FCC Test Report

Report No.:	RF200121E05A
FCC ID:	UXX-S5A103A
Test Model:	S5A108A, S5A103A
Received Date:	Aug. 26, 2020
Test Date:	Sep. 07 to Oct. 13, 2020
Issued Date:	Nov. 19, 2020
Applicant:	Cradlepoint, Inc.
Address:	1111 West Jefferson Street ,Boise ,Idaho,United States 83702
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
RF200121E05A	Original release.	Nov. 19, 2020

1 Certificate of Conformity

Product:	5G Adapter
Brand:	Cradlepoint, Inc.
Test Model:	S5A108A, S5A103A
Sample Status:	ENGINEERING SAMPLE
Applicant:	Cradlepoint, Inc.
Test Date:	Sep. 07 to Oct. 13, 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 : _____ , **Date:** Nov. 19, 2020

Joyce Kuo / Specialist

Approved by : _____ , **Date:** Nov. 19, 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 -5.70dB at 0.15000MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -0.1dB 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	Antenna connector is R-SMA or i-pex(MHF) not a standard connector.

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	5.1 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	5.1 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

Product	5G Adapter
Brand	Cradlepoint, Inc.
Test Model	S5A108A, S5A103A
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	56 Vdc from POE adapter
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT (20/40) mode in 2.4GHz 1024QAM for OFDMA in 11ax HE mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	802.11b: up to 11 Mbps 802.11a/g: up to 54 Mbps 802.11n: up to 600 Mbps 802.11ac: up to 1733.3 Mbps 802.11ax: up to 2401.9 Mbps
Operating Frequency	**2.4GHz:** 2.412 ~ 2.462 GHz **5GHz:** 5.18~ 5.24 GHz, 5.745 ~ 5.825 GHz
Number of Channel	**2.4GHz:** 802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20): 11 802.11n (HT40), VHT40, 802.11ax (HE40): 7 **5GHz:** 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 9 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 4 802.11ac (VHT80), 802.11ax (HE80): 2
Output Power	**CDD Mode:** **2.412 ~ 2.462 GHz:** 616.167 mW **5.18 ~ 5.24 GHz:** 30.022 mW **5.745 ~ 5.825 GHz:** 745.572 mW **Beamforming Mode:** **2.412 ~ 2.462 GHz:** 424.502 mW **5.18 ~ 5.24 GHz:** 8.961 mW **5.745 ~ 5.825 GHz:** 269.652 mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	POE Adapter x 1
Data Cable Supplied	NA

Note:

1. All models are listed as below.

Brand	Model	Difference
Cradlepoint, Inc.	S5A103A	1. Appearance differences. 2. Antennas differences. 3. Indoor use.
	S5A108A	1. Appearance differences. 2. Antennas differences. 3. Outdoor use.
Note: Output power is same for above models.		

2. The EUT has below radios as following table:

Radio 1	Radio 2	Radio 3
WLAN (2.4GHz)	WLAN (5GHz)	WWAN (LTE+GPS)

3. Simultaneously transmission condition.

Condition	Technology		
1	WLAN (2.4GHz)	WLAN (5GHz)	WWAN (LTE+GPS)
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.			

4. The EUT contains certified WWAN module which FCC ID: N7NEM91.

5. The antenna provided to the EUT, please refer to the following table:

For Model: S5A108A					
Antenna No.	Antenna Net Gain(dBi)	Frequency range	Antenna Type	Connector Type	Cable Length
Ant 1	2.47	2.4~2.4835 GHz	Dipole	R-SMA	170mm
	2.18	5.15~5.25 GHz			
	2.47	5.725~5.85 GHz			
Ant 2	2.47	2.4~2.4835 GHz	Dipole	R-SMA	170mm
	2.18	5.15~5.25 GHz			
	2.47	5.725~5.85 GHz			
Ant 3	2.47	2.4~2.4835 GHz	Dipole	R-SMA	170mm
	2.18	5.15~5.25 GHz			
	2.47	5.725~5.85 GHz			
Ant 4	2.47	2.4~2.4835 GHz	Dipole	R-SMA	170mm
	2.18	5.15~5.25 GHz			
	2.47	5.725~5.85 GHz			
LTE Ant 1 (GPS)	2.5	700~960 MHz	Dipole	N-Type	-
	2.2	1428~1600 MHz			
	4.3	1700~2700 MHz			
	4.6	3300~3700 MHz			
	6.1	5150~5925 MHz			
LTE Ant 2	2.5	700~960 MHz			
	2.2	1428~1600 MHz			
	4.3	1700~2700 MHz			
	4.6	3300~3700 MHz			
	6.1	5150~5925 MHz			
LTE Ant 3	2.5	700~960 MHz			
	2.2	1428~1600 MHz			
	4.3	1700~2700 MHz			
	4.6	3300~3700 MHz			
	6.1	5150~5925 MHz			
LTE Ant 4	2.5	700~960 MHz			
	2.2	1428~1600 MHz			
	4.3	1700~2700 MHz			
	4.6	3300~3700 MHz			
	6.1	5150~5925 MHz			

For Model: S5A103A					
Antenna No.	Antenna Net Gain (dBi)	Frequency Range	Antenna Type	Connector Type	Cable Length
Ant 1	2.54	2.4~2.4835 GHz	PIFA	i-pex(MHF)	74 mm
	5.16	5.15~5.25 GHz			
	5.65	5.725~5.85 GHz			
Ant 2	2.38	2.4~2.4835 GHz	PIFA	i-pex(MHF)	91 mm
	5.2	5.15~5.25 GHz			
	5.18	5.725~5.85 GHz			
Ant 3	3.59	2.4~2.4835 GHz	PIFA	i-pex(MHF)	197 mm
	5.96	5.15~5.25 GHz			
	5.71	5.725~5.85 GHz			
Ant 4	1.88	2.4~2.4835 GHz	PIFA	i-pex(MHF)	288 mm
	5.09	5.15~5.25 GHz			
	5.75	5.725~5.85 GHz			
LTE Ant 1 (GPS)	1.42	619~960 MHz	Dipole	SMA	-
	0.88	1445~1515 MHz			
	2.69	1710~2700 MHz			
	4.13	3400~3700 MHz			
	4.29	5150~5925 MHz			
LTE Ant 2	1.42	619~960 MHz			
	0.88	1445~1515 MHz			
	2.69	1710~2700 MHz			
	4.13	3400~3700 MHz			
	4.29	5150~5925 MHz			
LTE Ant 3	1.42	619~960 MHz			
	0.88	1445~1515 MHz			
	2.69	1710~2700 MHz			
	4.13	3400~3700 MHz			
	4.29	5150~5925 MHz			
LTE Ant 4	1.42	619~960 MHz			
	0.88	1445~1515 MHz			
	2.69	1710~2700 MHz			
	4.13	3400~3700 MHz			
	4.29	5150~5925 MHz			
Note: Max. gain was selected for the final test, except for the radiated emissions test.					

6. The EUT must be supplied from POE adapter as following table:

Brand	Model No.	Spec.
PHIHONG	POE90U-1BT-2	Input: 100-240Vac, 2.5A, 50/60Hz Output: 56V, 0.8A

7. The EUT incorporates a MIMO function:

2.4GHz Band		
MODULATION MODE	**TX & RX CONFIGURATION**	
802.11b	4TX	4RX
802.11g	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
VHT20	4TX	4RX
VHT40	4TX	4RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX
5GHz Band		
MODULATION MODE	**TX & RX CONFIGURATION**	
802.11a	4TX	4RX
802.11n (HT20)	4TX	4RX
802.11n (HT40)	4TX	4RX
802.11ac (VHT20)	4TX	4RX
802.11ac (VHT40)	4TX	4RX
802.11ac (VHT80)	4TX	4RX
802.11ax (HE20)	4TX	4RX
802.11ax (HE40)	4TX	4RX
802.11ax (HE80)	4TX	4RX

Note:
1. All of modulation mode support beamforming function except 802.11a/b/g/n modulation mode.
2. The EUT support Beamforming and CDD mode, therefore both mode were investigated and the worst case scenario was identified. The worst case data were presented in test report.
3. The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz), VHT20 mode for 20MHz (40MHz) and 802.11ax mode for 20MHz (40MHz), therefore the manufacturer will control the power for 802.11n mode as same as the VHT mode and ax mode or more lower than it and investigated worst case to representative mode in test report. (Final test mode refer to section 3.2.1)

8. 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.
9. 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), VHT20 and 802.11ax (HE20):

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), VHT40 and 802.11ax (HE40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
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	
1	√	√	√	√	For Model: S5A103A (Indoor)
2	√	√	√	-	For Model: S5A108A (Outdoor)

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 laying-flat and wall-mount. The worst case was found when positioned of on wall-mount.

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.

CDD Mode					
Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11b	1 to 11	1, 6, 10, 11	DSSS	DBPSK	1Mb/s
802.11g	1 to 11	1, 2, 6, 10, 11	OFDM	BPSK	6Mb/s
802.11ax (HE20)	1 to 11	1, 2, 6, 10, 11	OFDMA	BPSK	MCS0
802.11ax (HE40)	3 to 9	3, 6, 9	OFDMA	BPSK	MCS0

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.

CDD Mode					
Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11b	1 to 11	6	DSSS	DBPSK	1Mb/s

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.

CDD Mode					
Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate Parameter
802.11b	1 to 11	6	DSSS	DBPSK	1Mb/s

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.

CDD Mode					
Mode	**Available Channel**	**Tested Channel**	**Modulation Technology**	**Modulation Type**	**Data Rate Parameter**
802.11b	1 to 11	1, 6, 10, 11	DSSS	DBPSK	1Mb/s
802.11g	1 to 11	1, 2, 6, 10, 11	OFDM	BPSK	6Mb/s
VHT20 (Output power only)	1 to 11	1, 2, 6, 10, 11	OFDM	BPSK	MCS0
VHT40 (Output power only)	3 to 9	3, 6, 9	OFDM	BPSK	MCS0
802.11ax (HE20)	1 to 11	1, 2, 6, 10, 11	OFDMA	BPSK	MCS0
802.11ax (HE40)	3 to 9	3, 6, 9	OFDMA	BPSK	MCS0
Beamforming Mode (output power only)					
Mode	**Available Channel**	**Tested Channel**	**Modulation Technology**	**Modulation Type**	**Data Rate Parameter**
VHT20	1 to 11	1, 2, 6, 10, 11	OFDM	BPSK	MCS0
VHT40	3 to 9	3, 6, 9	OFDM	BPSK	MCS0
802.11ax (HE20)	1 to 11	1, 2, 6, 10, 11	OFDMA	BPSK	MCS0
802.11ax (HE40)	3 to 9	3, 6, 9	OFDMA	BPSK	MCS0

Test Condition:

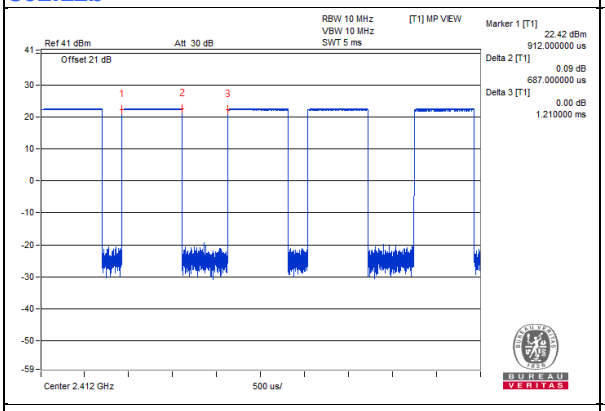
APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	23deg. C, 68%RH	120Vac, 60Hz	Benson Chao
RE<1G	26deg. C, 71%RH	120Vac, 60Hz	Benson Chao
PLC	25deg. C, 59%RH	120Vac, 60Hz	Sampson Chen
APCM	25deg. C, 60%RH	120Vac, 60Hz	Kevin Ko

3.3 Duty Cycle of Test Signal

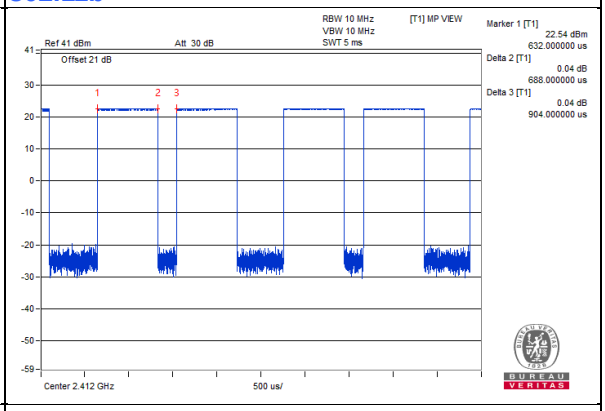
Duty cycle of test signal is < 98 %, duty factor shall be considered.

802.11b: Duty cycle = 1.375/2.114 = 0.65, Duty factor = 10 * log(1/Duty cycle) = 1.87 dB
802.11g: Duty cycle = 1.974/2.112 = 0.935, Duty factor = 10 * log(1/Duty cycle) = 0.29 dB
802.11ax (HE20): Duty cycle = 5.428/5.74 = 0.946, Duty factor = 10 * log(1/Duty cycle) = 0.24 dB
802.11ax (HE40): Duty cycle = 5.434/5.717 = 0.95, Duty factor = 10 * log(1/Duty cycle) = 0.22 dB

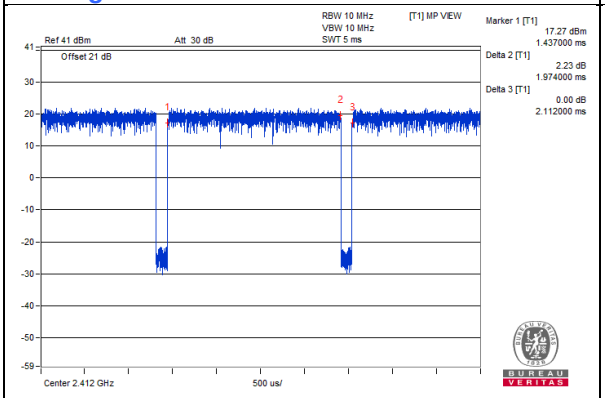
802.11b



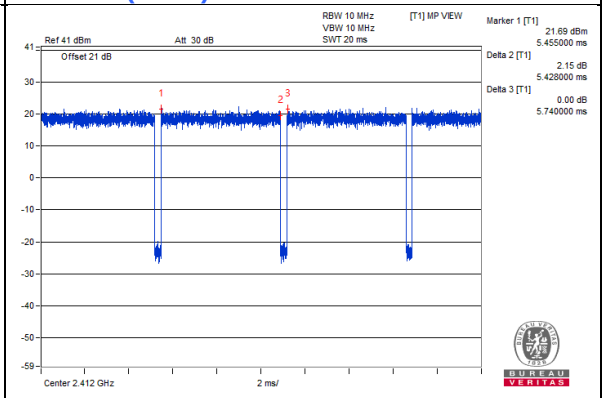
802.11b



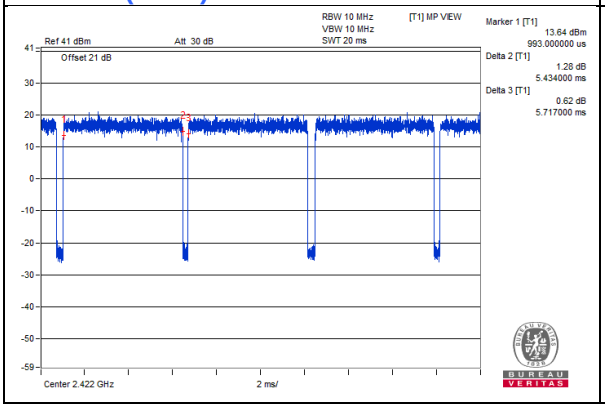
802.11g



802.11ax (HE20)



802.11ax (HE40)



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	P88G	G1WJL42	PD93165NG	Provided by Lab
B.	Laptop	HP	TPN-Q186	5CD8212YYK	doc	Provided by Lab
C.	iPod	Apple	MD778TA/A	CC4JL03FF4T1	NA	Provided by Lab
D.	SIM Card	keysight	NA	NA	NA	Provided by Lab
E.	SIM Card	keysight	NA	NA	NA	Provided by Lab

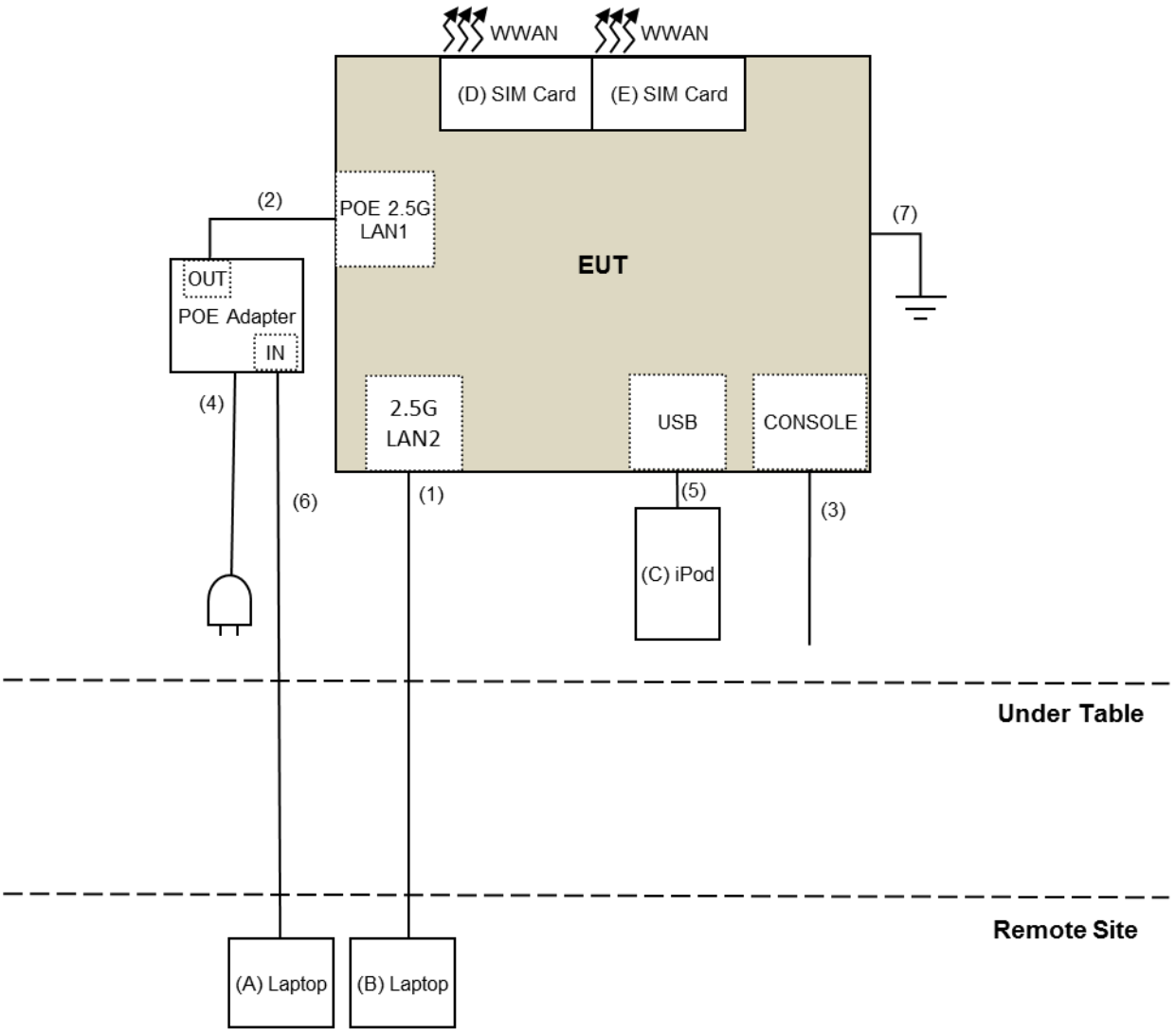
Note:

1. All power cords of the above support units are non-shielded (1.5m).

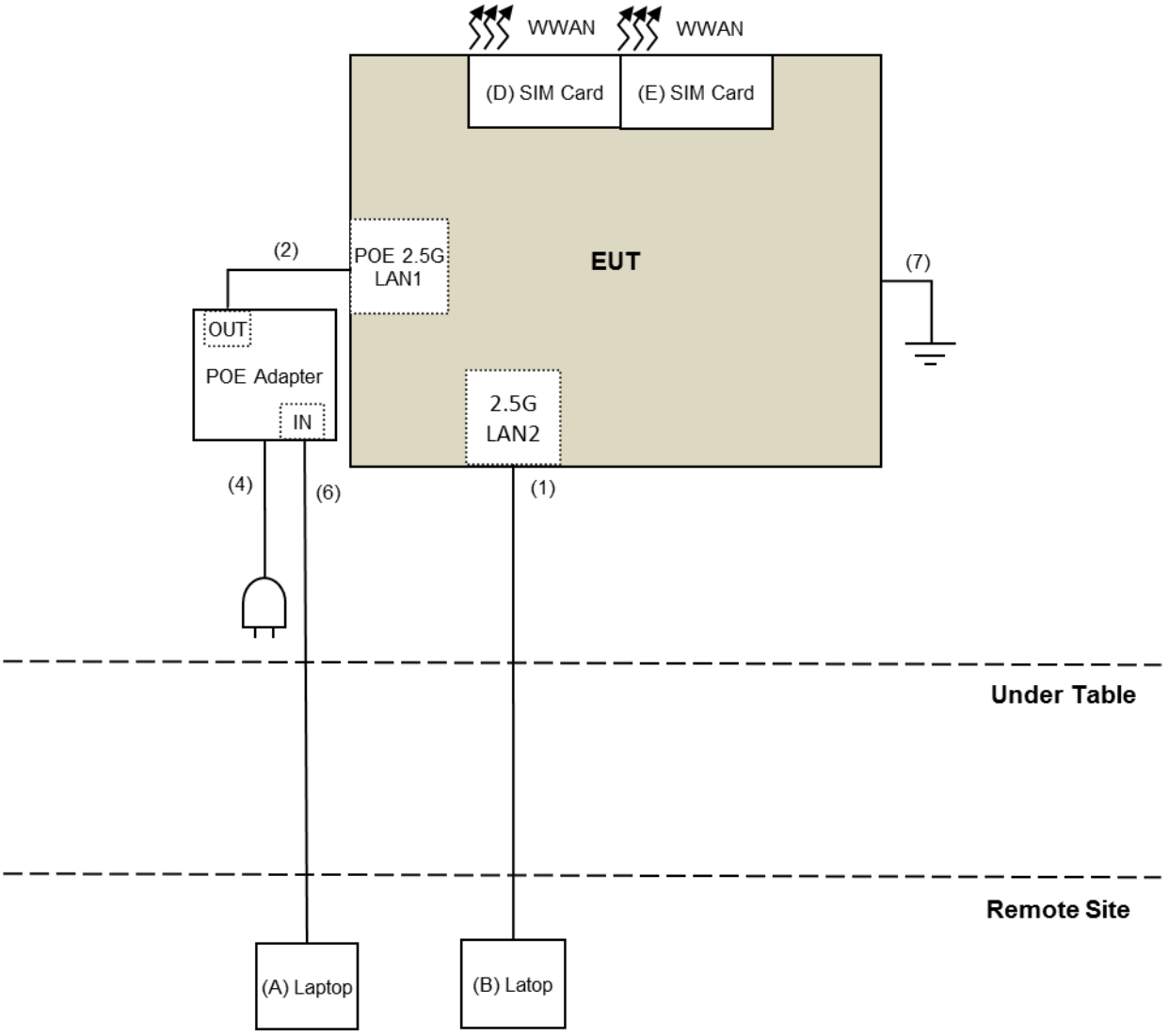
ID	Descriptions (Cables)	Qty	Length (m)	Shielding (Yes/No)	Cores (Number)	Remarks
1	RJ-45 Cable	1	10	No	0	Provided by Lab
2	RJ-45 Cable	1	3	No	0	Provided by Lab
3	Console Cable	1	1.5	No	0	Provided by Lab
4	AC Cable	1	1.8	No	0	Provided by Lab
5	USB Cable	1	0.1	Yes	0	Provided by Lab
6	RJ-45 Cable	1	10	No	0	Provided by Lab
7	Ground Cable	1	3	Yes	0	Provided by Lab

3.4.1 Configuration of System under Test

For Model: S5A103A (Indoor)



For Model: S5A108A (outdoor)



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 30dB 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 & BandEdge test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESR7	102026	Apr. 22, 2020	Apr. 21, 2021
Spectrum Analyzer Keysight	N9030B	MY57141948	May 22, 2020	May 21, 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 EMCI	EMC330N	980538	Apr. 28, 2020	Apr. 27, 2021
Trilog Broadband Antenna SCHWARZBECK	VULB9168	9168-0842	Nov. 08, 2019	Nov. 07, 2020
RF Cable	8D	966-5-1	Apr. 29, 2020	Apr. 28, 2021
RF Cable	8D	966-5-2	Apr. 29, 2020	Apr. 28, 2021
RF Cable	8D	966-5-3	Apr. 29, 2020	Apr. 28, 2021
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-ATT5-02	Jan. 14, 2020	Jan. 13, 2021
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-1819	Nov. 24, 2019	Nov. 23, 2020
Pre-Amplifier EMCI	EMC12630SE	980509	Apr. 29, 2020	Apr. 28, 2021
RF Cable EMCI	EMC104-SM-SM-1500	180503	Apr. 29, 2020	Apr. 28, 2021
RF Cable EMCI	EMC104-SM-SM-2000	180501	Apr. 29, 2020	Apr. 28, 2021
RF Cable EMCI	EMC104-SM-SM-6000	180506	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. 5.
3. Tested Date: Sep. 07 to Oct. 07, 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
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
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: Oct. 13, 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:

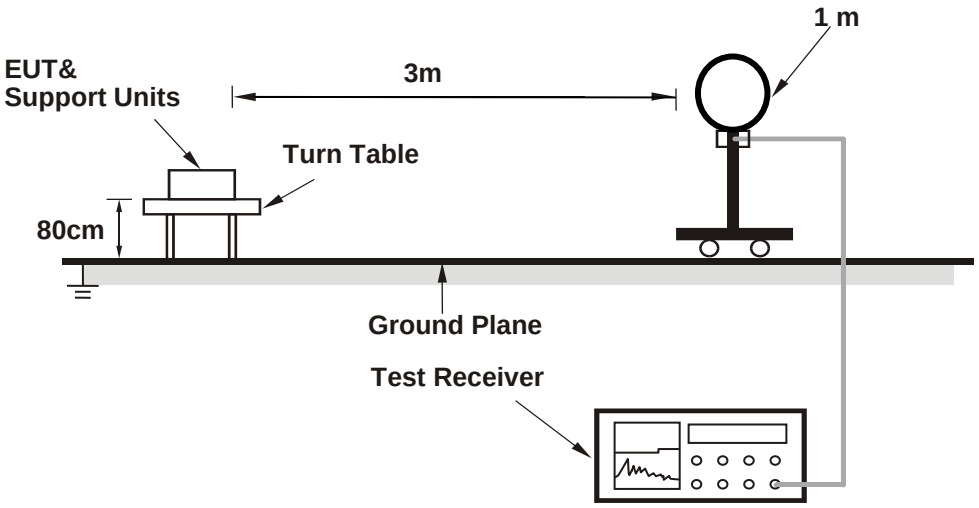
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

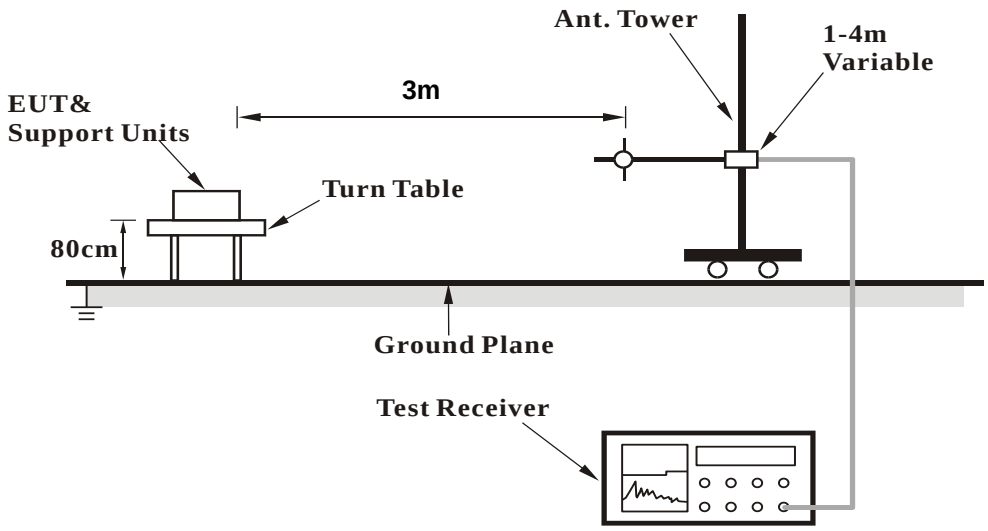
No deviation.

4.1.5 Test Setup

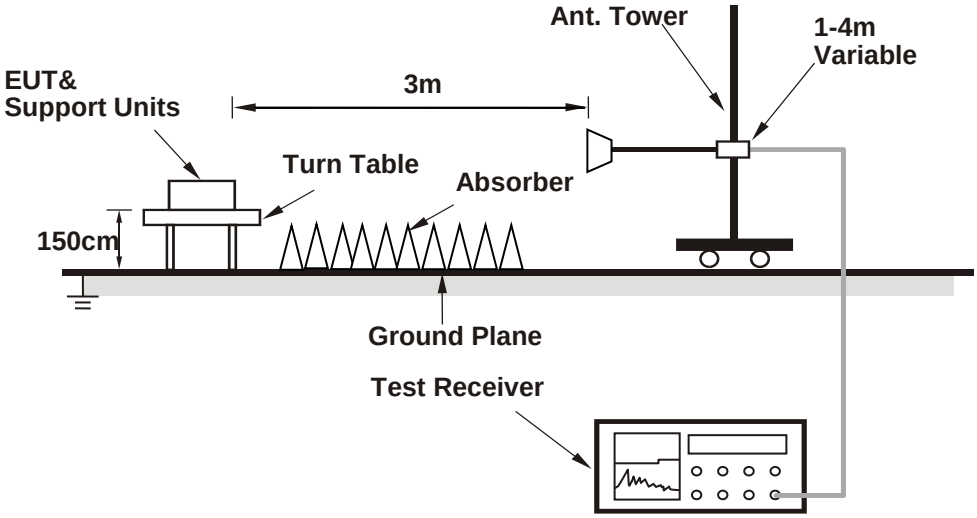
For Radiated emission below 30MHz



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. Connected the EUT with the Laptop which is placed on remote site.
b. Controlling software (qdart_conn.win.1.0_installer_00070.1) has been activated to set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results (Mode 1)

CDD Mode

ABOVE 1GHz DATA

RF Mode	TX 802.11b	**Channel**	CH 1：2412 MHz
Frequency Range	1GHz ~ 25GHz	**Detector Function**	Peak (PK) Average (AV)

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	61.0 PK	74.0	-13.0	1.04 H	202	64.1	-3.1
2	2390.00	53.3 AV	54.0	-0.7	1.04 H	202	56.4	-3.1
3	*2412.00	115.5 PK			1.04 H	202	118.5	-3.0
4	*2412.00	111.6 AV			1.04 H	202	114.6	-3.0
5	4824.00	43.2 PK	74.0	-30.8	1.50 H	192	42.2	1.0
6	4824.00	38.0 AV	54.0	-16.0	1.50 H	192	37.0	1.0
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	2387.82	58.3 PK	74.0	-15.7	3.12 V	172	61.4	-3.1
2	2387.82	48.3 AV	54.0	-5.7	3.12 V	172	51.4	-3.1
3	*2412.00	108.3 PK			3.12 V	172	111.3	-3.0
4	*2412.00	104.6 AV			3.12 V	172	107.6	-3.0
5	4824.00	37.9 PK	74.0	-36.1	1.30 V	170	36.9	1.0
6	4824.00	28.9 AV	54.0	-25.1	1.30 V	170	27.9	1.0

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.

