FCC Test Report (WLAN)

Report No.:	RFBEMT-WTW-P20090204
FCC ID:	K7S-03609
Test Model:	WUSB6300 V2
Received Date:	July 11 2020
Test Date:	July 11 to Oct. 06, 2020
Issued Date:	Nov. 06, 2020
Applicant:	Belkin International, Inc.
Address:	12045 East Waterfront Drive Playa Vista, CA. 90094, USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022

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Release Control Record

Issue No.	Description	Date Issued
RFBEMT-WTW-P20090204	Original release.	Nov. 06, 2020

1 Certificate of Conformity

Product: Wireless-AC USB Adapter

Brand: Linksys

Test Model: WUSB6300 V2

Sample Status: ENGINEERING SAMPLE

Applicant: Belkin International, Inc.

Test Date: July 11 to Oct. 06, 2020

Standards: 47 CFR FCC Part 15, Subpart C (Section 15.247)
ANSI C63.10: 2013

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : Cherry Chuo , **Date:** Nov. 06, 2020
Cherry Chuo / Specialist

Approved by : , **Date:** Nov. 06, 2020
Clark Lin / Technical Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -16.20dB at 0.17344MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -0.2dB at 2390.00MHz.
15.247(d)	Antenna Port Emission	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted 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.

Note:
1. For 2.4GHz band compliance with rule 15.247(d) of the band-edge items, the test plots were recorded in Annex A. Test Procedures refer to report 4.1.3.
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 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	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.9 dB
Conducted emissions	-	2.5 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.1 dB
	30MHz ~ 1GHz	5.4 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.0 dB
	18GHz ~ 40GHz	5.3 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT (WLAN)

Product	Wireless-AC USB Adapter
Brand	Linksys
Test Model	WUSB6300 V2
Status of EUT	ENGINEERING SAMPLE
Driver Version	1030.39.106.2020
Power Supply Rating	5 Vdc from USB interface
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: up to 11 Mbps 802.11a/g: up to 54 Mbps 802.11n: up to 300 Mbps 802.11ac: up to 866.7 Mbps
Operating Frequency	2.4GHz: 2.412 ~ 2.462 GHz 5GHz: 5.18 ~ 5.24 GHz, 5.26 ~ 5.32 GHz, 5.50 ~ 5.70 GHz, 5.745 ~ 5.825 GHz
Number of Channel	**2.4GHz:** 802.11b, 802.11g, 802.11n (HT20): 11 802.11n (HT40): 7 **5GHz:** 802.11a, 802.11n (HT20), 802.11ac (VHT20): 24 802.11n (HT40), 802.11ac (VHT40): 11 802.11ac (VHT80): 5
Output Power	**2.4GHz:** 571.565 mW **5.18 ~ 5.24 GHz:** 68.622 mW **5.26 ~ 5.32 GHz:** 79.165 mW **5.5 ~ 5.7 GHz:** 62.378 mW **5.745 ~ 5.825 GHz:** 110.898 mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. The device of WLAN (2.4GHz) and WLAN (5GHz) technology cannot transmit simultaneously.
2. The antennas provided to the EUT, please refer to the following table:

Antenna No.	RF Chain No.	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
1	PathA for 2G	1.54	2.4~2.4835	Monopole	None
	PathA for 5G	2.74	5.15~5.85		
2	PathB for 2G	1.51	2.4~2.4835	Monopole	None
	PathB for 5G	3.3	5.15~5.85		

3. The EUT incorporates a MIMO function.

2.4GHz Band		
MODULATION MODE	**TX & RX CONFIGURATION**	
802.11b	1TX (Fixed Chain 0)	1RX (Fixed Chain 0)
802.11g	1TX (Fixed Chain 0)	1RX (Fixed Chain 0)
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
5GHz Band		
MODULATION MODE	**TX & RX CONFIGURATION**	
802.11a	1TX (Fixed Chain 0)	1RX (Fixed Chain 0)
802.11n (HT20)	2TX	2RX
802.11n (HT40)	2TX	2RX
802.11ac (VHT20)	2TX	2RX
802.11ac (VHT40)	2TX	2RX
802.11ac (VHT80)	2TX	2RX

4. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.
5. The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.2 Description of Test Modes

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

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

7 channels are provided for 802.11n (HT40):

Channel	Frequency (MHz)	Channel	Frequency
3	2422	7	2442
4	2427	8	2447
5	2432	9	2452
6	2437		

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

Where **RE≥1G:** Radiated Emission above 1GHz & Bandedge Measurement **RE<1G:** Radiated Emission below 1GHz

PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

Note: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-plane**.

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 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	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
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

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 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)
802.11n (HT20)	1 to 11	1	OFDM	BPSK	6.5

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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11n (HT20)	1 to 11	1	OFDM	BPSK	6.5

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	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
802.11n (HT20)	1 to 11	1, 6, 11	OFDM	BPSK	6.5
802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

Test Condition:

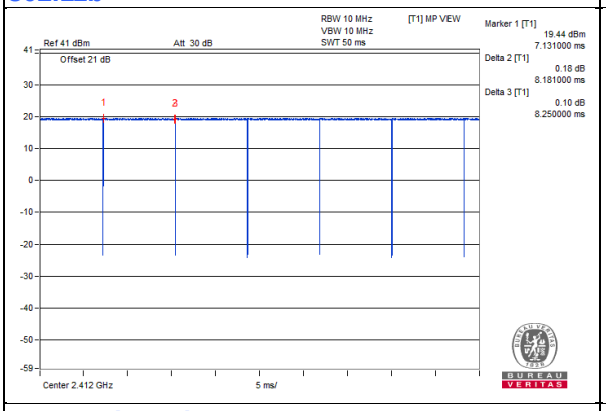
APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (System)	TESTED BY
RE≥1G	25deg. C, 75%RH	120Vac, 60Hz	Ryan Du
RE<1G	24deg. C, 66%RH	120Vac, 60Hz	Kevin Ko
PLC	25deg. C, 75%RH	120Vac, 60Hz	Kevin Ko
APCM	25deg. C, 60%RH	120Vac, 60Hz	Kevin Ko

3.3 Duty Cycle of Test Signal

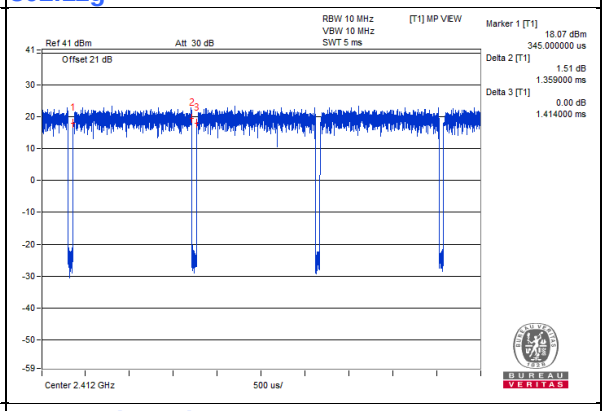
If duty cycle of test signal is ≥ 98 %, duty factor is not required.
If duty cycle of test signal is < 98 %, duty factor is not required.

802.11b: Duty cycle = 8.181 ms/8.25 ms = 0.992
802.11g: Duty cycle = 1.359 ms/1.414 ms = 0.961, Duty factor = 10 * log (1/Duty cycle) = 0.17 dB
802.11n (HT20): Duty cycle = 1.27 ms/1.333 ms = 0.953, Duty factor = 10 * log (1/Duty cycle) = 0.21 dB
802.11n (HT40): Duty cycle = 0.63 ms/0.686 ms = 0.918, Duty factor = 10 * log (1/Duty cycle) = 0.37 dB

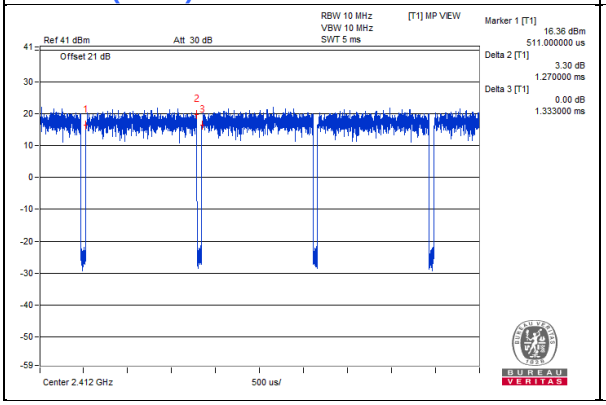
802.11b



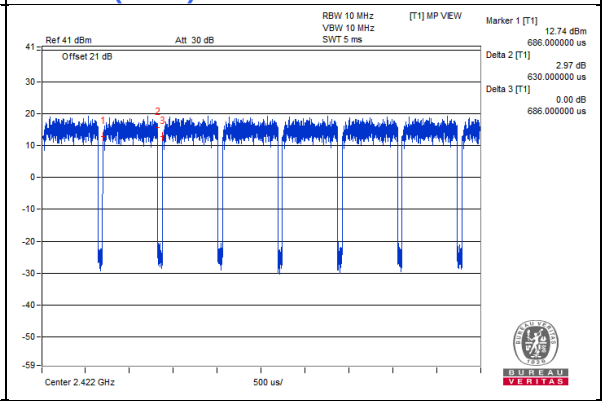
802.11g



802.11n (HT20)



802.11n (HT40)



3.4 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.

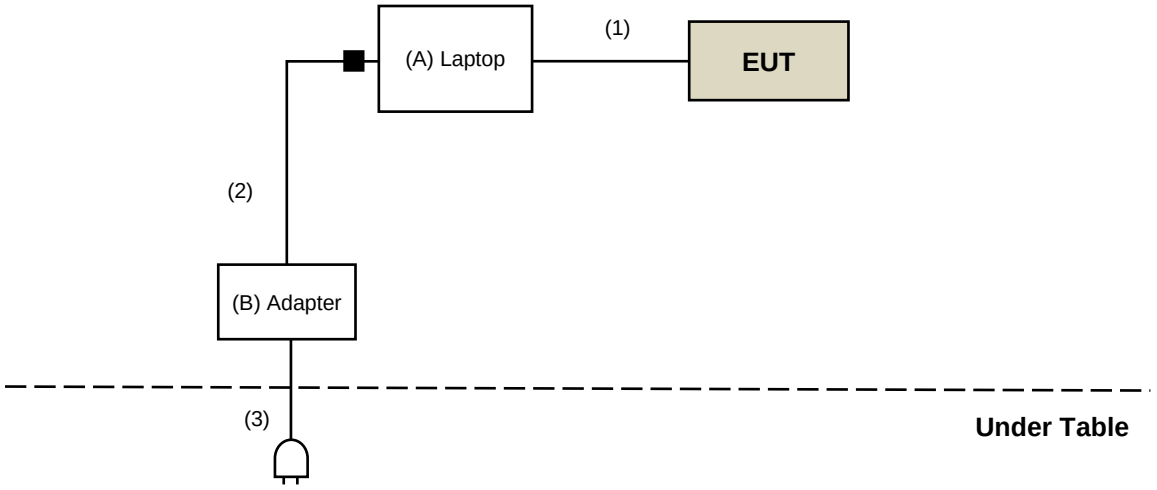
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	DELL	E5430	GM1SKV1	FCC DoC	Provided by Lab
B.	Adapter	DELL	LA65NS1-00	NA	NA	Provided by Lab

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Cable	1	1.5	Yes	0	Provided by Lab
2.	DC Cable	1	1.8	No	1	Provided by Lab
3.	AC Cable	1	0.9	No	0	Provided by Lab

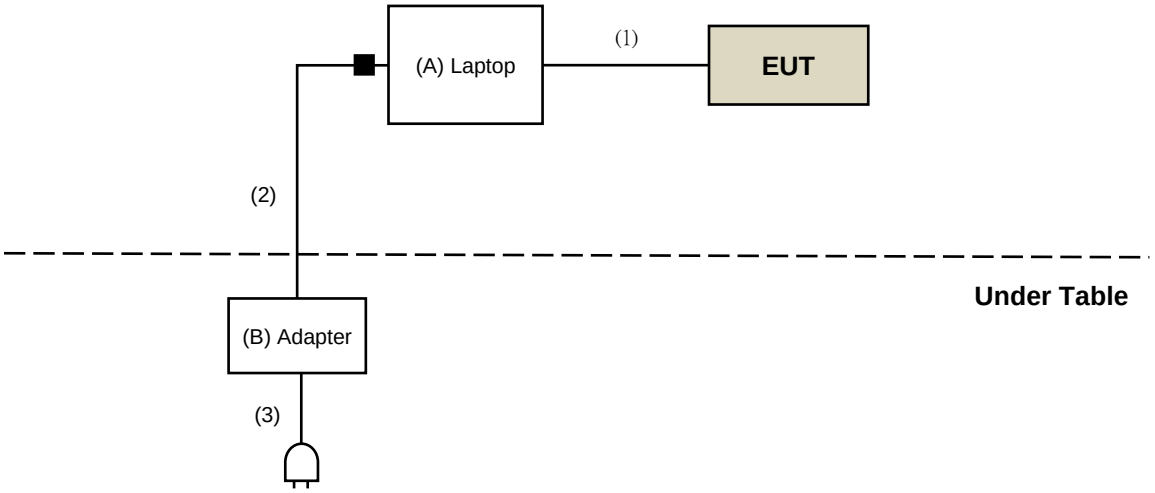
Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test

For AC Power Conducted Emissions test:



For Radiated Emissions test:



3.5 General Description of Applied Standards and references

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

Test standard:

FCC Part 15, Subpart C (15.247)
ANSI C63.10-2013

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

References Test Guidance :

KDB 558074 D01 15.247 Meas Guidance v05r02
KDB 662911 D01 Multiple Transmitter Output v02r01

All test items have been performed as a reference to the above KDB test guidance.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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. 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.

4.1.2 Test Instruments

For Radiated Emission test (below 1GHz):

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 06, 2020	July 05, 2021
Pre-Amplifier EMCI	EMC001340	980142	May 25, 2020	May 24, 2021
Loop Antenna Electro-Metrics	EM-6879	264	Feb. 18, 2020	Feb. 17, 2021
RF Cable	NA	LOOPCAB-001	Jan. 08, 2020	Jan. 07, 2021
RF Cable	NA	LOOPCAB-002	Jan. 08, 2020	Jan. 07, 2021
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	Apr. 28, 2020	Apr. 27, 2021
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 11, 2019	Nov. 10, 2020
RF Cable	8D	966-3-1	Mar. 17, 2020	Mar. 16, 2021
RF Cable	8D	966-3-2	Mar. 17, 2020	Mar. 16, 2021
RF Cable	8D	966-3-3	Mar. 17, 2020	Mar. 16, 2021
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Sep. 26, 2019	Sep. 25, 2020
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 3.
3. Tested Date: July 28, 2020

For Radiated Emission test (above 1GHz):

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 06, 2020	July 05, 2021
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Nov. 24, 2019	Nov. 23, 2020
Pre-Amplifier EMCI	EMC12630SE	980384	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC104-SM-SM-1500	180504	Apr. 29, 2020	Apr. 28, 2021
RF Cable	EMC104-SM-SM-2000	180601	June 09, 2020	June 08, 2021
RF Cable	EMC104-SM-SM-6000	180602	June 09, 2020	June 08, 2021
Spectrum Analyzer Keysight	N9030A	MY54490679	July 13, 2020	July 12, 2021
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 15, 2020	Jan. 14, 2021
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 24, 2019	Nov. 23, 2020
RF Cable	EMC102-KM-KM-1200	160924	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC-KM-KM-4000	200214	Mar. 11, 2020	Mar. 10, 2021
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 3.
3. Tested Date: Sep. 29, 2020

For Bandedge test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 13, 2019	Dec. 12, 2020
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Nov. 24, 2019	Nov. 23, 2020
Pre-Amplifier EMCI	EMC 12630 SE	980638	Apr. 08, 2020	Apr. 07, 2021
RF Cable	EMC104-SM-SM-1200	160923	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC104-SM-SM-2000	180502	Apr. 29, 2020	Apr. 28, 2021
RF Cable	EMC104-SM-SM-6000	180418	Apr. 29, 2020	Apr. 28, 2021
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 15, 2020	Jan. 14, 2021
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 24, 2019	Nov. 23, 2020
RF Cable	EMC102-KM-KM-1200	160924	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC-KM-KM-4000	200214	Mar. 11, 2020	Mar. 10, 2021
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 3.
3. Tested Date: July 11, 2020

