

## FCC Test Report

**Report No.:** RF180704E03

**FCC ID:** UDX-60079010

**Test Model:** MR45-HW

**Received Date:** July 04, 2018

**Test Date:** Aug. 29 to Oct. 09, 2018

**Issued Date:** Dec. 24, 2018

**Applicant:** Cisco Systems, Inc.

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**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
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Taiwan R.O.C.

**Test Location :** E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,  
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**FCC Registration /  
Designation Number:** 723255 / TW2022



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### Release Control Record

Issue No.	Description	Date Issued
RF180704E03	Original release.	Dec. 24, 2018

## 1 Certificate of Conformity

**Product:** 4x4 802.11a/b/g/n/ac/ax Access Point

**Brand:** Cisco

**Test Model:** MR45-HW

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** Cisco Systems, Inc.

**Test Date:** Aug. 29 to Oct. 09, 2018

**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 :** Mary Ko , **Date:** Dec. 24, 2018  
Mary Ko / Specialist

**Approved by :** May Chen , **Date:** Dec. 24, 2018  
May Chen / 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 -4.16dB at 1.21484MHz.
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 2387.00MHz, 2390.00MHz, 2483.50MHz.
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 i-pex(MHF) not a standard connector.

### 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) ( $\pm$ )
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.84 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.53 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.08 dB
	6GHz ~ 18GHz	4.98 dB
	18GHz ~ 40GHz	5.19 dB

### 2.2 Modification Record

There were no modifications required for compliance.

### 3 General Information

#### 3.1 General Description of EUT

Product	4x4 802.11a/b/g/n/ac/ax Access Point
Brand	Cisco
Test Model	MR45-HW
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	12Vdc from power adapter or 55Vdc from PoE
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 11Mbps 802.11a/g: up to 54Mbps 802.11n: up to 600Mbps 802.11ac: up to 1733.3Mbps 802.11ax: up to 2401.9Mbps
Operating Frequency	<b>2.4GHz:</b> 2.412 ~ 2.462GHz <b>5GHz:</b> 5.18GHz ~ 5.24GHz, 5.745GHz ~ 5.825GHz
Number of Channel	<b>2.4GHz:</b> 802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20): 11 802.11n (HT40), VHT40, 802.11ax (HE40): 7 <b>5GHz:</b> 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): 2 802.11ac (VHT80+80), 802.11ax (HE80+80): 1 set
Output Power	<b>2.4GHz:</b> <b>Non-Beamforming Mode:</b> <b>4TX:</b> 872.013mW <b>2TX:</b> 503.965mW <b>1TX:</b> 258.226mW <b>Beamforming Mode:</b> <b>4TX:</b> 591.63mW <b>2TX:</b> 374.567mW <b>5.18 ~ 5.24GHz:</b> <b>Non-Beamforming Mode:</b> <b>4TX:</b> 572.519mW <b>2TX:</b> 309.064mW <b>1TX:</b> 214.783mW <b>Beamforming Mode:</b> <b>4TX:</b> 572.519mW <b>2TX:</b> 302.029mW <b>5.745 ~ 5.825GHz:</b> <b>Non-Beamforming Mode:</b> <b>4TX:</b> 996.654mW <b>2TX:</b> 614.522mW <b>1TX:</b> 266.686mW <b>Beamforming Mode:</b> <b>4TX:</b> 605.112mW <b>2TX:</b> 614.522mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x 1 (option)

Data Cable Supplied	NA
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Note:

1. The EUT has below radios as following table:

Radio 1	Radio 2	Radio 3	Radio 4
WLAN (2.4GHz)	WLAN (5GHz)	2.4GHz / 5GHz Scanning (only RX)	Bluetooth

2. Simultaneously transmission condition.

Condition	Technology		
1	WLAN (2.4GHz)	WLAN (5GHz)	Bluetooth

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

3. The EUT must be supplied with a power adapter or POE as following table:

Adapter (Option)

No.	Brand	Model No.	Spec.
1	UMEC	MA-PWR-30W-US	Input: 100-240Vac, 0.8A, 50/60Hz Output: 12Vdc, 2.5A DC Output cable: Unshielded, 1.4m
2	Ktec	KSAS0361200250HU	Input: 100-240Vac, 1.0A, 50/60Hz Output: 12Vdc, 2.5A DC Output cable: Unshielded, 1.8m

POE (Only for test not for sale)

No.	Brand	Model No.	Spec.
1	CISCO	MA-INJ-5	Input: 100-240Vac, 1.5A, 50-60Hz Output: 55Vdc, 0.63A
2	CISCO	MA-INJ-4	Input: 100-240Vac, 0.67A, 50/60Hz Output: 55Vdc, 0.6A

Note:

- From the above conditions, the conducted emissions worse case was found in **POE No. 1**.  
Therefore only the test data of the mode was recorded in this report.
- From the above conditions, the radiated emissions worse case was found in **Adapter No. 2**.  
Therefore only the test data of the mode was recorded in this report.



4. The antennas provided to the EUT, please refer to the following table:

<b>WLAN Directional gain table – 4TX</b>				
Frequency range (GHz)	Directional Antenna Gain (dBi)	Antenna Type	Antenna Connector	
2.4 ~ 2.4835	7.74	PIFA	i-pex(MHF)	
5.15 ~ 5.25	8.40			
5.725 ~ 5.85	8.11			
<b>WLAN Directional gain table – 2TX</b>				
Frequency range (GHz)	Antenna Combine Type	Directional Antenna Gain (dBi)	Antenna Type	Antenna Connector
2.4 ~ 2.4835	2.4G Ant. 1+4	6.12	PIFA	i-pex(MHF)
5.15 ~ 5.25	5.15G Ant. 1+3	6.62		
5.725 ~ 5.85	5.85G Ant. 3+4	7.27		
<b>Bluetooth antenna spec.</b>				
Antenna Net Gain (dBi)	Frequency range (GHz)	Antenna Type	Antenna Connector	
4.24	2.4 ~ 2.4835	PIFA	i-pex(MHF)	
Note: More detailed information, please refer to operating description.				

5. The EUT incorporates a MIMO function.

Radio 1 - 2.4GHz Band			
MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11b	1 ~ 11Mbps	4TX	4RX
802.11g	6 ~ 54Mbps	4TX	4RX
802.11n (HT20)	MCS 0~7	4TX	4RX
	MCS 8~15	4TX	4RX
	MCS 16~23	4TX	4RX
	MCS 24~31	4TX	4RX
802.11n (HT40)	MCS 0~7	4TX	4RX
	MCS 8~15	4TX	4RX
	MCS 16~23	4TX	4RX
	MCS 24~31	4TX	4RX
VHT20	MCS 0~8, Nss=1	4TX	4RX
	MCS 0~8, Nss=2	4TX	4RX
	MCS 0~9, Nss=3	4TX	4RX
	MCS 0~8, Nss=4	4TX	4RX
VHT40	MCS 0~9, Nss=1	4TX	4RX
	MCS 0~9, Nss=2	4TX	4RX
	MCS 0~9, Nss=3	4TX	4RX
	MCS 0~9, Nss=4	4TX	4RX
802.11ax (HE20)	MCS 0~11, Nss=1	4TX	4RX
	MCS 0~11, Nss=2	4TX	4RX
	MCS 0~11, Nss=3	4TX	4RX
	MCS 0~11, Nss=4	4TX	4RX
802.11ax (HE40)	MCS 0~11, Nss=1	4TX	4RX
	MCS 0~11, Nss=2	4TX	4RX
	MCS 0~11, Nss=3	4TX	4RX
	MCS 0~11, Nss=4	4TX	4RX
Radio 2 - 5GHz Band			
MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11a	6 ~ 54Mbps	4TX	4RX
802.11n (HT20)	MCS 0~7	4TX	4RX
	MCS 8~15	4TX	4RX
	MCS 16~23	4TX	4RX
	MCS 24~31	4TX	4RX
802.11n (HT40)	MCS 0~7	4TX	4RX
	MCS 8~15	4TX	4RX
	MCS 16~23	4TX	4RX
	MCS 24~31	4TX	4RX
802.11ac (VHT20)	MCS 0~8, Nss=1	4TX	4RX
	MCS 0~8, Nss=2	4TX	4RX
	MCS 0~9, Nss=3	4TX	4RX
	MCS 0~8, Nss=4	4TX	4RX
802.11ac (VHT40)	MCS 0~9, Nss=1	4TX	4RX
	MCS 0~9, Nss=2	4TX	4RX
	MCS 0~9, Nss=3	4TX	4RX
	MCS 0~9, Nss=4	4TX	4RX
802.11ac (VHT80)	MCS 0~9, Nss=1	4TX	4RX
	MCS 0~9, Nss=2	4TX	4RX
	MCS 0~9, Nss=3	4TX	4RX
	MCS 0~9, Nss=4	4TX	4RX

<b>802.11ac (VHT80+VHT80)</b>	MCS 0~9, Nss=1	2TX+2TX	2RX+2RX
	MCS 0~9, Nss=2	2TX+2TX	2RX+2RX
<b>802.11ax (HE20)</b>	MCS 0~11, Nss=1	4TX	4RX
	MCS 0~11, Nss=2	4TX	4RX
	MCS 0~11, Nss=3	4TX	4RX
	MCS 0~11, Nss=4	4TX	4RX
<b>802.11ax (HE40)</b>	MCS 0~11, Nss=1	4TX	4RX
	MCS 0~11, Nss=2	4TX	4RX
	MCS 0~11, Nss=3	4TX	4RX
	MCS 0~11, Nss=4	4TX	4RX
<b>802.11ax (HE80)</b>	MCS 0~11, Nss=1	4TX	4RX
	MCS 0~11, Nss=2	4TX	4RX
	MCS 0~11, Nss=3	4TX	4RX
	MCS 0~11, Nss=4	4TX	4RX
<b>802.11ax (HE80+HE80)</b>	MCS 0~11, Nss=1	2TX+2TX	2RX+2RX
	MCS 0~11, Nss=2	2TX+2TX	2RX+2RX

Note:

1. All of modulation mode support beamforming function except 802.11a/b/g modulation mode.
2. The EUT support Beamforming and non-beamforming 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) and 802.11ac/ax mode for 20MHz (40MHz/80MHz), therefore investigated worst case to representative mode in test report.

#### Radio 3 - Scanning (only RX)

##### 2.4GHz

MODULATION MODE	RX CONFIGURATION
802.11b	1RX
802.11g	1RX
802.11n (HT20)	1RX
802.11n (HT40)	1RX
VHT20	1RX
VHT40	1RX

##### 5GHz

MODULATION MODE	RX CONFIGURATION
802.11a	1RX
802.11n (HT20)	1RX
802.11n (HT40)	1RX
802.11ac (VHT20)	1RX
802.11ac (VHT40)	1RX
802.11ac (VHT80)	1RX

6. 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.

### 3.2 Description of Test Modes

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20), VHT20, 802.11ax (HE20):

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

7 channels are provided for 802.11n (HT40), VHT40, 802.11ax (HE40):

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

### 3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE $\geq$ 1G	RE $<$ 1G	PLC	APCM	
1	√	√	√	√	4TX (PLC: POE mode; RE: adapter mode)
2	√	-	-	√	2TX (RE: adapter mode)
3	√	-	-	√	1TX (RE: adapter mode)

Where **RE $\geq$ 1G**: Radiated Emission above 1GHz & Bandedge Measurement  
**RE $<$ 1G**: Radiated Emission below 1GHz  
**PLC**: Power Line Conducted Emission  
**APCM**: Antenna Port Conducted Measurement

**NOTE:** 1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane (below 1GHz) & Z-plane (above 1GHz)**.  
 2. "-" means no effect.

#### **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.

Non-Beamforming Mode					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	Data Rate Parameter
802.11b	1 to 11	1, 6, 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.

Non-Beamforming Mode					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	Data Rate Parameter
802.11g	1 to 11	6	OFDM	BPSK	6Mb/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.

Non-Beamforming Mode					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	Data Rate Parameter
802.11g	1 to 11	6	OFDM	BPSK	6Mb/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.

Non-Beamforming Mode					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	Data Rate Parameter
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1Mb/s
802.11g	1 to 11	1, 2, 6, 10, 11	OFDM	BPSK	6Mb/s
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
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 (system)	Tested By
RE≥1G	23deg. C, 67%RH	120Vac, 60Hz	Weiwei Lo
RE<1G	22deg. C, 68%RH	120Vac, 60Hz	Frank Chuang
PLC	25deg. C, 75%RH	120Vac, 60Hz	Frank Chuang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Jyunchun Lin

### 3.3 Duty Cycle of Test Signal

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

**802.11b:** Duty cycle = 0.647/0.843 = 0.767, Duty factor =  $10 * \log(1/0.767) = 1.15$

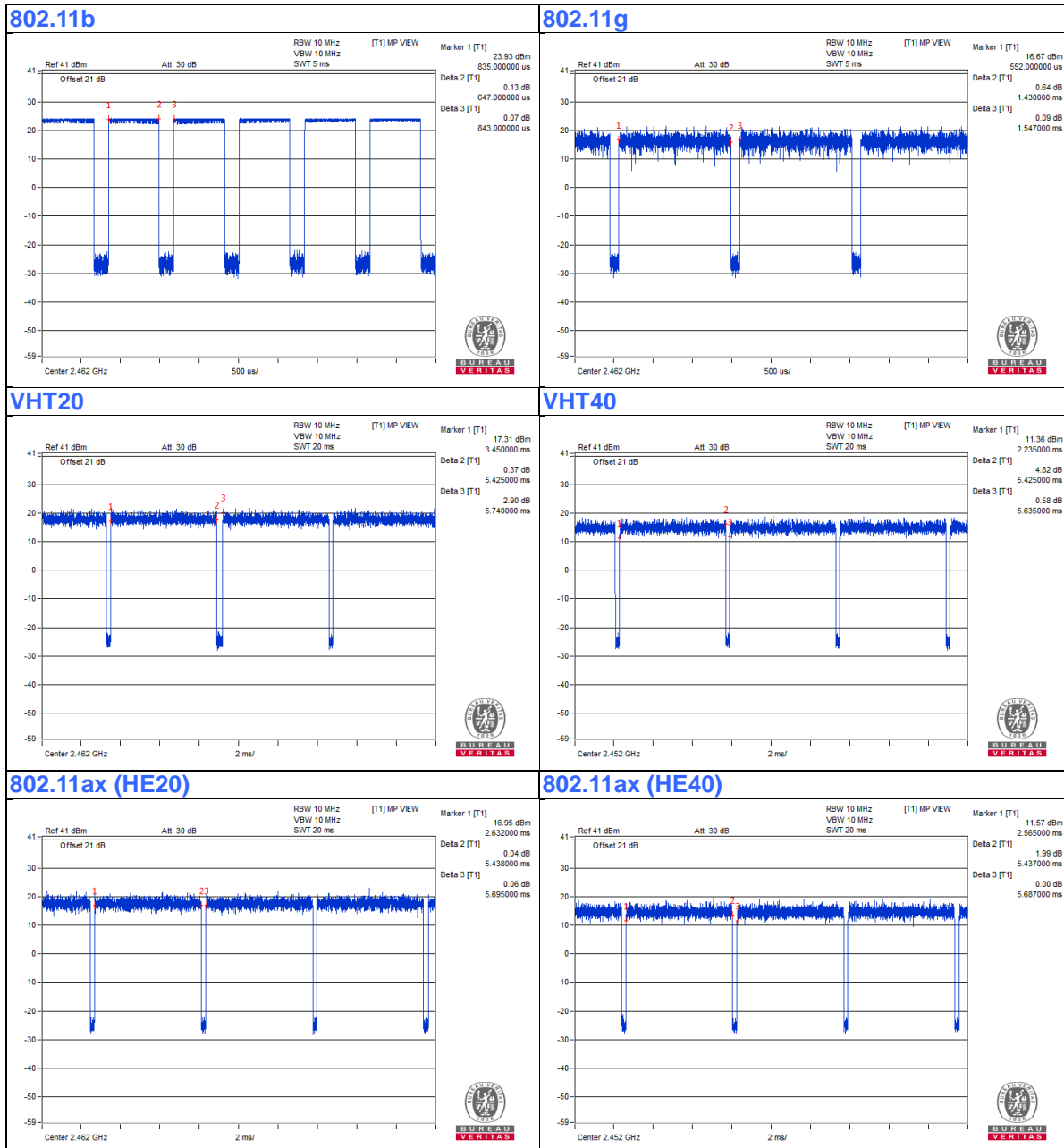
**802.11g:** Duty cycle = 1.43/1.547 = 0.924, Duty factor =  $10 * \log(1/0.924) = 0.34$

**VHT20:** Duty cycle = 5.425/5.74 = 0.945, Duty factor =  $10 * \log(1/0.945) = 0.25$

**VHT40:** Duty cycle = 5.425/5.635 = 0.963, Duty factor =  $10 * \log(1/0.963) = 0.16$

**802.11ax (HE20):** Duty cycle = 5.438/5.695 = 0.955, Duty factor =  $10 * \log(1/0.955) = 0.20$

**802.11ax (HE40):** Duty cycle = 5.437/5.687 = 0.956, Duty factor =  $10 * \log(1/0.956) = 0.20$



### 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	E6420	B92T3R1	FCC DoC	Provided by Lab
B.	POE Adapter	CISCO	MA-INJ-5	NA	NA	Supplied by client

Note:

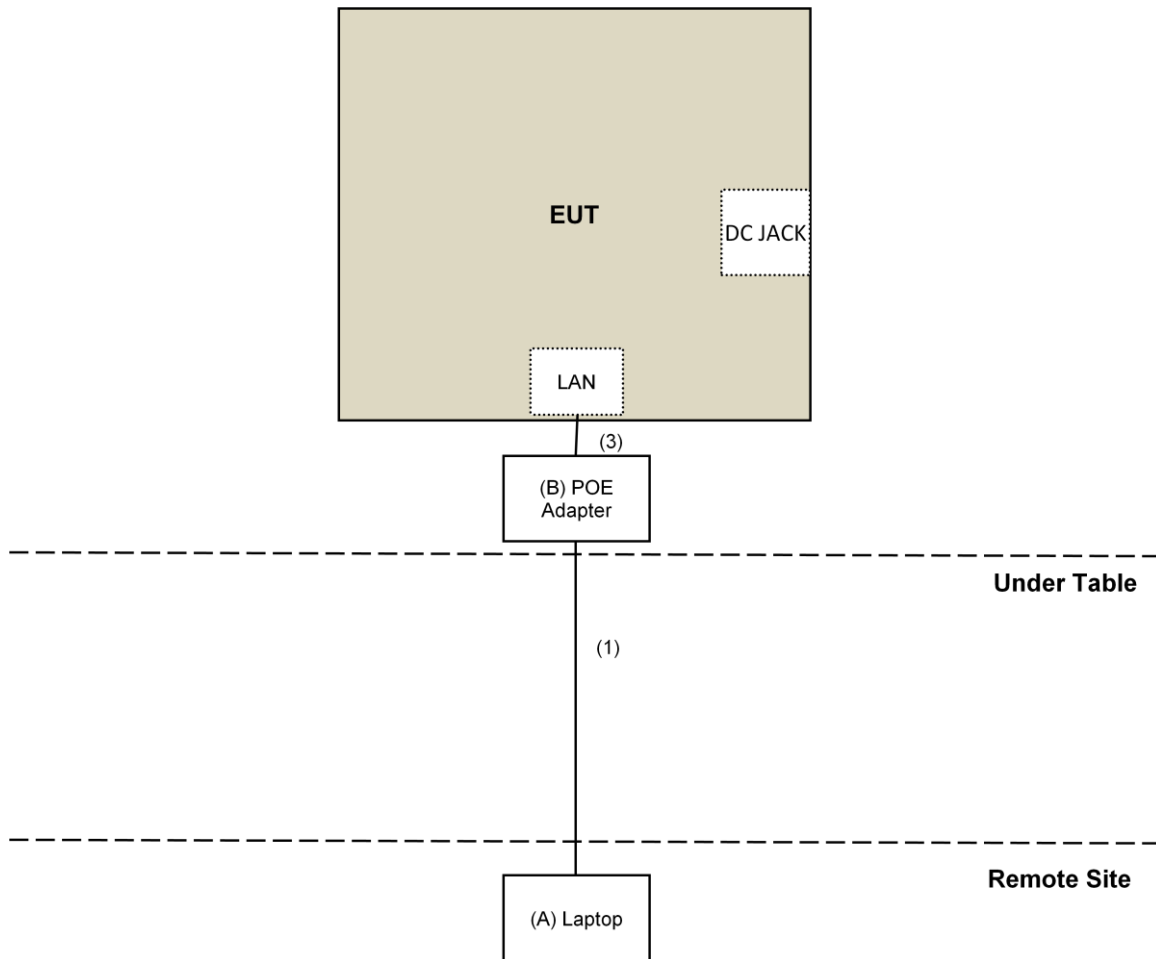
1. All power cords of the above support units are non-shielded (1.8m).

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ-45 Cable	1	10	No	0	Provided by Lab
2.	DC Cable	1	1.8	No	0	Supplied by client
3.	RJ-45 Cable	1	0.5	No	0	Provided by Lab

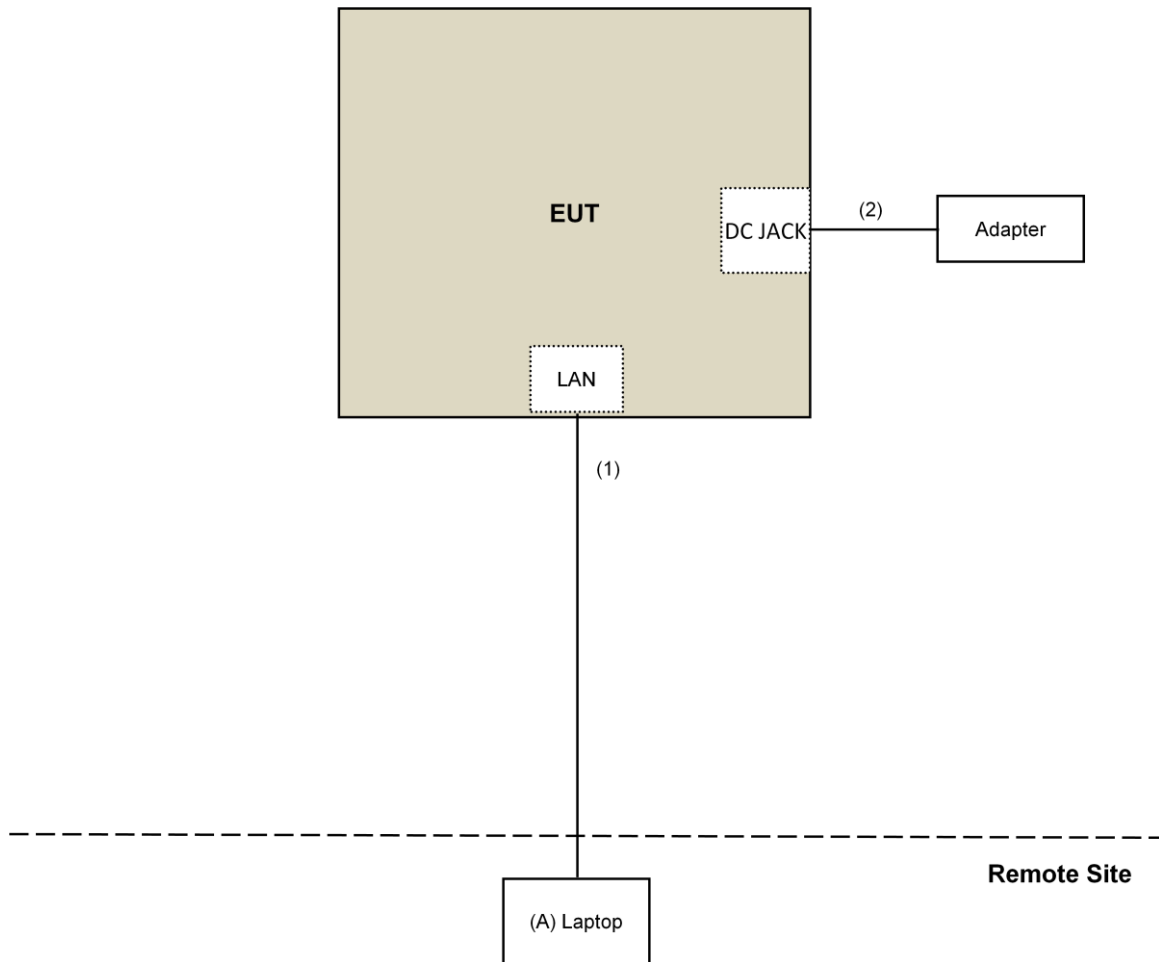


### 3.4.1 Configuration of System under Test

POE mode:



**Adapter mode:**



### 3.5 General Description of Applied Standards

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

**FCC Part 15, Subpart C (15.247)**  
**KDB 558074 D01 15.247 Meas Guidance v05**  
**KDB 662911 D01 Multiple Transmitter Output v02r01**  
**ANSI C63.10-2013**

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

## 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 other test:**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	July 12, 2018	July 11, 2019
Pre-Amplifier EMCI	EMC001340	980142	Feb. 09, 2018	Feb. 08, 2019
Loop Antenna(*) Electro-Metrics	EM-6879	264	Dec. 16, 2016	Dec. 15, 2018
RF Cable	NA	LOOPCAB-001	Jan. 15, 2018	Jan. 14, 2019
RF Cable	NA	LOOPCAB-002	Jan. 15, 2018	Jan. 14, 2019
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	May 05, 2018	May 04, 2019
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 29, 2017	Nov. 28, 2018
RF Cable	8D	966-3-1	Mar. 20, 2018	Mar. 19, 2019
RF Cable	8D	966-3-2	Mar. 20, 2018	Mar. 19, 2019
RF Cable	8D	966-3-3	Mar. 20, 2018	Mar. 19, 2019
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Oct. 03, 2017	Oct. 02, 2018
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Dec. 12, 2017	Dec. 11, 2018
Pre-Amplifier EMCI	EMC12630SE	980384	Jan. 29, 2018	Jan. 28, 2019
RF Cable	EMC104-SM-SM-1200	160922	Jan. 29, 2018	Jan. 28, 2019
RF Cable	EMC104-SM-SM-2000	150317	Jan. 29, 2018	Jan. 28, 2019
RF Cable	EMC104-SM-SM-5000	150322	Jan. 29, 2018	Jan. 28, 2019
Spectrum Analyzer Keysight	N9030A	MY54490679	July 23, 2018	July 22, 2019
Pre-Amplifier EMCI	EMC184045SE	980386	Jan. 29, 2018	Jan. 28, 2019
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Dec. 14, 2017	Dec. 13, 2018
RF Cable	EMC102-KM-KM-1200	160924	Jan. 29, 2018	Jan. 28, 2019
Attenuator STI	STI02-3310-10	013	Feb. 12, 2018	Feb. 11, 2019
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA

**Note:**

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. \*The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in 966 Chamber No. 3.
4. The CANADA Site Registration No. is 20331-1
5. Loop antenna was used for all emissions below 30 MHz.
6. Tested Date: Aug. 29, 2018

**For output power test:**

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	June 20, 2018	June 19, 2019
Power meter Anritsu	ML2495A	1014008	May 09, 2018	May 08, 2019
Power sensor Anritsu	MA2411B	0917122	May 09, 2018	May 08, 2019
Attenuator STI	STI02-3310-10	013	Feb. 12, 2018	Feb. 11, 2019

**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. 09, 2018

#### 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:**

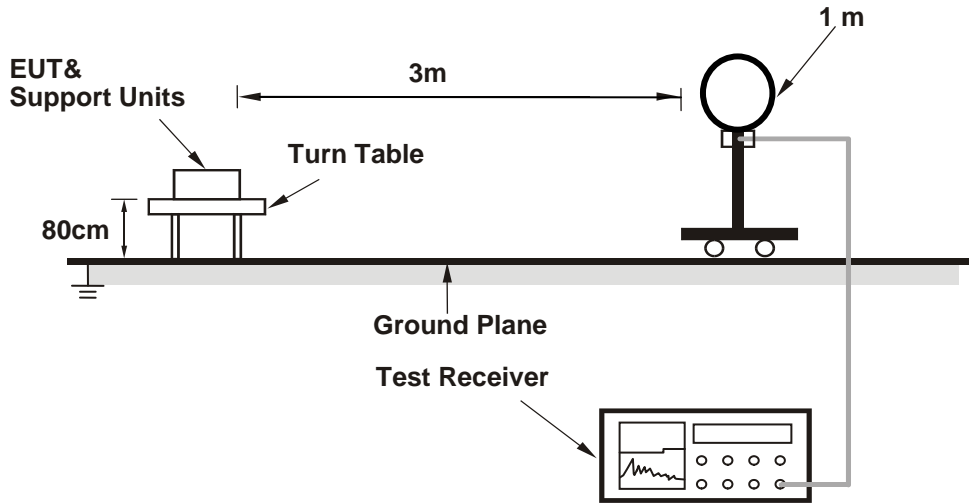
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is  $\geq 1/T$  (Duty cycle  $< 98\%$ ) or 10Hz (Duty cycle  $\geq 98\%$ ) 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

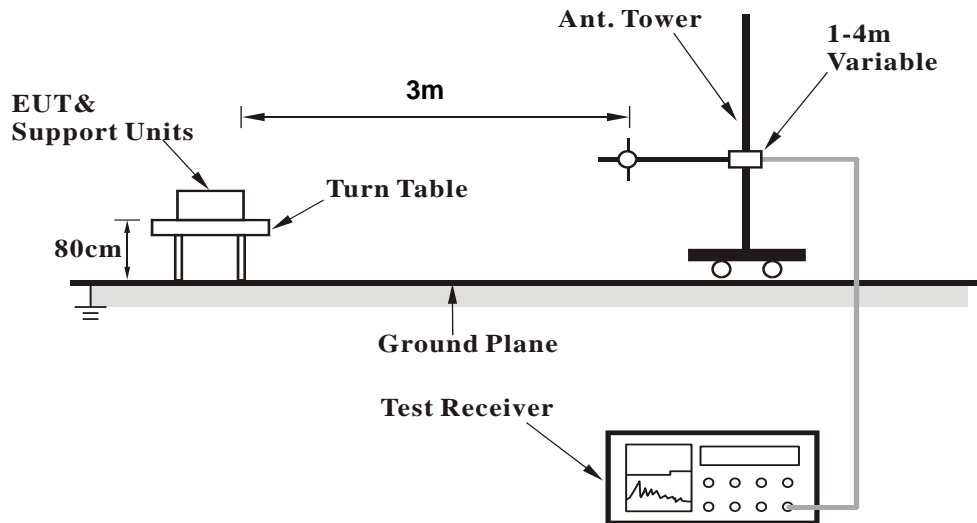
No deviation.

#### 4.1.5 Test Setup

##### For Radiated emission below 30MHz

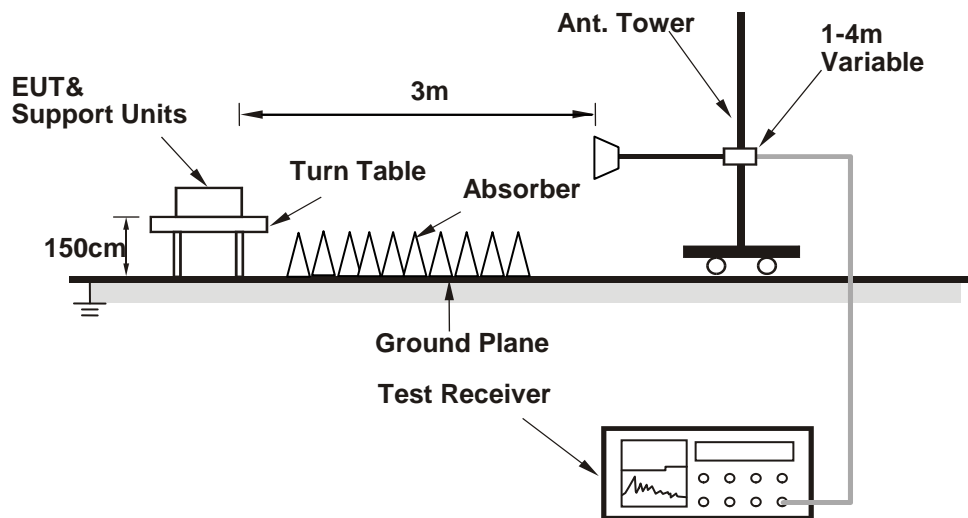


##### For Radiated emission 30MHz to 1GHz





### 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 (QSPR (5.0-00161)) has been activated to set the EUT on specific status.