RF Mode	TX 802.11b	Channel	CH 6：2437 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	58.1 PK	74.0	-15.9	1.10 H	207	61.2	-3.1
2	2390.00	48.3 AV	54.0	-5.7	1.10 H	207	51.4	-3.1
3	*2437.00	117.0 PK			1.10 H	207	120.0	-3.0
4	*2437.00	113.2 AV			1.10 H	207	116.2	-3.0
5	2483.50	61.3 PK	74.0	-12.7	1.10 H	207	64.4	-3.1
6	2483.50	52.3 AV	54.0	-1.7	1.10 H	207	55.4	-3.1
7	4874.00	43.0 PK	74.0	-31.0	1.68 H	194	42.1	0.9
8	4874.00	35.2 AV	54.0	-18.8	1.68 H	194	34.3	0.9
9	7311.00	46.1 PK	74.0	-27.9	1.50 H	233	39.1	7.0
10	7311.00	34.8 AV	54.0	-19.2	1.50 H	233	27.8	7.0
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	56.7 PK	74.0	-17.3	3.00 V	346	59.8	-3.1
2	2390.00	44.3 AV	54.0	-9.7	3.00 V	346	47.4	-3.1
3	*2437.00	108.9 PK			3.00 V	346	111.9	-3.0
4	*2437.00	105.5 AV			3.00 V	346	108.5	-3.0
5	2483.50	58.8 PK	74.0	-15.2	3.00 V	346	61.9	-3.1
6	2483.50	49.6 AV	54.0	-4.4	3.00 V	346	52.7	-3.1
7	4874.00	36.2 PK	74.0	-37.8	1.26 V	166	35.3	0.9
8	4874.00	27.9 AV	54.0	-26.1	1.26 V	166	27.0	0.9
9	7311.00	42.6 PK	74.0	-31.4	1.34 V	166	35.6	7.0
10	7311.00	31.5 AV	54.0	-22.5	1.34 V	166	24.5	7.0

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.

RF Mode	TX 802.11b	Channel	CH 10：2457 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	*2457.00	114.4 PK			1.17 H	212	117.5	-3.1
2	*2457.00	112.3 AV			1.17 H	212	115.4	-3.1
3	2483.50	59.4 PK	74.0	-14.6	1.17 H	212	62.5	-3.1
4	2483.50	53.8 AV	54.0	-0.2	1.17 H	212	56.9	-3.1
5	4914.00	40.0 PK	74.0	-34.0	1.00 H	191	39.0	1.0
6	4914.00	29.6 AV	54.0	-24.4	1.00 H	191	28.6	1.0
7	7371.00	45.6 PK	74.0	-28.4	1.57 H	200	38.5	7.1
8	7371.00	34.8 AV	54.0	-19.2	1.57 H	200	27.7	7.1
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	*2457.00	108.5 PK			2.72 V	183	111.6	-3.1
2	*2457.00	106.5 AV			2.72 V	183	109.6	-3.1
3	2483.50	59.0 PK	74.0	-15.0	2.72 V	183	62.1	-3.1
4	2483.50	53.3 AV	54.0	-0.7	2.72 V	183	56.4	-3.1
5	4914.00	39.9 PK	74.0	-34.1	1.28 V	143	38.9	1.0
6	4914.00	28.7 AV	54.0	-25.3	1.28 V	143	27.7	1.0
7	7371.00	45.3 PK	74.0	-28.7	1.60 V	184	38.2	7.1
8	7371.00	33.1 AV	54.0	-20.9	1.60 V	184	26.0	7.1

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.

RF Mode	TX 802.11b	Channel	CH 11：2462 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	115.0 PK			1.00 H	200	118.1	-3.1
2	*2462.00	111.2 AV			1.00 H	200	114.3	-3.1
3	2483.50	57.9 PK	74.0	-16.1	1.00 H	200	61.0	-3.1
4	2483.50	47.3 AV	54.0	-6.7	1.00 H	200	50.4	-3.1
5	4924.00	41.4 PK	74.0	-32.6	1.59 H	192	40.4	1.0
6	4924.00	29.4 AV	54.0	-24.6	1.59 H	192	28.4	1.0
7	7386.00	46.3 PK	74.0	-27.7	1.85 H	200	39.2	7.1
8	7386.00	34.1 AV	54.0	-19.9	1.85 H	200	27.0	7.1
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	107.4 PK			3.29 V	346	110.5	-3.1
2	*2462.00	103.5 AV			3.29 V	346	106.6	-3.1
3	2486.03	56.9 PK	74.0	-17.1	3.29 V	346	60.0	-3.1
4	2486.03	44.7 AV	54.0	-9.3	3.29 V	346	47.8	-3.1
5	4924.00	40.7 PK	74.0	-33.3	1.29 V	176	39.7	1.0
6	4924.00	29.5 AV	54.0	-24.5	1.29 V	176	28.5	1.0
7	7386.00	44.2 PK	74.0	-29.8	1.35 V	350	37.1	7.1
8	7386.00	32.6 AV	54.0	-21.4	1.35 V	350	25.5	7.1

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.

RF Mode	TX 802.11g	Channel	CH 1：2412 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	66.9 PK	74.0	-7.1	1.33 H	211	70.0	-3.1
2	2390.00	53.3 AV	54.0	-0.7	1.33 H	211	56.4	-3.1
3	*2412.00	115.3 PK			1.33 H	211	118.3	-3.0
4	*2412.00	105.5 AV			1.33 H	211	108.5	-3.0
5	4824.00	39.6 PK	74.0	-34.4	1.88 H	195	38.6	1.0
6	4824.00	27.5 AV	54.0	-26.5	1.88 H	195	26.5	1.0
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	2389.17	68.6 PK	74.0	-5.4	1.00 V	178	71.7	-3.1
2	2389.17	53.2 AV	54.0	-0.8	1.00 V	178	56.3	-3.1
3	*2412.00	114.3 PK			1.00 V	178	117.3	-3.0
4	*2412.00	104.0 AV			1.00 V	178	107.0	-3.0
5	4824.00	38.9 PK	74.0	-35.1	1.57 V	193	37.9	1.0
6	4824.00	26.9 AV	54.0	-27.1	1.57 V	193	25.9	1.0

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.

RF Mode	TX 802.11g	Channel	CH 2：2417 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	64.6 PK	74.0	-9.4	1.27 H	223	67.7	-3.1
2	2390.00	53.7 AV	54.0	-0.3	1.27 H	223	56.8	-3.1
3	*2417.00	117.2 PK			1.27 H	223	120.2	-3.0
4	*2417.00	109.1 AV			1.27 H	223	112.1	-3.0
5	4834.00	39.6 PK	74.0	-34.4	1.42 H	184	38.6	1.0
6	4834.00	26.9 AV	54.0	-27.1	1.42 H	184	25.9	1.0
7	7251.00	45.2 PK	74.0	-28.8	1.55 H	190	38.3	6.9
8	7251.00	31.9 AV	54.0	-22.1	1.55 H	190	25.0	6.9
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	62.0 PK	74.0	-12.0	1.19 V	190	65.1	-3.1
2	2390.00	51.2 AV	54.0	-2.8	1.19 V	190	54.3	-3.1
3	*2417.00	114.0 PK			1.19 V	190	117.0	-3.0
4	*2417.00	106.2 AV			1.19 V	190	109.2	-3.0
5	4834.00	38.9 PK	74.0	-35.1	1.25 V	206	37.9	1.0
6	4834.00	26.5 AV	54.0	-27.5	1.25 V	206	25.5	1.0
7	7251.00	44.4 PK	74.0	-29.6	1.43 V	198	37.5	6.9
8	7251.00	31.9 AV	54.0	-22.1	1.43 V	198	25.0	6.9

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.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11g	Channel	CH 6：2437 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	2389.98	67.0 PK	74.0	-7.0	1.42 H	209	70.1	-3.1
2	2389.98	53.4 AV	54.0	-0.6	1.42 H	209	56.5	-3.1
3	*2437.00	118.7 PK			1.42 H	209	121.7	-3.0
4	*2437.00	108.3 AV			1.42 H	209	111.3	-3.0
5	2484.74	67.9 PK	74.0	-6.1	1.42 H	209	71.0	-3.1
6	2484.74	53.8 AV	54.0	-0.2	1.42 H	209	56.9	-3.1
7	4874.00	41.4 PK	74.0	-32.6	1.78 H	165	40.5	0.9
8	4874.00	28.0 AV	54.0	-26.0	1.78 H	165	27.1	0.9
9	7311.00	45.1 PK	74.0	-28.9	1.57 H	193	38.1	7.0
10	7311.00	32.1 AV	54.0	-21.9	1.57 H	193	25.1	7.0
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	2389.92	66.5 PK	74.0	-7.5	1.00 V	182	69.6	-3.1
2	2389.92	53.1 AV	54.0	-0.9	1.00 V	182	56.2	-3.1
3	*2437.00	119.7 PK			1.00 V	182	122.7	-3.0
4	*2437.00	108.7 AV			1.00 V	182	111.7	-3.0
5	2483.71	68.6 PK	74.0	-5.4	1.00 V	182	71.7	-3.1
6	2483.71	53.1 AV	54.0	-0.9	1.00 V	182	56.2	-3.1
7	4874.00	38.8 PK	74.0	-35.2	1.22 V	180	37.9	0.9
8	4874.00	27.1 AV	54.0	-26.9	1.22 V	180	26.2	0.9
9	7311.00	44.9 PK	74.0	-29.1	1.45 V	184	37.9	7.0
10	7311.00	32.0 AV	54.0	-22.0	1.45 V	184	25.0	7.0

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.

RF Mode	TX 802.11g	Channel	CH 10：2457 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	*2457.00	114.6 PK			1.42 H	220	117.7	-3.1
2	*2457.00	106.5 AV			1.42 H	220	109.6	-3.1
3	2483.50	66.0 PK	74.0	-8.0	1.42 H	220	69.1	-3.1
4	2483.50	53.0 AV	54.0	-1.0	1.42 H	220	56.1	-3.1
5	4914.00	39.3 PK	74.0	-34.7	1.27 H	191	38.3	1.0
6	4914.00	26.9 AV	54.0	-27.1	1.27 H	191	25.9	1.0
7	7371.00	44.7 PK	74.0	-29.3	1.44 H	188	37.6	7.1
8	7371.00	32.4 AV	54.0	-21.6	1.44 H	188	25.3	7.1
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	*2457.00	112.7 PK			1.16 V	198	115.8	-3.1
2	*2457.00	104.5 AV			1.16 V	198	107.6	-3.1
3	2483.50	63.3 PK	74.0	-10.7	1.16 V	198	66.4	-3.1
4	2483.50	50.0 AV	54.0	-4.0	1.16 V	198	53.1	-3.1
5	4914.00	39.7 PK	74.0	-34.3	1.14 V	176	38.7	1.0
6	4914.00	27.0 AV	54.0	-27.0	1.14 V	176	26.0	1.0
7	7371.00	44.8 PK	74.0	-29.2	1.29 V	220	37.7	7.1
8	7371.00	32.3 AV	54.0	-21.7	1.29 V	220	25.2	7.1

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.

RF Mode	TX 802.11g	Channel	CH 11：2462 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	121.0 PK			1.20 H	206	124.1	-3.1
2	*2462.00	109.8 AV			1.20 H	206	112.9	-3.1
3	2484.14	65.7 PK	74.0	-8.3	1.20 H	206	68.8	-3.1
4	2484.14	52.0 AV	54.0	-2.0	1.20 H	206	55.1	-3.1
5	4924.00	39.4 PK	74.0	-34.6	1.58 H	184	38.4	1.0
6	4924.00	26.8 AV	54.0	-27.2	1.58 H	184	25.8	1.0
7	7386.00	44.9 PK	74.0	-29.1	1.45 H	186	37.8	7.1
8	7386.00	32.7 AV	54.0	-21.3	1.45 H	186	25.6	7.1
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	111.9 PK			1.00 V	186	115.0	-3.1
2	*2462.00	101.5 AV			1.00 V	186	104.6	-3.1
3	2484.66	66.4 PK	74.0	-7.6	1.00 V	186	69.5	-3.1
4	2484.66	51.4 AV	54.0	-2.6	1.00 V	186	54.5	-3.1
5	4924.00	39.4 PK	74.0	-34.6	2.19 V	185	38.4	1.0
6	4924.00	26.8 AV	54.0	-27.2	2.19 V	185	25.8	1.0
7	7386.00	45.0 PK	74.0	-29.0	1.55 V	242	37.9	7.1
8	7386.00	32.5 AV	54.0	-21.5	1.55 V	242	25.4	7.1

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 1：2412 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	2389.22	70.1 PK	74.0	-3.9	1.74 H	243	73.2	-3.1
2	2389.22	53.1 AV	54.0	-0.9	1.74 H	243	56.2	-3.1
3	*2412.00	118.0 PK			1.74 H	243	121.0	-3.0
4	*2412.00	103.8 AV			1.74 H	243	106.8	-3.0
5	4824.00	39.2 PK	74.0	-34.8	1.32 H	183	38.2	1.0
6	4824.00	26.7 AV	54.0	-27.3	1.32 H	183	25.7	1.0
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	67.0 PK	74.0	-7.0	1.54 V	224	70.1	-3.1
2	2390.00	52.2 AV	54.0	-1.8	1.54 V	224	55.3	-3.1
3	*2412.00	114.7 PK			1.54 V	224	117.7	-3.0
4	*2412.00	100.9 AV			1.54 V	224	103.9	-3.0
5	4824.00	39.8 PK	74.0	-34.2	2.15 V	218	38.8	1.0
6	4824.00	26.7 AV	54.0	-27.3	2.15 V	218	25.7	1.0

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 2：2417 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	64.1 PK	74.0	-9.9	1.43 H	240	67.2	-3.1
2	2390.00	53.2 AV	54.0	-0.8	1.43 H	240	56.3	-3.1
3	*2417.00	116.7 PK			1.43 H	240	119.7	-3.0
4	*2417.00	105.4 AV			1.43 H	240	108.4	-3.0
5	4834.00	40.1 PK	74.0	-33.9	1.16 H	205	39.1	1.0
6	4834.00	26.7 AV	54.0	-27.3	1.16 H	205	25.7	1.0
7	7251.00	45.0 PK	74.0	-29.0	1.68 H	203	38.1	6.9
8	7251.00	31.8 AV	54.0	-22.2	1.68 H	203	24.9	6.9
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	59.9 PK	74.0	-14.1	1.36 V	214	63.0	-3.1
2	2390.00	47.6 AV	54.0	-6.4	1.36 V	214	50.7	-3.1
3	*2417.00	113.9 PK			1.36 V	214	116.9	-3.0
4	*2417.00	102.1 AV			1.36 V	214	105.1	-3.0
5	4834.00	39.9 PK	74.0	-34.1	1.26 V	179	38.9	1.0
6	4834.00	26.6 AV	54.0	-27.4	1.26 V	179	25.6	1.0
7	7251.00	44.4 PK	74.0	-29.6	1.50 V	183	37.5	6.9
8	7251.00	31.7 AV	54.0	-22.3	1.50 V	183	24.8	6.9

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.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11ax (HE20)	Channel	CH 6：2437 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	2389.93	67.7 PK	74.0	-6.3	1.19 H	246	70.8	-3.1
2	2389.93	53.1 AV	54.0	-0.9	1.19 H	246	56.2	-3.1
3	*2437.00	122.3 PK			1.19 H	246	125.3	-3.0
4	*2437.00	109.3 AV			1.19 H	246	112.3	-3.0
5	2484.99	67.0 PK	74.0	-7.0	1.19 H	246	70.1	-3.1
6	2484.99	51.9 AV	54.0	-2.1	1.19 H	246	55.0	-3.1
7	4874.00	40.1 PK	74.0	-33.9	1.85 H	211	39.2	0.9
8	4874.00	26.9 AV	54.0	-27.1	1.85 H	211	26.0	0.9
9	7311.00	44.6 PK	74.0	-29.4	1.56 H	158	37.6	7.0
10	7311.00	31.7 AV	54.0	-22.3	1.56 H	158	24.7	7.0
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	65.1 PK	74.0	-8.9	1.00 V	184	68.2	-3.1
2	2390.00	49.0 AV	54.0	-5.0	1.00 V	184	52.1	-3.1
3	*2437.00	113.9 PK			1.03 V	181	116.9	-3.0
4	*2437.00	101.5 AV			1.03 V	181	104.5	-3.0
5	2483.50	69.8 PK	74.0	-4.2	1.00 V	184	72.9	-3.1
6	2483.50	52.2 AV	54.0	-1.8	1.00 V	184	55.3	-3.1
7	4874.00	39.2 PK	74.0	-34.8	1.52 V	176	38.3	0.9
8	4874.00	26.7 AV	54.0	-27.3	1.52 V	176	25.8	0.9
9	7311.00	45.2 PK	74.0	-28.8	1.00 V	206	38.2	7.0
10	7311.00	31.8 AV	54.0	-22.2	1.00 V	206	24.8	7.0

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 10：2457 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	*2457.00	118.6 PK			1.20 H	125	121.7	-3.1
2	*2457.00	107.1 AV			1.20 H	125	110.2	-3.1
3	2483.50	64.5 PK	74.0	-9.5	1.20 H	125	67.6	-3.1
4	2483.50	53.5 AV	54.0	-0.5	1.20 H	125	56.6	-3.1
5	4914.00	40.1 PK	74.0	-33.9	1.25 H	186	39.1	1.0
6	4914.00	26.6 AV	54.0	-27.4	1.25 H	186	25.6	1.0
7	7371.00	45.6 PK	74.0	-28.4	1.56 H	196	38.5	7.1
8	7371.00	32.5 AV	54.0	-21.5	1.56 H	196	25.4	7.1
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	*2457.00	115.4 PK			1.04 V	198	118.5	-3.1
2	*2457.00	104.0 AV			1.04 V	198	107.1	-3.1
3	2483.50	63.6 PK	74.0	-10.4	1.04 V	198	66.7	-3.1
4	2483.50	49.9 AV	54.0	-4.1	1.04 V	198	53.0	-3.1
5	4914.00	39.3 PK	74.0	-34.7	1.56 V	205	38.3	1.0
6	4914.00	26.7 AV	54.0	-27.3	1.56 V	205	25.7	1.0
7	7371.00	46.5 PK	74.0	-27.5	1.09 V	182	39.4	7.1
8	7371.00	32.1 AV	54.0	-21.9	1.09 V	182	25.0	7.1

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 11：2462 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	116.8 PK			1.49 H	250	119.9	-3.1
2	*2462.00	103.9 AV			1.49 H	250	107.0	-3.1
3	2485.76	59.1 PK	74.0	-14.9	1.49 H	250	62.2	-3.1
4	2485.76	46.3 AV	54.0	-7.7	1.49 H	250	49.4	-3.1
5	4924.00	39.0 PK	74.0	-35.0	2.60 H	179	38.0	1.0
6	4924.00	26.7 AV	54.0	-27.3	2.60 H	179	25.7	1.0
7	7386.00	44.5 PK	74.0	-29.5	1.76 H	210	37.4	7.1
8	7386.00	32.1 AV	54.0	-21.9	1.76 H	210	25.0	7.1
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	112.7 PK			1.14 V	181	115.8	-3.1
2	*2462.00	100.1 AV			1.14 V	181	103.2	-3.1
3	2483.74	69.1 PK	74.0	-4.9	1.14 V	181	72.2	-3.1
4	2483.74	52.3 AV	54.0	-1.7	1.14 V	181	55.4	-3.1
5	4924.00	39.2 PK	74.0	-34.8	1.56 V	174	38.2	1.0
6	4924.00	26.6 AV	54.0	-27.4	1.56 V	174	25.6	1.0
7	7386.00	45.6 PK	74.0	-28.4	1.88 V	220	38.5	7.1
8	7386.00	32.1 AV	54.0	-21.9	1.88 V	220	25.0	7.1

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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 3：2422 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	2389.13	68.5 PK	74.0	-5.5	1.67 H	248	71.6	-3.1
2	2389.13	52.0 AV	54.0	-2.0	1.67 H	248	55.1	-3.1
3	*2422.00	118.2 PK			1.67 H	248	121.2	-3.0
4	*2422.00	105.2 AV			1.67 H	248	108.2	-3.0
5	4844.00	40.3 PK	74.0	-33.7	1.29 H	257	39.3	1.0
6	4844.00	26.6 AV	54.0	-27.4	1.29 H	257	25.6	1.0
7	7266.00	45.2 PK	74.0	-28.8	1.97 H	246	38.2	7.0
8	7266.00	32.4 AV	54.0	-21.6	1.97 H	246	25.4	7.0
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	70.8 PK	74.0	-3.2	1.12 V	193	73.9	-3.1
2	2390.00	52.0 AV	54.0	-2.0	1.12 V	193	55.1	-3.1
3	*2422.00	111.6 PK			1.12 V	193	114.6	-3.0
4	*2422.00	99.5 AV			1.12 V	193	102.5	-3.0
5	4844.00	39.9 PK	74.0	-34.1	1.74 V	242	38.9	1.0
6	4844.00	26.6 AV	54.0	-27.4	1.74 V	242	25.6	1.0
7	7266.00	44.9 PK	74.0	-29.1	1.98 V	177	37.9	7.0
8	7266.00	31.7 AV	54.0	-22.3	1.98 V	177	24.7	7.0

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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 6：2437 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	66.9 PK	74.0	-7.1	1.40 H	249	70.0	-3.1
2	2390.00	53.4 AV	54.0	-0.6	1.40 H	249	56.5	-3.1
3	*2437.00	117.3 PK			1.40 H	249	120.3	-3.0
4	*2437.00	103.9 AV			1.40 H	249	106.9	-3.0
5	2483.50	65.6 PK	74.0	-8.4	1.40 H	249	68.7	-3.1
6	2483.50	48.5 AV	54.0	-5.5	1.40 H	249	51.6	-3.1
7	4874.00	39.4 PK	74.0	-34.6	1.45 H	188	38.5	0.9
8	4874.00	26.8 AV	54.0	-27.2	1.45 H	188	25.9	0.9
9	7311.00	44.6 PK	74.0	-29.4	1.90 H	218	37.6	7.0
10	7311.00	31.8 AV	54.0	-22.2	1.90 H	218	24.8	7.0
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	65.2 PK	74.0	-8.8	1.26 V	195	68.3	-3.1
2	2390.00	50.8 AV	54.0	-3.2	1.26 V	195	53.9	-3.1
3	*2437.00	112.0 PK			1.10 V	190	115.0	-3.0
4	*2437.00	99.9 AV			1.10 V	190	102.9	-3.0
5	2483.50	66.3 PK	74.0	-7.7	1.26 V	195	69.4	-3.1
6	2483.50	50.6 AV	54.0	-3.4	1.26 V	195	53.7	-3.1
7	4874.00	39.5 PK	74.0	-34.5	1.48 V	242	38.6	0.9
8	4874.00	26.6 AV	54.0	-27.4	1.48 V	242	25.7	0.9
9	7311.00	44.8 PK	74.0	-29.2	1.36 V	219	37.8	7.0
10	7311.00	31.7 AV	54.0	-22.3	1.36 V	219	24.7	7.0

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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 9：2452 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	115.0 PK			1.63 H	250	118.1	-3.1
2	*2452.00	102.5 AV			1.63 H	250	105.6	-3.1
3	2487.14	72.8 PK	74.0	-1.2	1.63 H	250	75.9	-3.1
4	2487.14	52.4 AV	54.0	-1.6	1.63 H	250	55.5	-3.1
5	4904.00	39.6 PK	74.0	-34.4	1.57 H	218	38.6	1.0
6	4904.00	26.8 AV	54.0	-27.2	1.57 H	218	25.8	1.0
7	7356.00	45.5 PK	74.0	-28.5	2.17 H	219	38.4	7.1
8	7356.00	32.0 AV	54.0	-22.0	2.17 H	219	24.9	7.1
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	112.6 PK			1.00 V	205	115.7	-3.1
2	*2452.00	99.2 AV			1.00 V	205	102.3	-3.1
3	2484.08	68.0 PK	74.0	-6.0	1.00 V	205	71.1	-3.1
4	2484.08	51.3 AV	54.0	-2.7	1.00 V	205	54.4	-3.1
5	4904.00	39.3 PK	74.0	-34.7	2.10 V	188	38.3	1.0
6	4904.00	26.6 AV	54.0	-27.4	2.10 V	188	25.6	1.0
7	7356.00	45.6 PK	74.0	-28.4	1.78 V	217	38.5	7.1
8	7356.00	32.0 AV	54.0	-22.0	1.78 V	217	24.9	7.1

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.

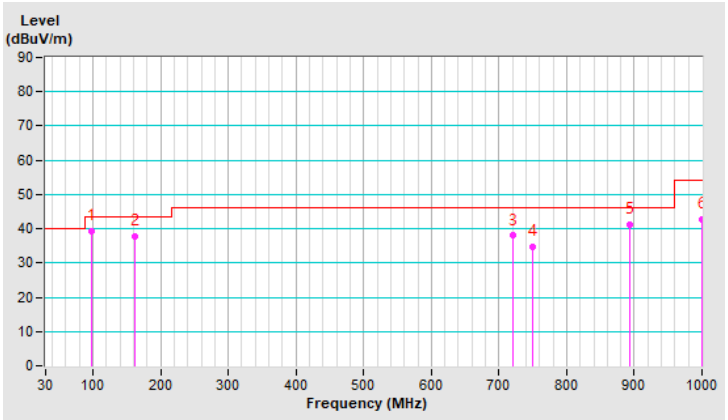
Below 1GHz Data:

RF Mode	TX 802.11b	Channel	CH 6：2437 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	96.93	39.3 QP	43.5	-4.2	2.00 H	276	56.8	-17.5
2	161.98	37.8 QP	43.5	-5.7	2.00 H	298	50.4	-12.6
3	721.11	37.9 QP	46.0	-8.1	4.00 H	360	41.4	-3.5
4	750.02	34.6 QP	46.0	-11.4	1.00 H	235	37.4	-2.8
5	892.96	41.3 QP	46.0	-4.7	2.00 H	311	42.4	-1.1
6	1000.00	42.7 QP	54.0	-11.3	1.00 H	319	42.4	0.3

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 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.

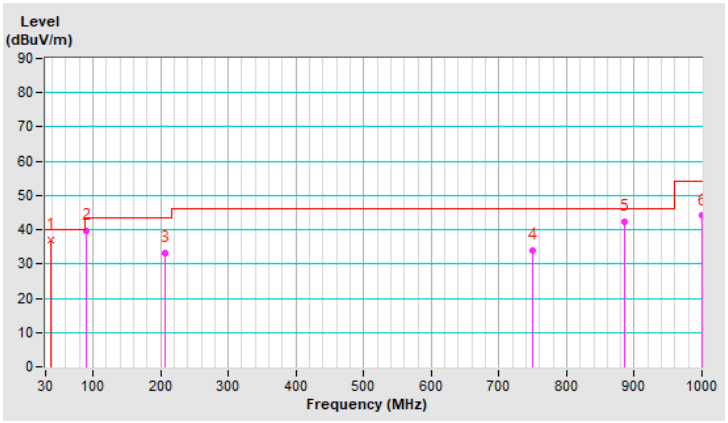


RF Mode	TX 802.11b	Channel	CH 6：2437 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	37.50	37.0 QP	40.0	-3.0	1.00 V	177	50.2	-13.2
2	90.82	39.8 QP	43.5	-3.7	2.00 V	360	58.1	-18.3
3	206.26	33.1 QP	43.5	-10.4	2.00 V	360	49.2	-16.1
4	750.02	34.0 QP	46.0	-12.0	1.00 V	54	36.8	-2.8
5	885.63	42.1 QP	46.0	-3.9	1.00 V	302	43.4	-1.3
6	1000.00	44.0 QP	54.0	-10.0	2.00 V	217	43.7	0.3

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 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.



4.1.8 Test Results (Mode 2)

CDD Mode

ABOVE 1GHz DATA

RF Mode	TX 802.11b	**Channel**	CH 1：2412 MHz
Frequency Range	1GHz ~ 25GHz	**Detector Function**	Peak (PK) Average (AV)

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	2387.05	60.8 PK	74.0	-13.2	1.90 H	55	63.9	-3.1
2	2387.05	51.9 AV	54.0	-2.1	1.90 H	55	55.0	-3.1
3	*2412.00	108.6 PK			1.90 H	55	111.6	-3.0
4	*2412.00	103.7 AV			1.90 H	55	106.7	-3.0
5	4824.00	39.9 PK	74.0	-34.1	1.87 H	127	38.9	1.0
6	4824.00	27.8 AV	54.0	-26.2	1.87 H	127	26.8	1.0
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	2387.78	60.9 PK	74.0	-13.1	2.74 V	166	64.0	-3.1
2	2387.78	53.6 AV	54.0	-0.4	2.74 V	166	56.7	-3.1
3	*2412.00	108.6 PK			2.74 V	166	111.6	-3.0
4	*2412.00	105.1 AV			2.74 V	166	108.1	-3.0
5	4824.00	39.3 PK	74.0	-34.7	1.58 V	188	38.3	1.0
6	4824.00	28.2 AV	54.0	-25.8	1.58 V	188	27.2	1.0

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.

RF Mode	TX 802.11b	Channel	CH 6：2437 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	60.2 PK	74.0	-13.8	1.45 H	62	63.3	-3.1
2	2390.00	48.0 AV	54.0	-6.0	1.45 H	62	51.1	-3.1
3	*2437.00	106.8 PK			1.45 H	62	109.8	-3.0
4	*2437.00	103.3 AV			1.45 H	62	106.3	-3.0
5	2483.50	57.2 PK	74.0	-16.8	1.45 H	62	60.3	-3.1
6	2483.50	44.4 AV	54.0	-9.6	1.45 H	62	47.5	-3.1
7	4874.00	39.3 PK	74.0	-34.7	1.73 H	190	38.4	0.9
8	4874.00	28.0 AV	54.0	-26.0	1.73 H	190	27.1	0.9
9	7311.00	44.6 PK	74.0	-29.4	1.62 H	186	37.6	7.0
10	7311.00	34.0 AV	54.0	-20.0	1.62 H	186	27.0	7.0
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	58.0 PK	74.0	-16.0	2.56 V	191	61.1	-3.1
2	2390.00	47.8 AV	54.0	-6.2	2.56 V	191	50.9	-3.1
3	*2437.00	118.5 PK			2.56 V	191	121.5	-3.0
4	*2437.00	114.7 AV			2.56 V	191	117.7	-3.0
5	2483.50	60.2 PK	74.0	-13.8	2.56 V	191	63.3	-3.1
6	2483.50	49.6 AV	54.0	-4.4	2.56 V	191	52.7	-3.1
7	4874.00	40.8 PK	74.0	-33.2	3.21 V	283	39.9	0.9
8	4874.00	32.7 AV	54.0	-21.3	3.21 V	283	31.8	0.9
9	7311.00	45.6 PK	74.0	-28.4	3.17 V	254	38.6	7.0
10	7311.00	32.9 AV	54.0	-21.1	3.17 V	254	25.9	7.0

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.