For other test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	May 29, 2020	May 28, 2021
Spectrum Analyzer Keysight	N9030A	MY54490679	July 13, 2020	July 12, 2021
Power meter Anritsu	ML2495A	1529002	July 22, 2020	July 21, 2021
Power sensor Anritsu	MA2411B	1339443	July 22, 2020	July 21, 2021
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020	Apr. 13, 2021
Mech Switch Absorptive Mini-Circuits	MSP4TA-18+	0140	Feb. 10, 2020	Feb. 09, 2021
FXD ATTEN Mini-Circuits	BW-S3W2+	MN71981	Feb. 10, 2020	Feb. 09, 2021
Software	ADT_RF Test Software V6.6.5.4	NA	NA	NA

NOTE:
1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. Tested Date:July 26, 2020

4.1.3 Test Procedures

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. 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. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case 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 Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. 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 height of antenna 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 quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

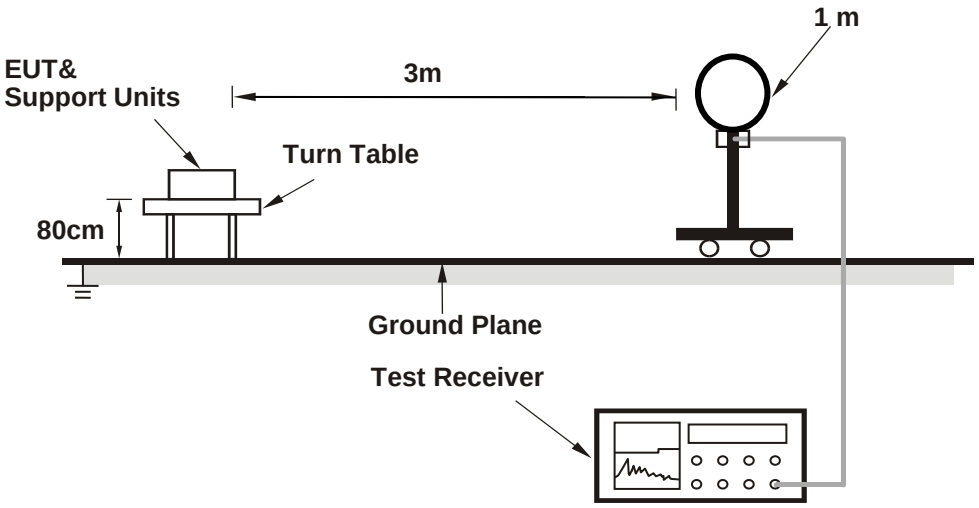
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

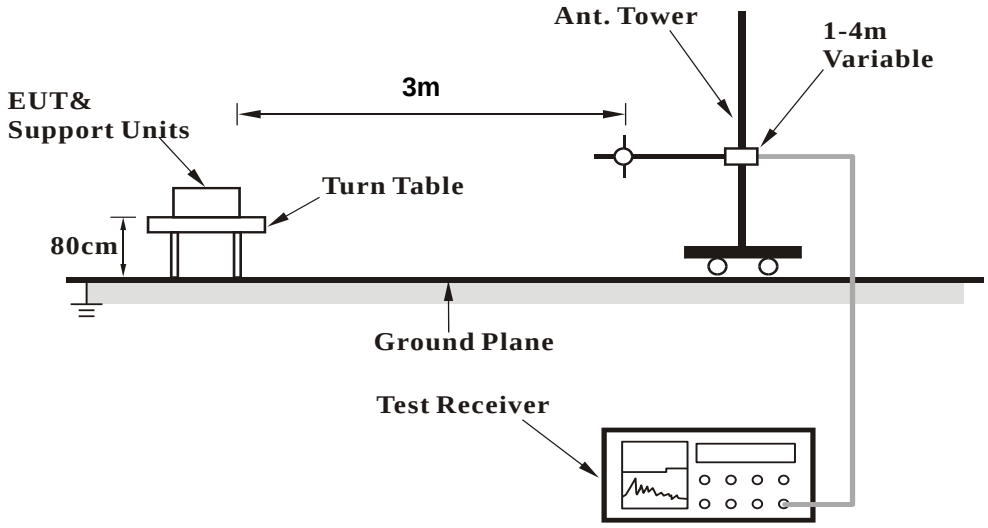
No deviation.

4.1.5 Test Setup

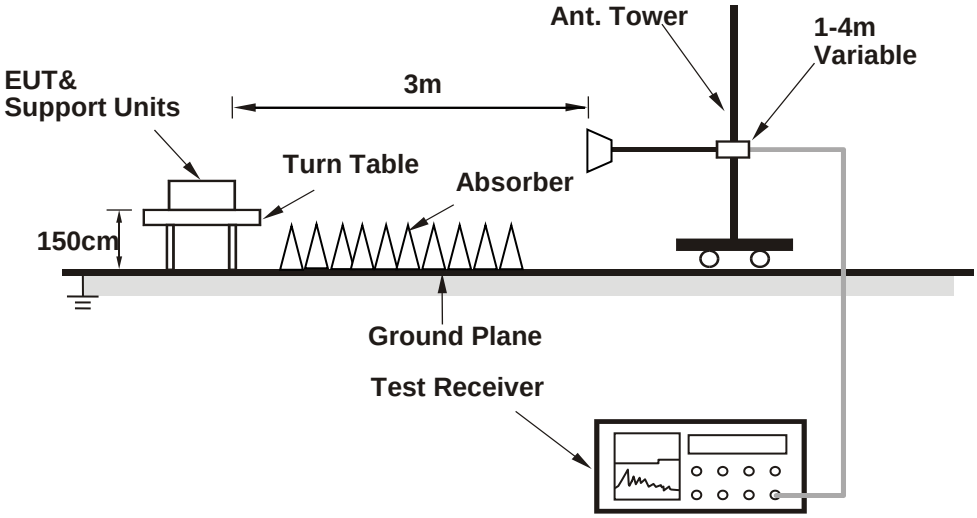
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

a. Placed the EUT on the testing table.
b. Controlling software (MP Tool 0.0006.06.20190321) has been activated to set the EUT under transmission condition continuously.

4.1.7 Test Results

ABOVE 1GHz DATA

802.11b

Channel	TX Channel 1	**Detector Function**	Peak (PK) Average (AV)
Frequency Range	1GHz ~ 25GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (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	55.6 PK	74.0	-18.4	1.04 H	357	57.2	-1.6
2	2390.00	45.1 AV	54.0	-8.9	1.04 H	357	46.7	-1.6
3	*2412.00	107.7 PK			1.04 H	357	109.3	-1.6
4	*2412.00	105.3 AV			1.04 H	357	106.9	-1.6
5	4824.00	39.3 PK	74.0	-34.7	1.75 H	360	36.1	3.2
6	4824.00	29.4 AV	54.0	-24.6	1.75 H	360	26.2	3.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (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	56.0 PK	74.0	-18.0	3.21 V	277	57.6	-1.6
2	2390.00	46.6 AV	54.0	-7.4	3.21 V	277	48.2	-1.6
3	*2412.00	108.9 PK			3.21 V	277	110.5	-1.6
4	*2412.00	106.8 AV			3.21 V	277	108.4	-1.6
5	4824.00	46.5 PK	74.0	-27.5	2.50 V	272	43.3	3.2
6	4824.00	37.4 AV	54.0	-16.6	2.50 V	272	34.2	3.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
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	Frequency (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	55.6 PK	74.0	-18.4	1.09 H	360	57.2	-1.6
2	2390.00	45.2 AV	54.0	-8.8	1.09 H	360	46.8	-1.6
3	*2437.00	108.3 PK			1.09 H	360	109.9	-1.6
4	*2437.00	105.7 AV			1.09 H	360	107.3	-1.6
5	2483.50	55.0 PK	74.0	-19.0	1.09 H	360	56.6	-1.6
6	2483.50	45.1 AV	54.0	-8.9	1.09 H	360	46.7	-1.6
7	4874.00	39.6 PK	74.0	-34.4	1.72 H	360	36.4	3.2
8	4874.00	29.6 AV	54.0	-24.4	1.72 H	360	26.4	3.2
9	7311.00	45.2 PK	74.0	-28.8	2.52 H	165	35.8	9.4
10	7311.00	31.1 AV	54.0	-22.9	2.52 H	165	21.7	9.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	55.3 PK	74.0	-18.7	2.19 V	280	56.9	-1.6
2	2390.00	45.2 AV	54.0	-8.8	2.19 V	280	46.8	-1.6
3	*2437.00	110.2 PK			2.19 V	280	111.8	-1.6
4	*2437.00	107.3 AV			2.19 V	280	108.9	-1.6
5	2483.50	54.9 PK	74.0	-19.1	2.19 V	280	56.5	-1.6
6	2483.50	44.8 AV	54.0	-9.2	2.19 V	280	46.4	-1.6
7	4874.00	46.7 PK	74.0	-27.3	2.51 V	273	43.5	3.2
8	4874.00	37.1 AV	54.0	-16.9	2.51 V	273	33.9	3.2
9	7311.00	41.3 PK	74.0	-32.7	1.75 V	85	31.9	9.4
10	7311.00	32.6 AV	54.0	-21.4	1.75 V	85	23.2	9.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
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	Frequency (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	107.8 PK			1.16 H	353	109.4	-1.6
2	*2462.00	105.5 AV			1.16 H	353	107.1	-1.6
3	2483.50	55.2 PK	74.0	-18.8	1.16 H	353	56.8	-1.6
4	2483.50	45.4 AV	54.0	-8.6	1.16 H	353	47.0	-1.6
5	4924.00	39.9 PK	74.0	-34.1	1.69 H	360	36.8	3.1
6	4924.00	30.0 AV	54.0	-24.0	1.69 H	360	26.9	3.1
7	7386.00	44.9 PK	74.0	-29.1	2.53 H	152	35.2	9.7
8	7386.00	31.1 AV	54.0	-22.9	2.53 H	152	21.4	9.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	109.3 PK			2.28 V	282	110.9	-1.6
2	*2462.00	106.9 AV			2.28 V	282	108.5	-1.6
3	2483.50	56.5 PK	74.0	-17.5	2.28 V	282	58.1	-1.6
4	2483.50	46.0 AV	54.0	-8.0	2.28 V	282	47.6	-1.6
5	4924.00	46.3 PK	74.0	-27.7	2.49 V	272	43.2	3.1
6	4924.00	36.9 AV	54.0	-17.1	2.49 V	272	33.8	3.1
7	7386.00	41.4 PK	74.0	-32.6	1.77 V	87	31.7	9.7
8	7386.00	32.5 AV	54.0	-21.5	1.77 V	87	22.8	9.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

802.11g

Channel	TX Channel 1	Detector Function	Peak (PK) Average (AV)
Frequency Range	1GHz ~ 25GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	66.5 PK	74.0	-7.5	1.00 H	358	68.1	-1.6
2	2390.00	51.1 AV	54.0	-2.9	1.00 H	358	52.7	-1.6
3	*2412.00	108.5 PK			1.00 H	358	110.1	-1.6
4	*2412.00	98.3 AV			1.00 H	358	99.9	-1.6
5	4824.00	39.7 PK	74.0	-34.3	1.71 H	360	36.5	3.2
6	4824.00	29.7 AV	54.0	-24.3	1.71 H	360	26.5	3.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	71.6 PK	74.0	-2.4	2.36 V	283	73.2	-1.6
2	2390.00	53.5 AV	54.0	-0.5	2.36 V	283	55.1	-1.6
3	*2412.00	111.6 PK			2.36 V	283	113.2	-1.6
4	*2412.00	102.1 AV			2.36 V	283	103.7	-1.6
5	4824.00	45.8 PK	74.0	-28.2	2.48 V	282	42.6	3.2
6	4824.00	36.2 AV	54.0	-17.8	2.48 V	282	33.0	3.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
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	Frequency (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	56.3 PK	74.0	-17.7	1.03 H	355	57.9	-1.6
2	2390.00	44.7 AV	54.0	-9.3	1.03 H	355	46.3	-1.6
3	*2437.00	109.2 PK			1.03 H	355	110.8	-1.6
4	*2437.00	98.7 AV			1.03 H	355	100.3	-1.6
5	2483.50	55.4 PK	74.0	-18.6	1.03 H	355	57.0	-1.6
6	2483.50	43.0 AV	54.0	-11.0	1.03 H	355	44.6	-1.6
7	4874.00	39.2 PK	74.0	-34.8	1.67 H	360	36.0	3.2
8	4874.00	29.4 AV	54.0	-24.6	1.67 H	360	26.2	3.2
9	7311.00	45.1 PK	74.0	-28.9	2.52 H	166	35.7	9.4
10	7311.00	31.0 AV	54.0	-23.0	2.52 H	166	21.6	9.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	56.6 PK	74.0	-17.4	2.19 V	280	58.2	-1.6
2	2390.00	44.8 AV	54.0	-9.2	2.19 V	280	46.4	-1.6
3	*2437.00	112.4 PK			2.19 V	280	114.0	-1.6
4	*2437.00	102.7 AV			2.19 V	280	104.3	-1.6
5	2483.50	55.8 PK	74.0	-18.2	2.19 V	280	57.4	-1.6
6	2483.50	43.3 AV	54.0	-10.7	2.19 V	280	44.9	-1.6
7	4874.00	46.7 PK	74.0	-27.3	2.48 V	282	43.5	3.2
8	4874.00	36.9 AV	54.0	-17.1	2.48 V	282	33.7	3.2
9	7311.00	40.9 PK	74.0	-33.1	1.76 V	84	31.5	9.4
10	7311.00	32.6 AV	54.0	-21.4	1.76 V	84	23.2	9.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
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	Frequency (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	105.4 PK			1.01 H	360	107.0	-1.6
2	*2462.00	95.2 AV			1.01 H	360	96.8	-1.6
3	2483.50	63.6 PK	74.0	-10.4	1.01 H	360	65.2	-1.6
4	2483.50	49.3 AV	54.0	-4.7	1.01 H	360	50.9	-1.6
5	4924.00	39.7 PK	74.0	-34.3	1.78 H	360	36.6	3.1
6	4924.00	29.5 AV	54.0	-24.5	1.78 H	360	26.4	3.1
7	7386.00	44.4 PK	74.0	-29.6	2.57 H	161	34.7	9.7
8	7386.00	30.6 AV	54.0	-23.4	2.57 H	161	20.9	9.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	109.5 PK			2.22 V	283	111.1	-1.6
2	*2462.00	99.1 AV			2.22 V	283	100.7	-1.6
3	2483.50	71.1 PK	74.0	-2.9	2.22 V	283	72.7	-1.6
4	2483.50	53.4 AV	54.0	-0.6	2.22 V	283	55.0	-1.6
5	4924.00	47.3 PK	74.0	-26.7	2.48 V	284	44.2	3.1
6	4924.00	37.2 AV	54.0	-16.8	2.48 V	284	34.1	3.1
7	7386.00	41.4 PK	74.0	-32.6	1.76 V	86	31.7	9.7
8	7386.00	33.1 AV	54.0	-20.9	1.76 V	86	23.4	9.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

802.11n (HT20)

Channel	TX Channel 1	Detector Function	Peak (PK) Average (AV)
Frequency Range	1GHz ~ 25GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	69.8 PK	74.0	-4.2	2.22 H	348	71.4	-1.6
2	2390.00	52.2 AV	54.0	-1.8	2.22 H	348	53.8	-1.6
3	*2412.00	111.1 PK			2.22 H	348	112.7	-1.6
4	*2412.00	100.5 AV			2.22 H	348	102.1	-1.6
5	4824.00	40.4 PK	74.0	-33.6	1.69 H	360	37.2	3.2
6	4824.00	30.4 AV	54.0	-23.6	1.69 H	360	27.2	3.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	68.9 PK	74.0	-5.1	3.26 V	282	70.5	-1.6
2	2390.00	53.3 AV	54.0	-0.7	3.26 V	282	54.9	-1.6
3	*2412.00	109.6 PK			3.26 V	282	111.2	-1.6
4	*2412.00	100.7 AV			3.26 V	282	102.3	-1.6
5	4824.00	45.6 PK	74.0	-28.4	2.48 V	282	42.4	3.2
6	4824.00	36.1 AV	54.0	-17.9	2.48 V	282	32.9	3.2