## 4.1.7 Test Results (Mode 1)

## Above 1GHz Data :

## 802.11b

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2387.00	60.3 PK	74.0	-13.7	1.51 H	194	63.0	-2.7
2	<b>2387.00</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.51 H</b>	<b>194</b>	<b>56.6</b>	<b>-2.7</b>
3	2390.00	58.8 PK	74.0	-15.2	1.51 H	194	61.5	-2.7
4	2390.00	51.5 AV	54.0	-2.5	1.51 H	194	54.2	-2.7
5	*2412.00	120.9 PK			1.51 H	194	123.6	-2.7
6	*2412.00	118.5 AV			1.51 H	194	121.2	-2.7
7	4824.00	45.7 PK	74.0	-28.3	1.24 H	273	44.1	1.6
8	4824.00	42.6 AV	54.0	-11.4	1.24 H	273	41.0	1.6

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2387.00	57.6 PK	74.0	-16.4	1.22 V	280	60.3	-2.7
2	2387.00	50.1 AV	54.0	-3.9	1.22 V	280	52.8	-2.7
3	2390.00	55.4 PK	74.0	-18.6	1.22 V	280	58.1	-2.7
4	2390.00	48.2 AV	54.0	-5.8	1.22 V	280	50.9	-2.7
5	*2412.00	114.5 PK			1.22 V	280	117.2	-2.7
6	*2412.00	112.1 AV			1.22 V	280	114.8	-2.7
7	4824.00	44.8 PK	74.0	-29.2	1.41 V	224	43.2	1.6
8	4824.00	40.6 AV	54.0	-13.4	1.41 V	224	39.0	1.6

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.2 PK	74.0	-14.8	1.39 H	188	61.9	-2.7
2	2390.00	53.6 AV	54.0	-0.4	1.39 H	188	56.3	-2.7
3	*2437.00	121.7 PK			1.39 H	188	124.7	-3.0
4	*2437.00	119.3 AV			1.39 H	188	122.3	-3.0
5	2483.50	60.6 PK	74.0	-13.4	1.39 H	188	63.6	-3.0
6	2483.50	50.2 AV	54.0	-3.8	1.39 H	188	53.2	-3.0
7	4874.00	46.4 PK	74.0	-27.6	1.20 H	254	44.8	1.6
8	4874.00	43.1 AV	54.0	-10.9	1.20 H	254	41.5	1.6
9	7311.00	49.3 PK	74.0	-24.7	2.11 H	315	41.6	7.7
10	7311.00	41.9 AV	54.0	-12.1	2.11 H	315	34.2	7.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.8 PK	74.0	-17.2	1.41 V	271	59.5	-2.7
2	2390.00	50.2 AV	54.0	-3.8	1.41 V	271	52.9	-2.7
3	*2437.00	115.6 PK			1.41 V	271	118.6	-3.0
4	*2437.00	113.8 AV			1.41 V	271	116.8	-3.0
5	2483.50	53.3 PK	74.0	-20.7	1.41 V	271	56.3	-3.0
6	2483.50	47.5 AV	54.0	-6.5	1.41 V	271	50.5	-3.0
7	4874.00	46.2 PK	74.0	-27.8	1.32 V	205	44.6	1.6
8	4874.00	42.5 AV	54.0	-11.5	1.32 V	205	40.9	1.6
9	7311.00	46.8 PK	74.0	-27.2	1.78 V	337	39.1	7.7
10	7311.00	36.2 AV	54.0	-17.8	1.78 V	337	28.5	7.7

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	119.7 PK			1.45 H	195	122.7	-3.0
2	*2462.00	117.3 AV			1.45 H	195	120.3	-3.0
3	2483.50	60.2 PK	74.0	-13.8	1.45 H	195	63.2	-3.0
4	2483.50	53.6 AV	54.0	-0.4	1.45 H	195	56.6	-3.0
5	4924.00	41.1 PK	74.0	-32.9	1.19 H	225	39.4	1.7
6	4924.00	36.7 AV	54.0	-17.3	1.19 H	225	35.0	1.7
7	7386.00	46.1 PK	74.0	-27.9	1.15 H	335	38.2	7.9
8	7386.00	34.0 AV	54.0	-20.0	1.15 H	335	26.1	7.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.4 PK			1.44 V	261	116.4	-3.0
2	*2462.00	111.2 AV			1.44 V	261	114.2	-3.0
3	2483.50	56.8 PK	74.0	-17.2	1.44 V	261	59.8	-3.0
4	2483.50	49.9 AV	54.0	-4.1	1.44 V	261	52.9	-3.0
5	4924.00	42.9 PK	74.0	-31.1	1.21 V	251	41.2	1.7
6	4924.00	39.3 AV	54.0	-14.7	1.21 V	251	37.6	1.7
7	7386.00	45.2 PK	74.0	-28.8	1.56 V	228	37.3	7.9
8	7386.00	33.8 AV	54.0	-20.2	1.56 V	228	25.9	7.9

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

**802.11g**

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.1 PK	74.0	-4.9	1.50 H	188	71.8	-2.7
2	<b>2390.00</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.50 H</b>	<b>188</b>	<b>56.6</b>	<b>-2.7</b>
3	*2412.00	116.0 PK			1.50 H	188	118.7	-2.7
4	*2412.00	107.1 AV			1.50 H	188	109.8	-2.7
5	4824.00	39.8 PK	74.0	-34.2	1.31 H	264	38.2	1.6
6	4824.00	34.6 AV	54.0	-19.4	1.31 H	264	33.0	1.6

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.7 PK	74.0	-10.3	1.45 V	277	66.4	-2.7
2	2390.00	48.5 AV	54.0	-5.5	1.45 V	277	51.2	-2.7
3	*2412.00	110.0 PK			1.45 V	277	112.7	-2.7
4	*2412.00	101.5 AV			1.45 V	277	104.2	-2.7
5	4824.00	45.4 PK	74.0	-28.6	1.28 V	222	43.8	1.6
6	4824.00	39.8 AV	54.0	-14.2	1.28 V	222	38.2	1.6

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

<b>CHANNEL</b>	TX Channel 2	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.5 PK	74.0	-6.5	1.41 H	192	70.2	-2.7
2	2390.00	53.7 AV	54.0	-0.3	1.41 H	192	56.4	-2.7
3	*2417.00	117.8 PK			1.41 H	192	120.6	-2.8
4	*2417.00	109.1 AV			1.41 H	192	111.9	-2.8
5	4834.00	41.5 PK	74.0	-32.5	1.32 H	286	39.9	1.6
6	4834.00	38.2 AV	54.0	-15.8	1.32 H	286	36.6	1.6
7	7251.00	45.6 PK	74.0	-28.4	2.13 H	284	37.8	7.8
8	7251.00	36.5 AV	54.0	-17.5	2.13 H	284	28.7	7.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.2 PK	74.0	-7.8	1.45 V	275	68.9	-2.7
2	2390.00	48.5 AV	54.0	-5.5	1.45 V	275	51.2	-2.7
3	*2417.00	112.2 PK			1.45 V	275	115.0	-2.8
4	*2417.00	103.5 AV			1.45 V	275	106.3	-2.8
5	4834.00	45.6 PK	74.0	-28.4	1.35 V	214	44.0	1.6
6	4834.00	40.4 AV	54.0	-13.6	1.35 V	214	38.8	1.6
7	7251.00	46.2 PK	74.0	-27.8	1.66 V	360	38.4	7.8
8	7251.00	35.7 AV	54.0	-18.3	1.66 V	360	27.9	7.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2378.00	71.7 PK	74.0	-2.3	1.38 H	199	74.3	-2.6
2	2378.00	53.1 AV	54.0	-0.9	1.38 H	199	55.7	-2.6
3	2390.00	62.5 PK	74.0	-11.5	1.38 H	199	65.2	-2.7
4	2390.00	52.4 AV	54.0	-1.6	1.38 H	199	55.1	-2.7
5	*2437.00	121.7 PK			1.38 H	199	124.7	-3.0
6	*2437.00	112.2 AV			1.38 H	199	115.2	-3.0
7	2483.50	70.7 PK	74.0	-3.3	1.38 H	199	73.7	-3.0
<b>8</b>	<b>2483.50</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.38 H</b>	<b>199</b>	<b>56.9</b>	<b>-3.0</b>
9	4874.00	45.3 PK	74.0	-28.7	1.26 H	289	43.7	1.6
10	4874.00	42.0 AV	54.0	-12.0	1.26 H	289	40.4	1.6
11	7311.00	49.2 PK	74.0	-24.8	2.10 H	295	41.5	7.7
12	7311.00	40.8 AV	54.0	-13.2	2.10 H	295	33.1	7.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2378.00	69.6 PK	74.0	-4.4	1.44 V	283	72.2	-2.6
2	2378.00	49.2 AV	54.0	-4.8	1.44 V	283	51.8	-2.6
3	2390.00	57.8 PK	74.0	-16.2	1.44 V	283	60.5	-2.7
4	2390.00	47.5 AV	54.0	-6.5	1.44 V	283	50.2	-2.7
5	*2437.00	114.8 PK			1.44 V	283	117.8	-3.0
6	*2437.00	106.5 AV			1.44 V	283	109.5	-3.0
7	2483.50	68.2 PK	74.0	-5.8	1.44 V	283	71.2	-3.0
8	2483.50	49.8 AV	54.0	-4.2	1.44 V	283	52.8	-3.0
9	4874.00	45.8 PK	74.0	-28.2	1.32 V	207	44.2	1.6
10	4874.00	42.1 AV	54.0	-11.9	1.32 V	207	40.5	1.6
11	7311.00	46.2 PK	74.0	-27.8	1.72 V	347	38.5	7.7
12	7311.00	35.8 AV	54.0	-18.2	1.72 V	347	28.1	7.7

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 10	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	117.2 PK			1.47 H	195	120.2	-3.0
2	*2457.00	108.5 AV			1.47 H	195	111.5	-3.0
3	2483.50	71.2 PK	74.0	-2.8	1.47 H	195	74.2	-3.0
<b>4</b>	<b>2483.50</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.47 H</b>	<b>195</b>	<b>56.9</b>	<b>-3.0</b>
5	4914.00	40.5 PK	74.0	-33.5	1.30 H	257	38.8	1.7
6	4914.00	37.4 AV	54.0	-16.6	1.30 H	257	35.7	1.7
7	7371.00	47.5 PK	74.0	-26.5	2.08 H	278	39.7	7.8
8	7371.00	35.3 AV	54.0	-18.7	2.08 H	278	27.5	7.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	111.6 PK			1.45 V	271	114.6	-3.0
2	*2457.00	102.5 AV			1.45 V	271	105.5	-3.0
3	2483.50	65.8 PK	74.0	-8.2	1.45 V	271	68.8	-3.0
4	2483.50	48.2 AV	54.0	-5.8	1.45 V	271	51.2	-3.0
5	4914.00	44.1 PK	74.0	-29.9	1.36 V	222	42.4	1.7
6	4914.00	39.5 AV	54.0	-14.5	1.36 V	222	37.8	1.7
7	7371.00	45.8 PK	74.0	-28.2	1.67 V	349	38.0	7.8
8	7371.00	35.1 AV	54.0	-18.9	1.67 V	349	27.3	7.8

**REMARKS:**

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



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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	114.3 PK			1.36 H	192	117.3	-3.0
2	*2462.00	105.7 AV			1.36 H	192	108.7	-3.0
3	2483.50	71.7 PK	74.0	-2.3	1.36 H	192	74.7	-3.0
4	2483.50	53.8 AV	54.0	-0.2	1.36 H	192	56.8	-3.0
5	4924.00	38.9 PK	74.0	-35.1	1.24 H	279	37.2	1.7
6	4924.00	35.3 AV	54.0	-18.7	1.24 H	279	33.6	1.7
7	7386.00	46.2 PK	74.0	-27.8	2.15 H	298	38.3	7.9
8	7386.00	34.6 AV	54.0	-19.4	2.15 H	298	26.7	7.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	108.5 PK			1.49 V	250	111.5	-3.0
2	*2462.00	99.6 AV			1.49 V	250	102.6	-3.0
3	2483.50	64.8 PK	74.0	-9.2	1.49 V	250	67.8	-3.0
4	2483.50	48.8 AV	54.0	-5.2	1.49 V	250	51.8	-3.0
5	4924.00	42.3 PK	74.0	-31.7	1.18 V	260	40.6	1.7
6	4924.00	38.9 AV	54.0	-15.1	1.18 V	260	37.2	1.7
7	7386.00	46.7 PK	74.0	-27.3	1.52 V	226	38.8	7.9
8	7386.00	34.5 AV	54.0	-19.5	1.52 V	226	26.6	7.9

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

**802.11ax (HE20)**

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.8 PK	74.0	-6.2	1.30 H	183	70.5	-2.7
2	2390.00	53.8 AV	54.0	-0.2	1.30 H	183	56.5	-2.7
3	*2412.00	119.7 PK			1.30 H	183	122.4	-2.7
4	*2412.00	107.5 AV			1.30 H	183	110.2	-2.7
5	4824.00	39.4 PK	74.0	-34.6	1.42 H	249	37.8	1.6
6	4824.00	36.2 AV	54.0	-17.8	1.42 H	249	34.6	1.6

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.5 PK	74.0	-9.5	1.45 V	246	67.2	-2.7
2	2390.00	48.6 AV	54.0	-5.4	1.45 V	246	51.3	-2.7
3	*2412.00	113.2 PK			1.45 V	246	115.9	-2.7
4	*2412.00	100.0 AV			1.45 V	246	102.7	-2.7
5	4824.00	41.9 PK	74.0	-32.1	1.25 V	244	40.3	1.6
6	4824.00	38.6 AV	54.0	-15.4	1.25 V	244	37.0	1.6

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

<b>CHANNEL</b>	TX Channel 2	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.9 PK	74.0	-8.1	1.18 H	190	68.6	-2.7
2	<b>2390.00</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.18 H</b>	<b>190</b>	<b>56.6</b>	<b>-2.7</b>
3	*2417.00	121.5 PK			1.18 H	190	124.3	-2.8
4	*2417.00	108.9 AV			1.18 H	190	111.7	-2.8
5	4834.00	40.5 PK	74.0	-33.5	1.33 H	241	38.9	1.6
6	4834.00	37.1 AV	54.0	-16.9	1.33 H	241	35.5	1.6
7	7251.00	47.7 PK	74.0	-26.3	2.09 H	285	39.9	7.8
8	7251.00	35.8 AV	54.0	-18.2	2.09 H	285	28.0	7.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.1 PK	74.0	-7.9	1.52 V	279	68.8	-2.7
2	2390.00	48.1 AV	54.0	-5.9	1.52 V	279	50.8	-2.7
3	*2417.00	115.7 PK			1.52 V	279	118.5	-2.8
4	*2417.00	102.4 AV			1.52 V	279	105.2	-2.8
5	4834.00	44.5 PK	74.0	-29.5	1.33 V	228	42.9	1.6
6	4834.00	39.5 AV	54.0	-14.5	1.33 V	228	37.9	1.6
7	7251.00	46.1 PK	74.0	-27.9	1.86 V	360	38.3	7.8
8	7251.00	35.0 AV	54.0	-19.0	1.86 V	360	27.2	7.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.1 PK	74.0	-3.9	1.15 H	192	72.8	-2.7
2	<b>2390.00</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.15 H</b>	<b>192</b>	<b>56.6</b>	<b>-2.7</b>
3	*2437.00	124.6 PK			1.15 H	192	127.6	-3.0
4	*2437.00	111.7 AV			1.15 H	192	114.7	-3.0
5	2483.50	71.3 PK	74.0	-2.7	1.15 H	192	74.3	-3.0
6	<b>2483.50</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.15 H</b>	<b>192</b>	<b>56.9</b>	<b>-3.0</b>
7	4874.00	45.4 PK	74.0	-28.6	1.28 H	278	43.8	1.6
8	4874.00	41.9 AV	54.0	-12.1	1.28 H	278	40.3	1.6
9	7311.00	48.7 PK	74.0	-25.3	2.11 H	292	41.0	7.7
10	7311.00	40.4 AV	54.0	-13.6	2.11 H	292	32.7	7.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.1 PK	74.0	-5.9	1.48 V	275	70.8	-2.7
2	2390.00	49.9 AV	54.0	-4.1	1.48 V	275	52.6	-2.7
3	*2437.00	119.6 PK			1.48 V	275	122.6	-3.0
4	*2437.00	106.4 AV			1.48 V	275	109.4	-3.0
5	2483.50	69.0 PK	74.0	-5.0	1.48 V	275	72.0	-3.0
6	2483.50	48.9 AV	54.0	-5.1	1.48 V	275	51.9	-3.0
7	4874.00	46.1 PK	74.0	-27.9	1.30 V	223	44.5	1.6
8	4874.00	42.5 AV	54.0	-11.5	1.30 V	223	40.9	1.6
9	7311.00	45.9 PK	74.0	-28.1	1.77 V	355	38.2	7.7
10	7311.00	35.7 AV	54.0	-18.3	1.77 V	355	28.0	7.7

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 10	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	120.7 PK			1.14 H	190	123.7	-3.0
2	*2457.00	108.3 AV			1.14 H	190	111.3	-3.0
3	2483.50	68.3 PK	74.0	-5.7	1.14 H	190	71.3	-3.0
4	2483.50	53.8 AV	54.0	-0.2	1.14 H	190	56.8	-3.0
5	4914.00	41.0 PK	74.0	-33.0	1.33 H	251	39.3	1.7
6	4914.00	37.6 AV	54.0	-16.4	1.33 H	251	35.9	1.7
7	7371.00	47.0 PK	74.0	-27.0	2.03 H	273	39.2	7.8
8	7371.00	34.8 AV	54.0	-19.2	2.03 H	273	27.0	7.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	115.8 PK			1.49 V	265	118.8	-3.0
2	*2457.00	102.3 AV			1.49 V	265	105.3	-3.0
3	2483.50	66.5 PK	74.0	-7.5	1.49 V	265	69.5	-3.0
4	2483.50	48.6 AV	54.0	-5.4	1.49 V	265	51.6	-3.0
5	4914.00	44.7 PK	74.0	-29.3	1.27 V	213	43.0	1.7
6	4914.00	39.8 AV	54.0	-14.2	1.27 V	213	38.1	1.7
7	7371.00	46.3 PK	74.0	-27.7	1.81 V	360	38.5	7.8
8	7371.00	35.3 AV	54.0	-18.7	1.81 V	360	27.5	7.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	119.7 PK			1.26 H	192	122.7	-3.0
2	*2462.00	106.6 AV			1.26 H	192	109.6	-3.0
3	2483.50	67.5 PK	74.0	-6.5	1.26 H	192	70.5	-3.0
4	2483.50	53.8 AV	54.0	-0.2	1.26 H	192	56.8	-3.0
5	4924.00	39.1 PK	74.0	-34.9	1.39 H	235	37.4	1.7
6	4924.00	35.8 AV	54.0	-18.2	1.39 H	235	34.1	1.7
7	7386.00	45.6 PK	74.0	-28.4	2.02 H	262	37.7	7.9
8	7386.00	32.9 AV	54.0	-21.1	2.02 H	262	25.0	7.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	112.9 PK			1.44 V	257	115.9	-3.0
2	*2462.00	99.6 AV			1.44 V	257	102.6	-3.0
3	2483.50	64.5 PK	74.0	-9.5	1.44 V	257	67.5	-3.0
4	2483.50	48.7 AV	54.0	-5.3	1.44 V	257	51.7	-3.0
5	4924.00	41.9 PK	74.0	-32.1	1.21 V	249	40.2	1.7
6	4924.00	38.6 AV	54.0	-15.4	1.21 V	249	36.9	1.7
7	7386.00	46.3 PK	74.0	-27.7	1.53 V	230	38.4	7.9
8	7386.00	34.0 AV	54.0	-20.0	1.53 V	230	26.1	7.9

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

**802.11ax (HE40)**

<b>CHANNEL</b>	TX Channel 3	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.7 PK	74.0	-4.3	1.53 H	188	72.4	-2.7
<b>2</b>	<b>2390.00</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.53 H</b>	<b>188</b>	<b>56.6</b>	<b>-2.7</b>
3	*2422.00	117.2 PK			1.53 H	188	120.1	-2.9
4	*2422.00	104.6 AV			1.53 H	188	107.5	-2.9
5	4844.00	39.8 PK	74.0	-34.2	1.49 H	234	38.2	1.6
6	4844.00	36.4 AV	54.0	-17.6	1.49 H	234	34.8	1.6
7	7266.00	45.6 PK	74.0	-28.4	2.08 H	255	37.8	7.8
8	7266.00	33.1 AV	54.0	-20.9	2.08 H	255	25.3	7.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.2 PK	74.0	-5.8	1.24 V	286	70.9	-2.7
2	2390.00	50.5 AV	54.0	-3.5	1.24 V	286	53.2	-2.7
3	*2422.00	111.3 PK			1.24 V	286	114.2	-2.9
4	*2422.00	98.3 AV			1.24 V	286	101.2	-2.9
5	4844.00	42.5 PK	74.0	-31.5	1.21 V	250	40.9	1.6
6	4844.00	39.1 AV	54.0	-14.9	1.21 V	250	37.5	1.6
7	7266.00	46.4 PK	74.0	-27.6	1.52 V	232	38.6	7.8
8	7266.00	34.6 AV	54.0	-19.4	1.52 V	232	26.8	7.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.7 PK	74.0	-7.3	1.25 H	189	69.4	-2.7
2	2390.00	52.8 AV	54.0	-1.2	1.25 H	189	55.5	-2.7
3	*2437.00	118.0 PK			1.25 H	189	121.0	-3.0
4	*2437.00	105.2 AV			1.25 H	189	108.2	-3.0
5	2483.50	68.7 PK	74.0	-5.3	1.25 H	189	71.7	-3.0
<b>6</b>	<b>2483.50</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.25 H</b>	<b>189</b>	<b>56.9</b>	<b>-3.0</b>
7	4874.00	45.5 PK	74.0	-28.5	1.28 H	304	43.9	1.6
8	4874.00	42.2 AV	54.0	-11.8	1.28 H	304	40.6	1.6
9	7311.00	49.2 PK	74.0	-24.8	2.13 H	286	41.5	7.7
10	7311.00	40.6 AV	54.0	-13.4	2.13 H	286	32.9	7.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.2 PK	74.0	-6.8	1.27 V	294	69.9	-2.7
2	2390.00	49.7 AV	54.0	-4.3	1.27 V	294	52.4	-2.7
3	*2437.00	112.7 PK			1.27 V	294	115.7	-3.0
4	*2437.00	99.8 AV			1.27 V	294	102.8	-3.0
5	2483.50	68.4 PK	74.0	-5.6	1.27 V	294	71.4	-3.0
6	2483.50	50.6 AV	54.0	-3.4	1.27 V	294	53.6	-3.0
7	4874.00	43.4 PK	74.0	-30.6	1.24 V	261	41.8	1.6
8	4874.00	40.9 AV	54.0	-13.1	1.24 V	261	39.3	1.6
9	7311.00	47.2 PK	74.0	-26.8	1.47 V	218	39.5	7.7
10	7311.00	35.2 AV	54.0	-18.8	1.47 V	218	27.5	7.7

**REMARKS:**

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



<b>CHANNEL</b>	TX Channel 9	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	116.6 PK			1.04 H	189	119.6	-3.0
2	*2452.00	103.9 AV			1.04 H	189	106.9	-3.0
3	2483.50	69.2 PK	74.0	-4.8	1.04 H	189	72.2	-3.0
<b>4</b>	<b>2483.50</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.04 H</b>	<b>189</b>	<b>56.9</b>	<b>-3.0</b>
5	4904.00	38.7 PK	74.0	-35.3	1.51 H	248	37.0	1.7
6	4904.00	35.4 AV	54.0	-18.6	1.51 H	248	33.7	1.7
7	7356.00	45.2 PK	74.0	-28.8	2.10 H	244	37.3	7.9
8	7356.00	32.6 AV	54.0	-21.4	2.10 H	244	24.7	7.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	110.4 PK			1.48 V	252	113.4	-3.0
2	*2452.00	97.2 AV			1.48 V	252	100.2	-3.0
3	2483.50	64.8 PK	74.0	-9.2	1.48 V	252	67.8	-3.0
4	2483.50	48.8 AV	54.0	-5.2	1.48 V	252	51.8	-3.0
5	4904.00	41.6 PK	74.0	-32.4	1.26 V	250	39.9	1.7
6	4904.00	38.4 AV	54.0	-15.6	1.26 V	250	36.7	1.7
7	7356.00	46.7 PK	74.0	-27.3	1.50 V	219	38.8	7.9
8	7356.00	34.2 AV	54.0	-19.8	1.50 V	219	26.3	7.9

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

Below 1GHz Data:

802.11g

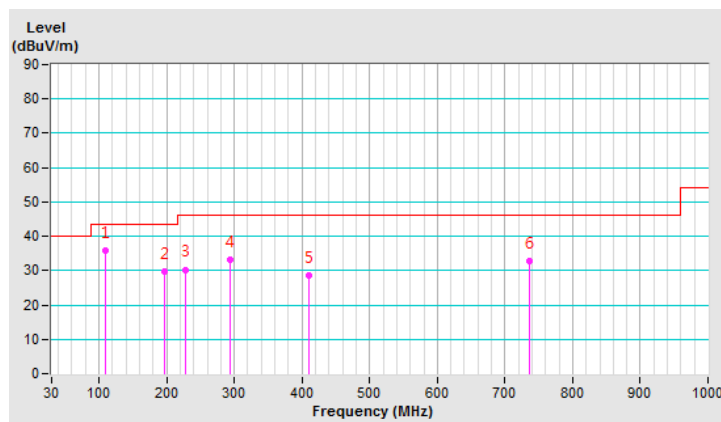
<b>CHANNEL</b>	TX Channel 6	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	9kHz ~ 1GHz		

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	110.39	35.9 QP	43.5	-7.6	2.00 H	108	46.4	-10.5
2	196.96	29.7 QP	43.5	-13.8	2.00 H	103	40.6	-10.9
3	228.44	30.3 QP	46.0	-15.7	1.50 H	68	40.8	-10.5
4	294.42	33.1 QP	46.0	-12.9	1.00 H	71	40.2	-7.1
5	410.19	28.5 QP	46.0	-17.5	1.00 H	114	32.7	-4.2
6	735.31	32.8 QP	46.0	-13.2	2.00 H	140	30.1	2.7

**REMARKS:**

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin value = Emission Level – Limit value
4. The 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.

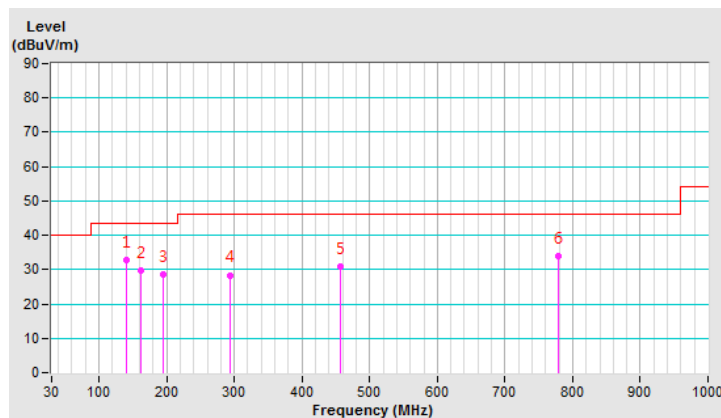


<b>CHANNEL</b>	TX Channel 6	<b>DETECTOR FUNCTION</b>	Quasi-Peak (QP)
<b>FREQUENCY RANGE</b>	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	141.21	32.8 QP	43.5	-10.7	1.50 V	360	40.7	-7.9
2	161.41	29.6 QP	43.5	-13.9	1.00 V	88	37.6	-8.0
3	195.82	28.7 QP	43.5	-14.8	1.00 V	114	39.5	-10.8
4	294.40	28.4 QP	46.0	-17.6	1.00 V	339	35.5	-7.1
5	456.56	30.7 QP	46.0	-15.3	1.00 V	3	33.6	-2.9
6	777.92	33.9 QP	46.0	-12.1	1.50 V	306	30.3	3.6

**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 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)

## Above 1GHz Data :

## 802.11b

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2387.00	59.3 PK	74.0	-14.7	2.14 H	178	62.0	-2.7
2	2387.00	53.6 AV	54.0	-0.4	2.14 H	178	56.3	-2.7
3	2390.00	58.6 PK	74.0	-15.4	2.14 H	178	61.3	-2.7
4	2390.00	51.6 AV	54.0	-2.4	2.14 H	178	54.3	-2.7
5	*2412.00	115.8 PK			2.14 H	178	118.5	-2.7
6	*2412.00	113.6 AV			2.14 H	178	116.3	-2.7
7	4824.00	44.9 PK	74.0	-29.1	1.56 H	263	43.3	1.6
8	4824.00	41.3 AV	54.0	-12.7	1.56 H	263	39.7	1.6

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2387.00	54.5 PK	74.0	-19.5	1.43 V	265	57.2	-2.7
2	2387.00	48.4 AV	54.0	-5.6	1.43 V	265	51.1	-2.7
3	2390.00	53.2 PK	74.0	-20.8	1.43 V	265	55.9	-2.7
4	2390.00	46.1 AV	54.0	-7.9	1.43 V	265	48.8	-2.7
5	*2412.00	109.5 PK			1.43 V	265	112.2	-2.7
6	*2412.00	107.4 AV			1.43 V	265	110.1	-2.7
7	4824.00	41.7 PK	74.0	-32.3	1.28 V	200	40.1	1.6
8	4824.00	39.8 AV	54.0	-14.2	1.28 V	200	38.2	1.6

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2388.00	59.7 PK	74.0	-14.3	2.18 H	172	62.4	-2.7
2	2388.00	51.8 AV	54.0	-2.2	2.18 H	172	54.5	-2.7
3	2390.00	57.9 PK	74.0	-16.1	2.18 H	172	60.6	-2.7
4	2390.00	49.9 AV	54.0	-4.1	2.18 H	172	52.6	-2.7
5	*2437.00	117.8 PK			2.18 H	172	120.8	-3.0
6	*2437.00	115.4 AV			2.18 H	172	118.4	-3.0
7	2483.50	61.1 PK	74.0	-12.9	2.18 H	172	64.1	-3.0
8	2483.50	50.6 AV	54.0	-3.4	2.18 H	172	53.6	-3.0
9	2485.00	60.1 PK	74.0	-13.9	2.18 H	172	63.1	-3.0
10	2485.00	53.7 AV	54.0	-0.3	2.18 H	172	56.7	-3.0
11	4874.00	45.3 PK	74.0	-28.7	1.57 H	239	43.7	1.6
12	4874.00	42.5 AV	54.0	-11.5	1.57 H	239	40.9	1.6
13	7311.00	48.2 PK	74.0	-25.8	1.06 H	284	40.5	7.7
14	7311.00	40.2 AV	54.0	-13.8	1.06 H	284	32.5	7.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2388.00	52.8 PK	74.0	-21.2	1.38 V	262	55.5	-2.7
2	2388.00	46.9 AV	54.0	-7.1	1.38 V	262	49.6	-2.7
3	2390.00	50.1 PK	74.0	-23.9	1.38 V	262	52.8	-2.7
4	2390.00	44.8 AV	54.0	-9.2	1.38 V	262	47.5	-2.7
5	*2437.00	111.7 PK			1.38 V	262	114.7	-3.0
6	*2437.00	109.5 AV			1.38 V	262	112.5	-3.0
7	2483.50	53.8 PK	74.0	-20.2	1.38 V	262	56.8	-3.0
8	2483.50	46.2 AV	54.0	-7.8	1.38 V	262	49.2	-3.0
9	2485.00	56.4 PK	74.0	-17.6	1.38 V	262	59.4	-3.0
10	2485.00	49.5 AV	54.0	-4.5	1.38 V	262	52.5	-3.0
11	4874.00	43.8 PK	74.0	-30.2	1.32 V	205	42.2	1.6
12	4874.00	40.4 AV	54.0	-13.6	1.32 V	205	38.8	1.6
13	7311.00	46.5 PK	74.0	-27.5	1.78 V	337	38.8	7.7
14	7311.00	38.5 AV	54.0	-15.5	1.78 V	337	30.8	7.7

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	116.7 PK			2.34 H	175	119.7	-3.0
2	*2462.00	114.6 AV			2.34 H	175	117.6	-3.0
3	2483.50	61.2 PK	74.0	-12.8	2.34 H	175	64.2	-3.0
<b>4</b>	<b>2483.50</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>2.34 H</b>	<b>175</b>	<b>56.9</b>	<b>-3.0</b>
5	4924.00	41.1 PK	74.0	-32.9	1.55 H	250	39.4	1.7
6	4924.00	35.4 AV	54.0	-18.6	1.55 H	250	33.7	1.7
7	7386.00	46.1 PK	74.0	-27.9	1.04 H	297	38.2	7.9
8	7386.00	33.0 AV	54.0	-21.0	1.04 H	297	25.1	7.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	108.5 PK			1.39 V	270	111.5	-3.0
2	*2462.00	106.2 AV			1.39 V	270	109.2	-3.0
3	2483.50	53.4 PK	74.0	-20.6	1.39 V	270	56.4	-3.0
4	2483.50	48.2 AV	54.0	-5.8	1.39 V	270	51.2	-3.0
5	4924.00	42.7 PK	74.0	-31.3	1.30 V	211	41.0	1.7
6	4924.00	39.0 AV	54.0	-15.0	1.30 V	211	37.3	1.7
7	7386.00	45.8 PK	74.0	-28.2	1.83 V	349	37.9	7.9
8	7386.00	33.5 AV	54.0	-20.5	1.83 V	349	25.6	7.9

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

**802.11g**

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2387.00	70.5 PK	74.0	-3.5	1.96 H	180	73.2	-2.7
2	2387.00	53.6 AV	54.0	-0.4	1.96 H	180	56.3	-2.7
3	2390.00	60.3 PK	74.0	-13.7	1.96 H	180	63.0	-2.7
4	2390.00	47.9 AV	54.0	-6.1	1.96 H	180	50.6	-2.7
5	*2412.00	114.2 PK			1.96 H	180	116.9	-2.7
6	*2412.00	104.1 AV			1.96 H	180	106.8	-2.7
7	4824.00	38.1 PK	74.0	-35.9	1.50 H	234	36.5	1.6
8	4824.00	33.2 AV	54.0	-20.8	1.50 H	234	31.6	1.6

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2387.00	62.8 PK	74.0	-11.2	1.40 V	226	65.5	-2.7
2	2387.00	48.2 AV	54.0	-5.8	1.40 V	226	50.9	-2.7
3	2390.00	55.1 PK	74.0	-18.9	1.40 V	226	57.8	-2.7
4	2390.00	43.2 AV	54.0	-10.8	1.40 V	226	45.9	-2.7
5	*2412.00	108.2 PK			1.40 V	226	110.9	-2.7
6	*2412.00	98.4 AV			1.40 V	226	101.1	-2.7
7	4824.00	44.8 PK	74.0	-29.2	1.23 V	223	43.2	1.6
8	4824.00	39.5 AV	54.0	-14.5	1.23 V	223	37.9	1.6

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 2	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2388.00	70.2 PK	74.0	-3.8	1.97 H	180	72.9	-2.7
2	2388.00	53.8 AV	54.0	-0.2	1.97 H	180	56.5	-2.7
3	2390.00	60.9 PK	74.0	-13.1	1.97 H	180	63.6	-2.7
4	2390.00	48.3 AV	54.0	-5.7	1.97 H	180	51.0	-2.7
5	*2417.00	115.3 PK			1.97 H	180	118.1	-2.8
6	*2417.00	105.6 AV			1.97 H	180	108.4	-2.8
7	4834.00	40.8 PK	74.0	-33.2	1.47 H	222	39.2	1.6
8	4834.00	37.2 AV	54.0	-16.8	1.47 H	222	35.6	1.6
9	7251.00	45.0 PK	74.0	-29.0	1.20 H	289	37.2	7.8
10	7251.00	36.2 AV	54.0	-17.8	1.20 H	289	28.4	7.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2388.00	63.2 PK	74.0	-10.8	1.43 V	239	65.9	-2.7
2	2388.00	48.7 AV	54.0	-5.3	1.43 V	239	51.4	-2.7
3	2390.00	55.9 PK	74.0	-18.1	1.43 V	239	58.6	-2.7
4	2390.00	43.5 AV	54.0	-10.5	1.43 V	239	46.2	-2.7
5	*2417.00	109.5 PK			1.43 V	239	112.3	-2.8
6	*2417.00	99.7 AV			1.43 V	239	102.5	-2.8
7	4834.00	38.5 PK	74.0	-35.5	1.25 V	210	36.9	1.6
8	4834.00	37.2 AV	54.0	-16.8	1.25 V	210	35.6	1.6
9	7251.00	43.1 PK	74.0	-30.9	1.77 V	340	35.3	7.8
10	7251.00	35.2 AV	54.0	-18.8	1.77 V	340	27.4	7.8

**REMARKS:**

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



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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2388.00	69.4 PK	74.0	-4.6	1.94 H	185	72.1	-2.7
2	2388.00	53.3 AV	54.0	-0.7	1.94 H	185	56.0	-2.7
3	2390.00	60.3 PK	74.0	-13.7	1.94 H	185	63.0	-2.7
4	2390.00	48.7 AV	54.0	-5.3	1.94 H	185	51.4	-2.7
5	*2437.00	117.8 PK			1.94 H	185	120.8	-3.0
6	*2437.00	108.6 AV			1.94 H	185	111.6	-3.0
7	2483.50	69.2 PK	74.0	-4.8	1.94 H	185	72.2	-3.0
8	2483.50	53.7 AV	54.0	-0.3	1.94 H	185	56.7	-3.0
9	4874.00	43.6 PK	74.0	-30.4	1.54 H	255	42.0	1.6
10	4874.00	41.1 AV	54.0	-12.9	1.54 H	255	39.5	1.6
11	7311.00	47.4 PK	74.0	-26.6	1.32 H	255	39.7	7.7
12	7311.00	39.7 AV	54.0	-14.3	1.32 H	255	32.0	7.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2388.00	64.8 PK	74.0	-9.2	1.43 V	249	67.5	-2.7
2	2388.00	49.1 AV	54.0	-4.9	1.43 V	249	51.8	-2.7
3	2390.00	56.8 PK	74.0	-17.2	1.43 V	249	59.5	-2.7
4	2390.00	44.3 AV	54.0	-9.7	1.43 V	249	47.0	-2.7
5	*2437.00	111.8 PK			1.43 V	249	114.8	-3.0
6	*2437.00	102.4 AV			1.43 V	249	105.4	-3.0
7	2483.50	65.1 PK	74.0	-8.9	1.43 V	249	68.1	-3.0
8	2483.50	49.6 AV	54.0	-4.4	1.43 V	249	52.6	-3.0
9	4874.00	41.8 PK	74.0	-32.2	1.30 V	204	40.2	1.6
10	4874.00	39.6 AV	54.0	-14.4	1.30 V	204	38.0	1.6
11	7311.00	45.6 PK	74.0	-28.4	1.79 V	325	37.9	7.7
12	7311.00	37.5 AV	54.0	-16.5	1.79 V	325	29.8	7.7

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 10	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	115.8 PK			1.91 H	184	118.8	-3.0
2	*2457.00	105.8 AV			1.91 H	184	108.8	-3.0
3	2483.50	70.2 PK	74.0	-3.8	1.91 H	184	73.2	-3.0
<b>4</b>	<b>2483.50</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.91 H</b>	<b>184</b>	<b>56.9</b>	<b>-3.0</b>
5	4914.00	40.2 PK	74.0	-33.8	1.49 H	232	38.5	1.7
6	4914.00	36.5 AV	54.0	-17.5	1.49 H	232	34.8	1.7
7	7371.00	46.5 PK	74.0	-27.5	1.23 H	286	38.7	7.8
8	7371.00	34.5 AV	54.0	-19.5	1.23 H	286	26.7	7.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	109.8 PK			1.47 V	241	112.8	-3.0
2	*2457.00	99.9 AV			1.47 V	241	102.9	-3.0
3	2483.50	63.2 PK	74.0	-10.8	1.47 V	241	66.2	-3.0
4	2483.50	48.4 AV	54.0	-5.6	1.47 V	241	51.4	-3.0
5	4914.00	38.6 PK	74.0	-35.4	1.24 V	223	36.9	1.7
6	4914.00	37.2 AV	54.0	-16.8	1.24 V	223	35.5	1.7
7	7371.00	43.2 PK	74.0	-30.8	1.73 V	343	35.4	7.8
8	7371.00	35.4 AV	54.0	-18.6	1.73 V	343	27.6	7.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.9 PK			1.93 H	183	116.9	-3.0
2	*2462.00	103.8 AV			1.93 H	183	106.8	-3.0
3	2483.50	72.2 PK	74.0	-1.8	1.93 H	183	75.2	-3.0
4	2483.50	53.8 AV	54.0	-0.2	1.93 H	183	56.8	-3.0
5	4924.00	38.8 PK	74.0	-35.2	1.44 H	229	37.1	1.7
6	4924.00	34.2 AV	54.0	-19.8	1.44 H	229	32.5	1.7
7	7386.00	45.1 PK	74.0	-28.9	1.22 H	290	37.2	7.9
8	7386.00	33.5 AV	54.0	-20.5	1.22 H	290	25.6	7.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	107.4 PK			1.50 V	230	110.4	-3.0
2	*2462.00	97.6 AV			1.50 V	230	100.6	-3.0
3	2483.50	62.9 PK	74.0	-11.1	1.50 V	230	65.9	-3.0
4	2483.50	48.0 AV	54.0	-6.0	1.50 V	230	51.0	-3.0
5	4924.00	38.2 PK	74.0	-35.8	1.28 V	219	36.5	1.7
6	4924.00	36.9 AV	54.0	-17.1	1.28 V	219	35.2	1.7
7	7386.00	42.9 PK	74.0	-31.1	1.71 V	357	35.0	7.9
8	7386.00	35.3 AV	54.0	-18.7	1.71 V	357	27.4	7.9

