

FCC Test Report (WLAN)

Report No.: RF180704E02

FCC ID: UDX-60083010

Test Model: MR55-HW

Received Date: July 05, 2018

Test Date: Aug. 29 to Oct. 18, 2018

Issued Date: Dec. 24, 2018

Applicant: Cisco Systems, Inc.

Address: 170 West Tasman Drive, San Jose, CA 95134 USA

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

Lab Address: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.

Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
Taiwan R.O.C.

**FCC Registration /
Designation Number:** 723255 / TW2022



This report is for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents. Unless specific mention, the uncertainty of measurement has been explicitly taken into account to declare the compliance or non-compliance to the specification. The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies.

Table of Contents

Release Control Record	4
1 Certificate of Conformity	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty.....	6
2.2 Modification Record.....	6
3 General Information	7
3.1 General Description of EUT (WLAN).....	7
3.2 Description of Test Modes.....	13
3.2.1 Test Mode Applicability and Tested Channel Detail.....	14
3.3 Duty Cycle of Test Signal.....	16
3.4 Description of Support Units.....	17
3.4.1 Configuration of System under Test.....	18
3.5 General Description of Applied Standards.....	20
4 Test Types and Results	21
4.1 Radiated Emission and Bandedge Measurement.....	21
4.1.1 Limits of Radiated Emission and Bandedge Measurement.....	21
4.1.2 Test Instruments.....	22
4.1.3 Test Procedures.....	24
4.1.4 Deviation from Test Standard.....	24
4.1.5 Test Setup.....	25
4.1.6 EUT Operating Conditions.....	26
4.1.7 Test Results (Mode 1).....	27
4.1.8 Test Results (Mode 2).....	45
4.1.9 Test Results (Mode 3).....	61
4.2 Conducted Emission Measurement.....	77
4.2.1 Limits of Conducted Emission Measurement.....	77
4.2.2 Test Instruments.....	77
4.2.3 Test Procedures.....	78
4.2.4 Deviation from Test Standard.....	78
4.2.5 Test Setup.....	78
4.2.6 EUT Operating Conditions.....	78
4.2.7 Test Results.....	79
4.3 6dB Bandwidth Measurement.....	81
4.3.1 Limits of 6dB Bandwidth Measurement.....	81
4.3.2 Test Setup.....	81
4.3.3 Test Instruments.....	81
4.3.4 Test Procedure.....	81
4.3.5 Deviation from Test Standard.....	81
4.3.6 EUT Operating Conditions.....	81
4.3.7 Test Result (Mode 1).....	82
4.3.8 Test Result (Mode 2).....	84
4.3.9 Test Result (Mode 3).....	86
4.4 Conducted Output Power Measurement.....	88
4.4.1 Limits of Conducted Output Power Measurement.....	88
4.4.2 Test Setup.....	88
4.4.3 Test Instruments.....	88
4.4.4 Test Procedures.....	88
4.4.5 Deviation from Test Standard.....	88
4.4.6 EUT Operating Conditions.....	88
4.4.7 Test Results (Mode 1).....	89
4.4.8 Test Results (Mode 2).....	92
4.4.9 Test Results (Mode 3).....	95
4.5 Power Spectral Density Measurement.....	97

4.5.1	Limits of Power Spectral Density Measurement	97
4.5.2	Test Setup.....	97
4.5.3	Test Instruments	97
4.5.4	Test Procedure	97
4.5.5	Deviation from Test Standard	97
4.5.6	EUT Operating Condition	97
4.5.7	Test Results (Mode 1).....	98
4.5.8	Test Results (Mode 2).....	105
4.5.9	Test Results (Mode 3).....	109
4.6	Conducted Out of Band Emission Measurement.....	112
4.6.1	Limits of Conducted Out of Band Emission Measurement	112
4.6.2	Test Setup.....	112
4.6.3	Test Instruments	112
4.6.4	Test Procedure	112
4.6.5	Deviation from Test Standard	112
4.6.6	EUT Operating Condition	112
4.6.7	Test Results (Mode 1).....	112
4.6.8	Test Results (Mode 2).....	129
4.6.9	Test Results (Mode 3).....	137
5	Pictures of Test Arrangements.....	141
	Appendix – Information on the Testing Laboratories	142

Release Control Record

Issue No.	Description	Date Issued
RF180704E02	Original release.	Dec. 24, 2018

1 Certificate of Conformity

Product: 8x8 802.11a/b/g/n/ac/ax Access Point

Brand: Cisco

Test Model: MR55-HW

Sample Status: ENGINEERING SAMPLE

Applicant: Cisco Systems, Inc.

Test Date: Aug. 29 to Oct. 18, 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 : Phoenix Huang, **Date:** Dec. 24, 2018
Phoenix Huang / Specialist

Approved by : Max Chen, **Date:** Dec. 24, 2018
Max 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 -5.77dB at 29.23438MHz.
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 2382.00MHz, 2386.00MHz, 2390.00MHz and 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 (WLAN)

Product	8x8 802.11a/b/g/n/ac/ax Access Point
Brand	Cisco
Test Model	MR55-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 3466.7Mbps 802.11ax: up to 4803.9Mbps
Operating Frequency	2.4GHz: 2.412 ~ 2.462GHz 5GHz: 5.18~ 5.24GHz, 5.745 ~ 5.825GHz
Number of Channel	2.4GHz: 802.11b, 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20): 11 802.11n (HT40),VHT40, 802.11ax (HE40): 7 5GHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 9 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 4 802.11ac (VHT80), 802.11ax (HE80): 2 802.11ac (VHT80+80), 802.11ax (HE80+80): 1 set
Output Power	2.412 ~ 2.462GHz: Non-Beamforming Mode: 4TX: 864.55mW 2TX: 456.82mW 1TX: 204.174mW Beamforming Mode 4TX: 482.48mW 2TX: 264.316mW 5.18 ~ 5.24GHz: Non-Beamforming Mode: 8TX: 432.724mW 4TX: 430.677mW 2TX: 376.099mW 1TX: 224.905mW Beamforming Mode 8TX: 432.724mW 4TX: 334.441mW 2TX: 376.099mW 5.745 ~ 5.825GHz: Non-Beamforming Mode: 8TX: 412.219mW 4TX: 902.442mW 2TX: 440.884mW 1TX: 238.781mW

Output Power	Beamforming Mode 8TX: 409.847mW 4TX: 338.338mW 2TX: 440.884mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x 1 (option)
Data Cable Supplied	NA

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. 2**. 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:

WLAN Directional gain table – 8TX				
Frequency range (GHz)	Directional Antenna Gain (dBi)	Antenna Type	Antenna Connector	
5.15 ~ 5.25	9.29	PIFA	i-pex(MHF)	
5.725 ~ 5.85	9.2			
WLAN Directional gain table – 4TX				
Frequency range (GHz)	Antenna Combine Type	Directional Antenna Gain (dBi)	Antenna Type	Antenna Connector
2.4 ~ 2.4835	Dual_1+Dual_2+Dual_3+Dual_4	5.43	PIFA	i-pex(MHF)
5.15 ~ 5.25	Single_1+Single_2+Single_3+Single_4	10.73		
5.725 ~ 5.85		10.68		
WLAN Directional gain table – 2TX				
Frequency range (GHz)	Antenna Combine Type	Directional Antenna Gain (dBi)	Antenna Type	Antenna Connector
2.4 ~ 2.4835	Dual_1+Dual_3	6.33	PIFA	i-pex(MHF)
5.15 ~ 5.25	Dual_2+Dual_3	8.47		
5.725 ~ 5.85		8.59		
Bluetooth antenna spec.				
Antenna Net Gain (dBi)	Frequency range (GHz)	Antenna Type	Antenna Connector	
3.61	2.4~2.4835	PIFA	i-pex(MHF)	
Note: More detailed information, please refer to operating description.				