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
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	Frequency (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	54.5 PK	74.0	-19.5	2.23 H	337	56.1	-1.6
2	2390.00	43.0 AV	54.0	-11.0	2.23 H	337	44.6	-1.6
3	*2437.00	111.2 PK			2.23 H	337	112.8	-1.6
4	*2437.00	100.6 AV			2.23 H	337	102.2	-1.6
5	2483.50	55.4 PK	74.0	-18.6	2.23 H	337	57.0	-1.6
6	2483.50	43.0 AV	54.0	-11.0	2.23 H	337	44.6	-1.6
7	4874.00	40.0 PK	74.0	-34.0	1.74 H	360	36.8	3.2
8	4874.00	30.0 AV	54.0	-24.0	1.74 H	360	26.8	3.2
9	7311.00	45.4 PK	74.0	-28.6	2.48 H	175	36.0	9.4
10	7311.00	31.2 AV	54.0	-22.8	2.48 H	175	21.8	9.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	54.8 PK	74.0	-19.2	3.26 V	282	56.4	-1.6
2	2390.00	43.5 AV	54.0	-10.5	3.26 V	282	45.1	-1.6
3	*2437.00	112.2 PK			3.26 V	282	113.8	-1.6
4	*2437.00	103.3 AV			3.26 V	282	104.9	-1.6
5	2483.50	54.9 PK	74.0	-19.1	3.26 V	282	56.5	-1.6
6	2483.50	42.7 AV	54.0	-11.3	3.26 V	282	44.3	-1.6
7	4874.00	47.3 PK	74.0	-26.7	2.48 V	282	44.1	3.2
8	4874.00	37.2 AV	54.0	-16.8	2.48 V	282	34.0	3.2
9	7311.00	41.3 PK	74.0	-32.7	1.76 V	84	31.9	9.4
10	7311.00	32.8 AV	54.0	-21.2	1.76 V	84	23.4	9.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
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	Frequency (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	105.8 PK			2.21 H	352	107.4	-1.6
2	*2462.00	97.1 AV			2.21 H	352	98.7	-1.6
3	2483.50	62.9 PK	74.0	-11.1	2.21 H	352	64.5	-1.6
4	2483.50	47.0 AV	54.0	-7.0	2.21 H	352	48.6	-1.6
5	4924.00	39.2 PK	74.0	-34.8	1.76 H	360	36.1	3.1
6	4924.00	29.4 AV	54.0	-24.6	1.76 H	360	26.3	3.1
7	7386.00	44.8 PK	74.0	-29.2	2.50 H	181	35.1	9.7
8	7386.00	30.7 AV	54.0	-23.3	2.50 H	181	21.0	9.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	110.5 PK			3.10 V	285	112.1	-1.6
2	*2462.00	101.1 AV			3.10 V	285	102.7	-1.6
3	2483.50	72.1 PK	74.0	-1.9	3.10 V	285	73.7	-1.6
4	2483.50	53.6 AV	54.0	-0.4	3.10 V	285	55.2	-1.6
5	4924.00	47.5 PK	74.0	-26.5	2.48 V	281	44.4	3.1
6	4924.00	37.3 AV	54.0	-16.7	2.48 V	281	34.2	3.1
7	7386.00	41.7 PK	74.0	-32.3	1.76 V	85	32.0	9.7
8	7386.00	33.4 AV	54.0	-20.6	1.76 V	85	23.7	9.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
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	Frequency (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	68.8 PK	74.0	-5.2	2.21 H	335	70.4	-1.6
2	2390.00	51.9 AV	54.0	-2.1	2.21 H	335	53.5	-1.6
3	*2422.00	104.8 PK			2.21 H	335	106.4	-1.6
4	*2422.00	96.1 AV			2.21 H	335	97.7	-1.6
5	4844.00	39.8 PK	74.0	-34.2	1.77 H	360	36.5	3.3
6	4844.00	30.0 AV	54.0	-24.0	1.77 H	360	26.7	3.3
7	7266.00	44.7 PK	74.0	-29.3	2.48 H	176	35.4	9.3
8	7266.00	30.8 AV	54.0	-23.2	2.48 H	176	21.5	9.3
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	70.5 PK	74.0	-3.5	3.26 V	283	72.1	-1.6
2	**2390.00**	**53.8 AV**	**54.0**	**-0.2**	**3.26 V**	**283**	**55.4**	**-1.6**
3	*2422.00	106.6 PK			3.26 V	283	108.2	-1.6
4	*2422.00	97.2 AV			3.26 V	283	98.8	-1.6
5	4844.00	47.3 PK	74.0	-26.7	2.42 V	271	44.0	3.3
6	4844.00	37.0 AV	54.0	-17.0	2.42 V	271	33.7	3.3
7	7266.00	41.1 PK	74.0	-32.9	1.82 V	74	31.8	9.3
8	7266.00	33.0 AV	54.0	-21.0	1.82 V	74	23.7	9.3

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
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	Frequency (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	65.6 PK	74.0	-8.4	2.23 H	345	67.2	-1.6
2	2390.00	50.3 AV	54.0	-3.7	2.23 H	345	51.9	-1.6
3	*2437.00	105.9 PK			2.23 H	345	107.5	-1.6
4	*2437.00	97.3 AV			2.23 H	345	98.9	-1.6
5	2483.50	63.0 PK	74.0	-11.0	2.23 H	345	64.6	-1.6
6	2483.50	47.0 AV	54.0	-7.0	2.23 H	345	48.6	-1.6
7	4874.00	39.9 PK	74.0	-34.1	1.66 H	359	36.7	3.2
8	4874.00	29.6 AV	54.0	-24.4	1.66 H	359	26.4	3.2
9	7311.00	45.8 PK	74.0	-28.2	2.51 H	151	36.4	9.4
10	7311.00	31.4 AV	54.0	-22.6	2.51 H	151	22.0	9.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	68.8 PK	74.0	-5.2	3.18 V	280	70.4	-1.6
2	2390.00	53.6 AV	54.0	-0.4	3.18 V	280	55.2	-1.6
3	*2437.00	110.4 PK			3.18 V	280	112.0	-1.6
4	*2437.00	101.3 AV			3.18 V	280	102.9	-1.6
5	2483.50	69.3 PK	74.0	-4.7	3.18 V	280	70.9	-1.6
6	2483.50	51.9 AV	54.0	-2.1	3.18 V	280	53.5	-1.6
7	4874.00	47.8 PK	74.0	-26.2	2.52 V	270	44.6	3.2
8	4874.00	37.4 AV	54.0	-16.6	2.52 V	270	34.2	3.2
9	7311.00	41.5 PK	74.0	-32.5	1.72 V	78	32.1	9.4
10	7311.00	33.3 AV	54.0	-20.7	1.72 V	78	23.9	9.4

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
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	Frequency (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	104.7 PK			2.22 H	337	106.3	-1.6
2	*2452.00	95.8 AV			2.22 H	337	97.4	-1.6
3	2483.50	67.5 PK	74.0	-6.5	2.22 H	337	69.1	-1.6
4	2483.50	53.0 AV	54.0	-1.0	2.22 H	337	54.6	-1.6
5	4904.00	40.2 PK	74.0	-33.8	1.74 H	360	37.1	3.1
6	4904.00	30.0 AV	54.0	-24.0	1.74 H	360	26.9	3.1
7	7356.00	44.8 PK	74.0	-29.2	2.46 H	156	35.3	9.5
8	7356.00	30.9 AV	54.0	-23.1	2.46 H	156	21.4	9.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	104.7 PK			3.27 V	282	106.3	-1.6
2	*2452.00	95.9 AV			3.27 V	282	97.5	-1.6
3	2483.50	70.1 PK	74.0	-3.9	3.27 V	282	71.7	-1.6
4	2483.50	53.4 AV	54.0	-0.6	3.27 V	282	55.0	-1.6
5	4904.00	47.6 PK	74.0	-26.4	2.54 V	291	44.5	3.1
6	4904.00	37.3 AV	54.0	-16.7	2.54 V	291	34.2	3.1
7	7356.00	42.1 PK	74.0	-31.9	1.72 V	75	32.6	9.5
8	7356.00	33.5 AV	54.0	-20.5	1.72 V	75	24.0	9.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.
5. " * ": Fundamental frequency.

Below 1GHz Data:

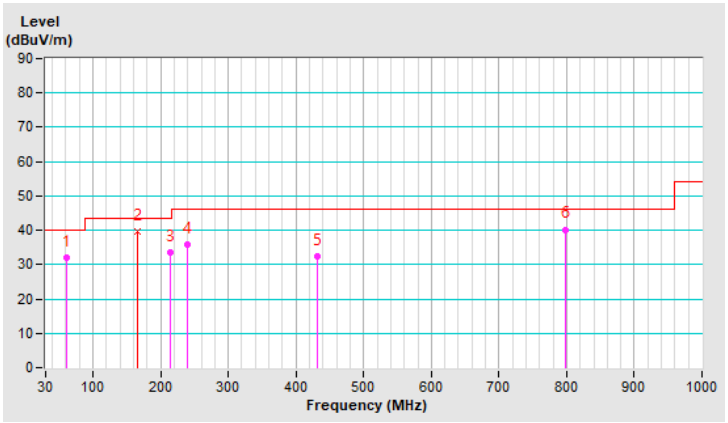
802.11n (HT20)

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

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	**Frequency (MHz)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	61.04	31.9 QP	40.0	-8.1	2.50 H	108	40.3	-8.4
2	166.24	39.8 QP	43.5	-3.7	1.50 H	284	46.9	-7.1
3	214.81	33.5 QP	43.5	-10.0	1.00 H	360	43.4	-9.9
4	239.98	35.9 QP	46.0	-10.1	1.00 H	259	44.1	-8.2
5	432.02	32.3 QP	46.0	-13.7	2.50 H	176	34.1	-1.8
6	798.17	40.2 QP	46.0	-5.8	1.50 H	308	34.3	5.9

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

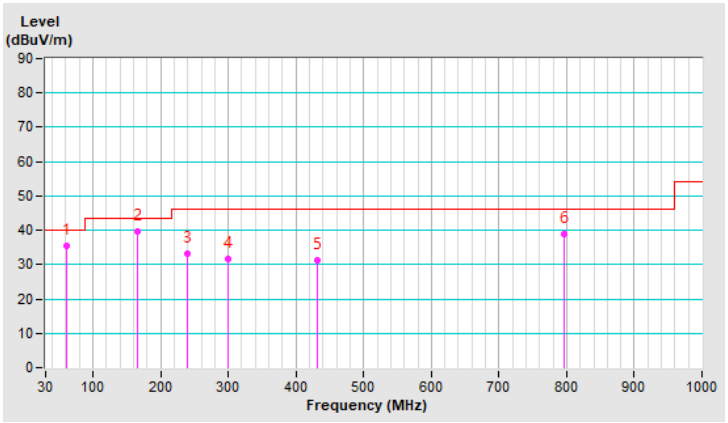


CHANNEL	TX Channel 1	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	60.92	35.6 QP	40.0	-4.4	1.00 V	282	43.9	-8.3
2	166.28	39.6 QP	43.5	-3.9	1.00 V	271	46.7	-7.1
3	239.98	33.3 QP	46.0	-12.7	2.00 V	315	41.5	-8.2
4	299.34	31.8 QP	46.0	-14.2	1.50 V	3	37.7	-5.9
5	432.33	31.1 QP	46.0	-14.9	2.00 V	0	32.9	-1.8
6	796.62	38.8 QP	46.0	-7.2	1.00 V	277	33.0	5.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	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.

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	Oct. 23, 2019	Oct. 22, 2020
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 23, 2019	Oct. 22, 2020
Line-Impedance Stabilization Network (for Peripheral) R&S	ESH3-Z5	835239/001	Mar. 19, 2020	Mar. 18, 2021
50 ohms Terminator	50	3	Oct. 23, 2019	Oct. 22, 2020
RF Cable	5D-FB	COCCAB-001	Sep. 27, 2019	Sep. 26, 2020
Fixed attenuator EMCI	STI02-2200-10	005	Aug. 30, 2019	Aug. 29, 2020
Software BVADT	BVADT_Cond_ V7.3.7.4	NA	NA	NA

Note:
1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Conduction 1.
3. Tested Date: July 26, 2020

4.2.3 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.

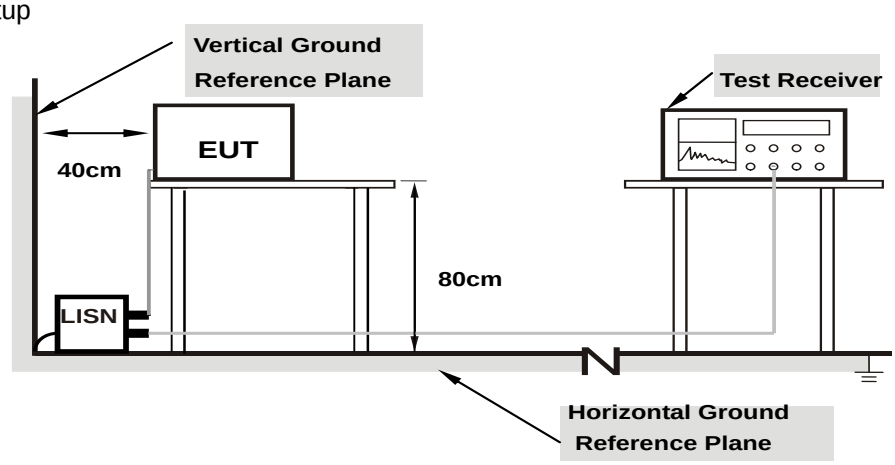
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

Note: The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

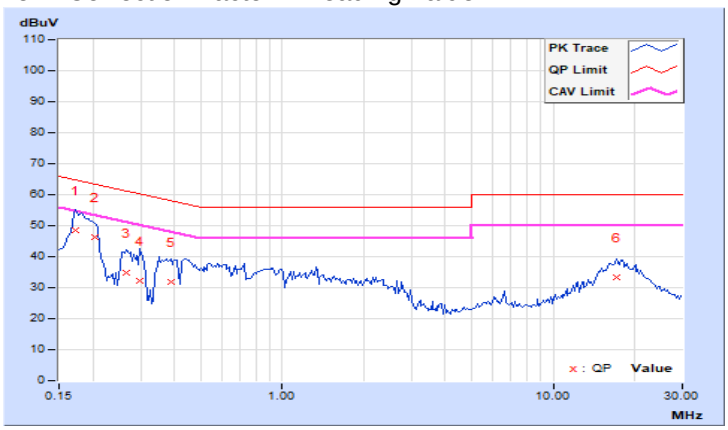
4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.17344**	**9.97**	**38.62**	**12.41**	**48.59**	**22.38**	**64.79**	**54.79**	**-16.20**	**-32.41**
2	0.20469	9.97	36.25	14.46	46.22	24.43	63.42	53.42	-17.20	-28.99
3	0.26719	9.97	24.79	2.30	34.76	12.27	61.20	51.20	-26.44	-38.93
4	0.29844	9.97	22.35	2.68	32.32	12.65	60.29	50.29	-27.97	-37.64
5	0.38828	9.98	21.81	5.16	31.79	15.14	58.10	48.10	-26.31	-32.96
6	17.12891	10.89	22.29	16.87	33.18	27.76	60.00	50.00	-26.82	-22.24

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

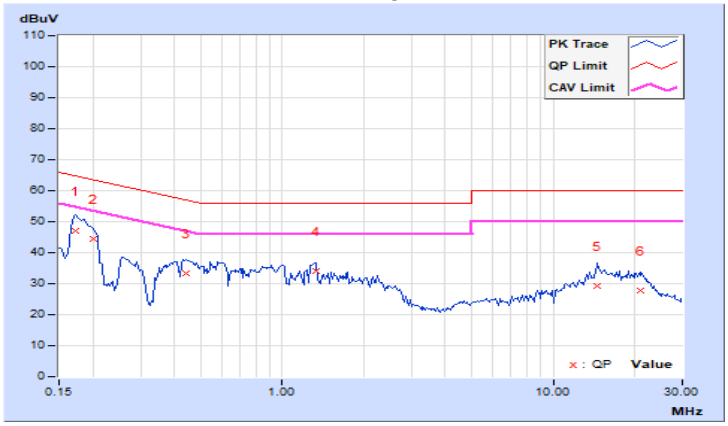


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17344	9.97	36.98	12.22	46.95	22.19	64.79	54.79	-17.84	-32.60
2	0.20078	9.97	34.31	15.49	44.28	25.46	63.58	53.58	-19.30	-28.12
3	0.43906	9.98	23.38	5.15	33.36	15.13	57.08	47.08	-23.72	-31.95
4	1.32813	10.03	24.01	9.65	34.04	19.68	56.00	46.00	-21.96	-26.32
5	14.58984	10.58	18.61	12.18	29.19	22.76	60.00	50.00	-30.81	-27.24
6	20.93359	10.82	16.88	12.47	27.70	23.29	60.00	50.00	-32.30	-26.71

Remarks:

1. Q.P. and AV. are abbreviations of quasi-peak and average individually.
2. The emission levels of other frequencies were very low against the limit.
3. Margin value = Emission level – Limit value
4. Correction factor = Insertion loss + Cable loss
5. Emission Level = Correction Factor + Reading Value

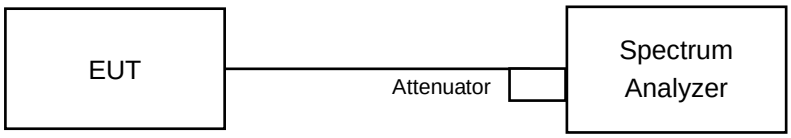


4.3 6dB Bandwidth Measurement

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

a. Set resolution bandwidth (RBW) = 100kHz
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. 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

4.3.5 Deviation from Test Standard

No deviation.

