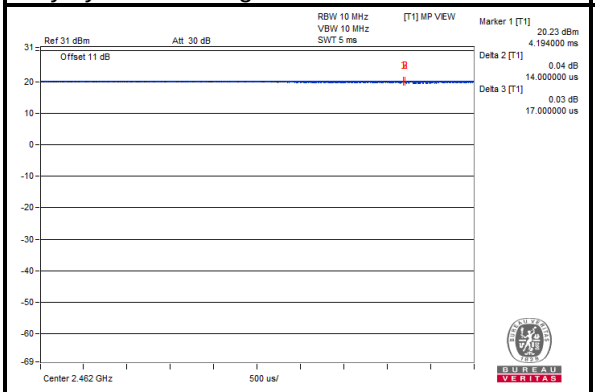
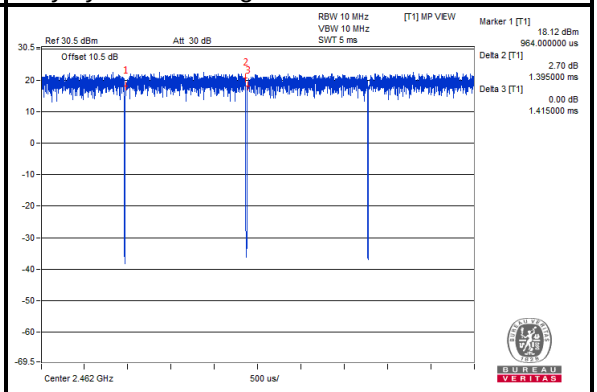
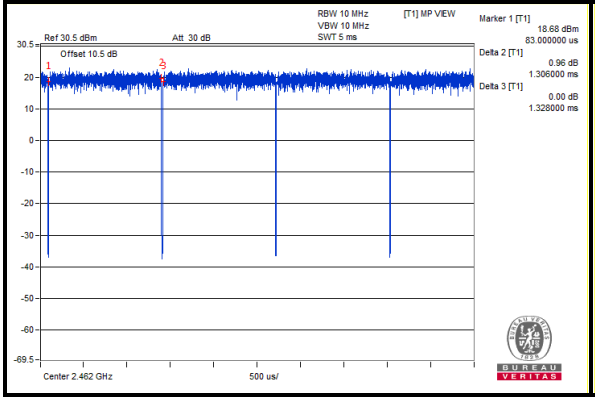
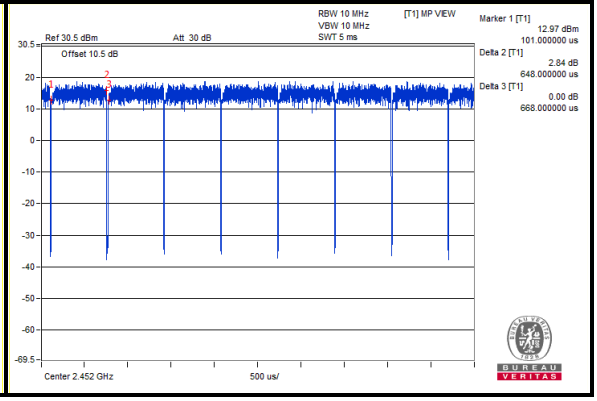
☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ 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)	FUNCTION
802.11b	1 to 11	1, 6, 11	CCK	DBPSK	1.0	MIMO
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6.0	MIMO
802.11n HT20	1 to 11	1, 6, 11	OFDM	BPSK	MCS0	MIMO
802.11n HT40	3 to 9	3, 6, 9	OFDM	BPSK	MCS0	MIMO

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	TEST VOLTAGE	TESTED BY
RE<1G	24deg. C, 55%RH	DC 12V From Adapter	Xue Wang
RE≥1G	24deg. C, 55%RH	DC 12V From Adapter	Xue Wang
PLC	20deg. C, 56%RH	DC 12V From Adapter	Yang
APCM	20deg. C, 55%RH	DC 12V From Adapter	Harry Li

3.3 DUTY CYCLE OF TEST SIGNAL

DUTY CYCLE	
802.11b (≥ 98%) Duty cycle of test signal is 100 %	**802.11g (≥ 98%)** Duty cycle of test signal is 98.58 %
	
802.11n HT20(≥ 98%) Duty cycle of test signal is 98.34 %	**802.11n HT40 (<98%)** Duty cycle of test signal is 97.00 %, Factor=0.132dB
	

POWER SETTING VALUE:

Test mode	Test Frequency (MHz)	Power setting	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
11b	2412	18	CCK	DBPSK	1.0
	2437	20	CCK	DBPSK	1.0
	2462	18	CCK	DBPSK	1.0
11g	2412	14	OFDM	BPSK	6.0
	2437	18	OFDM	BPSK	6.0
	2462	14	OFDM	BPSK	6.0
11n HT20	2412	13	OFDM	BPSK	MCS0
	2437	20	OFDM	BPSK	MCS0
	2462	14	OFDM	BPSK	MCS0
11n HT40	2422	11	OFDM	BPSK	MCS0
	2437	15	OFDM	BPSK	MCS0
	2452	12	OFDM	BPSK	MCS0

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 v04
ANSI C63.10:2013
KDB 662911 D01 Multiple Transmitter Output v02r01

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 without other necessary accessories or support units.

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	101494	Apr. 05,17	Apr. 04,18
Artificial Mains Network	Rohde&Schwarz	ENV216	101173	Mar. 06,17	Mar. 05,18
Artificial Mains Network	Rohde&Schwarz	ESH3-Z5	100317	Apr. 05,17	Apr. 04,18
Voltage probe	SCHWARZBECK	TK 9421	TK 9421-176	Jan. 04,17	Jan. 03,18
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.

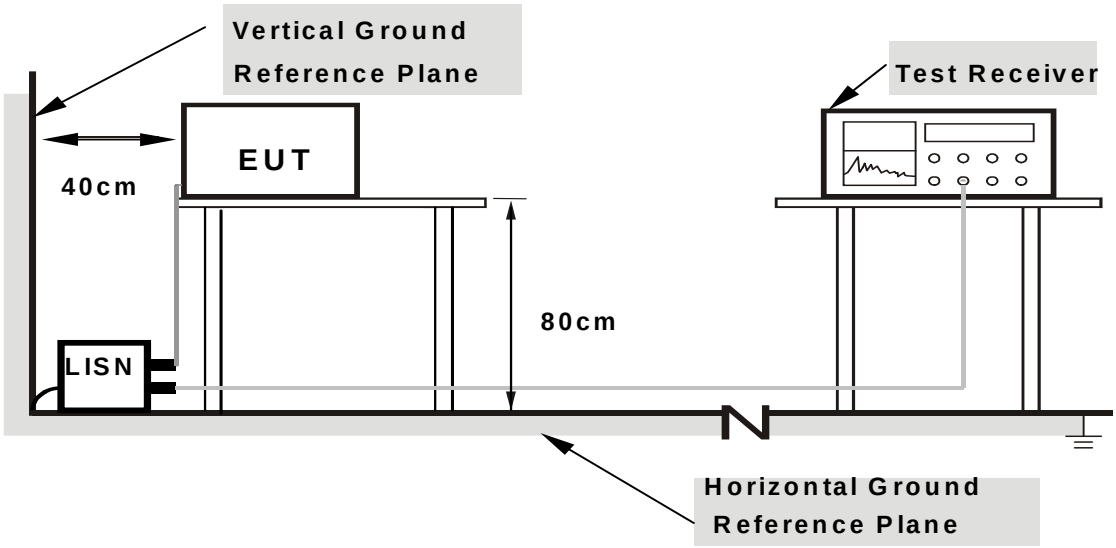
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) were not recorded.

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.

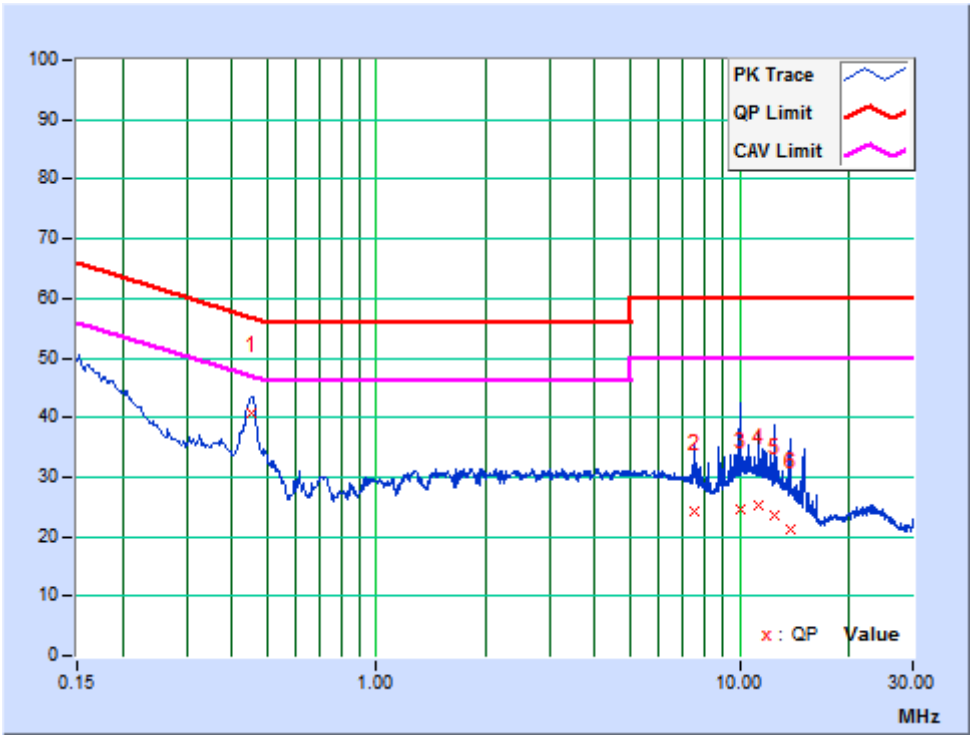
4.1.7 TEST RESULTS

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	0.45065	10.23	30.43	24.70	40.66	34.93	56.86	46.86	-16.20	-11.93
2	7.49625	10.22	13.97	6.80	24.19	17.02	60.00	50.00	-35.81	-32.98
3	9.99600	10.24	14.38	6.42	24.62	16.66	60.00	50.00	-35.38	-33.34
4	11.25825	10.24	14.89	7.70	25.13	17.94	60.00	50.00	-34.87	-32.06
5	12.50250	10.25	13.29	6.35	23.54	16.60	60.00	50.00	-36.46	-33.40
6	13.74225	10.25	10.91	4.22	21.16	14.47	60.00	50.00	-38.84	-35.53

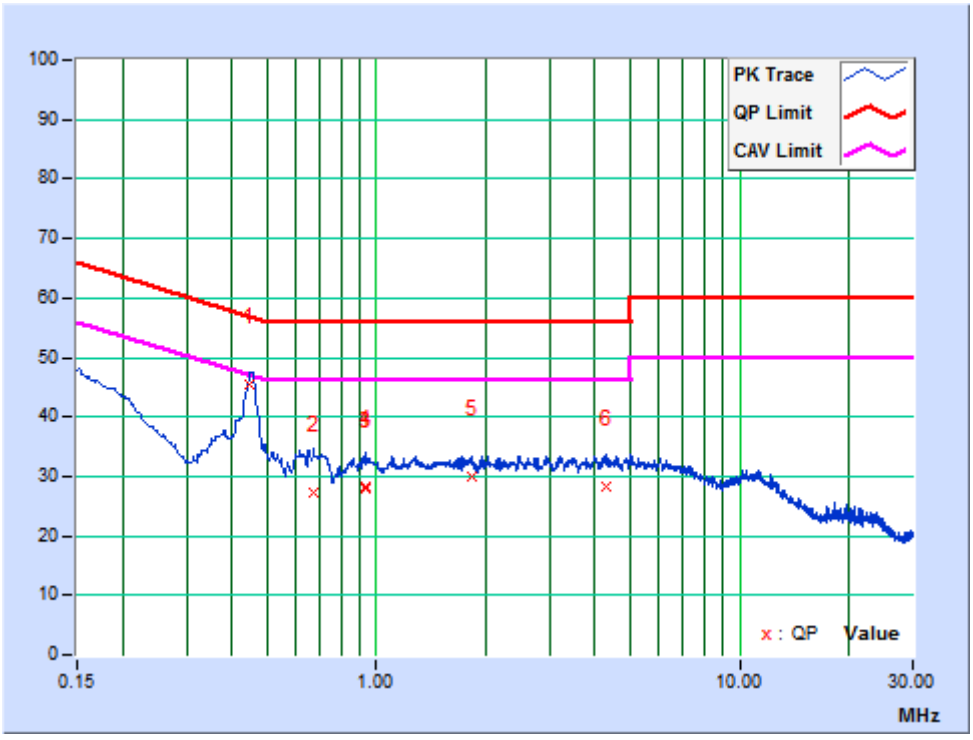
REMARKS: 1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. "-": The Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.
3. The emission levels of other frequencies were very low against the limit.
4. Margin value = Emission 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	**0.44947**	**10.03**	**35.33**	**31.69**	**45.36**	**41.72**	**56.88**	**46.88**	**-11.53**	**-5.17**
2	0.66975	10.02	17.21	13.52	27.23	23.54	56.00	46.00	-28.77	-22.46
3	0.93750	10.02	18.06	14.68	28.08	24.70	56.00	46.00	-27.92	-21.30
4	0.93750	10.02	18.20	14.69	28.22	24.71	56.00	46.00	-27.78	-21.29
5	1.82635	10.01	19.87	15.47	29.88	25.48	56.00	46.00	-26.12	-20.52
6	4.28100	10.02	18.22	13.85	28.24	23.87	56.00	46.00	-27.76	-22.13

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	ESU40	100449	Mar. 12,17	Mar. 11,18
Signal and Spectrum Analyzer	Rohde&Schwarz	FSV7	102331	Nov. 04,17	Nov. 03,18
Bilog Antenna (30MHz~1GHz)	Teseq	CBL 6111D	30643	Jul. 14, 17	Jul. 13, 18
Loop antenna (9KHz ~30MHz)	Daze	ZN30900A	0708	Mar. 12,17	Mar. 11,18
Horn Antenna (1GHz -18GHz)	ETS -Lindgren	3117	00062558	May 18,17	May 17,18
GPS Generator+ Antenna	TOJOIN	GNSS-5000A	E1-010119	Aug. 08, 17	Aug. 07, 18
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	NSEMC003	Mar. 12,17	Mar. 11,18
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A
Horn Antenna (18GHz-40GHz)	SCHWARZBECK	BBHA 9170	BBHA9170242	Mar. 15,17	Mar. 14,18
Amplifier (9kHz-1GHz)	SONOMA	310D	186955	Mar. 04,17	Mar. 03, 18
Broadband Preamplifier (1GHz~18GHz)	SCHWARZBECK	BBV9718	305	Mar. 09,17	Mar. 08,18
Pre-Amplifier (18GHz-40GHz)	EMCI	EMC 184045	980102	Nov. 04,17	Nov. 03,18
Test Software	ADT	ADT_Radiated_V7.6.15.9.2	N/A	N/A	N/A

NOTE:

1. The test was performed in 966 Chamber.
2. The calibration interval of the above test instruments are 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 above1GHz if tested.
4. The FCC Site Registration No. is 749762.