5. The EUT incorporates a MIMO function.

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

802.11ac (VHT80)	MCS 0~9, Nss=1	8TX	8RX
	MCS 0~9, Nss=2	8TX	8RX
	MCS 0~9, Nss=3	8TX	8RX
	MCS 0~9, Nss=4	8TX	8RX
	MCS 0~9, Nss=5	8TX	8RX
	MCS 0~8, Nss=6	8TX	8RX
	MCS 0~9, Nss=7	8TX	8RX
	MCS 0~9, Nss=8	8TX	8RX
802.11ac (VHT80+VHT80)	MCS 0~9, Nss=1	4TX+4TX	4RX +4RX
	MCS 0~9, Nss=2	4TX+4TX	4RX +4RX
	MCS 0~9, Nss=3	4TX+4TX	4RX +4RX
	MCS 0~9, Nss=4	4TX+4TX	4RX +4RX
802.11ax (HE20)	MCS 0~11, Nss=1	8TX	8RX
	MCS 0~11, Nss=2	8TX	8RX
	MCS 0~11, Nss=3	8TX	8RX
	MCS 0~11, Nss=4	8TX	8RX
	MCS 0~11, Nss=5	8TX	8RX
	MCS 0~11, Nss=6	8TX	8RX
	MCS 0~11, Nss=7	8TX	8RX
	MCS 0~11, Nss=8	8TX	8RX
802.11ax (HE40)	MCS 0~11, Nss=1	8TX	8RX
	MCS 0~11, Nss=2	8TX	8RX
	MCS 0~11, Nss=3	8TX	8RX
	MCS 0~11, Nss=4	8TX	8RX
	MCS 0~11, Nss=5	8TX	8RX
	MCS 0~11, Nss=6	8TX	8RX
	MCS 0~11, Nss=7	8TX	8RX
	MCS 0~11, Nss=8	8TX	8RX
802.11ax (HE80)	MCS 0~11, Nss=1	8TX	8RX
	MCS 0~11, Nss=2	8TX	8RX
	MCS 0~11, Nss=3	8TX	8RX
	MCS 0~11, Nss=4	8TX	8RX
	MCS 0~11, Nss=5	8TX	8RX
	MCS 0~11, Nss=6	8TX	8RX
	MCS 0~11, Nss=7	8TX	8RX
	MCS 0~11, Nss=8	8TX	8RX
802.11ax (HE80+HE80)	MCS 0~11, Nss=1	4TX+4TX	4RX +4RX
	MCS 0~11, Nss=2	4TX+4TX	4RX +4RX
	MCS 0~11, Nss=3	4TX+4TX	4RX +4RX
	MCS 0~11, Nss=4	4TX+4TX	4RX +4RX

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 mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

2.4GHz Scanning	
MODULATION MODE	RX CONFIGURATION
802.11b	1RX
802.11g	1RX
802.11n (HT20)	1RX
802.11n (HT40)	1RX
VHT20	1RX
VHT40	1RX
5GHz Scanning	
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 (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437		

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

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

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE \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
802.11b	1 to 11	6	DSSS	DBPSK	1Mb/s

Power Line Conducted Emission Test:

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

Following channel(s) was (were) selected for the final test as listed below.

Non-Beamforming Mode					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE PARAMETER
802.11b	1 to 11	6	DSSS	DBPSK	1Mb/s

Antenna Port Conducted Measurement:

- This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

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:

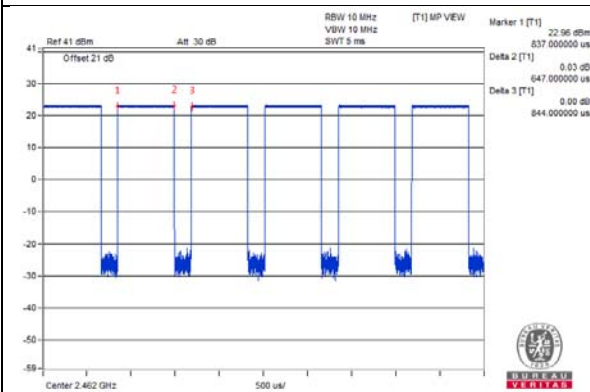
APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE \geq 1G	25deg. C, 69%RH	120Vac, 60Hz	Weiwei Lo
RE $<$ 1G	22deg. C, 68%RH	120Vac, 60Hz	Frank Chuang
PLC	25deg. C, 75%RH	120Vac, 60Hz	Frank Chuang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Jyunchun Lin

3.3 Duty Cycle of Test Signal

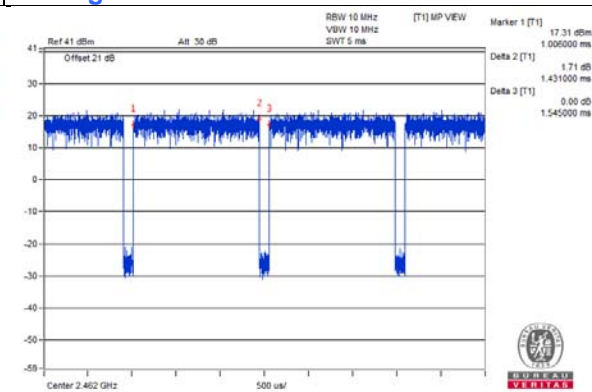
Duty cycle of test signal is < 98%, duty factor shall be considered.

- 802.11b:** Duty cycle = 0.647 ms/0.844 ms = 0.767, Duty factor = $10 * \log (1/\text{Duty cycle}) = 1.15$
- 802.11g:** Duty cycle = 1.431 ms/1.545 ms = 0.926, Duty factor = $10 * \log (1/\text{Duty cycle}) = 0.33$
- VHT20:** Duty cycle = 5.422 ms/5.717 ms = 0.948, Duty factor = $10 * \log (1/\text{Duty cycle}) = 0.23$
- VHT40:** Duty cycle = 5.417 ms/5.895 ms = 0.919, Duty factor = $10 * \log (1/\text{Duty cycle}) = 0.37$
- 802.11ax (HE20):** Duty cycle = 5.443 ms/5.635 ms = 0.966, Duty factor = $10 * \log (1/\text{Duty cycle}) = 0.15$
- 802.11ax (HE40):** Duty cycle = 5.439 ms/5.664 ms = 0.96, Duty factor = $10 * \log (1/\text{Duty cycle}) = 0.18$