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 Result

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	9.12	0.5	Pass
6	2437	9.13	0.5	Pass
11	2462	9.99	0.5	Pass

802.11g

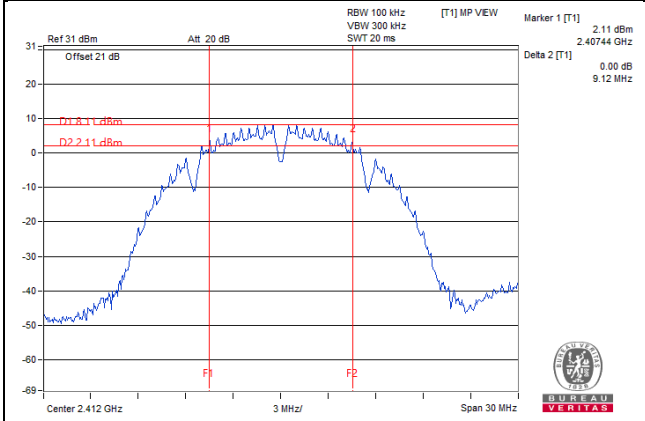
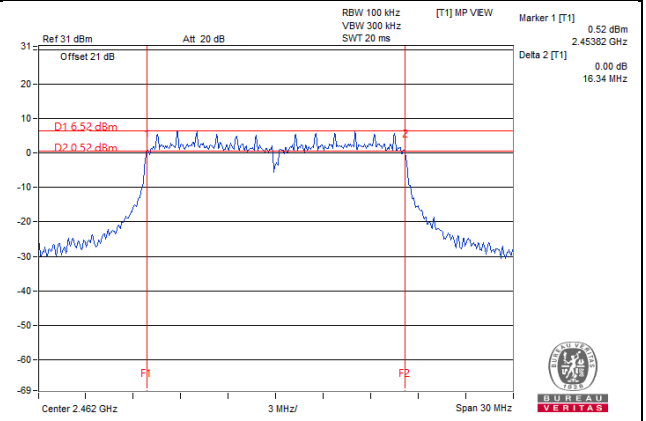
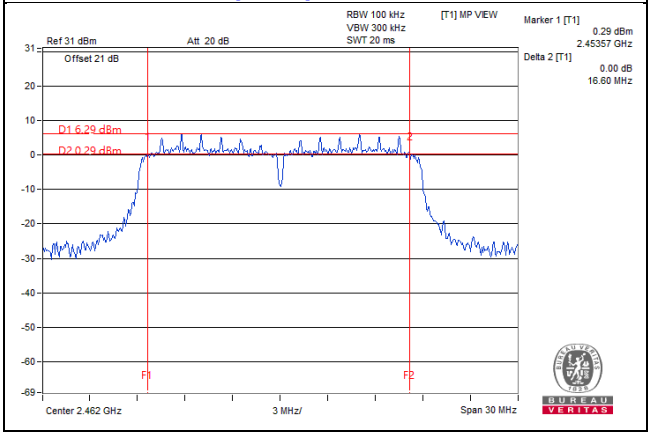
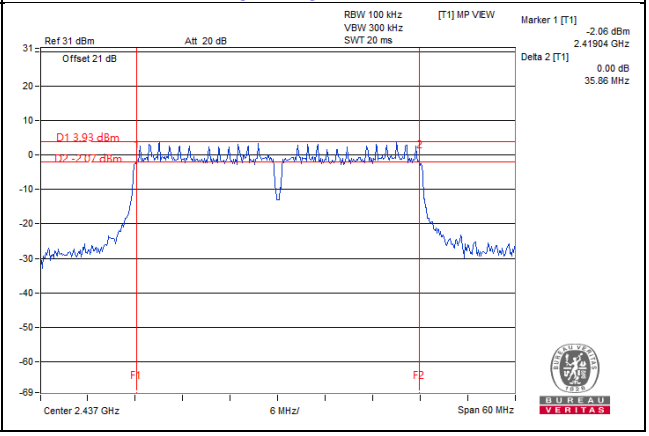
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.34	0.5	Pass
6	2437	16.34	0.5	Pass
11	2462	16.34	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.99	16.73	0.5	Pass
6	2437	17.05	16.71	0.5	Pass
11	2462	16.76	16.6	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	36.14	36.18	0.5	Pass
6	2437	36.05	35.86	0.5	Pass
9	2452	36.18	36.01	0.5	Pass

Spectrum Plot of Worst Value	
802.11b / CH1	**802.11g / CH1**
	
802.11n (HT20) _Chain 1 / CH11	**802.11n (HT40) _Chain 1 / CH6**
	

4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

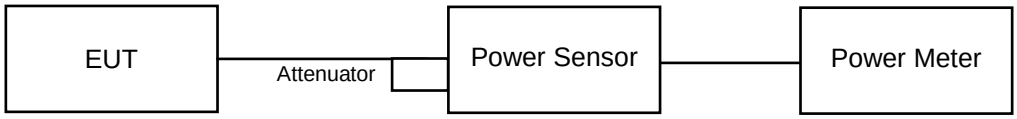
For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

Per KDB 662911 D01 Multiple Transmitter Output Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedures

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

Average power sensor was used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of TX on burst. Duty factor is not added to measured value.

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

Same as Item 4.3.6.

4.4.7 Test Results

FOR PEAK POWER

802.11b

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	96.828	19.86	30	Pass
6	2437	95.719	19.81	30	Pass
11	2462	100.231	20.01	30	Pass

802.11g

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	257.632	24.11	30	Pass
6	2437	262.422	24.19	30	Pass
11	2462	251.768	24.01	30	Pass

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	24.25	24.85	571.565	27.57	30.00	Pass
6	2437	23.57	23.92	474.114	26.76	30.00	Pass
11	2462	23.55	23.88	470.807	26.73	30.00	Pass

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Peak Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	24.10	24.36	529.937	27.24	30.00	Pass
6	2437	23.52	23.89	469.812	26.72	30.00	Pass
9	2452	23.81	24.53	524.228	27.20	30.00	Pass

FOR AVERAGE POWER

802.11b

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	53.088	17.25
6	2437	51.642	17.13
11	2462	53.58	17.29

802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	52.966	17.24
6	2437	53.333	17.27
11	2462	52.723	17.22

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
1	2412	16.93	17.56	106.334	20.27
6	2437	17.18	17.29	105.819	20.25
11	2462	17.11	17.22	104.127	20.18

802.11n (HT40)

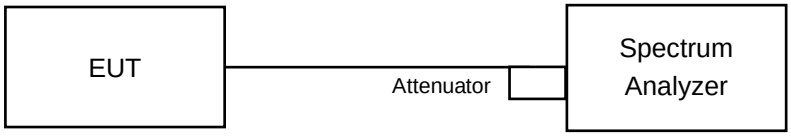
Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Average Power (mW)	Total Average Power (dBm)
		Chain 0	Chain 1		
3	2422	16.02	17.31	93.821	19.72
6	2437	17.18	17.28	105.696	20.24
9	2452	16.03	17.10	91.373	19.61

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm in any 3 kHz.

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

a. Set analyzer center frequency to DTS channel center frequency.
b. Set the span to 1.5 times the 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.

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

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-5.60	8	Pass
6	2437	-4.81	8	Pass
11	2462	-4.84	8	Pass

802.11g

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-8.45	8	Pass
6	2437	-7.84	8	Pass
11	2462	-8.36	8	Pass

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
		Chain 0	Chain 1			
1	2412	-7.58	-7.78	-4.67	8	Pass
6	2437	-7.09	-6.55	-3.80	8	Pass
11	2462	-6.74	-7.43	-4.06	8	Pass

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.

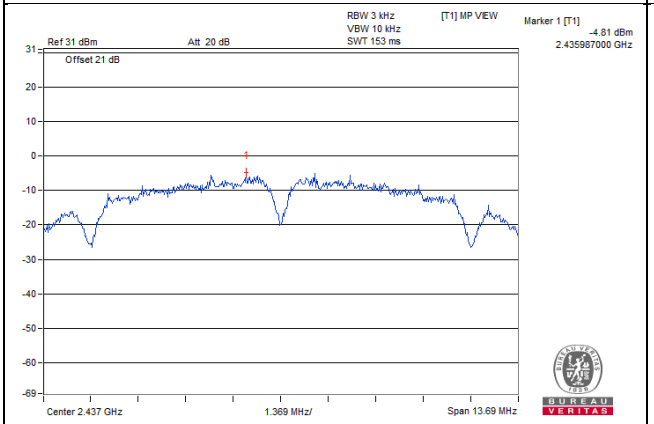
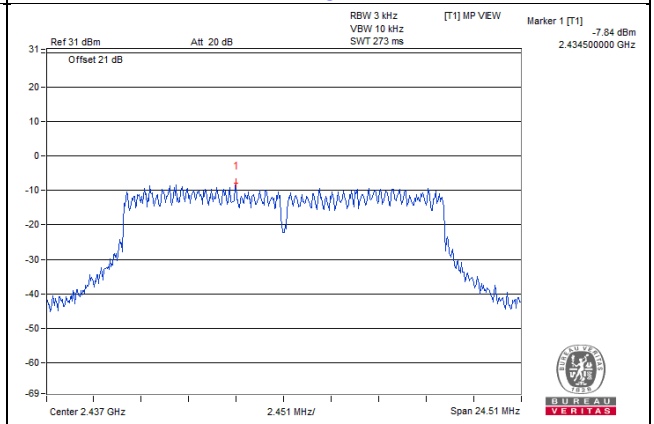
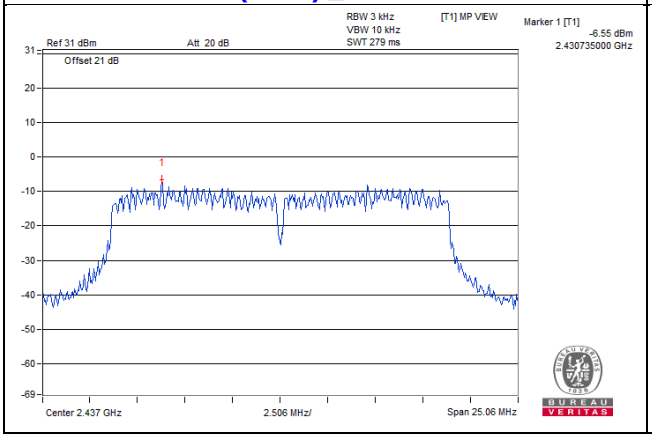
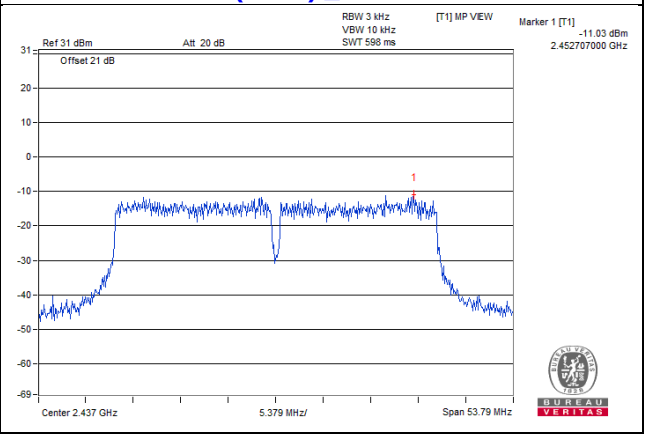
2. Directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 1.54dBi < 6dBi , so the power density limit shall not be reduced.

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	PSD (dBm/3kHz)		Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
		Chain 0	Chain 1			
3	2422	-12.73	-11.28	-8.93	8	Pass
6	2437	-11.25	-11.03	-8.13	8	Pass
9	2452	-12.72	-11.77	-9.21	8	Pass

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.

2. Directional gain = 10 log[$(10^{G0/20} + 10^{G1/20})^2$ / 2] = 1.54dBi < 6dBi , so the power density limit shall not be reduced.

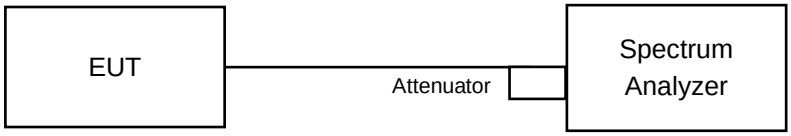
Spectrum Plot of Worst Value	
802.11b / CH6	**802.11g / CH6**
	
802.11n (HT20) _Chain 1 / CH6	**802.11n (HT40) _Chain 1 / CH6**
	

4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted 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 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