RF Mode	TX 802.11b	Channel	CH 10：2457 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	*2457.00	103.9 PK			1.13 H	203	107.0	-3.1
2	*2457.00	102.0 AV			1.13 H	203	105.1	-3.1
3	2483.50	56.8 PK	74.0	-17.2	1.13 H	203	59.9	-3.1
4	2483.50	45.8 AV	54.0	-8.2	1.13 H	203	48.9	-3.1
5	4914.00	40.1 PK	74.0	-33.9	1.00 H	201	39.1	1.0
6	4914.00	29.6 AV	54.0	-24.4	1.00 H	201	28.6	1.0
7	7371.00	46.1 PK	74.0	-27.9	1.60 H	215	39.0	7.1
8	7371.00	35.0 AV	54.0	-19.0	1.60 H	215	27.9	7.1
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	*2457.00	117.0 PK			2.74 V	190	120.1	-3.1
2	*2457.00	113.3 AV			2.74 V	190	116.4	-3.1
3	2483.50	58.4 PK	74.0	-15.6	2.74 V	190	61.5	-3.1
4	2483.50	52.9 AV	54.0	-1.1	2.74 V	190	56.0	-3.1
5	4914.00	39.7 PK	74.0	-34.3	1.32 V	158	38.7	1.0
6	4914.00	28.4 AV	54.0	-25.6	1.32 V	158	27.4	1.0
7	7371.00	44.7 PK	74.0	-29.3	1.64 V	174	37.6	7.1
8	7371.00	32.7 AV	54.0	-21.3	1.64 V	174	25.6	7.1

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.

RF Mode	TX 802.11b	Channel	CH 11：2462 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	103.9 PK			1.60 H	50	107.0	-3.1
2	*2462.00	100.5 AV			1.60 H	50	103.6	-3.1
3	2483.50	57.0 PK	74.0	-17.0	1.60 H	50	60.1	-3.1
4	2483.50	46.3 AV	54.0	-7.7	1.60 H	50	49.4	-3.1
5	4924.00	40.6 PK	74.0	-33.4	1.54 H	95	39.6	1.0
6	4924.00	27.8 AV	54.0	-26.2	1.54 H	95	26.8	1.0
7	7386.00	45.5 PK	74.0	-28.5	1.43 H	160	38.4	7.1
8	7386.00	33.2 AV	54.0	-20.8	1.43 H	160	26.1	7.1
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	114.4 PK			3.06 V	177	117.5	-3.1
2	*2462.00	110.9 AV			3.06 V	177	114.0	-3.1
3	2483.50	60.7 PK	74.0	-13.3	3.06 V	177	63.8	-3.1
4	2483.50	53.3 AV	54.0	-0.7	3.06 V	177	56.4	-3.1
5	4924.00	39.6 PK	74.0	-34.4	1.50 V	214	38.6	1.0
6	4924.00	27.8 AV	54.0	-26.2	1.50 V	214	26.8	1.0
7	7386.00	45.7 PK	74.0	-28.3	1.34 V	197	38.6	7.1
8	7386.00	33.3 AV	54.0	-20.7	1.34 V	197	26.2	7.1

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.

RF Mode	TX 802.11g	Channel	CH 1：2412 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	2389.62	63.2 PK	74.0	-10.8	2.31 H	45	66.3	-3.1
2	2389.62	51.7 AV	54.0	-2.3	2.31 H	45	54.8	-3.1
3	*2412.00	109.6 PK			2.31 H	45	112.6	-3.0
4	*2412.00	99.6 AV			2.31 H	45	102.6	-3.0
5	4824.00	39.5 PK	74.0	-34.5	1.76 H	169	38.5	1.0
6	4824.00	27.5 AV	54.0	-26.5	1.76 H	169	26.5	1.0
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	67.7 PK	74.0	-6.3	1.50 V	89	70.8	-3.1
2	**2390.00**	**53.9 AV**	**54.0**	**-0.1**	**1.50 V**	**89**	**57.0**	**-3.1**
3	*2412.00	117.0 PK			1.50 V	89	120.0	-3.0
4	*2412.00	107.4 AV			1.50 V	89	110.4	-3.0
5	4824.00	39.8 PK	74.0	-34.2	1.98 V	186	38.8	1.0
6	4824.00	27.4 AV	54.0	-26.6	1.98 V	186	26.4	1.0

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.

RF Mode	TX 802.11g	Channel	CH 2：2417 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	61.5 PK	74.0	-12.5	1.22 H	211	64.6	-3.1
2	2390.00	50.5 AV	54.0	-3.5	1.22 H	211	53.6	-3.1
3	*2417.00	110.5 PK			1.22 H	211	113.5	-3.0
4	*2417.00	100.7 AV			1.22 H	211	103.7	-3.0
5	4834.00	39.4 PK	74.0	-34.6	1.37 H	172	38.4	1.0
6	4834.00	27.0 AV	54.0	-27.0	1.37 H	172	26.0	1.0
7	7251.00	45.1 PK	74.0	-28.9	1.59 H	189	38.2	6.9
8	7251.00	31.8 AV	54.0	-22.2	1.59 H	189	24.9	6.9
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	65.4 PK	74.0	-8.6	1.22 V	191	68.5	-3.1
2	2390.00	53.0 AV	54.0	-1.0	1.22 V	191	56.1	-3.1
3	*2417.00	118.2 PK			1.22 V	191	121.2	-3.0
4	*2417.00	107.8 AV			1.22 V	191	110.8	-3.0
5	4834.00	39.3 PK	74.0	-34.7	1.25 V	205	38.3	1.0
6	4834.00	26.8 AV	54.0	-27.2	1.25 V	205	25.8	1.0
7	7251.00	43.8 PK	74.0	-30.2	1.44 V	186	36.9	6.9
8	7251.00	31.4 AV	54.0	-22.6	1.44 V	186	24.5	6.9

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.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11g	Channel	CH 6：2437 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	65.0 PK	74.0	-9.0	2.44 H	283	68.1	-3.1
2	2390.00	50.1 AV	54.0	-3.9	2.44 H	283	53.2	-3.1
3	*2437.00	113.8 PK			2.44 H	283	116.8	-3.0
4	*2437.00	103.8 AV			2.44 H	283	106.8	-3.0
5	2483.50	65.5 PK	74.0	-8.5	2.44 H	283	68.6	-3.1
6	2483.50	51.9 AV	54.0	-2.1	2.44 H	283	55.0	-3.1
7	4874.00	40.4 PK	74.0	-33.6	1.88 H	195	39.5	0.9
8	4874.00	27.3 AV	54.0	-26.7	1.88 H	195	26.4	0.9
9	7311.00	45.5 PK	74.0	-28.5	1.38 H	219	38.5	7.0
10	7311.00	32.5 AV	54.0	-21.5	1.38 H	219	25.5	7.0
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	67.3 PK	74.0	-6.7	1.59 V	59	70.4	-3.1
2	2390.00	51.8 AV	54.0	-2.2	1.59 V	59	54.9	-3.1
3	*2437.00	120.2 PK			1.59 V	59	123.2	-3.0
4	*2437.00	109.6 AV			1.59 V	59	112.6	-3.0
5	2483.50	68.9 PK	74.0	-5.1	1.59 V	59	72.0	-3.1
6	2483.50	52.6 AV	54.0	-1.4	1.59 V	59	55.7	-3.1
7	4874.00	39.7 PK	74.0	-34.3	2.42 V	158	38.8	0.9
8	4874.00	27.4 AV	54.0	-26.6	2.42 V	158	26.5	0.9
9	7311.00	44.8 PK	74.0	-29.2	1.58 V	217	37.8	7.0
10	7311.00	32.7 AV	54.0	-21.3	1.58 V	217	25.7	7.0

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.

RF Mode	TX 802.11g	Channel	CH 10：2457 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	*2457.00	107.3 PK			1.41 H	233	110.4	-3.1
2	*2457.00	97.3 AV			1.41 H	233	100.4	-3.1
3	2483.50	56.4 PK	74.0	-17.6	1.41 H	233	59.5	-3.1
4	2483.50	44.5 AV	54.0	-9.5	1.41 H	233	47.6	-3.1
5	4914.00	39.4 PK	74.0	-34.6	1.32 H	206	38.4	1.0
6	4914.00	27.1 AV	54.0	-26.9	1.32 H	206	26.1	1.0
7	7371.00	44.5 PK	74.0	-29.5	1.42 H	201	37.4	7.1
8	7371.00	31.9 AV	54.0	-22.1	1.42 H	201	24.8	7.1
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	*2457.00	111.3 PK			1.21 V	195	114.4	-3.1
2	*2457.00	105.3 AV			1.21 V	195	108.4	-3.1
3	2483.50	64.0 PK	74.0	-10.0	1.21 V	195	67.1	-3.1
4	2483.50	50.4 AV	54.0	-3.6	1.21 V	195	53.5	-3.1
5	4914.00	39.1 PK	74.0	-34.9	1.18 V	163	38.1	1.0
6	4914.00	26.5 AV	54.0	-27.5	1.18 V	163	25.5	1.0
7	7371.00	45.0 PK	74.0	-29.0	1.27 V	234	37.9	7.1
8	7371.00	32.4 AV	54.0	-21.6	1.27 V	234	25.3	7.1

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.

RF Mode	TX 802.11g	Channel	CH 11：2462 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	108.2 PK			2.98 H	282	111.3	-3.1
2	*2462.00	98.3 AV			2.98 H	282	101.4	-3.1
3	2486.72	57.8 PK	74.0	-16.2	2.98 H	282	60.9	-3.1
4	2486.72	45.3 AV	54.0	-8.7	2.98 H	282	48.4	-3.1
5	4924.00	40.2 PK	74.0	-33.8	1.38 H	193	39.2	1.0
6	4924.00	27.2 AV	54.0	-26.8	1.38 H	193	26.2	1.0
7	7386.00	45.3 PK	74.0	-28.7	2.34 H	243	38.2	7.1
8	7386.00	32.7 AV	54.0	-21.3	2.34 H	243	25.6	7.1
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	112.5 PK			1.34 V	78	115.6	-3.1
2	*2462.00	102.8 AV			1.34 V	78	105.9	-3.1
3	2483.50	65.7 PK	74.0	-8.3	1.34 V	78	68.8	-3.1
4	2483.50	52.2 AV	54.0	-1.8	1.34 V	78	55.3	-3.1
5	4924.00	39.7 PK	74.0	-34.3	1.29 V	224	38.7	1.0
6	4924.00	27.3 AV	54.0	-26.7	1.29 V	224	26.3	1.0
7	7386.00	45.8 PK	74.0	-28.2	1.59 V	172	38.7	7.1
8	7386.00	32.7 AV	54.0	-21.3	1.59 V	172	25.6	7.1

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 1：2412 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	65.4 PK	74.0	-8.6	2.60 H	275	68.5	-3.1
2	2390.00	49.5 AV	54.0	-4.5	2.60 H	275	52.6	-3.1
3	*2412.00	111.0 PK			2.60 H	275	114.0	-3.0
4	*2412.00	97.7 AV			2.60 H	275	100.7	-3.0
5	4824.00	39.7 PK	74.0	-34.3	1.94 H	210	38.7	1.0
6	4824.00	27.4 AV	54.0	-26.6	1.94 H	210	26.4	1.0
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	2389.68	67.7 PK	74.0	-6.3	1.26 V	303	70.8	-3.1
2	2389.68	52.9 AV	54.0	-1.1	1.26 V	303	56.0	-3.1
3	*2412.00	118.0 PK			1.26 V	303	121.0	-3.0
4	*2412.00	105.1 AV			1.26 V	303	108.1	-3.0
5	4824.00	39.4 PK	74.0	-34.6	1.64 V	205	38.4	1.0
6	4824.00	27.4 AV	54.0	-26.6	1.64 V	205	26.4	1.0

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 2：2417 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	64.1 PK	74.0	-9.9	1.47 H	226	67.2	-3.1
2	2390.00	48.4 AV	54.0	-5.6	1.47 H	226	51.5	-3.1
3	*2417.00	111.1 PK			1.47 H	226	114.1	-3.0
4	*2417.00	98.4 AV			1.47 H	226	101.4	-3.0
5	4834.00	40.5 PK	74.0	-33.5	1.17 H	198	39.5	1.0
6	4834.00	27.1 AV	54.0	-26.9	1.17 H	198	26.1	1.0
7	7251.00	45.3 PK	74.0	-28.7	1.64 H	211	38.4	6.9
8	7251.00	32.1 AV	54.0	-21.9	1.64 H	211	25.2	6.9
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	66.4 PK	74.0	-7.6	1.37 V	227	69.5	-3.1
2	2390.00	51.9 AV	54.0	-2.1	1.37 V	227	55.0	-3.1
3	*2417.00	119.0 PK			1.37 V	227	122.0	-3.0
4	*2417.00	106.3 AV			1.37 V	227	109.3	-3.0
5	4834.00	39.6 PK	74.0	-34.4	1.30 V	173	38.6	1.0
6	4834.00	26.2 AV	54.0	-27.8	1.30 V	173	25.2	1.0
7	7251.00	45.1 PK	74.0	-28.9	1.50 V	176	38.2	6.9
8	7251.00	32.2 AV	54.0	-21.8	1.50 V	176	25.3	6.9

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.
5. " * ": Fundamental frequency.

RF Mode	TX 802.11ax (HE20)	Channel	CH 6：2437 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	60.6 PK	74.0	-13.4	2.77 H	282	63.7	-3.1
2	2390.00	47.8 AV	54.0	-6.2	2.77 H	282	50.9	-3.1
3	*2437.00	116.0 PK			2.77 H	282	119.0	-3.0
4	*2437.00	103.3 AV			2.77 H	282	106.3	-3.0
5	2483.50	64.0 PK	74.0	-10.0	2.77 H	282	67.1	-3.1
6	2483.50	48.6 AV	54.0	-5.4	2.77 H	282	51.7	-3.1
7	4874.00	40.3 PK	74.0	-33.7	1.86 H	194	39.4	0.9
8	4874.00	27.4 AV	54.0	-26.6	1.86 H	194	26.5	0.9
9	7311.00	45.0 PK	74.0	-29.0	1.77 H	204	38.0	7.0
10	7311.00	32.6 AV	54.0	-21.4	1.77 H	204	25.6	7.0
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	70.1 PK	74.0	-3.9	2.52 V	250	73.2	-3.1
2	2390.00	52.7 AV	54.0	-1.3	2.52 V	250	55.8	-3.1
3	*2437.00	121.9 PK			2.52 V	250	124.9	-3.0
4	*2437.00	109.7 AV			2.52 V	250	112.7	-3.0
5	2483.50	70.1 PK	74.0	-3.9	2.52 V	250	73.2	-3.1
6	2483.50	53.5 AV	54.0	-0.5	2.52 V	250	56.6	-3.1
7	4874.00	40.5 PK	74.0	-33.5	1.35 V	239	39.6	0.9
8	4874.00	27.4 AV	54.0	-26.6	1.35 V	239	26.5	0.9
9	7311.00	45.1 PK	74.0	-28.9	1.35 V	167	38.1	7.0
10	7311.00	32.5 AV	54.0	-21.5	1.35 V	167	25.5	7.0

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 10：2457 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	*2457.00	111.4 PK			1.23 H	112	114.5	-3.1
2	*2457.00	98.7 AV			1.23 H	112	101.8	-3.1
3	2483.50	61.4 PK	74.0	-12.6	1.23 H	112	64.5	-3.1
4	2483.50	48.4 AV	54.0	-5.6	1.23 H	112	51.5	-3.1
5	4914.00	40.3 PK	74.0	-33.7	1.23 H	202	39.3	1.0
6	4914.00	26.7 AV	54.0	-27.3	1.23 H	202	25.7	1.0
7	7371.00	46.0 PK	74.0	-28.0	1.61 H	193	38.9	7.1
8	7371.00	32.7 AV	54.0	-21.3	1.61 H	193	25.6	7.1
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	*2457.00	119.2 PK			1.05 V	210	122.3	-3.1
2	*2457.00	106.3 AV			1.05 V	210	109.4	-3.1
3	2483.50	66.7 PK	74.0	-7.3	1.05 V	210	69.8	-3.1
4	2483.50	52.1 AV	54.0	-1.9	1.05 V	210	55.2	-3.1
5	4914.00	39.1 PK	74.0	-34.9	1.61 V	214	38.1	1.0
6	4914.00	26.8 AV	54.0	-27.2	1.61 V	214	25.8	1.0
7	7371.00	46.6 PK	74.0	-27.4	1.12 V	185	39.5	7.1
8	7371.00	32.2 AV	54.0	-21.8	1.12 V	185	25.1	7.1

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.

RF Mode	TX 802.11ax (HE20)	Channel	CH 11：2462 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	110.4 PK			3.00 H	284	113.5	-3.1
2	*2462.00	98.4 AV			3.00 H	284	101.5	-3.1
3	2484.15	62.7 PK	74.0	-11.3	3.00 H	284	65.8	-3.1
4	2484.15	49.2 AV	54.0	-4.8	3.00 H	284	52.3	-3.1
5	4924.00	39.7 PK	74.0	-34.3	1.44 H	158	38.7	1.0
6	4924.00	27.3 AV	54.0	-26.7	1.44 H	158	26.3	1.0
7	7386.00	45.9 PK	74.0	-28.1	1.87 H	195	38.8	7.1
8	7386.00	32.7 AV	54.0	-21.3	1.87 H	195	25.6	7.1
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	114.8 PK			1.66 V	304	117.9	-3.1
2	*2462.00	102.6 AV			1.66 V	304	105.7	-3.1
3	2485.99	68.1 PK	74.0	-5.9	1.66 V	304	71.2	-3.1
4	2485.99	53.1 AV	54.0	-0.9	1.66 V	304	56.2	-3.1
5	4924.00	39.4 PK	74.0	-34.6	1.70 V	150	38.4	1.0
6	4924.00	27.2 AV	54.0	-26.8	1.70 V	150	26.2	1.0
7	7386.00	45.8 PK	74.0	-28.2	1.43 V	234	38.7	7.1
8	7386.00	32.8 AV	54.0	-21.2	1.43 V	234	25.7	7.1

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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 3：2422 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	2389.50	64.1 PK	74.0	-9.9	2.80 H	282	67.2	-3.1
2	2389.50	47.9 AV	54.0	-6.1	2.80 H	282	51.0	-3.1
3	*2422.00	107.1 PK			2.80 H	282	110.1	-3.0
4	*2422.00	95.1 AV			2.80 H	282	98.1	-3.0
5	4844.00	39.5 PK	74.0	-34.5	1.55 H	188	38.5	1.0
6	4844.00	27.1 AV	54.0	-26.9	1.55 H	188	26.1	1.0
7	7266.00	45.4 PK	74.0	-28.6	1.96 H	147	38.4	7.0
8	7266.00	32.3 AV	54.0	-21.7	1.96 H	147	25.3	7.0
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	71.8 PK	74.0	-2.2	1.34 V	307	74.9	-3.1
2	2390.00	51.7 AV	54.0	-2.3	1.34 V	307	54.8	-3.1
3	*2422.00	111.8 PK			1.34 V	307	114.8	-3.0
4	*2422.00	98.8 AV			1.34 V	307	101.8	-3.0
5	4844.00	39.9 PK	74.0	-34.1	2.19 V	174	38.9	1.0
6	4844.00	27.0 AV	54.0	-27.0	2.19 V	174	26.0	1.0
7	7266.00	46.2 PK	74.0	-27.8	1.50 V	195	39.2	7.0
8	7266.00	32.5 AV	54.0	-21.5	1.50 V	195	25.5	7.0

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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 6：2437 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	58.3 PK	74.0	-15.7	2.75 H	280	61.4	-3.1
2	2390.00	46.6 AV	54.0	-7.4	2.75 H	280	49.7	-3.1
3	*2437.00	108.7 PK			2.75 H	280	111.7	-3.0
4	*2437.00	95.8 AV			2.75 H	280	98.8	-3.0
5	2483.50	63.4 PK	74.0	-10.6	2.75 H	280	66.5	-3.1
6	2483.50	47.1 AV	54.0	-6.9	2.75 H	280	50.2	-3.1
7	4874.00	40.2 PK	74.0	-33.8	1.93 H	187	39.3	0.9
8	4874.00	27.2 AV	54.0	-26.8	1.93 H	187	26.3	0.9
9	7311.00	44.9 PK	74.0	-29.1	1.66 H	214	37.9	7.0
10	7311.00	32.2 AV	54.0	-21.8	1.66 H	214	25.2	7.0
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	66.2 PK	74.0	-7.8	2.84 V	95	69.3	-3.1
2	2390.00	53.5 AV	54.0	-0.5	2.84 V	95	56.6	-3.1
3	*2437.00	114.4 PK			2.84 V	95	117.4	-3.0
4	*2437.00	100.6 AV			2.84 V	95	103.6	-3.0
5	2483.50	66.3 PK	74.0	-7.7	2.84 V	95	69.4	-3.1
6	2483.50	52.0 AV	54.0	-2.0	2.84 V	95	55.1	-3.1
7	4874.00	40.0 PK	74.0	-34.0	1.45 V	198	39.1	0.9
8	4874.00	27.2 AV	54.0	-26.8	1.45 V	198	26.3	0.9
9	7311.00	46.0 PK	74.0	-28.0	1.34 V	178	39.0	7.0
10	7311.00	32.3 AV	54.0	-21.7	1.34 V	178	25.3	7.0

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.

RF Mode	TX 802.11ax (HE40)	Channel	CH 9：2452 MHz
Frequency Range	1GHz ~ 25GHz	Detector Function	Peak (PK) Average (AV)

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	107.1 PK			2.70 H	285	110.2	-3.1
2	*2452.00	93.7 AV			2.70 H	285	96.8	-3.1
3	2486.97	60.9 PK	74.0	-13.1	2.70 H	285	64.0	-3.1
4	2486.97	46.3 AV	54.0	-7.7	2.70 H	285	49.4	-3.1
5	4904.00	40.6 PK	74.0	-33.4	1.54 H	184	39.6	1.0
6	4904.00	27.2 AV	54.0	-26.8	1.54 H	184	26.2	1.0
7	7356.00	45.3 PK	74.0	-28.7	1.15 H	208	38.2	7.1
8	7356.00	32.5 AV	54.0	-21.5	1.15 H	208	25.4	7.1
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	111.7 PK			2.56 V	93	114.8	-3.1
2	*2452.00	98.3 AV			2.56 V	93	101.4	-3.1
3	2486.03	72.3 PK	74.0	-1.7	2.56 V	93	75.4	-3.1
4	2486.03	53.0 AV	54.0	-1.0	2.56 V	93	56.1	-3.1
5	4904.00	39.8 PK	74.0	-34.2	1.60 V	189	38.8	1.0
6	4904.00	27.2 AV	54.0	-26.8	1.60 V	189	26.2	1.0
7	7356.00	44.7 PK	74.0	-29.3	1.95 V	204	37.6	7.1
8	7356.00	32.5 AV	54.0	-21.5	1.95 V	204	25.4	7.1

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.

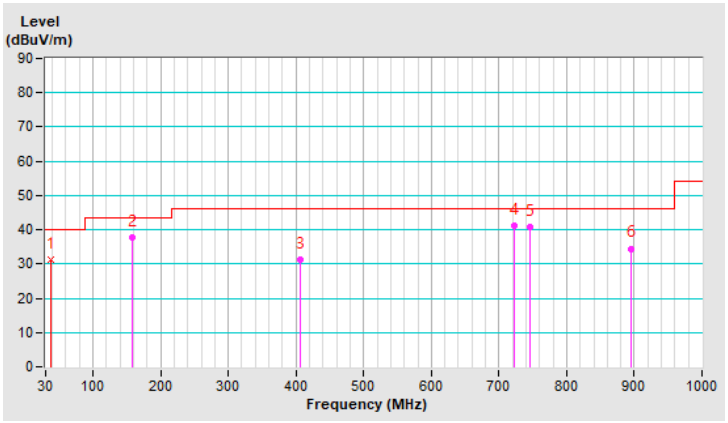
Below 1GHz Data:

RF Mode	TX 802.11b	Channel	CH 6：2437 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	37.50	31.2 QP	40.0	-8.8	2.72 H	360	44.4	-13.2
2	158.82	37.8 QP	43.5	-5.7	1.00 H	306	50.3	-12.5
3	406.23	31.3 QP	46.0	-14.7	2.00 H	237	40.8	-9.5
4	721.89	41.0 QP	46.0	-5.0	2.00 H	292	44.5	-3.5
5	746.48	40.9 QP	46.0	-5.1	3.00 H	208	43.7	-2.8
6	894.41	34.5 QP	46.0	-11.5	2.00 H	360	35.6	-1.1

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.

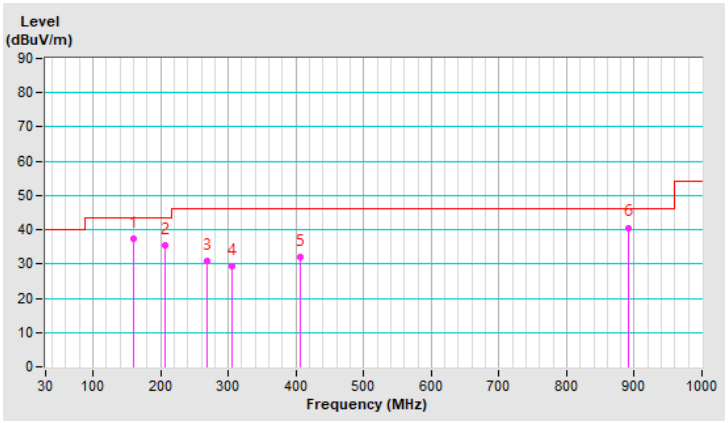


RF Mode	TX 802.11b	Channel	CH 6：2437 MHz
Frequency Range	9kHz ~ 1GHz	Detector Function	Quasi-Peak (QP)

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	159.50	37.3 QP	43.5	-6.2	2.00 V	291	49.7	-12.4
2	206.21	35.5 QP	43.5	-8.0	1.00 V	0	51.6	-16.1
3	268.73	30.9 QP	46.0	-15.1	1.00 V	27	44.0	-13.1
4	306.22	29.5 QP	46.0	-16.5	1.00 V	143	41.3	-11.8
5	406.23	31.9 QP	46.0	-14.1	2.00 V	227	41.4	-9.5
6	890.58	40.6 QP	46.0	-5.4	4.00 V	360	41.8	-1.2

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 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. 26, 2020	Sep. 25, 2021
Fixed attenuator EMCI	STI02-2200-10	005	Aug. 29, 2020	Aug. 28, 2021
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: Oct. 05, 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.