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

**802.11ax (HE20)**

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.5 PK	74.0	-5.5	1.70 H	175	71.2	-2.7
2	2390.00	53.7 AV	54.0	-0.3	1.70 H	175	56.4	-2.7
3	*2412.00	116.2 PK			1.70 H	175	118.9	-2.7
4	*2412.00	103.1 AV			1.70 H	175	105.8	-2.7
5	4824.00	39.7 PK	74.0	-34.3	1.59 H	245	38.1	1.6
6	4824.00	35.8 AV	54.0	-18.2	1.59 H	245	34.2	1.6

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.4 PK	74.0	-11.6	1.54 V	238	65.1	-2.7
2	2390.00	47.5 AV	54.0	-6.5	1.54 V	238	50.2	-2.7
3	*2412.00	110.3 PK			1.54 V	238	113.0	-2.7
4	*2412.00	97.2 AV			1.54 V	238	99.9	-2.7
5	4824.00	38.9 PK	74.0	-35.1	1.31 V	201	37.3	1.6
6	4824.00	37.2 AV	54.0	-16.8	1.31 V	201	35.6	1.6

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

<b>CHANNEL</b>	TX Channel 2	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.1 PK	74.0	-3.9	1.21 H	171	72.8	-2.7
2	<b>2390.00</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.21 H</b>	<b>171</b>	<b>56.6</b>	<b>-2.7</b>
3	*2417.00	116.9 PK			1.21 H	171	119.7	-2.8
4	*2417.00	104.2 AV			1.21 H	171	107.0	-2.8
5	4834.00	39.8 PK	74.0	-34.2	1.59 H	229	38.2	1.6
6	4834.00	36.8 AV	54.0	-17.2	1.59 H	229	35.2	1.6
7	7251.00	42.8 PK	74.0	-31.2	1.30 H	258	35.0	7.8
8	7251.00	35.2 AV	54.0	-18.8	1.30 H	258	27.4	7.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.8 PK	74.0	-10.2	1.44 V	234	66.5	-2.7
2	2390.00	48.8 AV	54.0	-5.2	1.44 V	234	51.5	-2.7
3	*2417.00	111.2 PK			1.44 V	234	114.0	-2.8
4	*2417.00	98.5 AV			1.44 V	234	101.3	-2.8
5	4834.00	38.4 PK	74.0	-35.6	1.22 V	211	36.8	1.6
6	4834.00	37.1 AV	54.0	-16.9	1.22 V	211	35.5	1.6
7	7251.00	41.8 PK	74.0	-32.2	1.77 V	358	34.0	7.8
8	7251.00	34.6 AV	54.0	-19.4	1.77 V	358	26.8	7.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.5 PK	74.0	-4.5	1.03 H	167	72.2	-2.7
2	<b>2390.00</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.03 H</b>	<b>167</b>	<b>56.6</b>	<b>-2.7</b>
3	*2437.00	120.3 PK			1.03 H	167	123.3	-3.0
4	*2437.00	107.5 AV			1.03 H	167	110.5	-3.0
5	2483.50	70.3 PK	74.0	-3.7	1.03 H	167	73.3	-3.0
6	2483.50	53.7 AV	54.0	-0.3	1.03 H	167	56.7	-3.0
7	4874.00	44.2 PK	74.0	-29.8	1.58 H	248	42.6	1.6
8	4874.00	41.5 AV	54.0	-12.5	1.58 H	248	39.9	1.6
9	7311.00	47.1 PK	74.0	-26.9	1.30 H	266	39.4	7.7
10	7311.00	39.3 AV	54.0	-14.7	1.30 H	266	31.6	7.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.6 PK	74.0	-8.4	1.45 V	245	68.3	-2.7
2	2390.00	49.7 AV	54.0	-4.3	1.45 V	245	52.4	-2.7
3	*2437.00	114.3 PK			1.45 V	245	117.3	-3.0
4	*2437.00	101.5 AV			1.45 V	245	104.5	-3.0
5	2483.50	64.2 PK	74.0	-9.8	1.45 V	245	67.2	-3.0
6	2483.50	48.2 AV	54.0	-5.8	1.45 V	245	51.2	-3.0
7	4874.00	42.1 PK	74.0	-31.9	1.36 V	200	40.5	1.6
8	4874.00	39.8 AV	54.0	-14.2	1.36 V	200	38.2	1.6
9	7311.00	45.7 PK	74.0	-28.3	1.75 V	334	38.0	7.7
10	7311.00	37.4 AV	54.0	-16.6	1.75 V	334	29.7	7.7

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 10	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	117.9 PK			1.14 H	172	120.9	-3.0
2	*2457.00	104.5 AV			1.14 H	172	107.5	-3.0
3	2483.50	68.9 PK	74.0	-5.1	1.14 H	172	71.9	-3.0
4	2483.50	53.8 AV	54.0	-0.2	1.14 H	172	56.8	-3.0
5	4914.00	39.5 PK	74.0	-34.5	1.61 H	236	37.8	1.7
6	4914.00	36.8 AV	54.0	-17.2	1.61 H	236	35.1	1.7
7	7371.00	42.1 PK	74.0	-31.9	1.26 H	251	34.3	7.8
8	7371.00	34.6 AV	54.0	-19.4	1.26 H	251	26.8	7.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	110.9 PK			1.30 V	228	113.9	-3.0
2	*2457.00	98.3 AV			1.30 V	228	101.3	-3.0
3	2483.50	63.2 PK	74.0	-10.8	1.30 V	228	66.2	-3.0
4	2483.50	48.5 AV	54.0	-5.5	1.30 V	228	51.5	-3.0
5	4914.00	38.7 PK	74.0	-35.3	1.22 V	226	37.0	1.7
6	4914.00	37.6 AV	54.0	-16.4	1.22 V	226	35.9	1.7
7	7371.00	43.1 PK	74.0	-30.9	1.78 V	346	35.3	7.8
8	7371.00	35.4 AV	54.0	-18.6	1.78 V	346	27.6	7.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	116.9 PK			1.13 H	173	119.9	-3.0
2	*2462.00	103.1 AV			1.13 H	173	106.1	-3.0
3	2483.50	67.9 PK	74.0	-6.1	1.13 H	173	70.9	-3.0
4	<b>2483.50</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.13 H</b>	<b>173</b>	<b>56.9</b>	<b>-3.0</b>
5	4924.00	39.0 PK	74.0	-35.0	1.56 H	233	37.3	1.7
6	4924.00	35.2 AV	54.0	-18.8	1.56 H	233	33.5	1.7
7	7386.00	40.1 PK	74.0	-33.9	1.28 H	250	32.2	7.9
8	7386.00	32.0 AV	54.0	-22.0	1.28 H	250	24.1	7.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	109.5 PK			1.58 V	235	112.5	-3.0
2	*2462.00	96.4 AV			1.58 V	235	99.4	-3.0
3	2483.50	61.7 PK	74.0	-12.3	1.58 V	235	64.7	-3.0
4	2483.50	46.8 AV	54.0	-7.2	1.58 V	235	49.8	-3.0
5	4924.00	38.3 PK	74.0	-35.7	1.22 V	237	36.6	1.7
6	4924.00	37.3 AV	54.0	-16.7	1.22 V	237	35.6	1.7
7	7386.00	43.4 PK	74.0	-30.6	1.83 V	345	35.5	7.9
8	7386.00	35.5 AV	54.0	-18.5	1.83 V	345	27.6	7.9

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



802.11ax (HE40)

<b>CHANNEL</b>	TX Channel 3	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.4 PK	74.0	-3.6	1.51 H	182	73.1	-2.7
2	2390.00	53.9 AV	54.0	-0.1	1.51 H	182	56.6	-2.7
3	*2422.00	113.9 PK			1.51 H	182	116.8	-2.9
4	*2422.00	100.7 AV			1.51 H	182	103.6	-2.9
5	4844.00	39.2 PK	74.0	-34.8	1.56 H	238	37.6	1.6
6	4844.00	35.6 AV	54.0	-18.4	1.56 H	238	34.0	1.6
7	7266.00	45.4 PK	74.0	-28.6	1.23 H	259	37.6	7.8
8	7266.00	32.7 AV	54.0	-21.3	1.23 H	259	24.9	7.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.5 PK	74.0	-11.5	2.28 V	355	65.2	-2.7
2	2390.00	47.0 AV	54.0	-7.0	2.28 V	355	49.7	-2.7
3	*2422.00	107.7 PK			2.28 V	355	110.6	-2.9
4	*2422.00	94.5 AV			2.28 V	355	97.4	-2.9
5	4844.00	38.5 PK	74.0	-35.5	1.23 V	235	36.9	1.6
6	4844.00	37.0 AV	54.0	-17.0	1.23 V	235	35.4	1.6
7	7266.00	43.5 PK	74.0	-30.5	1.77 V	342	35.7	7.8
8	7266.00	36.2 AV	54.0	-17.8	1.77 V	342	28.4	7.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.7 PK	74.0	-8.3	1.72 H	180	68.4	-2.7
2	2390.00	51.4 AV	54.0	-2.6	1.72 H	180	54.1	-2.7
3	*2437.00	114.5 PK			1.72 H	180	117.5	-3.0
4	*2437.00	101.4 AV			1.72 H	180	104.4	-3.0
5	2483.50	68.7 PK	74.0	-5.3	1.72 H	180	71.7	-3.0
<b>6</b>	<b>2483.50</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.72 H</b>	<b>180</b>	<b>56.9</b>	<b>-3.0</b>
7	4874.00	40.1 PK	74.0	-33.9	1.61 H	240	38.5	1.6
8	4874.00	38.2 AV	54.0	-15.8	1.61 H	240	36.6	1.6
9	7311.00	42.7 PK	74.0	-31.3	1.22 H	263	35.0	7.7
10	7311.00	35.8 AV	54.0	-18.2	1.22 H	263	28.1	7.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.8 PK	74.0	-10.2	2.24 V	349	66.5	-2.7
2	2390.00	47.5 AV	54.0	-6.5	2.24 V	349	50.2	-2.7
3	*2437.00	105.8 PK			2.24 V	349	108.8	-3.0
4	*2437.00	95.1 AV			2.24 V	349	98.1	-3.0
5	2483.50	65.2 PK	74.0	-8.8	2.24 V	349	68.2	-3.0
6	2483.50	49.2 AV	54.0	-4.8	2.24 V	349	52.2	-3.0
7	4874.00	38.5 PK	74.0	-35.5	1.22 V	228	36.9	1.6
8	4874.00	37.2 AV	54.0	-16.8	1.22 V	228	35.6	1.6
9	7311.00	43.2 PK	74.0	-30.8	1.77 V	330	35.5	7.7
10	7311.00	35.8 AV	54.0	-18.2	1.77 V	330	28.1	7.7

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 9	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	112.6 PK			2.13 H	176	115.6	-3.0
2	*2452.00	99.5 AV			2.13 H	176	102.5	-3.0
3	2483.50	70.6 PK	74.0	-3.4	2.13 H	176	73.6	-3.0
4	<b>2483.50</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>2.13 H</b>	<b>176</b>	<b>56.9</b>	<b>-3.0</b>
5	4904.00	38.3 PK	74.0	-35.7	1.60 H	232	36.6	1.7
6	4904.00	35.0 AV	54.0	-19.0	1.60 H	232	33.3	1.7
7	7356.00	45.5 PK	74.0	-28.5	1.23 H	241	37.6	7.9
8	7356.00	32.6 AV	54.0	-21.4	1.23 H	241	24.7	7.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	106.5 PK			2.26 V	357	109.5	-3.0
2	*2452.00	93.2 AV			2.26 V	357	96.2	-3.0
3	2483.50	62.1 PK	74.0	-11.9	2.26 V	357	65.1	-3.0
4	2483.50	46.4 AV	54.0	-7.6	2.26 V	357	49.4	-3.0
5	4904.00	38.5 PK	74.0	-35.5	1.20 V	216	36.8	1.7
6	4904.00	37.1 AV	54.0	-16.9	1.20 V	216	35.4	1.7
7	7356.00	42.9 PK	74.0	-31.1	1.79 V	319	35.0	7.9
8	7356.00	35.7 AV	54.0	-18.3	1.79 V	319	27.8	7.9

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

4.1.9 Test Results (Mode 3)

Above 1GHz Data :

802.11b

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2387.00	60.9 PK	74.0	-13.1	1.95 H	175	63.6	-2.7
2	2387.00	52.7 AV	54.0	-1.3	1.95 H	175	55.4	-2.7
3	2390.00	59.4 PK	74.0	-14.6	1.95 H	175	62.1	-2.7
4	2390.00	47.8 AV	54.0	-6.2	1.95 H	175	50.5	-2.7
5	*2412.00	116.6 PK			1.95 H	175	119.3	-2.7
6	*2412.00	105.3 AV			1.95 H	175	108.0	-2.7
7	4824.00	44.2 PK	74.0	-29.8	1.57 H	220	42.6	1.6
8	4824.00	41.3 AV	54.0	-12.7	1.57 H	220	39.7	1.6

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2387.00	56.7 PK	74.0	-17.3	2.36 V	264	59.4	-2.7
2	2387.00	48.3 AV	54.0	-5.7	2.36 V	264	51.0	-2.7
3	2390.00	55.8 PK	74.0	-18.2	2.36 V	264	58.5	-2.7
4	2390.00	43.4 AV	54.0	-10.6	2.36 V	264	46.1	-2.7
5	*2412.00	114.7 PK			2.36 V	264	117.4	-2.7
6	*2412.00	103.1 AV			2.36 V	264	105.8	-2.7
7	4824.00	41.2 PK	74.0	-32.8	1.28 V	222	39.6	1.6
8	4824.00	39.3 AV	54.0	-14.7	1.28 V	222	37.7	1.6

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.0 PK	74.0	-16.0	1.97 H	184	60.7	-2.7
2	2390.00	46.7 AV	54.0	-7.3	1.97 H	184	49.4	-2.7
3	*2437.00	117.1 PK			1.97 H	184	120.1	-3.0
4	*2437.00	105.1 AV			1.97 H	184	108.1	-3.0
5	2483.50	59.2 PK	74.0	-14.8	1.97 H	184	62.2	-3.0
6	2483.50	45.4 AV	54.0	-8.6	1.97 H	184	48.4	-3.0
7	4874.00	44.5 PK	74.0	-29.5	1.58 H	250	42.9	1.6
8	4874.00	42.0 AV	54.0	-12.0	1.58 H	250	40.4	1.6
9	7311.00	47.9 PK	74.0	-26.1	1.03 H	282	40.2	7.7
10	7311.00	40.1 AV	54.0	-13.9	1.03 H	282	32.4	7.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	54.9 PK	74.0	-19.1	2.39 V	269	57.6	-2.7
2	2390.00	42.8 AV	54.0	-11.2	2.39 V	269	45.5	-2.7
3	*2437.00	115.2 PK			2.39 V	269	118.2	-3.0
4	*2437.00	103.5 AV			2.39 V	269	106.5	-3.0
5	2483.50	55.9 PK	74.0	-18.1	2.39 V	269	58.9	-3.0
6	2483.50	41.7 AV	54.0	-12.3	2.39 V	269	44.7	-3.0
7	4874.00	41.5 PK	74.0	-32.5	1.27 V	219	39.9	1.6
8	4874.00	39.6 AV	54.0	-14.4	1.27 V	219	38.0	1.6
9	7311.00	44.8 PK	74.0	-29.2	1.74 V	345	37.1	7.7
10	7311.00	37.7 AV	54.0	-16.3	1.74 V	345	30.0	7.7

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	116.5 PK			1.91 H	188	119.5	-3.0
2	*2462.00	104.9 AV			1.91 H	188	107.9	-3.0
3	2483.50	60.2 PK	74.0	-13.8	1.91 H	188	63.2	-3.0
4	2483.50	51.5 AV	54.0	-2.5	1.91 H	188	54.5	-3.0
5	2486.00	61.7 PK	74.0	-12.3	1.91 H	188	64.6	-2.9
6	2486.00	53.7 AV	54.0	-0.3	1.91 H	188	56.6	-2.9
7	4924.00	42.3 PK	74.0	-31.7	1.61 H	224	40.6	1.7
8	4924.00	40.2 AV	54.0	-13.8	1.61 H	224	38.5	1.7
9	7386.00	45.6 PK	74.0	-28.4	1.19 H	258	37.7	7.9
10	7386.00	38.7 AV	54.0	-15.3	1.19 H	258	30.8	7.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.4 PK			2.45 V	274	116.4	-3.0
2	*2462.00	101.1 AV			2.45 V	274	104.1	-3.0
3	2483.50	56.8 PK	74.0	-17.2	2.45 V	274	59.8	-3.0
4	2483.50	47.2 AV	54.0	-6.8	2.45 V	274	50.2	-3.0
5	2486.00	58.5 PK	74.0	-15.5	2.45 V	274	61.4	-2.9
6	2486.00	49.1 AV	54.0	-4.9	2.45 V	274	52.0	-2.9
7	4924.00	40.5 PK	74.0	-33.5	1.26 V	216	38.8	1.7
8	4924.00	38.2 AV	54.0	-15.8	1.26 V	216	36.5	1.7
9	7386.00	43.4 PK	74.0	-30.6	1.78 V	339	35.5	7.9
10	7386.00	36.5 AV	54.0	-17.5	1.78 V	339	28.6	7.9

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

**802.11g**

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	71.3 PK	74.0	-2.7	2.25 H	177	74.0	-2.7
2	2390.00	53.8 AV	54.0	-0.2	2.25 H	177	56.5	-2.7
3	*2412.00	109.2 PK			2.25 H	177	111.9	-2.7
4	*2412.00	99.9 AV			2.25 H	177	102.6	-2.7
5	4824.00	41.6 PK	74.0	-32.4	1.67 H	258	40.0	1.6
6	4824.00	38.7 AV	54.0	-15.3	1.67 H	258	37.1	1.6

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.5 PK	74.0	-4.5	2.34 V	277	72.2	-2.7
2	2390.00	51.5 AV	54.0	-2.5	2.34 V	277	54.2	-2.7
3	*2412.00	107.1 PK			2.34 V	277	109.8	-2.7
4	*2412.00	97.8 AV			2.34 V	277	100.5	-2.7
5	4824.00	39.8 PK	74.0	-34.2	1.22 V	229	38.2	1.6
6	4824.00	37.4 AV	54.0	-16.6	1.22 V	229	35.8	1.6

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

<b>CHANNEL</b>	TX Channel 2	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.2 PK	74.0	-6.8	2.26 H	177	69.9	-2.7
2	2390.00	53.6 AV	54.0	-0.4	2.26 H	177	56.3	-2.7
3	*2417.00	109.3 PK			2.26 H	177	112.1	-2.8
4	*2417.00	100.2 AV			2.26 H	177	103.0	-2.8
5	4834.00	42.5 PK	74.0	-31.5	1.65 H	269	40.9	1.6
6	4834.00	39.8 AV	54.0	-14.2	1.65 H	269	38.2	1.6
7	7251.00	44.6 PK	74.0	-29.4	1.36 H	298	36.8	7.8
8	7251.00	37.4 AV	54.0	-16.6	1.36 H	298	29.6	7.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.4 PK	74.0	-4.6	2.30 V	272	72.1	-2.7
2	2390.00	51.3 AV	54.0	-2.7	2.30 V	272	54.0	-2.7
3	*2417.00	108.4 PK			2.30 V	272	111.2	-2.8
4	*2417.00	98.5 AV			2.30 V	272	101.3	-2.8
5	4834.00	40.2 PK	74.0	-33.8	1.21 V	229	38.6	1.6
6	4834.00	37.8 AV	54.0	-16.2	1.21 V	229	36.2	1.6
7	7251.00	42.6 PK	74.0	-31.4	1.68 V	342	34.8	7.8
8	7251.00	35.4 AV	54.0	-18.6	1.68 V	342	27.6	7.8

**REMARKS:**

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



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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.3 PK	74.0	-7.7	2.21 H	182	69.0	-2.7
2	2390.00	52.5 AV	54.0	-1.5	2.21 H	182	55.2	-2.7
3	*2437.00	114.2 PK			2.21 H	182	117.2	-3.0
4	*2437.00	104.7 AV			2.21 H	182	107.7	-3.0
5	2483.50	67.0 PK	74.0	-7.0	2.21 H	182	70.0	-3.0
6	2483.50	52.3 AV	54.0	-1.7	2.21 H	182	55.3	-3.0
7	4874.00	45.1 PK	74.0	-28.9	1.64 H	258	43.5	1.6
8	4874.00	42.4 AV	54.0	-11.6	1.64 H	258	40.8	1.6
9	7311.00	47.6 PK	74.0	-26.4	1.35 H	286	39.9	7.7
10	7311.00	40.1 AV	54.0	-13.9	1.35 H	286	32.4	7.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.5 PK	74.0	-14.5	2.34 V	284	62.2	-2.7
2	2390.00	47.8 AV	54.0	-6.2	2.34 V	284	50.5	-2.7
3	*2437.00	111.8 PK			2.32 V	287	114.8	-3.0
4	*2437.00	101.9 AV			2.32 V	287	104.9	-3.0
5	2483.50	58.3 PK	74.0	-15.7	2.34 V	284	61.3	-3.0
6	2483.50	46.5 AV	54.0	-7.5	2.34 V	284	49.5	-3.0
7	4874.00	41.1 PK	74.0	-32.9	1.23 V	229	39.5	1.6
8	4874.00	39.4 AV	54.0	-14.6	1.23 V	229	37.8	1.6
9	7311.00	45.0 PK	74.0	-29.0	1.70 V	339	37.3	7.7
10	7311.00	37.8 AV	54.0	-16.2	1.70 V	339	30.1	7.7

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 10	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	110.5 PK			2.18 H	177	113.5	-3.0
2	*2457.00	101.7 AV			2.18 H	177	104.7	-3.0
3	2483.50	68.7 PK	74.0	-5.3	2.18 H	177	71.7	-3.0
4	2483.50	53.6 AV	54.0	-0.4	2.18 H	177	56.6	-3.0
5	4914.00	42.1 PK	74.0	-31.9	1.64 H	272	40.4	1.7
6	4914.00	39.4 AV	54.0	-14.6	1.64 H	272	37.7	1.7
7	7371.00	44.1 PK	74.0	-29.9	1.32 H	287	36.3	7.8
8	7371.00	37.3 AV	54.0	-16.7	1.32 H	287	29.5	7.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	107.4 PK			2.28 V	303	110.4	-3.0
2	*2457.00	97.9 AV			2.28 V	303	100.9	-3.0
3	2483.50	66.4 PK	74.0	-7.6	2.28 V	303	69.4	-3.0
4	2483.50	50.9 AV	54.0	-3.1	2.28 V	303	53.9	-3.0
5	4914.00	39.9 PK	74.0	-34.1	1.27 V	229	38.2	1.7
6	4914.00	37.4 AV	54.0	-16.6	1.27 V	229	35.7	1.7
7	7371.00	41.5 PK	74.0	-32.5	1.71 V	349	33.7	7.8
8	7371.00	35.1 AV	54.0	-18.9	1.71 V	349	27.3	7.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	109.1 PK			2.16 H	182	112.1	-3.0
2	*2462.00	99.8 AV			2.16 H	182	102.8	-3.0
3	2483.50	73.2 PK	74.0	-0.8	2.16 H	182	76.2	-3.0
4	2483.50	53.7 AV	54.0	-0.3	2.16 H	182	56.7	-3.0
5	4924.00	41.1 PK	74.0	-32.9	1.70 H	260	39.4	1.7
6	4924.00	38.2 AV	54.0	-15.8	1.70 H	260	36.5	1.7
7	7386.00	43.5 PK	74.0	-30.5	1.31 H	288	35.6	7.9
8	7386.00	36.8 AV	54.0	-17.2	1.31 H	288	28.9	7.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	105.4 PK			2.27 V	294	108.4	-3.0
2	*2462.00	95.8 AV			2.27 V	294	98.8	-3.0
3	2483.50	65.3 PK	74.0	-8.7	2.27 V	294	68.3	-3.0
4	2483.50	51.1 AV	54.0	-2.9	2.27 V	294	54.1	-3.0
5	4924.00	39.7 PK	74.0	-34.3	1.17 V	231	38.0	1.7
6	4924.00	37.2 AV	54.0	-16.8	1.17 V	231	35.5	1.7
7	7386.00	40.4 PK	74.0	-33.6	1.67 V	346	32.5	7.9
8	7386.00	34.8 AV	54.0	-19.2	1.67 V	346	26.9	7.9

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

802.11ax (HE20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.4 PK	74.0	-4.6	1.99 H	186	72.1	-2.7
2	2390.00	53.6 AV	54.0	-0.4	1.99 H	186	56.3	-2.7
3	*2412.00	113.1 PK			1.99 H	186	115.8	-2.7
4	*2412.00	99.8 AV			1.99 H	186	102.5	-2.7
5	4824.00	41.4 PK	74.0	-32.6	1.74 H	259	39.8	1.6
6	4824.00	39.5 AV	54.0	-14.5	1.74 H	259	37.9	1.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.7 PK	74.0	-15.3	2.27 V	267	61.4	-2.7
2	2390.00	48.1 AV	54.0	-5.9	2.27 V	267	50.8	-2.7
3	*2412.00	108.3 PK			2.27 V	267	111.0	-2.7
4	*2412.00	96.5 AV			2.27 V	267	99.2	-2.7
5	4824.00	39.8 PK	74.0	-34.2	1.28 V	229	38.2	1.6
6	4824.00	37.6 AV	54.0	-16.4	1.28 V	229	36.0	1.6

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

<b>CHANNEL</b>	TX Channel 2	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.7 PK	74.0	-6.3	1.98 H	185	70.4	-2.7
2	2390.00	53.6 AV	54.0	-0.4	1.98 H	185	56.3	-2.7
3	*2417.00	114.1 PK			1.98 H	185	116.9	-2.8
4	*2417.00	100.6 AV			1.98 H	185	103.4	-2.8
5	4834.00	42.5 PK	74.0	-31.5	1.78 H	268	40.9	1.6
6	4834.00	40.1 AV	54.0	-13.9	1.78 H	268	38.5	1.6
7	7251.00	45.8 PK	74.0	-28.2	1.40 H	339	38.0	7.8
8	7251.00	37.6 AV	54.0	-16.4	1.40 H	339	29.8	7.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.9 PK	74.0	-14.1	2.31 V	289	62.6	-2.7
2	2390.00	48.2 AV	54.0	-5.8	2.31 V	289	50.9	-2.7
3	*2417.00	109.3 PK			2.31 V	289	112.1	-2.8
4	*2417.00	97.4 AV			2.31 V	289	100.2	-2.8
5	4834.00	39.5 PK	74.0	-34.5	1.19 V	228	37.9	1.6
6	4834.00	37.4 AV	54.0	-16.6	1.19 V	228	35.8	1.6
7	7251.00	42.2 PK	74.0	-31.8	1.67 V	332	34.4	7.8
8	7251.00	35.3 AV	54.0	-18.7	1.67 V	332	27.5	7.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.3 PK	74.0	-5.7	1.97 H	184	71.0	-2.7
2	2390.00	52.7 AV	54.0	-1.3	1.97 H	184	55.4	-2.7
3	*2437.00	115.7 PK			1.97 H	184	118.7	-3.0
4	*2437.00	103.5 AV			1.97 H	184	106.5	-3.0
5	2483.50	68.1 PK	74.0	-5.9	1.97 H	184	71.1	-3.0
6	2483.50	52.4 AV	54.0	-1.6	1.97 H	184	55.4	-3.0
7	4874.00	44.8 PK	74.0	-29.2	1.75 H	273	43.2	1.6
8	4874.00	42.2 AV	54.0	-11.8	1.75 H	273	40.6	1.6
9	7311.00	47.3 PK	74.0	-26.7	1.37 H	323	39.6	7.7
10	7311.00	39.9 AV	54.0	-14.1	1.37 H	323	32.2	7.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.1 PK	74.0	-13.9	2.37 V	289	62.8	-2.7
2	2390.00	48.4 AV	54.0	-5.6	2.37 V	289	51.1	-2.7
3	*2437.00	112.2 PK			2.32 V	283	115.2	-3.0
4	*2437.00	100.5 AV			2.32 V	283	103.5	-3.0
5	2483.50	58.4 PK	74.0	-15.6	2.34 V	277	61.4	-3.0
6	2483.50	46.8 AV	54.0	-7.2	2.34 V	277	49.8	-3.0
7	4874.00	41.0 PK	74.0	-33.0	1.19 V	244	39.4	1.6
8	4874.00	39.6 AV	54.0	-14.4	1.19 V	244	38.0	1.6
9	7311.00	45.4 PK	74.0	-28.6	1.71 V	338	37.7	7.7
10	7311.00	37.9 AV	54.0	-16.1	1.71 V	338	30.2	7.7

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 10	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	113.9 PK			1.91 H	184	116.9	-3.0
2	*2457.00	100.8 AV			1.91 H	184	103.8	-3.0
3	2483.50	68.2 PK	74.0	-5.8	1.91 H	184	71.2	-3.0
4	<b>2483.50</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>1.91 H</b>	<b>184</b>	<b>56.9</b>	<b>-3.0</b>
5	4914.00	42.3 PK	74.0	-31.7	1.70 H	282	40.6	1.7
6	4914.00	39.8 AV	54.0	-14.2	1.70 H	282	38.1	1.7
7	7371.00	44.6 PK	74.0	-29.4	1.35 H	316	36.8	7.8
8	7371.00	37.7 AV	54.0	-16.3	1.35 H	316	29.9	7.8

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	108.7 PK			2.31 V	281	111.7	-3.0
2	*2457.00	96.6 AV			2.31 V	281	99.6	-3.0
3	2483.50	59.2 PK	74.0	-14.8	2.31 V	281	62.2	-3.0
4	2483.50	48.8 AV	54.0	-5.2	2.31 V	281	51.8	-3.0
5	4914.00	39.6 PK	74.0	-34.4	1.23 V	238	37.9	1.7
6	4914.00	37.3 AV	54.0	-16.7	1.23 V	238	35.6	1.7
7	7371.00	41.8 PK	74.0	-32.2	1.76 V	337	34.0	7.8
8	7371.00	35.6 AV	54.0	-18.4	1.76 V	337	27.8	7.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	112.3 PK			1.91 H	187	115.3	-3.0
2	*2462.00	99.2 AV			1.91 H	187	102.2	-3.0
3	2483.50	69.4 PK	74.0	-4.6	1.91 H	187	72.4	-3.0
4	2483.50	53.6 AV	54.0	-0.4	1.91 H	187	56.6	-3.0
5	4924.00	41.8 PK	74.0	-32.2	1.72 H	276	40.1	1.7
6	4924.00	38.6 AV	54.0	-15.4	1.72 H	276	36.9	1.7
7	7386.00	43.5 PK	74.0	-30.5	1.35 H	334	35.6	7.9
8	7386.00	36.7 AV	54.0	-17.3	1.35 H	334	28.8	7.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	106.2 PK			2.32 V	282	109.2	-3.0
2	*2462.00	94.5 AV			2.32 V	282	97.5	-3.0
3	2483.50	58.9 PK	74.0	-15.1	2.32 V	282	61.9	-3.0
4	2483.50	48.2 AV	54.0	-5.8	2.32 V	282	51.2	-3.0
5	4924.00	39.9 PK	74.0	-34.1	1.22 V	238	38.2	1.7
6	4924.00	37.6 AV	54.0	-16.4	1.22 V	238	35.9	1.7
7	7386.00	40.0 PK	74.0	-34.0	1.61 V	357	32.1	7.9
8	7386.00	34.4 AV	54.0	-19.6	1.61 V	357	26.5	7.9

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



**802.11ax (HE40)**

<b>CHANNEL</b>	TX Channel 3	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.6 PK	74.0	-4.4	1.97 H	180	72.3	-2.7
2	2390.00	53.7 AV	54.0	-0.3	1.97 H	180	56.4	-2.7
3	*2422.00	109.6 PK			1.97 H	180	112.5	-2.9
4	*2422.00	96.4 AV			1.97 H	180	99.3	-2.9
5	4844.00	38.0 PK	74.0	-36.0	1.72 H	271	36.4	1.6
6	4844.00	35.0 AV	54.0	-19.0	1.72 H	271	33.4	1.6
7	7266.00	45.0 PK	74.0	-29.0	1.34 H	316	37.2	7.8
8	7266.00	31.0 AV	54.0	-23.0	1.34 H	316	23.2	7.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.2 PK	74.0	-9.8	2.37 V	280	66.9	-2.7
2	2390.00	49.5 AV	54.0	-4.5	2.37 V	280	52.2	-2.7
3	*2422.00	104.5 PK			2.37 V	280	107.4	-2.9
4	*2422.00	92.2 AV			2.37 V	280	95.1	-2.9
5	4844.00	39.3 PK	74.0	-34.7	1.24 V	232	37.7	1.6
6	4844.00	36.0 AV	54.0	-18.0	1.24 V	232	34.4	1.6
7	7266.00	41.6 PK	74.0	-32.4	1.76 V	331	33.8	7.8
8	7266.00	34.0 AV	54.0	-20.0	1.76 V	331	26.2	7.8

**REMARKS:**

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

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

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.7 PK	74.0	-7.3	2.17 H	178	69.4	-2.7
2	2390.00	51.9 AV	54.0	-2.1	2.17 H	178	54.6	-2.7
3	*2437.00	109.8 PK			2.17 H	178	112.8	-3.0
4	*2437.00	97.1 AV			2.17 H	178	100.1	-3.0
5	2483.50	69.7 PK	74.0	-4.3	2.17 H	178	72.7	-3.0
6	2483.50	53.8 AV	54.0	-0.2	2.17 H	178	56.8	-3.0
7	4874.00	39.8 PK	74.0	-34.2	1.71 H	287	38.2	1.6
8	4874.00	37.8 AV	54.0	-16.2	1.71 H	287	36.2	1.6
9	7311.00	42.9 PK	74.0	-31.1	1.34 H	310	35.2	7.7
10	7311.00	36.1 AV	54.0	-17.9	1.34 H	310	28.4	7.7

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.3 PK	74.0	-11.7	2.35 V	281	65.0	-2.7
2	2390.00	48.1 AV	54.0	-5.9	2.35 V	281	50.8	-2.7
3	*2437.00	105.2 PK			2.35 V	281	108.2	-3.0
4	*2437.00	93.3 AV			2.35 V	281	96.3	-3.0
5	2483.50	65.5 PK	74.0	-8.5	2.35 V	281	68.5	-3.0
6	2483.50	50.2 AV	54.0	-3.8	2.35 V	281	53.2	-3.0
7	4874.00	39.8 PK	74.0	-34.2	1.25 V	228	38.2	1.6
8	4874.00	37.7 AV	54.0	-16.3	1.25 V	228	36.1	1.6
9	7311.00	42.5 PK	74.0	-31.5	1.75 V	326	34.8	7.7
10	7311.00	36.0 AV	54.0	-18.0	1.75 V	326	28.3	7.7

**REMARKS:**

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

<b>CHANNEL</b>	TX Channel 9	<b>DETECTOR FUNCTION</b>	Peak (PK)
<b>FREQUENCY RANGE</b>	1GHz ~ 25GHz		Average (AV)

**ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	108.9 PK			2.16 H	179	111.9	-3.0
2	*2452.00	95.9 AV			2.16 H	179	98.9	-3.0
3	2483.50	73.6 PK	74.0	-0.4	2.16 H	179	76.6	-3.0
<b>4</b>	<b>2483.50</b>	<b>53.9 AV</b>	<b>54.0</b>	<b>-0.1</b>	<b>2.16 H</b>	<b>179</b>	<b>56.9</b>	<b>-3.0</b>
5	4904.00	37.9 PK	74.0	-36.1	1.75 H	285	36.2	1.7
6	4904.00	34.6 AV	54.0	-19.4	1.75 H	285	32.9	1.7
7	7356.00	45.0 PK	74.0	-29.0	1.33 H	343	37.1	7.9
8	7356.00	32.1 AV	54.0	-21.9	1.33 H	343	24.2	7.9

**ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M**

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	103.5 PK			2.36 V	270	106.5	-3.0
2	*2452.00	91.2 AV			2.36 V	270	94.2	-3.0
3	2483.50	63.8 PK	74.0	-10.2	2.36 V	270	66.8	-3.0
4	2483.50	49.2 AV	54.0	-4.8	2.36 V	270	52.2	-3.0
5	4904.00	38.9 PK	74.0	-35.1	1.22 V	238	37.2	1.7
6	4904.00	36.3 AV	54.0	-17.7	1.22 V	238	34.6	1.7
7	7356.00	40.0 PK	74.0	-34.0	1.61 V	357	32.1	7.9
8	7356.00	33.4 AV	54.0	-20.6	1.61 V	357	25.5	7.9

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

## 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	Nov. 01, 2017	Oct. 31, 2018
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Nov. 15, 2017	Nov. 14, 2018
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100072	June 04, 2018	June 03, 2019
50 ohms Terminator	N/A	EMC-04	Nov. 01, 2017	Oct. 31, 2018
RF Cable	5D-FB	COCCAB-001	Sep. 29, 2017	Sep. 28, 2018
Fixed attenuator EMCI	STI02-2200-10	003	Mar. 16, 2018	Mar. 15, 2019
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: Aug. 29, 2018