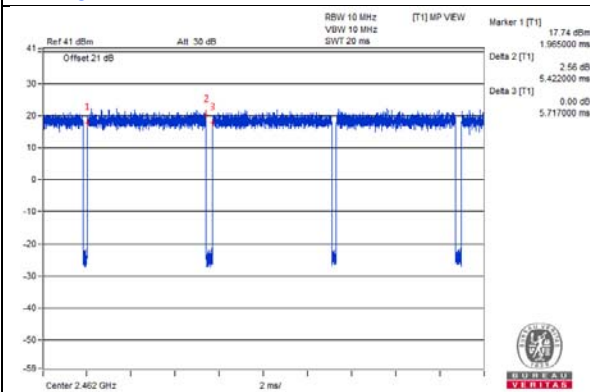
802.11b



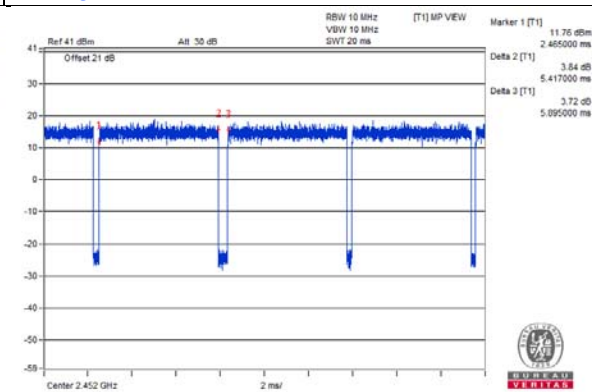
802.11g



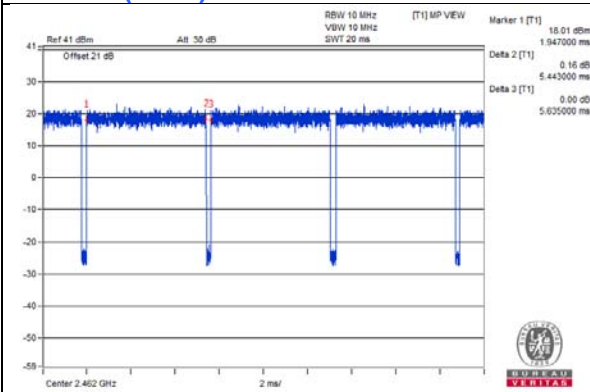
VHT20



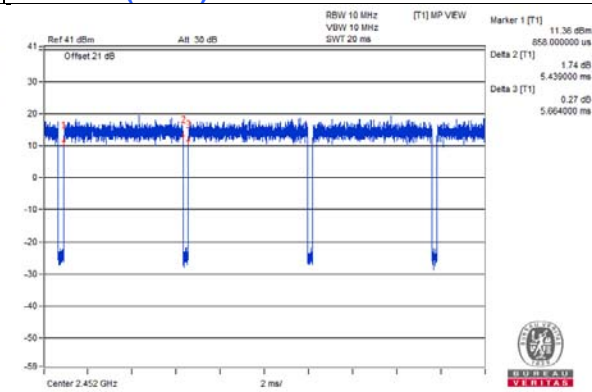
VHT40



802.11ax (HE20)



802.11ax (HE40)



3.4 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	DELL	E6420	B92T3R1	FCC DoC	Provided by Lab
B.	POE Adapter	CISCO	MA-INJ-4	NA	NA	Supplied by client

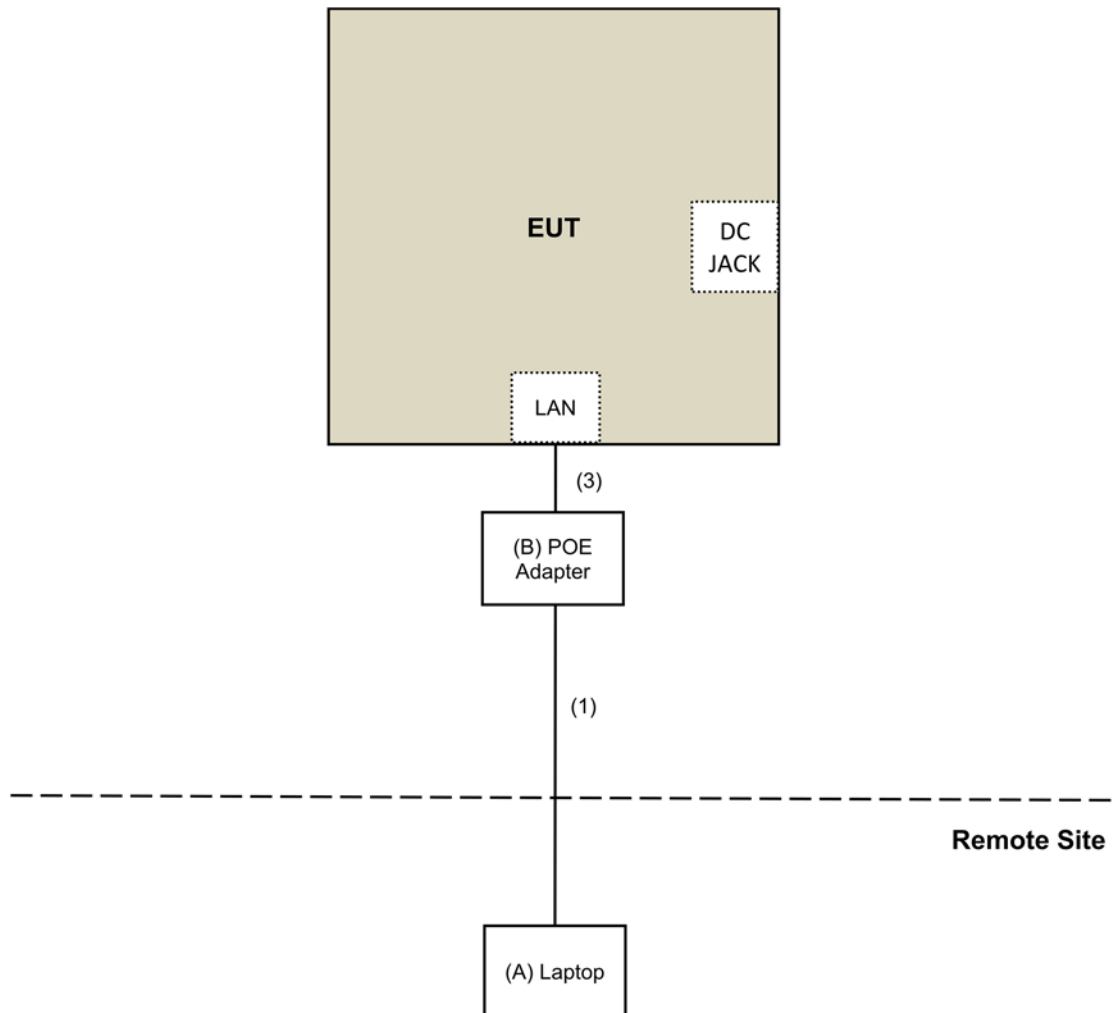
Note:

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

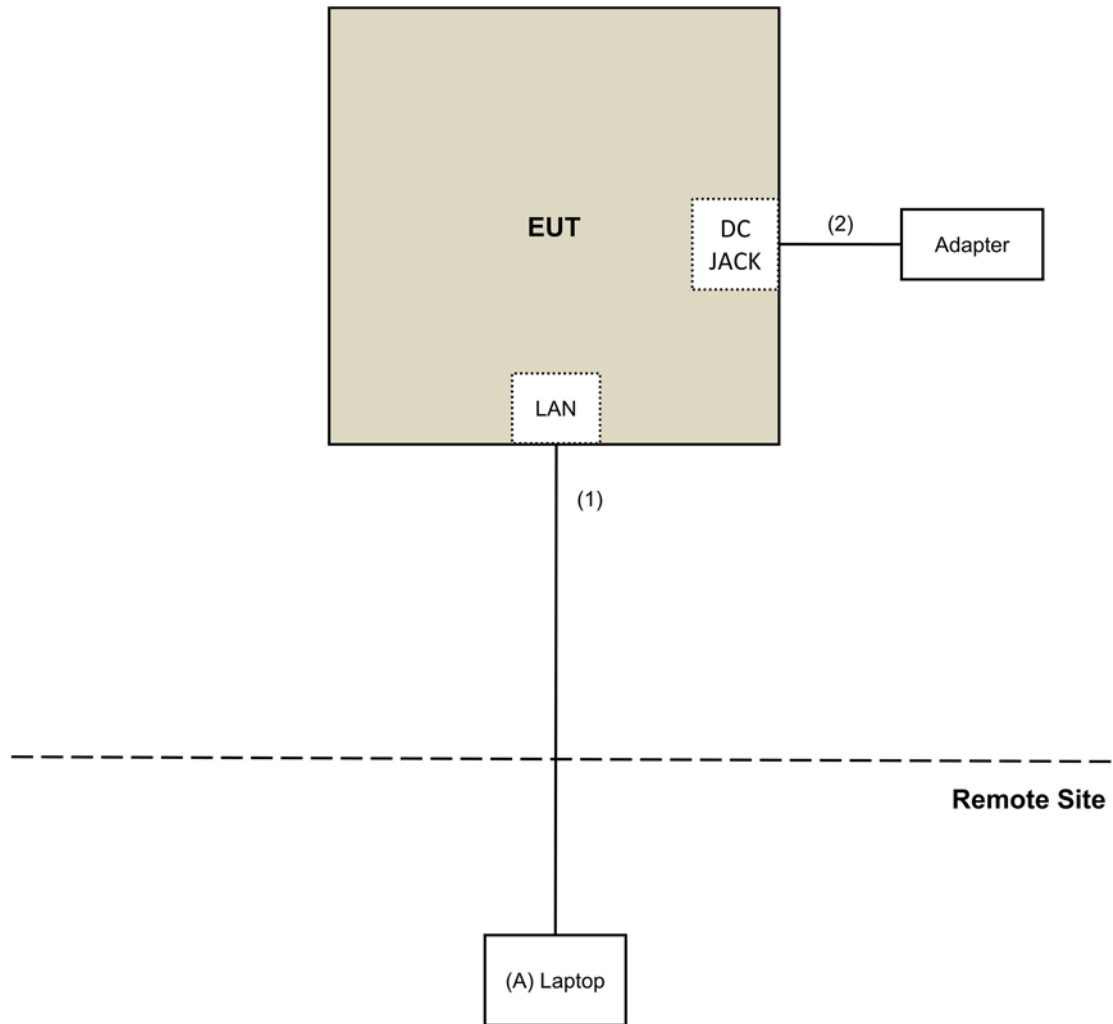
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ-45 Cable	1	10	No	0	Provided by Lab
2.	DC Cable	1	1.8	No	0	Supplied by client
3.	RJ-45 Cable	1	0.5	No	0	Provided by Lab

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 radiated emission 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. 30 to Sep. 05, 2018

For other 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. 18, 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:

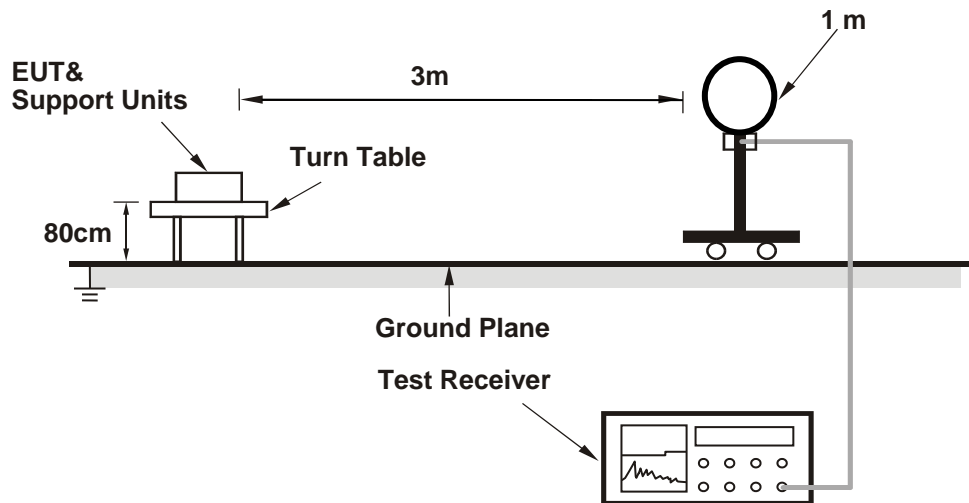
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

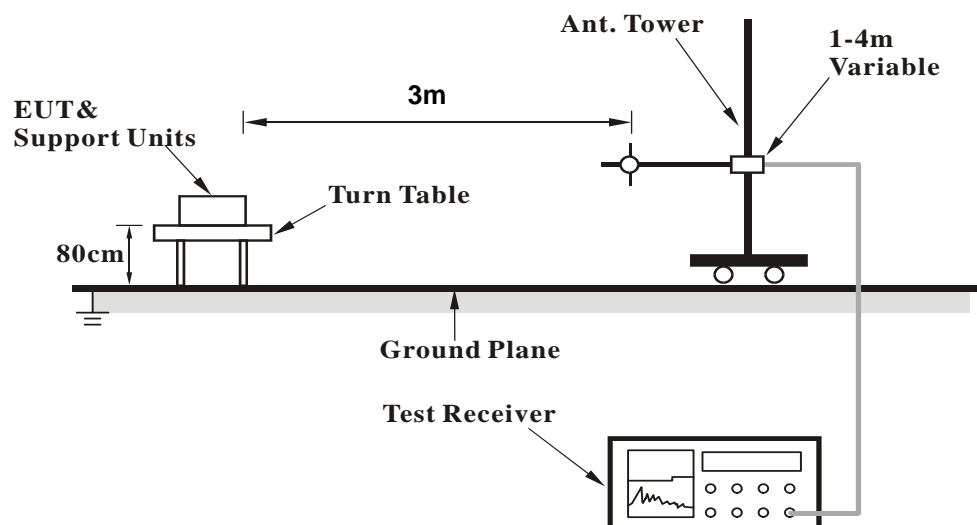
No deviation.