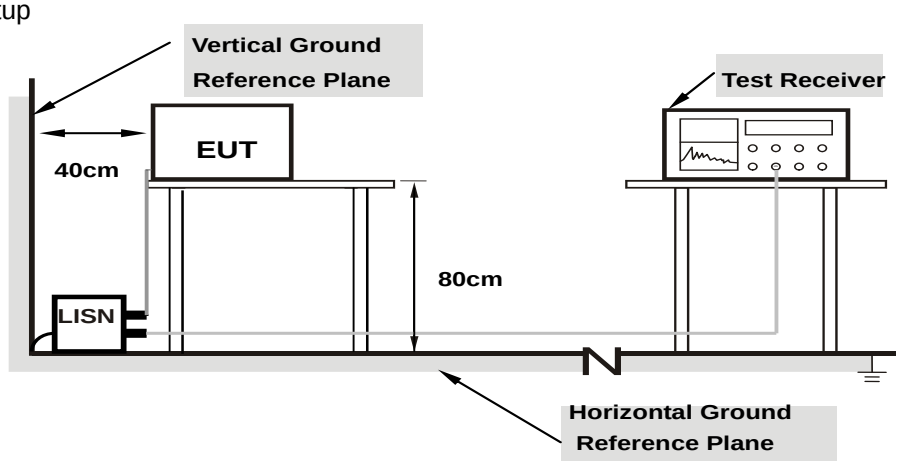
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

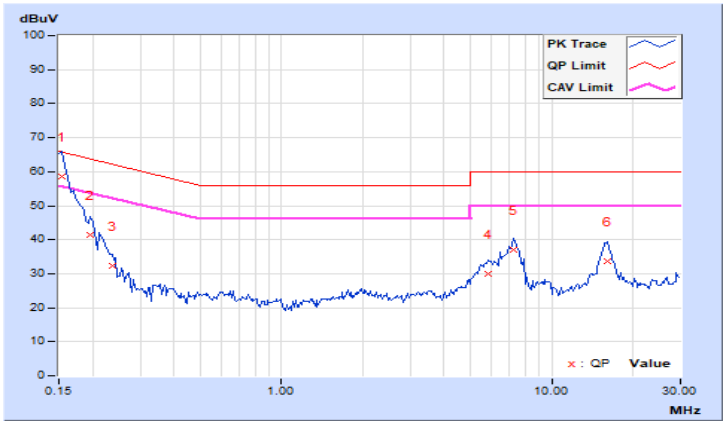
4.2.7 Test Results (Mode 1)

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	0.15391	9.91	48.56	38.02	58.47	47.93	65.79	55.79	-7.32	-7.86
2	0.19687	9.93	31.52	18.86	41.45	28.79	63.74	53.74	-22.29	-24.95
3	0.23594	9.93	22.23	10.43	32.16	20.36	62.24	52.24	-30.08	-31.88
4	5.85938	10.22	19.72	15.06	29.94	25.28	60.00	50.00	-30.06	-24.72
5	7.26563	10.29	26.61	22.19	36.90	32.48	60.00	50.00	-23.10	-17.52
6	16.10547	10.79	22.98	18.31	33.77	29.10	60.00	50.00	-26.23	-20.90

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

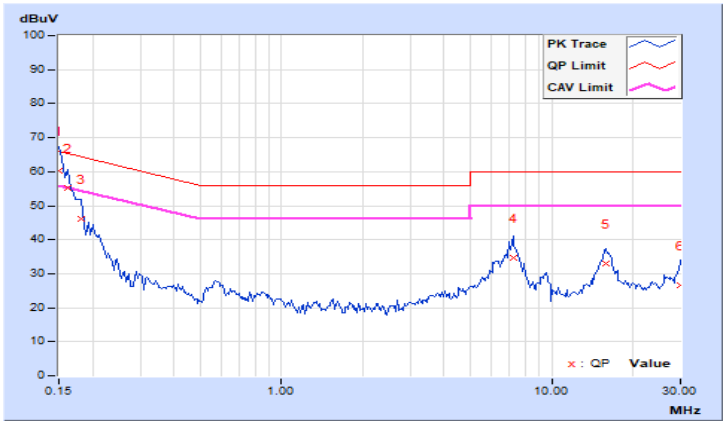


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	**0.15000**	**9.91**	**50.39**	**39.73**	**60.30**	**49.64**	**66.00**	**56.00**	**-5.70**	**-6.36**
2	0.16172	9.91	45.18	31.13	55.09	41.04	65.38	55.38	-10.29	-14.34
3	0.18125	9.92	36.06	24.53	45.98	34.45	64.43	54.43	-18.45	-19.98
4	7.24609	10.24	24.54	19.91	34.78	30.15	60.00	50.00	-25.22	-19.85
5	15.92969	10.60	22.32	17.38	32.92	27.98	60.00	50.00	-27.08	-22.02
6	29.87500	10.91	15.61	10.79	26.52	21.70	60.00	50.00	-33.48	-28.30

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



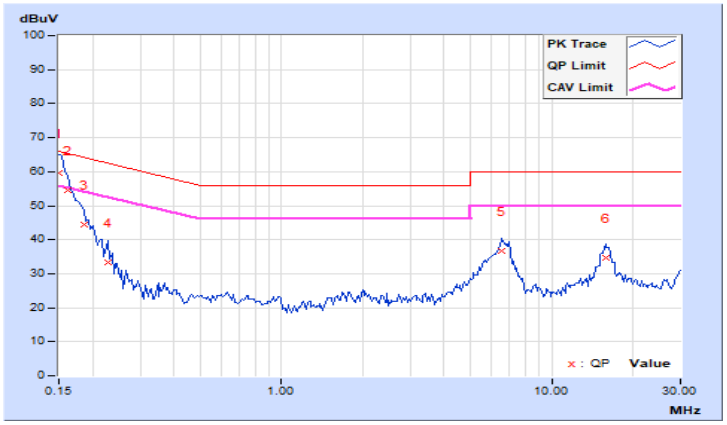
4.2.8 Test Results (Mode 2)

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	0.15000	9.91	49.61	38.95	59.52	48.86	66.00	56.00	-6.48	-7.14
2	0.16172	9.91	44.53	30.47	54.44	40.38	65.38	55.38	-10.94	-15.00
3	0.18516	9.92	34.48	22.27	44.40	32.19	64.25	54.25	-19.85	-22.06
4	0.22812	9.93	23.26	11.44	33.19	21.37	62.52	52.52	-29.33	-31.15
5	6.57031	10.26	26.43	21.67	36.69	31.93	60.00	50.00	-23.31	-18.07
6	15.86328	10.78	23.79	19.15	34.57	29.93	60.00	50.00	-25.43	-20.07

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

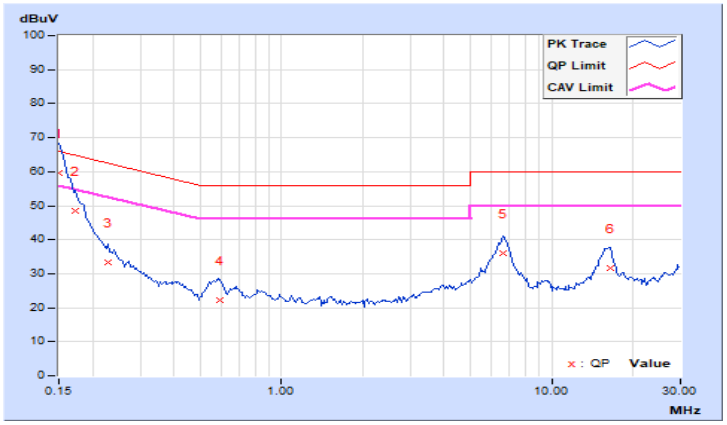


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	0.15000	9.91	49.67	38.72	59.58	48.63	66.00	56.00	-6.42	-7.37
2	0.17344	9.92	38.43	26.24	48.35	36.16	64.79	54.79	-16.44	-18.63
3	0.22812	9.93	23.28	12.04	33.21	21.97	62.52	52.52	-29.31	-30.55
4	0.59531	9.96	12.31	6.09	22.27	16.05	56.00	46.00	-33.73	-29.95
5	6.57813	10.21	25.74	20.74	35.95	30.95	60.00	50.00	-24.05	-19.05
6	16.45313	10.62	21.15	15.71	31.77	26.33	60.00	50.00	-28.23	-23.67

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

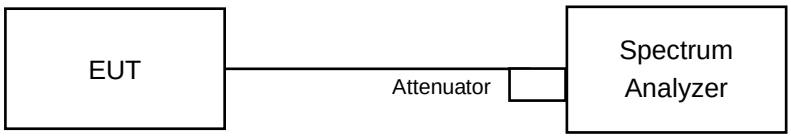


4.3 6dB Bandwidth Measurement

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

CDD Mode

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	7.13	8.12	7.63	8.57	0.5	Pass
6	2437	10.12	10.07	10.12	11.12	0.5	Pass
10	2457	7.57	9.59	8.12	8.54	0.5	Pass
11	2462	7.61	11.14	9.51	8.09	0.5	Pass

802.11g

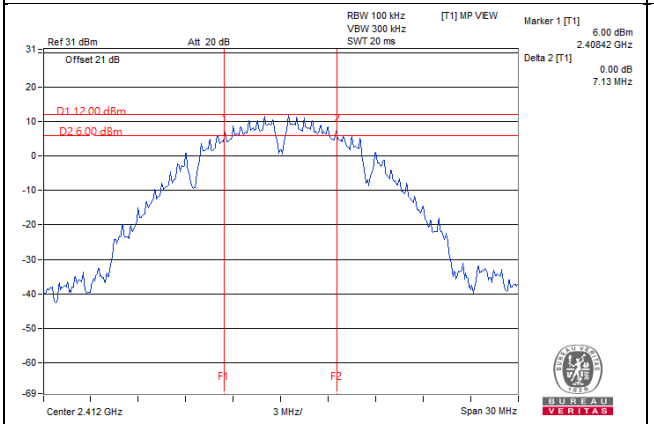
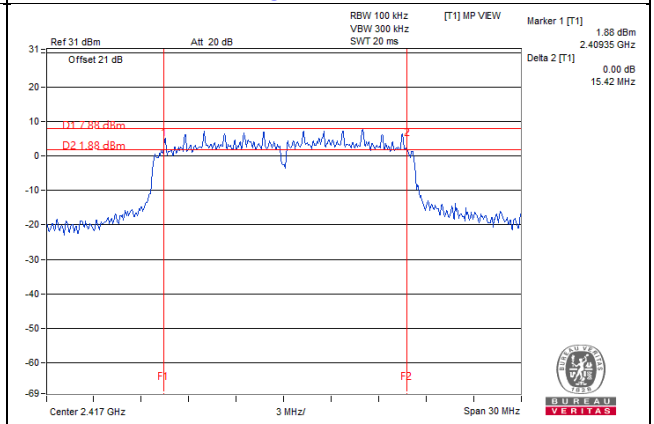
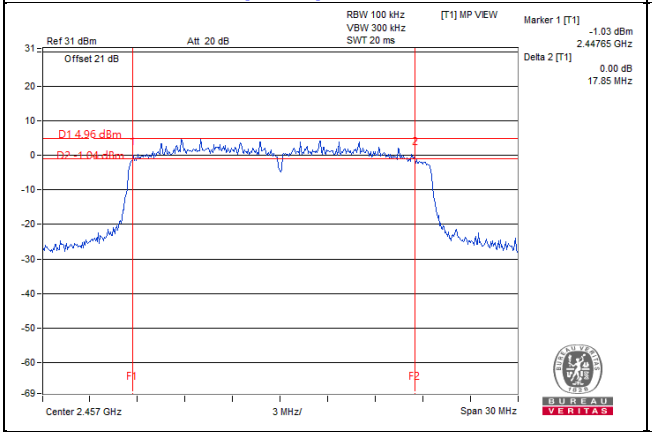
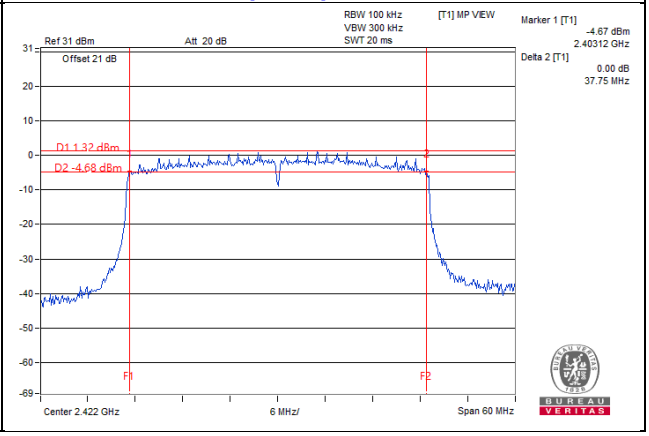
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	16.02	16.36	15.99	16	0.5	Pass
2	2417	15.98	16	15.42	15.92	0.5	Pass
6	2437	16.41	16.35	15.78	16.36	0.5	Pass
10	2457	16.4	15.82	15.7	16.1	0.5	Pass
11	2462	16.41	16.15	15.79	16.36	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	18.72	19	18.93	18.77	0.5	Pass
2	2417	18.42	18.75	18.97	18.76	0.5	Pass
6	2437	18.29	18.95	19.02	18.97	0.5	Pass
10	2457	17.85	18.9	18.73	18.79	0.5	Pass
11	2462	18.67	19.03	18.92	19	0.5	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
3	2422	37.81	37.75	37.95	37.86	0.5	Pass
6	2437	37.97	37.84	38.06	37.93	0.5	Pass
9	2452	37.93	37.9	38.13	38.05	0.5	Pass

Spectrum Plot of Worst Value	
802.11b_Chain 0 / CH1	**802.11g_Chain 2 / CH2**
	
802.11ax (HE20)_Chain 0 / CH10	**802.11ax (HE40)_Chain 1 / CH3**
	

4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

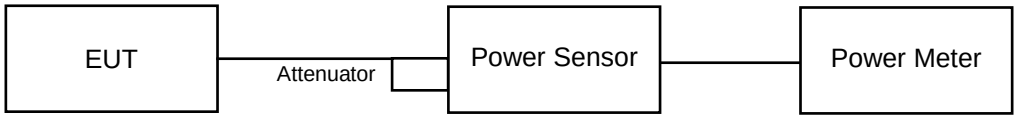
For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

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

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

CDD Mode

802.11b

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	20.57	20.03	20.37	19.66	416.081	26.19	30.00	Pass
6	2437	22.36	21.64	22.06	21.38	616.167	27.90	30.00	Pass
10	2457	20.48	19.81	20.26	19.53	403.318	26.06	30.00	Pass
11	2462	18.19	17.73	18.01	17.27	241.785	23.83	30.00	Pass

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	17.25	16.56	17.11	16.28	192.245	22.84	30.00	Pass
2	2417	20.67	19.23	20.15	19.95	402.803	26.05	30.00	Pass
6	2437	21.56	20.78	21.21	20.61	510.102	27.08	30.00	Pass
10	2457	17.63	16.98	17.54	16.62	210.506	23.23	30.00	Pass
11	2462	15.21	14.58	14.94	14.22	119.51	20.77	30.00	Pass

VHT20

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	15.13	14.59	14.57	13.90	192.245	20.59	30.00	Pass
2	2417	16.06	16.22	16.88	16.69	402.803	22.50	30.00	Pass
6	2437	20.45	19.58	20.37	19.68	510.102	26.06	30.00	Pass
10	2457	16.12	16.25	16.94	16.87	210.506	22.58	30.00	Pass
11	2462	14.61	13.97	14.78	14.23	119.51	20.43	30.00	Pass

VHT40

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
3	2422	15.78	14.85	15.63	14.80	192.245	21.31	30.00	Pass
6	2437	17.09	16.69	17.02	16.05	402.803	22.75	30.00	Pass
9	2452	14.90	13.84	14.68	14.11	110.253	20.42	30.00	Pass

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	15.34	14.87	14.78	14.14	120.891	20.82	30.00	Pass
2	2417	16.35	16.49	17.12	16.94	188.671	22.76	30.00	Pass
6	2437	20.65	19.84	20.57	19.91	424.502	26.28	30.00	Pass
10	2457	16.39	16.53	17.19	17.08	191.94	22.83	30.00	Pass
11	2462	14.83	14.24	15.03	14.44	116.594	20.67	30.00	Pass

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
3	2422	16.01	15.12	15.84	15.06	142.845	21.55	30.00	Pass
6	2437	17.29	16.91	17.23	16.34	198.568	22.98	30.00	Pass
9	2452	15.18	14.12	14.91	14.32	116.797	20.67	30.00	Pass

Beamforming Mode

VHT20

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	15.13	14.59	14.57	13.90	114.547	20.59	27.36	Pass
2	2417	16.06	16.22	16.88	16.69	177.663	22.50	27.36	Pass
6	2437	20.37	19.58	20.45	19.68	403.489	26.06	27.36	Pass
10	2457	16.12	16.25	16.94	16.87	181.168	22.58	27.36	Pass
11	2462	14.61	13.97	14.78	14.23	110.399	20.43	27.36	Pass

Note: 1. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 4] = 8.64dBi > 6dBi , so the power limit shall be reduced to 30.00-(8.64-6) = 27.36dBm.

VHT40

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
3	2422	15.78	14.85	15.63	14.80	135.152	21.31	27.36	Pass
6	2437	17.09	16.69	17.02	16.05	188.456	22.75	27.36	Pass
9	2452	14.90	13.84	14.68	14.11	110.253	20.42	27.36	Pass

Note: 1. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 4] = 8.64dBi > 6dBi , so the power limit shall be reduced to 30.00-(8.64-6) = 27.36dBm.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	15.34	14.87	14.78	14.14	120.891	20.82	27.36	Pass
2	2417	16.35	16.49	17.12	16.94	188.671	22.76	27.36	Pass
6	2437	20.57	19.84	20.65	19.91	424.502	26.28	27.36	Pass
10	2457	16.39	16.53	17.19	17.08	191.94	22.83	27.36	Pass
11	2462	14.83	14.24	15.03	14.44	116.594	20.67	27.36	Pass

Note: 1. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 4] = 8.64dBi > 6dBi , so the power limit shall be reduced to 30.00-(8.64-6) = 27.36dBm.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
3	2422	16.01	15.12	15.84	15.06	142.845	21.55	27.36	Pass
6	2437	17.29	16.91	17.23	16.34	198.568	22.98	27.36	Pass
9	2452	15.18	14.12	14.91	14.32	116.797	20.67	27.36	Pass

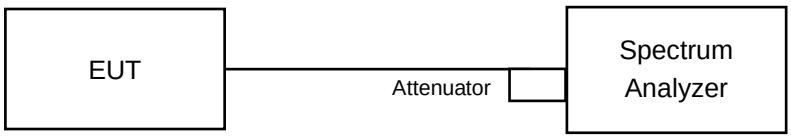
Note: 1. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 4] = 8.64dBi > 6dBi , so the power limit shall be reduced to 30.00-(8.64-6) = 27.36dBm.

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) Measure the duty cycle (x).
b) Set instrument center frequency to DTS channel center frequency.
c) Set span to at least 1.5 times the OBW.
d) Set RBW to: 3 kHz ≤ RBW ≤ 100 kHz..
e) Set VBW ≥3 x RBW.
f) Detector = power averaging (RMS) or sample detector (when RMS not available).
g) Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
h) Sweep time = auto couple.
i) Do not use sweep triggering. Allow sweep to “free run”.
j) Employ trace averaging (RMS) mode over a minimum of 100 traces.
k) Use the peak marker function to determine the maximum amplitude level.
l) Add 10 log (1/x), where x is the duty cycle measured in step (a, to the measured PSD to compute the average PSD during the actual transmission time.

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

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)				Duty Factor (dB)	Total PSD (mW/3kHz)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3					
1	2412	-14.89	-14.62	-15.12	-15.37	1.87	0.19487	-7.10	5.36	PASS
6	2437	-14.14	-13.86	-14.41	-13.40	1.87	0.24845	-6.05	5.36	PASS
10	2457	-16.36	-14.79	-15.74	-17.30	1.87	0.1562	-8.06	5.36	PASS
11	2462	-16.35	-16.14	-14.83	-16.25	1.87	0.16004	-7.96	5.36	PASS

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 4] = 8.64dBi > 6dBi , so the power limit shall be reduced to 8-(8.64-6) = 5.36dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11g

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)				Duty Factor (dB)	Total PSD (mW/3kHz)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3					
1	2412	-16.64	-16.46	-17.02	-16.18	0.29	0.0944	-10.25	5.36	PASS
2	2417	-15.14	-14.79	-15.05	-14.91	0.29	0.13626	-8.66	5.36	PASS
6	2437	-13.19	-13.79	-12.35	-11.94	0.29	0.22676	-6.44	5.36	PASS
10	2457	-17.63	-17.26	-16.99	-17.24	0.29	0.08017	-10.96	5.36	PASS
11	2462	-18.94	-19.05	-18.67	-18.68	0.29	0.056	-12.52	5.36	PASS

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 4] = 8.64dBi > 6dBi , so the power limit shall be reduced to 8-(8.64-6) = 5.36dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

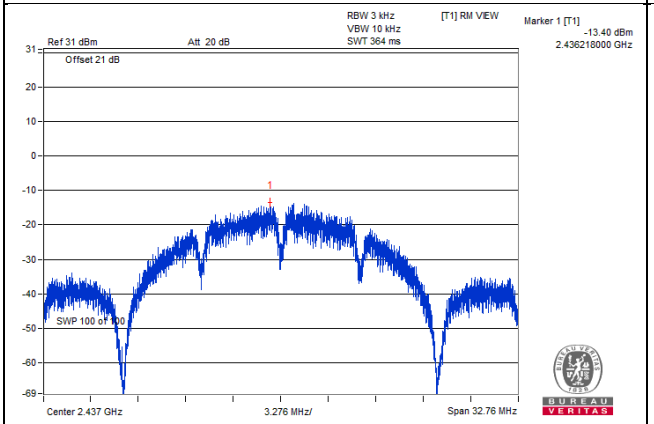
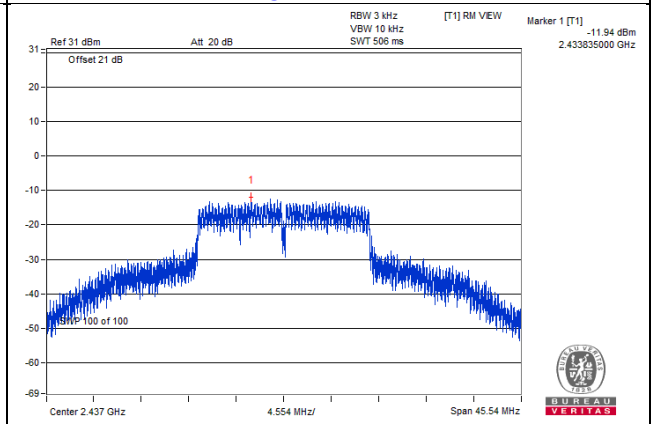
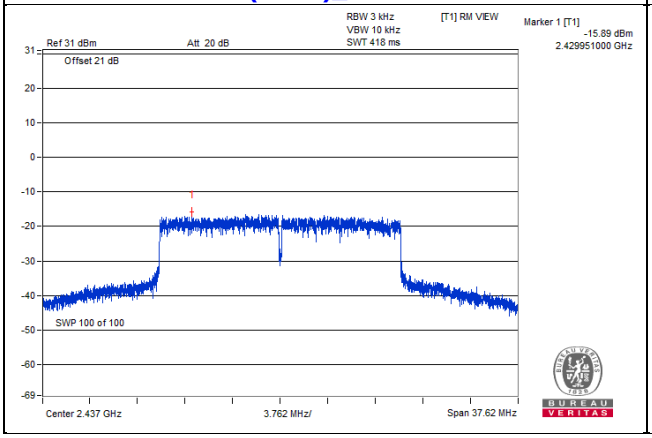
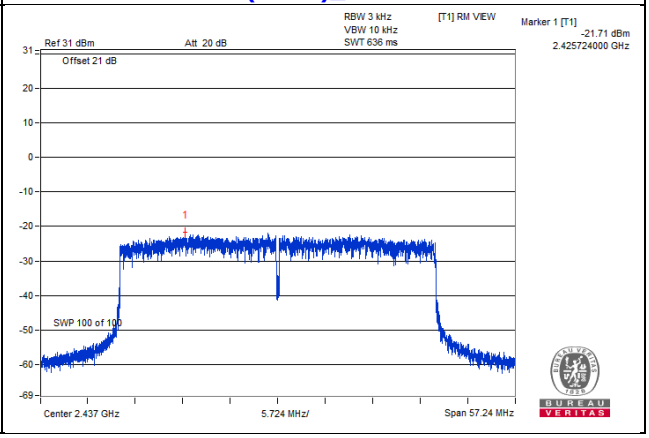
Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)				Duty Factor (dB)	Total PSD (mW/3kHz)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3					
1	2412	-21.51	-21.65	-21.77	-21.32	0.24	0.02954	-15.30	5.36	PASS
2	2417	-20.07	-20.58	-20.68	-20.77	0.24	0.037557	-14.25	5.36	PASS
6	2437	-16.83	-16.32	-16.38	-15.89	0.24	0.0982	-10.08	5.36	PASS
10	2457	-20.60	-20.83	-21.08	-21.00	0.24	0.034592	-14.61	5.36	PASS
11	2462	-22.10	-22.60	-22.36	-22.24	0.24	0.024787	-16.06	5.36	PASS

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 4] = 8.64dBi > 6dBi , so the power limit shall be reduced to 8-(8.64-6) = 5.36dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	PSD w/o Duty Factor (dBm/3kHz)				Duty Factor (dB)	Total PSD (mW/3kHz)	Total PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3					
3	2422	-22.79	-23.16	-23.60	-22.83	0.22	0.020692	-16.84	5.36	PASS
6	2437	-22.10	-21.99	-21.71	-21.88	0.22	0.027061	-15.68	5.36	PASS
9	2452	-23.89	-24.63	-24.19	-23.77	0.22	0.016344	-17.87	5.36	PASS

Note: 1. Method b) Measure and sum spectral maxima across the outputs of KDB 662911 is using for calculating total power density.
2. The directional gain = 10 log[$(10^{G0/20} + 10^{G1/20} + 10^{G2/20} + 10^{G3/20})^2$ / 4] = 8.64dBi > 6dBi , so the power limit shall be reduced to 8-(8.64-6) = 5.36dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

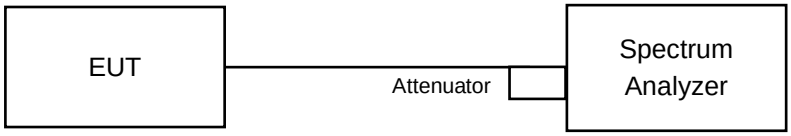
Spectrum Plot of Worst Value	
802.11b_Chain 3 / CH6	**802.11g_Chain 3 / CH6**
	
802.11ax (HE20)_Chain 3 / CH6	**802.11ax (HE40)_Chain 2 / CH6**
	

4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted 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 4.1.2 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

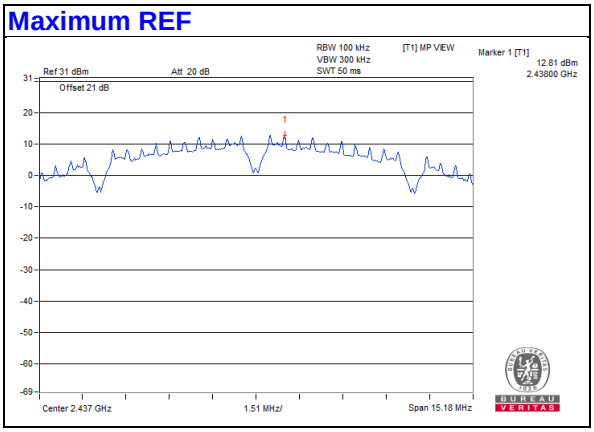
Same as Item 4.3.6

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 30dB offset below D1. It shows compliance with the requirement.