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 OOBE

1. Set RBW = 100 kHz.
2. Set VBW ≥ 300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

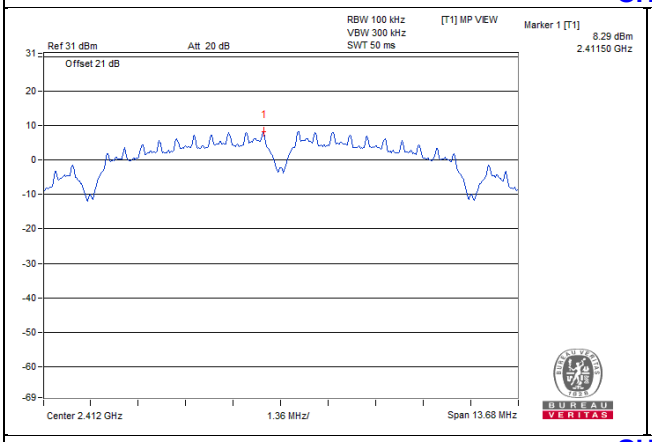
Same as Item 4.3.6

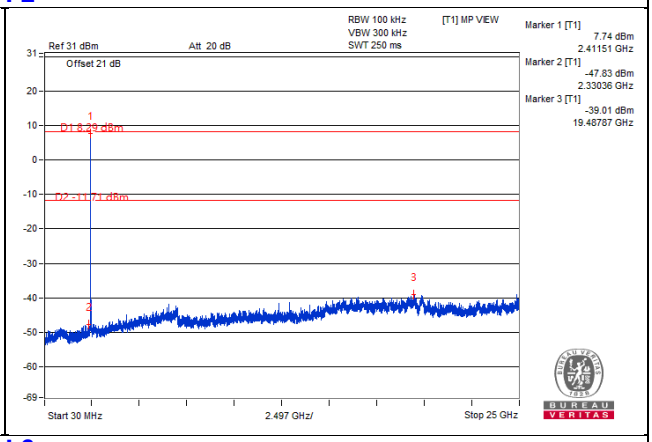
4.6.7 Test Results

The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

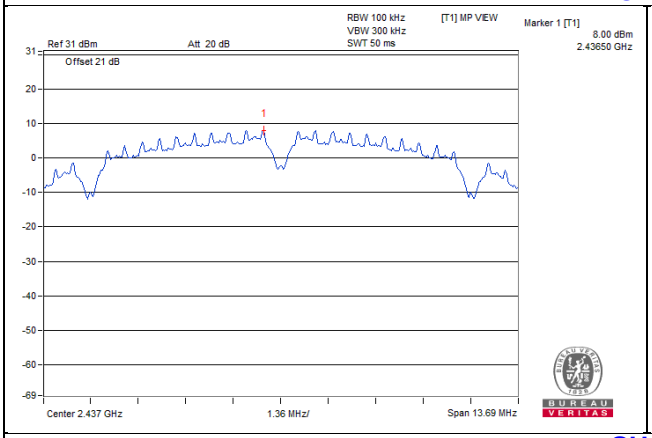
802.11b

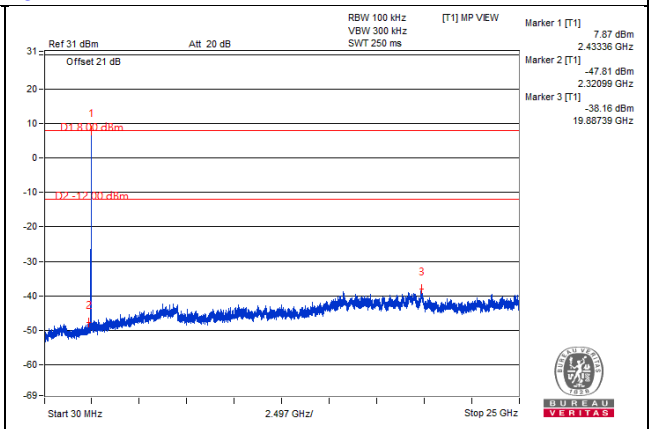
CH 1



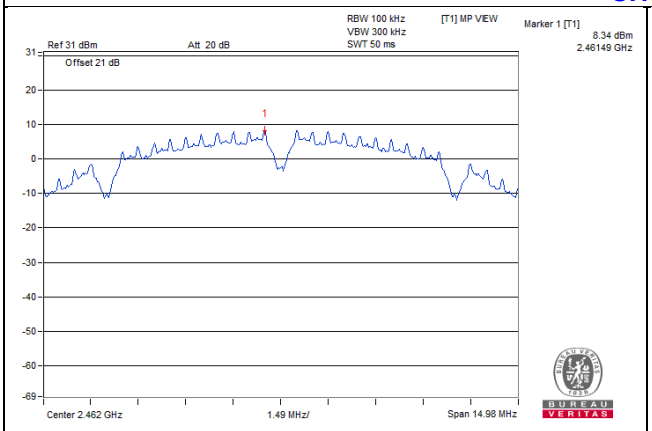


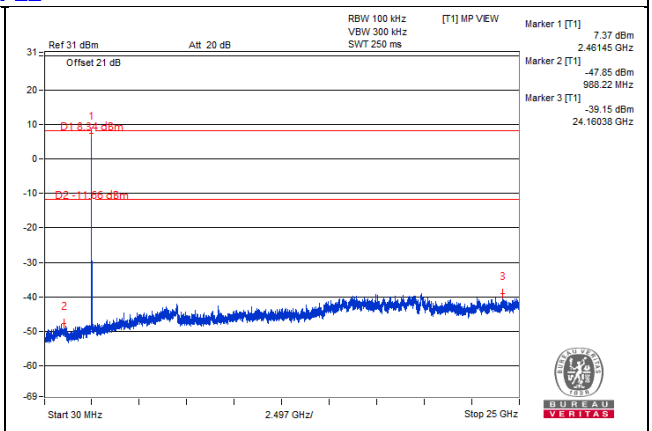
CH 6



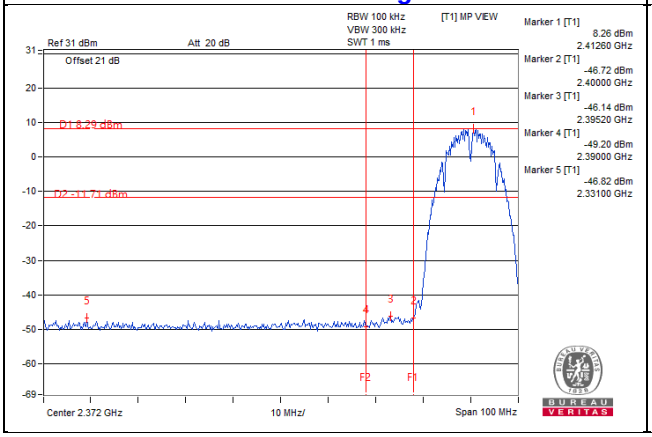


CH 11

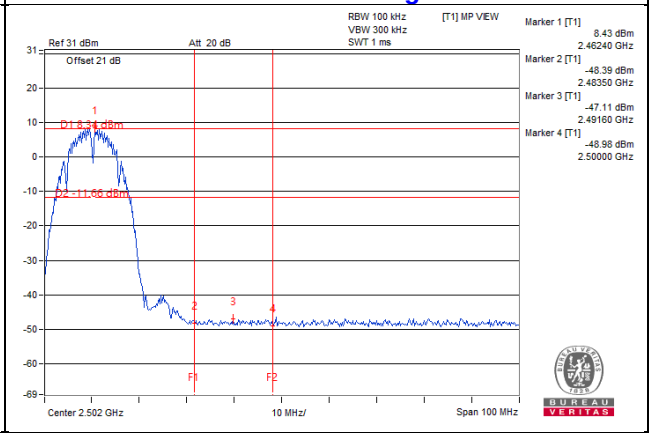




CH 1 Band edge

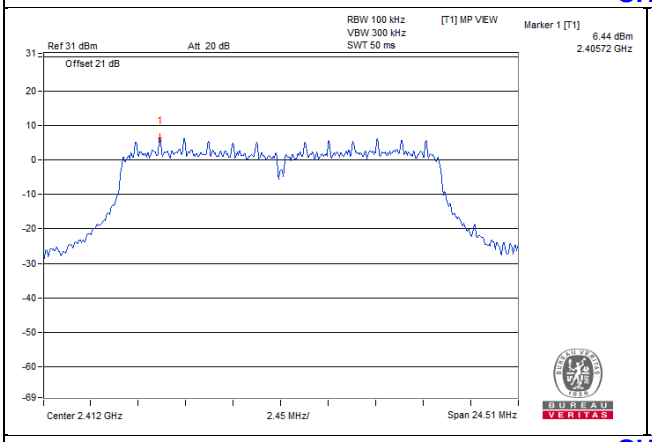


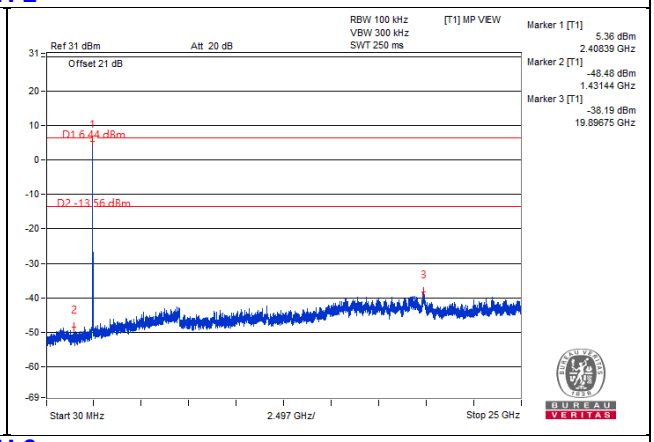
CH 11 Band edge



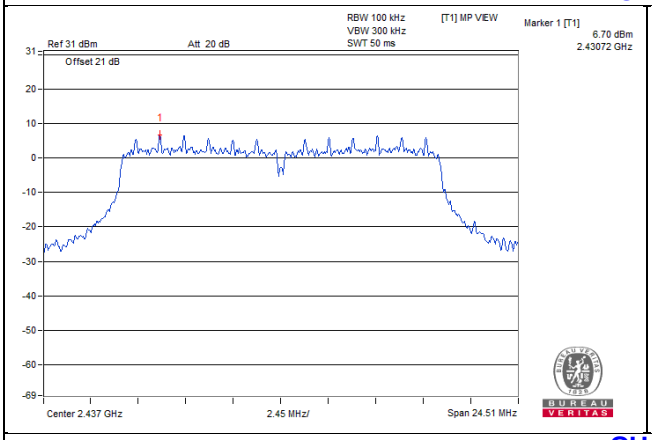
802.11g

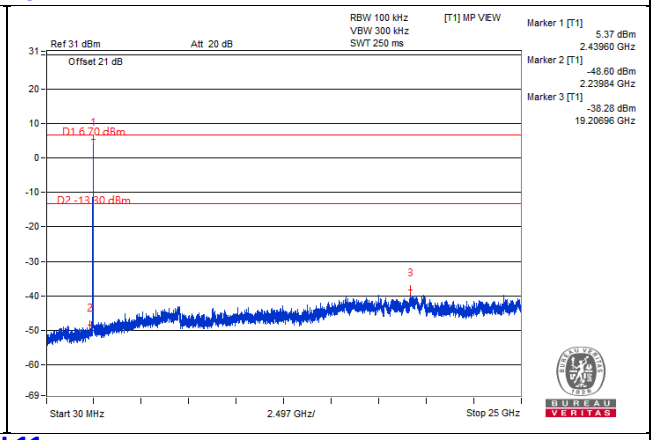
CH 1



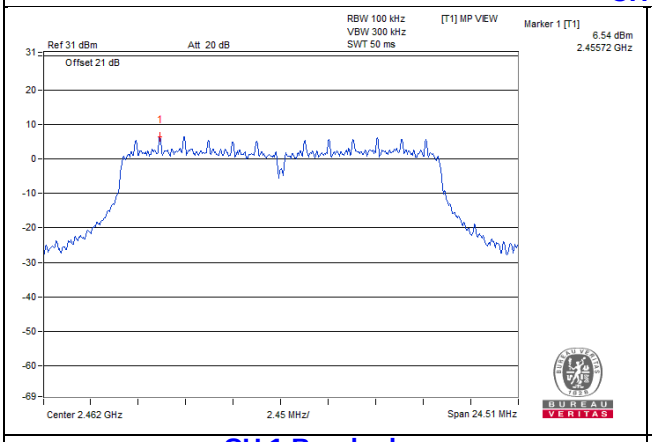


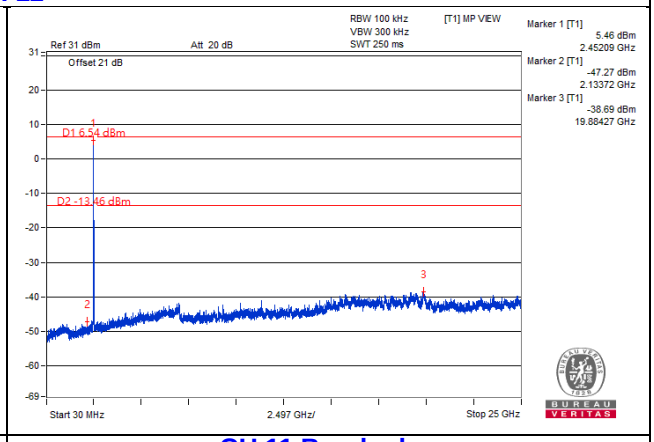
CH 6



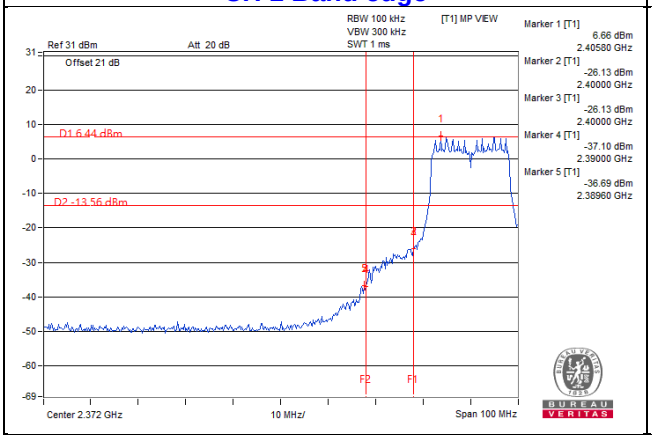


CH 11

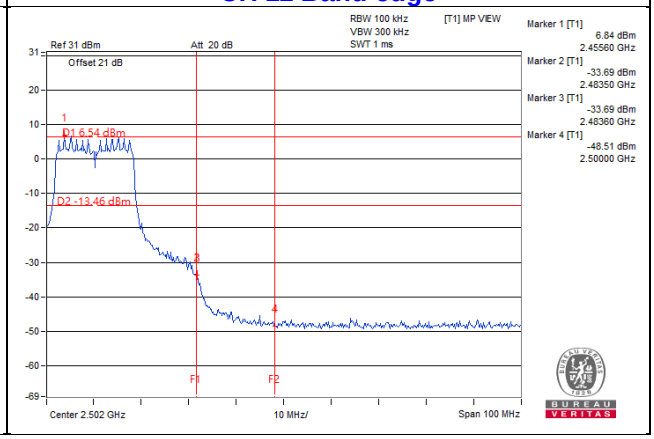




CH 1 Band edge



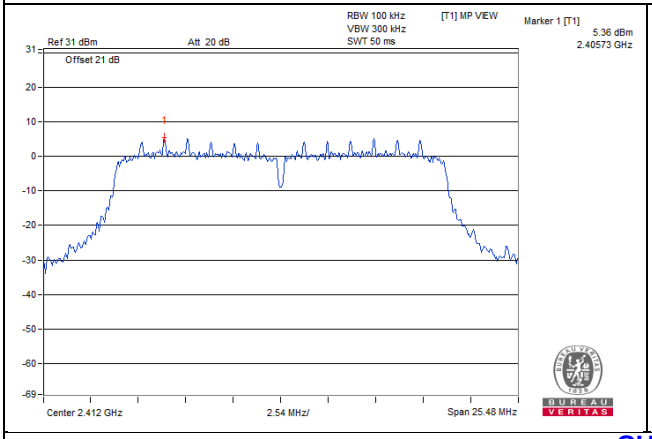
CH 11 Band edge

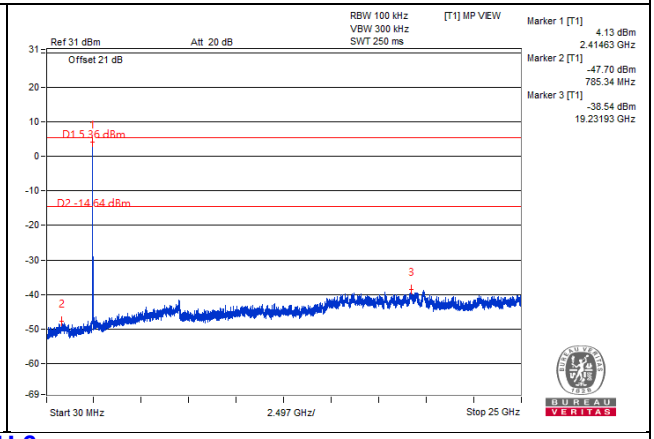


802.11n (HT20)