4.1.5 Test Setup

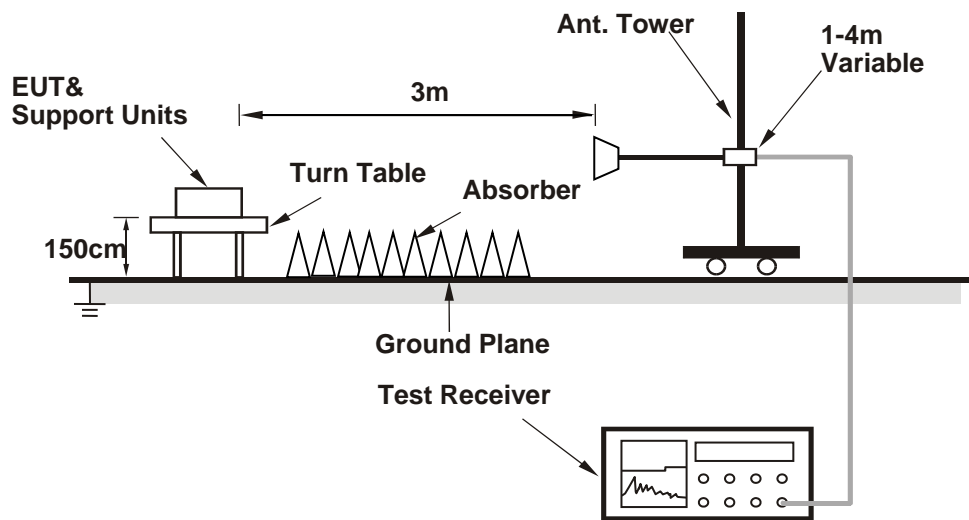
For Radiated emission below 30MHz



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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2387.00	59.4 PK	74.0	-14.6	1.75 H	193	62.1	-2.7
2	2387.00	53.6 AV	54.0	-0.4	1.75 H	193	56.3	-2.7
3	*2412.00	113.9 PK			1.75 H	193	116.6	-2.7
4	*2412.00	111.8 AV			1.75 H	193	114.5	-2.7
5	4824.00	45.9 PK	74.0	-28.1	1.29 H	257	44.3	1.6
6	4824.00	42.8 AV	54.0	-11.2	1.29 H	257	41.2	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	2387.00	49.3 PK	74.0	-24.7	1.90 V	310	52.0	-2.7
2	2387.00	49.2 AV	54.0	-4.8	1.90 V	310	51.9	-2.7
3	*2412.00	110.6 PK			1.90 V	310	113.3	-2.7
4	*2412.00	107.9 AV			1.90 V	310	110.6	-2.7
5	4824.00	44.6 PK	74.0	-29.4	1.38 V	231	43.0	1.6
6	4824.00	40.1 AV	54.0	-13.9	1.38 V	231	38.5	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.7 PK	74.0	-14.3	1.60 H	293	62.4	-2.7
2	2390.00	50.6 AV	54.0	-3.4	1.60 H	293	53.3	-2.7
3	*2437.00	115.2 PK			1.60 H	293	118.2	-3.0
4	*2437.00	111.8 AV			1.60 H	293	114.8	-3.0
5	2483.50	60.7 PK	74.0	-13.3	1.60 H	293	63.7	-3.0
6	2483.50	52.5 AV	54.0	-1.5	1.60 H	293	55.5	-3.0
7	4874.00	52.6 PK	74.0	-21.4	1.77 H	79	51.0	1.6
8	4874.00	49.9 AV	54.0	-4.1	1.77 H	79	48.3	1.6
9	7311.00	49.3 PK	74.0	-24.7	1.62 H	271	41.6	7.7
10	7311.00	41.5 AV	54.0	-12.5	1.62 H	271	33.8	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	50.4 PK	74.0	-23.6	1.94 V	307	53.1	-2.7
2	2390.00	46.9 AV	54.0	-7.1	1.94 V	307	49.6	-2.7
3	*2437.00	112.0 PK			1.94 V	307	115.0	-3.0
4	*2437.00	108.3 AV			1.94 V	307	111.3	-3.0
5	2483.50	51.3 PK	74.0	-22.7	1.94 V	307	54.3	-3.0
6	2483.50	48.5 AV	54.0	-5.5	1.94 V	307	51.5	-3.0
7	4874.00	50.4 PK	74.0	-23.6	1.60 V	2	48.8	1.6
8	4874.00	47.2 AV	54.0	-6.8	1.60 V	2	45.6	1.6
9	7311.00	48.2 PK	74.0	-25.8	1.52 V	310	40.5	7.7
10	7311.00	40.2 AV	54.0	-13.8	1.52 V	310	32.5	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.6 PK			1.73 H	360	116.6	-3.0
2	*2462.00	109.7 AV			1.73 H	360	112.7	-3.0
3	2483.50	61.2 PK	74.0	-12.8	1.73 H	360	64.2	-3.0
4	2483.50	53.9 AV	54.0	-0.1	1.73 H	360	56.9	-3.0
5	4924.00	40.5 PK	74.0	-33.5	1.23 H	238	38.8	1.7
6	4924.00	36.2 AV	54.0	-17.8	1.23 H	238	34.5	1.7
7	7386.00	46.2 PK	74.0	-27.8	1.18 H	334	38.3	7.9
8	7386.00	34.2 AV	54.0	-19.8	1.18 H	334	26.3	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	110.5 PK			1.91 V	292	113.5	-3.0
2	*2462.00	106.7 AV			1.91 V	292	109.7	-3.0
3	2483.50	51.8 PK	74.0	-22.2	1.91 V	292	54.8	-3.0
4	2483.50	49.7 AV	54.0	-4.3	1.91 V	292	52.7	-3.0
5	4924.00	43.2 PK	74.0	-30.8	1.26 V	261	41.5	1.7
6	4924.00	39.3 AV	54.0	-14.7	1.26 V	261	37.6	1.7
7	7386.00	45.0 PK	74.0	-29.0	1.61 V	235	37.1	7.9
8	7386.00	33.4 AV	54.0	-20.6	1.61 V	235	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.