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:

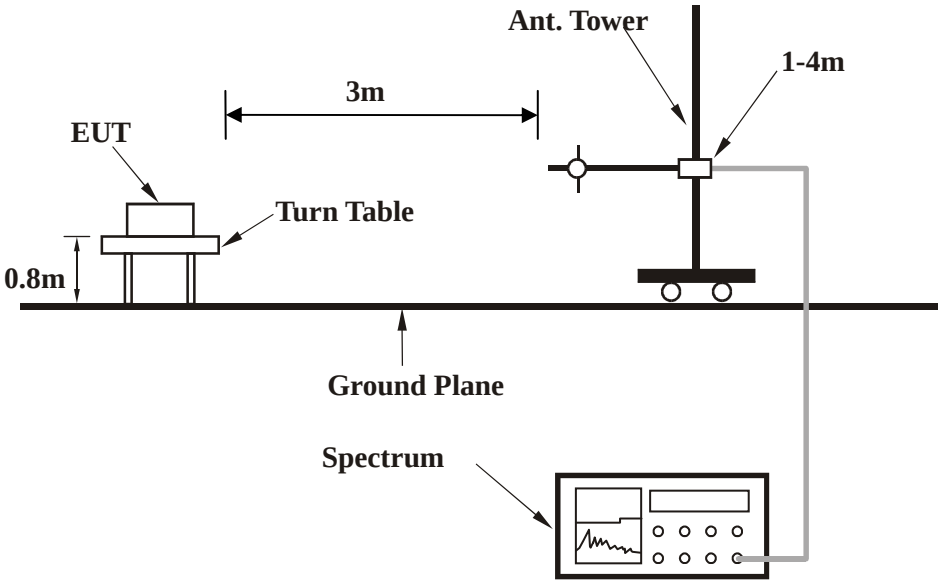
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution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

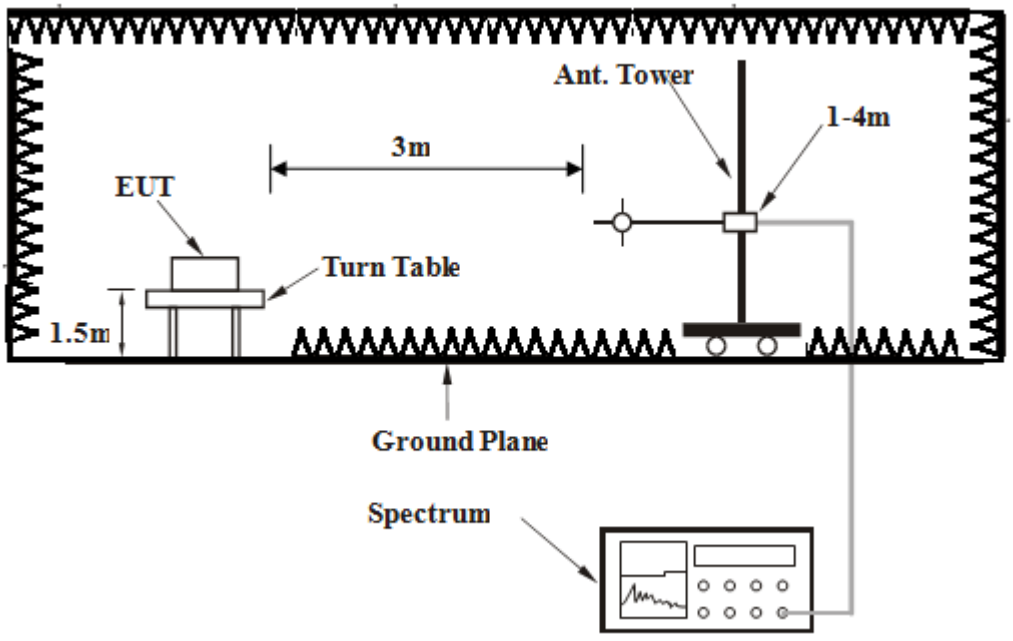
4.2.5 TEST SETUP

Below 1GHz test setup



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

Above 1GHz test setup



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

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:

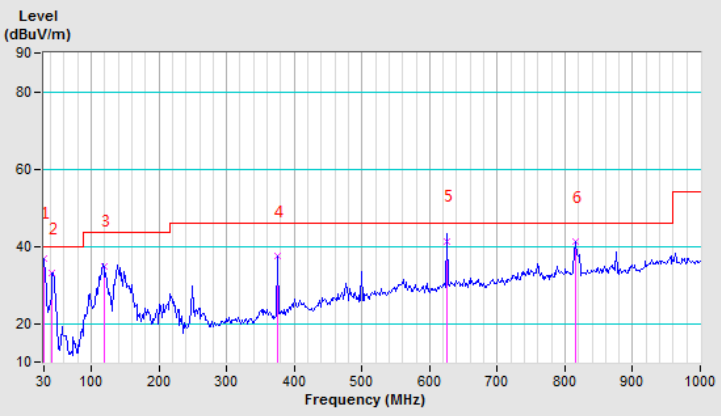
2.4G&5G Wi-Fi transmit simultaneously:

CHANNEL	TX Channel 1	**DETECTOR FUNCTION**	Quasi-Peak (QP)
FREQUENCY RANGE	9KHz ~ 1GHz		

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	**30.00**	**36.90 QP**	**40.00**	**-3.10**	**2.00 H**	**214**	**43.27**	**-6.37**
2	42.44	32.89 QP	40.00	-7.11	2.00 H	173	45.86	-12.97
3	118.61	34.72 QP	43.50	-8.78	2.00 H	35	46.57	-11.85
4	375.10	37.31 QP	46.00	-8.69	2.00 H	204	43.43	-6.12
5	625.37	41.33 QP	46.00	-4.67	2.00 H	245	39.18	2.15
6	816.57	41.07 QP	46.00	-4.93	2.00 H	83	36.50	4.57

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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.

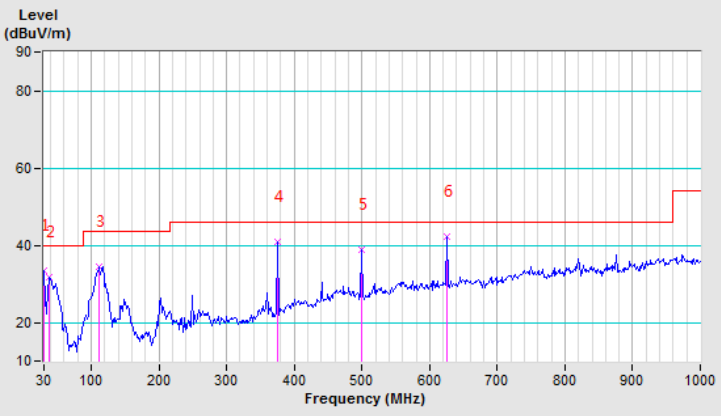


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9KHz ~ 1GHz		

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	30.00	33.36 QP	40.00	-6.64	1.00 V	123	39.73	-6.37
2	37.77	31.74 QP	40.00	-8.26	1.00 V	48	42.19	-10.45
3	112.39	34.34 QP	43.50	-9.16	1.00 V	166	46.94	-12.60
4	375.10	40.89 QP	46.00	-5.11	1.00 V	237	47.01	-6.12
5	499.46	38.87 QP	46.00	-7.13	1.00 V	304	40.65	-1.78
6	625.37	42.36 QP	46.00	-3.64	1.00 V	295	40.21	2.15

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 emission levels of other frequencies were less than 20dB margin 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	2390.00	60.71 PK	74.00	-13.29	1.91 H	117	22.71	38.00
2	2390.00	40.14 AV	54.00	-13.86	1.91 H	117	2.14	38.00
3	*2412.00	99.42 PK			1.91 H	117	61.36	38.06
4	*2412.00	95.29 AV			1.91 H	117	57.23	38.06
5	4824.00	51.00 PK	74.00	-23.00	1.56 H	0	45.04	5.96
6	4824.00	47.80 AV	54.00	-6.20	1.56 H	0	41.84	5.96
7	#7236.00	42.95 PK	74.00	-31.05	1.56 H	231	30.82	12.13
8	#7236.00	30.17 AV	54.00	-23.83	1.56 H	231	18.04	12.13
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	73.35 PK	74.00	-0.65	1.00 V	175	35.35	38.00
2	2390.00	42.66 AV	54.00	-11.34	1.00 V	175	4.66	38.00
3	*2412.00	110.91 PK			2.01 V	189	72.85	38.06
4	*2412.00	106.93 AV			2.01 V	189	68.87	38.06
5	4824.00	53.29 PK	74.00	-20.71	2.37 V	125	47.33	5.96
6	4824.00	52.29 AV	54.00	-1.71	2.37 V	125	46.33	5.96
7	#7326.00	42.92 PK	74.00	-31.08	1.46 V	213	30.69	12.23
8	#7326.00	30.18 AV	54.00	-23.82	1.46 V	213	17.95	12.23

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 emission levels of other frequencies were less than 20dB margin 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	2390.00	54.35 PK	74.00	-19.65	2.51 H	127	16.35	38.00
2	2390.00	40.81 AV	54.00	-13.19	2.51 H	127	2.81	38.00
3	*2437.00	102.72 PK			2.51 H	127	64.58	38.14
4	*2437.00	98.46 AV			2.51 H	127	60.32	38.14
5	2483.50	58.40 PK	74.00	-15.60	2.51 H	127	20.12	38.28
6	2483.50	41.53 AV	54.00	-12.47	2.51 H	127	3.25	38.28
7	4874.00	53.68 PK	74.00	-20.32	2.40 H	255	47.63	6.05
8	4874.00	51.46 AV	54.00	-2.54	2.40 H	255	45.41	6.05
9	7311.00	44.47 PK	74.00	-29.53	1.26 H	250	32.26	12.21
10	7311.00	30.24 AV	54.00	-23.76	1.26 H	250	18.03	12.21
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	71.25 PK	74.00	-2.75	1.80 V	360	33.25	38.00
2	2390.00	44.64 AV	54.00	-9.36	1.80 V	360	6.64	38.00
3	*2437.00	115.42 PK			1.80 V	360	77.28	38.14
4	*2437.00	111.89 AV			1.80 V	360	73.75	38.14
5	2483.50	73.30 PK	74.00	-0.70	1.89 V	0	35.02	38.28
6	2483.50	45.85 AV	54.00	-8.15	1.89 V	0	7.57	38.28
7	4874.00	43.28 PK	74.00	-30.72	1.50 V	220	37.23	6.05
8	4874.00	35.71 AV	54.00	-18.29	1.50 V	220	29.66	6.05
9	7311.00	43.84 PK	74.00	-30.16	1.95 V	246	31.63	12.21
10	7311.00	30.52 AV	54.00	-23.48	1.95 V	246	18.31	12.21

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 emission levels of other frequencies were less than 20dB margin 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	96.00 PK			2.65 H	150	57.78	38.22
2	*2462.00	91.68 AV			2.65 H	150	53.46	38.22
3	2483.50	56.94 PK	74.00	-17.06	2.65 H	150	18.66	38.28
4	2483.50	40.93 AV	54.00	-13.07	2.65 H	150	2.65	38.28
5	4924.00	48.29 PK	74.00	-25.71	1.53 H	261	41.80	6.49
6	4924.00	44.24 AV	54.00	-9.76	1.53 H	261	37.75	6.49
7	7386.00	44.93 PK	74.00	-29.07	1.00 H	235	32.63	12.30
8	7386.00	36.42 AV	54.00	-17.58	1.00 H	235	24.12	12.30
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	109.44 PK			1.64 V	354	71.22	38.22
2	*2462.00	105.54 AV			1.64 V	354	67.32	38.22
3	2483.50	72.67 PK	74.00	-1.33	1.64 V	354	34.39	38.28
4	2483.50	43.57 AV	54.00	-10.43	1.64 V	354	5.29	38.28
5	4924.00	42.15 PK	74.00	-31.85	1.73 V	120	35.66	6.49
6	4924.00	32.54 AV	54.00	-21.46	1.73 V	120	26.05	6.49
7	7386.00	44.65 PK	74.00	-29.35	1.84 V	234	32.35	12.30
8	7386.00	36.49 AV	54.00	-17.51	1.84 V	234	24.19	12.30

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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

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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	53.60 PK	74.00	-20.40	2.50 H	148	15.60	38.00
2	2390.00	40.72 AV	54.00	-13.28	2.50 H	148	2.72	38.00
3	*2412.00	96.94 PK			2.50 H	148	58.88	38.06
4	*2412.00	87.56 AV			2.50 H	148	49.50	38.06
5	4824.00	49.40 PK	74.00	-24.60	1.94 H	306	42.93	6.47
6	4824.00	38.54 AV	54.00	-15.46	1.94 H	306	32.07	6.47
7	#7236.00	46.56 PK	74.00	-27.44	2.35 H	84	34.43	12.13
8	#7236.00	36.40 AV	54.00	-17.60	2.35 H	84	24.27	12.13
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	69.22 PK	74.00	-4.78	1.68 V	360	31.22	38.00
2	2390.00	51.72 AV	54.00	-2.28	1.68 V	360	13.72	38.00
3	*2412.00	111.60 PK			1.68 V	360	73.54	38.06
4	*2412.00	102.13 AV			1.68 V	360	64.07	38.06
5	4824.00	38.45 PK	74.00	-35.55	1.64 V	221	31.98	6.47
6	4824.00	31.56 AV	54.00	-22.44	1.64 V	221	25.09	6.47
7	#7236.00	45.61 PK	74.00	-28.39	1.49 V	194	33.48	12.13
8	#7236.00	36.25 AV	54.00	-17.75	1.49 V	194	24.12	12.13

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 emission levels of other frequencies were less than 20dB margin 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	2390.00	55.30 PK	74.00	-18.70	1.00 H	36	17.30	38.00
2	2390.00	40.86 AV	54.00	-13.14	1.00 H	36	2.86	38.00
3	*2437.00	104.54 PK			1.00 H	36	66.40	38.14
4	*2437.00	94.60 AV			1.00 H	36	56.46	38.14
5	2483.50	55.84 PK	74.00	-18.16	1.00 H	36	17.56	38.28
6	2483.50	41.41 AV	54.00	-12.59	1.00 H	36	3.13	38.28
7	4874.00	52.78 PK	74.00	-21.22	1.21 H	203	46.30	6.48
8	4874.00	38.35 AV	54.00	-15.65	1.21 H	203	31.87	6.48
9	7311.00	45.32 PK	74.00	-28.68	1.49 H	302	33.11	12.21
10	7311.00	36.58 AV	54.00	-17.42	1.49 H	302	24.37	12.21
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	67.31 PK	74.00	-6.69	2.03 V	0	29.31	38.00
2	2390.00	48.60 AV	54.00	-5.40	2.03 V	0	10.60	38.00
3	*2437.00	118.94 PK			2.03 V	0	80.80	38.14
4	*2437.00	108.67 AV			2.03 V	0	70.53	38.14
5	2483.50	71.15 PK	74.00	-2.85	2.03 V	0	32.87	38.28
6	2483.50	50.28 AV	54.00	-3.72	2.03 V	0	12.00	38.28
7	4874.00	40.12 PK	74.00	-33.88	1.26 V	302	33.64	6.48
8	4874.00	31.20 AV	54.00	-22.80	1.26 V	302	24.72	6.48
9	7311.00	43.37 PK	74.00	-30.63	1.45 V	201	31.16	12.21
10	7311.00	36.43 AV	54.00	-17.57	1.45 V	201	24.22	12.21