#### 4.2.3 Test Procedures

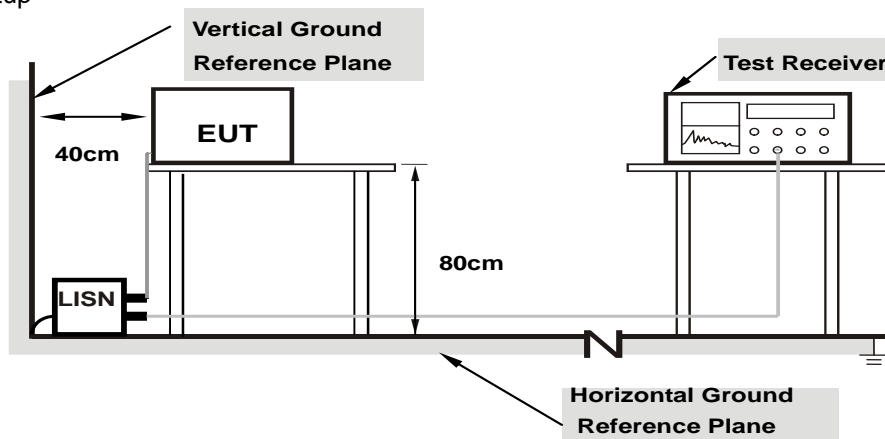
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

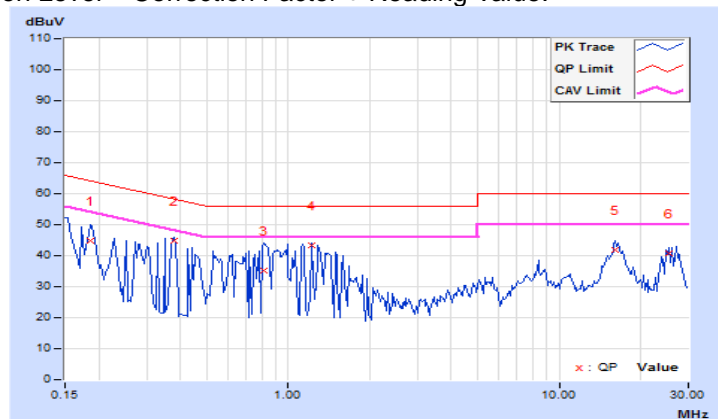
#### 4.2.7 Test Results (Mode 1)

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18516	10.05	34.89	32.50	44.94	42.55	64.25	54.25	-19.31	-11.70
2	0.38047	10.11	34.59	31.39	44.70	41.50	58.27	48.27	-13.57	-6.77
3	0.81406	10.14	25.04	6.74	35.18	16.88	56.00	46.00	-20.82	-29.12
<b>4</b>	<b>1.21484</b>	<b>10.16</b>	<b>33.30</b>	<b>31.68</b>	<b>43.46</b>	<b>41.84</b>	<b>56.00</b>	<b>46.00</b>	<b>-12.54</b>	<b>-4.16</b>
5	16.19141	10.89	30.96	21.30	41.85	32.19	60.00	50.00	-18.15	-17.81
6	25.46094	11.15	29.69	27.64	40.84	38.79	60.00	50.00	-19.16	-11.21

#### 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.

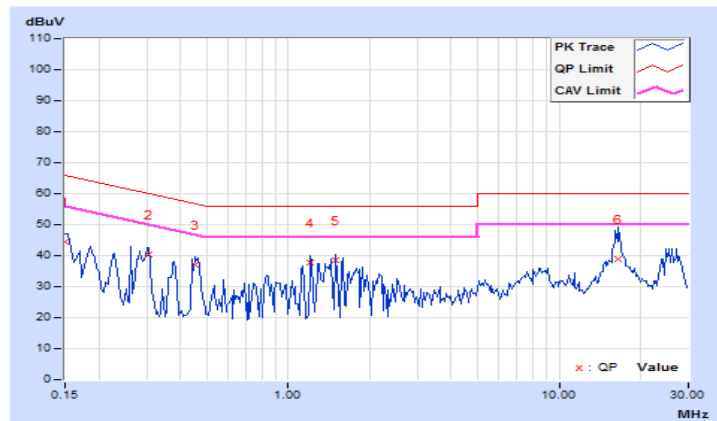


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
	1	0.15000	9.94	34.49	29.01	44.43	38.95	66.00	56.00	-21.57
2	0.30625	9.98	30.21	26.64	40.19	36.62	60.07	50.07	-19.88	-13.45
3	0.45469	10.00	27.16	25.23	37.16	35.23	56.79	46.79	-19.63	-11.56
4	1.21094	10.04	27.90	25.65	37.94	35.69	56.00	46.00	-18.06	-10.31
5	1.49219	10.05	28.32	20.73	38.37	30.78	56.00	46.00	-17.63	-15.22
6	16.60156	10.73	28.19	23.00	38.92	33.73	60.00	50.00	-21.08	-16.27

**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.

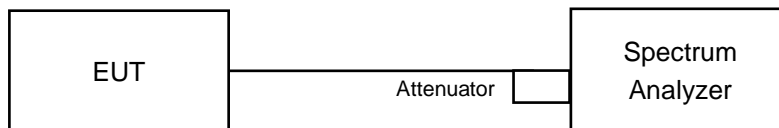


### 4.3 6dB Bandwidth Measurement

#### 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)  $\geq 3 \times$  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 (Mode 1)

## 802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	7.61	7.60	8.06	8.53	0.5	Pass
6	2437	9.11	8.58	8.55	9.58	0.5	Pass
11	2462	8.08	8.01	8.09	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	16.39	16.42	16.45	16.44	0.5	Pass
2	2417	16.37	16.37	16.44	16.42	0.5	Pass
6	2437	16.33	16.37	16.42	16.39	0.5	Pass
10	2457	16.36	16.39	16.45	16.44	0.5	Pass
11	2462	16.37	16.40	16.44	16.43	0.5	Pass

## 802.11ax (HE20)

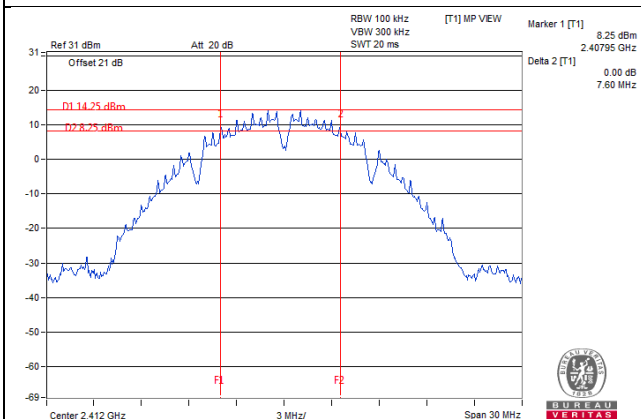
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	18.92	18.54	18.99	19.00	0.5	Pass
2	2417	18.93	18.96	19.05	18.95	0.5	Pass
6	2437	18.76	18.48	18.90	19.17	0.5	Pass
10	2457	18.72	18.55	18.84	18.93	0.5	Pass
11	2462	18.64	18.86	18.90	19.05	0.5	Pass

## 802.11ax (HE40)

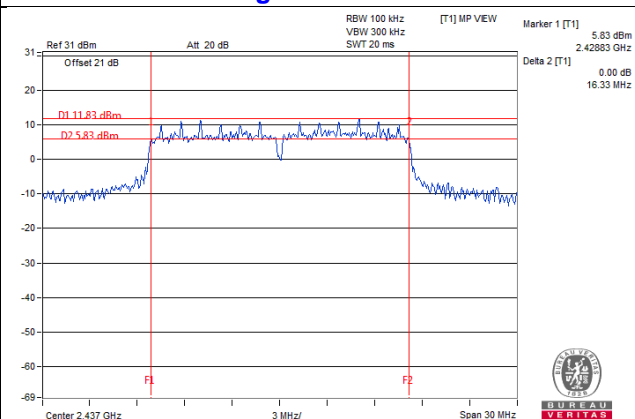
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
3	2422	38.03	37.76	38.02	38.14	0.5	Pass
6	2437	38.00	37.78	38.04	38.32	0.5	Pass
9	2452	37.67	37.51	38.03	38.12	0.5	Pass

### Spectrum Plot of Worst Value

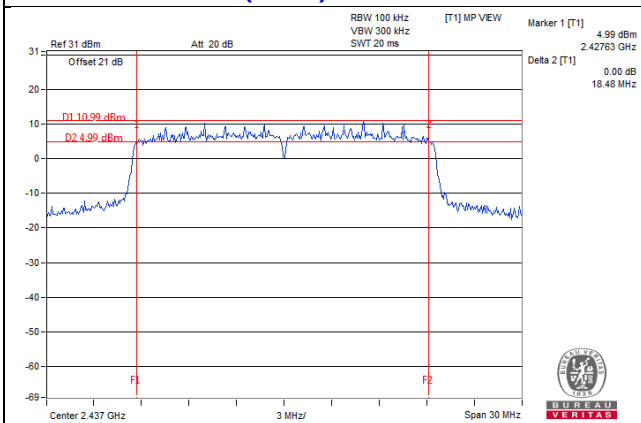
#### 802.11b / Chain 1 : CH1



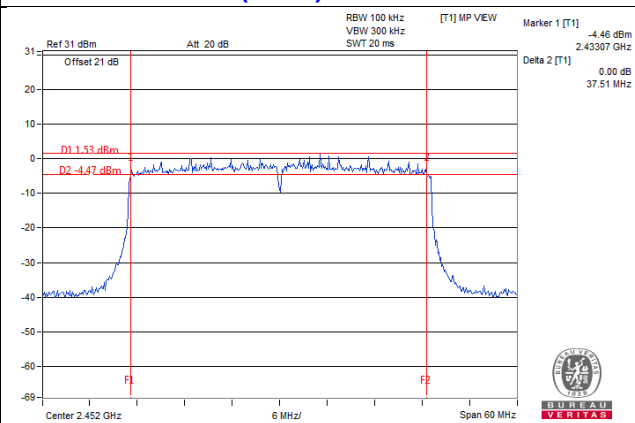
#### 802.11g / Chain 0 : CH6



#### 802.11ax (HE20) / Chain 1 : CH6



#### 802.11ax (HE40) / Chain 1 : CH9



## 4.3.8 Test Result (Mode 2)

## 802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	8.08	7.66	0.5	Pass
6	2437	10.04	9.57	0.5	Pass
11	2462	7.63	7.65	0.5	Pass

## 802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.42	16.40	0.5	Pass
2	2417	16.37	16.37	0.5	Pass
6	2437	16.08	16.36	0.5	Pass
10	2457	16.36	16.39	0.5	Pass
11	2462	16.40	16.40	0.5	Pass

## 802.11ax (HE20)

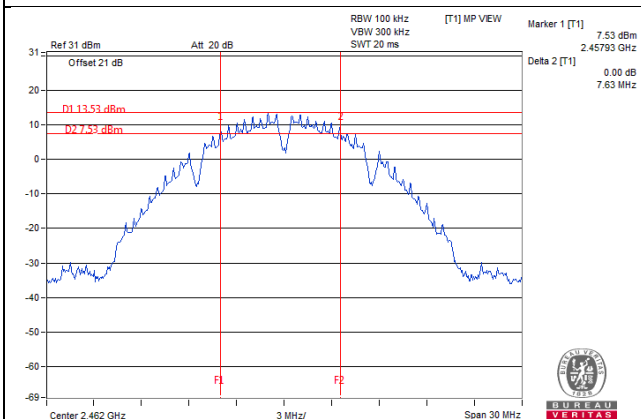
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	19.04	18.85	0.5	Pass
2	2417	18.85	19.02	0.5	Pass
6	2437	18.49	18.86	0.5	Pass
10	2457	18.88	18.91	0.5	Pass
11	2462	18.97	18.80	0.5	Pass

## 802.11ax (HE40)

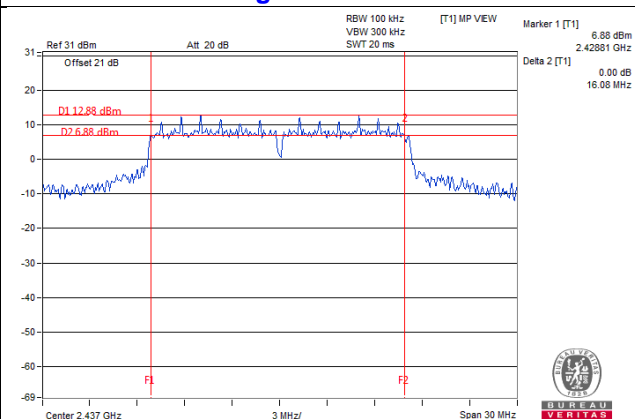
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	37.63	37.76	0.5	Pass
6	2437	37.52	37.80	0.5	Pass
9	2452	38.02	38.26	0.5	Pass

### Spectrum Plot of Worst Value

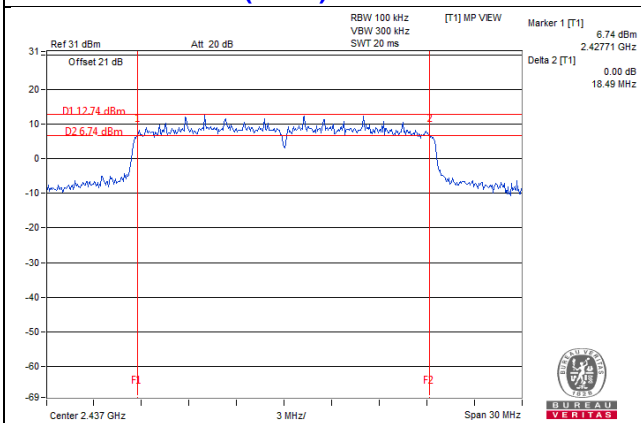
#### 802.11b / Chain 0 : CH11



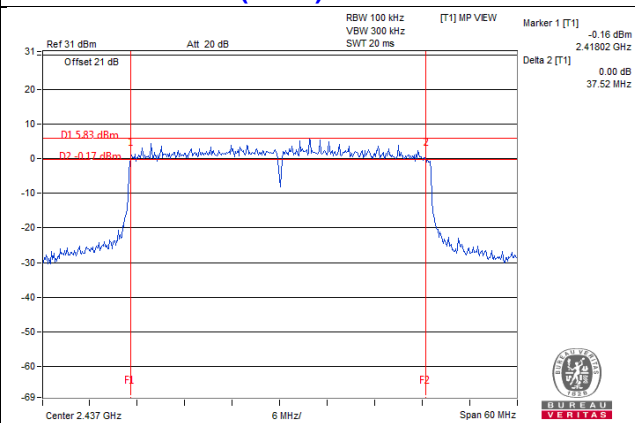
#### 802.11g / Chain 0 : CH6



#### 802.11ax (HE20) / Chain 0 : CH6



#### 802.11ax (HE40) / Chain 0 : CH6



#### 4.3.9 Test Result (Mode 3)

##### 802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	9.56	0.5	Pass
6	2437	9.09	0.5	Pass
11	2462	8.14	0.5	Pass

##### 802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.38	0.5	Pass
2	2417	16.37	0.5	Pass
6	2437	16.40	0.5	Pass
10	2457	16.40	0.5	Pass
11	2462	16.39	0.5	Pass

##### 802.11ax (HE20)

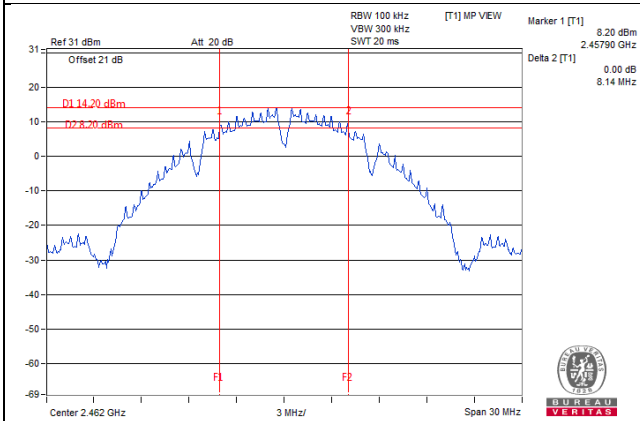
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	18.87	0.5	Pass
2	2417	18.61	0.5	Pass
6	2437	18.60	0.5	Pass
10	2457	18.67	0.5	Pass
11	2462	18.79	0.5	Pass

##### 802.11ax (HE40)

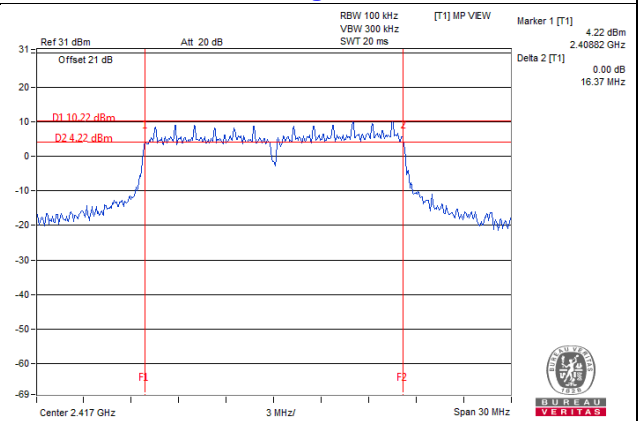
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3	2422	37.45	0.5	Pass
6	2437	37.54	0.5	Pass
9	2452	37.55	0.5	Pass

### Spectrum Plot of Worst Value

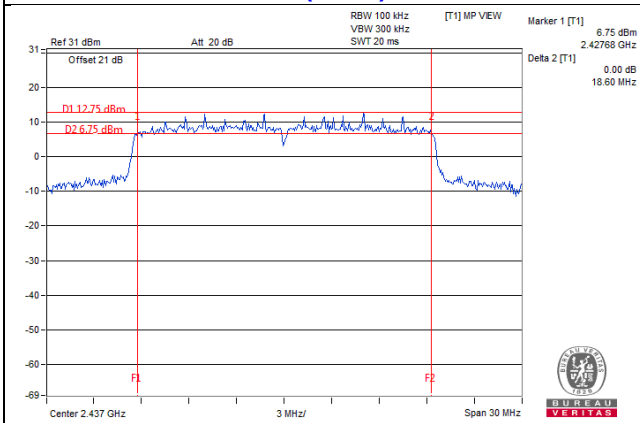
#### 802.11b / CH11



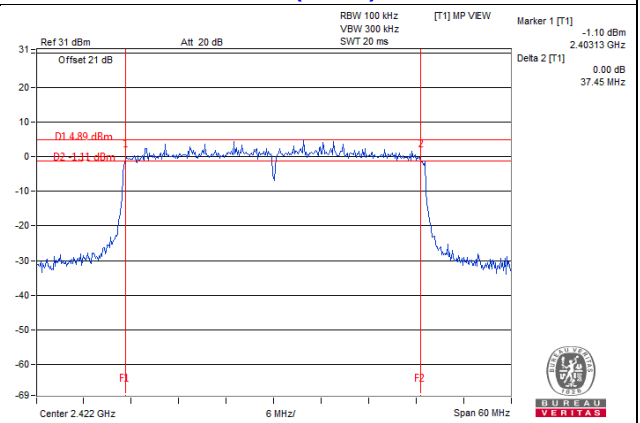
#### 802.11g / CH2



#### 802.11ax (HE20) / CH6



#### 802.11ax (HE40) / 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,

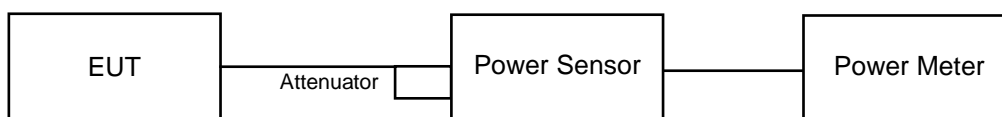
Array Gain = 0 dB (i.e., no array gain) for  $N_{ANT} \leq 4$ ;

Array Gain = 0 dB (i.e., no array gain) for channel widths  $\geq 40$  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 (Mode 1)

**Non-Beamforming 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	21.93	21.74	21.85	21.98	616.104	27.90	30.00	Pass
6	2437	23.36	23.29	23.27	23.61	872.013	29.41	30.00	Pass
11	2462	20.78	20.87	20.78	21.08	489.761	26.90	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	16.81	16.66	17.11	17.08	196.772	22.94	30.00	Pass
2	2417	18.67	18.68	19.07	18.95	306.659	24.87	30.00	Pass
6	2437	22.02	22.08	22.42	22.36	667.426	28.24	30.00	Pass
10	2457	17.58	17.66	17.96	17.88	239.518	23.79	30.00	Pass
11	2462	15.68	15.77	16.13	16.05	156.032	21.93	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	16.38	16.03	16.73	16.88	179.389	22.54	30.00	Pass
2	2417	17.22	16.98	17.49	17.67	217.195	23.37	30.00	Pass
6	2437	21.29	21.22	21.61	21.73	560.833	27.49	30.00	Pass
10	2457	17.23	16.94	17.48	17.57	215.4	23.33	30.00	Pass
11	2462	15.15	15.01	15.36	15.70	135.94	21.33	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	16.07	15.63	16.19	16.62	164.528	22.16	30.00	Pass
6	2437	17.32	16.71	17.23	17.38	208.379	23.19	30.00	Pass
9	2452	15.10	14.47	15.07	15.44	127.481	21.05	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	16.70	16.24	16.96	17.09	189.674	22.78	30.00	Pass
2	2417	17.54	17.12	17.81	17.98	231.478	23.65	30.00	Pass
6	2437	21.54	21.45	21.84	21.95	591.63	27.72	30.00	Pass
10	2457	17.48	17.15	17.70	17.88	228.116	23.58	30.00	Pass
11	2462	15.46	15.16	15.68	16.01	144.851	21.61	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	16.32	15.84	16.43	16.94	174.611	22.42	30.00	Pass
6	2437	17.82	17.21	17.80	18.13	238.405	23.77	30.00	Pass
9	2452	15.35	14.81	15.32	15.70	135.741	21.33	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	16.38	16.03	16.73	16.88	179.389	22.54	28.26	Pass
2	2417	17.22	16.98	17.49	17.67	217.195	23.37	28.26	Pass
6	2437	21.29	21.22	21.61	21.73	560.833	27.49	28.26	Pass
10	2457	17.23	16.94	17.48	17.57	215.4	23.33	28.26	Pass
11	2462	15.15	15.01	15.36	15.70	135.94	21.33	28.26	Pass

**Note:** 1. Directional gain = 7.74dBi > 6dBi, so the power limit shall be reduced to  $30-(7.74-6) = 28.26$ dBm.

**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	16.07	15.63	16.19	16.62	164.528	22.16	28.26	Pass
6	2437	17.32	16.71	17.23	17.38	208.379	23.19	28.26	Pass
9	2452	15.10	14.47	15.07	15.44	127.481	21.05	28.26	Pass

**Note:** 1. Directional gain = 7.74dBi > 6dBi, so the power limit shall be reduced to  $30-(7.74-6) = 28.26$ dBm.

**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	16.70	16.24	16.96	17.09	189.674	22.78	28.26	Pass
2	2417	17.54	17.12	17.81	17.98	231.478	23.65	28.26	Pass
6	2437	21.54	21.45	21.84	21.95	591.63	27.72	28.26	Pass
10	2457	17.48	17.15	17.70	17.88	228.116	23.58	28.26	Pass
11	2462	15.46	15.16	15.68	16.01	144.851	21.61	28.26	Pass

**Note:** 1. Directional gain = 7.74dBi > 6dBi, so the power limit shall be reduced to  $30-(7.74-6) = 28.26$ dBm.

**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	16.32	15.84	16.43	16.94	174.611	22.42	28.26	Pass
6	2437	17.82	17.21	17.80	18.13	238.405	23.77	28.26	Pass
9	2452	15.35	14.81	15.32	15.70	135.741	21.33	28.26	Pass

**Note:** 1. Directional gain = 7.74dBi > 6dBi, so the power limit shall be reduced to  $30-(7.74-6) = 28.26$ dBm.

#### 4.4.8 Test Results (Mode 2)

##### Non-Beamforming Mode:

##### 802.11b

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	22.36	22.16	336.624	25.27	30.00	Pass
6	2437	23.73	24.28	503.965	27.02	30.00	Pass
11	2462	21.30	21.77	285.21	24.55	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				
1	2412	17.98	17.89	124.324	20.95	30.00	Pass
2	2417	18.84	18.88	153.828	21.87	30.00	Pass
6	2437	22.48	22.82	368.437	25.66	30.00	Pass
10	2457	18.78	18.83	151.893	21.82	30.00	Pass
11	2462	16.84	16.98	98.194	19.92	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				
1	2412	17.85	17.43	116.289	20.66	30.00	Pass
2	2417	18.74	18.34	143.051	21.55	30.00	Pass
6	2437	22.47	22.39	349.984	25.44	30.00	Pass
10	2457	18.63	18.36	141.495	21.51	30.00	Pass
11	2462	16.68	16.52	91.434	19.61	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				
3	2422	17.42	17.08	106.258	20.26	30.00	Pass
6	2437	18.83	18.54	147.834	21.70	30.00	Pass
9	2452	16.39	16.04	83.73	19.23	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				
1	2412	18.10	17.65	122.775	20.89	30.00	Pass
2	2417	18.99	18.65	152.532	21.83	30.00	Pass
6	2437	22.72	22.73	374.567	25.74	30.00	Pass
10	2457	18.88	18.61	149.879	21.76	30.00	Pass
11	2462	16.94	16.83	97.626	19.90	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				
3	2422	17.74	17.46	115.148	20.61	30.00	Pass
6	2437	19.11	18.89	158.916	22.01	30.00	Pass
9	2452	16.75	16.44	91.37	19.61	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				
1	2412	17.85	17.43	116.289	20.66	29.88	Pass
2	2417	18.74	18.34	143.051	21.55	29.88	Pass
6	2437	22.47	22.39	349.984	25.44	29.88	Pass
10	2457	18.63	18.36	141.495	21.51	29.88	Pass
11	2462	16.68	16.52	91.434	19.61	29.88	Pass

**Note:** 1. Directional gain = 6.12dBi > 6dBi, so the power limit shall be reduced to  $30-(6.12-6) = 29.88\text{dBm}$ .

**VHT40**

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	17.42	17.08	106.258	20.26	29.88	Pass
6	2437	18.83	18.54	147.834	21.70	29.88	Pass
9	2452	16.39	16.04	83.73	19.23	29.88	Pass

**Note:** 1. Directional gain = 6.12dBi > 6dBi, so the power limit shall be reduced to  $30-(6.12-6) = 29.88\text{dBm}$ .

**802.11ax (HE20)**

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	18.10	17.65	122.775	20.89	29.88	Pass
2	2417	18.99	18.65	152.532	21.83	29.88	Pass
6	2437	22.72	22.73	374.567	25.74	29.88	Pass
10	2457	18.88	18.61	149.879	21.76	29.88	Pass
11	2462	16.94	16.83	97.626	19.90	29.88	Pass

**Note:** 1. Directional gain = 6.12dBi > 6dBi, so the power limit shall be reduced to  $30-(6.12-6) = 29.88\text{dBm}$ .

**802.11ax (HE40)**

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	17.74	17.46	115.148	20.61	29.88	Pass
6	2437	19.11	18.89	158.916	22.01	29.88	Pass
9	2452	16.75	16.44	91.37	19.61	29.88	Pass

**Note:** 1. Directional gain = 6.12dBi > 6dBi, so the power limit shall be reduced to  $30-(6.12-6) = 29.88\text{dBm}$ .

#### 4.4.9 Test Results (Mode 3)

##### Non-Beamforming Mode:

##### 802.11b

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	230.675	23.63	30.00	Pass
6	2437	258.226	24.12	30.00	Pass
11	2462	163.682	22.14	30.00	Pass

##### 802.11g

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	89.331	19.51	30.00	Pass
2	2417	110.154	20.42	30.00	Pass
6	2437	216.77	23.36	30.00	Pass
10	2457	89.743	19.53	30.00	Pass
11	2462	60.954	17.85	30.00	Pass

##### VHT20

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	81.47	19.11	30.00	Pass
2	2417	104.954	20.21	30.00	Pass
6	2437	205.116	23.12	30.00	Pass
10	2457	84.14	19.25	30.00	Pass
11	2462	51.286	17.10	30.00	Pass

##### VHT40

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
3	2422	68.234	18.34	30.00	Pass
6	2437	84.723	19.28	30.00	Pass
9	2452	48.978	16.90	30.00	Pass

**802.11ax (HE20)**

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	84.333	19.26	30.00	Pass
2	2417	107.647	20.32	30.00	Pass
6	2437	216.77	23.36	30.00	Pass
10	2457	85.507	19.32	30.00	Pass
11	2462	52.602	17.21	30.00	Pass

**802.11ax (HE40)**

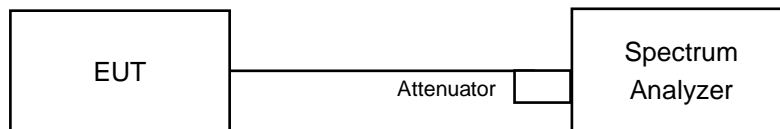
Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
3	2422	72.111	18.58	30.00	Pass
6	2437	90.365	19.56	30.00	Pass
9	2452	50.466	17.03	30.00	Pass

## 4.5 Power Spectral Density Measurement

### 4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm 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:  $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$ .
- e) Set VBW  $\geq 3 \times \text{RBW}$ .
- f) Detector = power averaging (RMS) or sample detector (when RMS not available).
- g) Ensure that the number of measurement points in the sweep  $\geq 2 \times \text{span}/\text{RBW}$ .
- 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 (Mode 1)

## 802.11b

TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=4) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-7.24	6.02	1.15	-0.07	6.26	Pass
	6	2437	-7.37	6.02	1.15	-0.20	6.26	Pass
	11	2462	-8.38	6.02	1.15	-1.21	6.26	Pass
1	1	2412	-7.80	6.02	1.15	-0.63	6.26	Pass
	6	2437	-6.50	6.02	1.15	0.67	6.26	Pass
	11	2462	-7.94	6.02	1.15	-0.77	6.26	Pass
2	1	2412	-6.88	6.02	1.15	0.29	6.26	Pass
	6	2437	-6.70	6.02	1.15	0.47	6.26	Pass
	11	2462	-9.20	6.02	1.15	-2.03	6.26	Pass
3	1	2412	-6.83	6.02	1.15	0.34	6.26	Pass
	6	2437	-6.83	6.02	1.15	0.34	6.26	Pass
	11	2462	-6.76	6.02	1.15	0.41	6.26	Pass

- Note:** 1. Directional gain = 7.74dBi > 6dBi, so the power density limit shall be reduced to  $8-(7.74-6) = 6.26\text{dBm}$ .
2. Refer to section 3.3 for duty cycle spectrum plot.

**802.11g**

TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=4) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-14.69	6.02	0.34	-8.33	6.26	Pass
	2	2417	-13.81	6.02	0.34	-7.45	6.26	Pass
	6	2437	-9.85	6.02	0.34	-3.49	6.26	Pass
	10	2457	-15.06	6.02	0.34	-8.70	6.26	Pass
	11	2462	-17.00	6.02	0.34	-10.64	6.26	Pass
1	1	2412	-15.03	6.02	0.34	-8.67	6.26	Pass
	2	2417	-12.99	6.02	0.34	-6.63	6.26	Pass
	6	2437	-10.14	6.02	0.34	-3.78	6.26	Pass
	10	2457	-14.49	6.02	0.34	-8.13	6.26	Pass
	11	2462	-16.30	6.02	0.34	-9.94	6.26	Pass
2	1	2412	-15.73	6.02	0.34	-9.37	6.26	Pass
	2	2417	-13.52	6.02	0.34	-7.16	6.26	Pass
	6	2437	-10.61	6.02	0.34	-4.25	6.26	Pass
	10	2457	-14.55	6.02	0.34	-8.19	6.26	Pass
	11	2462	-16.97	6.02	0.34	-10.61	6.26	Pass
3	1	2412	-15.66	6.02	0.34	-9.30	6.26	Pass
	2	2417	-13.51	6.02	0.34	-7.15	6.26	Pass
	6	2437	-10.04	6.02	0.34	-3.68	6.26	Pass
	10	2457	-15.18	6.02	0.34	-8.82	6.26	Pass
	11	2462	-16.90	6.02	0.34	-10.54	6.26	Pass

**Note:** 1. Directional gain = 7.74dBi > 6dBi, so the power density limit shall be reduced to  $8-(7.74-6) = 6.26\text{dBm}$ .

2. Refer to section 3.3 for duty cycle spectrum plot.

**VHT20**

TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=4) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-16.16	6.02	0.25	-9.89	6.26	Pass
	2	2417	-15.61	6.02	0.25	-9.34	6.26	Pass
	6	2437	-11.43	6.02	0.25	-5.16	6.26	Pass
	10	2457	-15.55	6.02	0.25	-9.28	6.26	Pass
	11	2462	-17.81	6.02	0.25	-11.54	6.26	Pass
1	1	2412	-16.26	6.02	0.25	-9.99	6.26	Pass
	2	2417	-15.00	6.02	0.25	-8.73	6.26	Pass
	6	2437	-11.16	6.02	0.25	-4.89	6.26	Pass
	10	2457	-15.31	6.02	0.25	-9.04	6.26	Pass
	11	2462	-17.60	6.02	0.25	-11.33	6.26	Pass
2	1	2412	-16.26	6.02	0.25	-9.99	6.26	Pass
	2	2417	-15.52	6.02	0.25	-9.25	6.26	Pass
	6	2437	-12.11	6.02	0.25	-5.84	6.26	Pass
	10	2457	-15.85	6.02	0.25	-9.58	6.26	Pass
	11	2462	-17.87	6.02	0.25	-11.60	6.26	Pass
3	1	2412	-16.04	6.02	0.25	-9.77	6.26	Pass
	2	2417	-15.09	6.02	0.25	-8.82	6.26	Pass
	6	2437	-9.98	6.02	0.25	-3.71	6.26	Pass
	10	2457	-14.97	6.02	0.25	-8.70	6.26	Pass
	11	2462	-17.35	6.02	0.25	-11.08	6.26	Pass

**Note:** 1. Directional gain = 7.74dBi > 6dBi, so the power density limit shall be reduced to  $8 - (7.74 - 6) = 6.26$  dBm.