802.11g

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2386.00	70.5 PK	74.0	-3.5	2.04 H	341	73.2	-2.7
2	2386.00	53.9 AV	54.0	-0.1	2.04 H	341	56.6	-2.7
3	2390.00	68.8 PK	74.0	-5.2	2.04 H	341	71.5	-2.7
4	2390.00	51.9 AV	54.0	-2.1	2.04 H	341	54.6	-2.7
5	*2412.00	113.6 PK			2.04 H	341	116.3	-2.7
6	*2412.00	104.1 AV			2.04 H	341	106.8	-2.7
7	4824.00	40.2 PK	74.0	-33.8	1.32 H	250	38.6	1.6
8	4824.00	34.7 AV	54.0	-19.3	1.32 H	250	33.1	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	2386.00	60.7 PK	74.0	-13.3	1.91 V	289	63.4	-2.7
2	2386.00	49.9 AV	54.0	-4.1	1.91 V	289	52.6	-2.7
3	2390.00	58.5 PK	74.0	-15.5	1.91 V	289	61.2	-2.7
4	2390.00	47.3 AV	54.0	-6.7	1.91 V	289	50.0	-2.7
5	*2412.00	110.9 PK			1.91 V	289	113.6	-2.7
6	*2412.00	100.8 AV			1.91 V	289	103.5	-2.7
7	4824.00	44.8 PK	74.0	-29.2	1.24 V	211	43.2	1.6
8	4824.00	39.4 AV	54.0	-14.6	1.24 V	211	37.8	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	72.4 PK	74.0	-1.6	2.03 H	182	75.1	-2.7
2	2390.00	53.9 AV	54.0	-0.1	2.03 H	182	56.6	-2.7
3	*2417.00	115.3 PK			2.03 H	182	118.1	-2.8
4	*2417.00	105.8 AV			2.03 H	182	108.6	-2.8
5	4834.00	41.3 PK	74.0	-32.7	1.34 H	287	39.7	1.6
6	4834.00	37.9 AV	54.0	-16.1	1.34 H	287	36.3	1.6
7	7251.00	45.8 PK	74.0	-28.2	2.19 H	274	38.0	7.8
8	7251.00	36.6 AV	54.0	-17.4	2.19 H	274	28.8	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	62.7 PK	74.0	-11.3	1.88 V	282	65.4	-2.7
2	2390.00	49.5 AV	54.0	-4.5	1.88 V	282	52.2	-2.7
3	*2417.00	112.2 PK			1.88 V	282	115.0	-2.8
4	*2417.00	102.5 AV			1.88 V	282	105.3	-2.8
5	4834.00	45.4 PK	74.0	-28.6	1.31 V	230	43.8	1.6
6	4834.00	40.1 AV	54.0	-13.9	1.31 V	230	38.5	1.6
7	7251.00	46.6 PK	74.0	-27.4	1.68 V	346	38.8	7.8
8	7251.00	35.9 AV	54.0	-18.1	1.68 V	346	28.1	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2382.00	68.9 PK	74.0	-5.1	2.04 H	180	71.6	-2.7
2	2382.00	53.9 AV	54.0	-0.1	2.04 H	180	56.6	-2.7
3	2390.00	58.6 PK	74.0	-15.4	2.04 H	180	61.3	-2.7
4	2390.00	48.4 AV	54.0	-5.6	2.04 H	180	51.1	-2.7
5	*2437.00	120.7 PK			2.04 H	180	123.7	-3.0
6	*2437.00	111.6 AV			2.04 H	180	114.6	-3.0
7	2483.50	67.1 PK	74.0	-6.9	2.04 H	180	70.1	-3.0
8	2483.50	50.8 AV	54.0	-3.2	2.04 H	180	53.8	-3.0
9	4874.00	45.3 PK	74.0	-28.7	1.26 H	288	43.7	1.6
10	4874.00	42.0 AV	54.0	-12.0	1.26 H	288	40.4	1.6
11	7311.00	48.9 PK	74.0	-25.1	2.07 H	304	41.2	7.7
12	7311.00	40.4 AV	54.0	-13.6	2.07 H	304	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	2382.00	60.2 PK	74.0	-13.8	1.96 V	300	62.9	-2.7
2	2382.00	50.4 AV	54.0	-3.6	1.96 V	300	53.1	-2.7
3	2390.00	49.5 PK	74.0	-24.5	1.96 V	300	52.2	-2.7
4	2390.00	44.9 AV	54.0	-9.1	1.96 V	300	47.6	-2.7
5	*2437.00	117.8 PK			1.96 V	300	120.8	-3.0
6	*2437.00	108.2 AV			1.96 V	300	111.2	-3.0
7	2483.50	57.7 PK	74.0	-16.3	1.96 V	300	60.7	-3.0
8	2483.50	46.5 AV	54.0	-7.5	1.96 V	300	49.5	-3.0
9	4874.00	45.8 PK	74.0	-28.2	1.33 V	198	44.2	1.6
10	4874.00	42.1 AV	54.0	-11.9	1.33 V	198	40.5	1.6
11	7311.00	45.8 PK	74.0	-28.2	1.69 V	349	38.1	7.7
12	7311.00	35.5 AV	54.0	-18.5	1.69 V	349	27.8	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	115.7 PK			1.86 H	198	118.7	-3.0
2	*2457.00	106.3 AV			1.86 H	198	109.3	-3.0
3	2483.50	58.7 PK	74.0	-15.3	1.86 H	198	61.7	-3.0
4	2483.50	48.8 AV	54.0	-5.2	1.86 H	198	51.8	-3.0
5	2490.00	70.5 PK	74.0	-3.5	1.86 H	198	73.4	-2.9
6	2490.00	53.6 AV	54.0	-0.4	1.86 H	198	56.5	-2.9
7	4914.00	40.5 PK	74.0	-33.5	1.32 H	256	38.8	1.7
8	4914.00	37.6 AV	54.0	-16.4	1.32 H	256	35.9	1.7
9	7371.00	47.6 PK	74.0	-26.4	2.03 H	274	39.8	7.8
10	7371.00	35.2 AV	54.0	-18.8	2.03 H	274	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	*2457.00	113.0 PK			1.98 V	282	116.0	-3.0
2	*2457.00	103.0 AV			1.98 V	282	106.0	-3.0
3	2483.50	49.9 PK	74.0	-24.1	1.98 V	282	52.9	-3.0
4	2483.50	45.6 AV	54.0	-8.4	1.98 V	282	48.6	-3.0
5	2490.00	61.0 PK	74.0	-13.0	1.98 V	282	63.9	-2.9
6	2490.00	49.5 AV	54.0	-4.5	1.98 V	282	52.4	-2.9
7	4914.00	43.8 PK	74.0	-30.2	1.34 V	235	42.1	1.7
8	4914.00	39.5 AV	54.0	-14.5	1.34 V	235	37.8	1.7
9	7371.00	45.5 PK	74.0	-28.5	1.71 V	346	37.7	7.8
10	7371.00	34.9 AV	54.0	-19.1	1.71 V	346	27.1	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	112.4 PK			1.70 H	182	115.4	-3.0
2	*2462.00	103.5 AV			1.70 H	182	106.5	-3.0
3	2483.50	73.6 PK	74.0	-0.4	1.70 H	182	76.6	-3.0
4	2483.50	53.9 AV	54.0	-0.1	1.70 H	182	56.9	-3.0
5	4924.00	38.2 PK	74.0	-35.8	1.21 H	273	36.5	1.7
6	4924.00	34.8 AV	54.0	-19.2	1.21 H	273	33.1	1.7
7	7386.00	46.1 PK	74.0	-27.9	2.11 H	313	38.2	7.9
8	7386.00	34.6 AV	54.0	-19.4	2.11 H	313	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	109.7 PK			1.89 V	307	112.7	-3.0
2	*2462.00	100.4 AV			1.89 V	307	103.4	-3.0
3	2483.50	64.5 PK	74.0	-9.5	1.89 V	307	67.5	-3.0
4	2483.50	50.2 AV	54.0	-3.8	1.89 V	307	53.2	-3.0
5	4924.00	42.5 PK	74.0	-31.5	1.14 V	269	40.8	1.7
6	4924.00	39.2 AV	54.0	-14.8	1.14 V	269	37.5	1.7
7	7386.00	46.4 PK	74.0	-27.6	1.53 V	236	38.5	7.9
8	7386.00	34.3 AV	54.0	-19.7	1.53 V	236	26.4	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)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.7 PK	74.0	-7.3	1.52 H	190	69.4	-2.7
2	2390.00	53.8 AV	54.0	-0.2	1.52 H	190	56.5	-2.7
3	*2412.00	113.6 PK			1.52 H	190	116.3	-2.7
4	*2412.00	101.4 AV			1.52 H	190	104.1	-2.7
5	4824.00	39.0 PK	74.0	-35.0	1.48 H	242	37.4	1.6
6	4824.00	36.1 AV	54.0	-17.9	1.48 H	242	34.5	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	57.7 PK	74.0	-16.3	1.94 V	298	60.4	-2.7
2	2390.00	49.9 AV	54.0	-4.1	1.94 V	298	52.6	-2.7
3	*2412.00	110.2 PK			1.94 V	298	112.9	-2.7
4	*2412.00	97.7 AV			1.94 V	298	100.4	-2.7
5	4824.00	41.9 PK	74.0	-32.1	1.21 V	241	40.3	1.6
6	4824.00	38.6 AV	54.0	-15.4	1.21 V	241	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.4 PK	74.0	-5.6	1.38 H	194	71.1	-2.7
2	2390.00	53.8 AV	54.0	-0.2	1.38 H	194	56.5	-2.7
3	*2417.00	115.4 PK			1.38 H	194	118.2	-2.8
4	*2417.00	103.3 AV			1.38 H	194	106.1	-2.8
5	4834.00	40.6 PK	74.0	-33.4	1.34 H	226	39.0	1.6
6	4834.00	37.1 AV	54.0	-16.9	1.34 H	226	35.5	1.6
7	7251.00	47.4 PK	74.0	-26.6	2.07 H	271	39.6	7.8
8	7251.00	35.6 AV	54.0	-18.4	2.07 H	271	27.8	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	58.6 PK	74.0	-15.4	1.94 V	310	61.3	-2.7
2	2390.00	49.6 AV	54.0	-4.4	1.94 V	310	52.3	-2.7
3	*2417.00	111.9 PK			1.94 V	310	114.7	-2.8
4	*2417.00	99.7 AV			1.94 V	310	102.5	-2.8
5	4834.00	44.2 PK	74.0	-29.8	1.30 V	225	42.6	1.6
6	4834.00	39.3 AV	54.0	-14.7	1.30 V	225	37.7	1.6
7	7251.00	45.6 PK	74.0	-28.4	1.89 V	360	37.8	7.8
8	7251.00	34.4 AV	54.0	-19.6	1.89 V	360	26.6	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.5 PK	74.0	-9.5	1.60 H	299	67.2	-2.7
2	2390.00	52.5 AV	54.0	-1.5	1.60 H	299	55.2	-2.7
3	*2437.00	116.8 PK			1.60 H	299	119.8	-3.0
4	*2437.00	105.1 AV			1.60 H	299	108.1	-3.0
5	2483.50	68.1 PK	74.0	-5.9	1.60 H	299	71.1	-3.0
6	2483.50	53.6 AV	54.0	-0.4	1.60 H	299	56.6	-3.0
7	4874.00	44.9 PK	74.0	-29.1	1.34 H	293	43.3	1.6
8	4874.00	41.7 AV	54.0	-12.3	1.34 H	293	40.1	1.6
9	7311.00	48.8 PK	74.0	-25.2	2.14 H	306	41.1	7.7
10	7311.00	40.4 AV	54.0	-13.6	2.14 H	306	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	55.3 PK	74.0	-18.7	1.99 V	311	58.0	-2.7
2	2390.00	48.6 AV	54.0	-5.4	1.99 V	311	51.3	-2.7
3	*2437.00	113.7 PK			1.99 V	311	116.7	-3.0
4	*2437.00	101.4 AV			1.99 V	311	104.4	-3.0
5	2483.50	58.7 PK	74.0	-15.3	1.99 V	311	61.7	-3.0
6	2483.50	49.6 AV	54.0	-4.4	1.99 V	311	52.6	-3.0
7	4874.00	45.8 PK	74.0	-28.2	1.29 V	218	44.2	1.6
8	4874.00	42.7 AV	54.0	-11.3	1.29 V	218	41.1	1.6
9	7311.00	46.5 PK	74.0	-27.5	1.77 V	351	38.8	7.7
10	7311.00	36.3 AV	54.0	-17.7	1.77 V	351	28.6	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	114.9 PK			1.78 H	358	117.9	-3.0
2	*2457.00	101.7 AV			1.78 H	358	104.7	-3.0
3	2483.50	68.7 PK	74.0	-5.3	1.78 H	358	71.7	-3.0
4	2483.50	53.9 AV	54.0	-0.1	1.78 H	358	56.9	-3.0
5	4914.00	41.4 PK	74.0	-32.6	1.34 H	244	39.7	1.7
6	4914.00	38.0 AV	54.0	-16.0	1.34 H	244	36.3	1.7
7	7371.00	47.2 PK	74.0	-26.8	2.00 H	269	39.4	7.8
8	7371.00	35.2 AV	54.0	-18.8	2.00 H	269	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	*2457.00	112.4 PK			1.97 V	302	115.4	-3.0
2	*2457.00	98.7 AV			1.97 V	302	101.7	-3.0
3	2483.50	58.7 PK	74.0	-15.3	1.97 V	302	61.7	-3.0
4	2483.50	49.5 AV	54.0	-4.5	1.97 V	302	52.5	-3.0
5	4914.00	45.6 PK	74.0	-28.4	1.33 V	228	43.9	1.7
6	4914.00	40.6 AV	54.0	-13.4	1.33 V	228	38.9	1.7
7	7371.00	46.5 PK	74.0	-27.5	1.81 V	360	38.7	7.8
8	7371.00	35.4 AV	54.0	-18.6	1.81 V	360	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	112.8 PK			1.72 H	360	115.8	-3.0
2	*2462.00	100.4 AV			1.72 H	360	103.4	-3.0
3	2483.50	67.2 PK	74.0	-6.8	1.72 H	360	70.2	-3.0
4	2483.50	53.9 AV	54.0	-0.1	1.72 H	360	56.9	-3.0
5	4924.00	38.6 PK	74.0	-35.4	1.34 H	226	36.9	1.7
6	4924.00	35.3 AV	54.0	-18.7	1.34 H	226	33.6	1.7
7	7386.00	45.2 PK	74.0	-28.8	2.03 H	257	37.3	7.9
8	7386.00	32.6 AV	54.0	-21.4	2.03 H	257	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	*2462.00	109.3 PK			1.99 V	290	112.3	-3.0
2	*2462.00	96.6 AV			1.99 V	290	99.6	-3.0
3	2483.50	58.2 PK	74.0	-15.8	1.99 V	290	61.2	-3.0
4	2483.50	50.1 AV	54.0	-3.9	1.99 V	290	53.1	-3.0
5	4924.00	42.0 PK	74.0	-32.0	1.19 V	251	40.3	1.7
6	4924.00	38.7 AV	54.0	-15.3	1.19 V	251	37.0	1.7
7	7386.00	46.4 PK	74.0	-27.6	1.51 V	240	38.5	7.9
8	7386.00	33.8 AV	54.0	-20.2	1.51 V	240	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.