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 emission levels of other frequencies were less than 20dB margin 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	100.22 PK			2.67 H	152	62.00	38.22
2	*2462.00	89.72 AV			2.67 H	152	51.50	38.22
3	2483.50	60.68 PK	74.00	-13.32	2.67 H	152	22.40	38.28
4	2483.50	43.28 AV	54.00	-10.72	2.67 H	152	5.00	38.28
5	4924.00	40.79 PK	74.00	-33.21	1.26 H	231	34.30	6.49
6	4924.00	35.46 AV	54.00	-18.54	1.26 H	231	28.97	6.49
7	7386.00	41.67 PK	74.00	-32.33	1.49 H	201	29.37	12.30
8	7386.00	34.79 AV	54.00	-19.21	1.49 H	201	22.49	12.30
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	110.24 PK			1.63 V	353	72.02	38.22
2	*2462.00	101.43 AV			1.63 V	353	63.21	38.22
3	2483.50	71.41 PK	74.00	-2.59	1.63 V	353	33.13	38.28
4	2483.50	51.96 AV	54.00	-2.04	1.63 V	353	13.68	38.28
5	4924.00	47.52 PK	74.00	-26.48	1.64 V	235	41.03	6.49
6	4924.00	34.33 AV	54.00	-19.67	1.64 V	235	27.84	6.49
7	7386.00	45.03 PK	74.00	-28.97	2.36 V	195	32.73	12.30
8	7386.00	34.53 AV	54.00	-19.47	2.36 V	195	22.23	12.30

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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

802.11n (HT20)

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	55.64 PK	74.00	-18.36	1.00 H	199	17.64	38.00
2	2390.00	41.27 AV	54.00	-12.73	1.00 H	199	3.27	38.00
3	*2412.00	95.50 PK			1.00 H	199	57.44	38.06
4	*2412.00	85.66 AV			1.00 H	199	47.60	38.06
5	4824.00	55.17 PK	74.00	-18.83	1.12 H	201	48.70	6.47
6	4824.00	38.65 AV	54.00	-15.35	1.12 H	201	32.18	6.47
7	#7236.00	44.88 PK	74.00	-29.12	1.94 H	205	32.75	12.13
8	#7236.00	36.42 AV	54.00	-17.58	1.94 H	205	24.29	12.13
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	71.67 PK	74.00	-2.33	1.77 V	0	33.67	38.00
2	2390.00	50.41 AV	54.00	-3.59	1.77 V	0	12.41	38.00
3	*2412.00	113.91 PK			1.77 V	0	75.85	38.06
4	*2412.00	102.12 AV			1.77 V	0	64.06	38.06
5	4824.00	41.33 PK	74.00	-32.67	1.52 V	302	34.86	6.47
6	4824.00	35.42 AV	54.00	-18.58	1.52 V	302	28.95	6.47
7	#7236.00	44.19 PK	74.00	-29.81	1.84 V	230	32.06	12.13
8	#7236.00	36.40 AV	54.00	-17.60	1.84 V	230	24.27	12.13

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 emission levels of other frequencies were less than 20dB margin 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	2390.00	60.50 PK	74.00	-13.50	2.57 H	115	22.50	38.00
2	2390.00	42.52 AV	54.00	-11.48	2.57 H	115	4.52	38.00
3	*2437.00	101.94 PK			2.57 H	115	63.80	38.14
4	*2437.00	93.51 AV			2.57 H	115	55.37	38.14
5	2483.50	59.63 PK	74.00	-14.37	2.57 H	115	21.35	38.28
6	2483.50	43.25 AV	54.00	-10.75	2.57 H	115	4.97	38.28
7	4874.00	40.30 PK	74.00	-33.70	1.42 H	247	33.82	6.48
8	4874.00	33.42 AV	54.00	-20.58	1.42 H	247	26.94	6.48
9	7311.00	42.85 PK	74.00	-31.15	1.24 H	318	30.64	12.21
10	7311.00	36.52 AV	54.00	-17.48	1.24 H	318	24.31	12.21
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	68.60 PK	74.00	-5.40	1.70 V	345	30.60	38.00
2	2390.00	49.70 AV	54.00	-4.30	1.70 V	345	11.70	38.00
3	*2437.00	117.81 PK			1.70 V	345	79.67	38.14
4	*2437.00	107.74 AV			1.70 V	345	69.60	38.14
5	2483.50	72.19 PK	74.00	-1.81	1.70 V	345	33.91	38.28
6	2483.50	50.28 AV	54.00	-3.72	1.70 V	345	12.00	38.28
7	4874.00	46.20 PK	74.00	-27.80	2.63 V	84	39.72	6.48
8	4874.00	31.67 AV	54.00	-22.33	2.63 V	84	25.19	6.48
9	7311.00	44.32 PK	74.00	-29.68	1.05 V	239	32.11	12.21
10	7311.00	36.56 AV	54.00	-17.44	1.05 V	239	24.35	12.21

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 emission levels of other frequencies were less than 20dB margin 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	106.42 PK			3.98 H	137	68.20	38.22
2	*2462.00	92.87 AV			3.98 H	137	54.65	38.22
3	2483.50	60.66 PK	74.00	-13.34	3.95 H	137	22.38	38.28
4	2483.50	44.78 AV	54.00	-9.22	3.95 H	137	6.50	38.28
5	4924.00	50.15 PK	74.00	-23.85	1.18 H	200	43.66	6.49
6	4924.00	35.82 AV	54.00	-18.18	1.18 H	200	29.33	6.49
7	7386.00	44.99 PK	74.00	-29.01	1.62 H	302	32.69	12.30
8	7386.00	36.42 AV	54.00	-17.58	1.62 H	302	24.12	12.30
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	112.90 PK			1.50 V	200	74.68	38.22
2	*2462.00	101.35 AV			1.50 V	200	63.13	38.22
3	2483.50	73.87 PK	74.00	-0.13	1.50 V	200	35.59	38.28
4	2483.50	52.74 AV	54.00	-1.26	1.50 V	200	14.46	38.28
5	4924.00	39.73 PK	74.00	-34.27	2.04 V	248	33.24	6.49
6	4924.00	29.00 AV	54.00	-25.00	2.04 V	248	22.51	6.49
7	7386.00	44.48 PK	74.00	-29.52	1.49 V	201	32.18	12.30
8	7386.00	36.65 AV	54.00	-17.35	1.49 V	201	24.35	12.30

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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

802.11n (HT40)

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	63.36 PK	74.00	-10.64	1.67 H	220	25.36	38.00
2	2390.00	45.89 AV	54.00	-8.11	1.67 H	220	7.89	38.00
3	*2422.00	103.21 PK			1.67 H	220	65.12	38.09
4	*2422.00	86.76 AV			1.67 H	220	48.67	38.09
5	4844.00	39.64 PK	74.00	-34.36	1.87 H	284	33.17	6.47
6	4844.00	28.65 AV	54.00	-25.35	1.87 H	284	22.18	6.47
7	7266.00	45.30 PK	74.00	-28.70	1.84 H	243	33.15	12.15
8	7266.00	34.51 AV	54.00	-19.49	1.84 H	243	22.36	12.15
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	71.80 PK	74.00	-2.20	1.52 V	0	33.80	38.00
2	2390.00	53.38 AV	54.00	-0.62	1.52 V	0	15.38	38.00
3	*2422.00	113.29 PK			1.52 V	0	75.20	38.09
4	*2422.00	101.59 AV			1.52 V	0	63.50	38.09
5	4844.00	42.56 PK	74.00	-31.44	1.49 V	230	36.09	6.47
6	4844.00	32.06 AV	54.00	-21.94	1.49 V	230	25.59	6.47
7	7266.00	45.05 PK	74.00	-28.95	1.94 V	328	32.90	12.15
8	7266.00	34.46 AV	54.00	-19.54	1.94 V	328	22.31	12.15

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 emission levels of other frequencies were less than 20dB margin 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	66.67 PK	74.00	-7.33	2.63 H	360	28.67	38.00
2	2390.00	46.36 AV	54.00	-7.64	2.63 H	360	8.36	38.00
3	*2437.00	110.44 PK			2.63 H	360	72.30	38.14
4	*2437.00	96.78 AV			2.63 H	360	58.64	38.14
5	2483.50	64.24 PK	74.00	-9.76	2.63 H	360	25.96	38.28
6	2483.50	45.64 AV	54.00	-8.36	2.63 H	360	7.36	38.28
7	4874.00	51.83 PK	74.00	-22.17	2.65 H	275	45.35	6.48
8	4874.00	34.83 AV	54.00	-19.17	2.65 H	275	28.35	6.48
9	7311.00	42.03 PK	74.00	-31.97	2.73 H	184	29.82	12.21
10	7311.00	34.57 AV	54.00	-19.43	2.73 H	184	22.36	12.21
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	73.20 PK	74.00	-0.80	1.50 V	0	35.20	38.00
2	2390.00	52.80 AV	54.00	-1.20	1.50 V	0	14.80	38.00
3	*2437.00	115.12 PK			1.50 V	0	76.98	38.14
4	*2437.00	101.74 AV			1.50 V	0	63.60	38.14
5	2483.50	72.78 PK	74.00	-1.22	1.50 V	0	34.50	38.28
6	2483.50	51.62 AV	54.00	-2.38	1.50 V	0	13.34	38.28
7	4874.00	38.37 PK	74.00	-35.63	2.21 V	257	31.89	6.48
8	4874.00	31.12 AV	54.00	-22.88	2.21 V	257	24.64	6.48
9	7311.00	45.62 PK	74.00	-28.38	1.98 V	324	33.41	12.21
10	7311.00	36.42 AV	54.00	-17.58	1.98 V	324	24.21	12.21

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 emission levels of other frequencies were less than 20dB margin 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	100.53 PK			1.64 H	220	62.34	38.19
2	*2452.00	89.49 AV			1.64 H	220	51.30	38.19
3	2483.50	64.63 PK	74.00	-9.37	1.64 H	220	26.35	38.28
4	2483.50	46.42 AV	54.00	-7.58	1.64 H	220	8.14	38.28
5	4904.00	38.77 PK	74.00	-35.23	3.16 H	223	32.28	6.49
6	4904.00	30.85 AV	54.00	-23.15	3.16 H	223	24.36	6.49
7	7356.00	45.06 PK	74.00	-28.94	1.00 H	65	32.80	12.26
8	7356.00	35.58 AV	54.00	-18.42	1.00 H	65	23.32	12.26
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	109.86 PK			1.00 V	210	71.67	38.19
2	*2452.00	98.50 AV			1.00 V	210	60.31	38.19
3	2483.50	72.08 PK	74.00	-1.92	1.00 V	210	33.80	38.28
4	**2483.50**	**53.88 AV**	**54.00**	**-0.12**	**1.00 V**	**210**	**15.60**	**38.28**
5	4904.00	42.60 PK	74.00	-31.40	2.16 V	230	36.11	6.49
6	4904.00	32.14 AV	54.00	-21.86	2.16 V	230	25.65	6.49
7	7356.00	43.70 PK	74.00	-30.30	1.48 V	213	31.44	12.26
8	7356.00	34.45 AV	54.00	-19.55	1.48 V	213	22.19	12.26

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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.

Additional test for other channel of radiated emission

ABOVE 1GHz DATA

802.11g

CHANNEL	TX Channel 2	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	53.60 PK	74.00	-20.40	1.50 H	97	15.61	37.99
2	2390.00	44.66 AV	54.00	-9.34	1.50 H	97	6.67	37.99

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	58.53 PK	74.00	-15.47	2.00 H	6	20.54	37.99
2	2390.00	53.31 AV	54.00	-0.69	2.00 H	6	15.32	37.99

CHANNEL	TX Channel 10	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	2483.50	56.23 PK	74.00	-17.77	2.00 H	345	18.04	38.19
2	2483.50	49.85 AV	54.00	-4.15	2.00 H	345	11.66	38.19

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	2483.50	61.04 PK	74.00	-12.96	2.00 V	36	22.85	38.19
2	**2483.50**	**53.43 AV**	**54.00**	**-0.57**	**2.00 V**	**36**	**15.24**	**38.19**

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 emission levels of other frequencies were less than 20dB margin against the limit.
4. Margin value = Emission level – Limit value.

802.11n (HT20)

CHANNEL	TX Channel 2	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	63.68 PK	74.00	-10.32	2.45 H	12	25.69	37.99
2	2390.00	48.28 AV	54.00	-5.72	2.45 H	12	10.29	37.99
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	69.93 PK	74.00	-4.07	2.00 V	339	31.94	37.99
2	2390.00	53.11 AV	54.00	-0.89	2.00 V	339	15.12	37.99

CHANNEL	TX Channel 10	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	2483.50	62.43 PK	74.00	-11.57	3.22 H	360	24.24	38.19
2	2483.50	47.80 AV	54.00	-6.20	3.22 H	360	9.61	38.19
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	2483.50	65.07 PK	74.00	-8.93	2.00 V	350	26.88	38.19
2	2483.50	52.14 AV	54.00	-1.86	2.00 V	350	13.95	38.19

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 emission levels of other frequencies were less than 20dB margin against the limit.

802.11n (HT40)

CHANNEL	TX Channel 4	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	65.86 PK	74.00	-8.14	3.32 H	0	27.87	37.99
2	2390.00	48.51 AV	54.00	-5.49	3.32 H	0	10.52	37.99
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	70.98 PK	74.00	-3.02	1.00 V	150	32.99	37.99
2	2390.00	53.09 AV	54.00	-0.91	1.00 V	150	15.10	37.99

CHANNEL	TX Channel 8	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	2483.50	58.32 PK	74.00	-15.68	3.22 H	323	20.13	38.19
2	2483.50	47.98 AV	54.00	-6.02	3.22 H	323	9.79	38.19
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	2483.50	63.94 PK	74.00	-10.06	1.00 V	204	25.75	38.19
2	2483.50	52.51 AV	54.00	-1.49	1.00 V	204	14.32	38.19

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 emission levels of other frequencies were less than 20dB margin against the limit.