2. Refer to section 3.3 for duty cycle spectrum plot.

**VHT40**

TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=4) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	3	2422	-19.00	6.02	0.16	-12.82	6.26	Pass
	6	2437	-17.31	6.02	0.16	-11.13	6.26	Pass
	9	2452	-19.50	6.02	0.16	-13.32	6.26	Pass
1	3	2422	-19.73	6.02	0.16	-13.55	6.26	Pass
	6	2437	-18.23	6.02	0.16	-12.05	6.26	Pass
	9	2452	-20.79	6.02	0.16	-14.61	6.26	Pass
2	3	2422	-18.26	6.02	0.16	-12.08	6.26	Pass
	6	2437	-18.59	6.02	0.16	-12.41	6.26	Pass
	9	2452	-20.75	6.02	0.16	-14.57	6.26	Pass
3	3	2422	-18.89	6.02	0.16	-12.71	6.26	Pass
	6	2437	-17.73	6.02	0.16	-11.55	6.26	Pass
	9	2452	-20.01	6.02	0.16	-13.83	6.26	Pass

- Note:** 1. Directional gain = 7.74dBi > 6dBi, so the power density limit shall be reduced to  $8-(7.74-6) = 6.26$ dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

**802.11ax (HE20)**

TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=4) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-16.91	6.02	0.20	-10.69	6.26	Pass
	2	2417	-17.15	6.02	0.20	-10.93	6.26	Pass
	6	2437	-11.81	6.02	0.20	-5.59	6.26	Pass
	10	2457	-16.76	6.02	0.20	-10.54	6.26	Pass
	11	2462	-18.56	6.02	0.20	-12.34	6.26	Pass
1	1	2412	-17.59	6.02	0.20	-11.37	6.26	Pass
	2	2417	-16.29	6.02	0.20	-10.07	6.26	Pass
	6	2437	-12.45	6.02	0.20	-6.23	6.26	Pass
	10	2457	-16.26	6.02	0.20	-10.04	6.26	Pass
	11	2462	-18.40	6.02	0.20	-12.18	6.26	Pass
2	1	2412	-17.28	6.02	0.20	-11.06	6.26	Pass
	2	2417	-17.14	6.02	0.20	-10.92	6.26	Pass
	6	2437	-12.67	6.02	0.20	-6.45	6.26	Pass
	10	2457	-16.42	6.02	0.20	-10.20	6.26	Pass
	11	2462	-18.67	6.02	0.20	-12.45	6.26	Pass
3	1	2412	-16.71	6.02	0.20	-10.49	6.26	Pass
	2	2417	-16.18	6.02	0.20	-9.96	6.26	Pass
	6	2437	-13.20	6.02	0.20	-6.98	6.26	Pass
	10	2457	-16.65	6.02	0.20	-10.43	6.26	Pass
	11	2462	-18.72	6.02	0.20	-12.50	6.26	Pass

**Note:** 1. Directional gain = 7.74dBi > 6dBi, so the power density limit shall be reduced to  $8-(7.74-6) = 6.26$ dBm.

2. Refer to section 3.3 for duty cycle spectrum plot.

**802.11ax (HE40)**

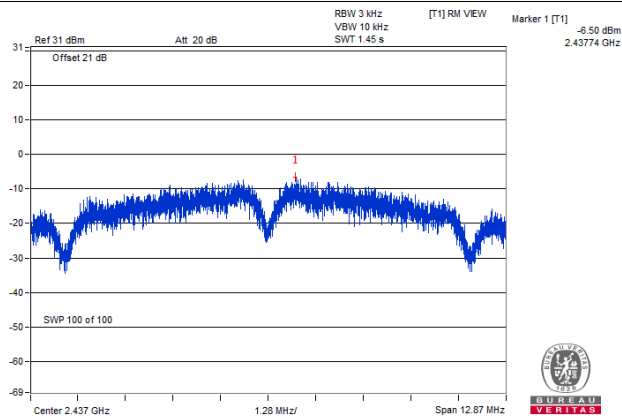
TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=4) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	3	2422	-20.03	6.02	0.20	-13.81	6.26	Pass
	6	2437	-18.74	6.02	0.20	-12.52	6.26	Pass
	9	2452	-20.90	6.02	0.20	-14.68	6.26	Pass
1	3	2422	-20.63	6.02	0.20	-14.41	6.26	Pass
	6	2437	-19.78	6.02	0.20	-13.56	6.26	Pass
	9	2452	-21.35	6.02	0.20	-15.13	6.26	Pass
2	3	2422	-20.18	6.02	0.20	-13.96	6.26	Pass
	6	2437	-18.21	6.02	0.20	-11.99	6.26	Pass
	9	2452	-20.75	6.02	0.20	-14.53	6.26	Pass
3	3	2422	-19.74	6.02	0.20	-13.52	6.26	Pass
	6	2437	-19.13	6.02	0.20	-12.91	6.26	Pass
	9	2452	-20.96	6.02	0.20	-14.74	6.26	Pass

**Note:** 1. Directional gain = 7.74dBi > 6dBi, so the power density limit shall be reduced to  $8-(7.74-6) = 6.26$ dBm.

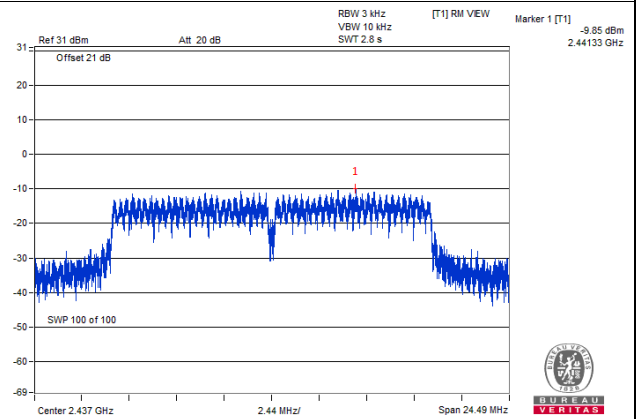
2. Refer to section 3.3 for duty cycle spectrum plot.

### Spectrum Plot of Worst Value

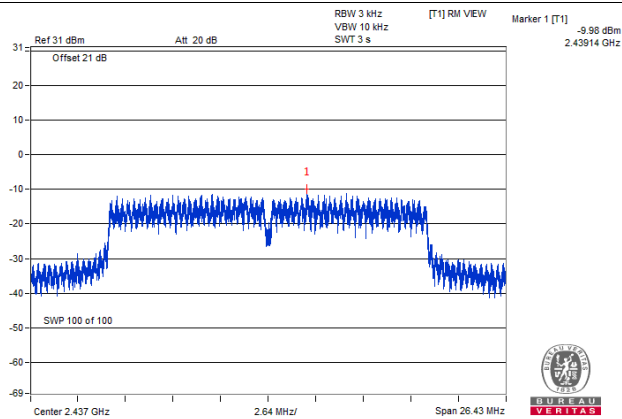
**802.11b / Chain 1 : CH6**



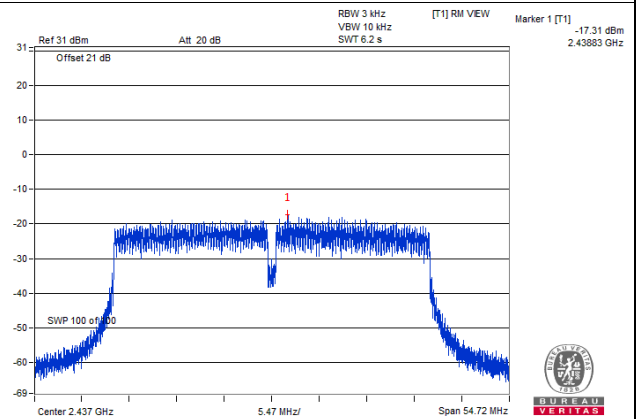
**802.11g / Chain 0 : CH6**



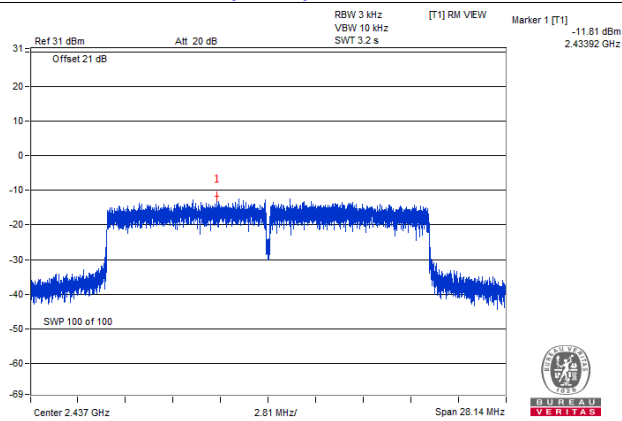
**VHT20 / Chain 3 : CH6**



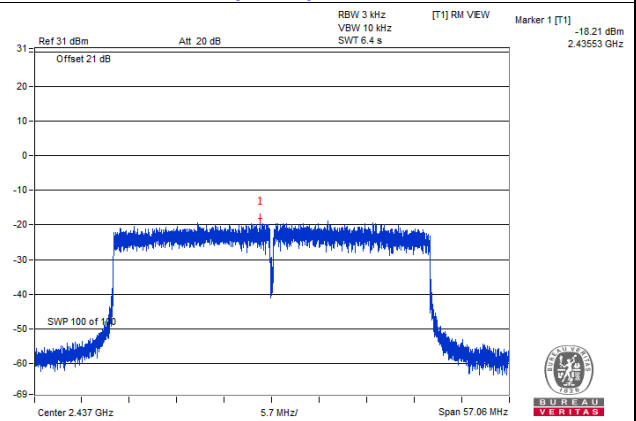
**VHT40 / Chain 0 : CH6**



**802.11ax (HE20) / Chain 0 : CH6**



**802.11ax (HE40) / Chain 2 : CH6**



#### 4.5.8 Test Results (Mode 2)

##### 802.11b

TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=2) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-6.60	3.01	1.15	-2.44	7.88	Pass
	6	2437	-5.84	3.01	1.15	-1.68	7.88	Pass
	11	2462	-8.58	3.01	1.15	-4.42	7.88	Pass
1	1	2412	-6.79	3.01	1.15	-2.63	7.88	Pass
	6	2437	-6.58	3.01	1.15	-2.42	7.88	Pass
	11	2462	-7.92	3.01	1.15	-3.76	7.88	Pass

**Note:** 1. Directional gain = 6.12dBi > 6dBi, so the power density limit shall be reduced to  $8-(6.12-6) = 7.88\text{dBm}$ .

2. Refer to section 3.3 for duty cycle spectrum plot.

##### 802.11g

TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=2) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-14.26	3.01	0.34	-10.91	7.88	Pass
	2	2417	-13.54	3.01	0.34	-10.19	7.88	Pass
	6	2437	-9.19	3.01	0.34	-5.84	7.88	Pass
	10	2457	-14.03	3.01	0.34	-10.68	7.88	Pass
	11	2462	-14.95	3.01	0.34	-11.60	7.88	Pass
1	1	2412	-14.30	3.01	0.34	-10.95	7.88	Pass
	2	2417	-12.80	3.01	0.34	-9.45	7.88	Pass
	6	2437	-9.74	3.01	0.34	-6.39	7.88	Pass
	10	2457	-12.96	3.01	0.34	-9.61	7.88	Pass
	11	2462	-15.01	3.01	0.34	-11.66	7.88	Pass

**Note:** 1. Directional gain = 6.12dBi > 6dBi, so the power density limit shall be reduced to  $8-(6.12-6) = 7.88\text{dBm}$ .

2. Refer to section 3.3 for duty cycle spectrum plot.



### VHT20

TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=2) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-14.92	3.01	0.25	-11.66	7.88	Pass
	2	2417	-12.69	3.01	0.25	-9.43	7.88	Pass
	6	2437	-9.84	3.01	0.25	-6.58	7.88	Pass
	10	2457	-13.39	3.01	0.25	-10.13	7.88	Pass
	11	2462	-15.65	3.01	0.25	-12.39	7.88	Pass
1	1	2412	-15.20	3.01	0.25	-11.94	7.88	Pass
	2	2417	-14.07	3.01	0.25	-10.81	7.88	Pass
	6	2437	-10.18	3.01	0.25	-6.92	7.88	Pass
	10	2457	-14.25	3.01	0.25	-10.99	7.88	Pass
	11	2462	-16.38	3.01	0.25	-13.12	7.88	Pass

**Note:** 1. Directional gain = 6.12dBi > 6dBi, so the power density limit shall be reduced to  $8-(6.12-6) = 7.88\text{dBm}$ .

2. Refer to section 3.3 for duty cycle spectrum plot.

### VHT40

TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=2) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	3	2422	-17.37	3.01	0.16	-14.20	7.88	Pass
	6	2437	-16.30	3.01	0.16	-13.13	7.88	Pass
	9	2452	-18.76	3.01	0.16	-15.59	7.88	Pass
1	3	2422	-18.10	3.01	0.16	-14.93	7.88	Pass
	6	2437	-16.81	3.01	0.16	-13.64	7.88	Pass
	9	2452	-18.43	3.01	0.16	-15.26	7.88	Pass

**Note:** 1. Directional gain = 6.12dBi > 6dBi, so the power density limit shall be reduced to  $8-(6.12-6) = 7.88\text{dBm}$ .

2. Refer to section 3.3 for duty cycle spectrum plot.

### 802.11ax (HE20)

TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=2) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-16.01	3.01	0.20	-12.80	7.88	Pass
	2	2417	-15.23	3.01	0.20	-12.02	7.88	Pass
	6	2437	-11.25	3.01	0.20	-8.04	7.88	Pass
	10	2457	-15.30	3.01	0.20	-12.09	7.88	Pass
	11	2462	-17.19	3.01	0.20	-13.98	7.88	Pass
1	1	2412	-16.44	3.01	0.20	-13.23	7.88	Pass
	2	2417	-15.63	3.01	0.20	-12.42	7.88	Pass
	6	2437	-11.59	3.01	0.20	-8.38	7.88	Pass
	10	2457	-16.14	3.01	0.20	-12.93	7.88	Pass
	11	2462	-17.17	3.01	0.20	-13.96	7.88	Pass

**Note:** 1. Directional gain = 6.12dBi > 6dBi, so the power density limit shall be reduced to  $8-(6.12-6) = 7.88\text{dBm}$ .

2. Refer to section 3.3 for duty cycle spectrum plot.

### 802.11ax (HE40)

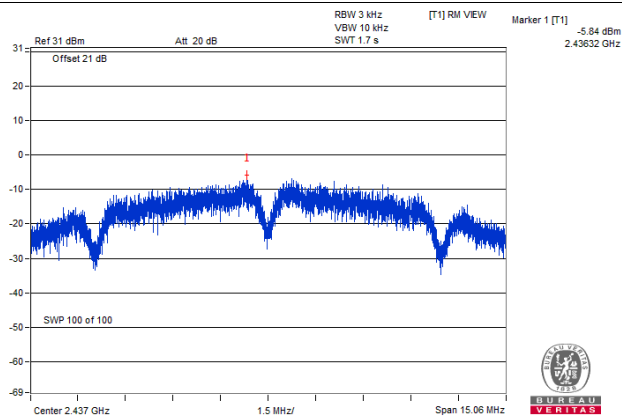
TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=2) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	3	2422	-19.07	3.01	0.20	-15.86	7.88	Pass
	6	2437	-16.95	3.01	0.20	-13.74	7.88	Pass
	9	2452	-19.73	3.01	0.20	-16.52	7.88	Pass
1	3	2422	-19.56	3.01	0.20	-16.35	7.88	Pass
	6	2437	-17.14	3.01	0.20	-13.93	7.88	Pass
	9	2452	-20.66	3.01	0.20	-17.45	7.88	Pass

**Note:** 1. Directional gain = 6.12dBi > 6dBi, so the power density limit shall be reduced to  $8-(6.12-6) = 7.88\text{dBm}$ .

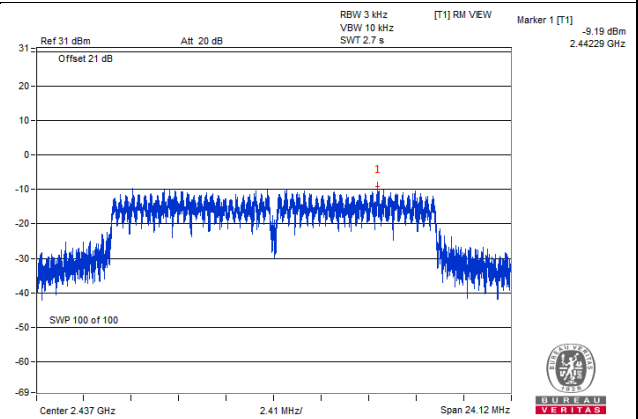
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

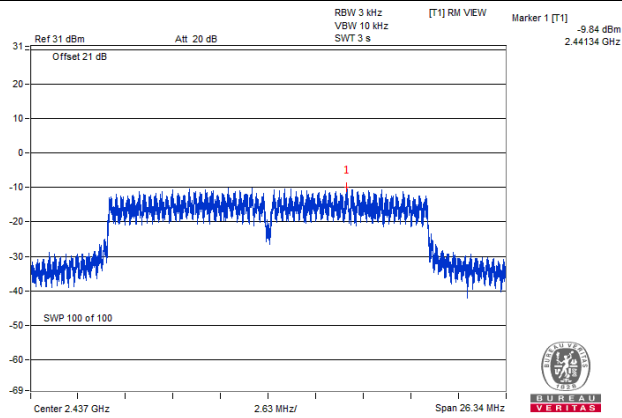
802.11b / Chain 0 : CH6



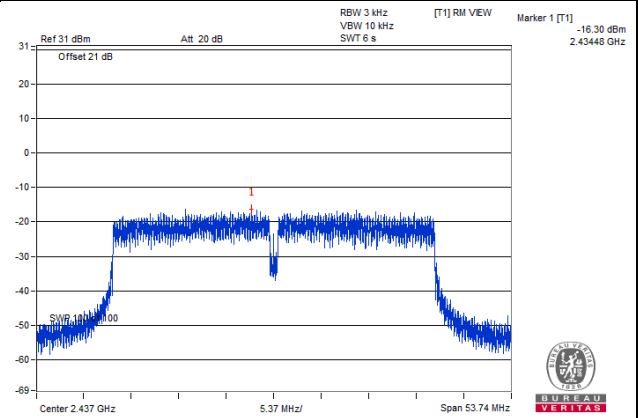
802.11g / Chain 0 : CH6



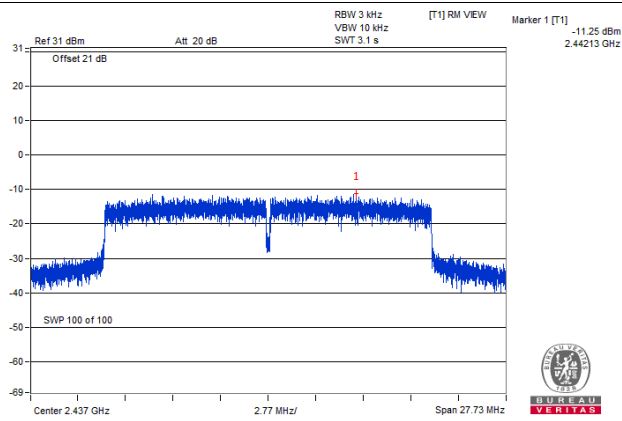
VHT20 / Chain 0 : CH6



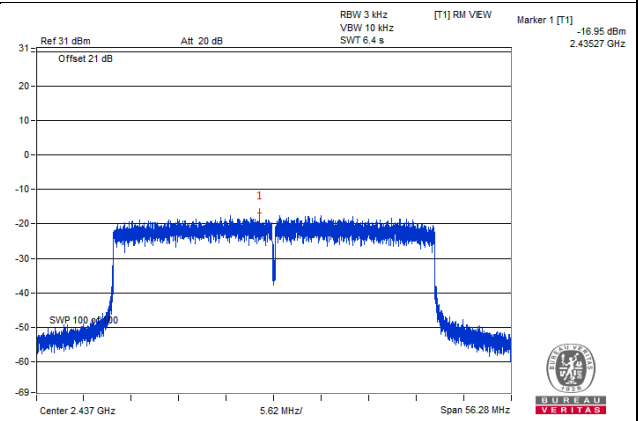
VHT40 / Chain 0 : CH6



802.11ax (HE20) / Chain 0 : CH6



802.11ax (HE40) / Chain 0 : CH6



#### 4.5.9 Test Results (Mode 3)

##### 802.11b

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/3kHz)	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-6.07	1.15	-4.92	8.00	Pass
6	2437	-6.30	1.15	-5.15	8.00	Pass
11	2462	-6.95	1.15	-5.80	8.00	Pass

**Note:** 1. Refer to section 3.3 for duty cycle spectrum plot.

##### 802.11g

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/3kHz)	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-12.39	0.34	-12.05	8.00	Pass
2	2417	-10.98	0.34	-10.64	8.00	Pass
6	2437	-9.43	0.34	-9.09	8.00	Pass
10	2457	-12.45	0.34	-12.11	8.00	Pass
11	2462	-14.38	0.34	-14.04	8.00	Pass

**Note:** 1. Refer to section 3.3 for duty cycle spectrum plot.

##### VHT20

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/3kHz)	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-13.93	0.25	-13.68	8.00	Pass
2	2417	-12.78	0.25	-12.53	8.00	Pass
6	2437	-9.90	0.25	-9.65	8.00	Pass
10	2457	-13.91	0.25	-13.66	8.00	Pass
11	2462	-15.59	0.25	-15.34	8.00	Pass

**Note:** 1. Refer to section 3.3 for duty cycle spectrum plot.

##### VHT40

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/3kHz)	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
3	2422	-16.51	0.16	-16.35	8.00	Pass
6	2437	-15.58	0.16	-15.42	8.00	Pass
9	2452	-18.70	0.16	-18.54	8.00	Pass

**Note:** 1. Refer to section 3.3 for duty cycle spectrum plot.

### 802.11ax (HE20)

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/3kHz)	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-14.66	0.20	-14.46	8.00	Pass
2	2417	-13.85	0.20	-13.65	8.00	Pass
6	2437	-11.18	0.20	-10.98	8.00	Pass
10	2457	-15.21	0.20	-15.01	8.00	Pass
11	2462	-16.46	0.20	-16.26	8.00	Pass

**Note:** 1. Refer to section 3.3 for duty cycle spectrum plot.

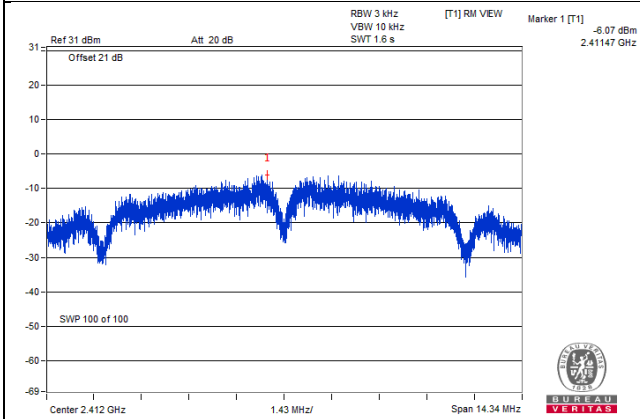
### 802.11ax (HE40)

Channel	Frequency (MHz)	PSD W/O Duty Factor (dBm/3kHz)	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
3	2422	-17.93	0.20	-17.73	8.00	Pass
6	2437	-17.38	0.20	-17.18	8.00	Pass
9	2452	-19.50	0.20	-19.30	8.00	Pass

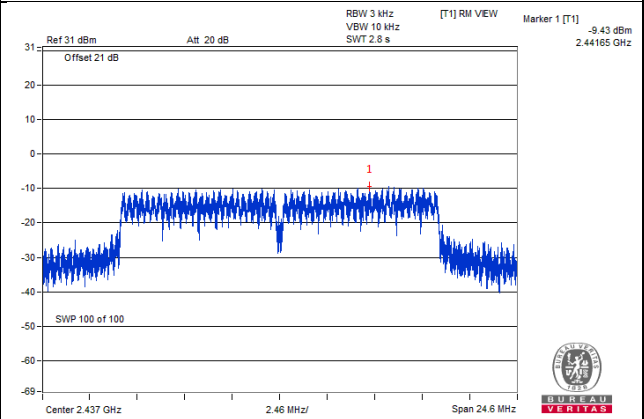
**Note:** 1. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

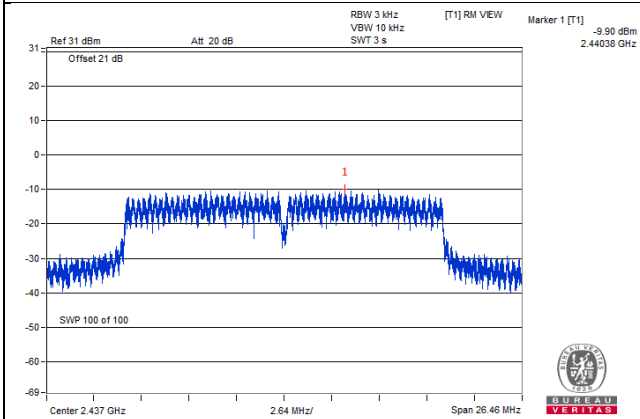
802.11b / CH1



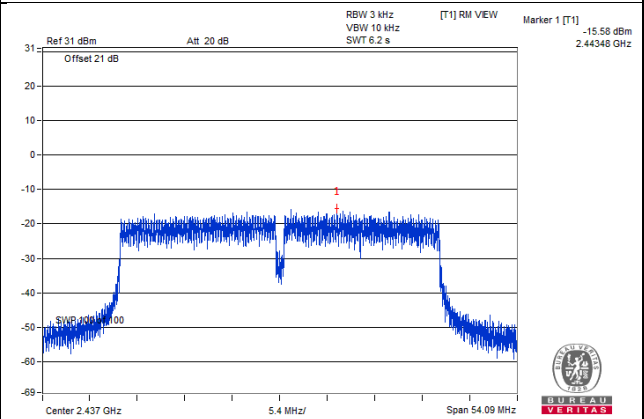
802.11g / CH6



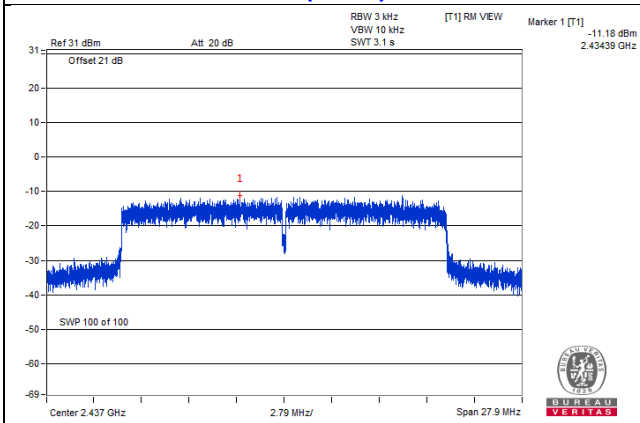
VHT20 / CH6



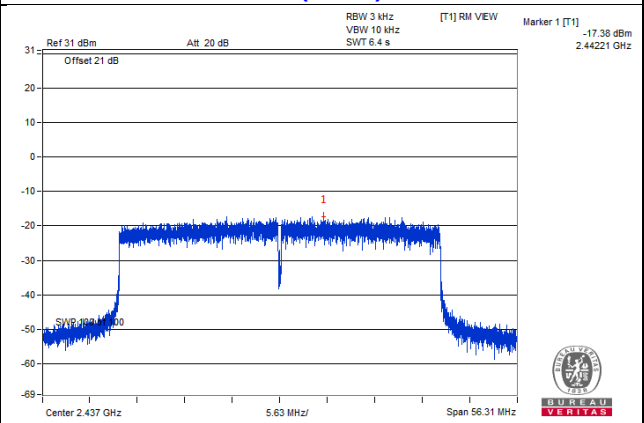
VHT40 / CH6



802.11ax (HE20) / CH6



802.11ax (HE40) / CH6

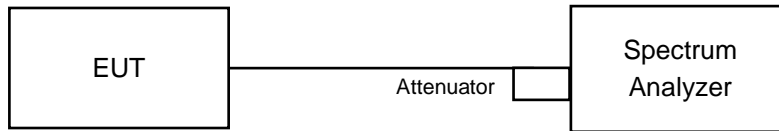


## 4.6 Conducted Out of Band Emission Measurement

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

#### MEASUREMENT PROCEDURE OOB

1. Set RBW = 100 kHz.
2. Set VBW  $\geq$  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.

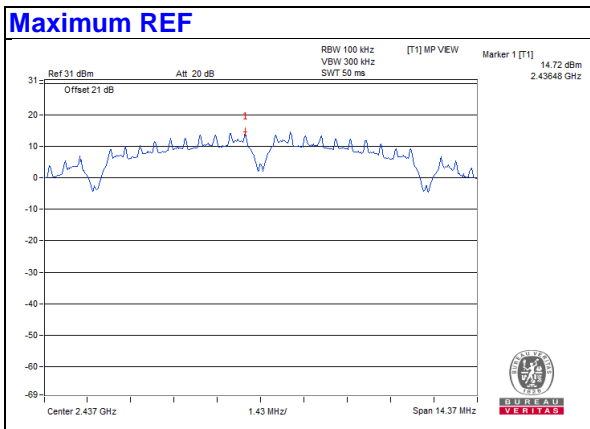
### 4.6.6 EUT Operating Condition

Same as Item 4.3.6

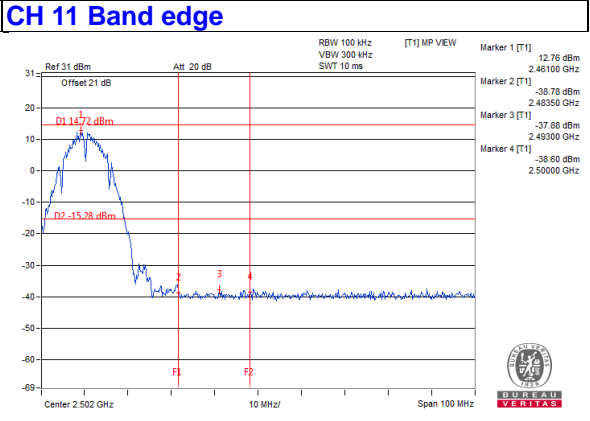
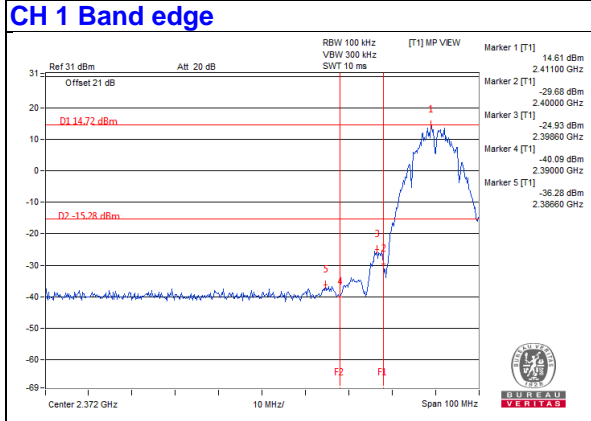
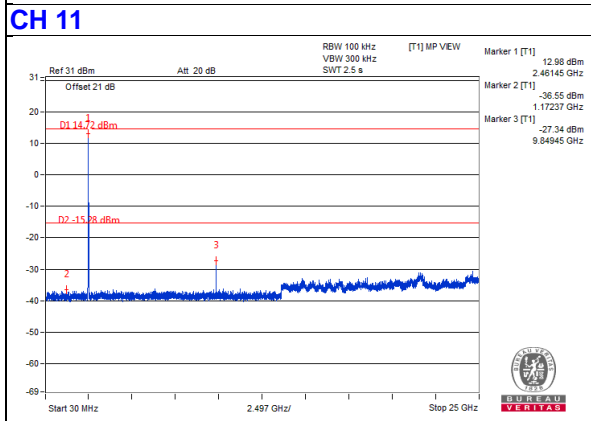
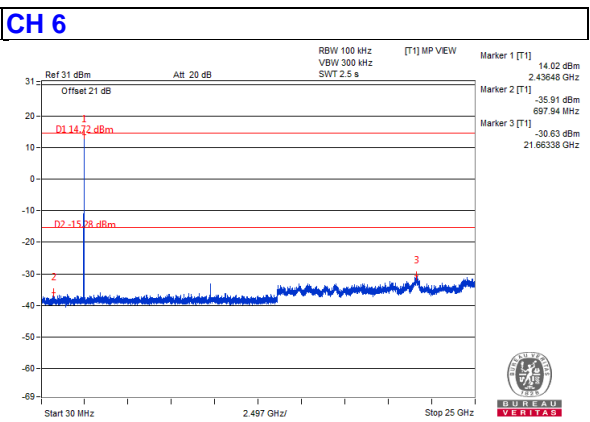
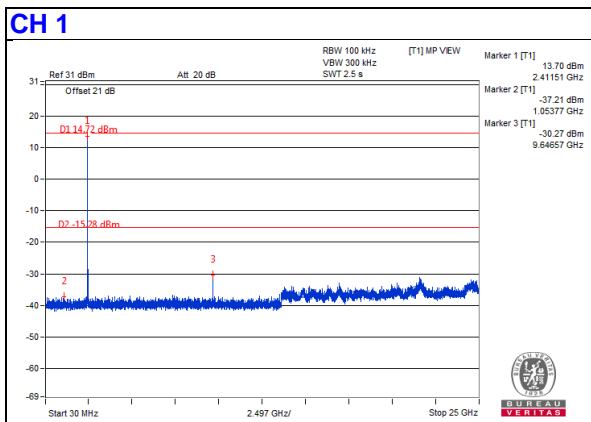
### 4.6.7 Test Results (Mode 1)