802.11ax (HE40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.4 PK	74.0	-10.6	1.18 H	239	66.1	-2.7
2	2390.00	53.7 AV	54.0	-0.3	1.18 H	239	56.4	-2.7
3	*2422.00	113.2 PK			1.18 H	239	116.1	-2.9
4	*2422.00	101.0 AV			1.18 H	239	103.9	-2.9
5	4844.00	38.3 PK	74.0	-35.7	1.36 H	220	36.7	1.6
6	4844.00	35.3 AV	54.0	-18.7	1.36 H	220	33.7	1.6
7	7266.00	45.9 PK	74.0	-28.1	2.00 H	248	38.1	7.8
8	7266.00	33.0 AV	54.0	-21.0	2.00 H	248	25.2	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	53.1 PK	74.0	-20.9	1.94 V	296	55.8	-2.7
2	2390.00	49.1 AV	54.0	-4.9	1.94 V	296	51.8	-2.7
3	*2422.00	110.4 PK			1.94 V	296	113.3	-2.9
4	*2422.00	97.8 AV			1.94 V	296	100.7	-2.9
5	4844.00	41.1 PK	74.0	-32.9	1.26 V	251	39.5	1.6
6	4844.00	37.8 AV	54.0	-16.2	1.26 V	251	36.2	1.6
7	7266.00	46.3 PK	74.0	-27.7	1.59 V	219	38.5	7.8
8	7266.00	33.8 AV	54.0	-20.2	1.59 V	219	26.0	7.8