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 19,17	May 18,18
Power Sensor	Keysight	U2021XA	MY55060018	May 19,17	May 18,18
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 13, 17	Oct.12, 18
Humid & Temp Programmable Tester	Haida	HD-2257	110807201	Sep.05,17	Sep. 04,18
Oscilloscope	Agilent	DSO9254A	MY51260160	Nov. 04,17	Nov. 03,18
Signal Analyzer	Rohde & Schwarz	FSV7	102331	Nov. 04,17	Nov. 03,18
Signal Generator	Agilent	N5183A	MY50140980	Nov. 04,17	Nov. 03,18
Agile Signal Generator	Agilent	8645A	Agilent	Aug.08, 17	Aug.07, 18
Spectrum Analyzer	Keysight	N9020A	MY55400499	Apr. 10,17	Apr. 09,18
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY56200288	Dec.05, 16	Dec. 04, 17
BLUETOOTH TESTER	Rohde&Schwarz	CBT32	100811	Aug.08, 17	Aug.07, 18
Attenuator	MINI	BW-S10W2+	S130129FGE2	N/A	N/A
DC Source	Keysight	E3642A	MY56146098	N/A	N/A

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

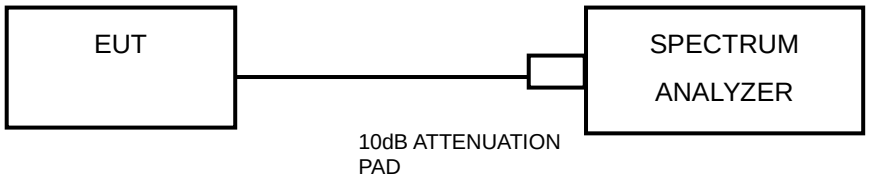
Refer to “KDB 558074 D01 DTS Meas Guidance v04 " 8.1 Option 2
Refer to “ANSI C63.10-2013 " 11.8.2 Option 2

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	10.09	10.10	0.5	PASS
6	2437	10.10	10.10	0.5	PASS
11	2462	10.10	10.10	0.5	PASS

802.11g

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	16.40	16.40	0.5	PASS
6	2437	16.39	16.38	0.5	PASS
11	2462	16.39	16.37	0.5	PASS

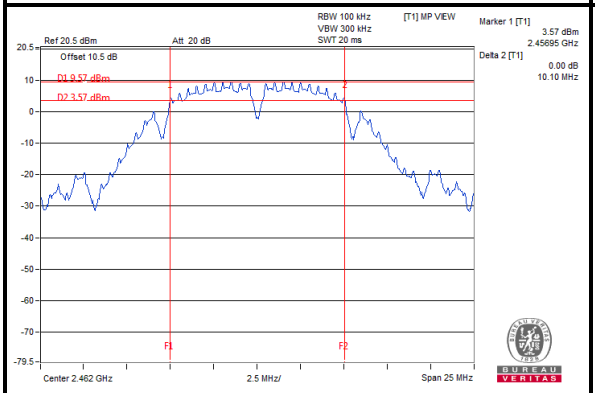
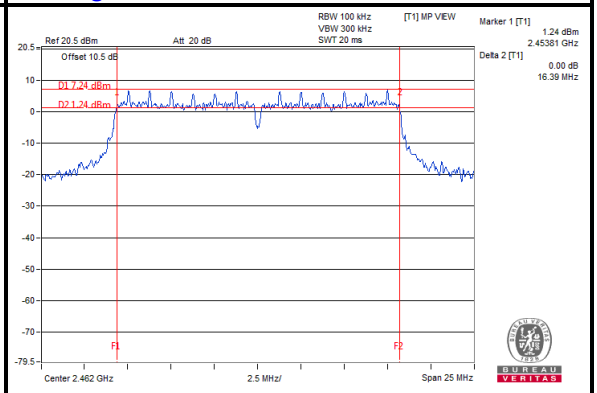
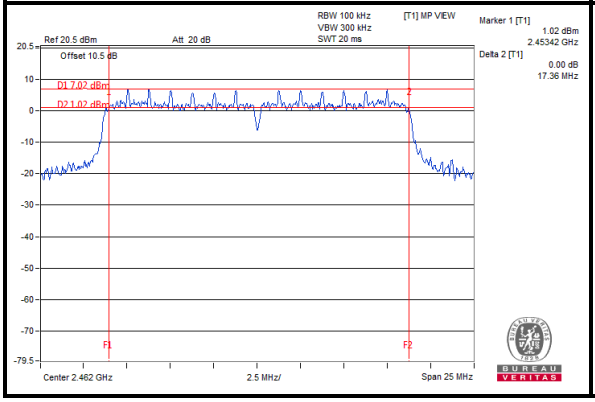
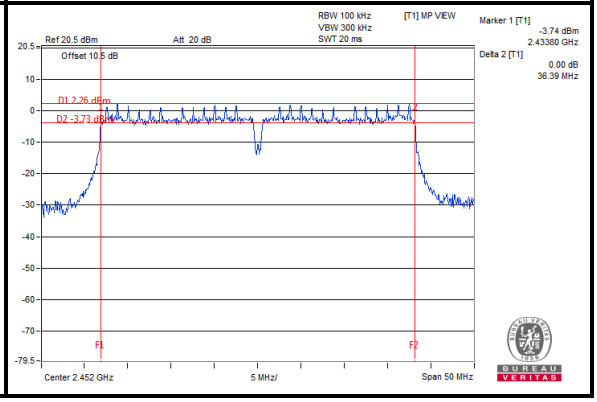
802.11n HT20

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
1	2412	17.13	17.13	0.5	PASS
6	2437	17.13	17.33	0.5	PASS
11	2462	17.36	17.11	0.5	PASS

802.11n HT40

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)		MINIMUM LIMIT (MHz)	PASS / FAIL
		CHAIN 0	CHAIN 1		
3	2422	36.18	36.43	0.5	PASS
6	2437	36.16	36.35	0.5	PASS
9	2452	36.39	36.13	0.5	PASS

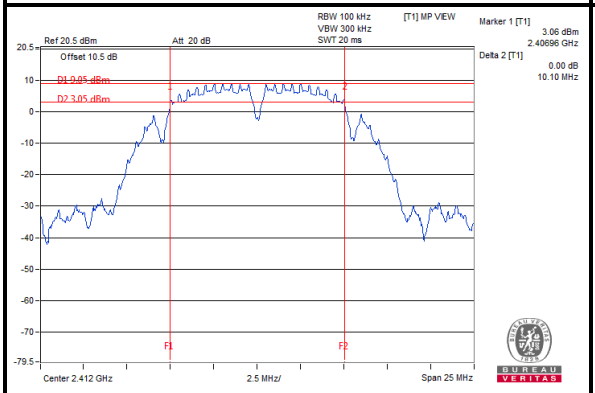
CHAIN 0

SPECTRUM PLOT OF WORST VALUE	
802.11b	802.11g
	
802.11n HT20	802.11n HT40
	

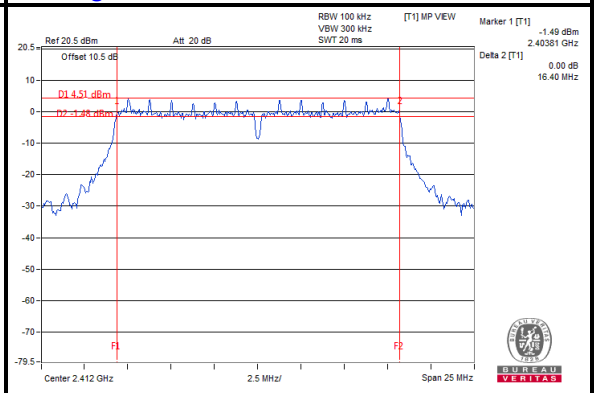
CHAIN 1

SPECTRUM PLOT OF WORST VALUE

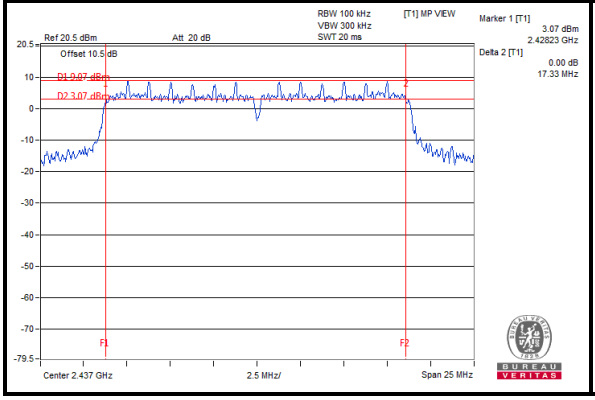
802.11b



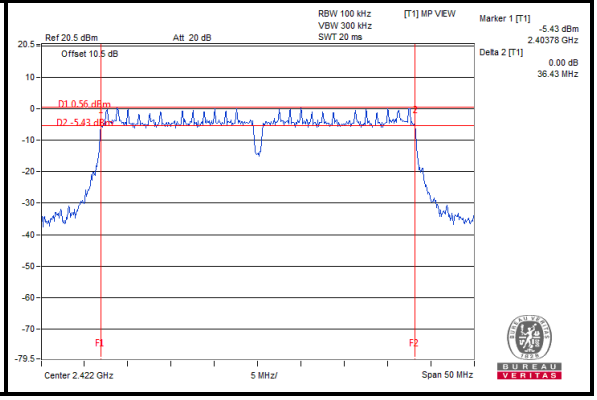
802.11g



802.11n HT20



802.11n HT40

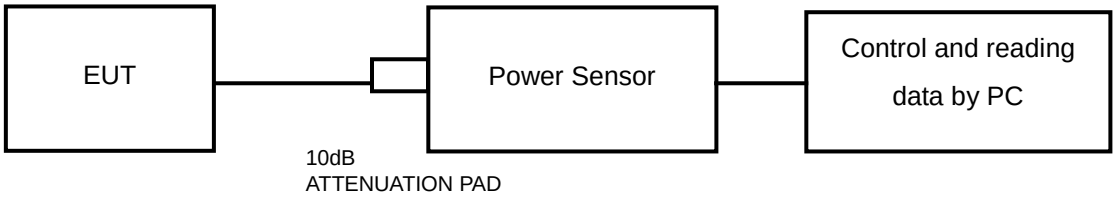


4.4 CONDUCTED OUTPUT POWER

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 19,17	May 18,18
Power Sensor	Keysight	U2021XA	MY55060018	May 19,17	May 18,18
Test Software	Keysight	Power Analyzer 3.9	Power Analyzer 3.9	N/A	N/A
Digital Multimeter	FLUKE	15B	A1220010DG	Oct. 13, 17	Oct.12, 18
Humid & Temp Programmable Tester	Haida	HD-2257	110807201	Sep.05,17	Sep. 04,18
Oscilloscope	Agilent	DSO9254A	MY51260160	Nov. 04,17	Nov. 03,18
Signal Analyzer	Rohde & Schwarz	FSV7	102331	Nov. 04,17	Nov. 03,18
Signal Generator	Agilent	N5183A	MY50140980	Nov. 04,17	Nov. 03,18
Agile Signal Generator	Agilent	8645A	Agilent	Aug.08, 17	Aug.07, 18
Spectrum Analyzer	Keysight	N9020A	MY55400499	Apr. 10,17	Apr. 09,18
MXG-B RF Vector Signal Generator	Keysight	N5182B	MY56200288	Dec.05, 16	Dec. 04, 17
BLUETOOTH TESTER	Rohde&Schwarz	CBT32	100811	Aug.08, 17	Aug.07, 18
Attenuator	MINI	BW-S10W2+	S130129FGE2	N/A	N/A
DC Source	Keysight	E3642A	MY56146098	N/A	N/A

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. The test software was install in PC used to read the response of the average power sensor. Record the average power level. The Maximum Conducted Output Power was tested based on KDB 558074 D01 DTS Meas Guidance v04 "Chapter 9.2.3.1 and “ANSI C63.10-2013” Chapter 11.9.2.3.1

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 (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2412	19.52	19.71	89.536	93.541	183.077	22.63	30	PASS
6	2437	20.37	20.82	108.893	120.781	229.674	23.61	30	PASS
11	2462	19.46	19.67	88.308	92.683	**180.991**	**22.58**	30	PASS

802.11g

CHAN.	FREQ. (MHz)	AVG. POWER (dBm)		AVG. POWER (mW)		TOTAL POWER (mW)	TOTAL POWER (dBm)	AVG. POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2412	18.12	18.70	64.863	74.131	138.994	21.43	30	PASS
6	2437	20.13	20.54	103.039	113.24	216.279	23.35	30	PASS
11	2462	18.04	18.51	63.68	70.958	134.638	21.29	30	PASS

802.11n HT20

CHAN.	FREQ. (MHz)	AVG. POWER (dBm)		AVG. POWER (mW)		TOTAL POWER (mW)	TOTAL POWER (dBm)	AVG. POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
1	2412	17.21	17.62	52.602	57.810	110.412	20.43	30	PASS
6	2437	19.92	20.23	98.175	105.439	203.614	23.09	30	PASS
11	2462	17.93	18.29	62.087	67.453	129.540	21.12	30	PASS

802.11n HT40

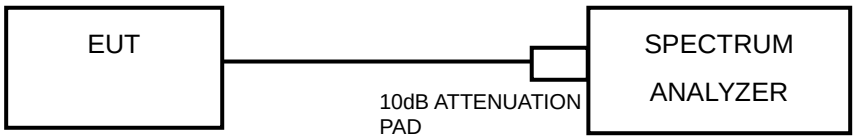
CHAN.	FREQ. (MHz)	AVG. POWER (dBm)		AVG. POWER (mW)		TOTAL POWER (mW)	TOTAL POWER (dBm)	AVG. POWER LIMIT (dBm)	PASS / FAIL
		CHAIN 0	CHAIN 1	CHAIN 0	CHAIN 1				
3	2422	16.17	16.30	41.400	42.658	84.058	19.25	30	PASS
6	2437	17.71	17.72	59.020	59.156	118.176	20.73	30	PASS
9	2452	16.63	16.60	46.026	45.709	91.735	19.63	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

Refer to KDB 558074 D01 DTS Meas Guidance v04 Chapter 10.2

Refer to ANSI C63.10-2013 Chapter 11.10.2

a) Set analyzer center frequency to DTS channel center frequency.
b) Set the span to 1.5 × DTS bandwidth.
c) Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
d) Set the VBW ≥ 3 × RBW.
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum amplitude level within the RBW.
j) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

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/3kHz)	10 log (N=2) dB	TOTAL PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	1	2412	-4.91	3.01	-1.90	5.99	PASS
	6	2437	-4.61	3.01	-1.60	5.99	PASS
	11	2462	-4.90	3.01	-1.89	5.99	PASS
1	1	2412	-5.16	3.01	-2.15	5.99	PASS
	6	2437	-4.16	3.01	-1.15	5.99	PASS
	11	2462	-4.85	3.01	-1.84	5.99	PASS

Remark: Due ANT gain > 6dBi [5 +10log(N=2)=8.01>6], so the limit need to be changed 8+[5 +10log(N=2)-6]=5.99.
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.

802.11g

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=2) dB	TOTAL PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	1	2412	-10.86	3.01	-7.85	5.99	PASS
	6	2437	-6.46	3.01	-3.45	5.99	PASS
	11	2462	-8.72	3.01	-5.71	5.99	PASS
1	1	2412	-10.88	3.01	-7.87	5.99	PASS
	6	2437	-7.79	3.01	-4.78	5.99	PASS
	11	2462	-9.05	3.01	-6.04	5.99	PASS

Remark: Due ANT gain > 6dBi [5 +10log(N=2)=8.01>6], so the limit need to be changed 8+[5 +10log(N=2)-6]=5.99.
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.