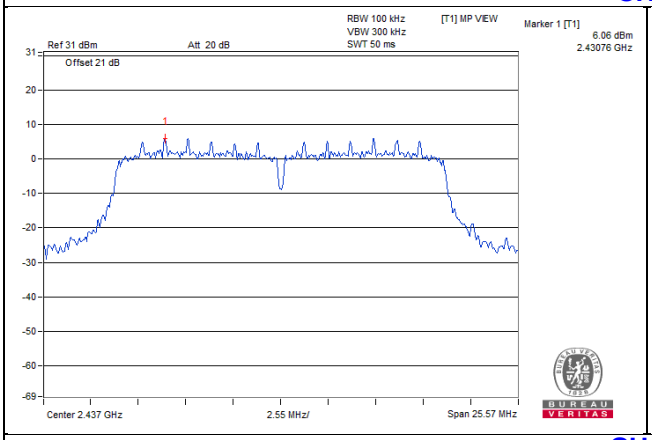
Chain 0

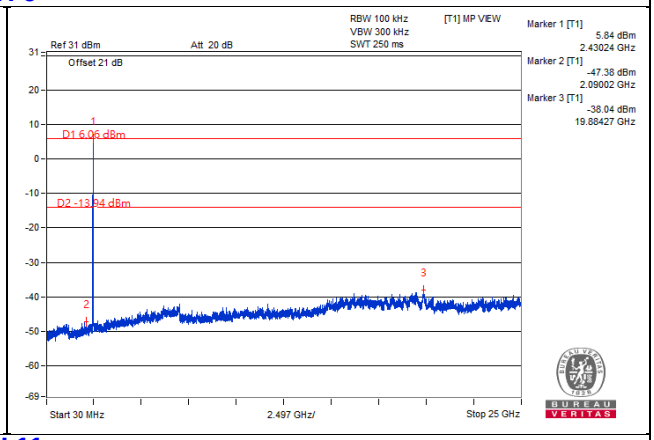
CH 1



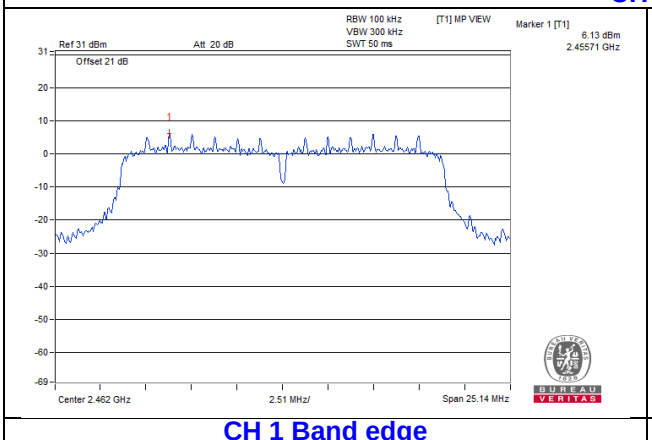


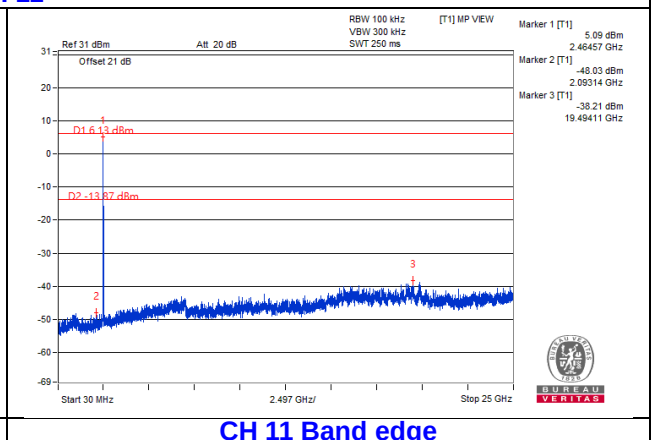
CH 6



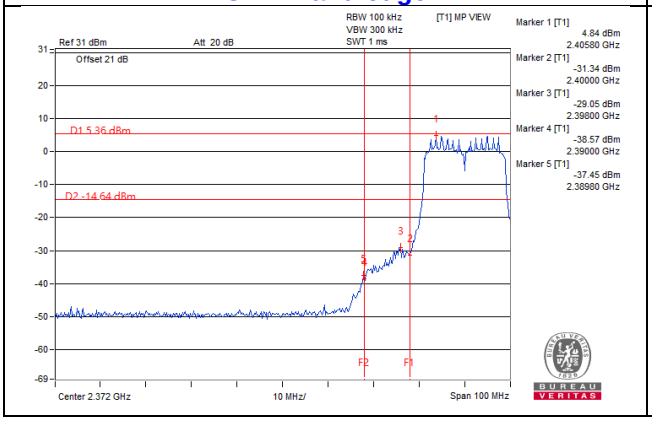


CH 11

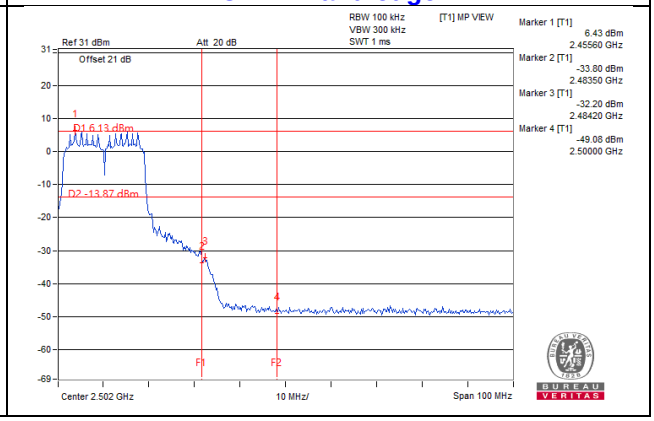




CH 1 Band edge

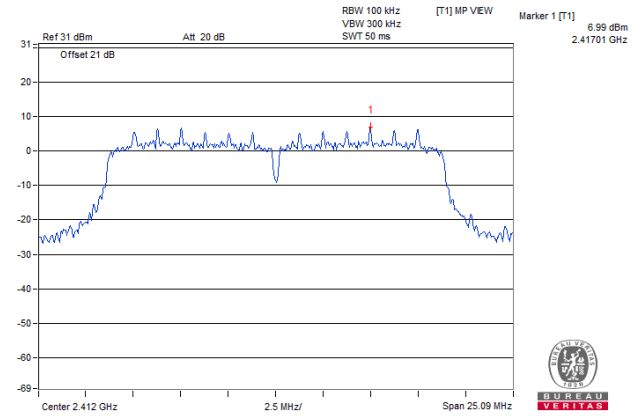


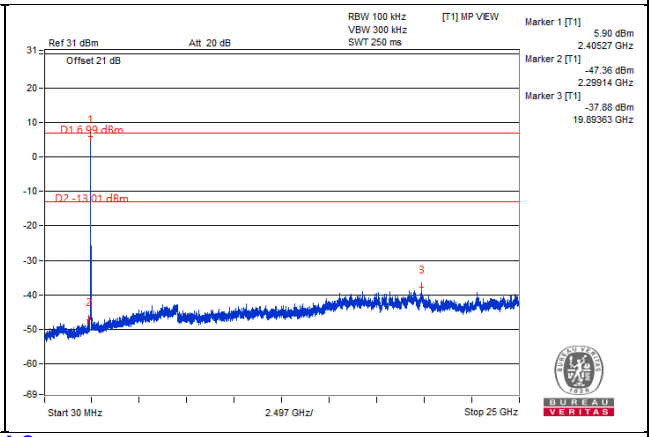
CH 11 Band edge



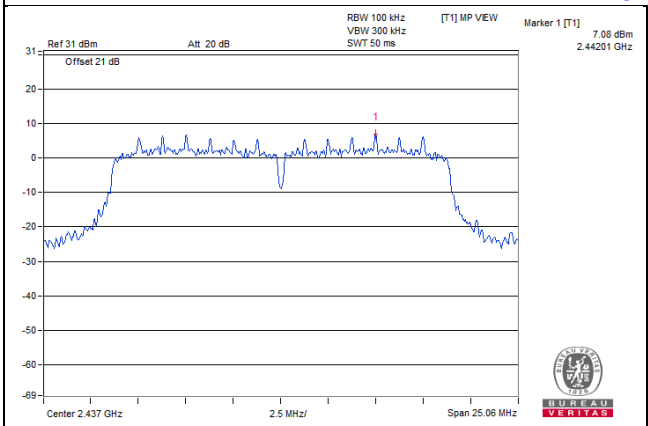
Chain 1

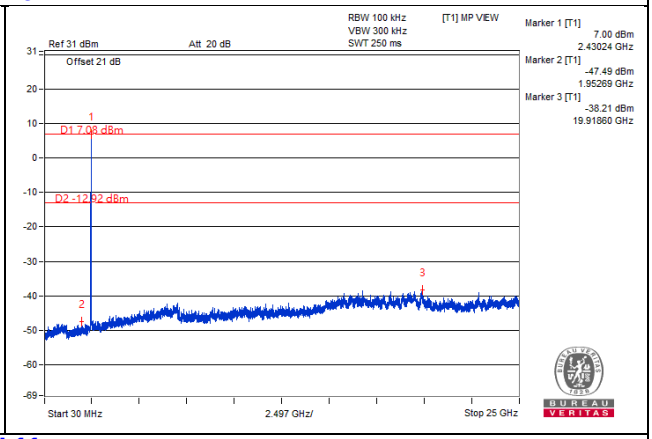
CH 1



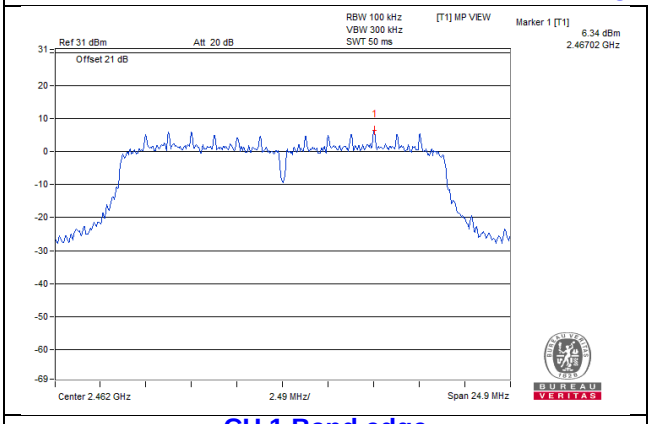


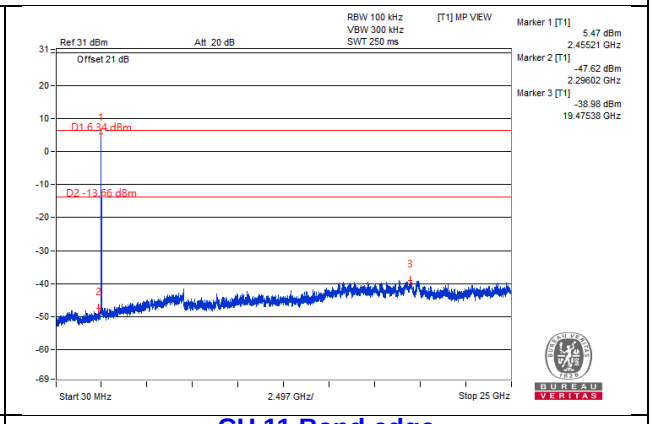
CH 6



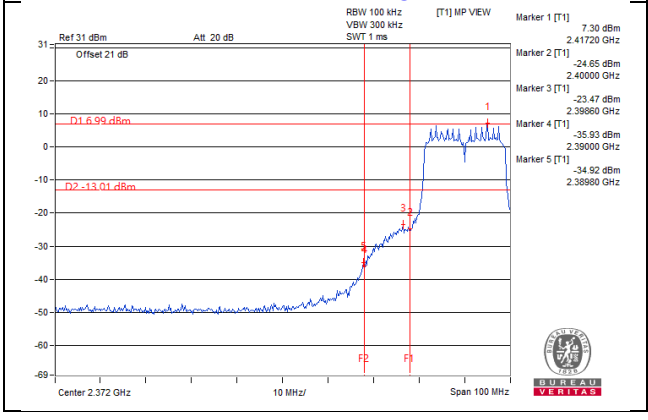


CH 11

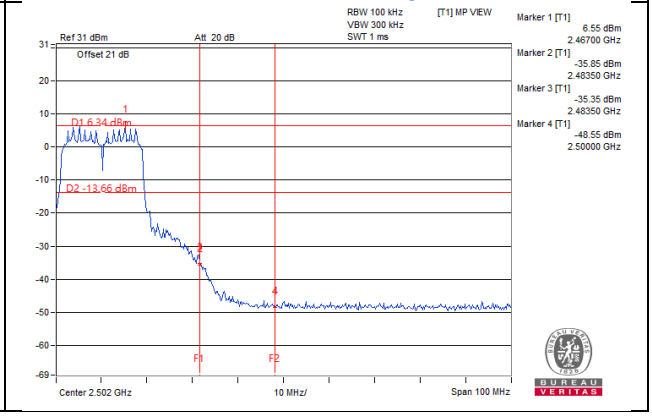




CH 1 Band edge



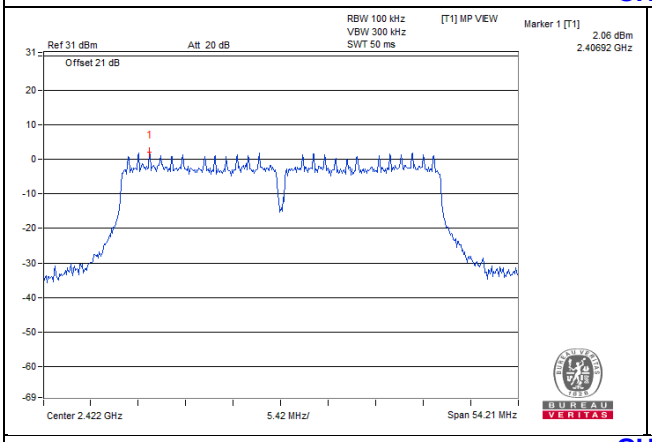
CH 11 Band edge

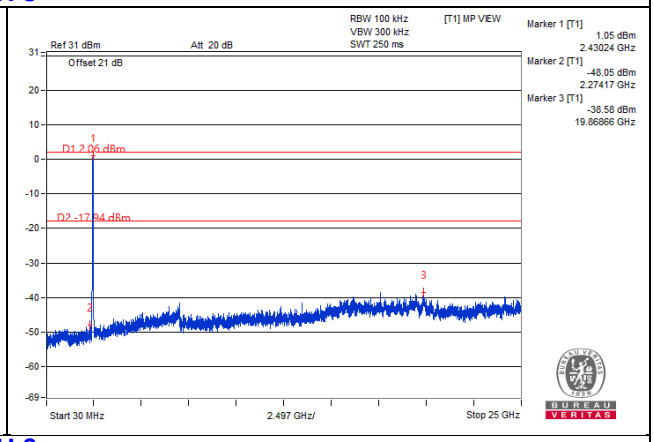


802.11n (HT40)