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



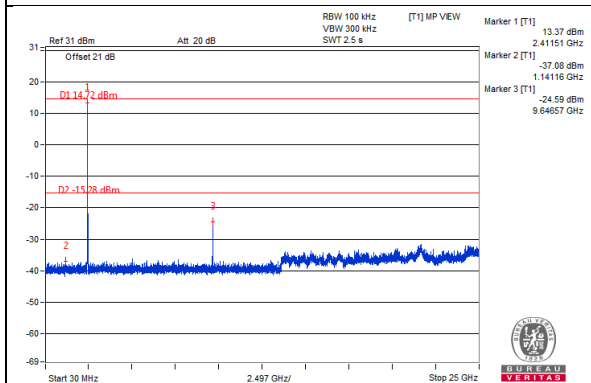
Chain 0



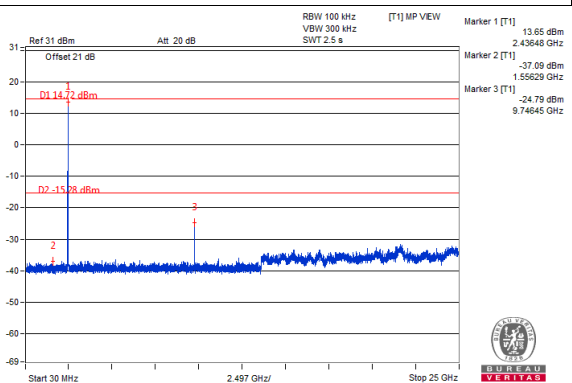


### Chain 1

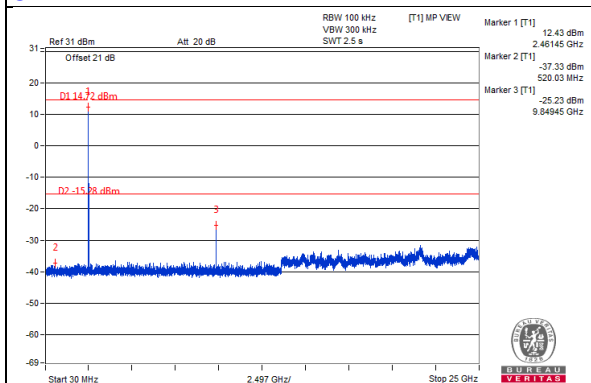
#### CH 1



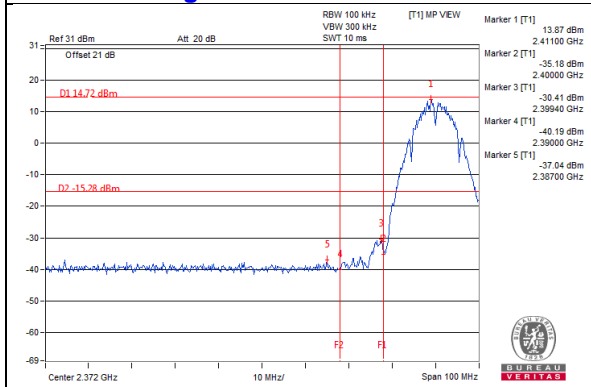
#### CH 6



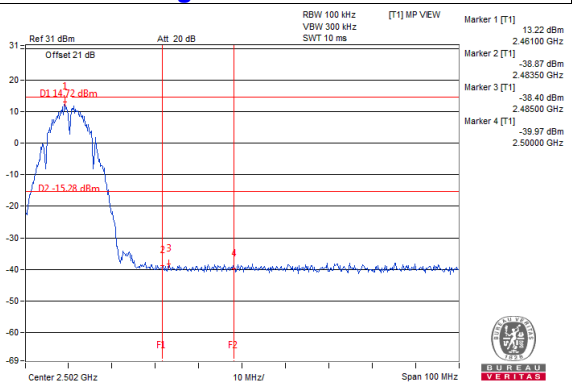
#### CH 11



#### CH 1 Band edge

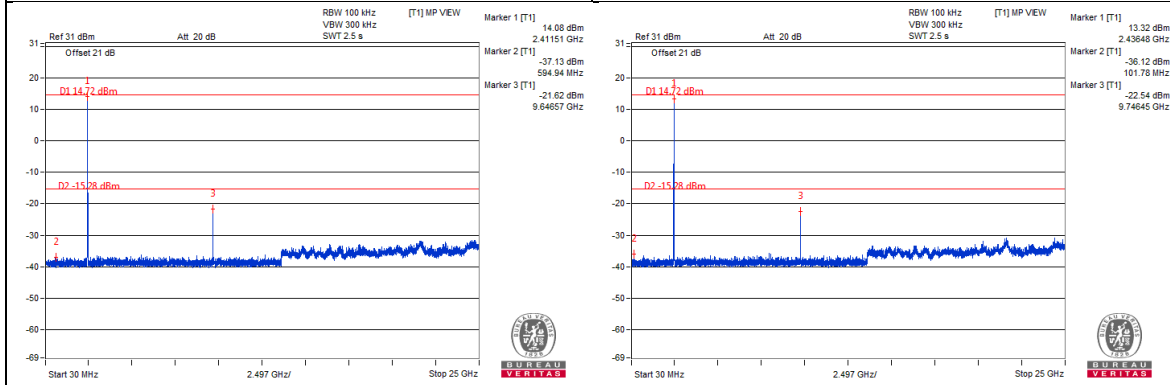


#### CH 11 Band edge

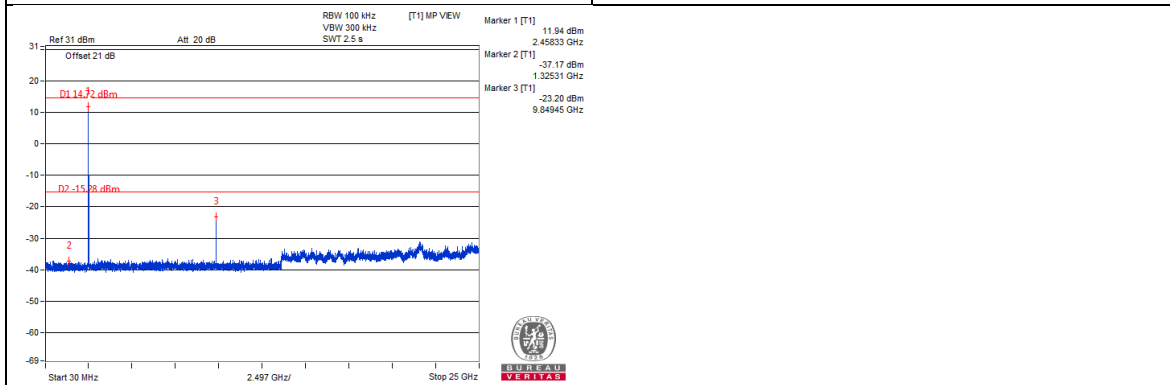


### Chain 2

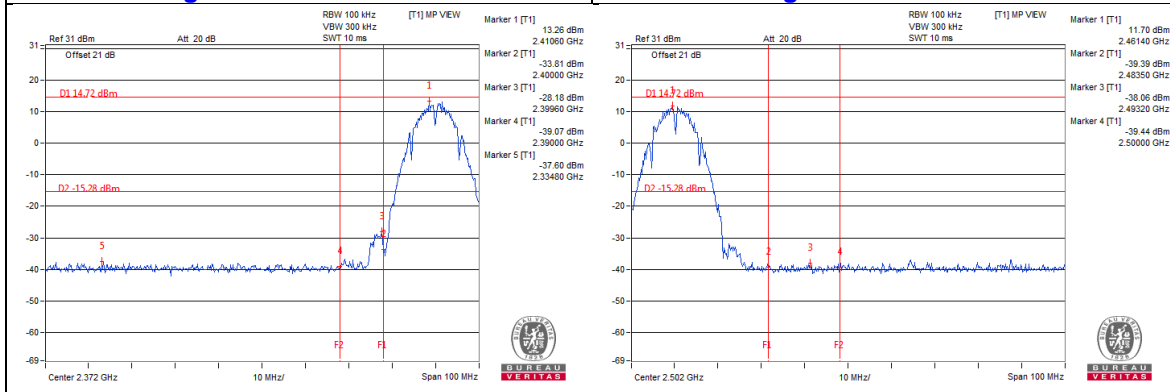
#### CH 1 CH 6



#### CH 11

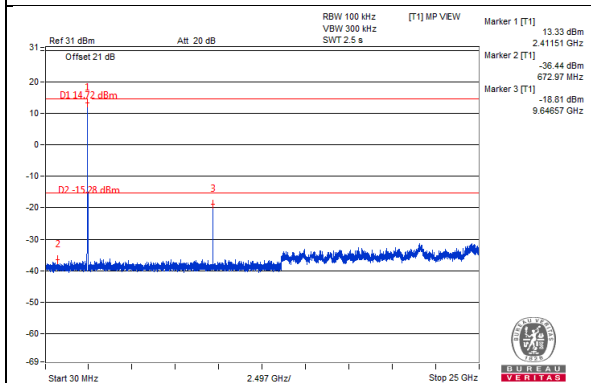


#### CH 1 Band edge CH 11 Band edge

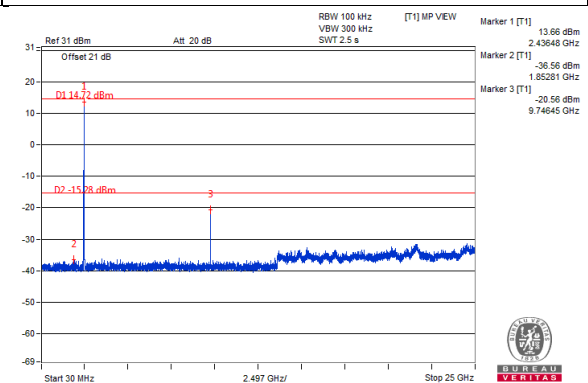


### Chain 3

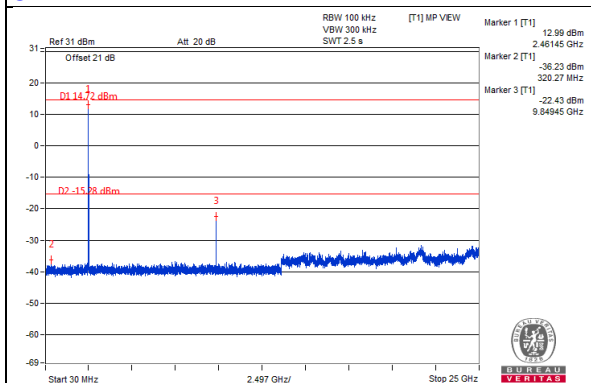
#### CH 1



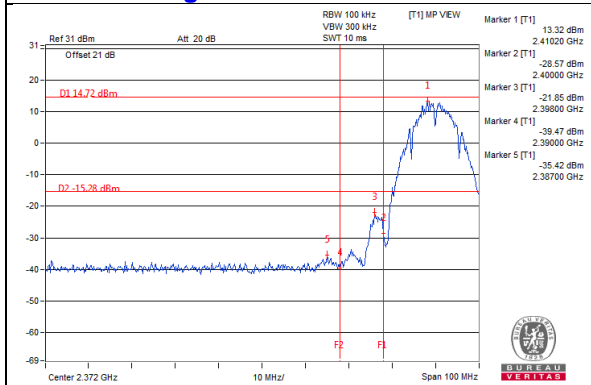
#### CH 6



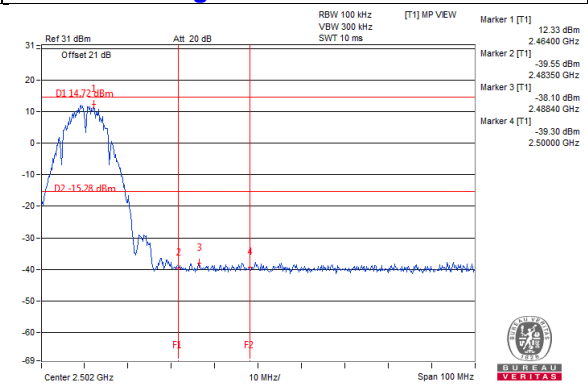
#### CH 11



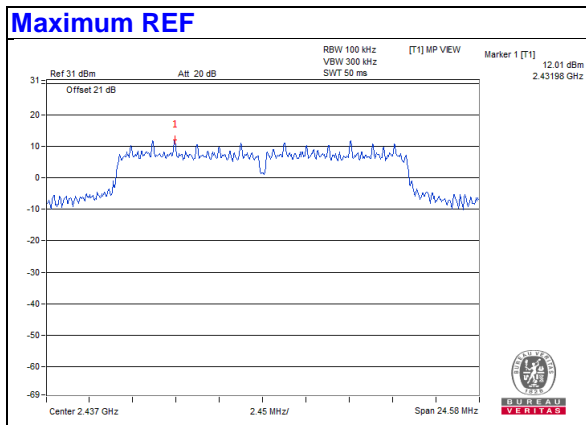
#### CH 1 Band edge



#### CH 11 Band edge

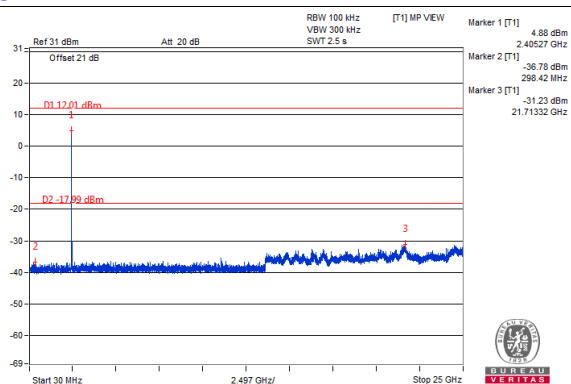


802.11g

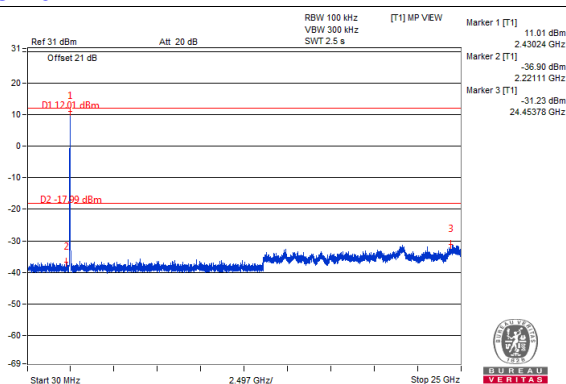


Chain 0

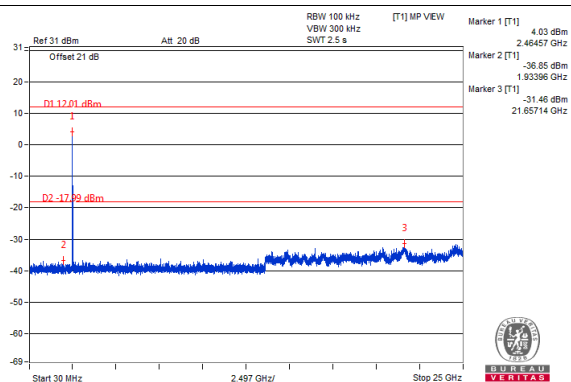
CH 1



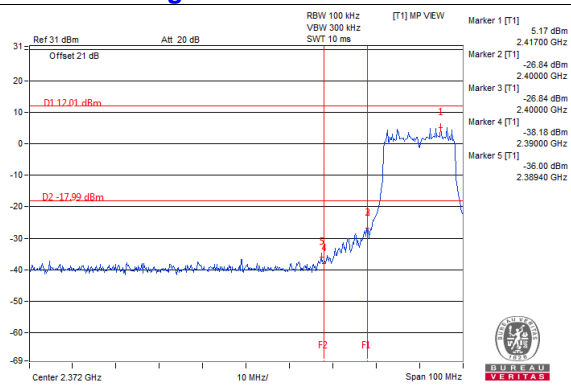
CH 6



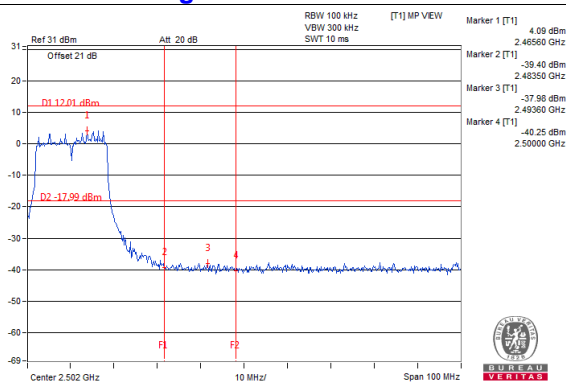
CH 11



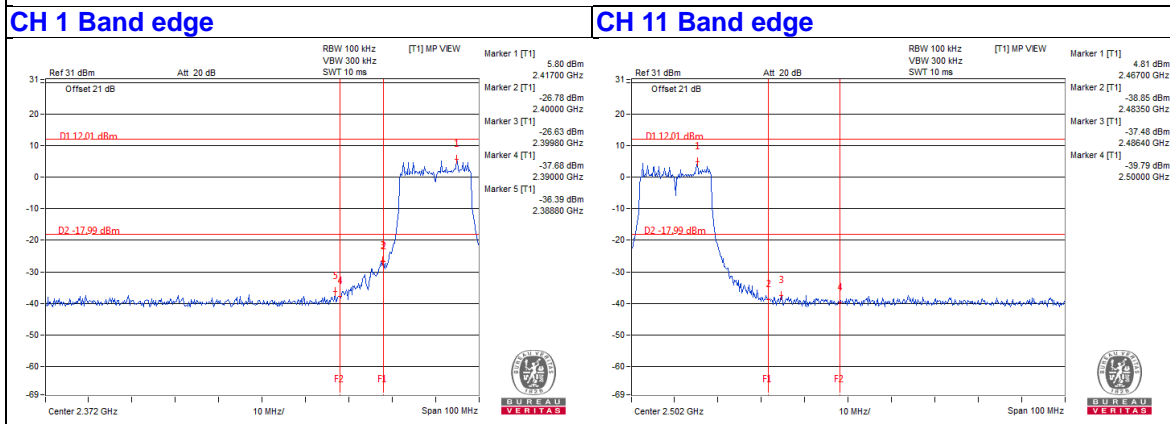
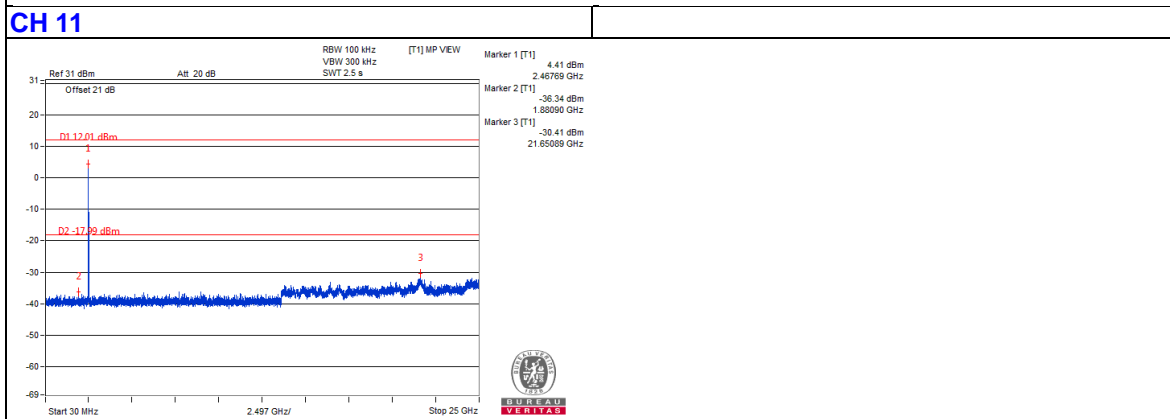
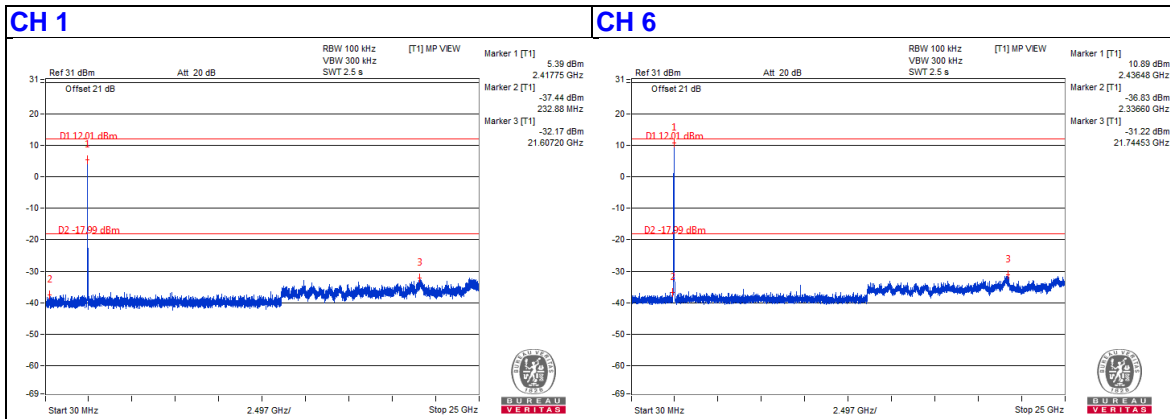
CH 1 Band edge



CH 11 Band edge

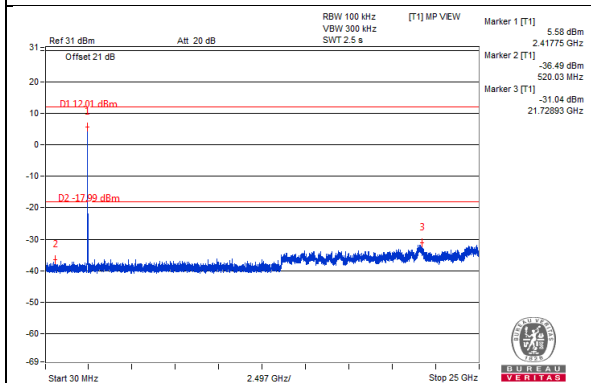


### Chain 1

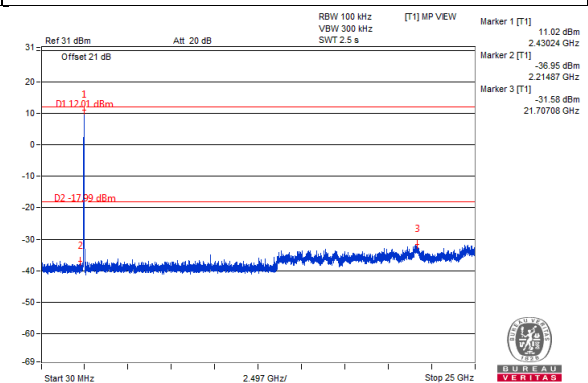


### Chain 2

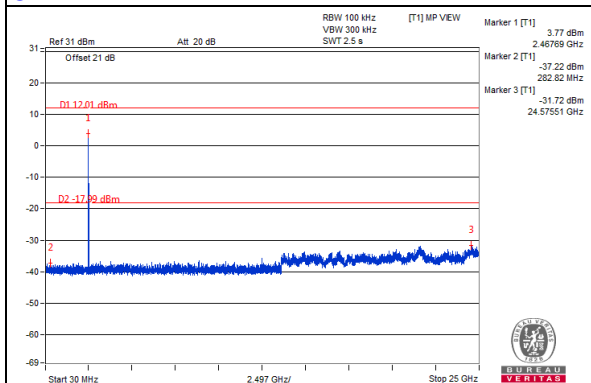
#### CH 1



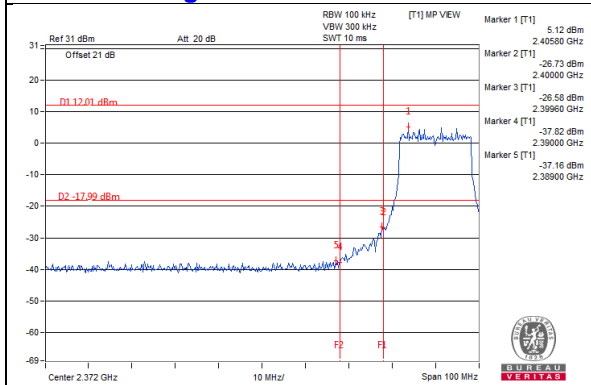
#### CH 6



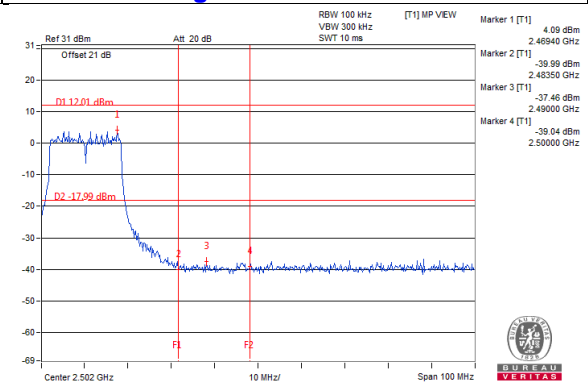
#### CH 11



#### CH 1 Band edge

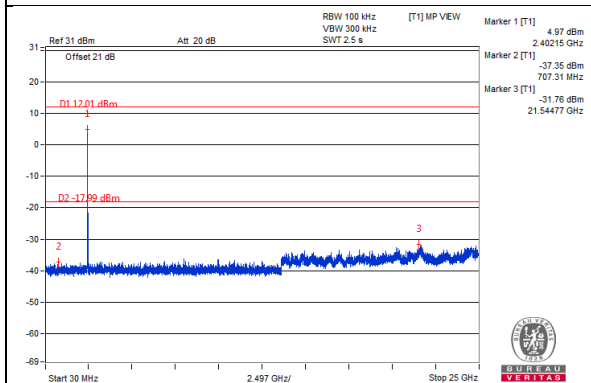


#### CH 11 Band edge

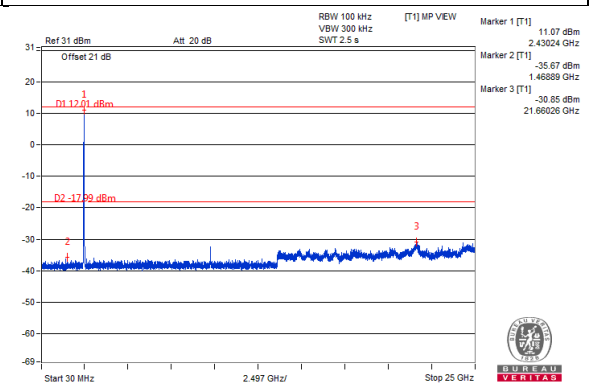


### Chain 3

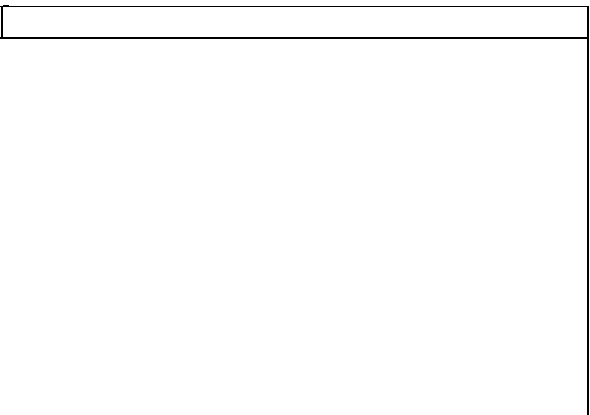
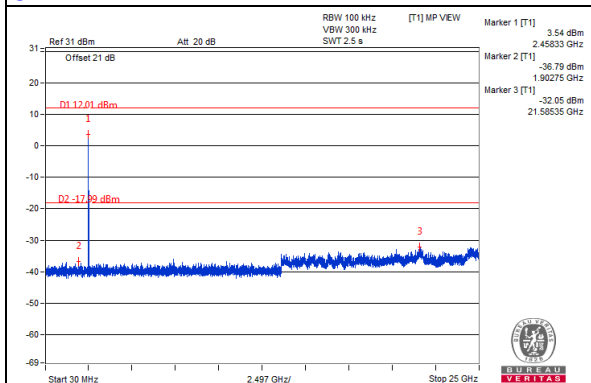
#### CH 1



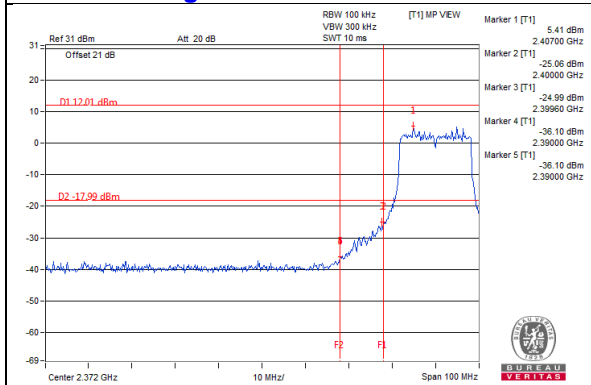
#### CH 6



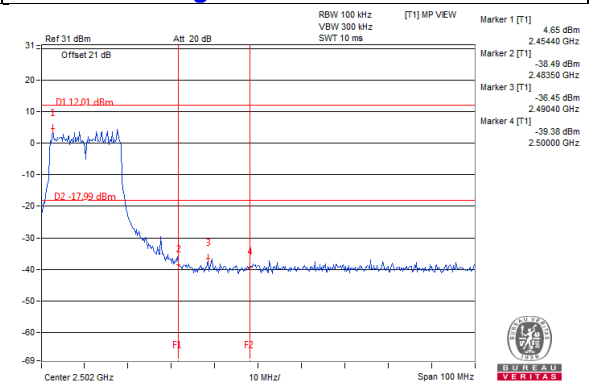
#### CH 11



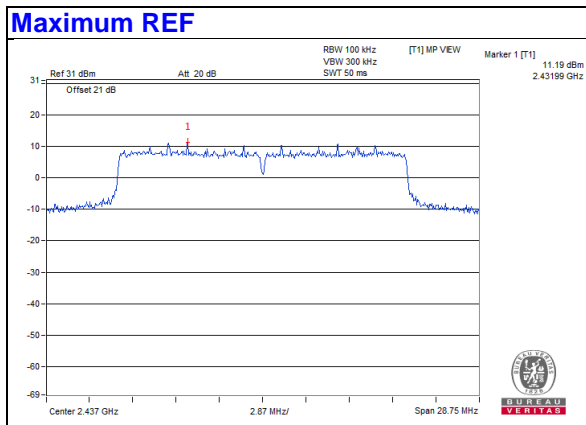
#### CH 1 Band edge



#### CH 11 Band edge

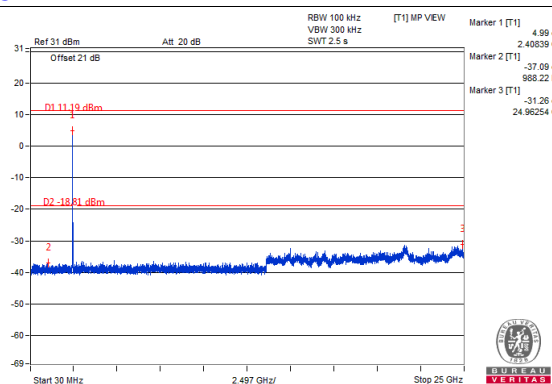


802.11ax (HE20)

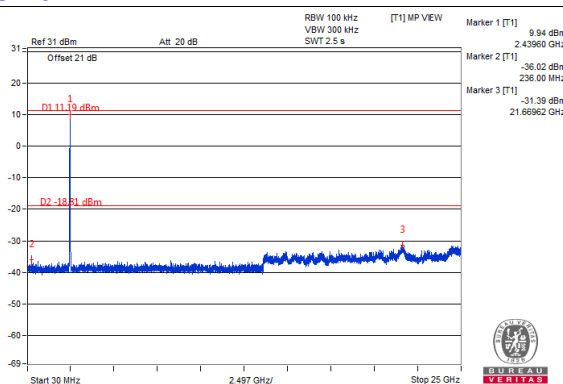


Chain 0

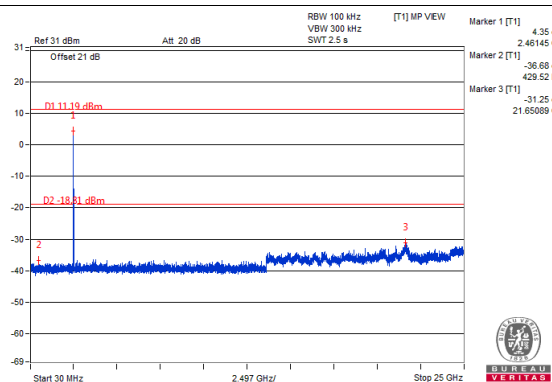
CH 1



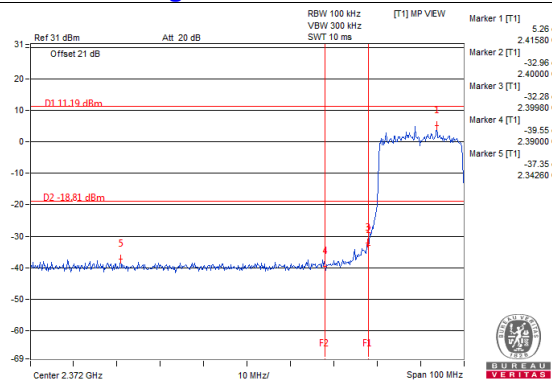
CH 6



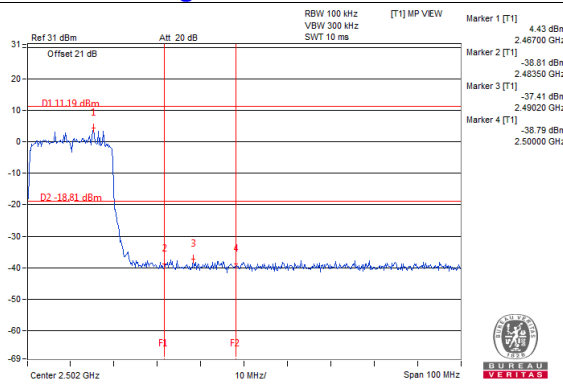
CH 11



CH 1 Band edge

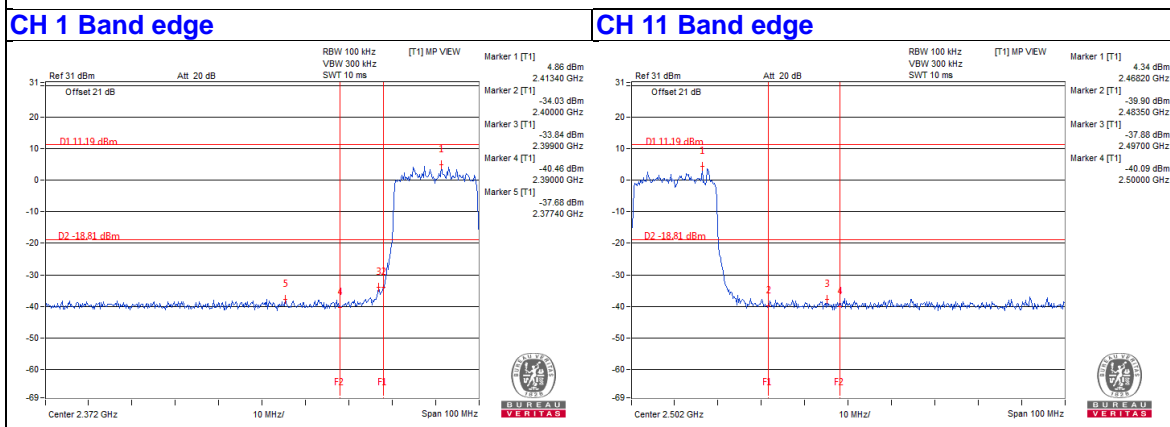
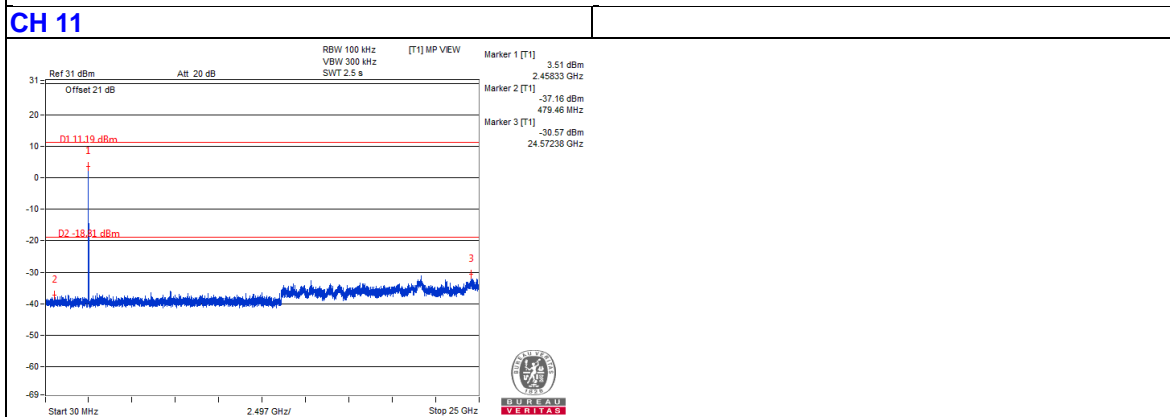
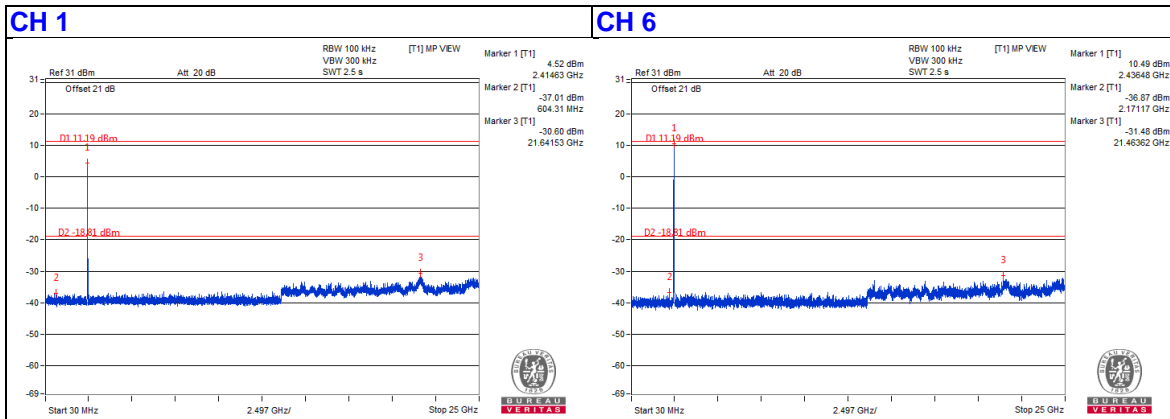