802.11n HT20

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=2) dB	TOTAL PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	1	2412	-9.89	3.01	-6.88	5.99	PASS
	6	2437	-6.66	3.01	-3.65	5.99	PASS
	11	2462	-8.77	3.01	-5.76	5.99	PASS
1	1	2412	-11.15	3.01	-8.14	5.99	PASS
	6	2437	-5.55	3.01	-2.54	5.99	PASS
	11	2462	-8.35	3.01	-5.34	5.99	PASS

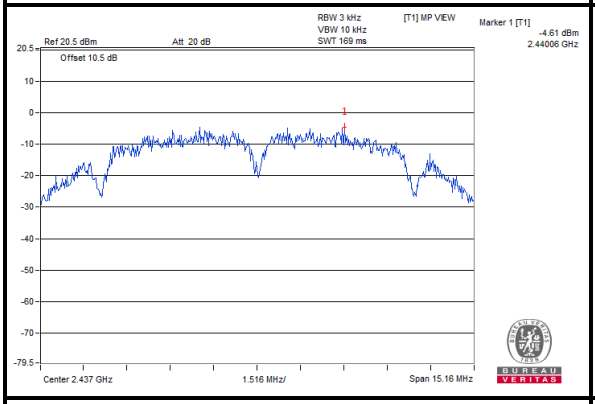
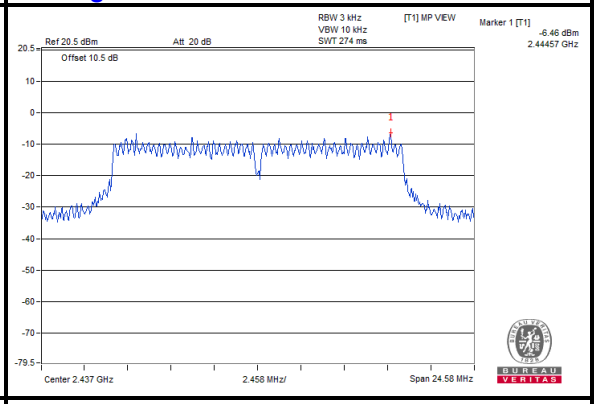
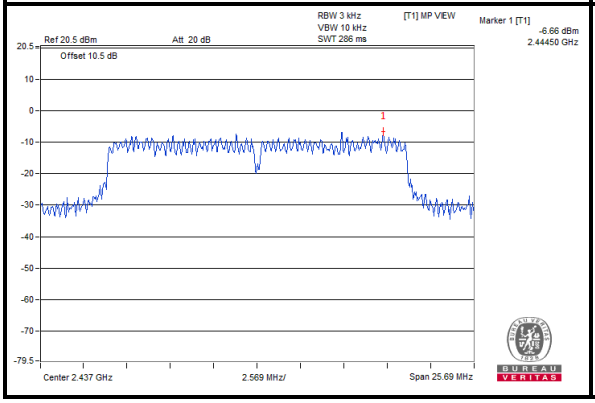
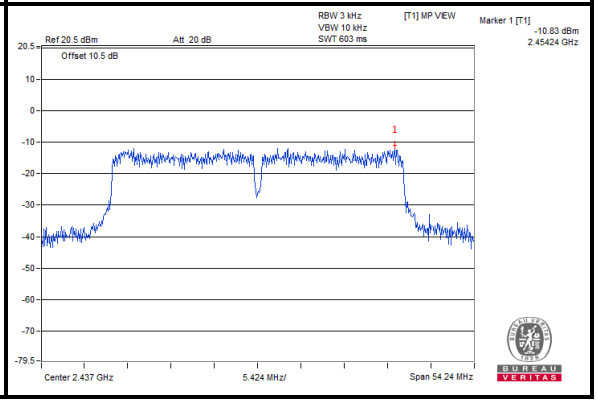
Remark: Due ANT gain > 6dBi [5 +10log(N=2)=8.01>6], so the limit need to be changed 8+[5 +10log(N=2)-6]=5.99.
Note: Method 1 of power density measurement of KDB 662911 is using for calculating total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.

802.11n HT40

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=2) dB	TOTAL PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
0	3	2422	-14.47	3.01	-11.46	5.99	PASS
	6	2437	-10.83	3.01	-7.82	5.99	PASS
	9	2452	-12.06	3.01	-9.05	5.99	PASS
1	3	2422	-14.79	3.01	-11.78	5.99	PASS
	6	2437	-10.48	3.01	-7.47	5.99	PASS
	9	2452	-13.06	3.01	-10.05	5.99	PASS

Remark: Due ANT gain > 6dBi [5 +10log(N=2)=8.01>6], so the limit need to be changed 8+[5 +10log(N=2)-6]=5.99.
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.