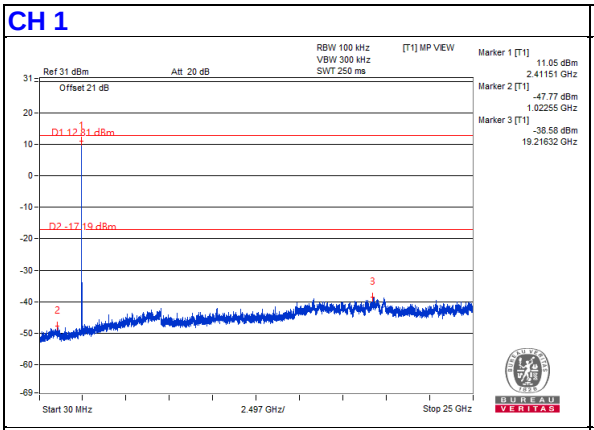
802.11b

Maximum REF

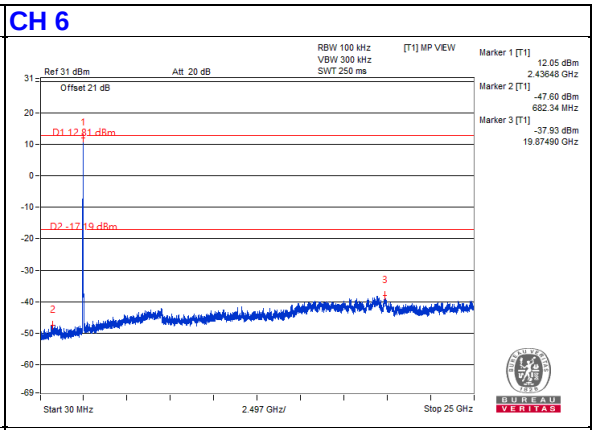


Chain 0

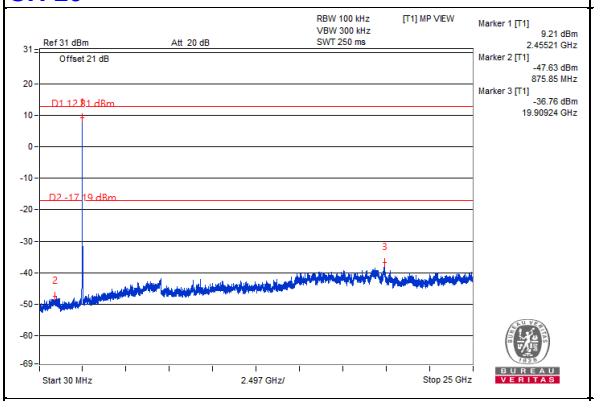
CH 1



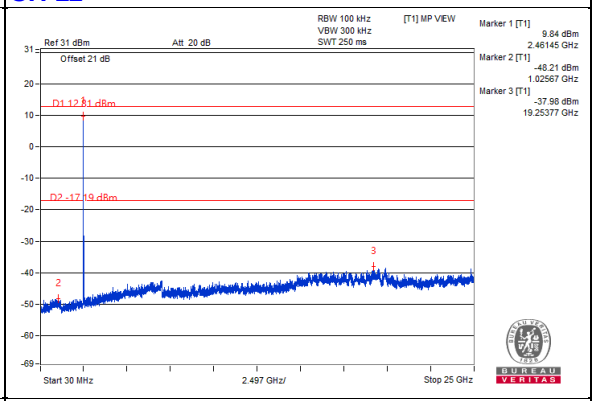
CH 6



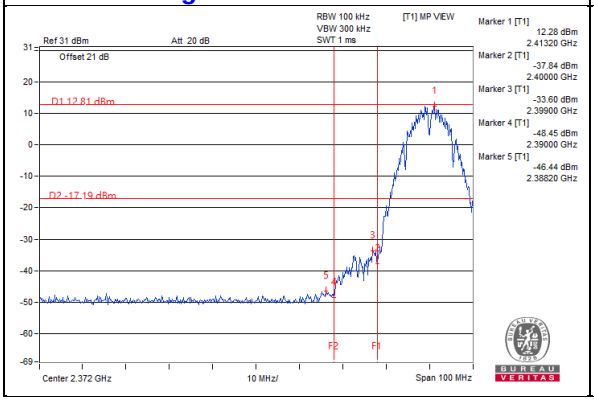
CH 10



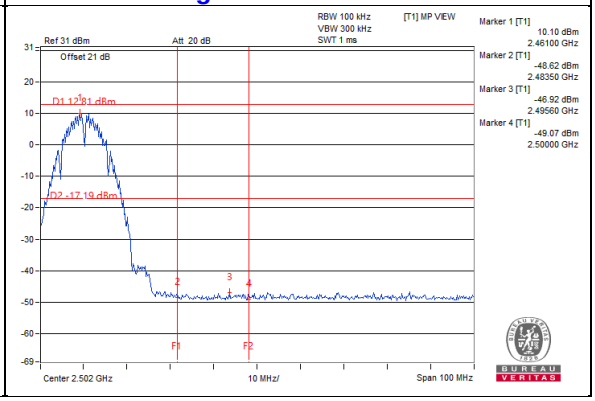
CH 11



CH 1 Band edge

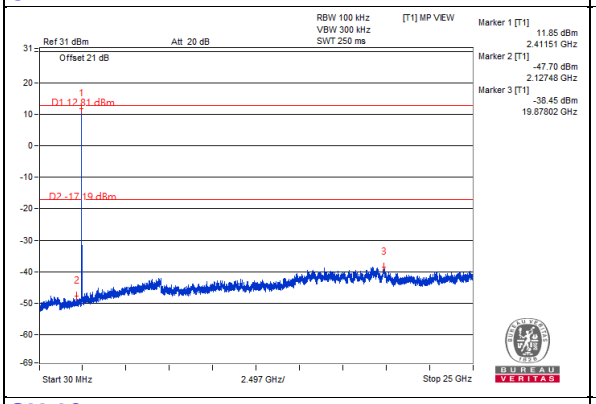


CH 11 Band edge

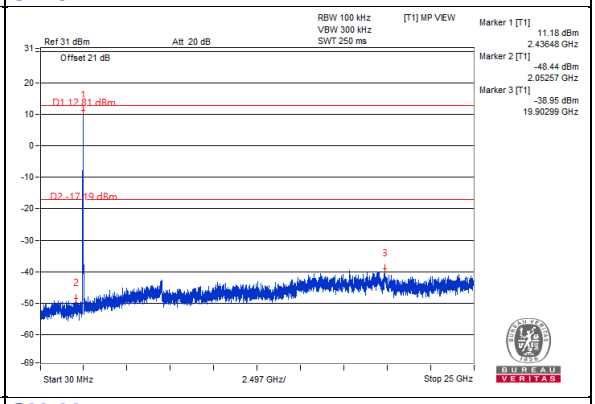


Chain 1

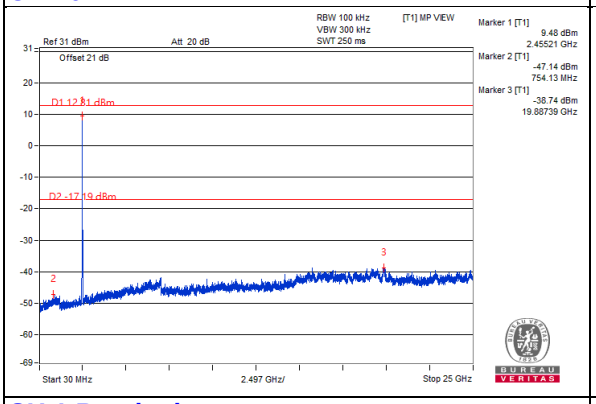
CH 1



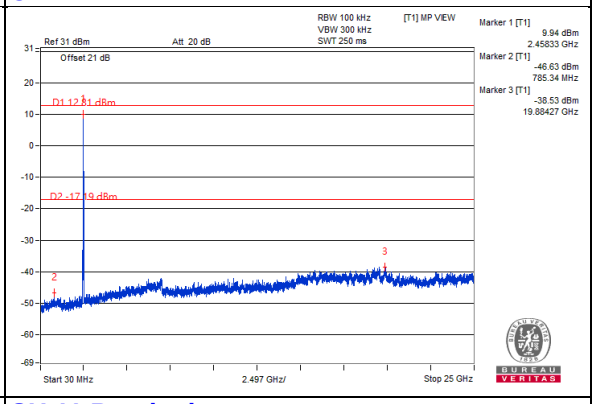
CH 6



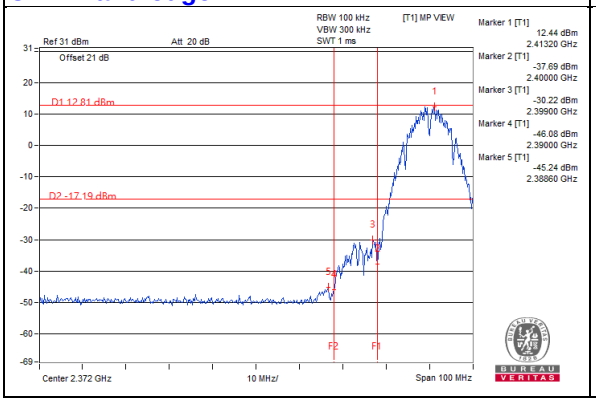
CH 10



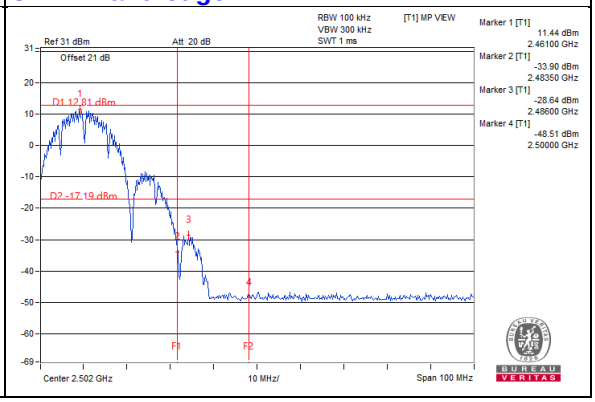
CH 11



CH 1 Band edge

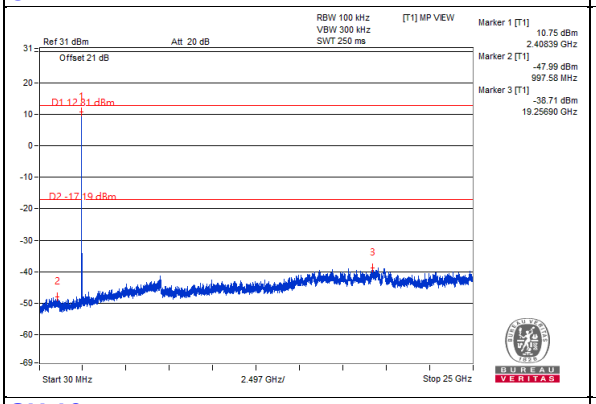


CH 11 Band edge

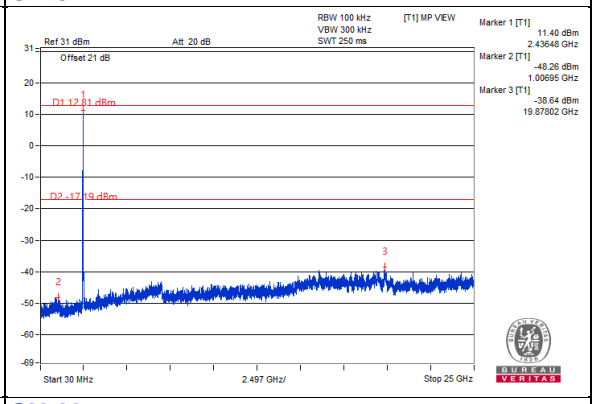


Chain 2

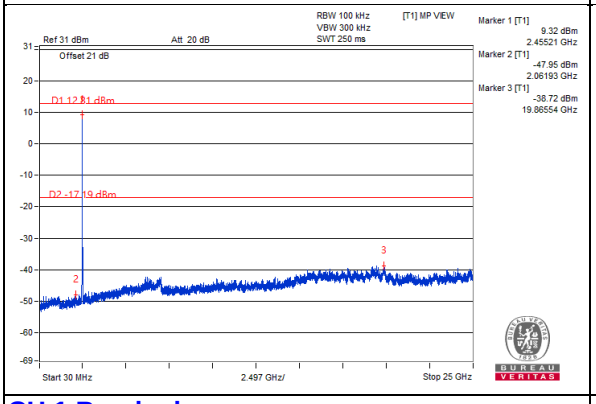
CH 1



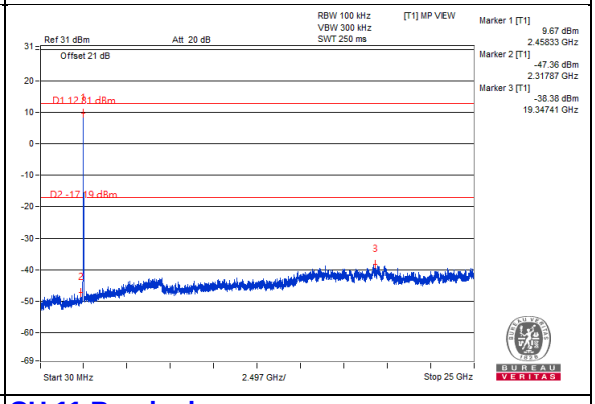
CH 6



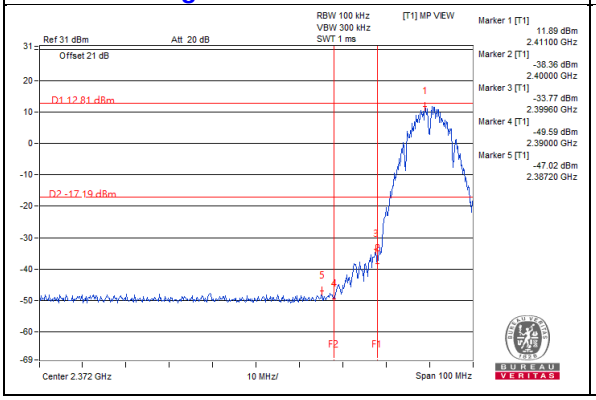
CH 10



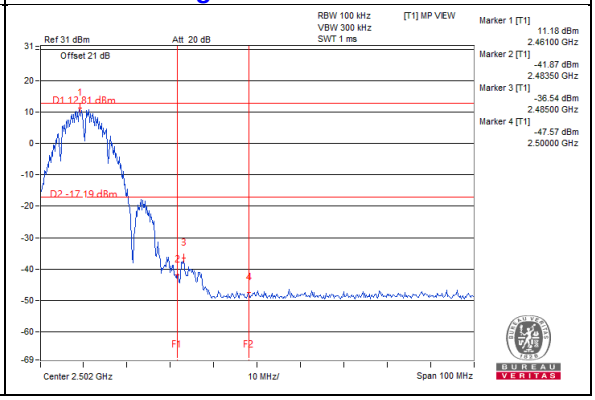
CH 11



CH 1 Band edge

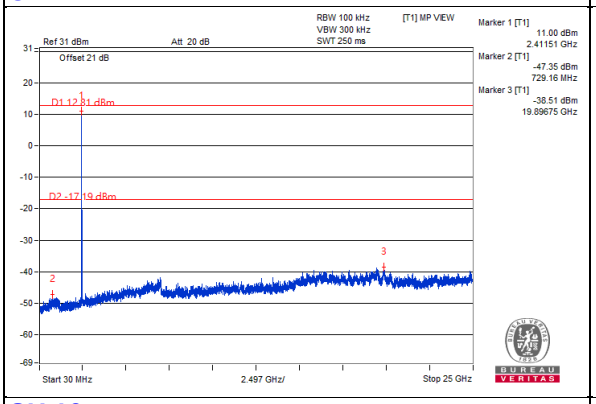


CH 11 Band edge

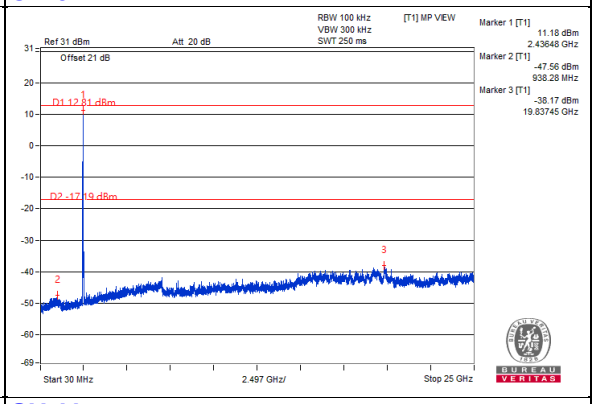


Chain 3

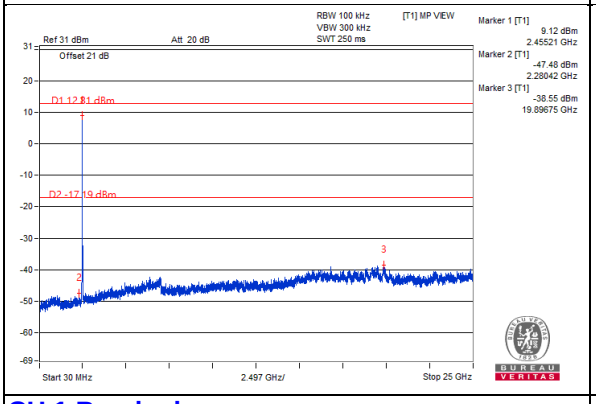
CH 1



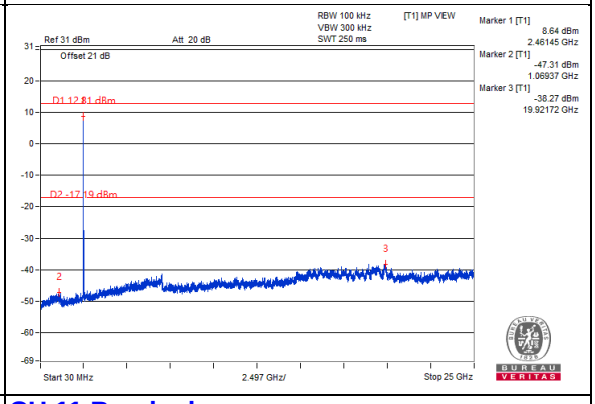
CH 6



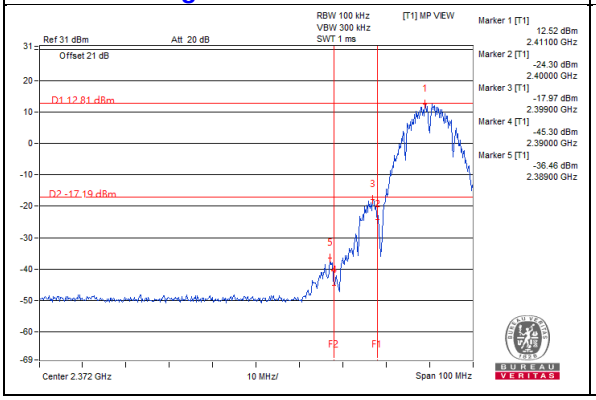
CH 10



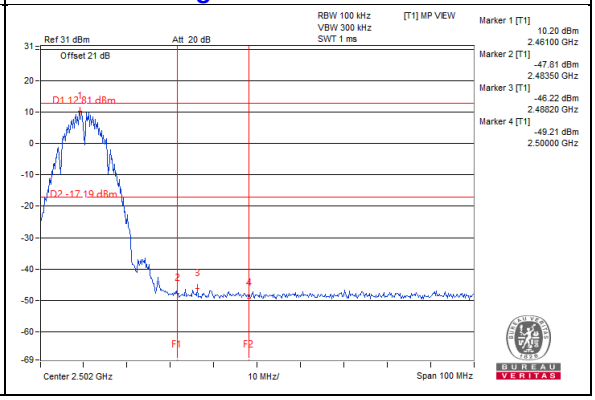
CH 11



CH 1 Band edge

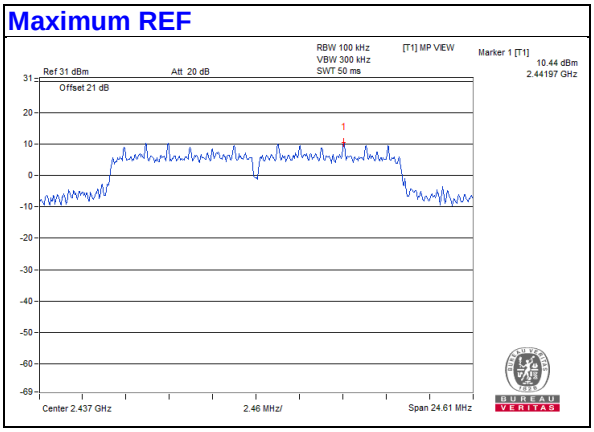


CH 11 Band edge



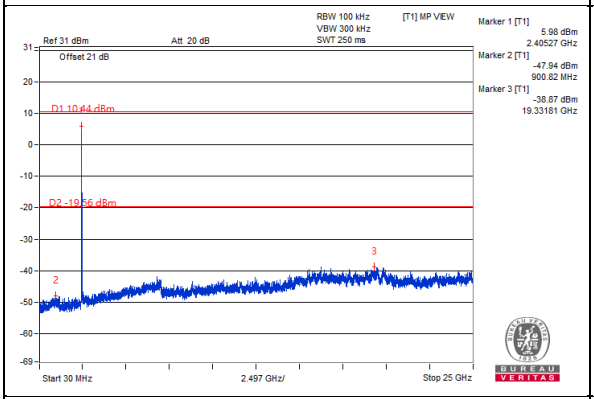
802.11g

Maximum REF

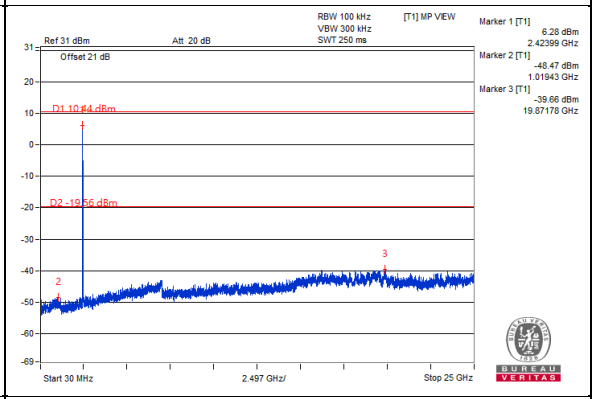


Chain 0

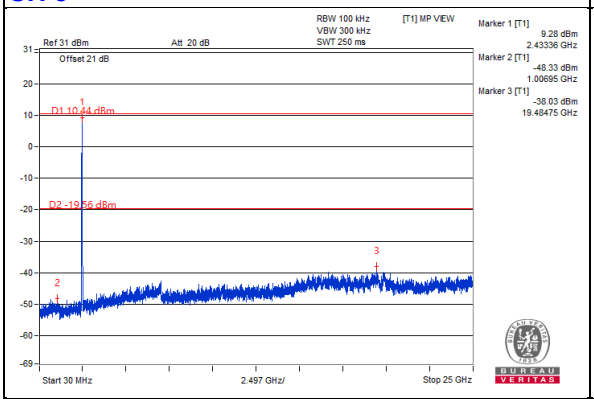
CH 1



CH 2



CH 6



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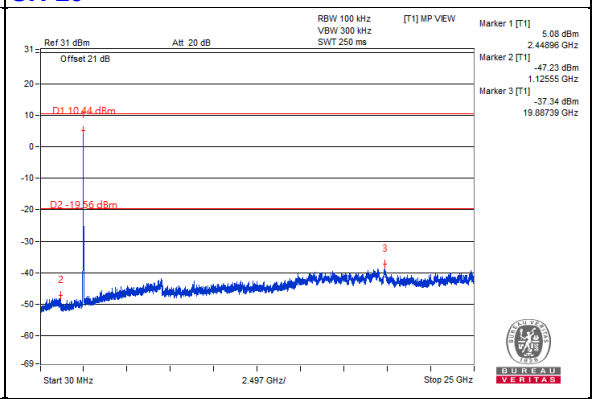

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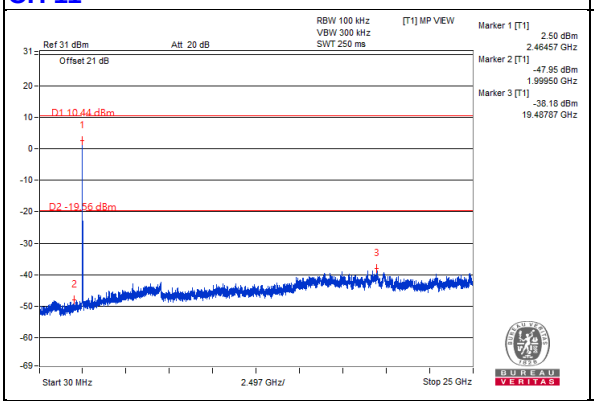
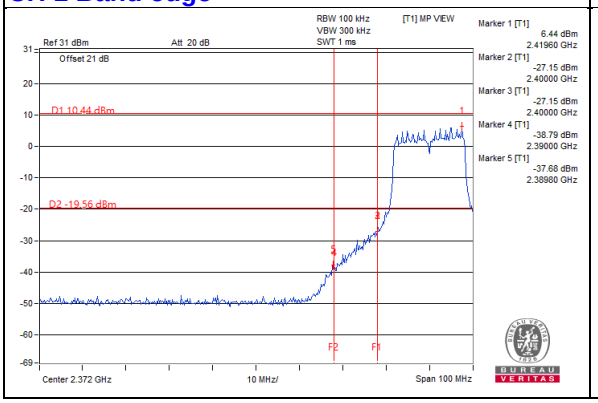
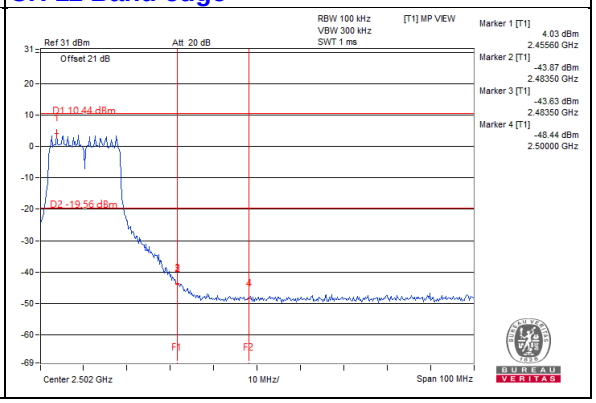


CH 1 Band edge

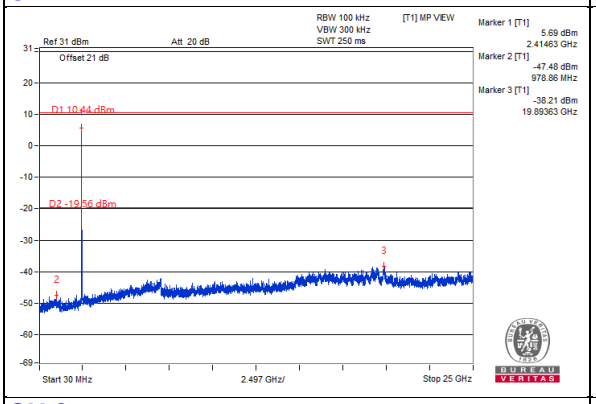


CH 11 Band edge



Chain 1

CH 1



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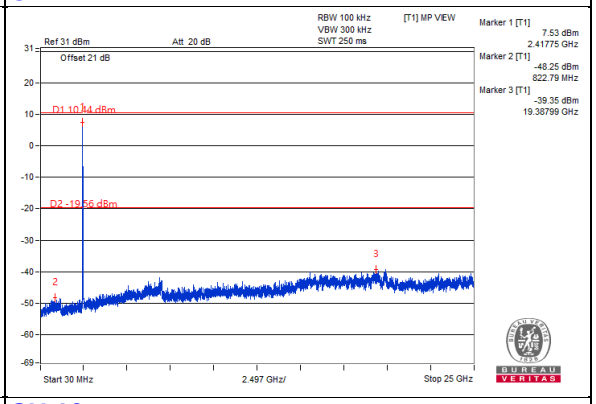

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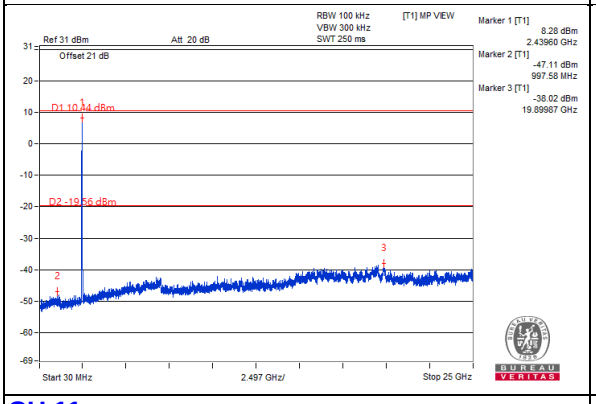

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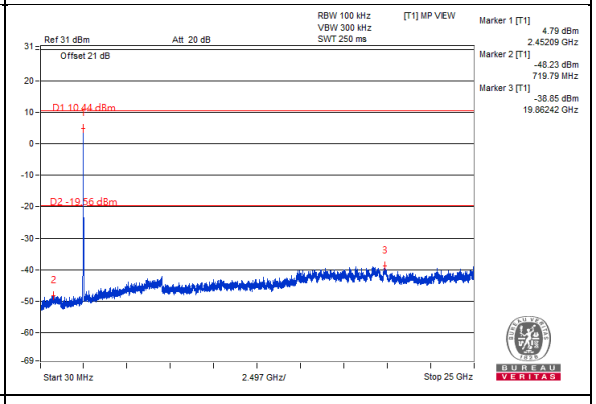

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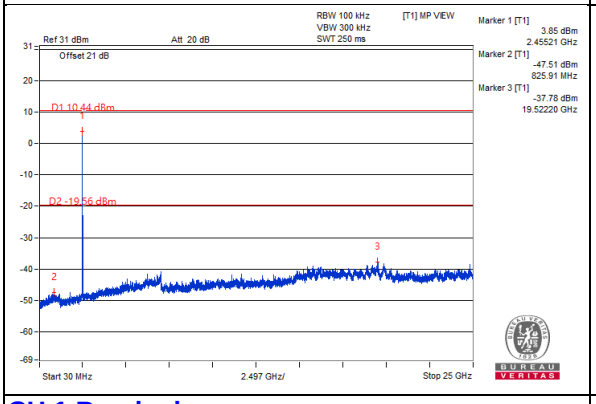
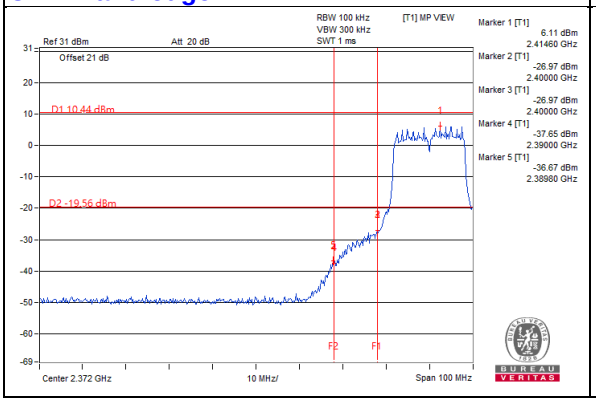
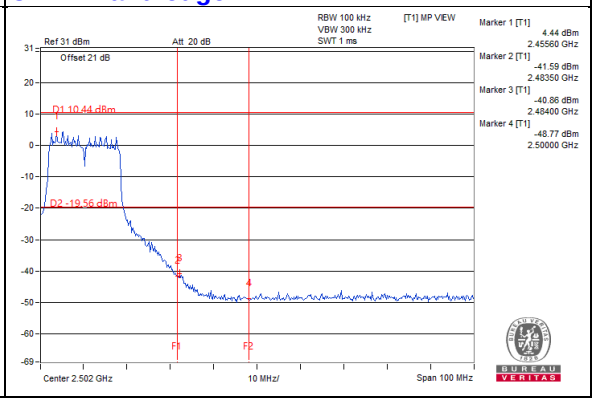


CH 1 Band edge

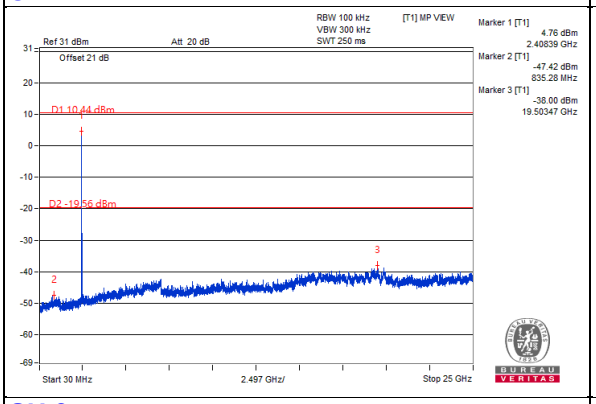


CH 11 Band edge

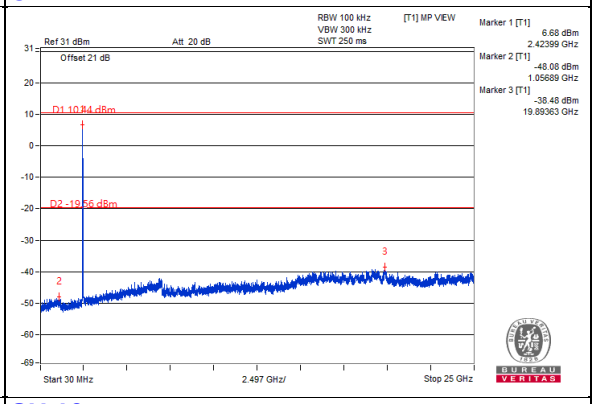


Chain 2

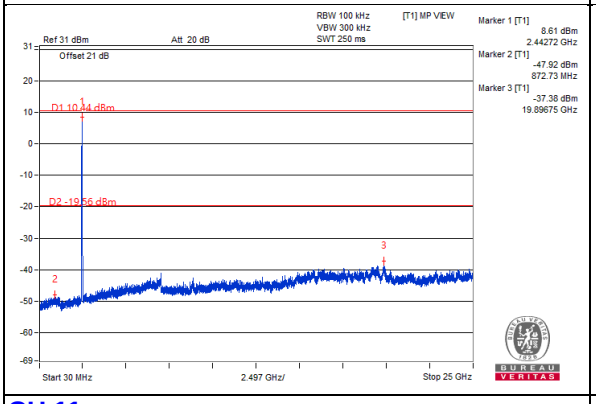
CH 1



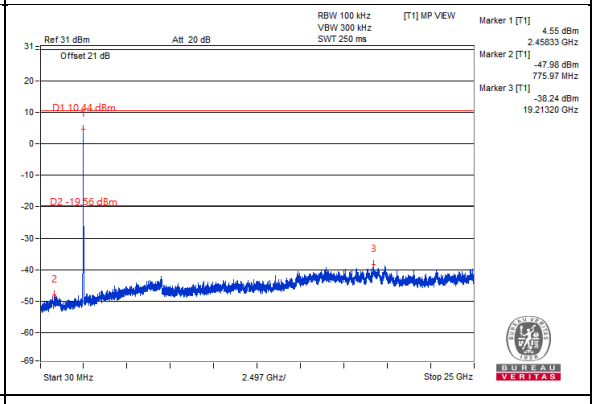
CH 2



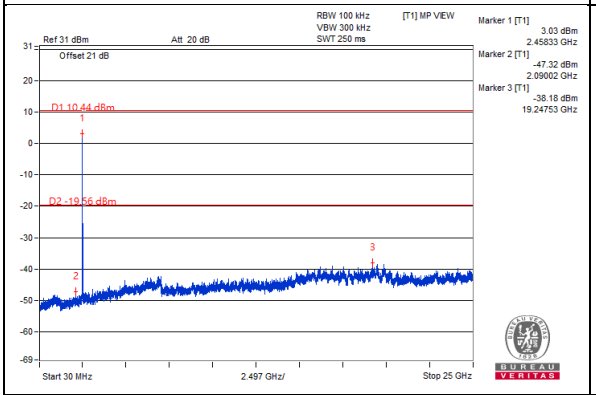
CH 6



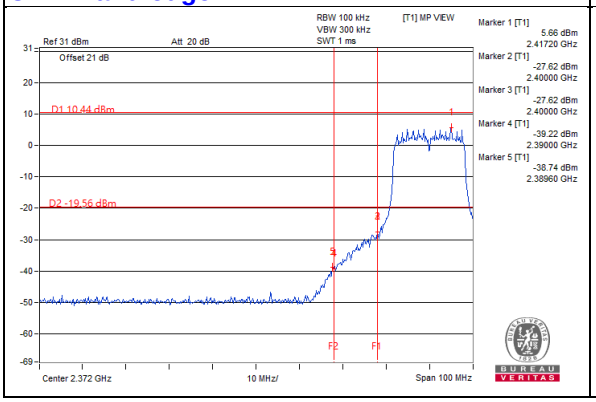
CH 10



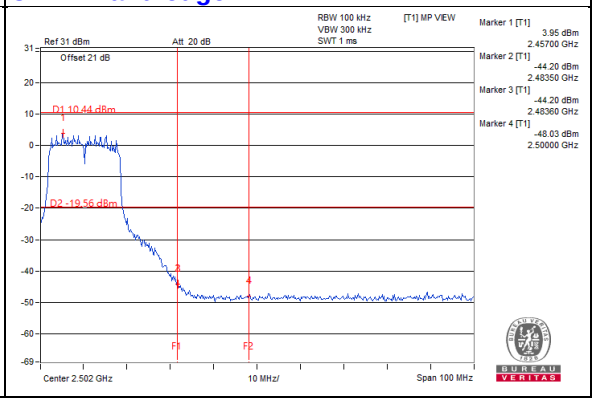
CH 11



CH 1 Band edge

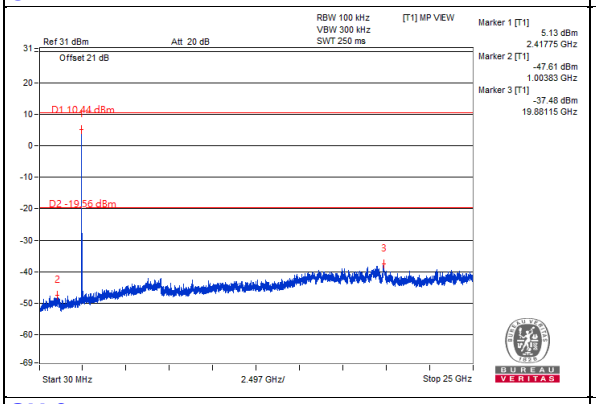


CH 11 Band edge

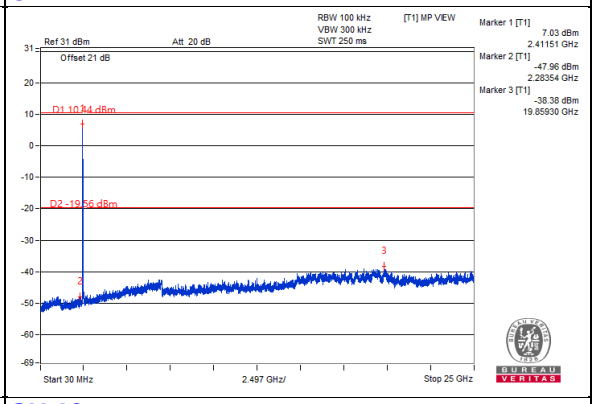


Chain 3

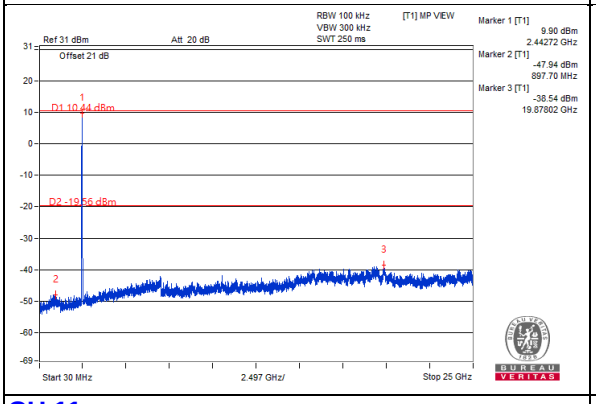
CH 1



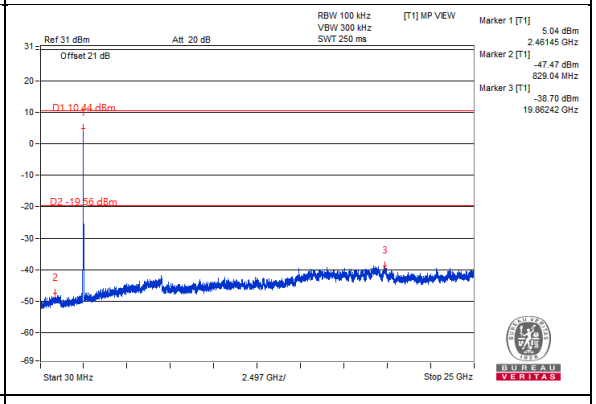
CH 2



CH 6



CH 10



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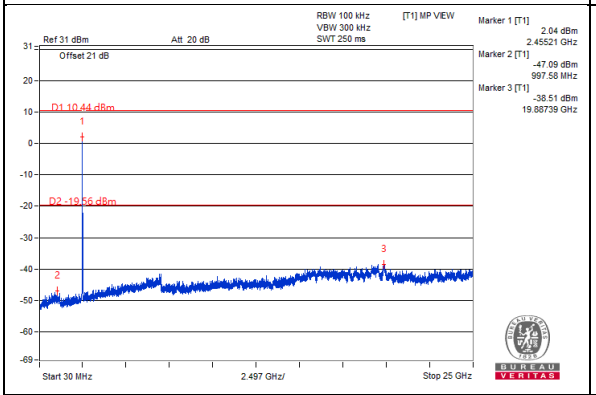
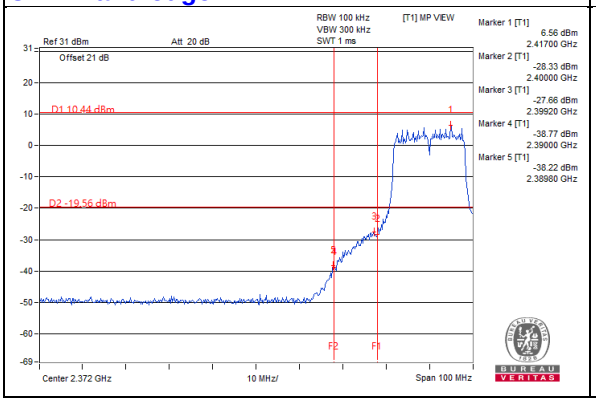