CH 11 Band edge



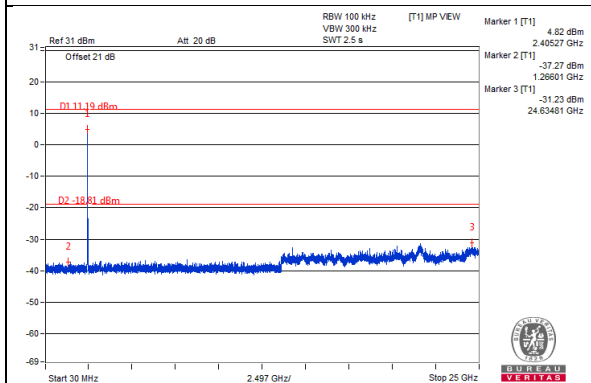


### Chain 1

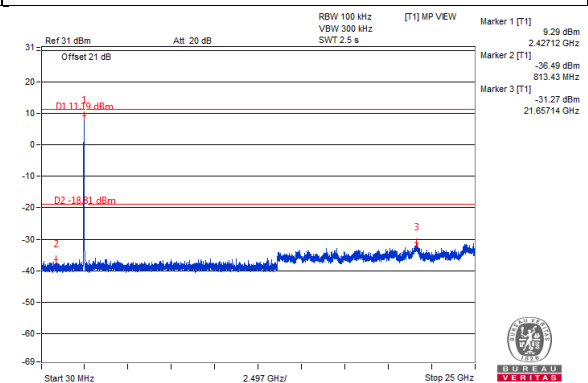


## Chain 2

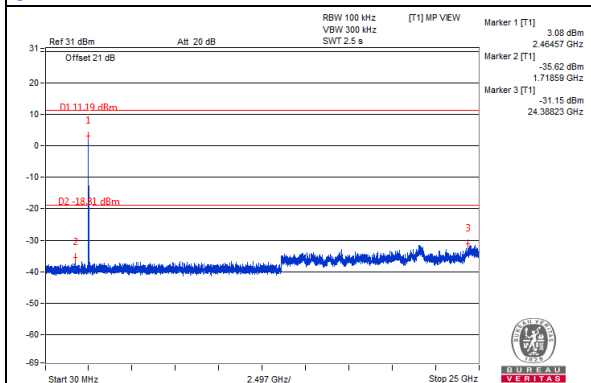
### CH 1



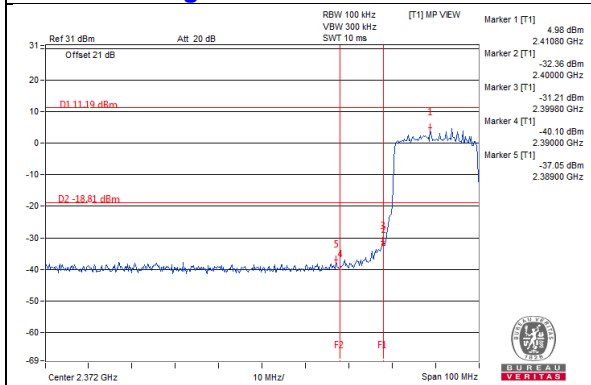
### CH 6



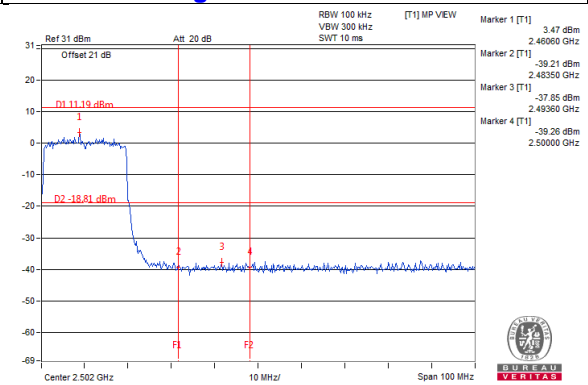
### CH 11



### CH 1 Band edge

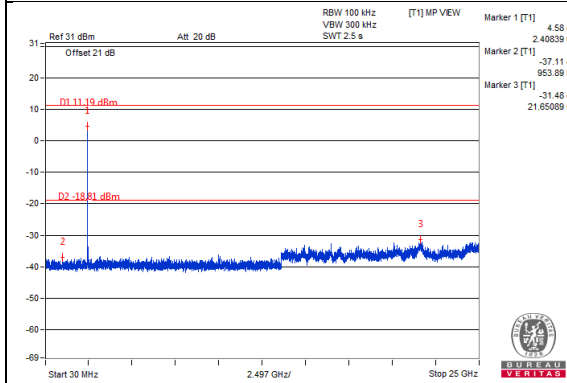


### CH 11 Band edge

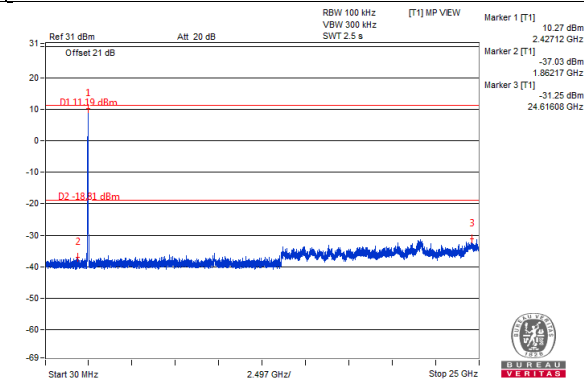


### Chain 3

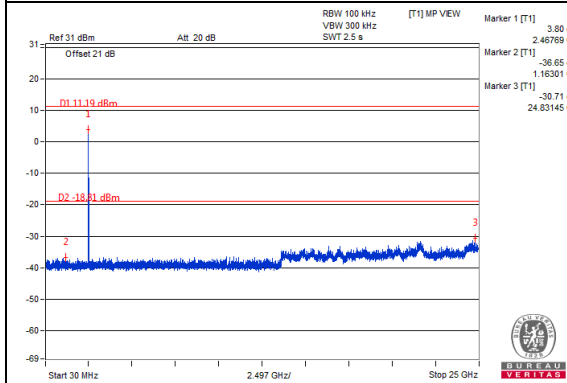
#### CH 1



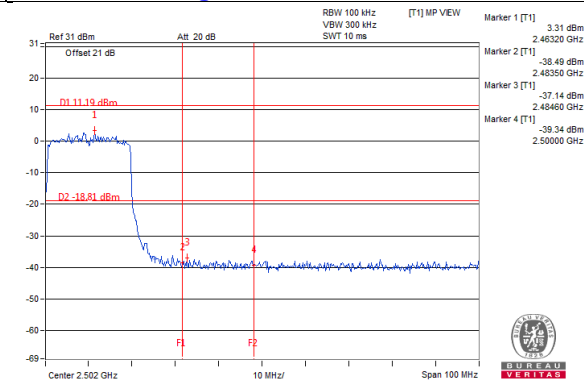
#### CH 6



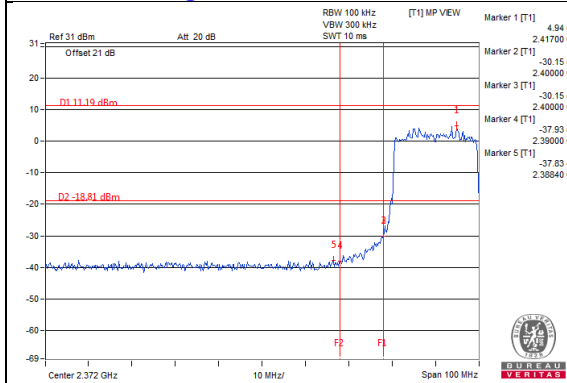
#### CH 11



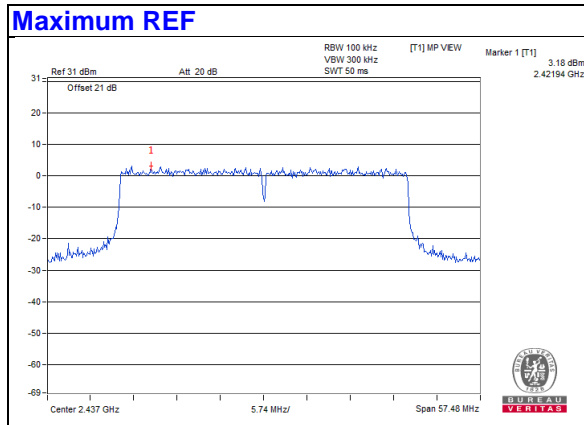
#### CH 11 Band edge



#### CH 1 Band edge

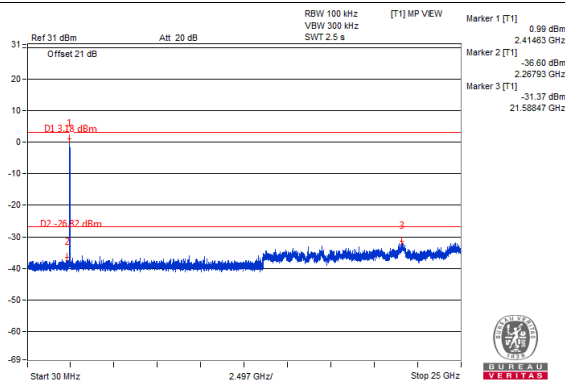


# 802.11ax (HE40)

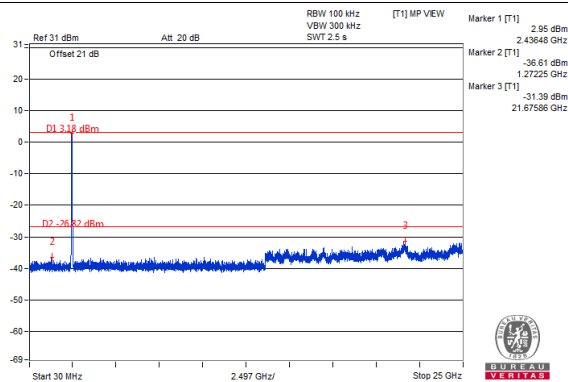


## Chain 0

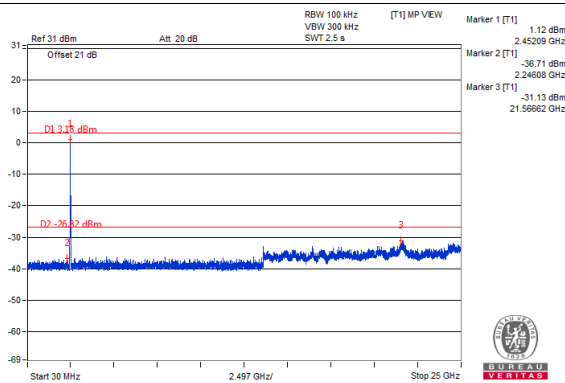
### CH 3



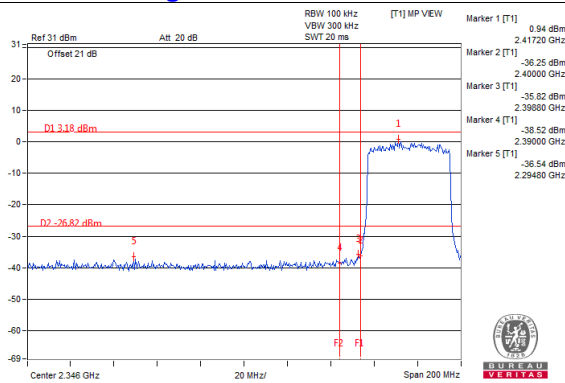
### CH 6



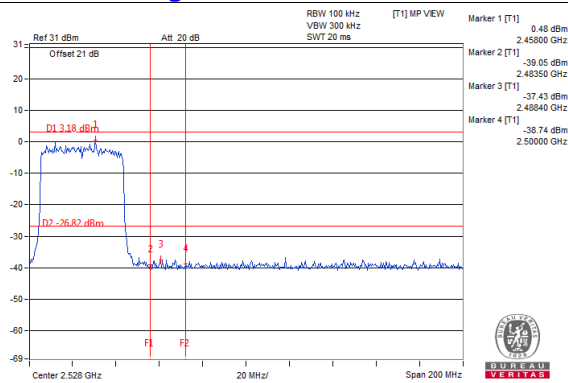
### CH 9



### CH 3 Band edge

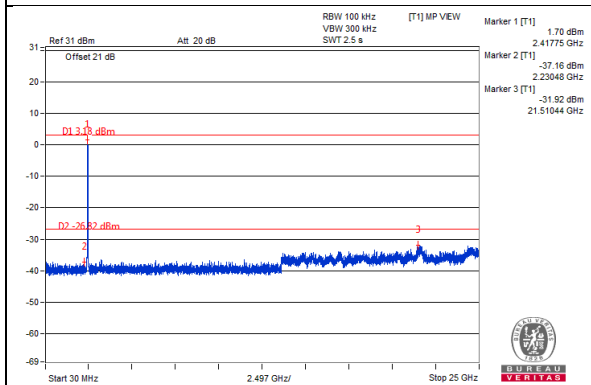


### CH 9 Band edge

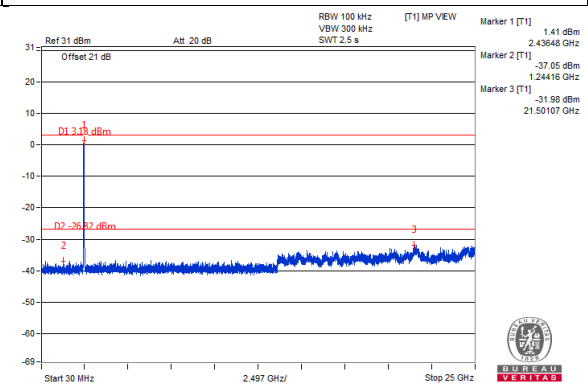


Chain 1

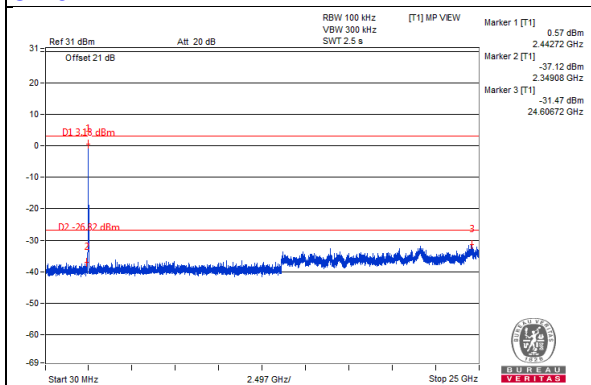
CH 3



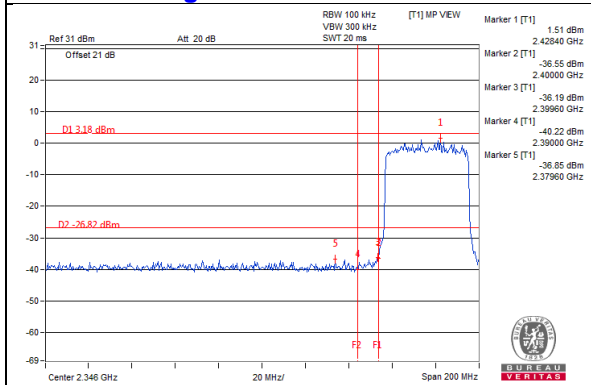
CH 6



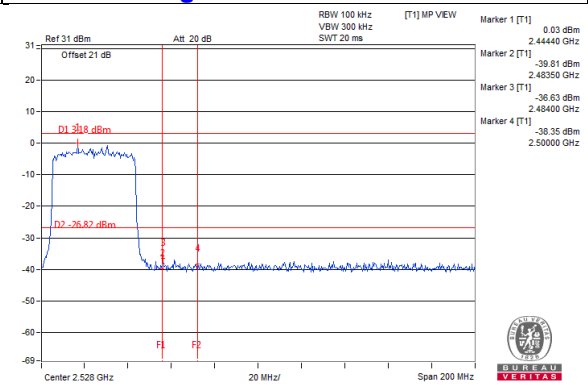
CH 9



CH 3 Band edge

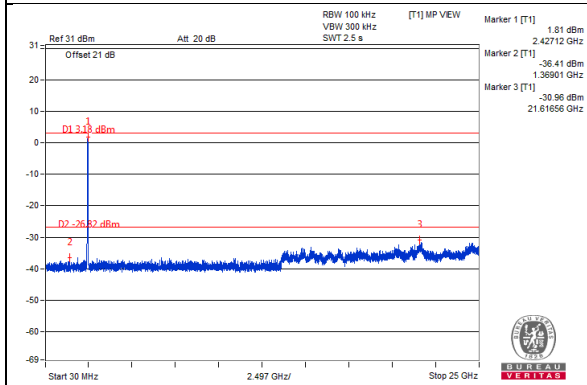


CH 9 Band edge

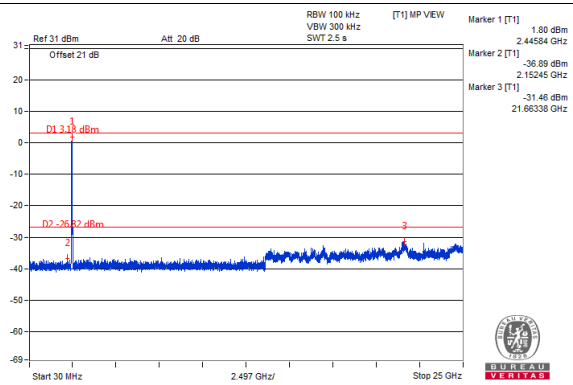


## Chain 2

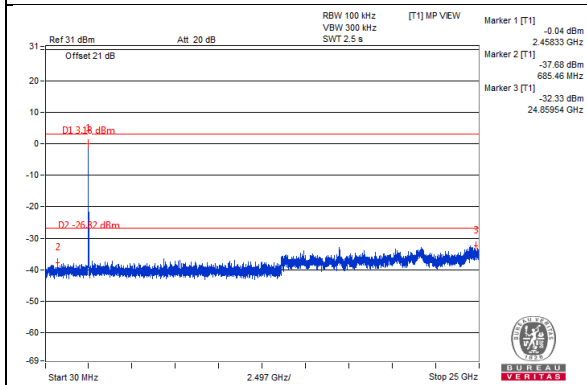
### CH 3



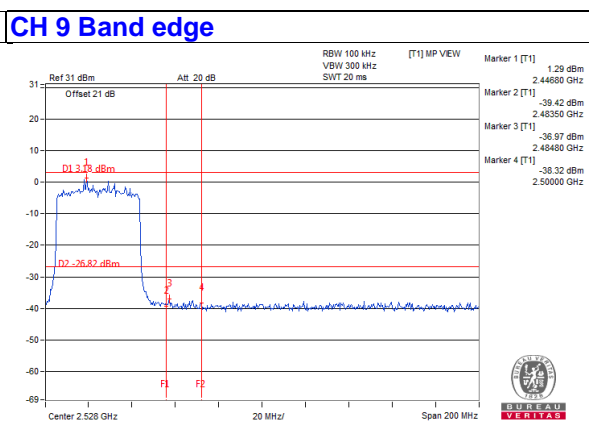
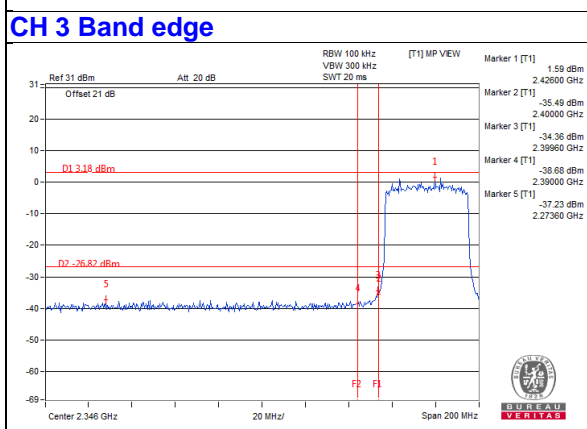
### CH 6



### CH 9

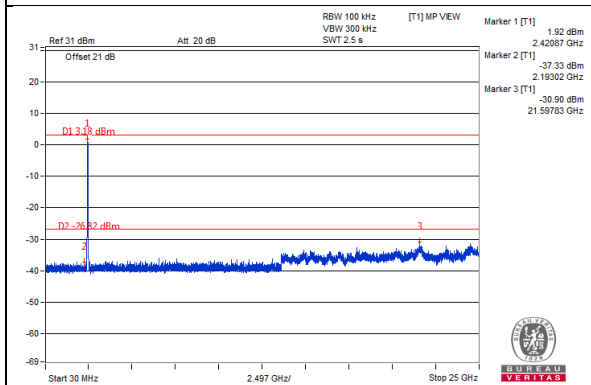


### CH 9 Band edge

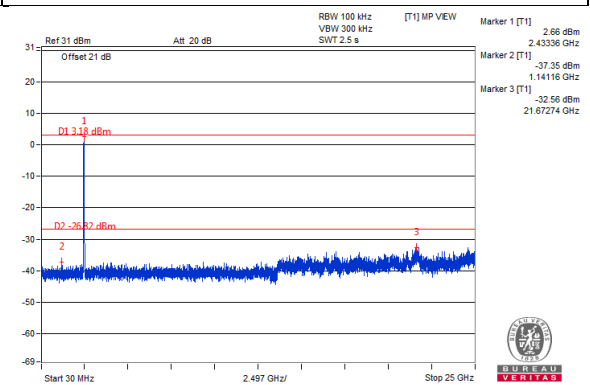


### Chain 3

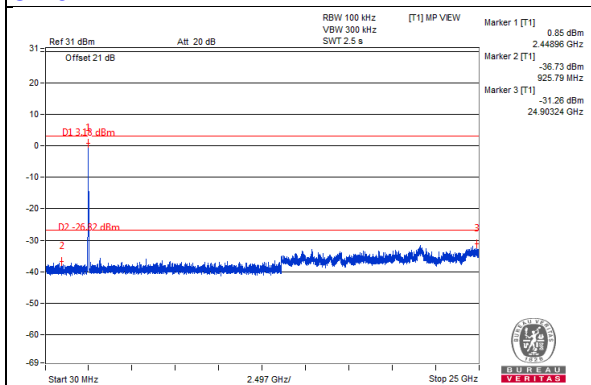
#### CH 3



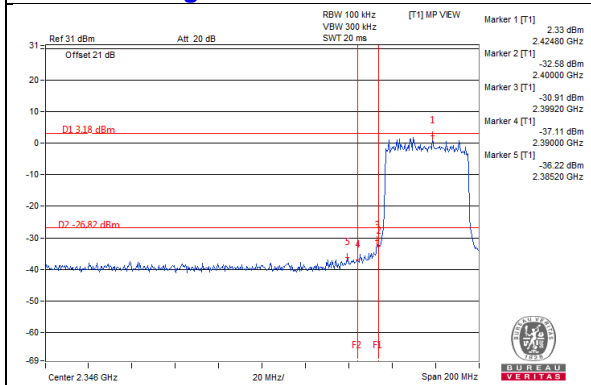
#### CH 6



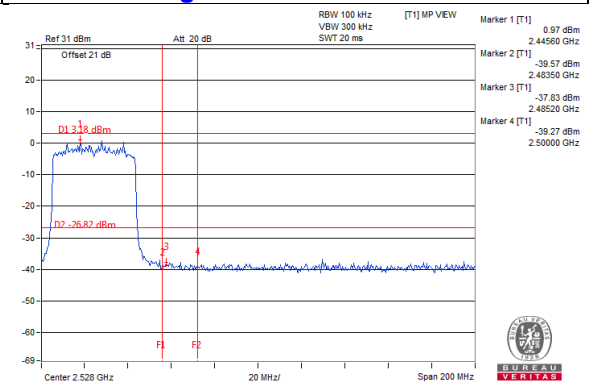
#### CH 9



#### CH 3 Band edge



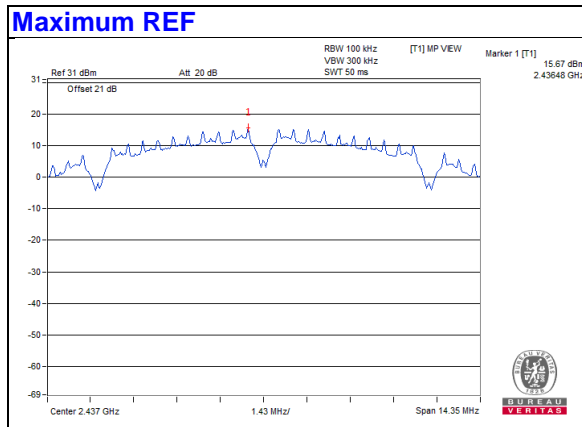
#### CH 9 Band edge



### 4.6.8 Test Results (Mode 2)

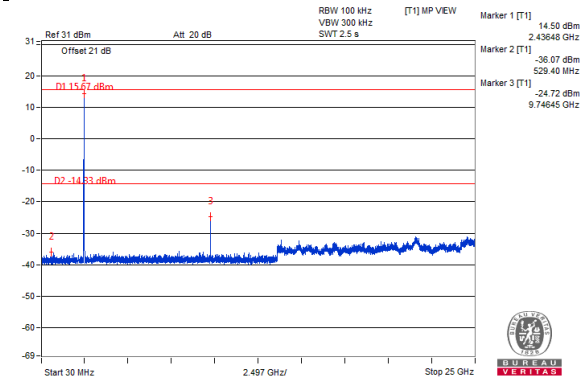
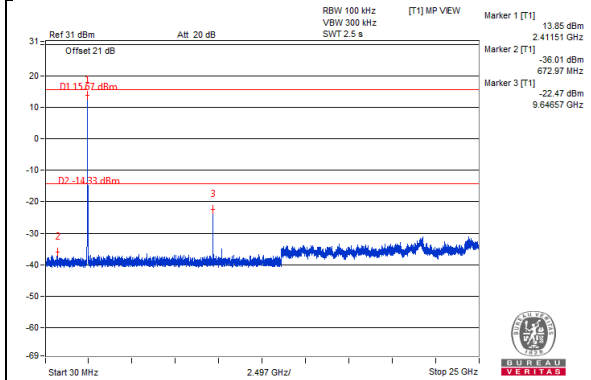
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