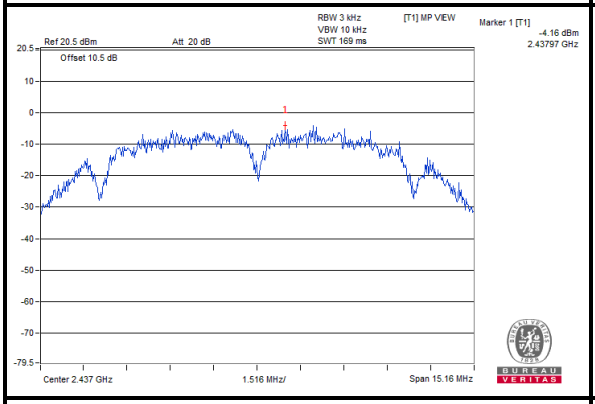
CHAIN 0

SPECTRUM PLOT OF WORST VALUE	
802.11b	802.11g
	
802.11n HT20	802.11n HT40
	

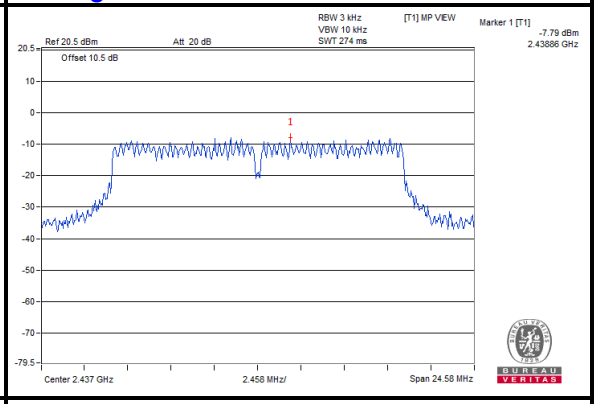
CHAIN 1

SPECTRUM PLOT OF WORST VALUE

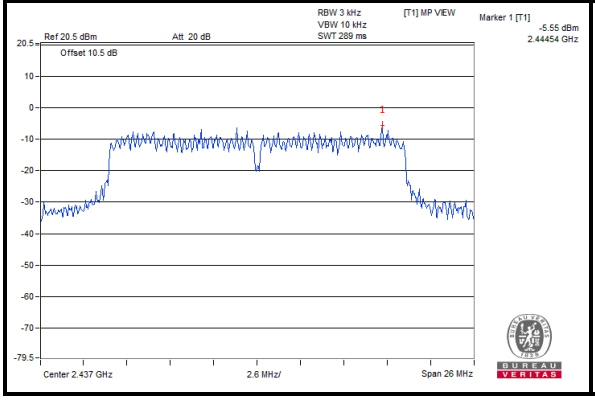
802.11b



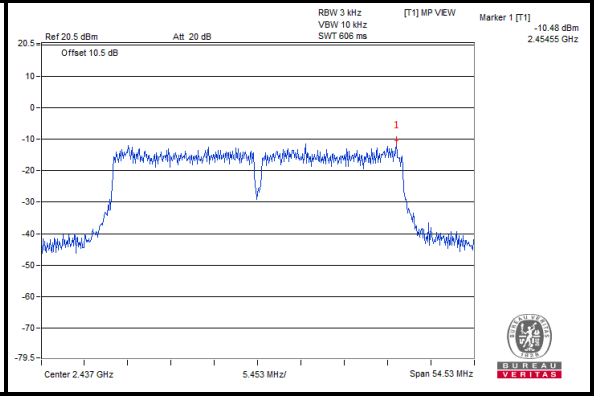
802.11g



802.11n HT20



802.11n HT40

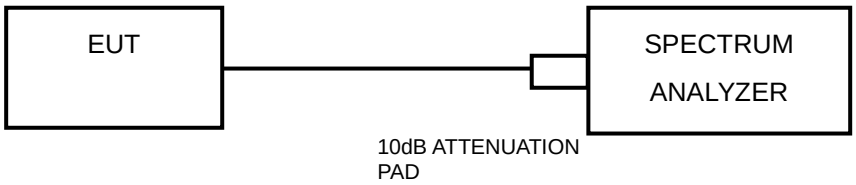


4.6 OUT OF BAND EMISSION MEASUREMENT

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

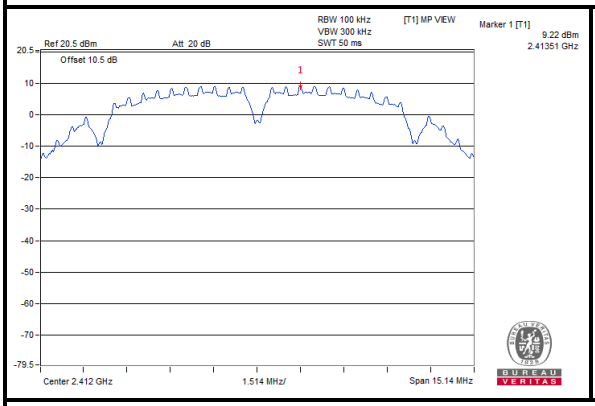
Same as item 4.3.6

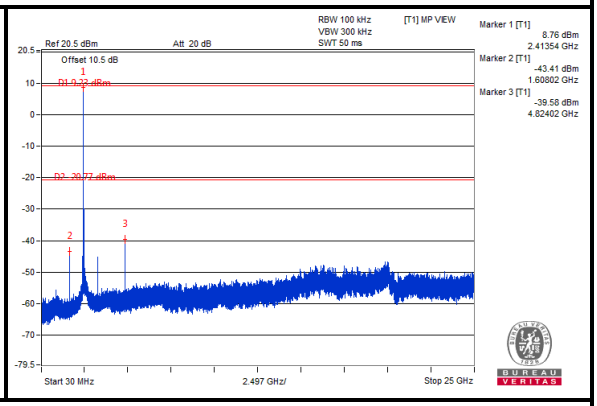
4.6.7 TEST RESULTS

802.11b

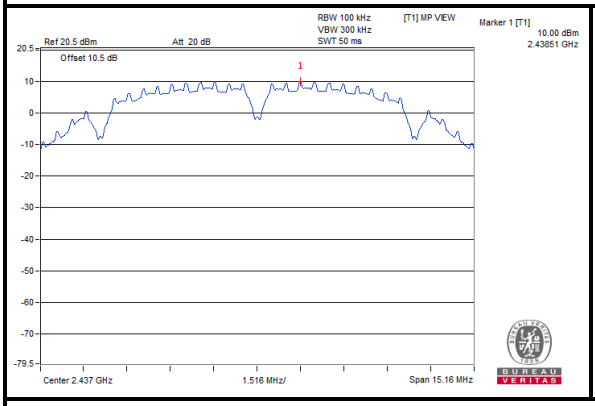
CHAIN 0

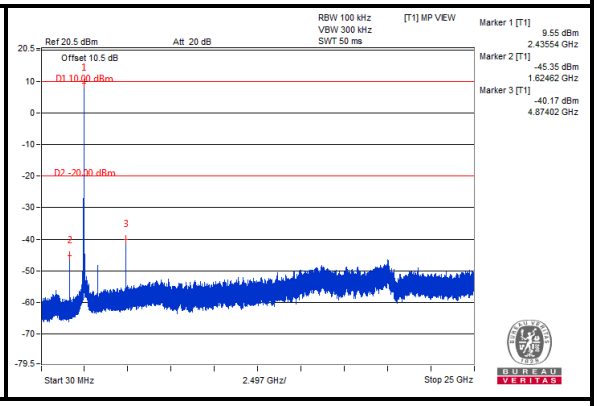
CH 1



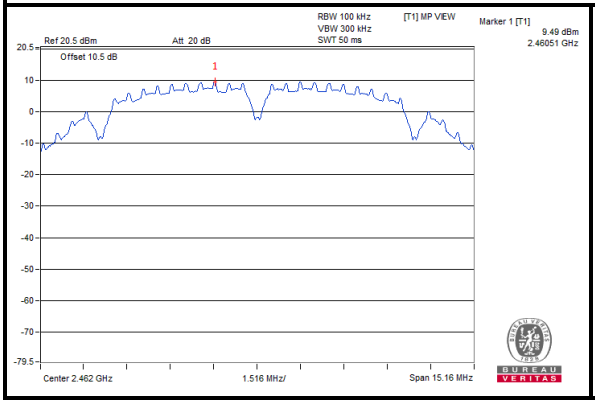


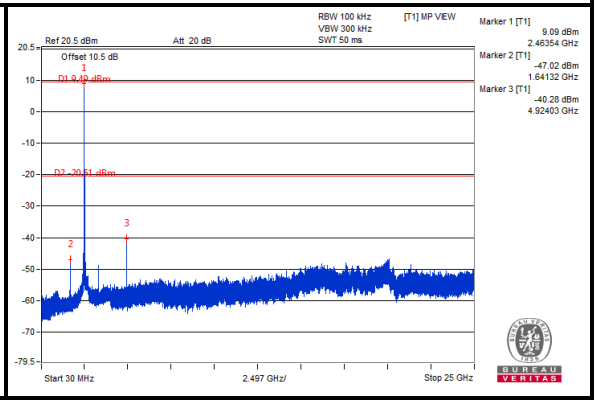
CH 6





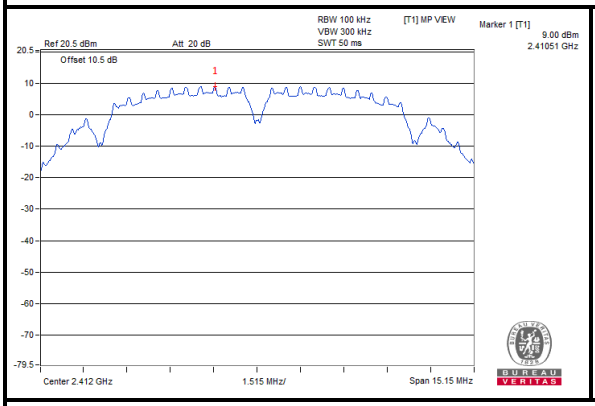
CH 11

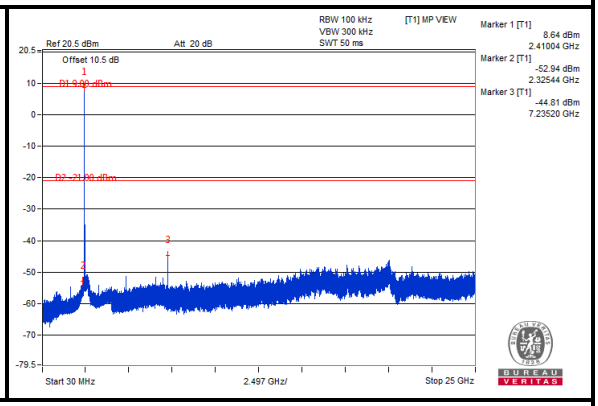




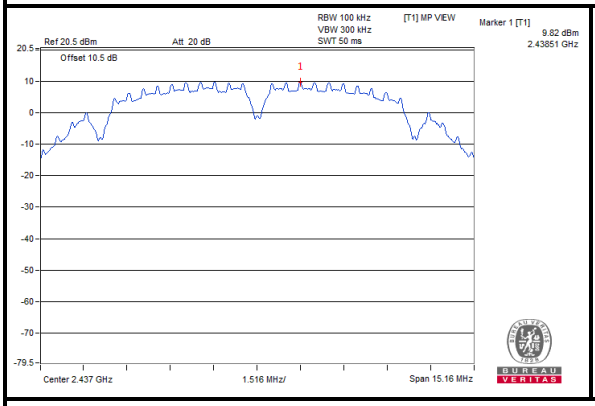
CHAIN 1

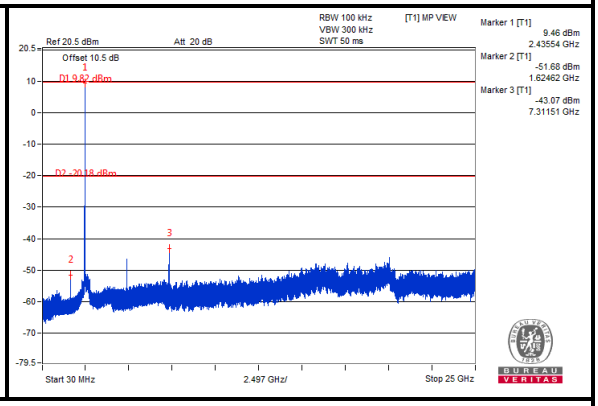
CH 1



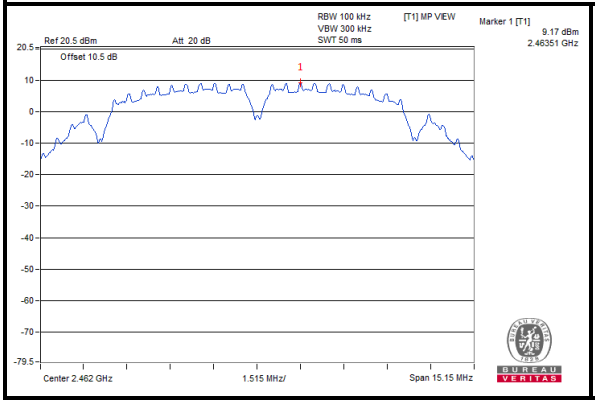


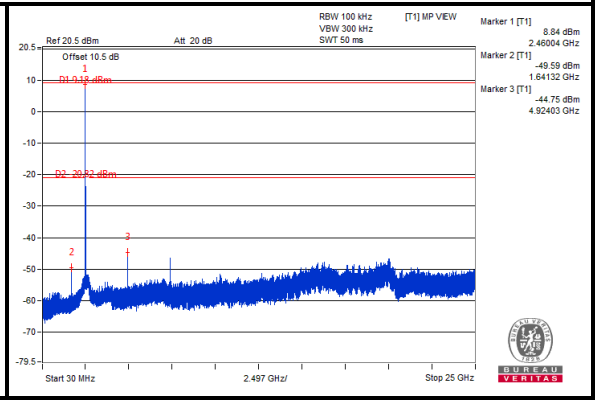
CH 6





CH 11





802.11g

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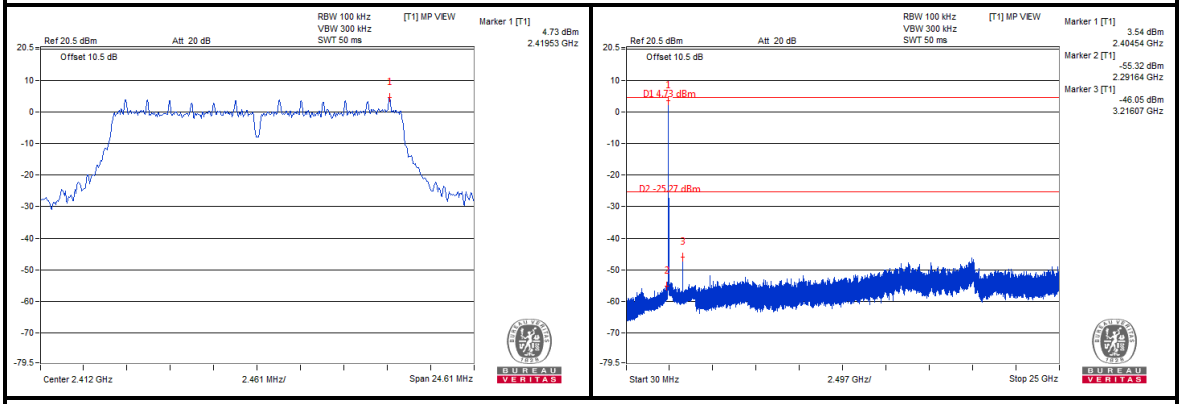
CH 1



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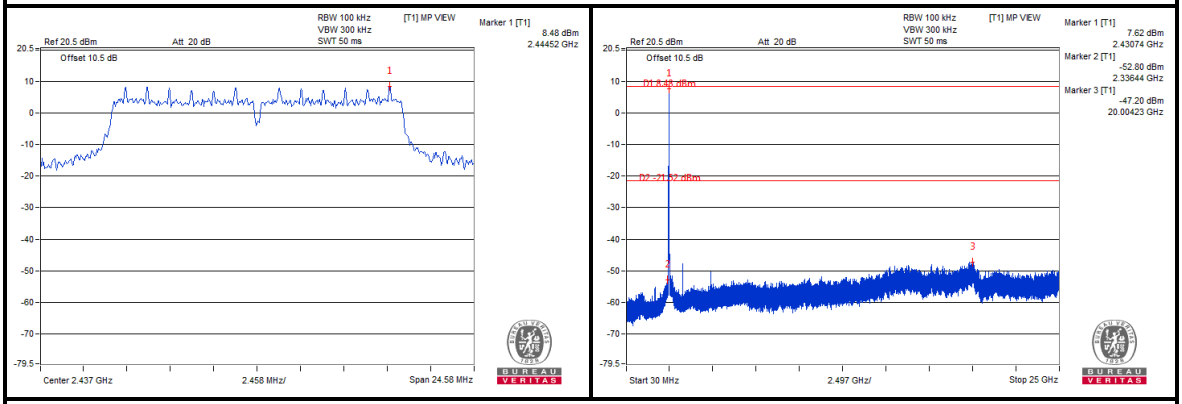

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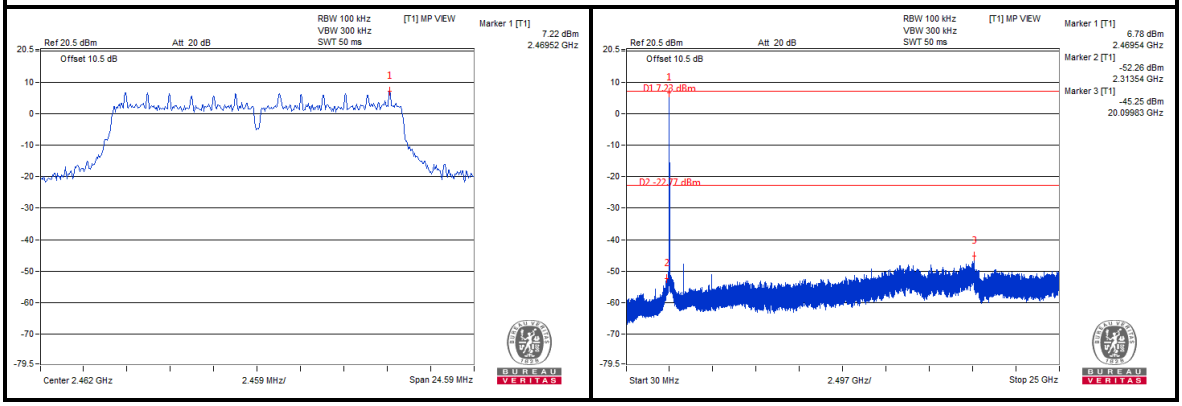

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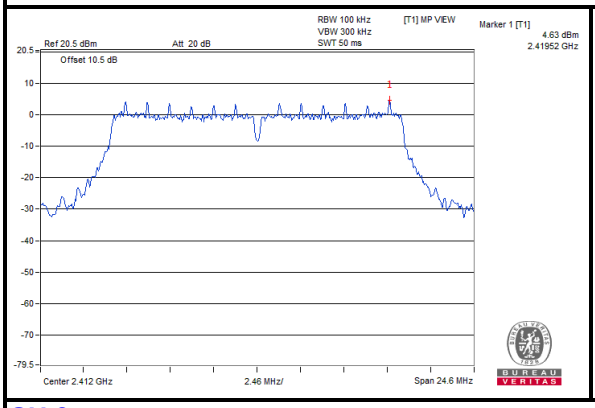
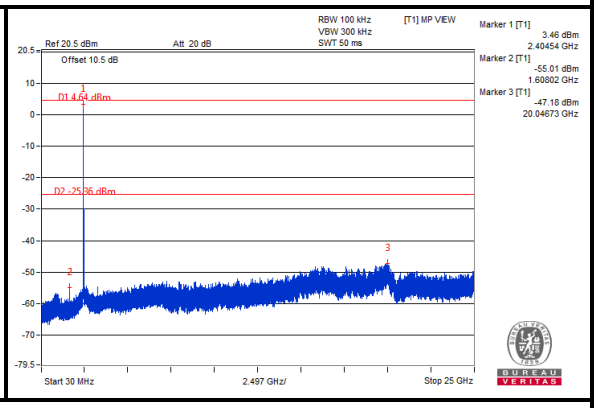
CH 1





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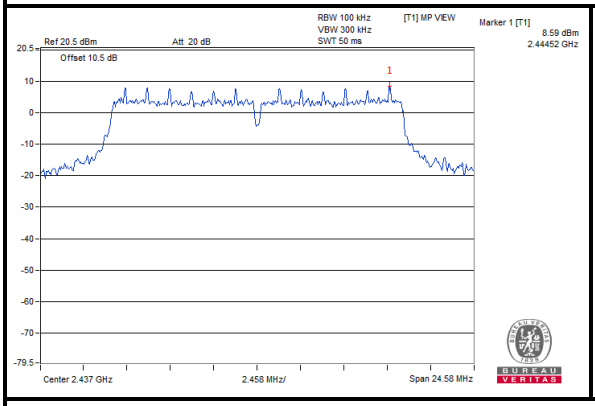

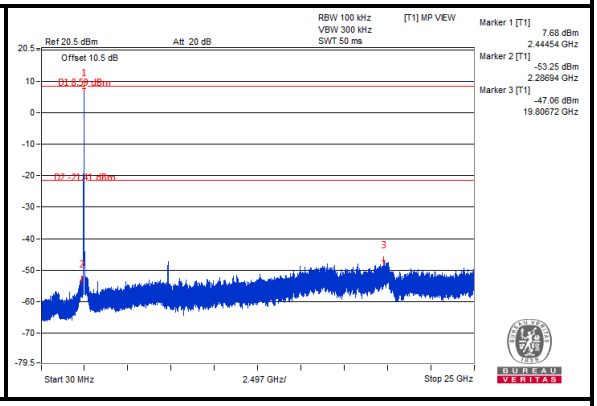

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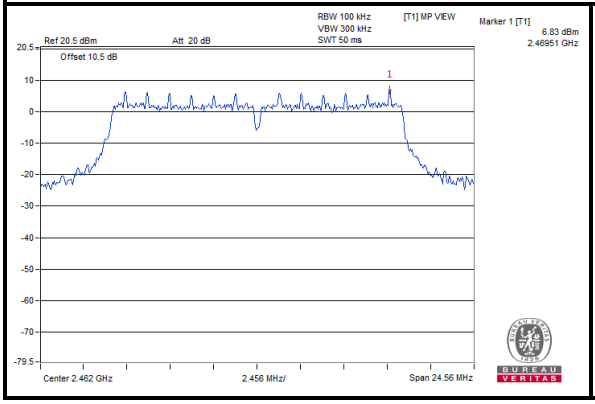

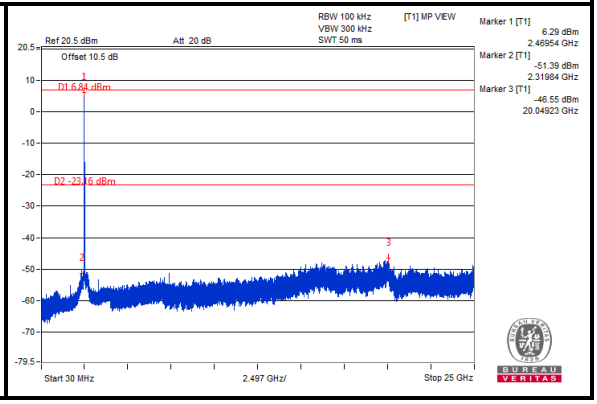

802.11n HT20

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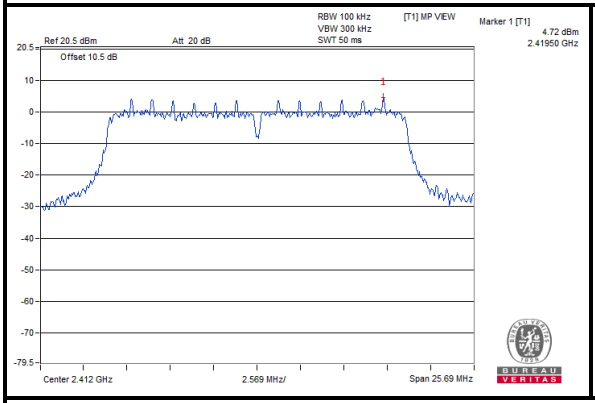

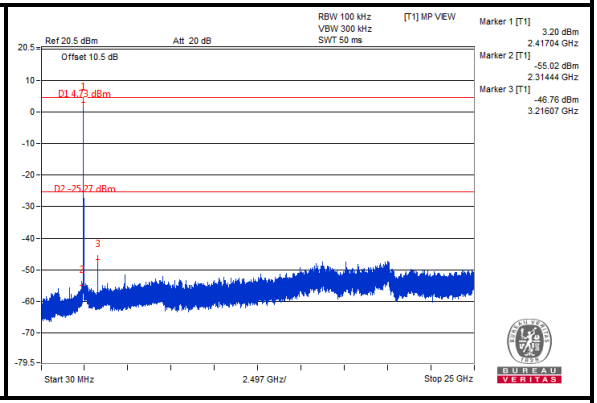

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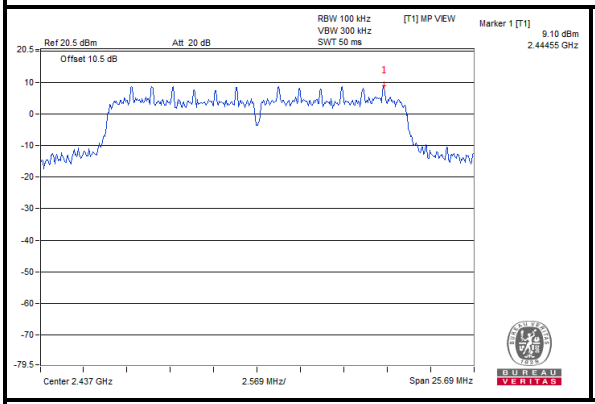