CH 1 Band edge



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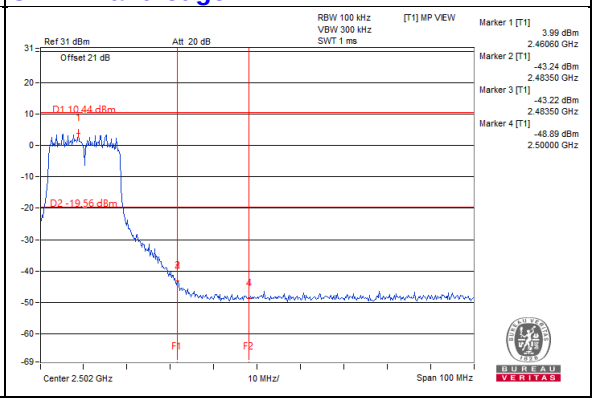
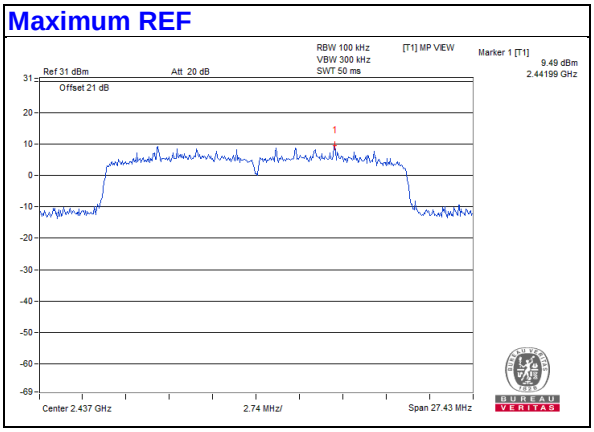


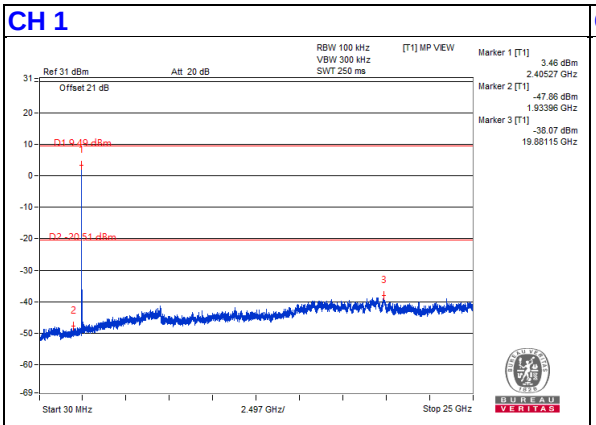
802.11ax (HE20)

Maximum REF

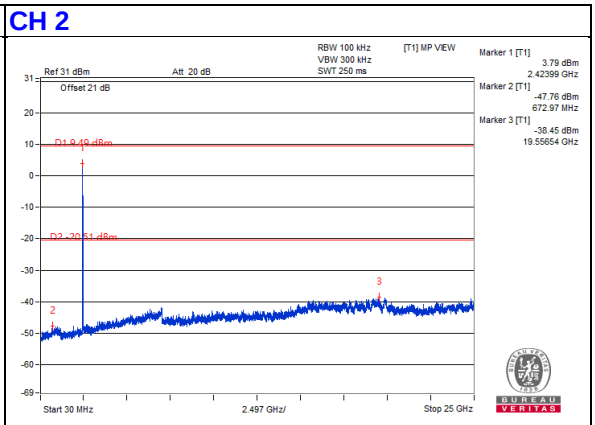


Chain 0

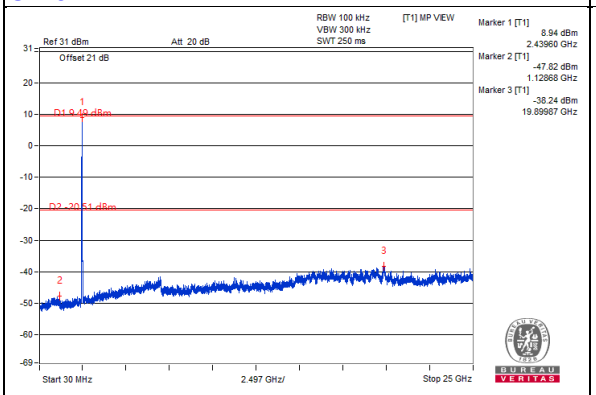
CH 1



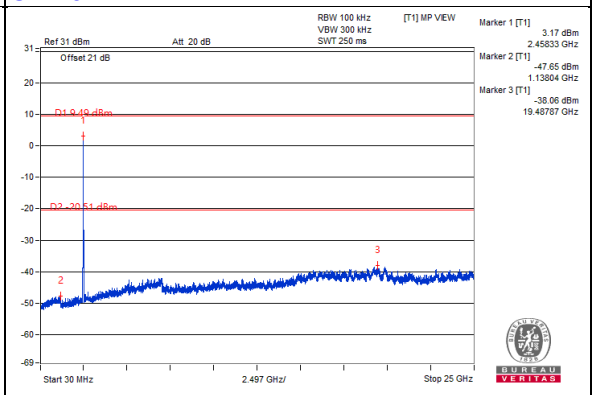
CH 2



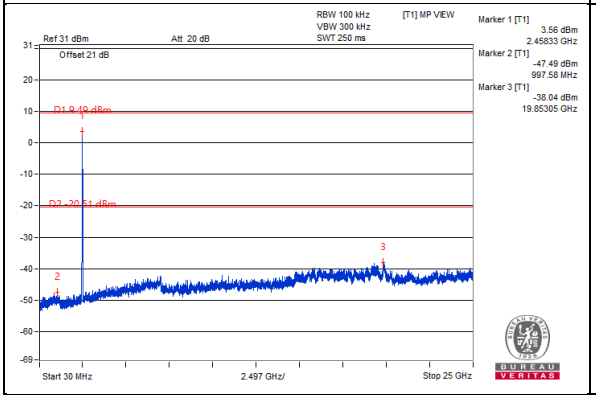
CH 6



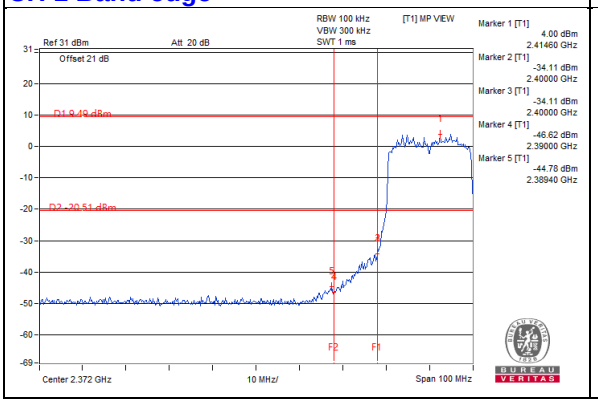
CH 10



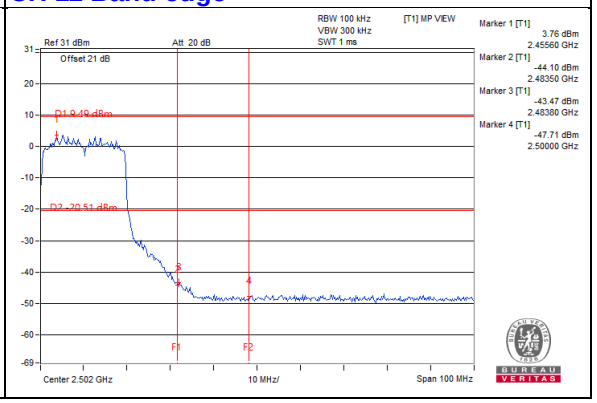
CH 11



CH 1 Band edge

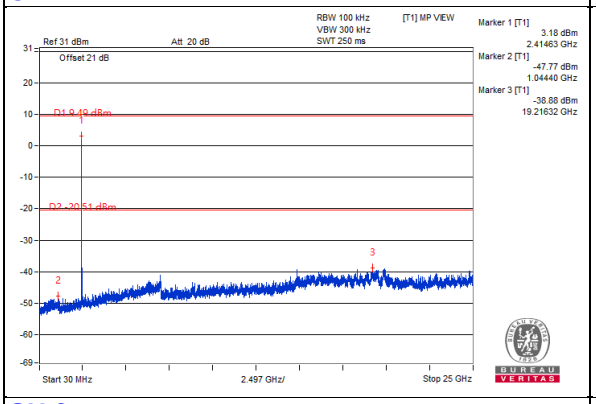


CH 11 Band edge

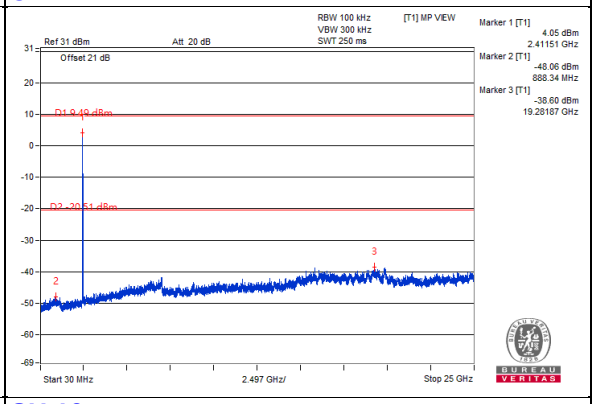


Chain 1

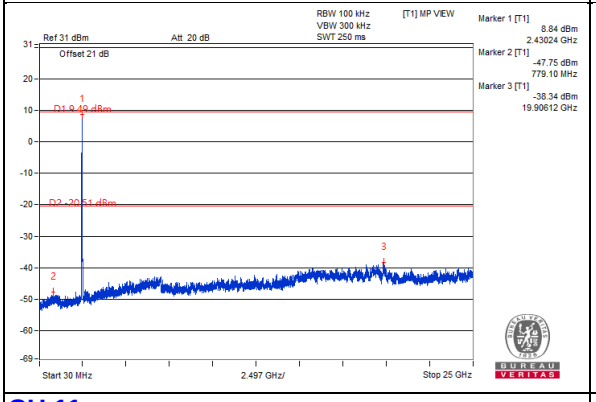
CH 1



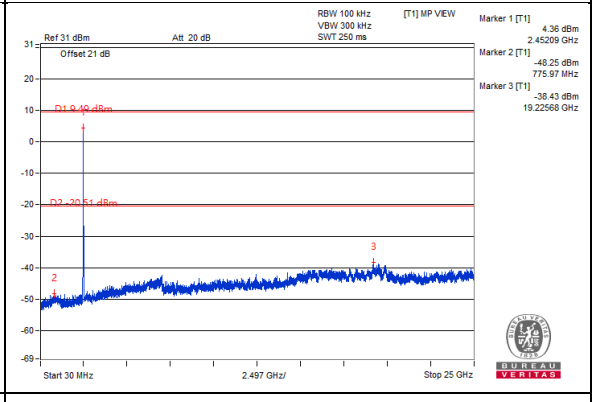
CH 2



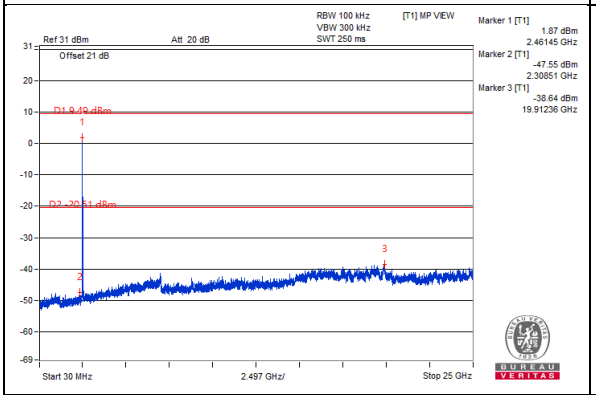
CH 6



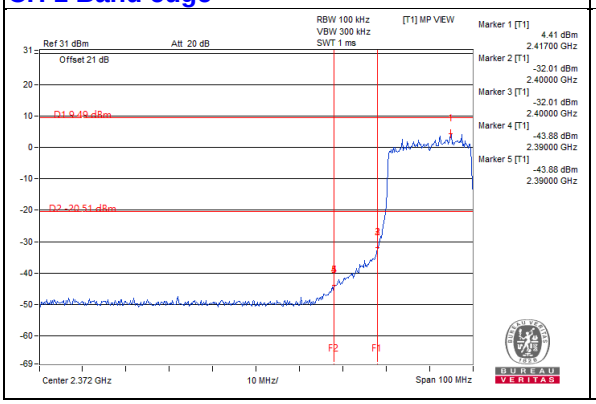
CH 10



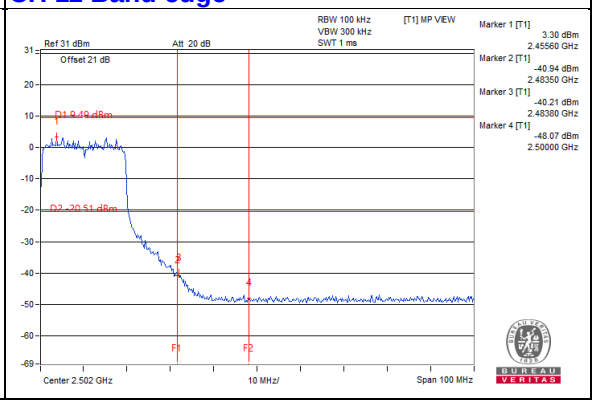
CH 11



CH 1 Band edge

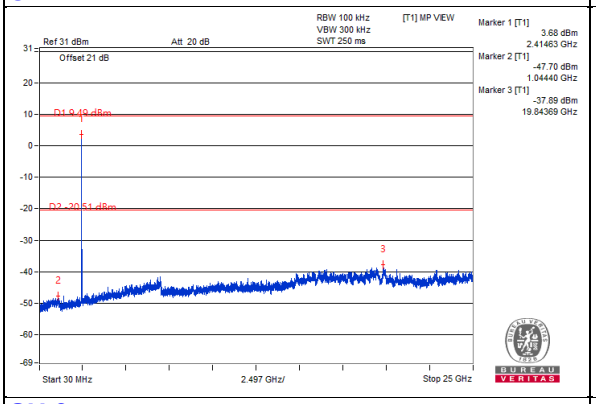


CH 11 Band edge

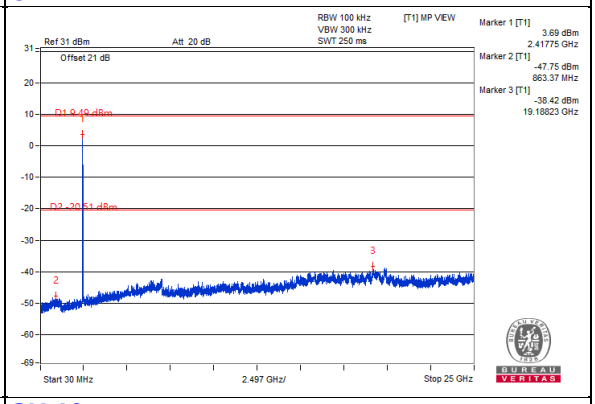


Chain 2

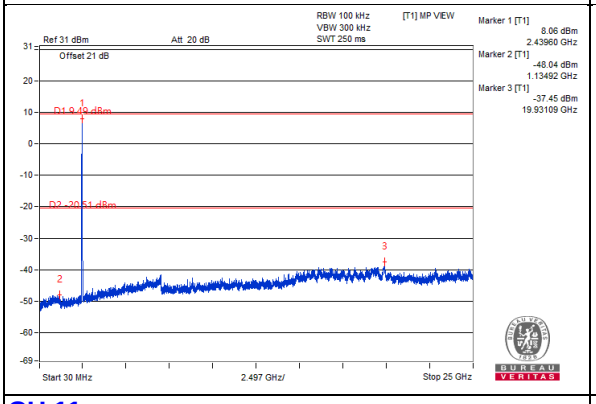
CH 1



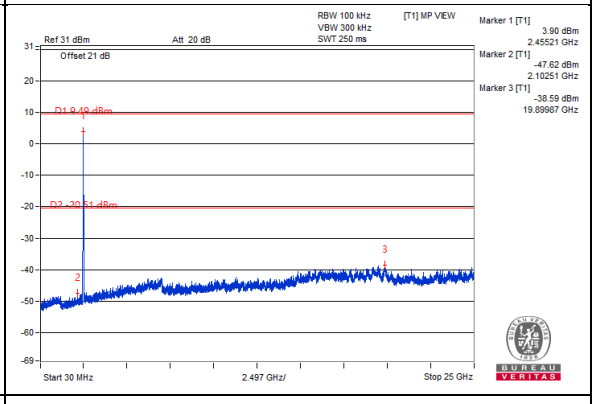
CH 2



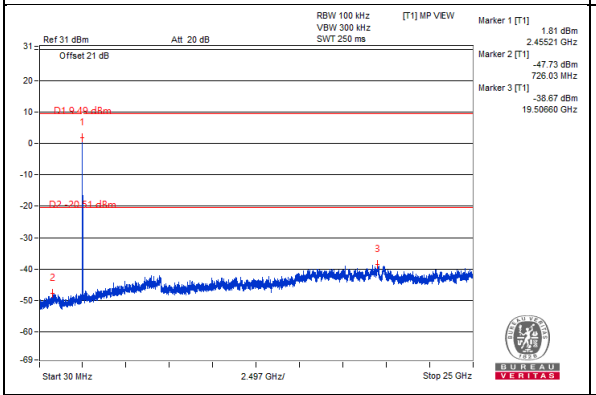
CH 6



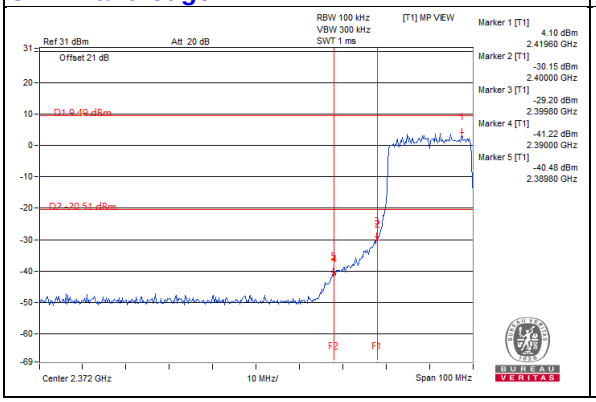
CH 10



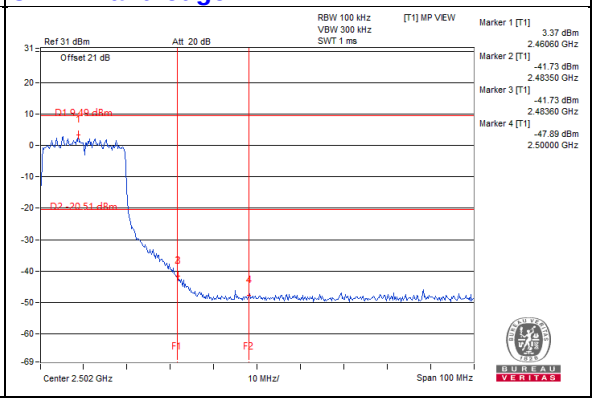
CH 11



CH 1 Band edge

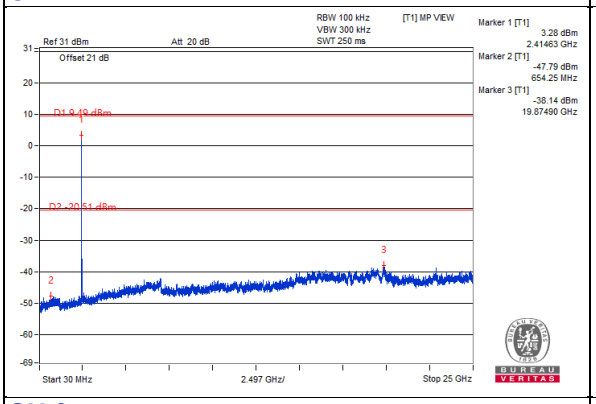


CH 11 Band edge

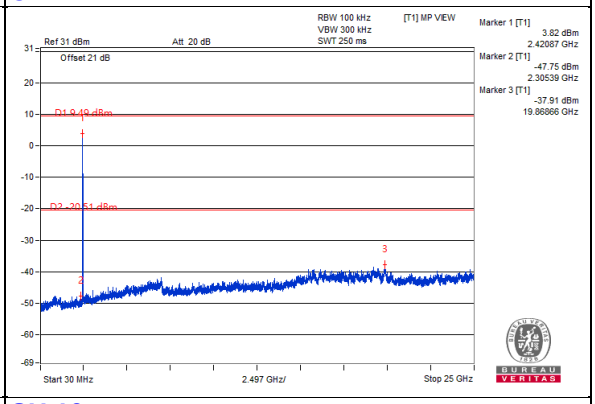


Chain 3

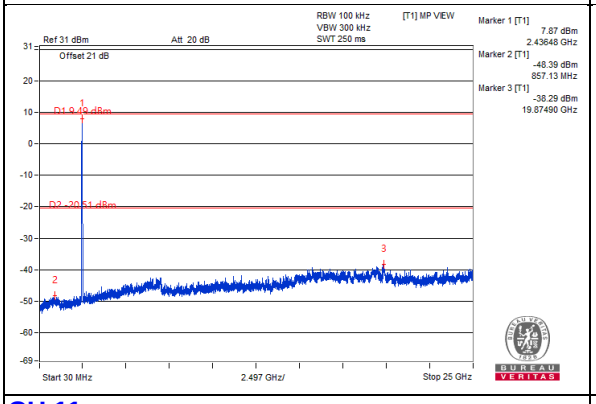
CH 1



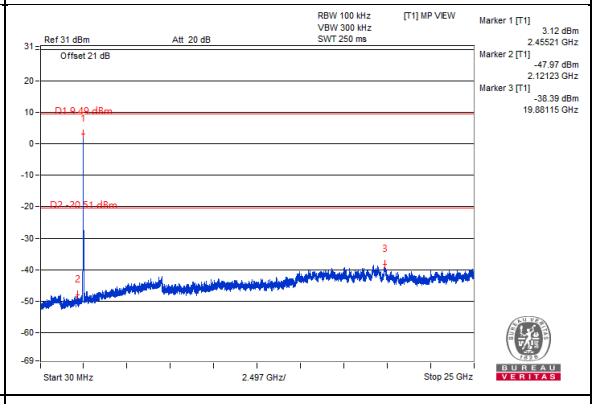
CH 2



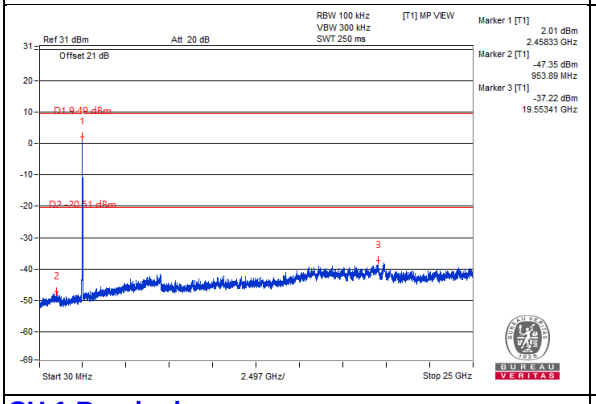
CH 6



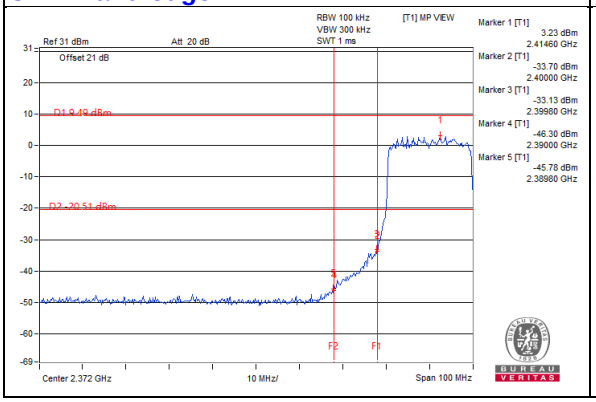
CH 10



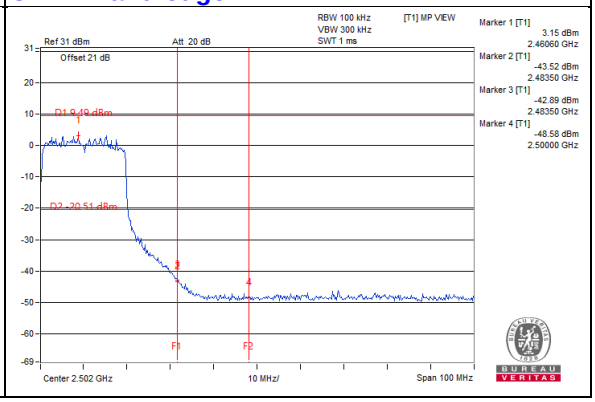
CH 11



CH 1 Band edge

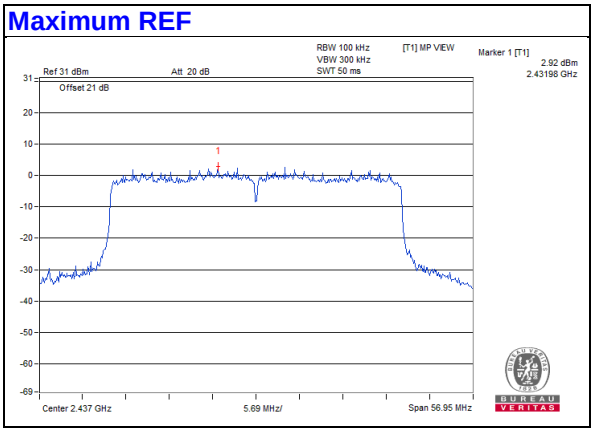


CH 11 Band edge



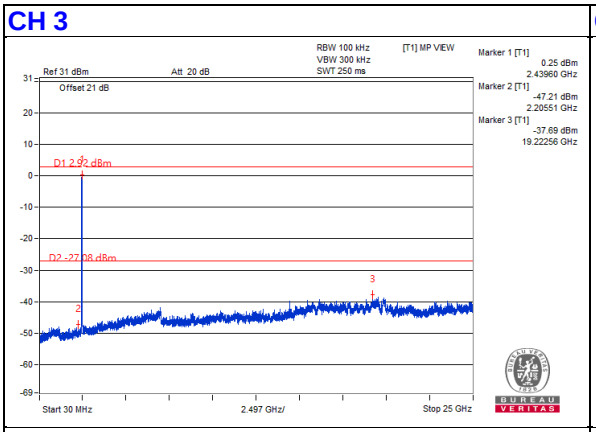
802.11ax (HE40)