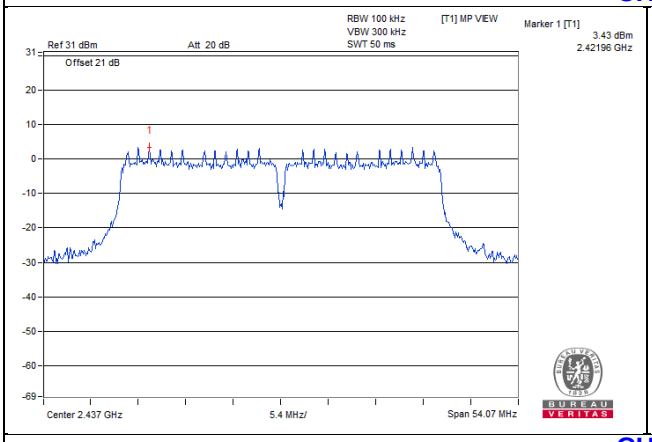
Chain 0

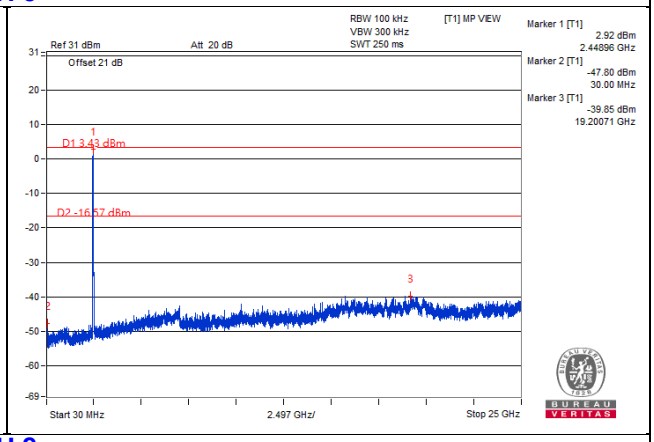
CH 3



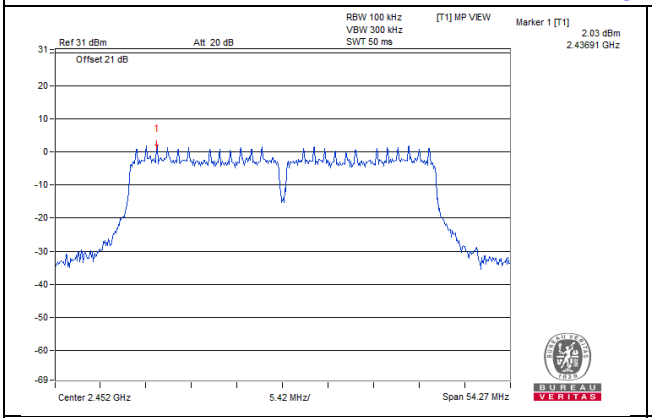


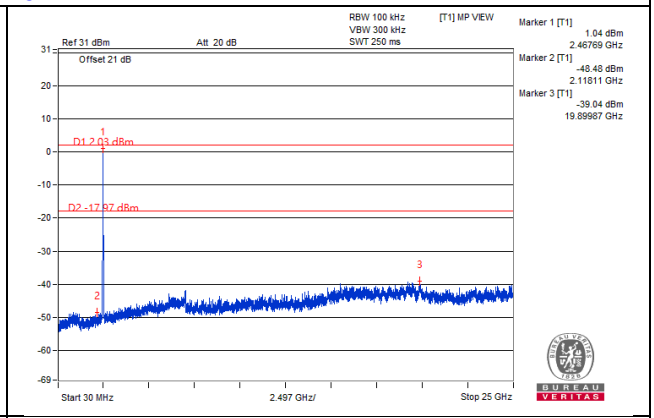
CH 6



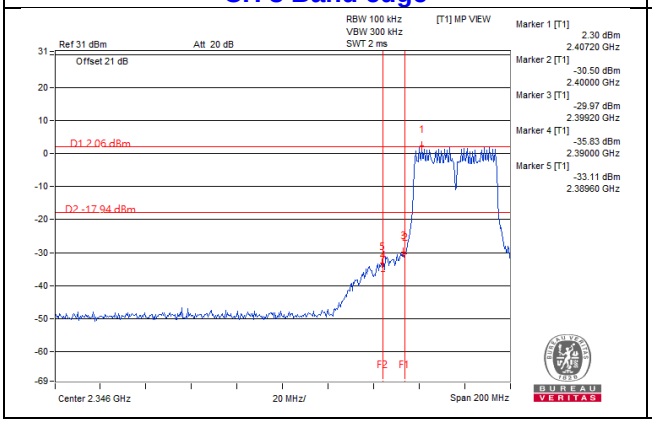


CH 9

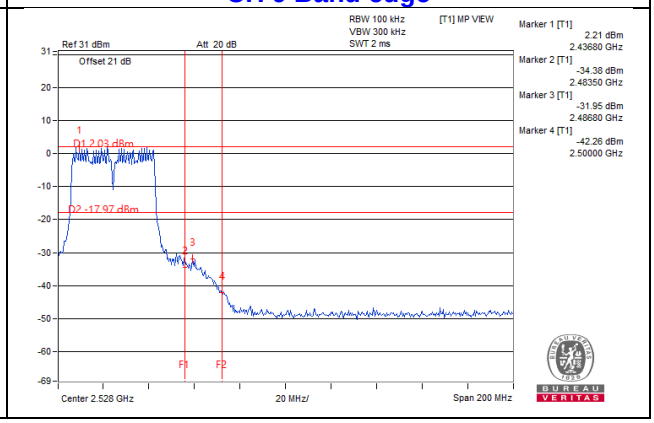




CH 3 Band edge

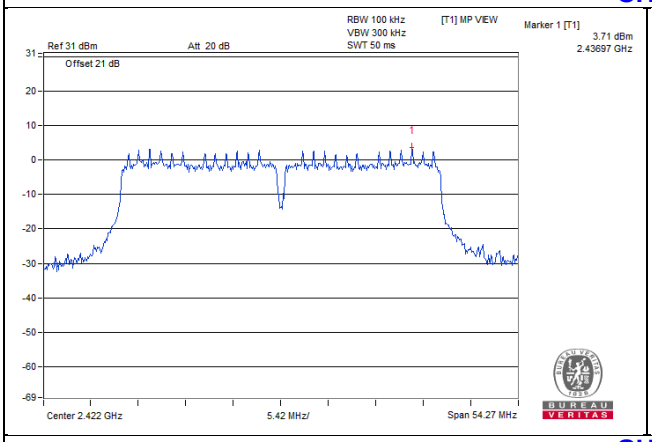


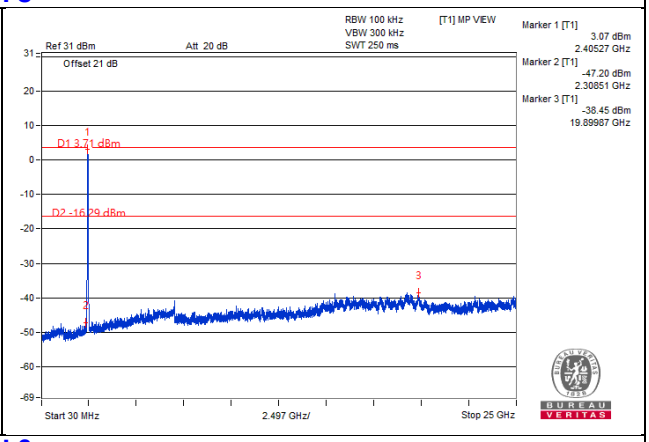
CH 9 Band edge



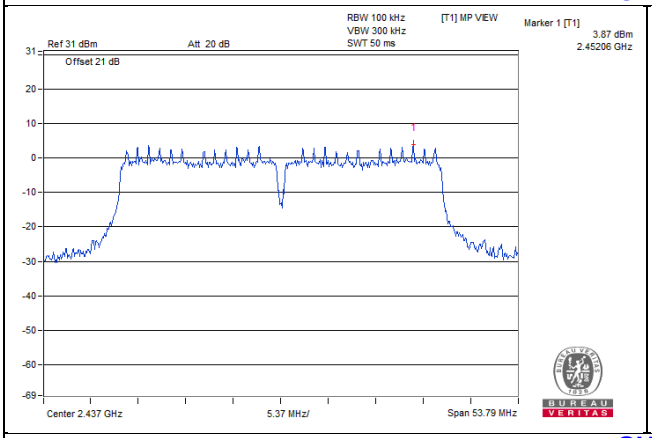
Chain 1

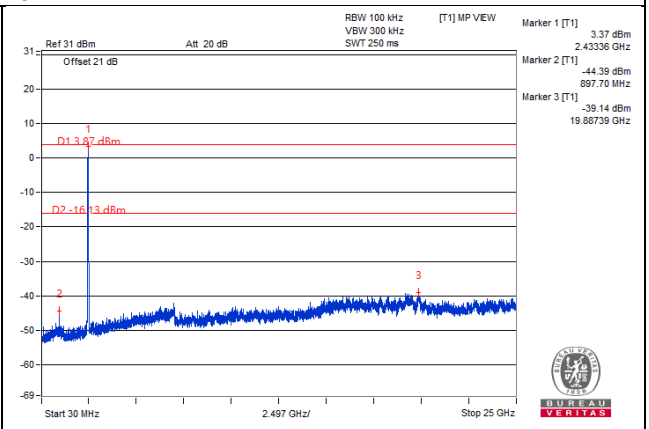
CH 3



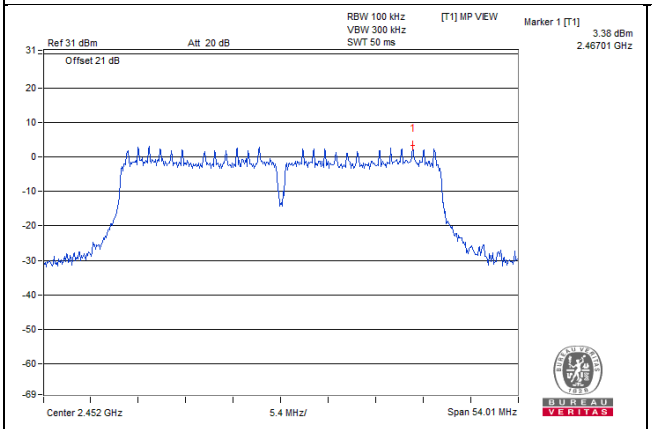


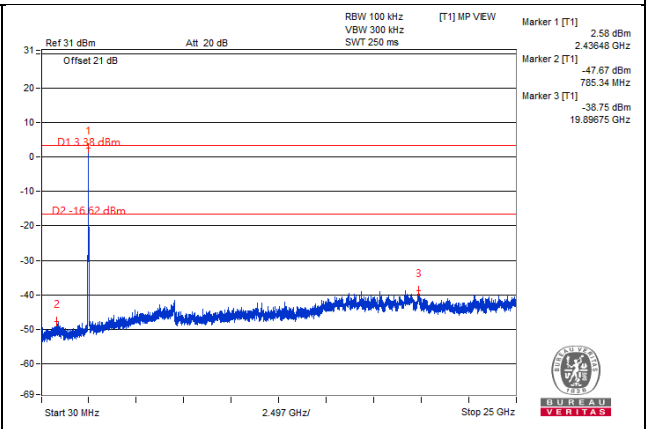
CH 6



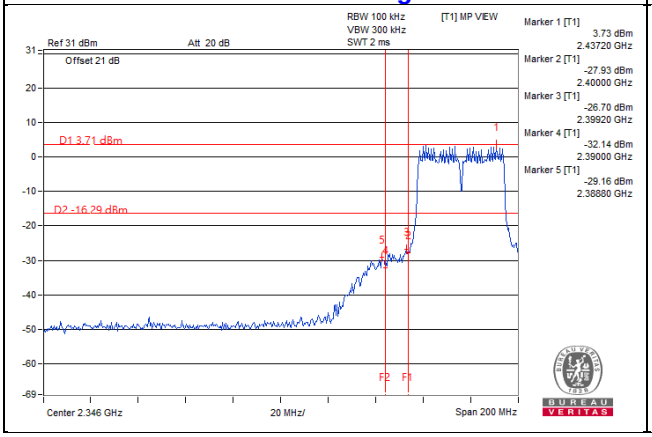


CH 9

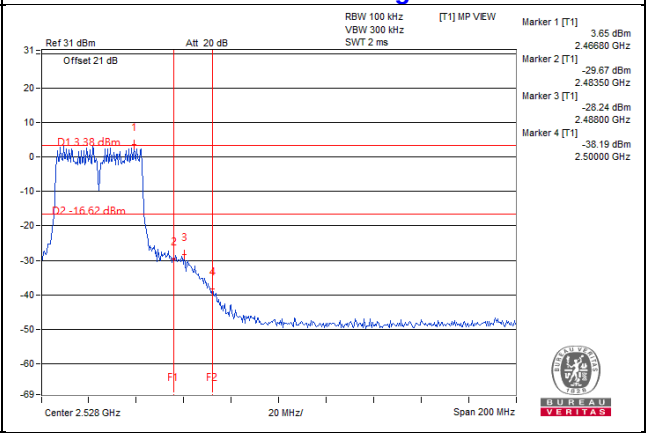




CH 3 Band edge



CH 9 Band edge

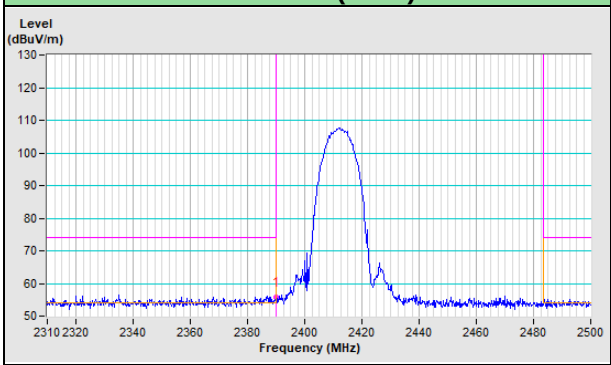
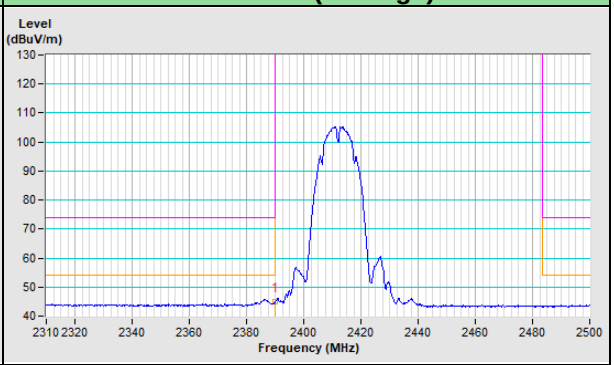
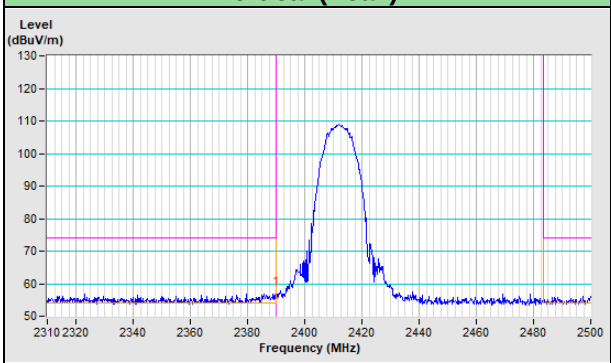
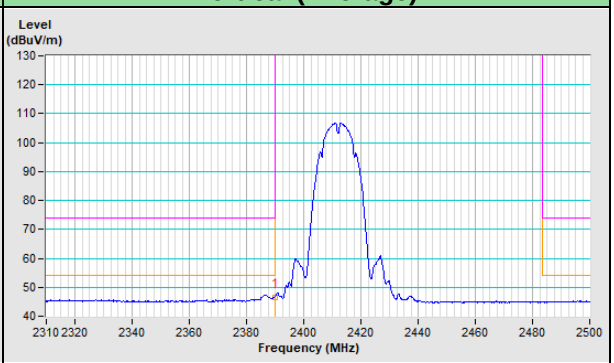
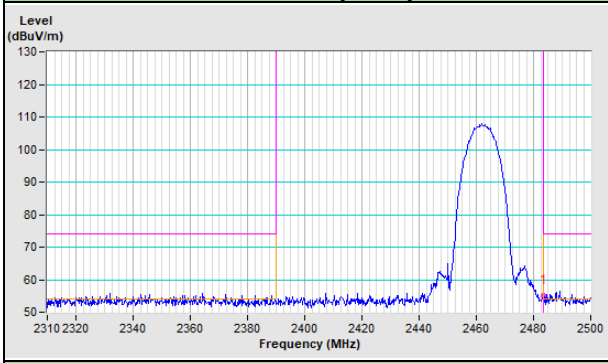
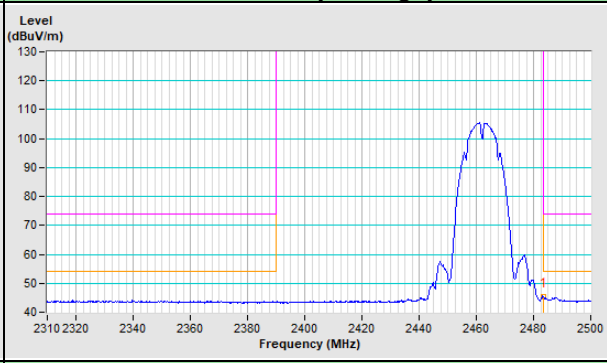
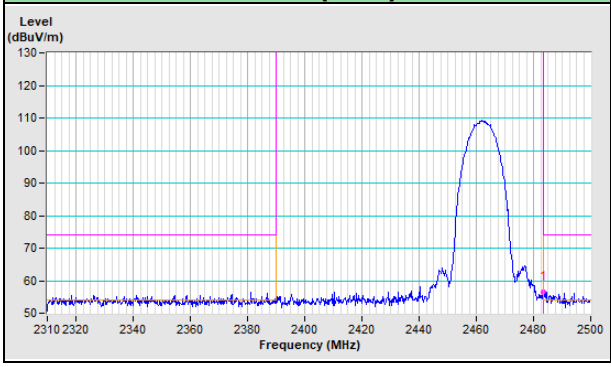
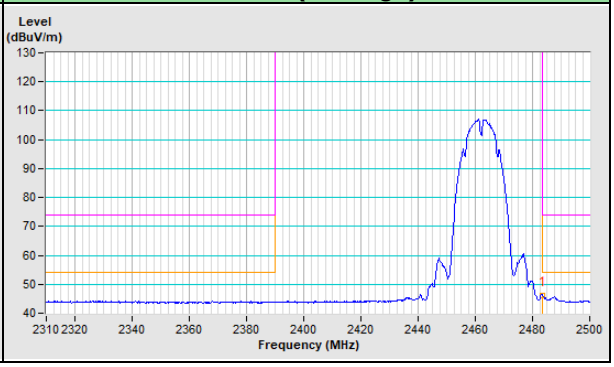


5 Pictures of Test Arrangements

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

Annex A - Band-Edge Measurement

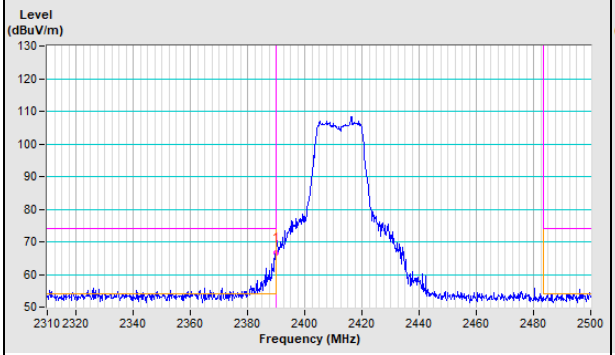
802.11b

Channel 1	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	
Channel 11	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