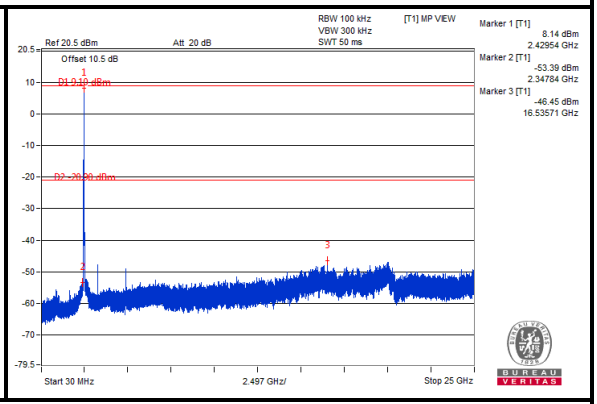

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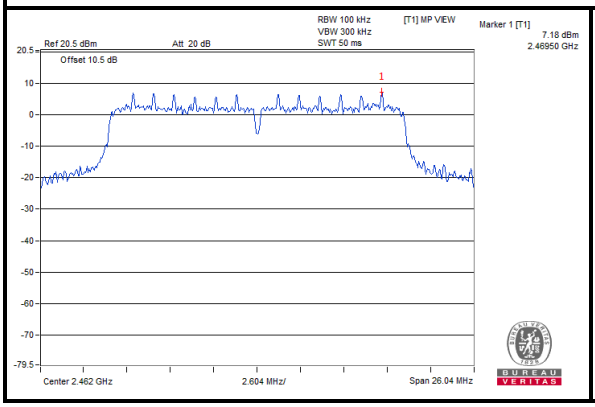
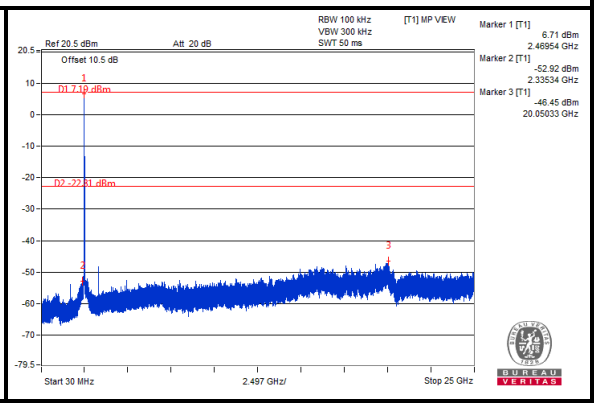
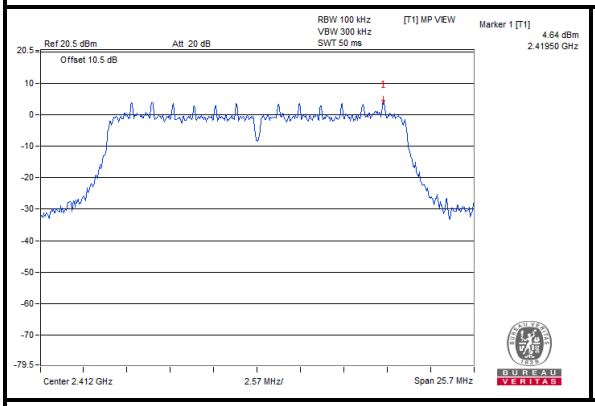
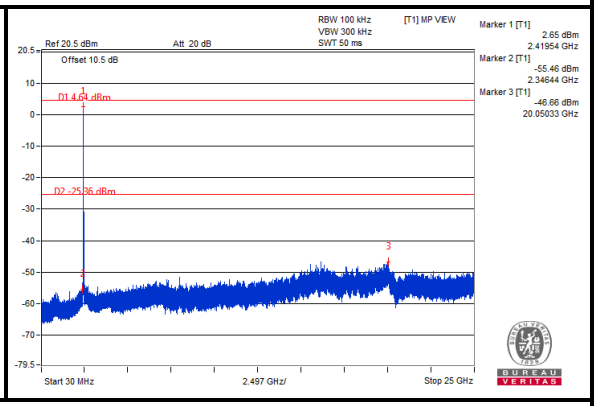




CHAIN 1

CH 1





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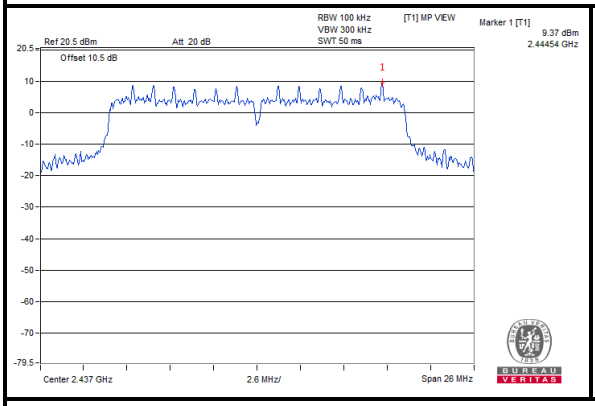

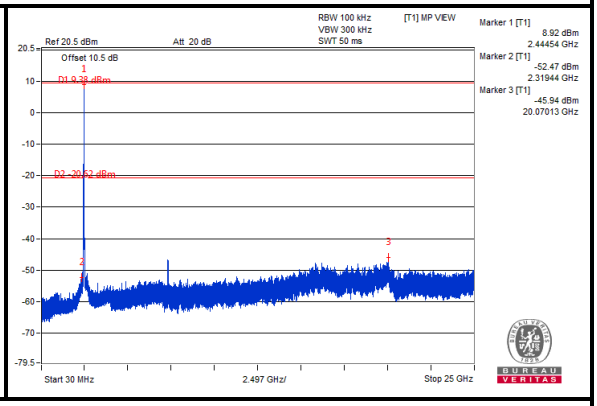

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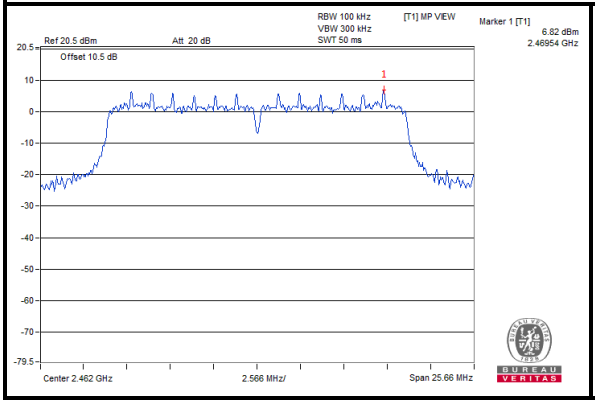
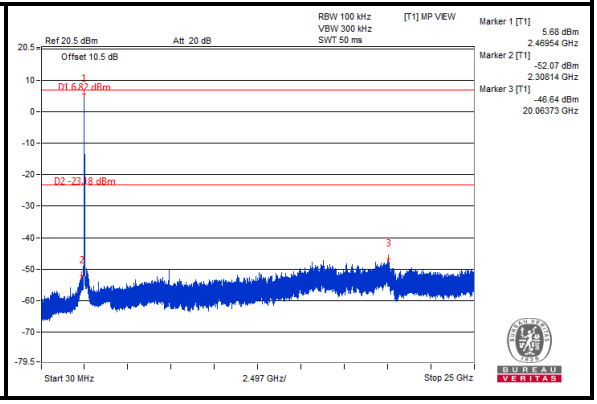
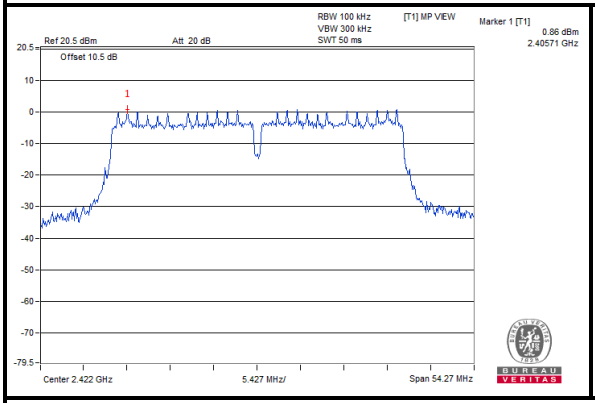


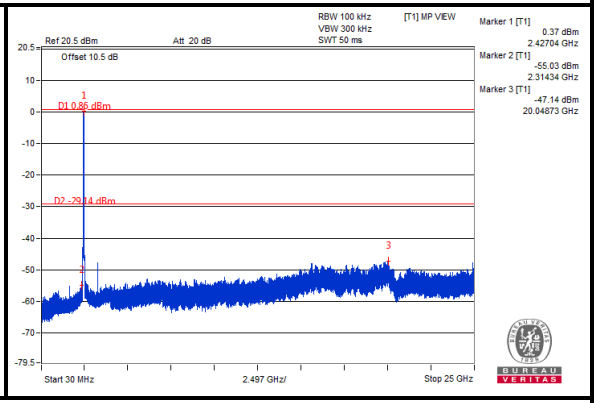


802.11n HT40

CHAIN 0

CH 3





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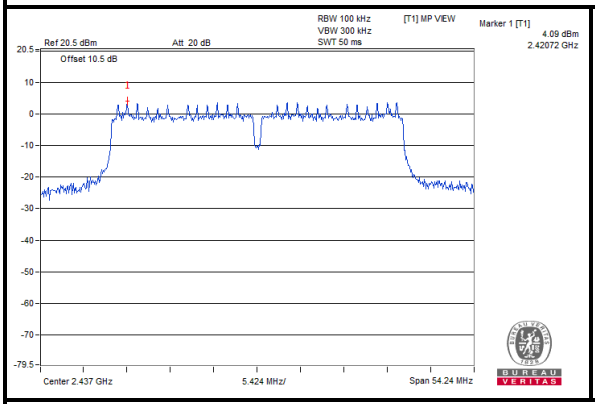
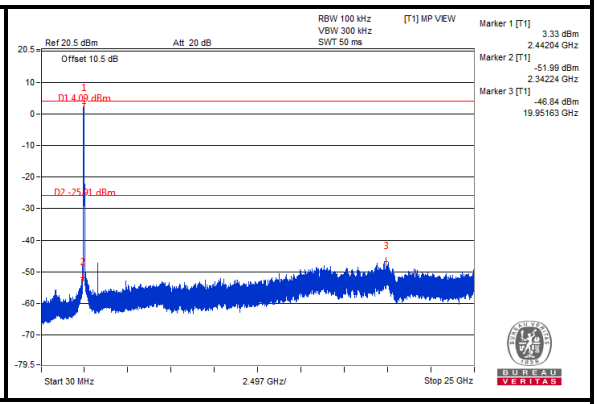
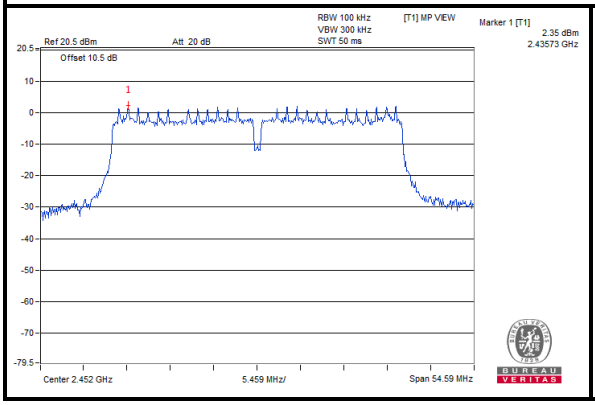
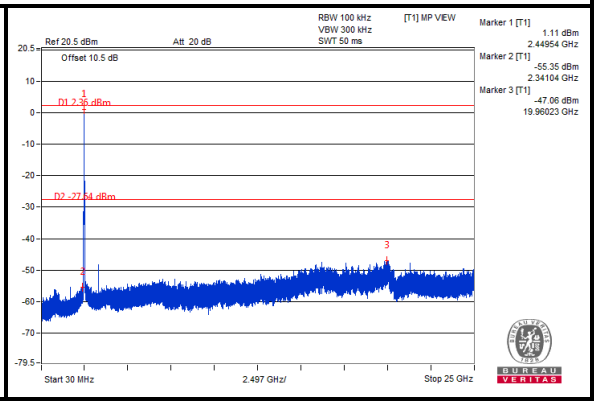




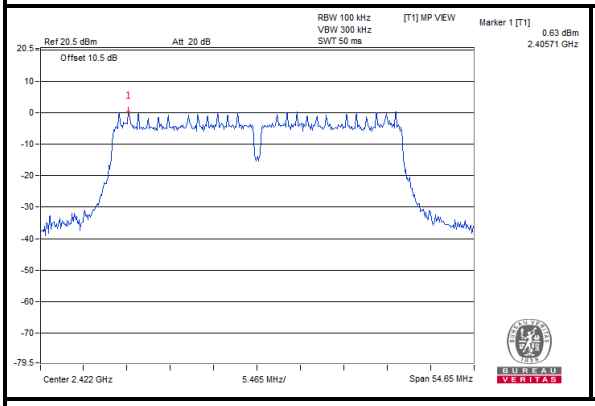
CH 9

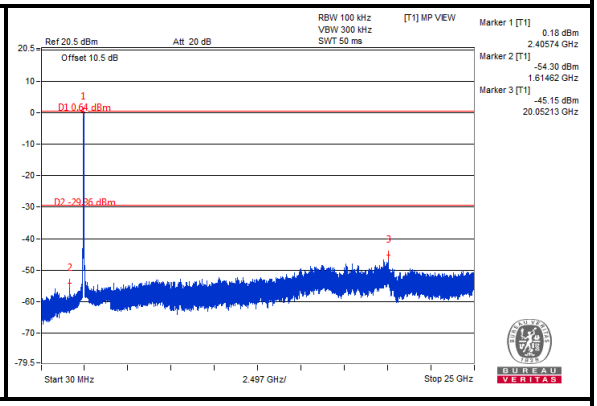




CHAIN 1

CH 3





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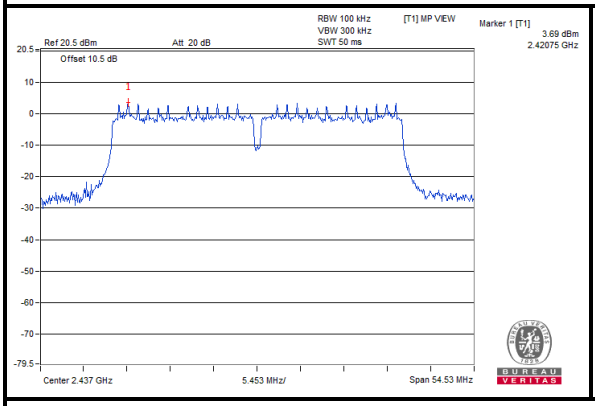