Maximum REF

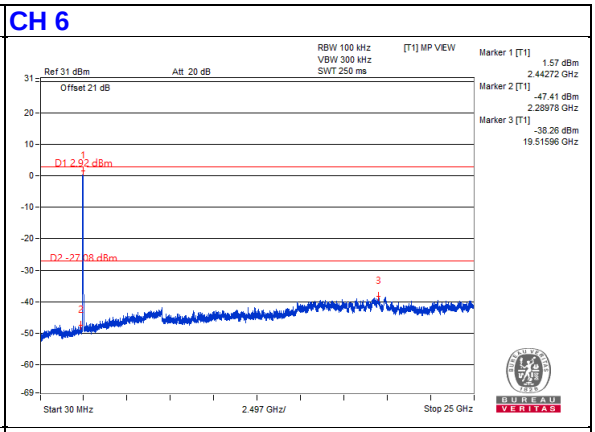


Chain 0

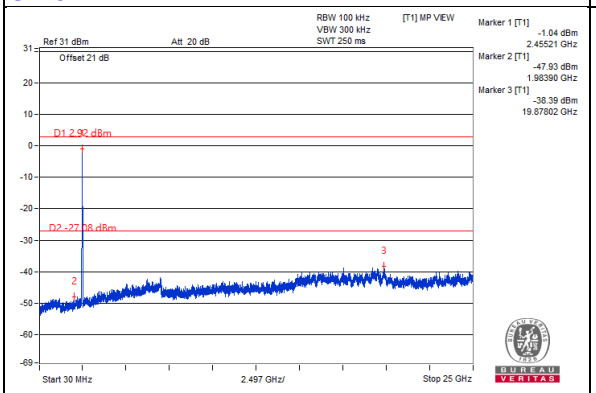
CH 3



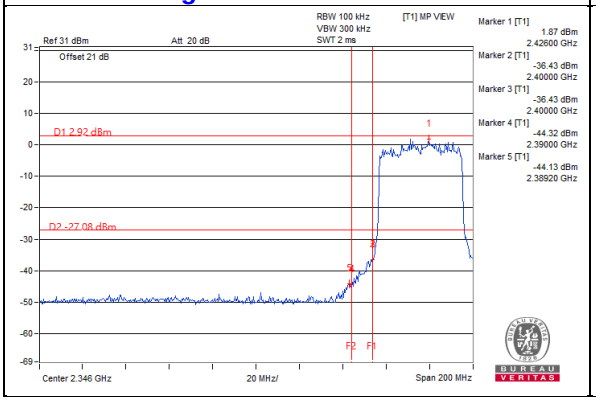
CH 6



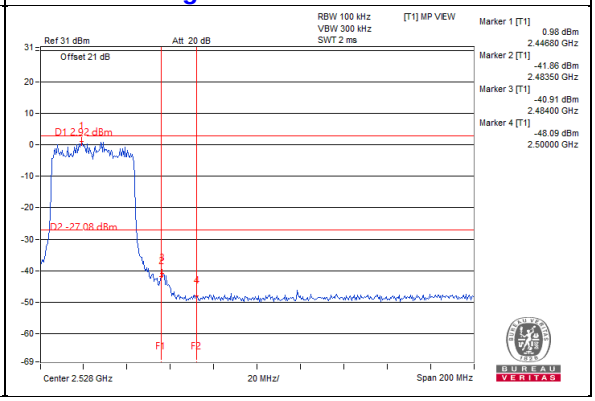
CH 9



CH 3 Band edge

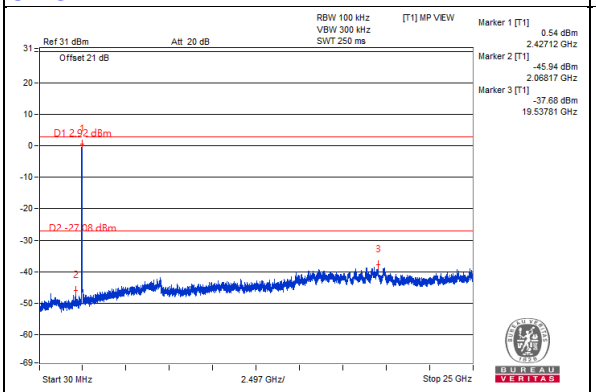


CH 9 Band edge

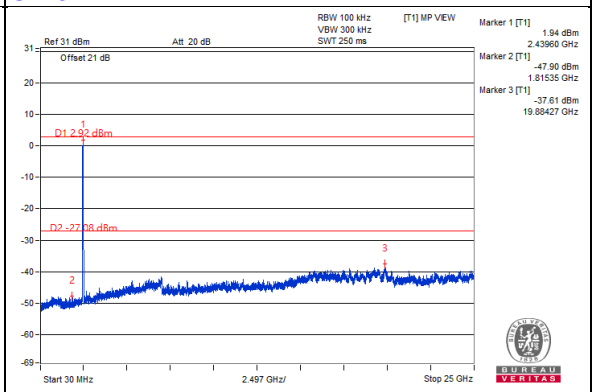


Chain 1

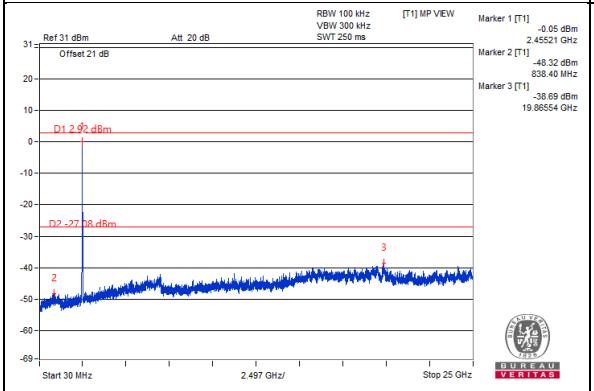
CH 3



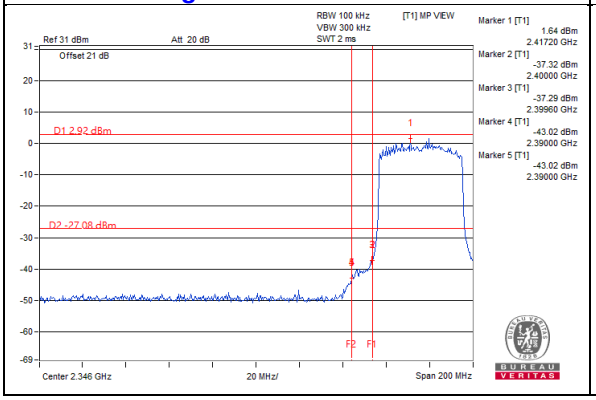
CH 6



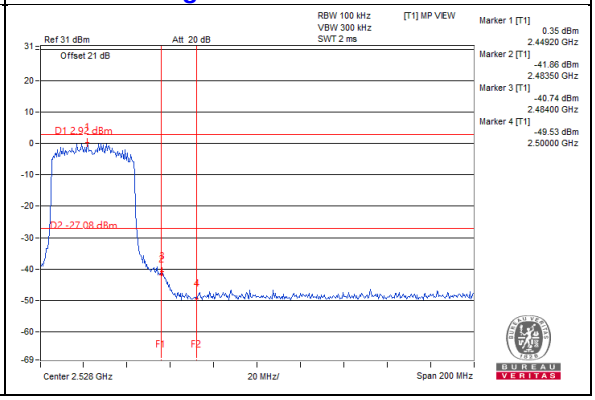
CH 9



CH 3 Band edge

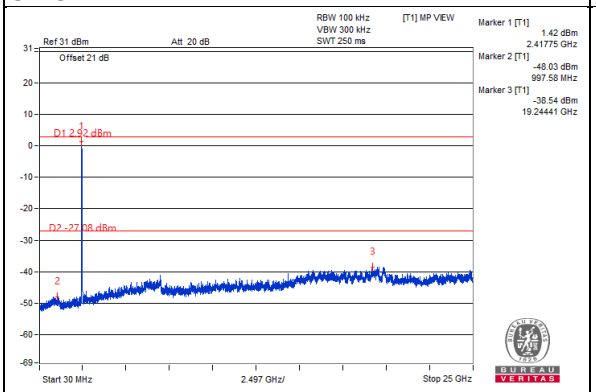


CH 9 Band edge

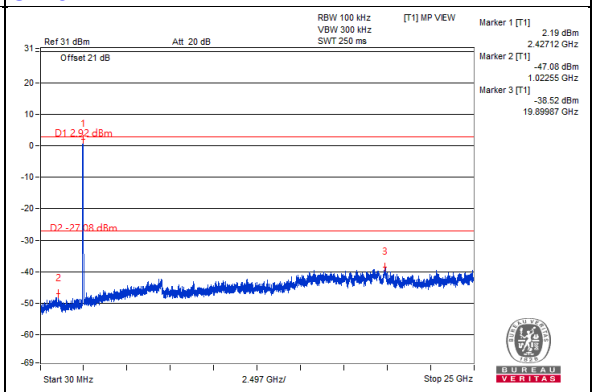


Chain 2

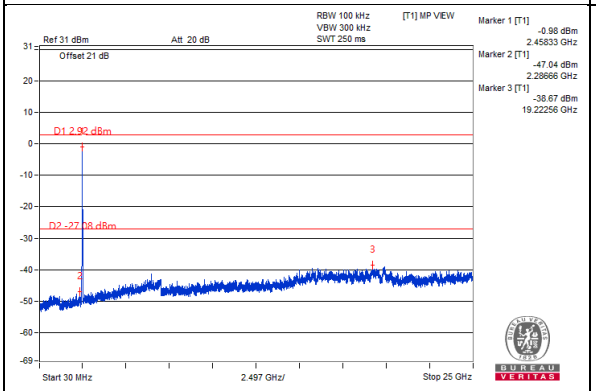
CH 3



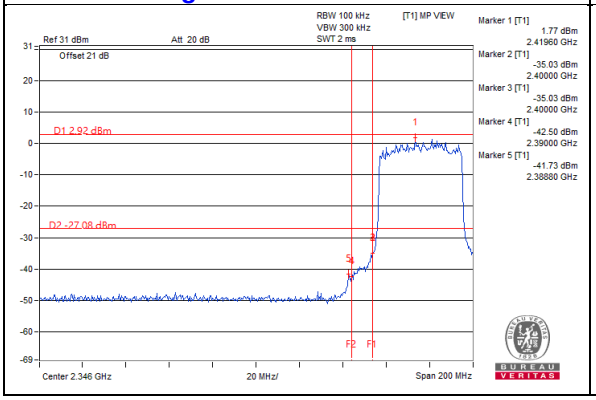
CH 6



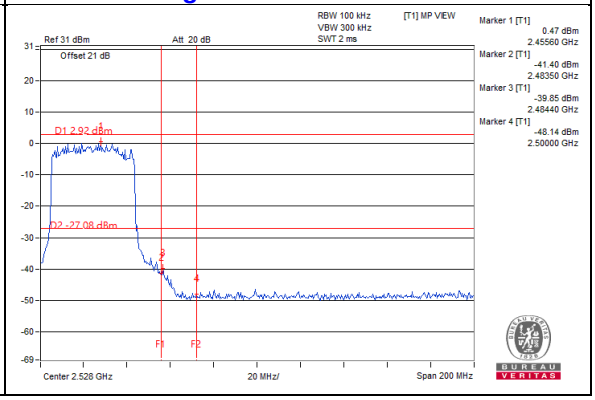
CH 9



CH 3 Band edge

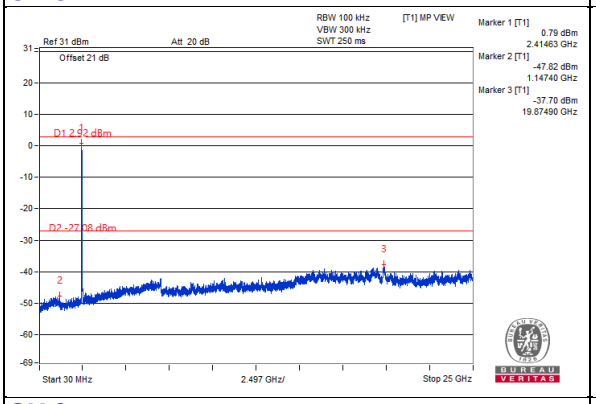


CH 9 Band edge

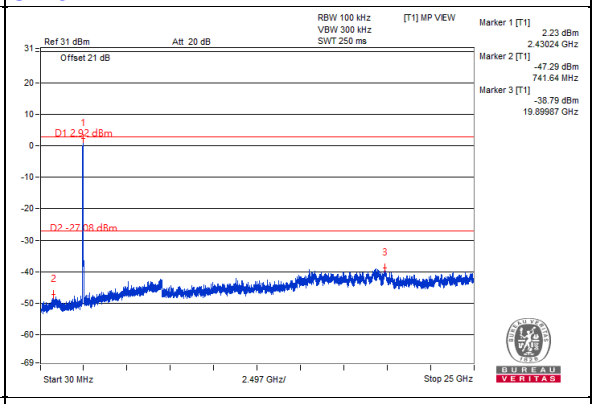


Chain 3

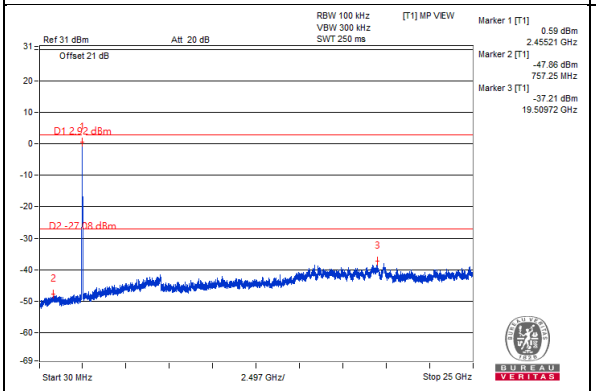
CH 3



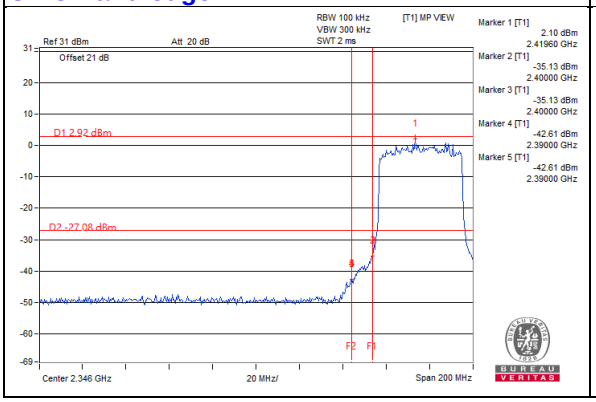
CH 6



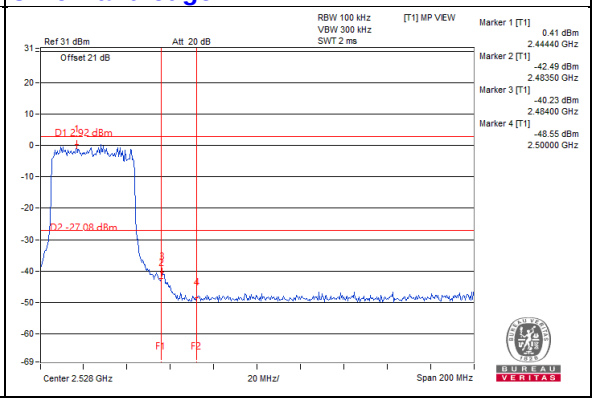
CH 9



CH 3 Band edge



CH 9 Band edge



5 Pictures of Test Arrangements

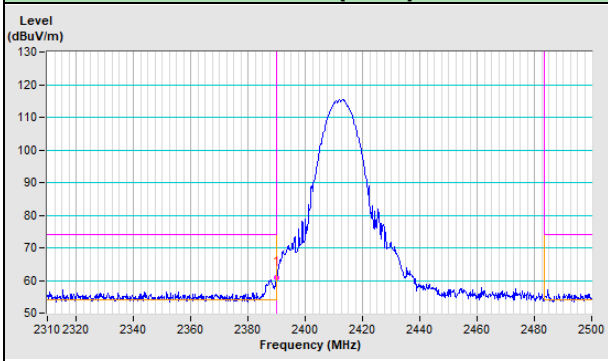
Please refer to the attached file (Test Setup Photo).

Annex A - Band-Edge Measurement

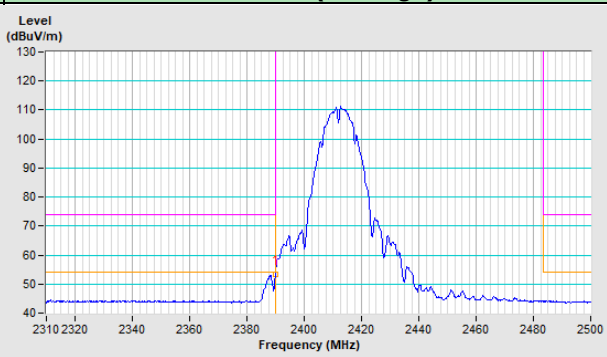
Annex A.1 - Test Results (Mode 1)

802.11b Channel 1

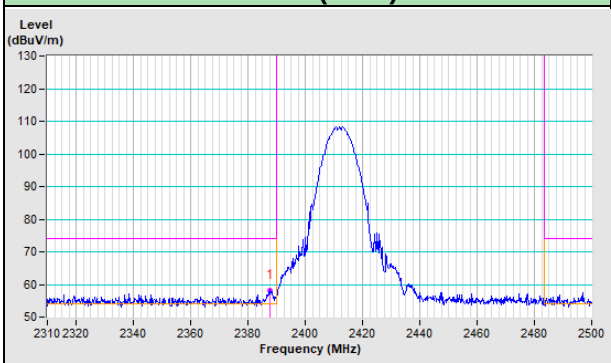
Horizontal (Peak)



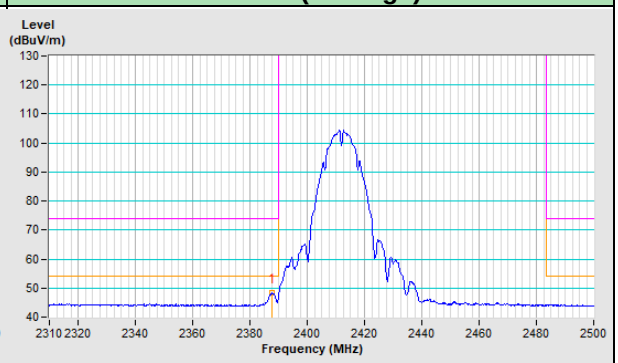
Horizontal (Average)



Vertical (Peak)

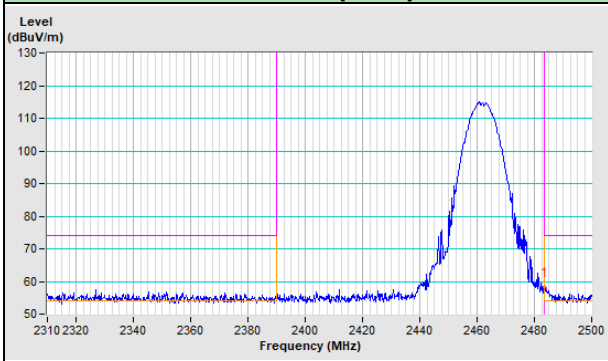


Vertical (Average)

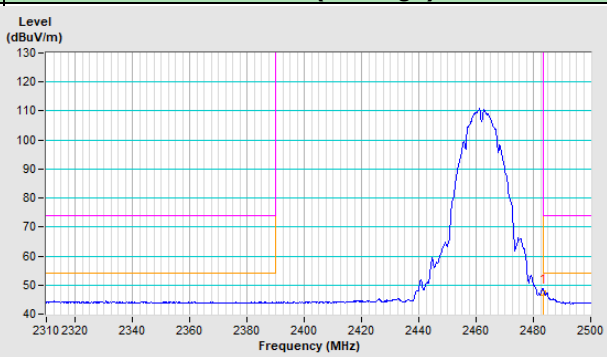


802.11b Channel 11

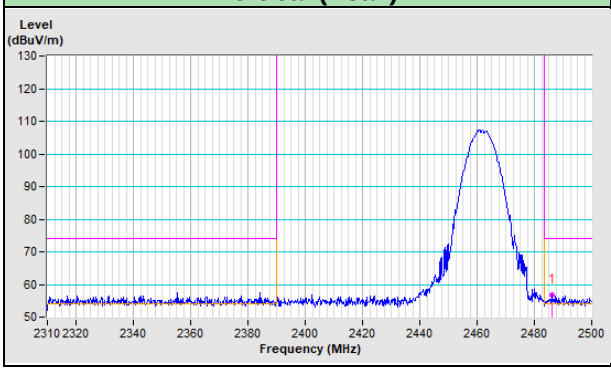
Horizontal (Peak)



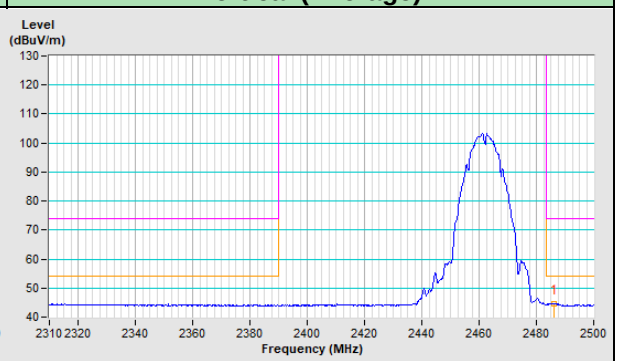
Horizontal (Average)



Vertical (Peak)

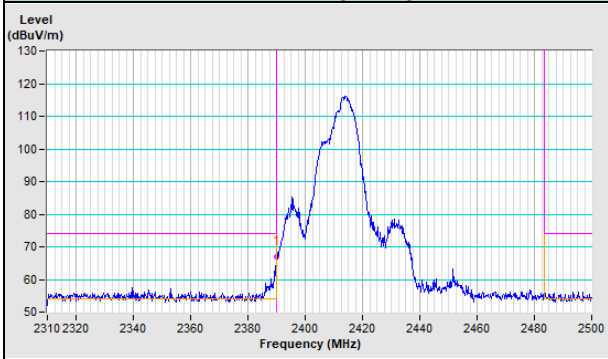


Vertical (Average)

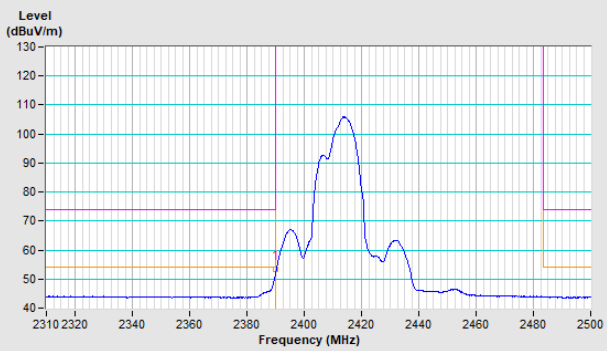


802.11g Channel 1

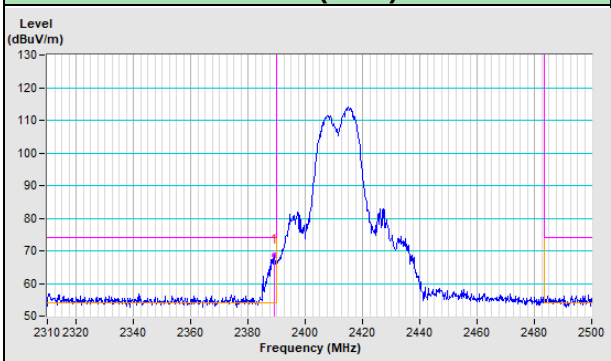
Horizontal (Peak)



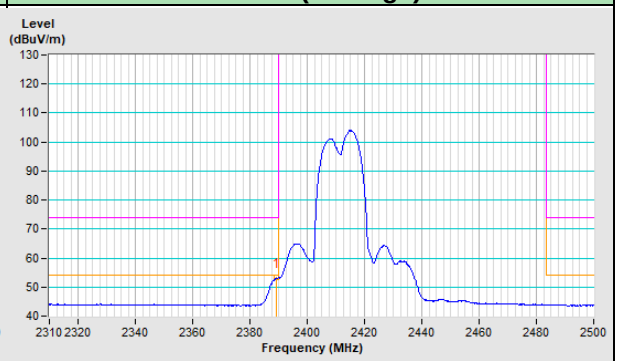
Horizontal (Average)



Vertical (Peak)

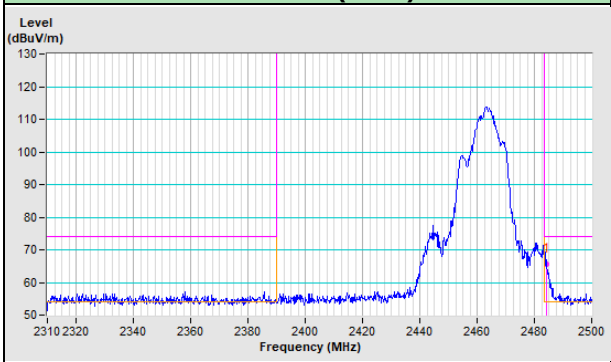


Vertical (Average)

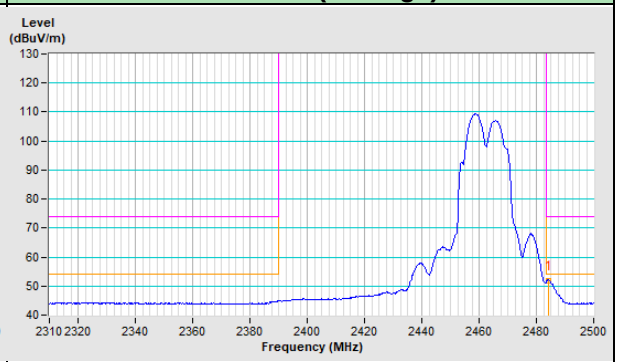


802.11g Channel 11

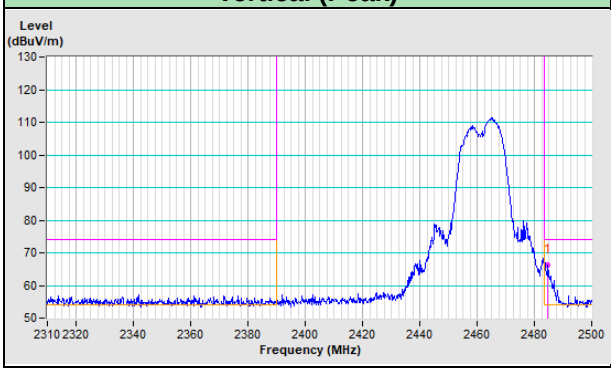
Horizontal (Peak)



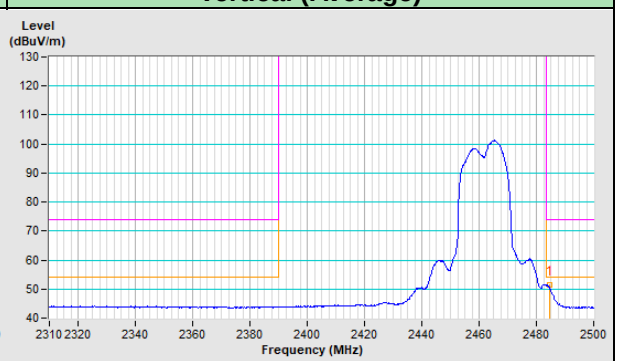
Horizontal (Average)



Vertical (Peak)

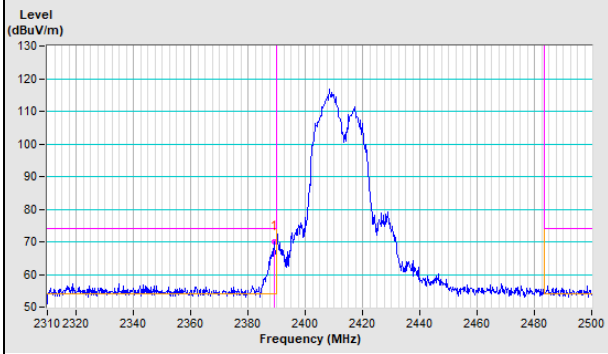


Vertical (Average)

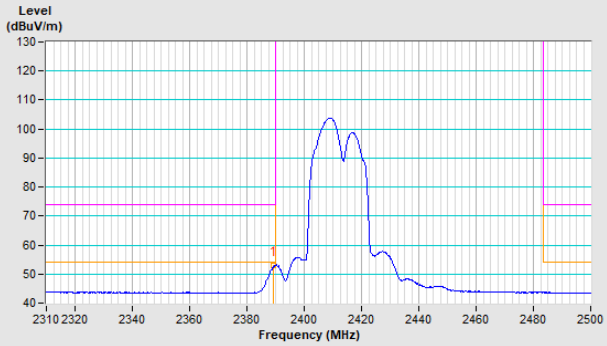


802.11ax (HE20) Channel 1

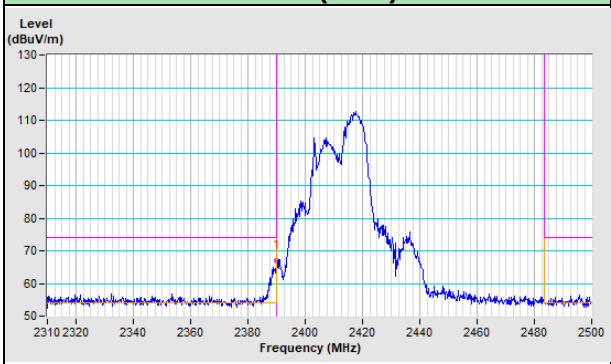
Horizontal (Peak)



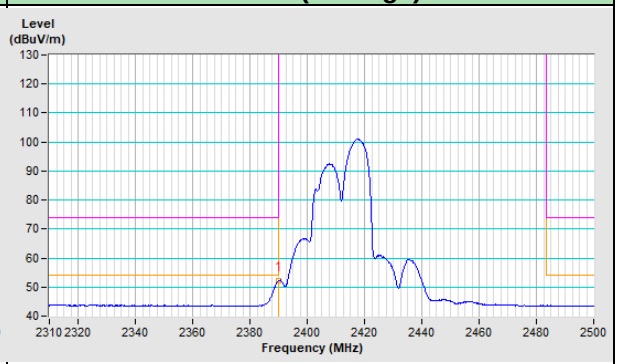
Horizontal (Average)



Vertical (Peak)

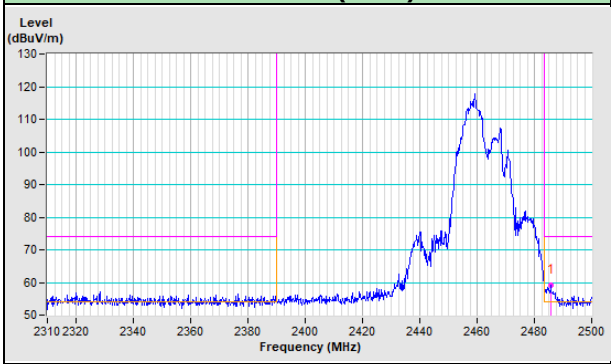


Vertical (Average)