#### 802.11b

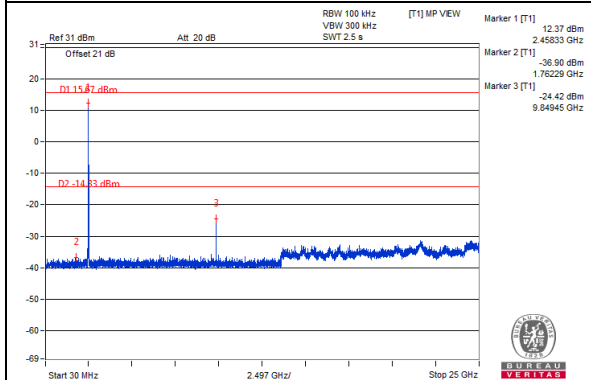


#### Chain 0

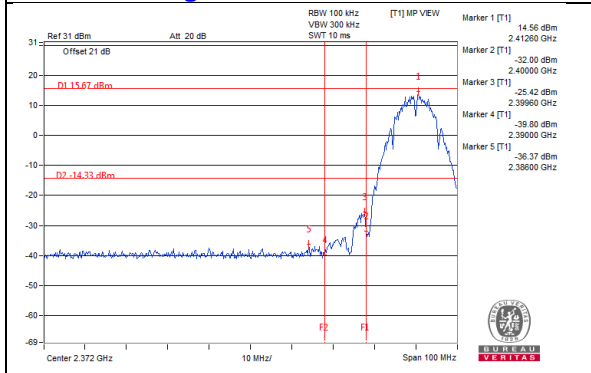
### CH 1 CH 6



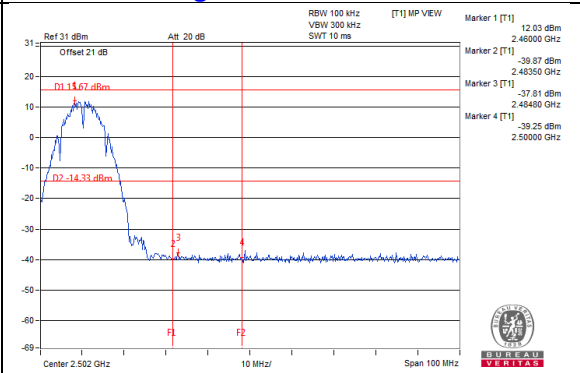
### CH 11



### CH 1 Band edge



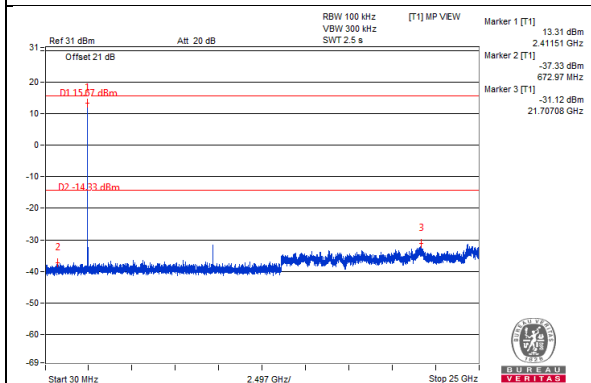
### CH 11 Band edge



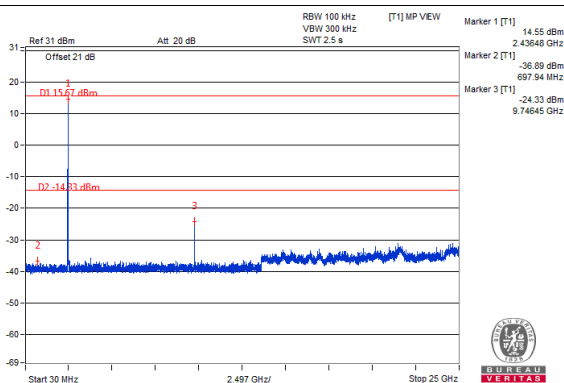


### Chain 1

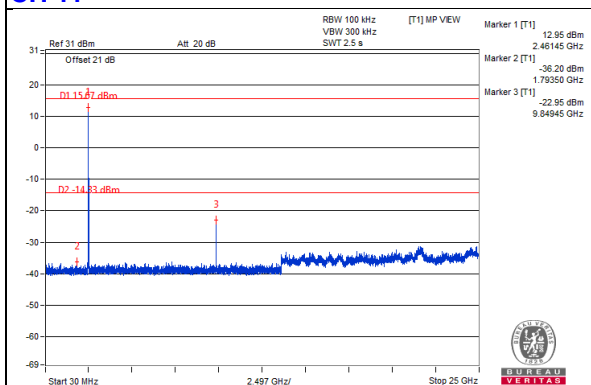
#### CH 1



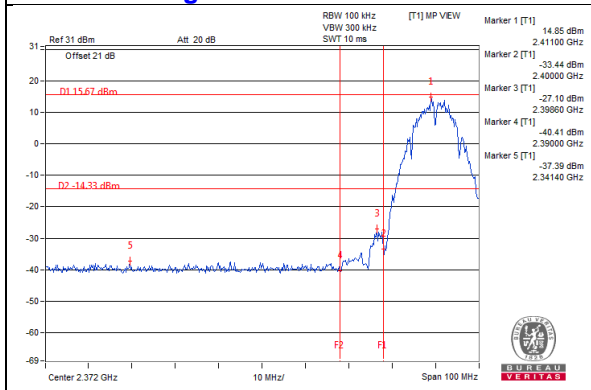
#### CH 6



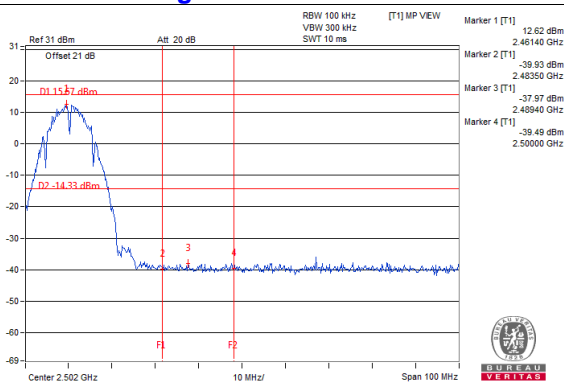
#### CH 11



#### CH 1 Band edge

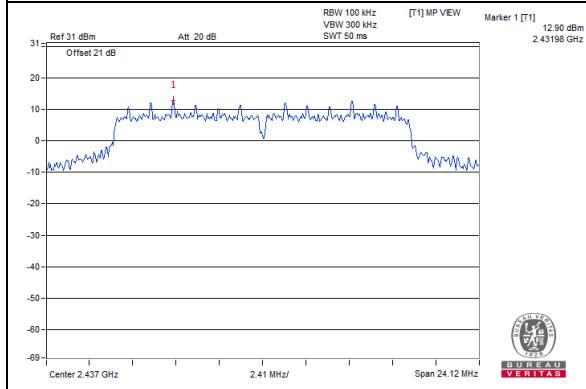


#### CH 11 Band edge



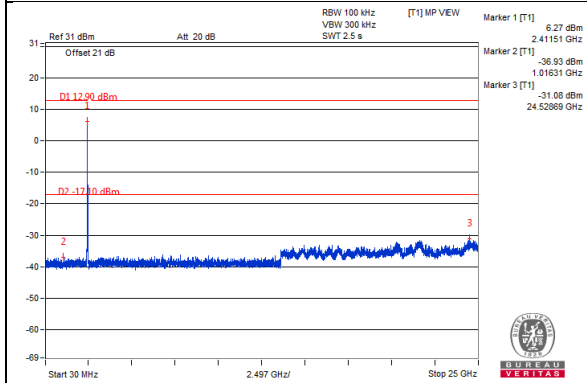
802.11g

Maximum REF

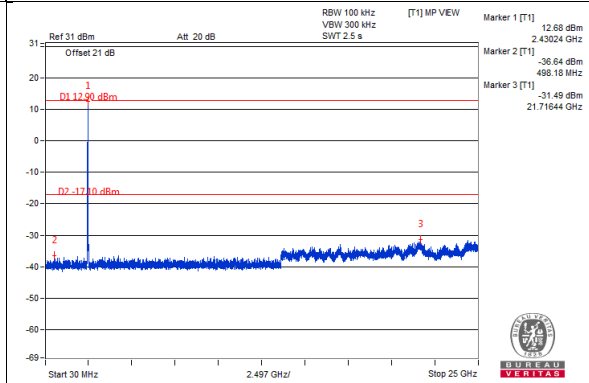


Chain 0

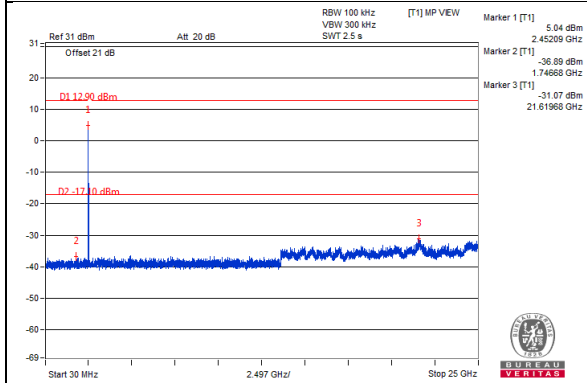
CH 1



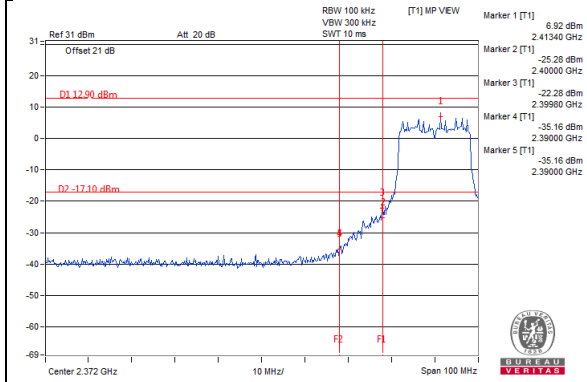
CH 6



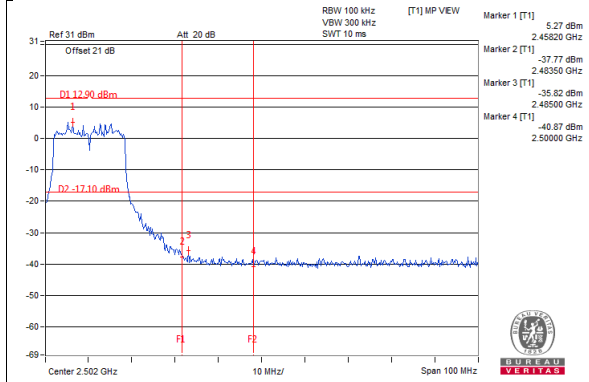
CH 11



CH 1 Band edge

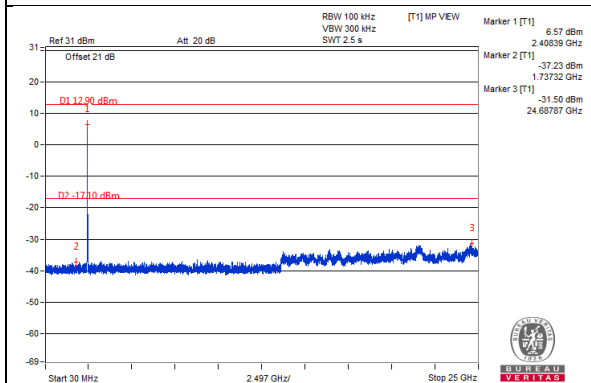


CH 11 Band edge

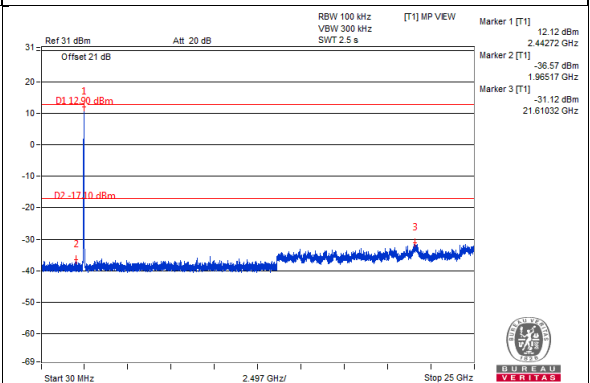


### Chain 1

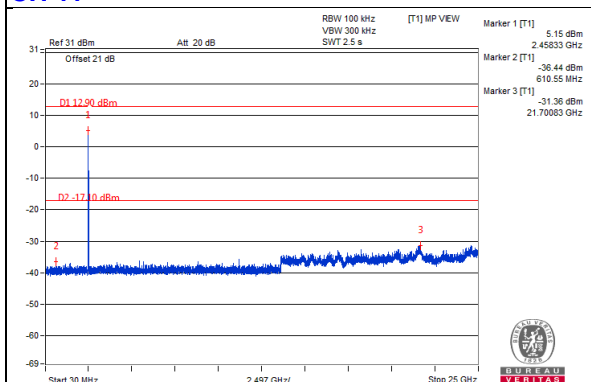
#### CH 1



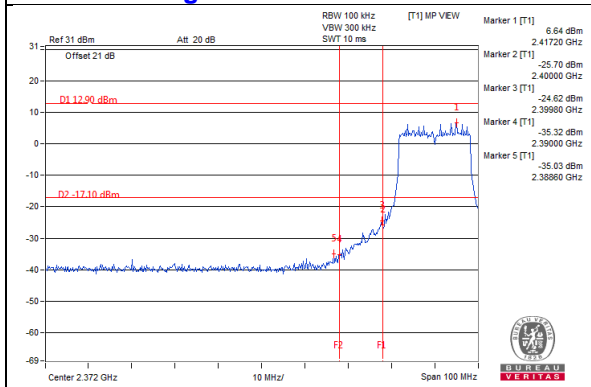
#### CH 6



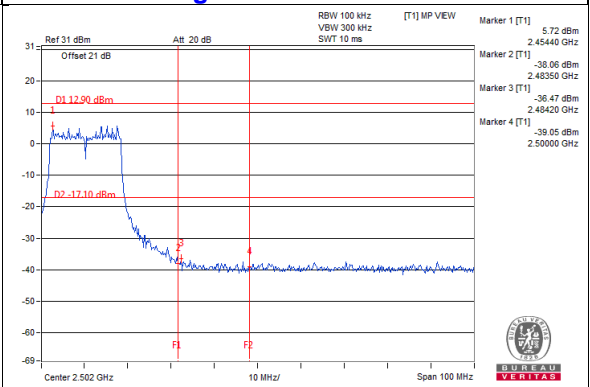
#### CH 11



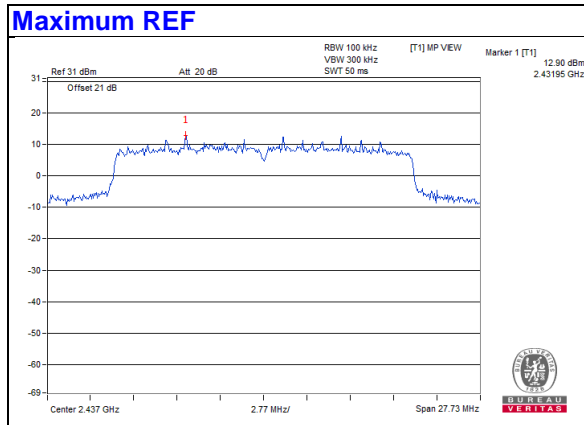
#### CH 1 Band edge



#### CH 11 Band edge

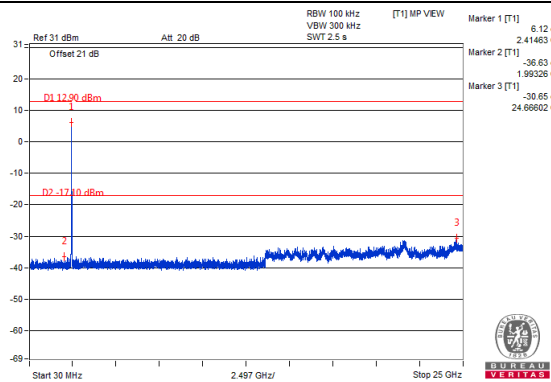


# 802.11ax (HE20)

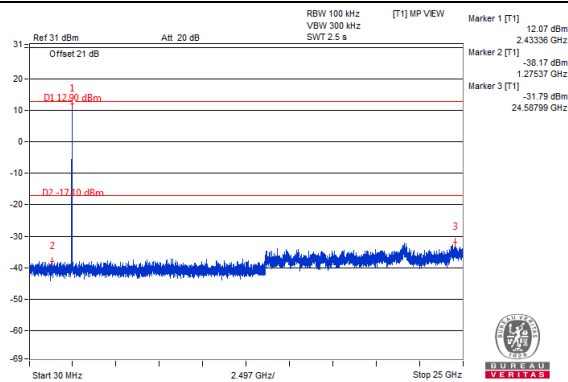


## Chain 0

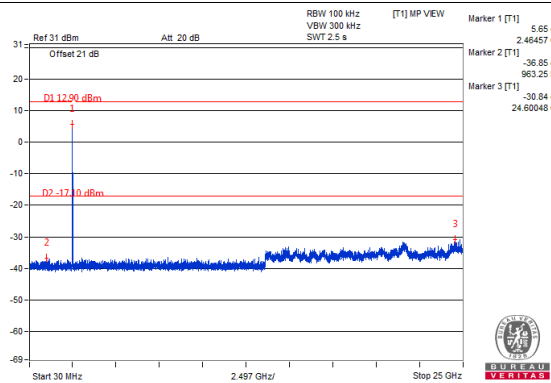
### CH 1



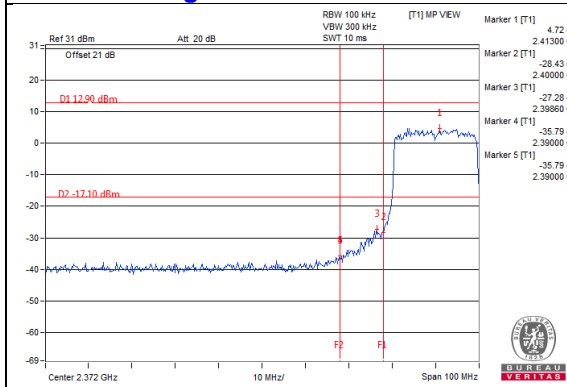
### CH 6



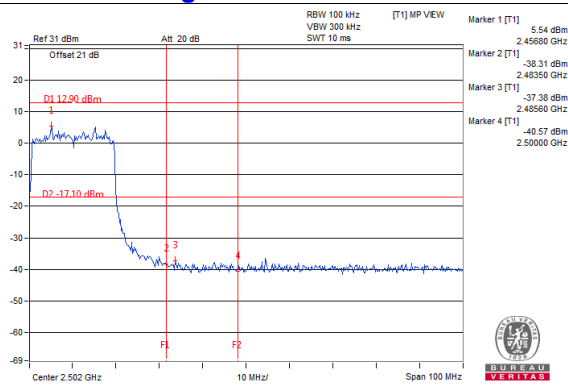
### CH 11



### CH 1 Band edge

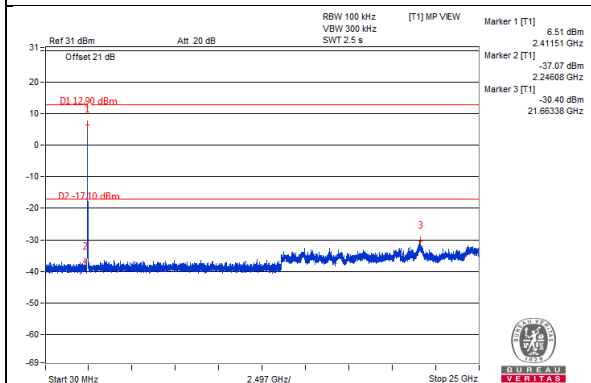


### CH 11 Band edge

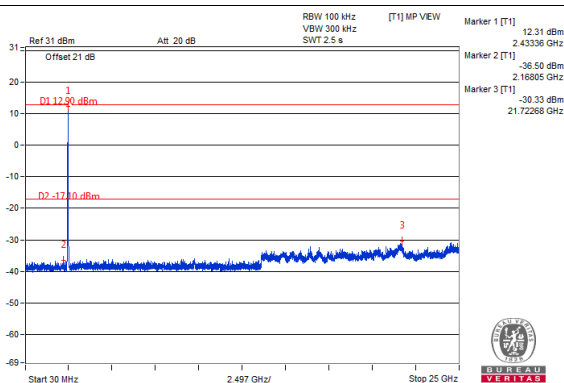


### Chain 1

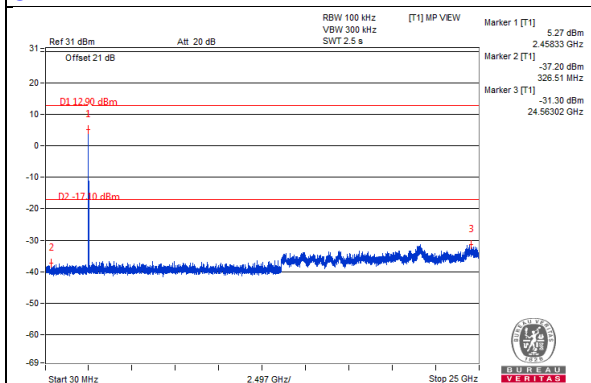
#### CH 1



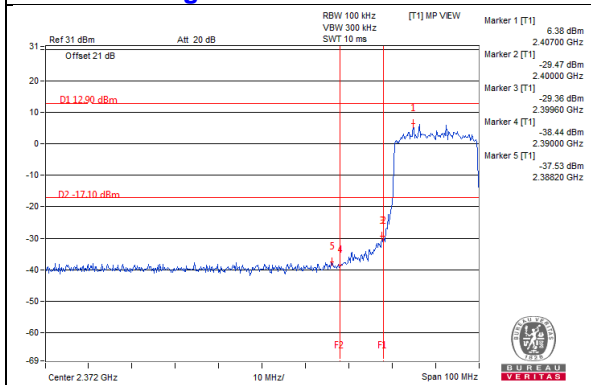
#### CH 6



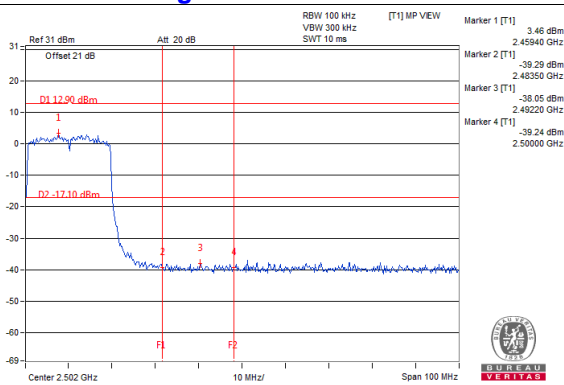
#### CH 11



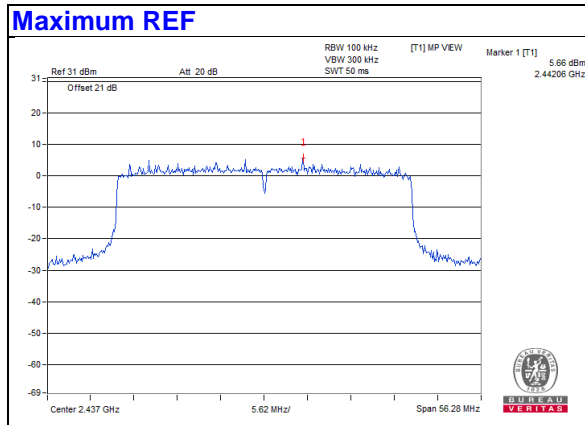
#### CH 1 Band edge



#### CH 11 Band edge

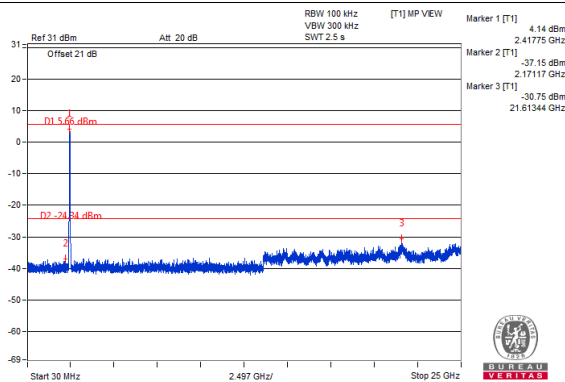


# 802.11ax (HE40)

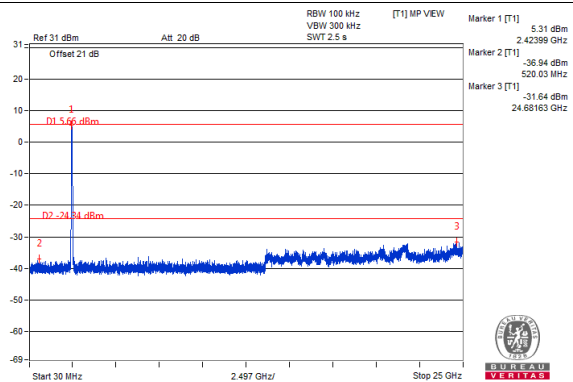


## Chain 0

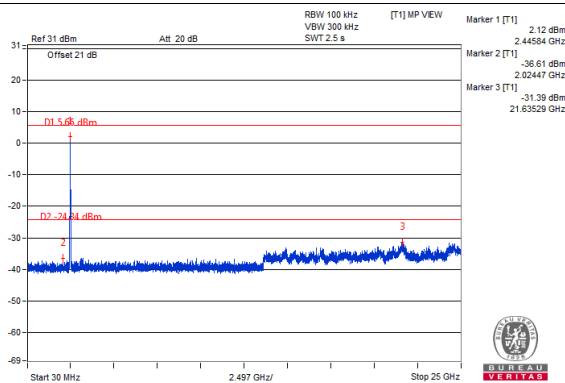
### CH 3



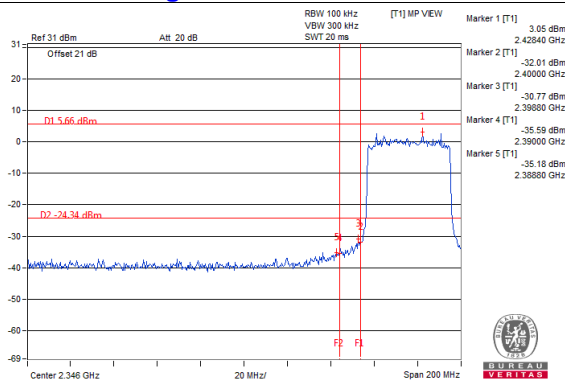
### CH 6



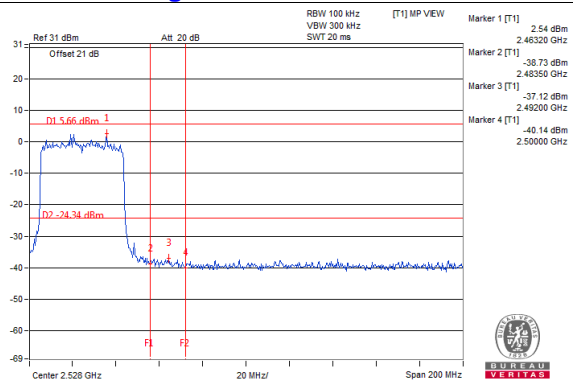
### CH 9



### CH 3 Band edge

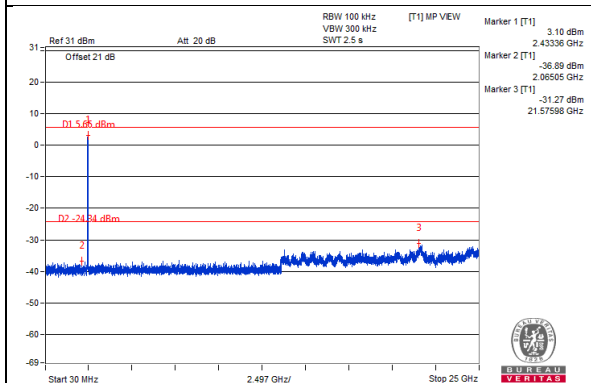


### CH 9 Band edge

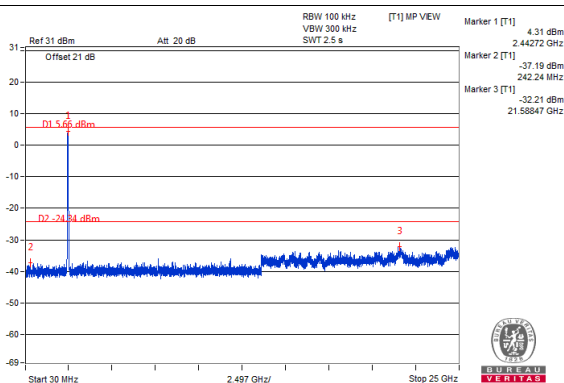


### Chain 1

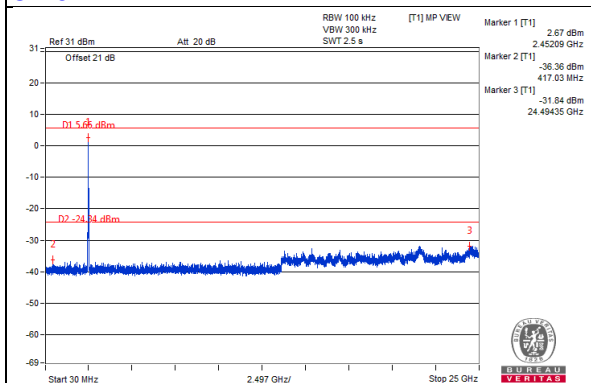
#### CH 3



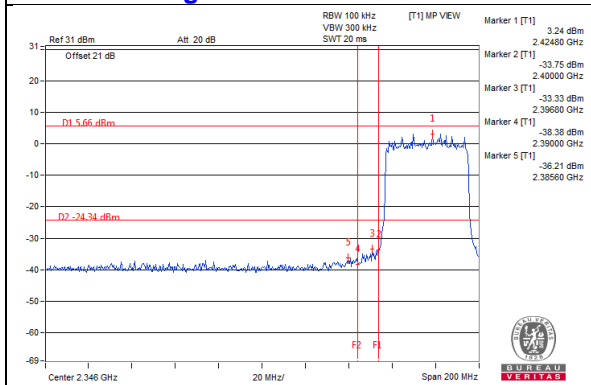
#### CH 6



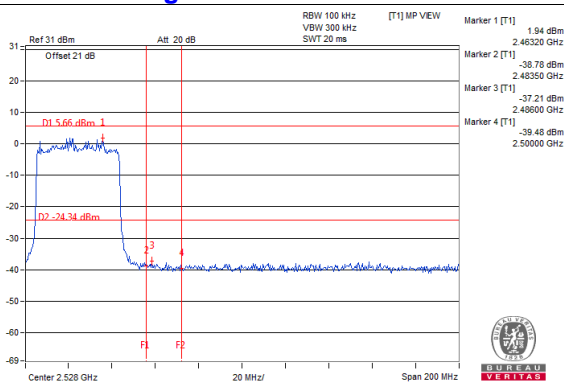
#### CH 9



#### CH 3 Band edge



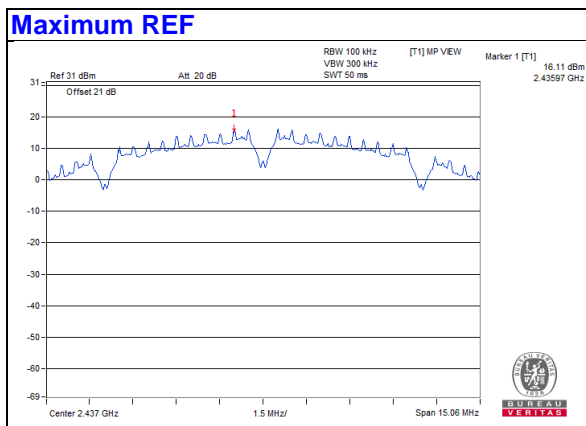
#### CH 9 Band edge



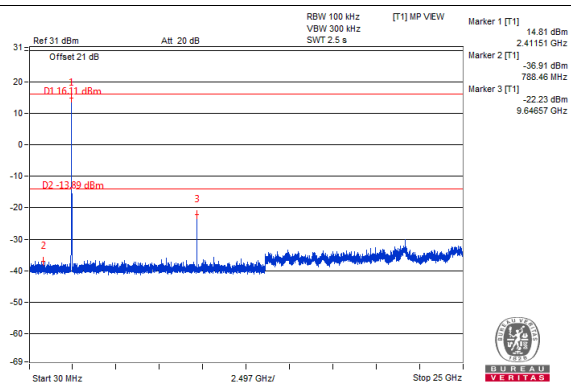
### 4.6.9 Test Results (Mode 3)

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.

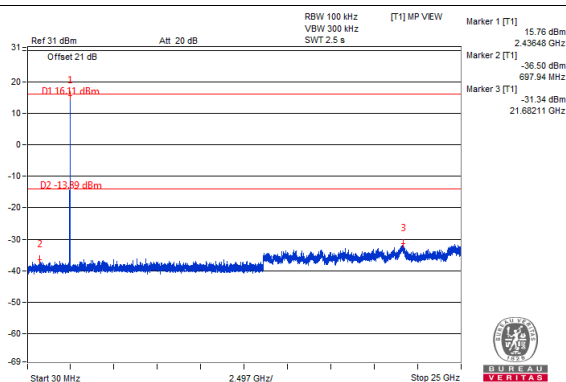
#### 802.11b



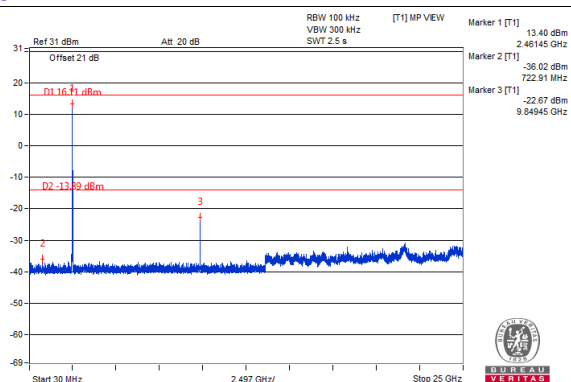
#### CH 1



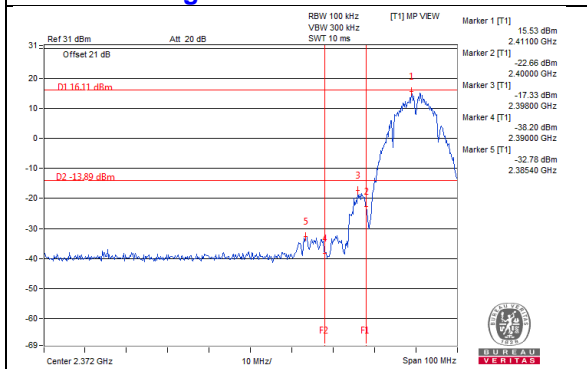
#### CH 6



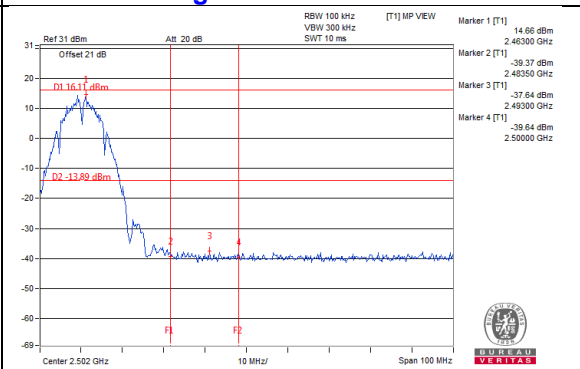
#### CH 11



#### CH 1 Band edge



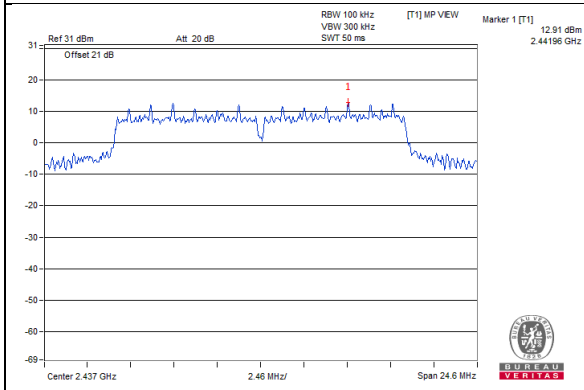
#### CH 11 Band edge



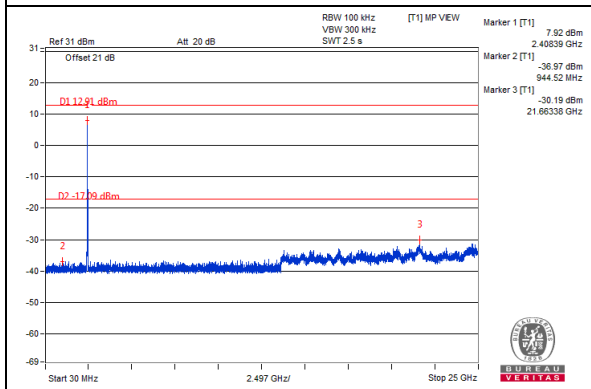


802.11g

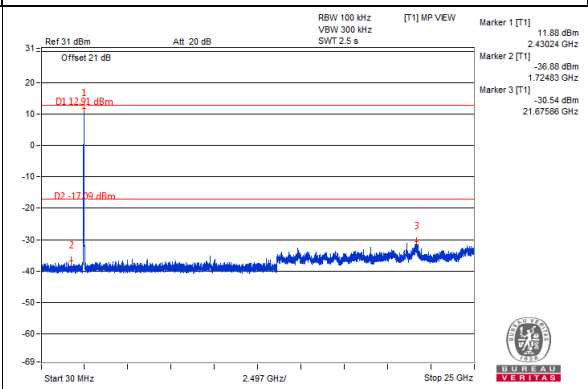
Maximum REF



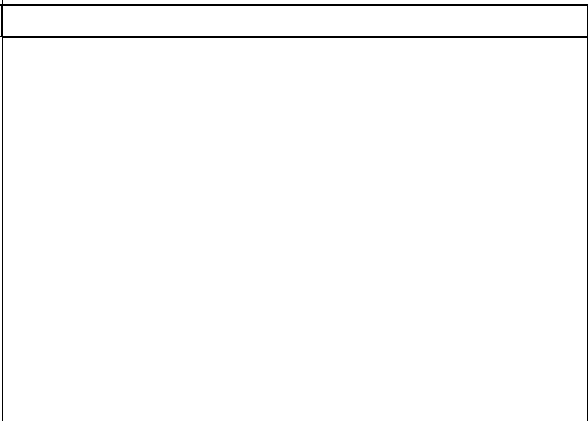
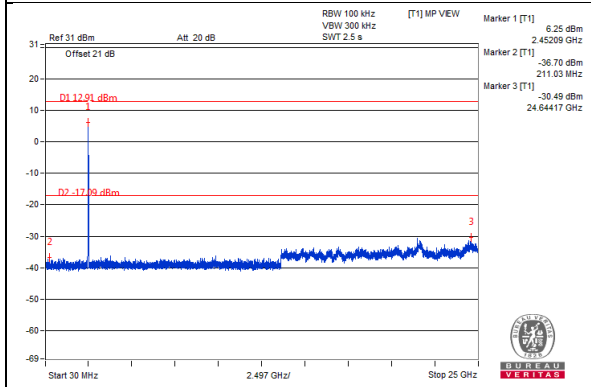
CH 1



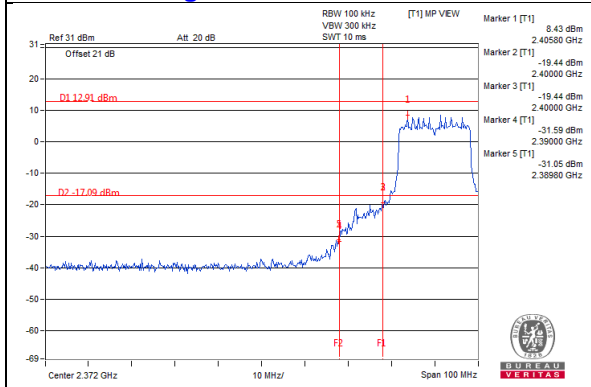
CH 6



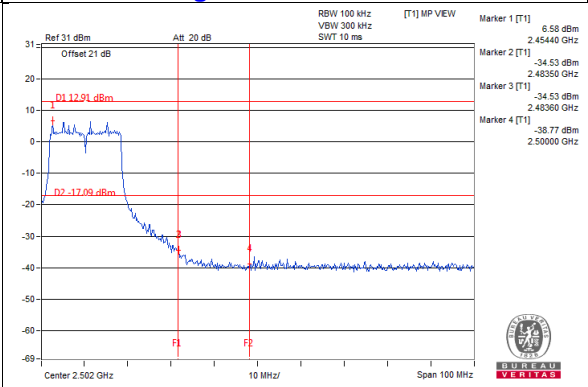
CH 11



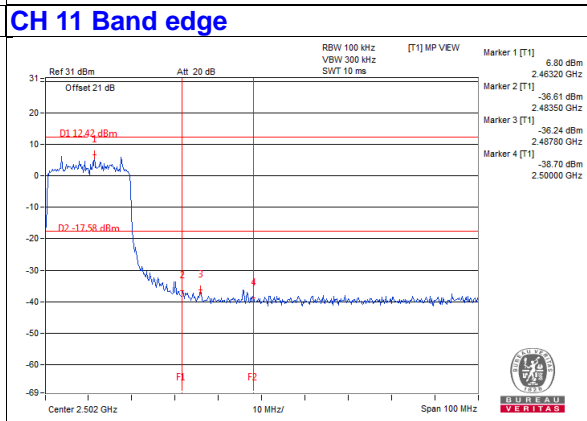
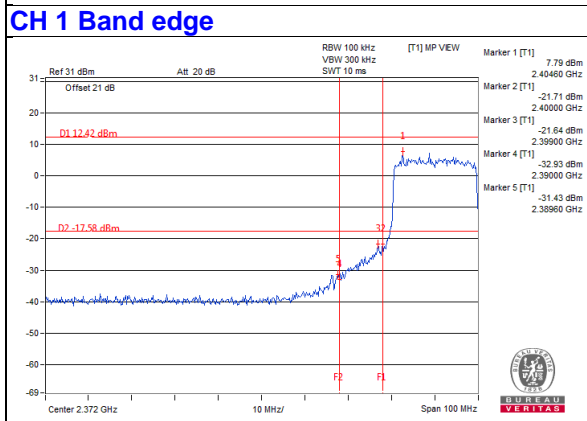
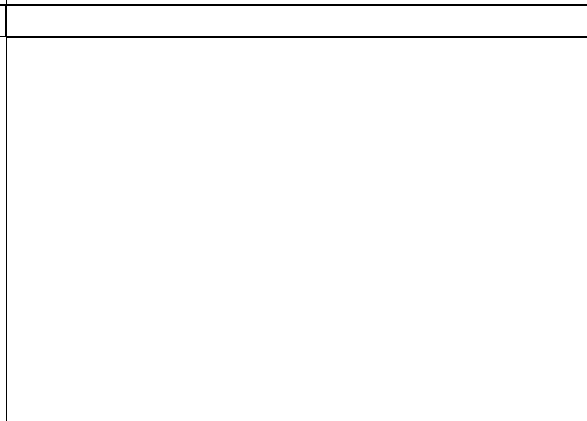
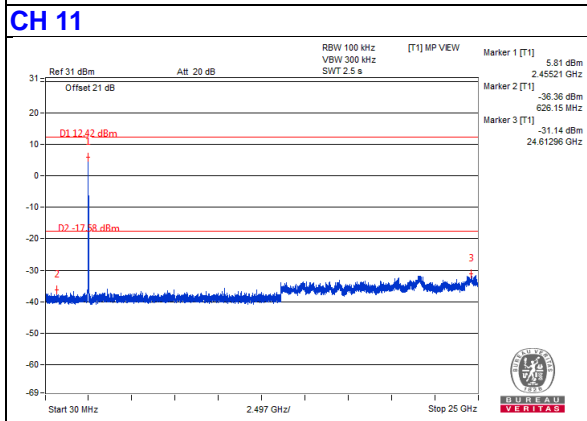
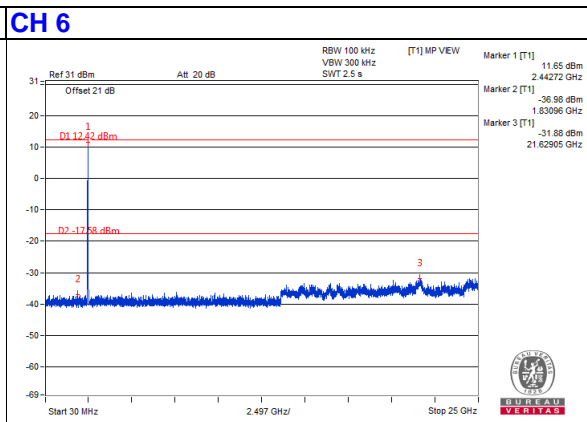
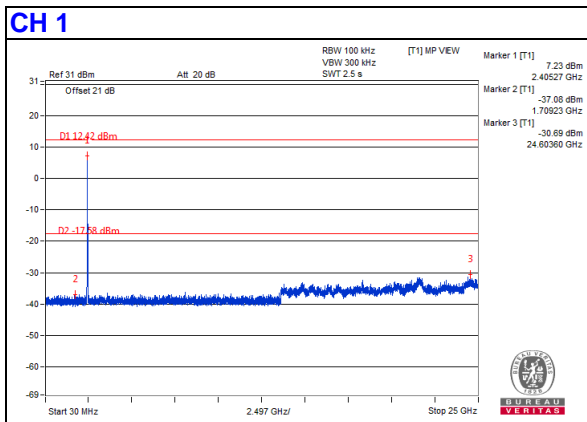
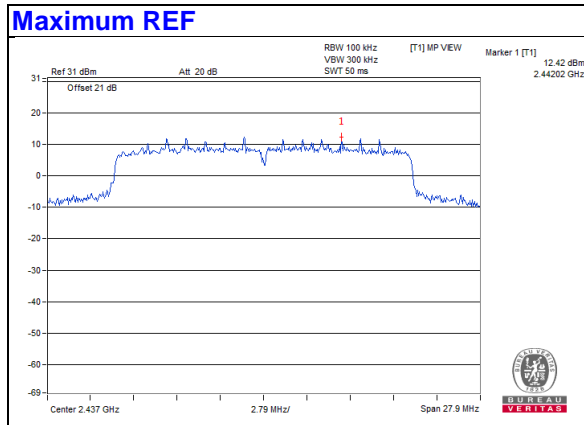
CH 1 Band edge



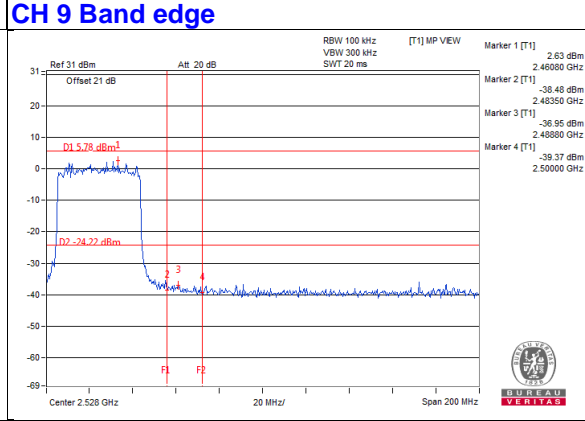
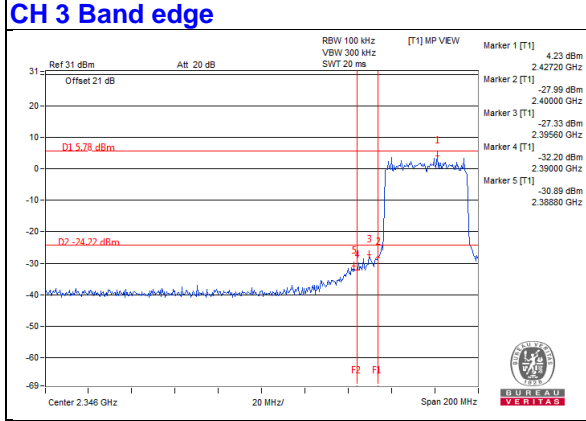
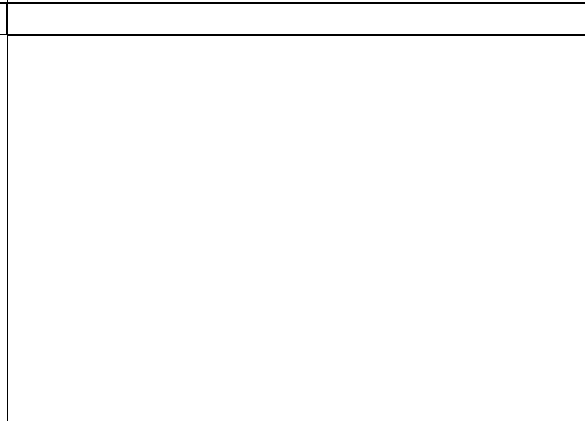
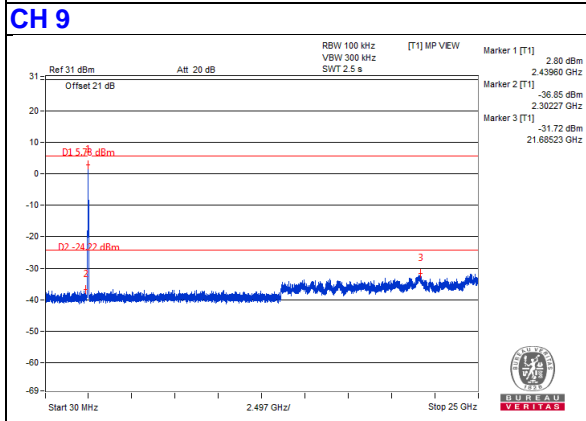
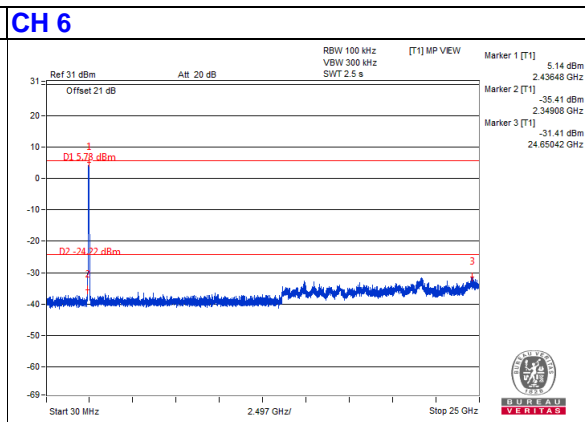
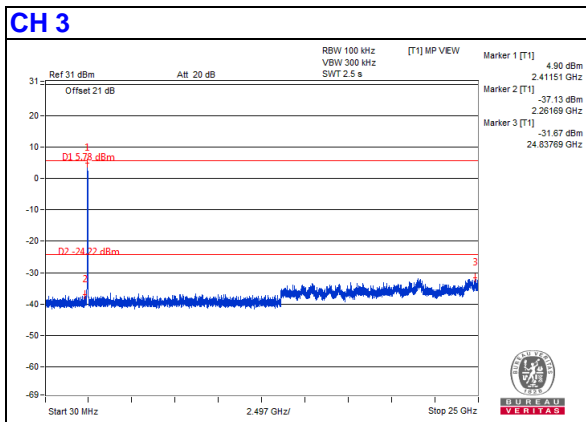
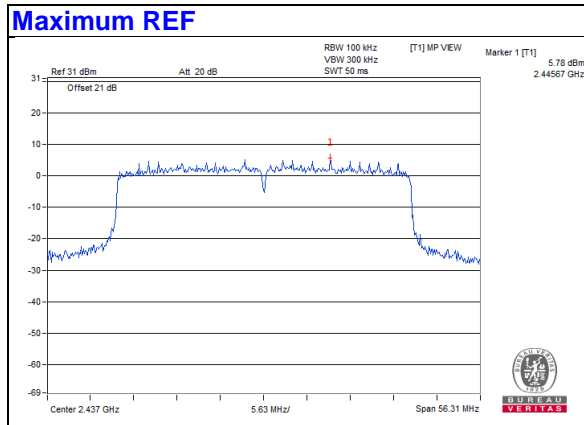
CH 11 Band edge



# 802.11ax (HE20)



# 802.11ax (HE40)



## 5 Pictures of Test Arrangements

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

## Appendix – Information on 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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The address and road map of all our labs can be found in our web site also.

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