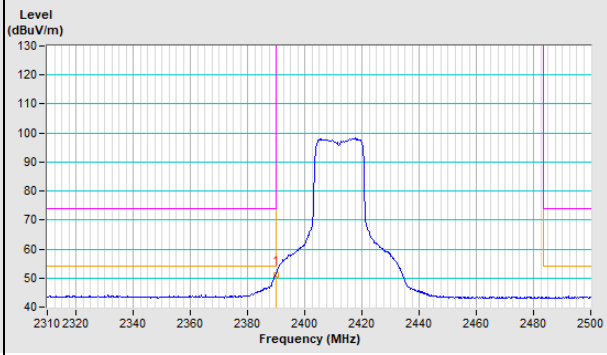
802.11g

Channel 1

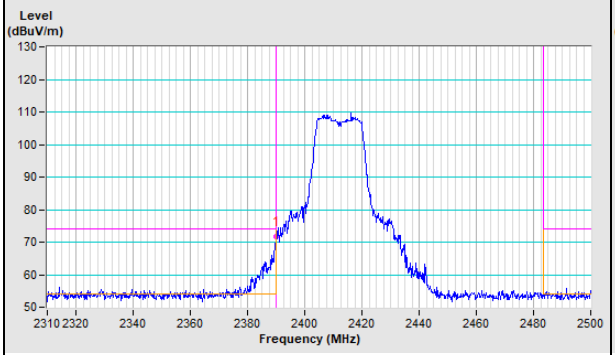
Horizontal (Peak)



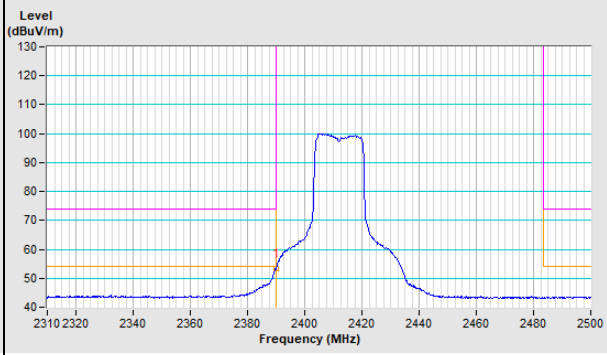
Horizontal (Average)



Vertical (Peak)

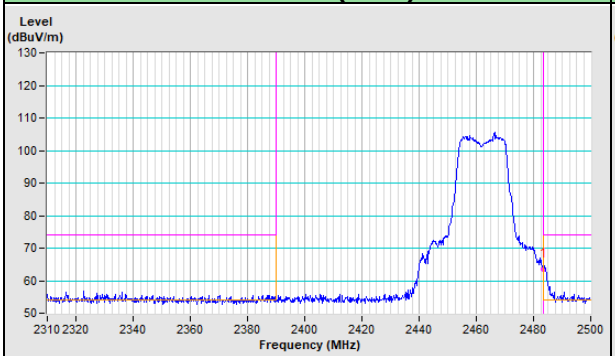


Vertical (Average)

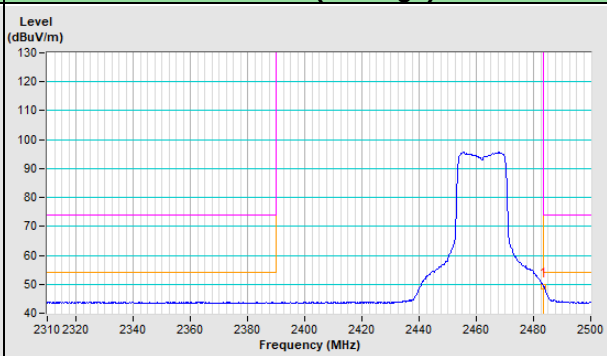


Channel 11

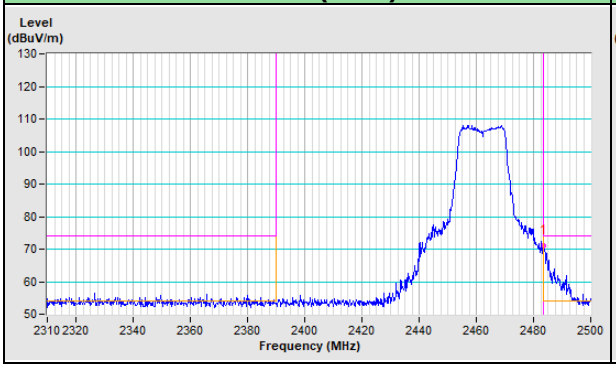
Horizontal (Peak)



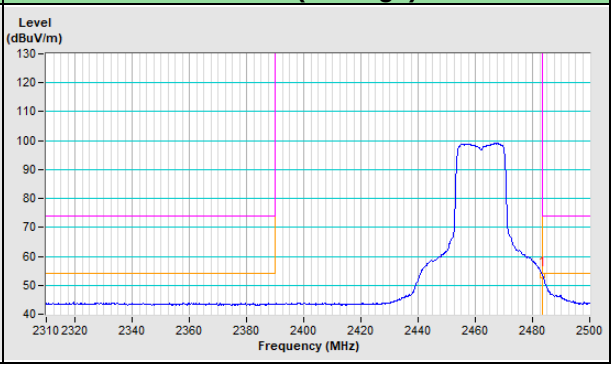
Horizontal (Average)



Vertical (Peak)



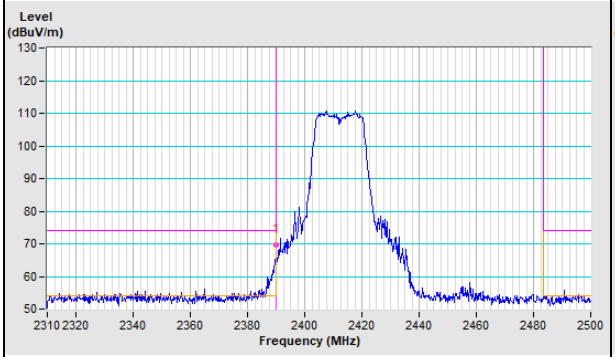
Vertical (Average)



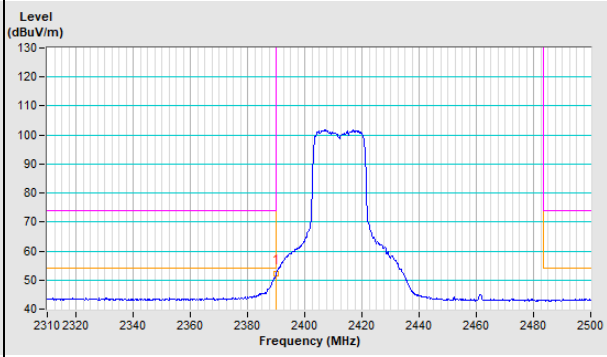
802.11n (HT20)

Channel 1

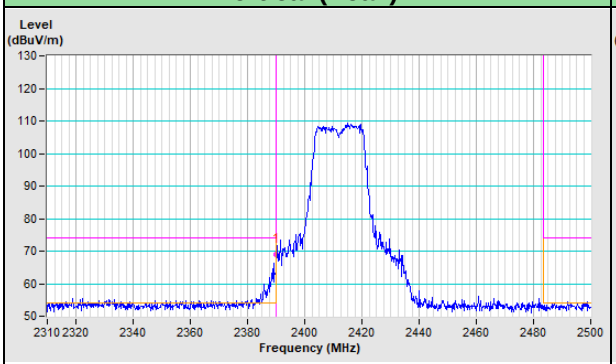
Horizontal (Peak)



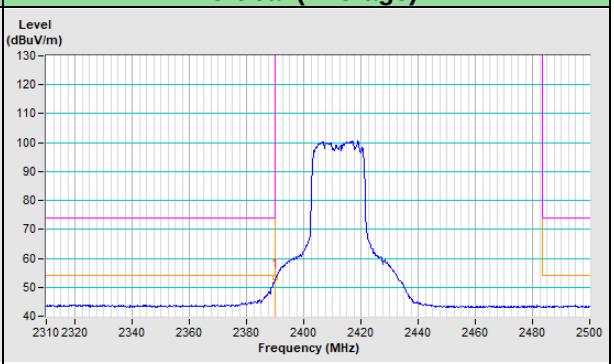
Horizontal (Average)



Vertical (Peak)

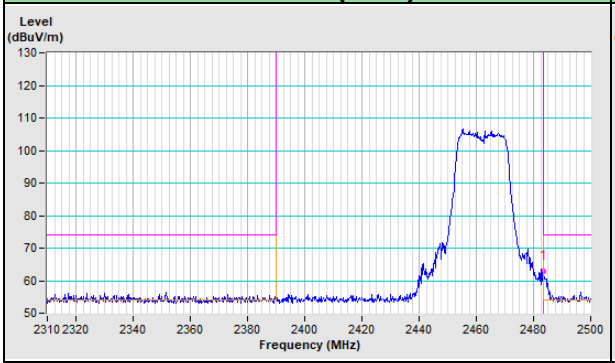


Vertical (Average)

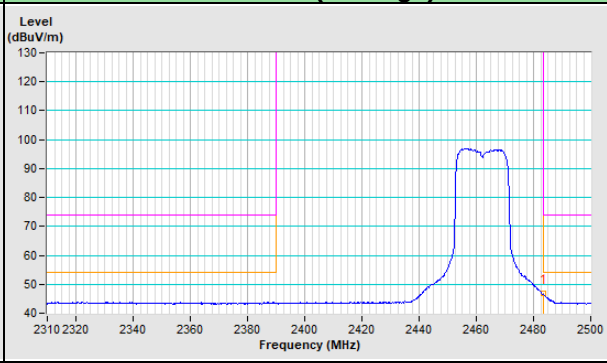


Channel 11

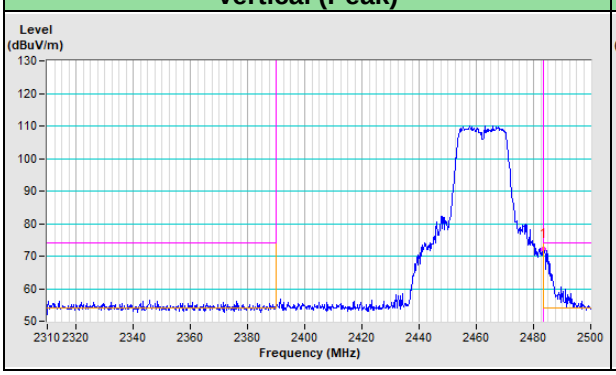
Horizontal (Peak)



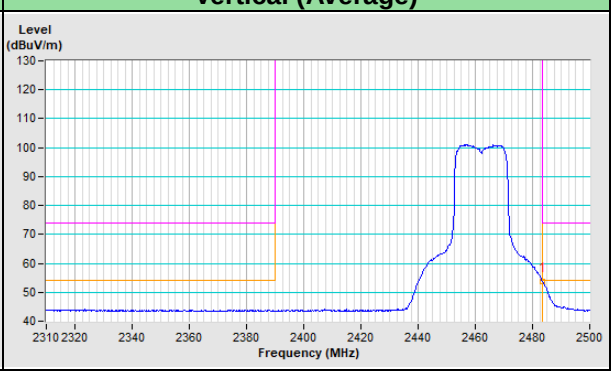
Horizontal (Average)



Vertical (Peak)



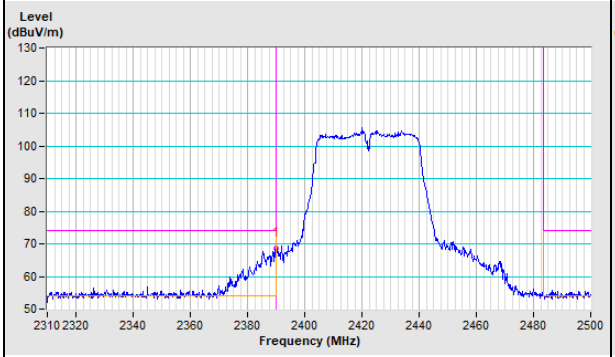
Vertical (Average)



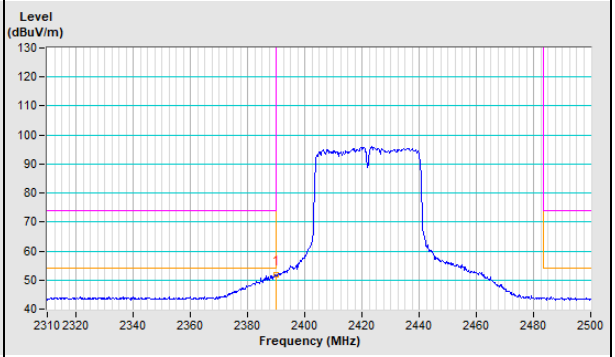
802.11n (HT40)

Channel 3

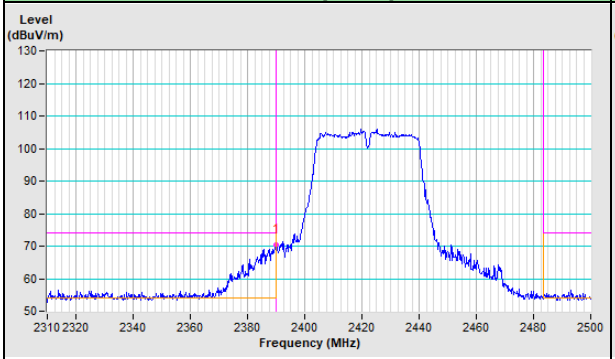
Horizontal (Peak)



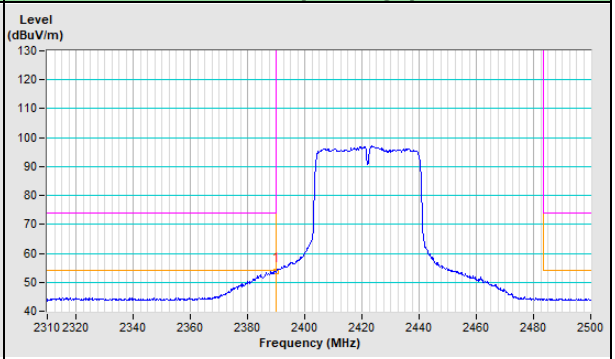
Horizontal (Average)



Vertical (Peak)

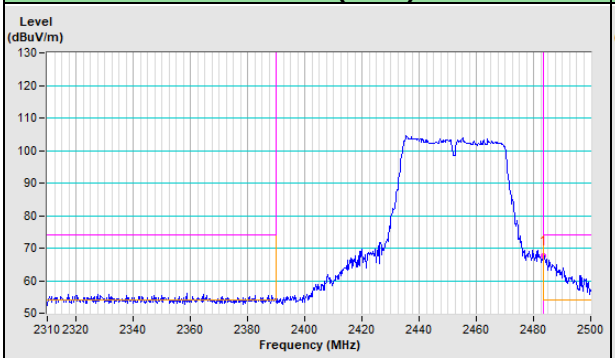


Vertical (Average)

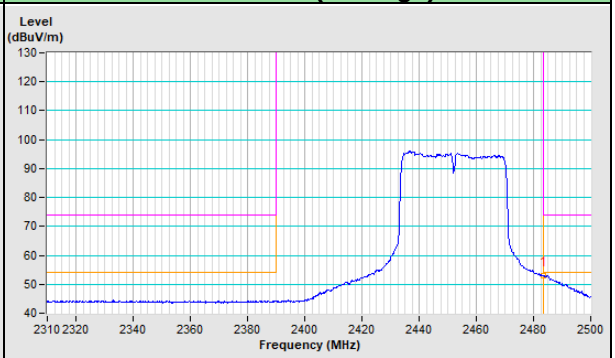


Channel 9

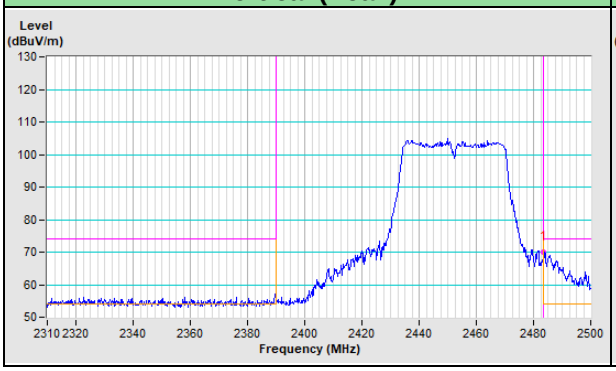
Horizontal (Peak)



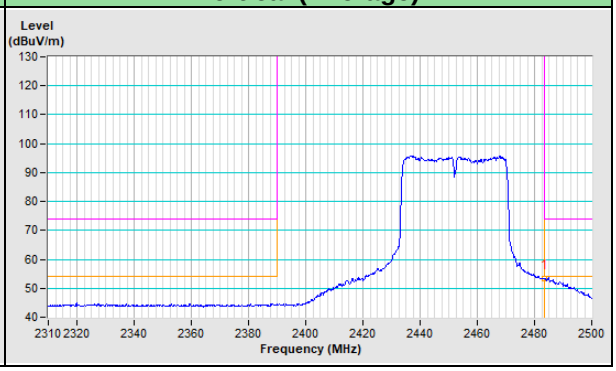
Horizontal (Average)



Vertical (Peak)



Vertical (Average)



Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

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Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

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