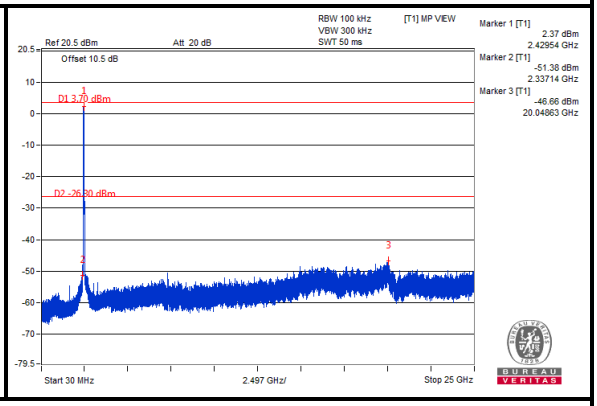

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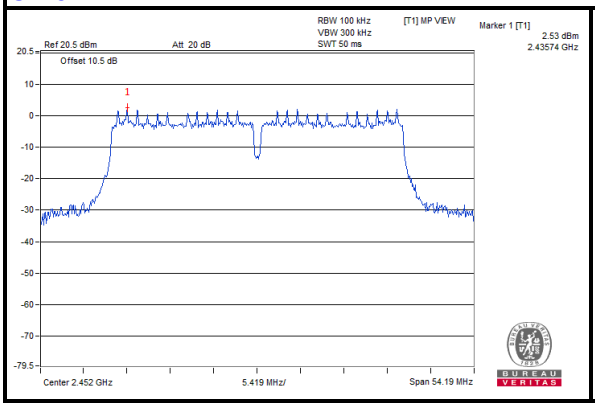
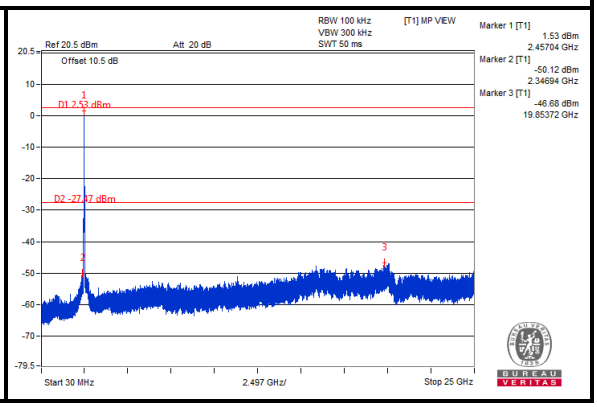
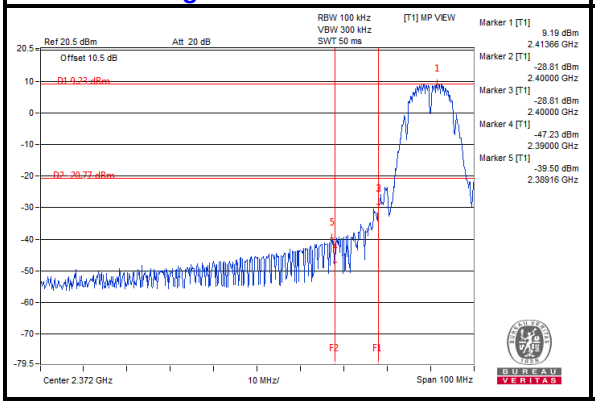




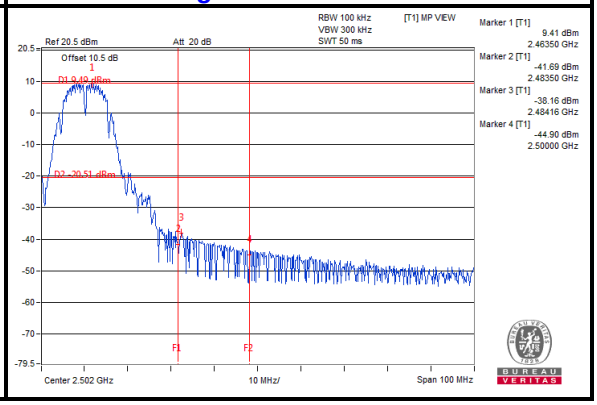
802.11b

CHAIN 0

CH 1 Band edge

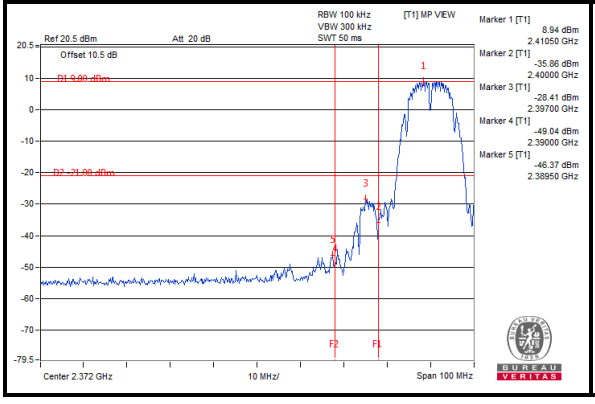


CH 11 Band edge

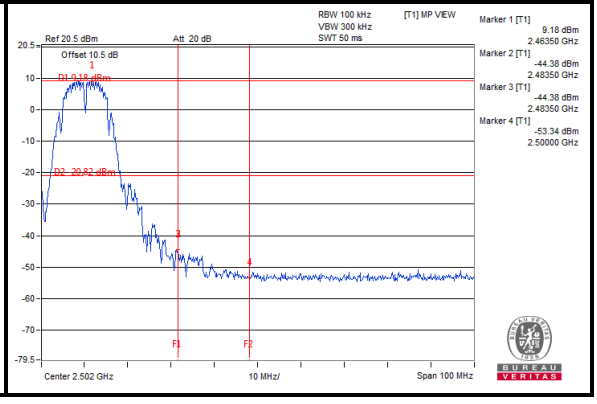


CHAIN 1

CH 1 Band edge

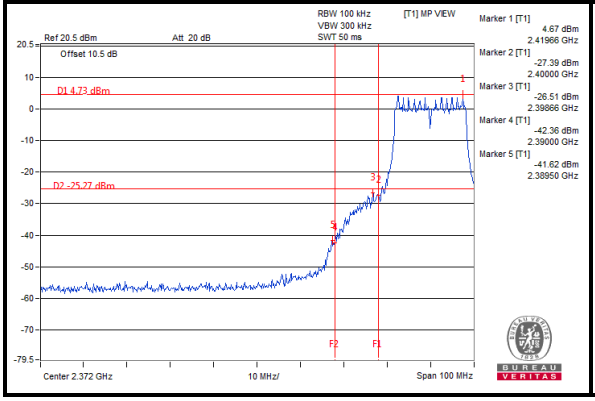
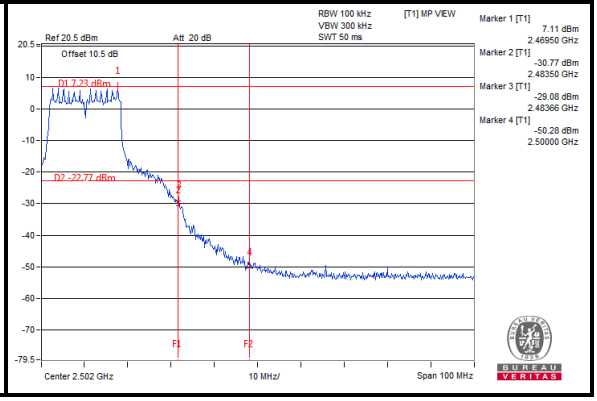


CH 11 Band edge

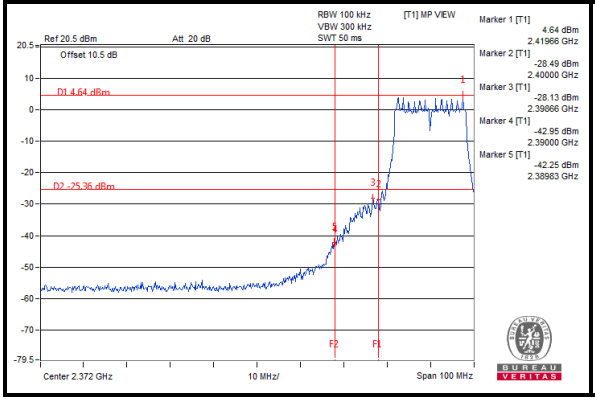
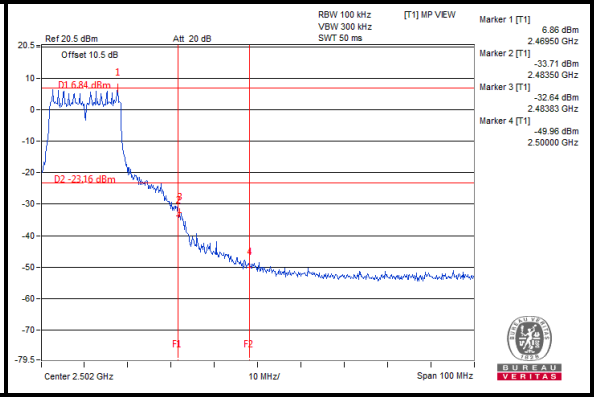


802.11g

CHAIN 0

CH 1 Band edge	CH 11 Band edge
	

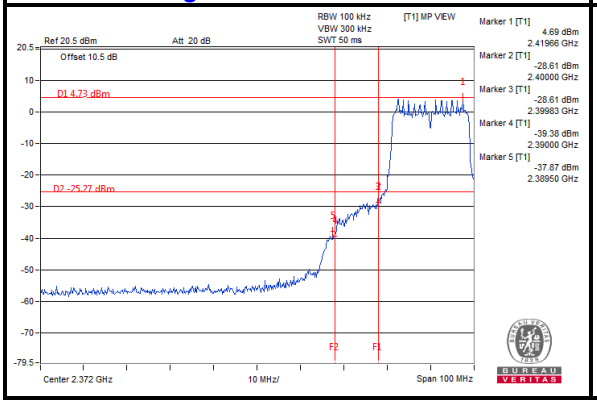
CHAIN 1

CH 1 Band edge	CH 11 Band edge
	

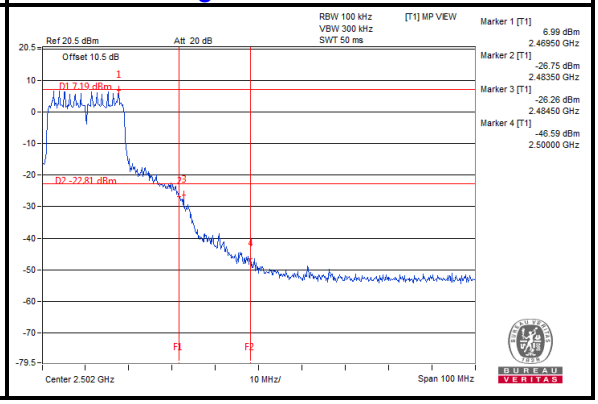
802.11n HT20

CHAIN 0

CH 1 Band edge

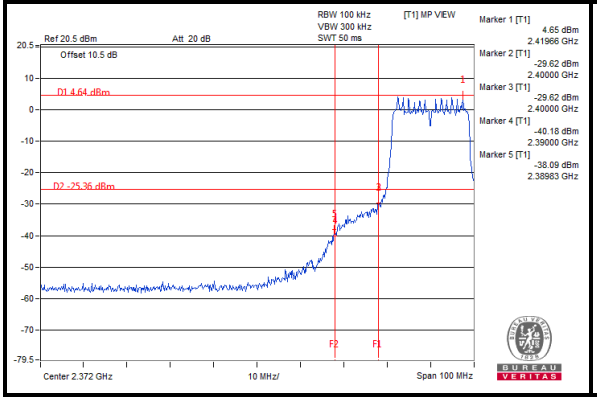


CH 11 Band edge

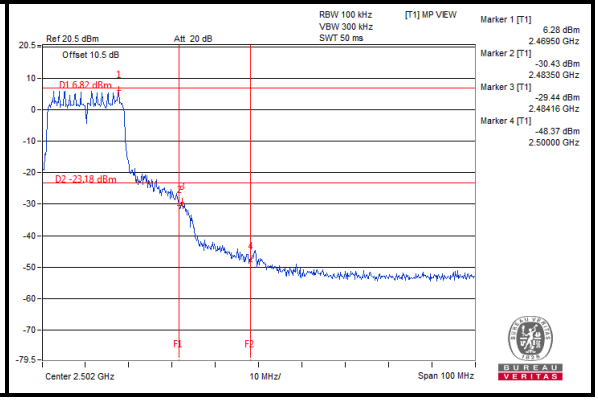


CHAIN 1

CH 1 Band edge



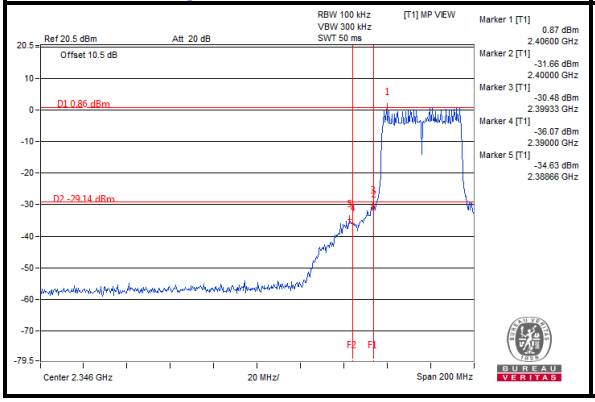
CH 11 Band edge



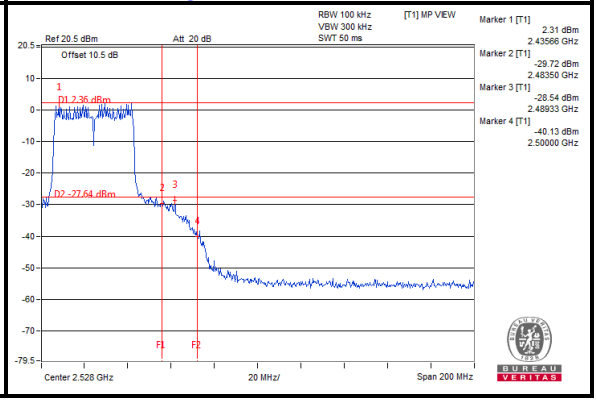
802.11n HT40

CHAIN 0

CH 3 Band edge

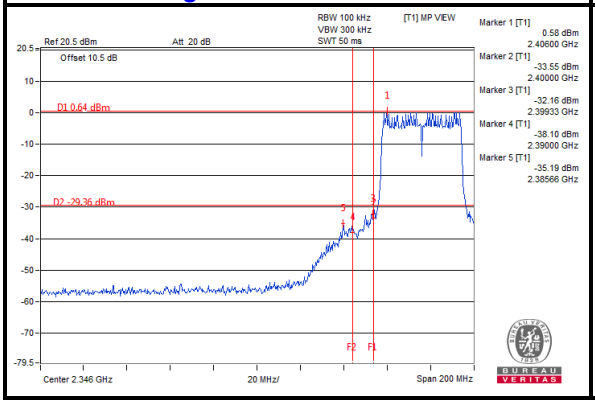


CH 9 Band edge

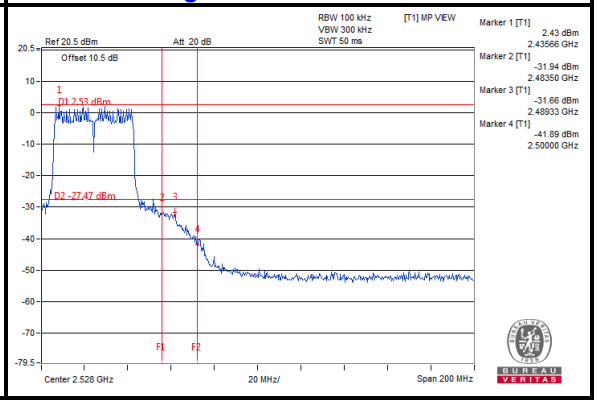


CHAIN 1

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---