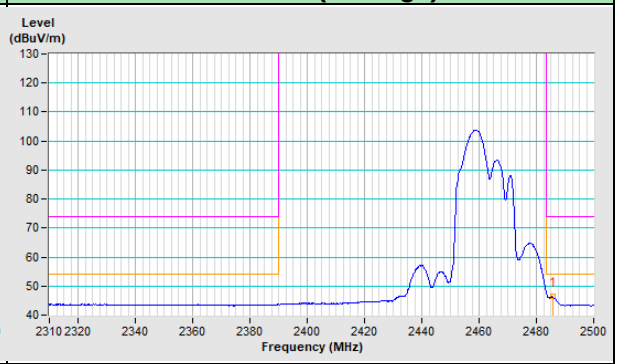


802.11ax (HE20) Channel 11

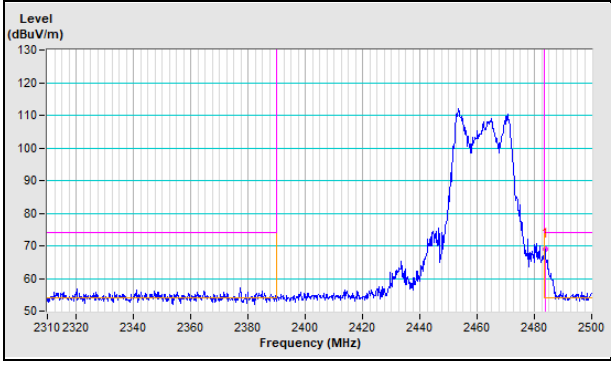
Horizontal (Peak)



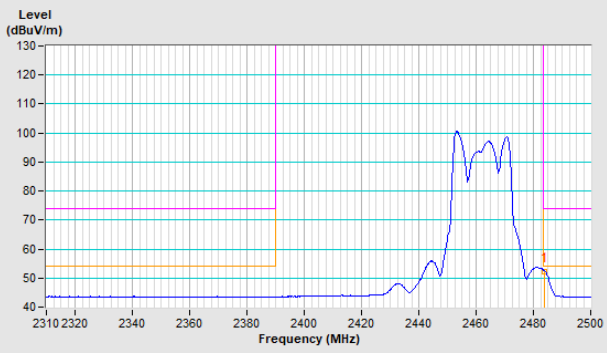
Horizontal (Average)



Vertical (Peak)

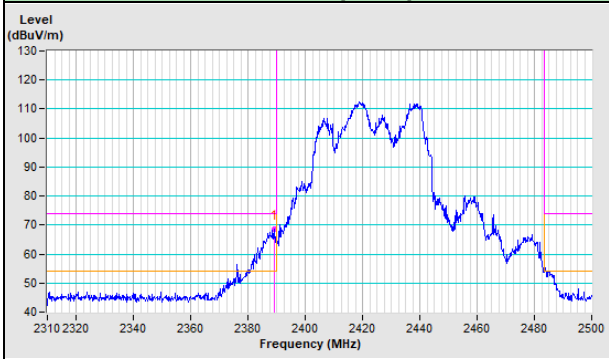


Vertical (Average)

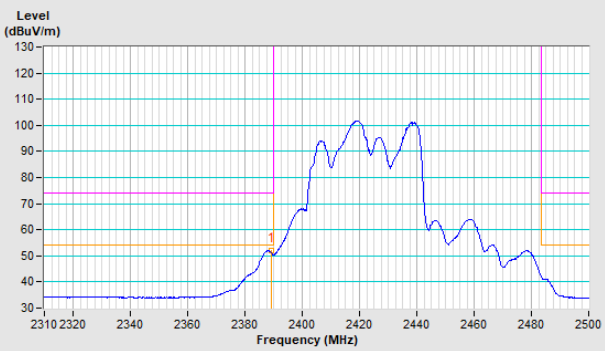


802.11ax (HE40) Channel 3

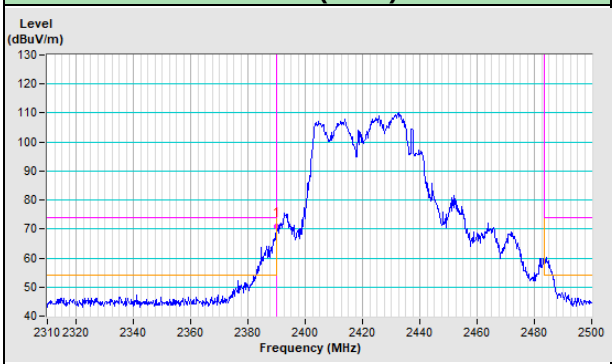
Horizontal (Peak)



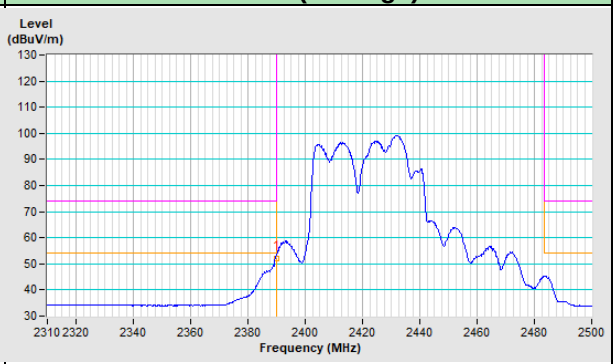
Horizontal (Average)



Vertical (Peak)

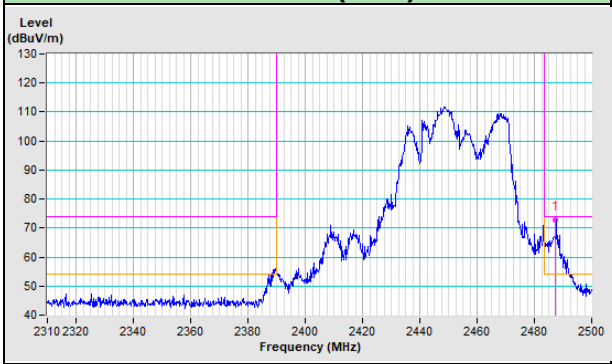


Vertical (Average)

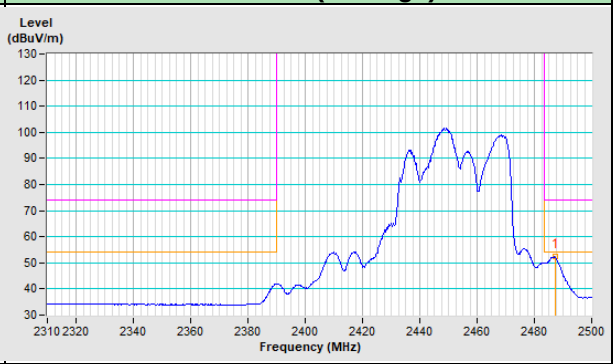


802.11ax (HE40) Channel 9

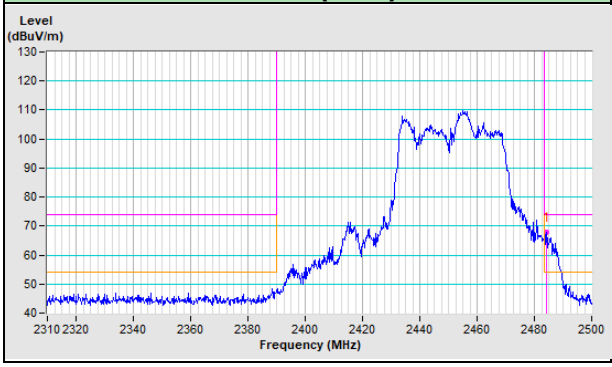
Horizontal (Peak)



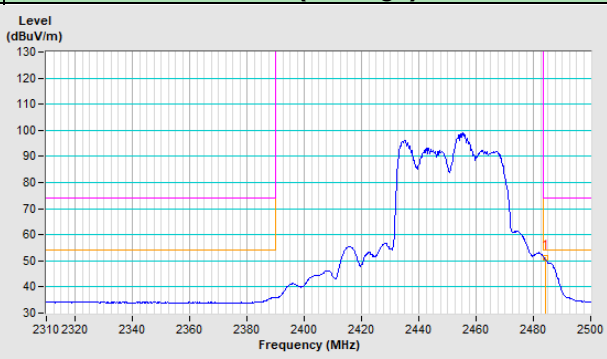
Horizontal (Average)



Vertical (Peak)



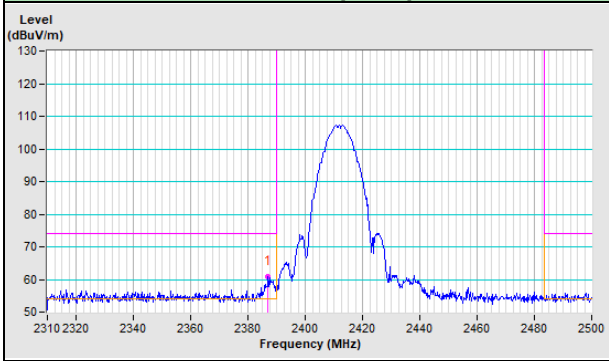
Vertical (Average)



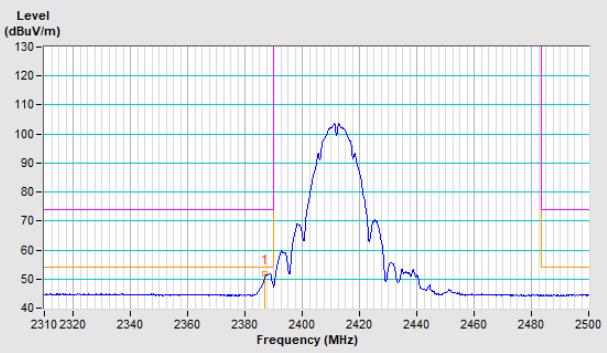
Annex A.2 - Test Results (Mode 2)

802.11b Channel 1

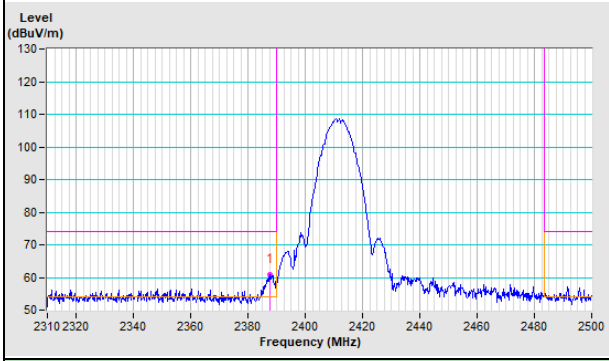
Horizontal (Peak)



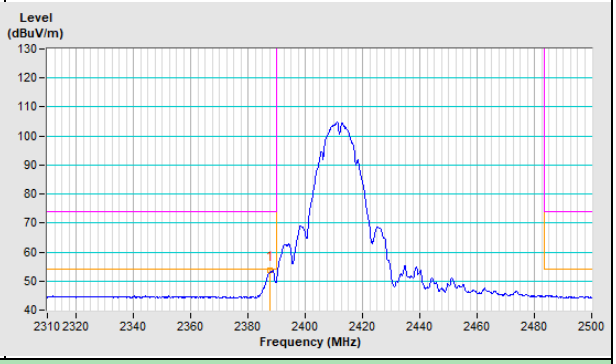
Horizontal (Average)



Vertical (Peak)

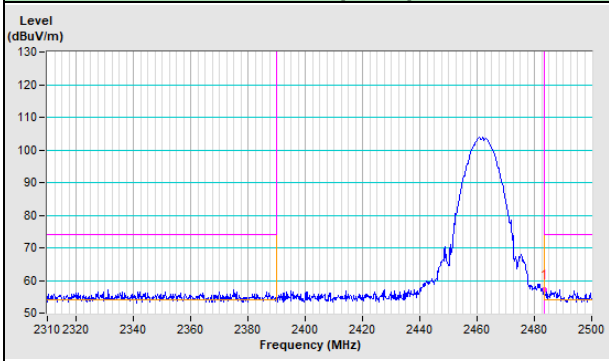


Vertical (Average)

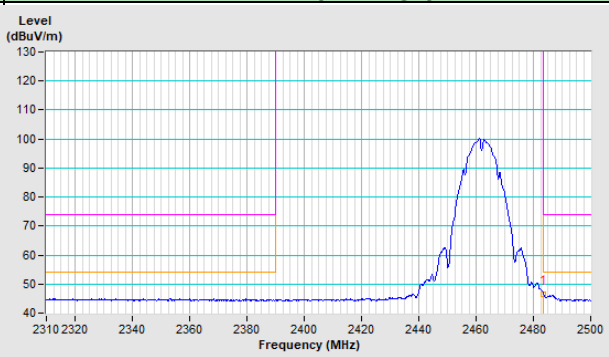


802.11b Channel 11

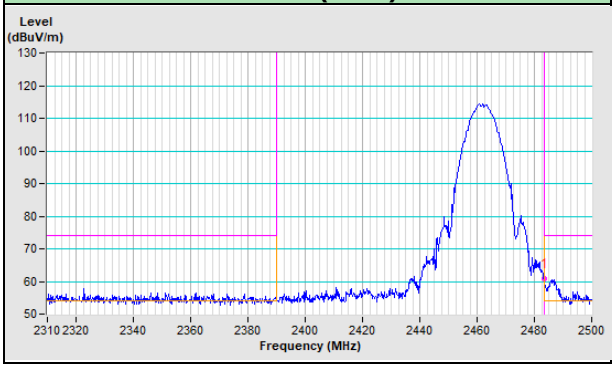
Horizontal (Peak)



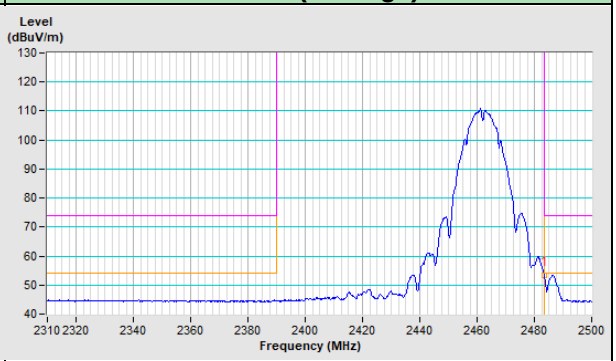
Horizontal (Average)



Vertical (Peak)

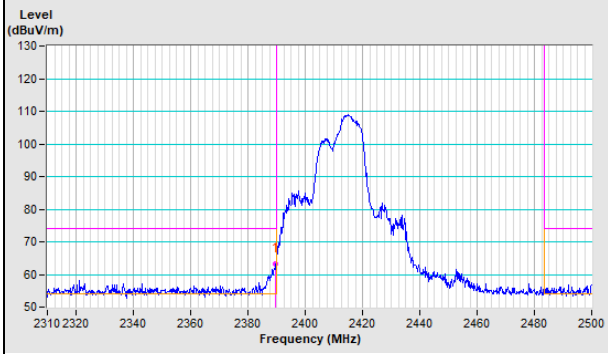


Vertical (Average)

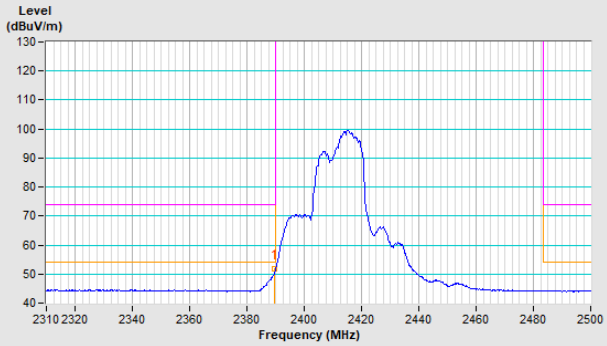


802.11g Channel 1

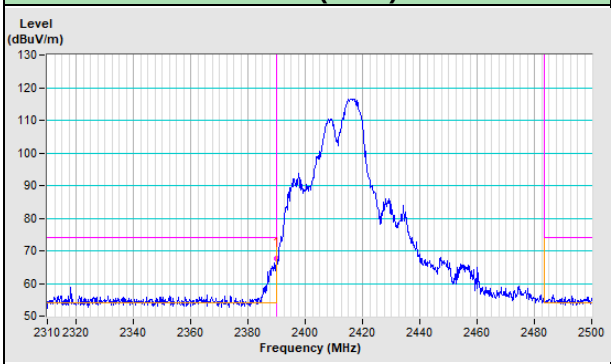
Horizontal (Peak)



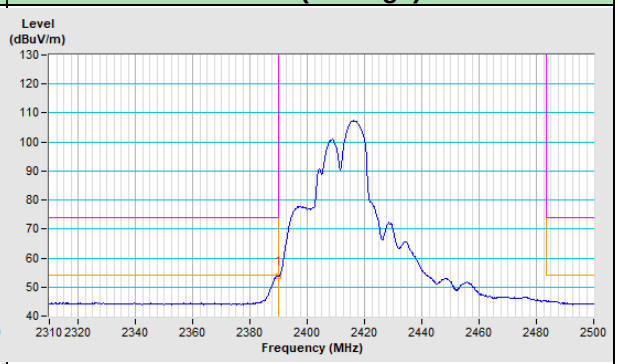
Horizontal (Average)



Vertical (Peak)

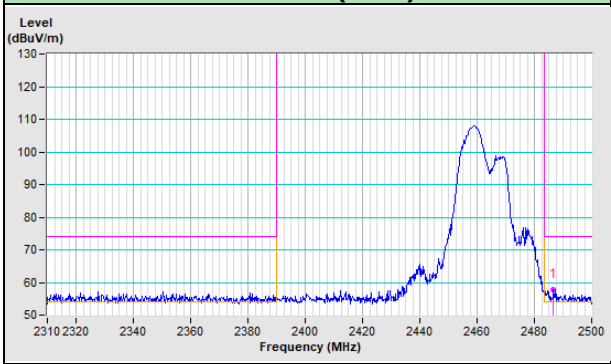


Vertical (Average)



802.11g Channel 11

Horizontal (Peak)



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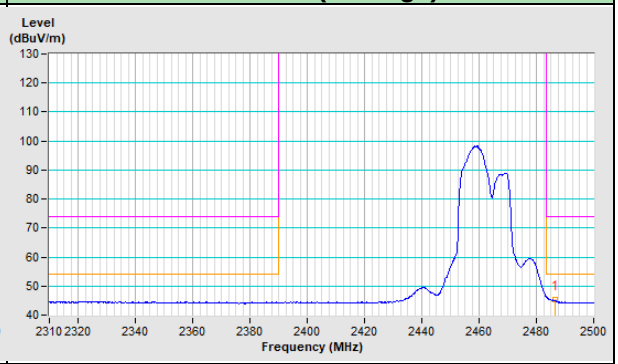
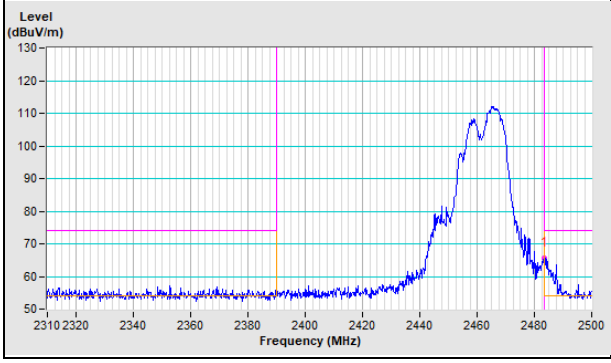
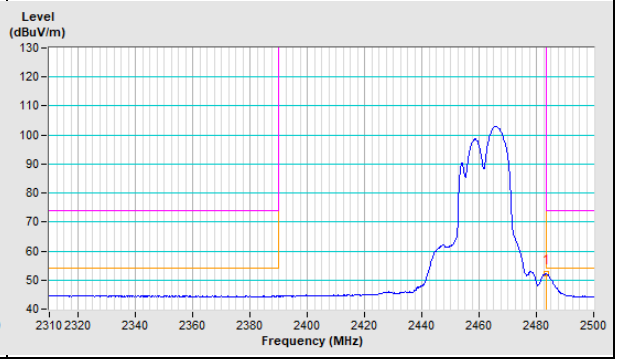


Vertical (Peak)

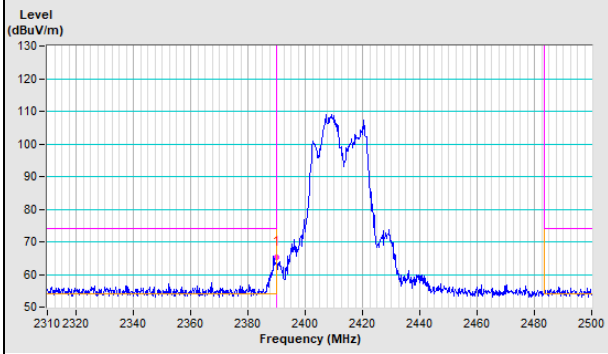


Vertical (Average)

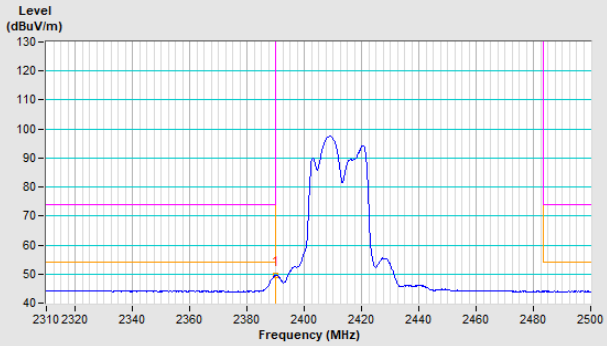


802.11ax (HE20) Channel 1

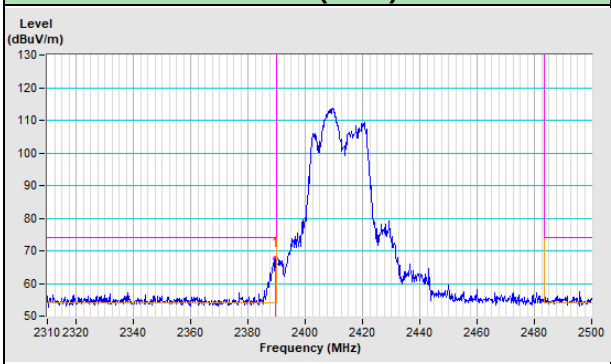
Horizontal (Peak)



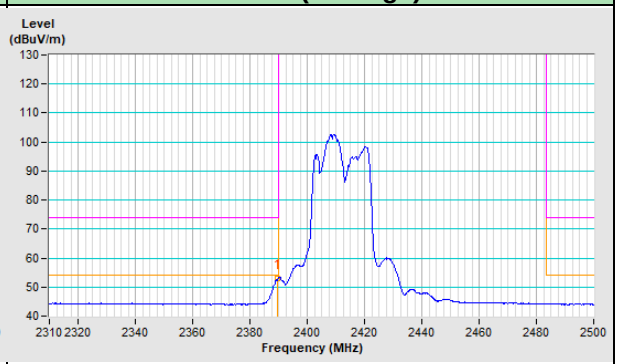
Horizontal (Average)



Vertical (Peak)

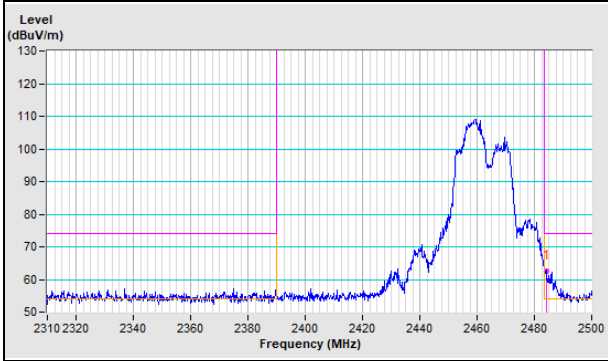


Vertical (Average)

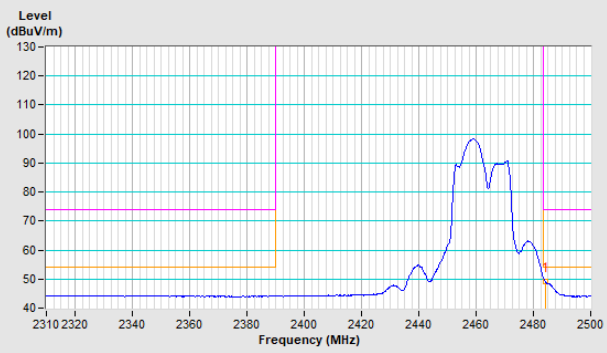


802.11ax (HE20) Channel 11

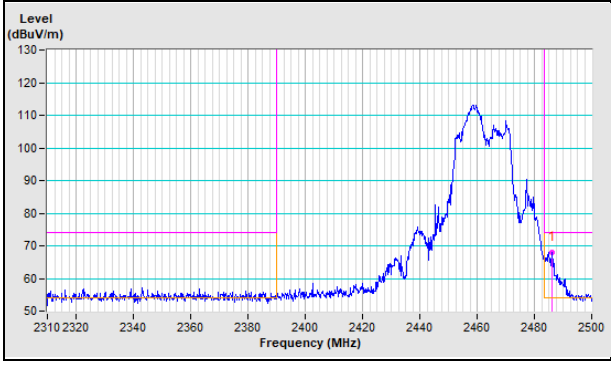
Horizontal (Peak)



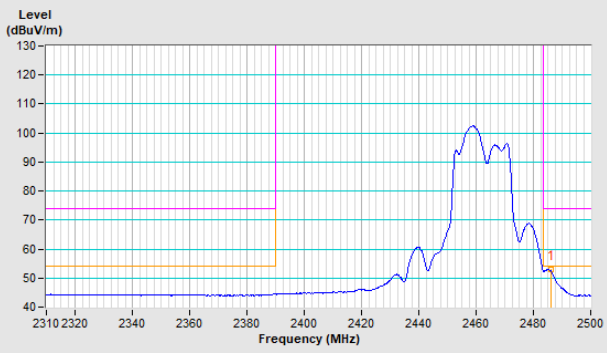
Horizontal (Average)



Vertical (Peak)

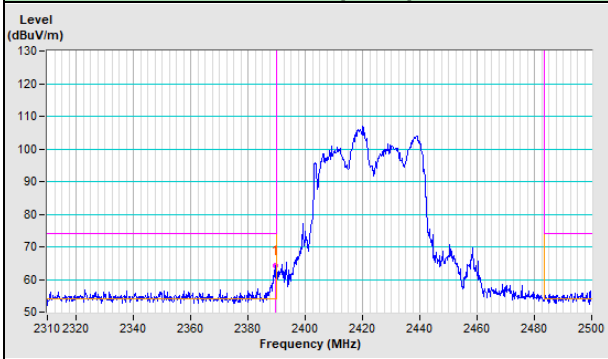


Vertical (Average)

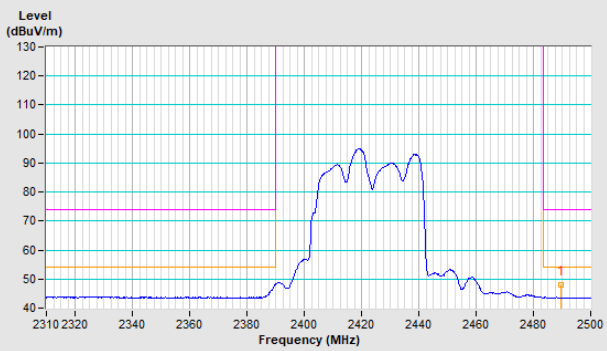


802.11ax (HE40) Channel 3

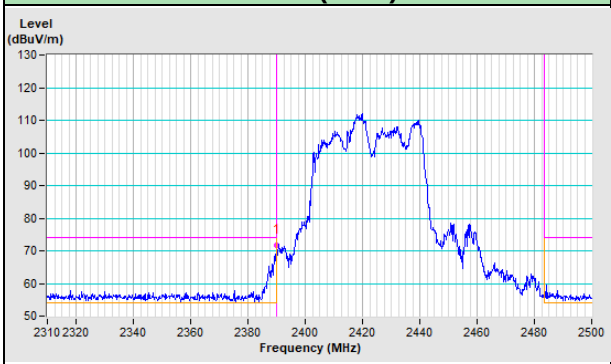
Horizontal (Peak)



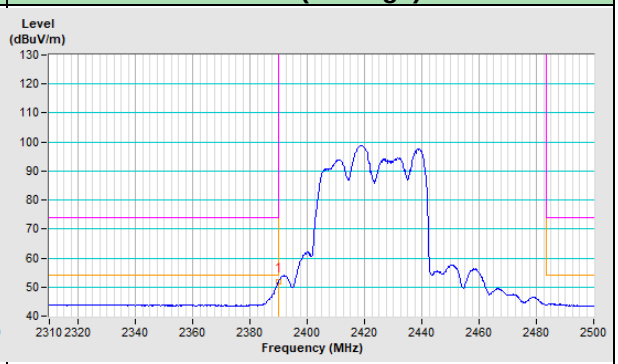
Horizontal (Average)



Vertical (Peak)

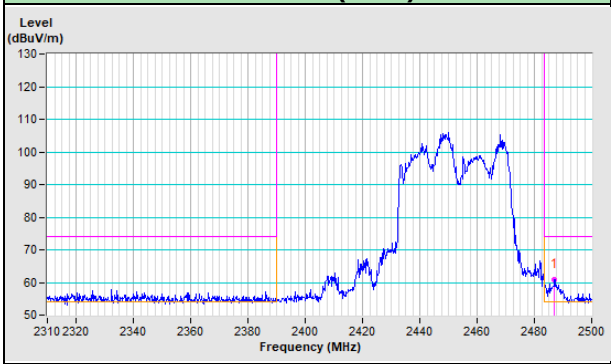


Vertical (Average)

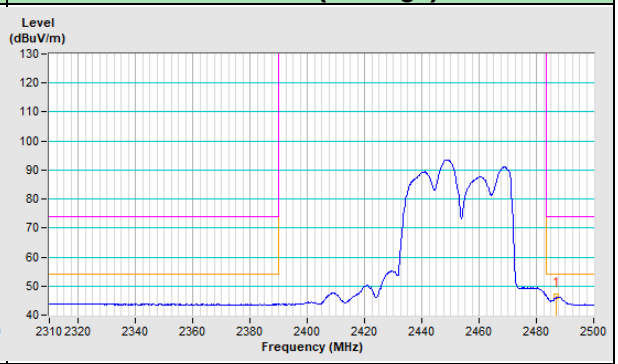


802.11ax (HE40) Channel 9

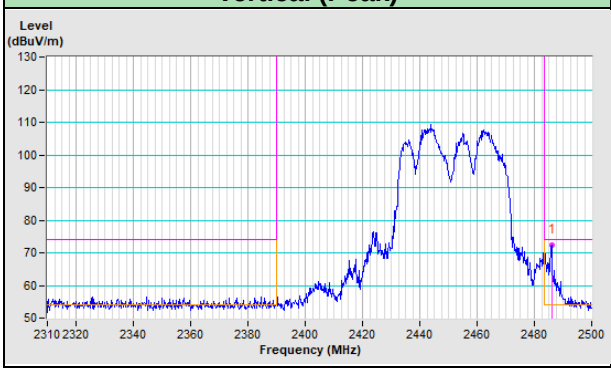
Horizontal (Peak)



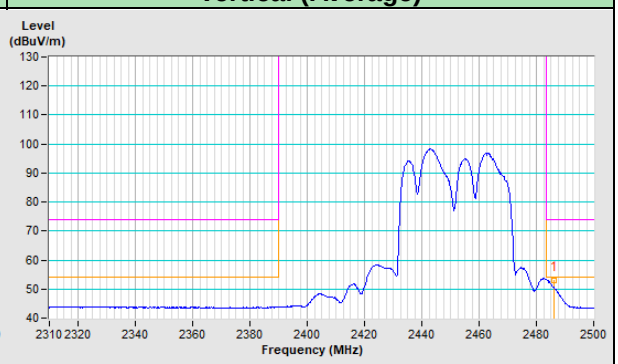
Horizontal (Average)



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.

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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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