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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.6 PK	74.0	-15.4	1.98 H	360	61.3	-2.7
2	2390.00	49.1 AV	54.0	-4.9	1.98 H	360	51.8	-2.7
3	*2437.00	114.0 PK			1.98 H	360	117.0	-3.0
4	*2437.00	103.2 AV			1.98 H	360	106.2	-3.0
5	2483.50	66.4 PK	74.0	-7.6	1.98 H	360	69.4	-3.0
6	2483.50	53.9 AV	54.0	-0.1	1.98 H	360	56.9	-3.0
7	4874.00	40.1 PK	74.0	-33.9	1.49 H	246	38.5	1.6
8	4874.00	36.4 AV	54.0	-17.6	1.49 H	246	34.8	1.6
9	7311.00	45.8 PK	74.0	-28.2	2.03 H	266	38.1	7.7
10	7311.00	33.0 AV	54.0	-21.0	2.03 H	266	25.3	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	54.3 PK	74.0	-19.7	1.90 V	305	57.0	-2.7
2	2390.00	44.6 AV	54.0	-9.4	1.90 V	305	47.3	-2.7
3	*2437.00	110.2 PK			1.90 V	305	113.2	-3.0
4	*2437.00	99.4 AV			1.90 V	305	102.4	-3.0
5	2483.50	56.9 PK	74.0	-17.1	1.90 V	305	59.9	-3.0
6	2483.50	49.7 AV	54.0	-4.3	1.90 V	305	52.7	-3.0
7	4874.00	42.7 PK	74.0	-31.3	1.21 V	248	41.1	1.6
8	4874.00	39.4 AV	54.0	-14.6	1.21 V	248	37.8	1.6
9	7311.00	46.6 PK	74.0	-27.4	1.50 V	219	38.9	7.7
10	7311.00	34.7 AV	54.0	-19.3	1.50 V	219	27.0	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	112.8 PK			1.77 H	360	115.8	-3.0
2	*2452.00	100.0 AV			1.77 H	360	103.0	-3.0
3	2483.50	65.7 PK	74.0	-8.3	1.77 H	360	68.7	-3.0
4	2483.50	53.7 AV	54.0	-0.3	1.77 H	360	56.7	-3.0
5	4904.00	46.0 PK	74.0	-28.0	1.26 H	290	44.3	1.7
6	4904.00	42.6 AV	54.0	-11.4	1.26 H	290	40.9	1.7
7	7356.00	49.0 PK	74.0	-25.0	2.13 H	294	41.1	7.9
8	7356.00	40.5 AV	54.0	-13.5	2.13 H	294	32.6	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	*2452.00	109.4 PK			1.95 V	303	112.4	-3.0
2	*2452.00	96.5 AV			1.95 V	303	99.5	-3.0
3	2483.50	56.6 PK	74.0	-17.4	1.95 V	303	59.6	-3.0
4	2483.50	50.0 AV	54.0	-4.0	1.95 V	303	53.0	-3.0
5	4904.00	44.3 PK	74.0	-29.7	1.26 V	264	42.6	1.7
6	4904.00	41.2 AV	54.0	-12.8	1.26 V	264	39.5	1.7
7	7356.00	45.8 PK	74.0	-28.2	1.45 V	232	37.9	7.9
8	7356.00	34.6 AV	54.0	-19.4	1.45 V	232	26.7	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:

802.11b

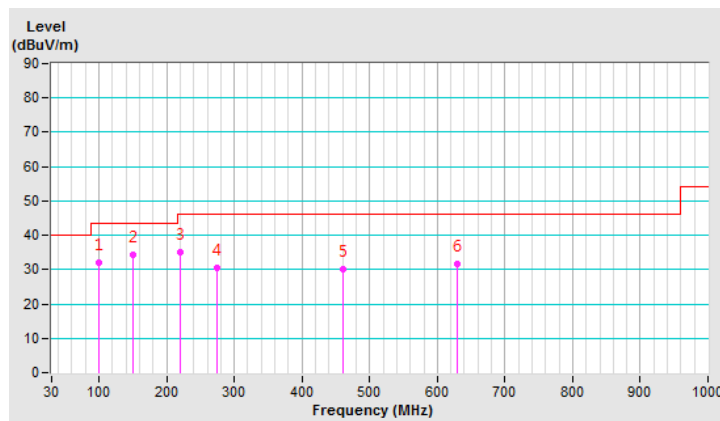
CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	99.69	32.1 QP	43.5	-11.4	2.00 H	262	44.5	-12.4
2	149.99	34.4 QP	43.5	-9.1	2.00 H	79	41.9	-7.5
3	220.51	35.2 QP	46.0	-10.8	1.50 H	291	46.0	-10.8
4	274.27	30.4 QP	46.0	-15.6	1.50 H	92	38.3	-7.9
5	460.19	30.0 QP	46.0	-16.0	2.00 H	360	32.7	-2.7
6	629.36	31.7 QP	46.0	-14.3	1.50 H	0	30.7	1.0

REMARKS:

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



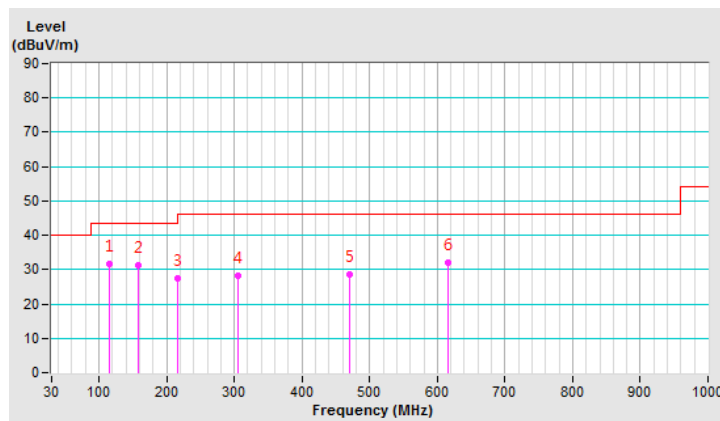
CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	116.28	31.7 QP	43.5	-11.8	1.00 V	250	41.6	-9.9
2	158.99	31.2 QP	43.5	-12.3	1.00 V	51	38.9	-7.7
3	215.97	27.3 QP	43.5	-16.2	1.00 V	222	38.1	-10.8
4	306.18	28.2 QP	46.0	-17.8	1.00 V	26	34.9	-6.7
5	470.62	28.7 QP	46.0	-17.3	1.00 V	360	31.3	-2.6
6	615.71	31.9 QP	46.0	-14.1	1.50 V	118	31.3	0.6

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2387.00	59.6 PK	74.0	-14.4	1.67 H	216	62.3	-2.7
2	2387.00	53.6 AV	54.0	-0.4	1.67 H	216	56.3	-2.7
3	2390.00	55.3 PK	74.0	-18.7	1.67 H	216	58.0	-2.7
4	2390.00	45.8 AV	54.0	-8.2	1.67 H	216	48.5	-2.7
5	*2412.00	109.5 PK			1.67 H	216	112.2	-2.7
6	*2412.00	106.6 AV			1.67 H	216	109.3	-2.7
7	4824.00	45.3 PK	74.0	-28.7	1.56 H	247	43.7	1.6
8	4824.00	41.7 AV	54.0	-12.3	1.56 H	247	40.1	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	2387.00	57.3 PK	74.0	-16.7	2.00 V	248	60.0	-2.7
2	2387.00	47.3 AV	54.0	-6.7	2.00 V	248	50.0	-2.7
3	2390.00	55.6 PK	74.0	-18.4	2.00 V	248	58.3	-2.7
4	2390.00	46.2 AV	54.0	-7.8	2.00 V	248	48.9	-2.7
5	*2412.00	106.3 PK			2.00 V	248	109.0	-2.7
6	*2412.00	103.1 AV			2.00 V	248	105.8	-2.7
7	4824.00	41.8 PK	74.0	-32.2	1.30 V	197	40.2	1.6
8	4824.00	40.1 AV	54.0	-13.9	1.30 V	197	38.5	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	61.3 PK	74.0	-12.7	1.96 H	202	64.0	-2.7
2	2390.00	53.9 AV	54.0	-0.1	1.96 H	202	56.6	-2.7
3	*2437.00	115.3 PK			1.96 H	202	118.3	-3.0
4	*2437.00	112.1 AV			1.96 H	202	115.1	-3.0
5	2483.50	61.4 PK	74.0	-12.6	1.96 H	202	64.4	-3.0
6	2483.50	53.9 AV	54.0	-0.1	1.96 H	202	56.9	-3.0
7	4874.00	45.2 PK	74.0	-28.8	1.53 H	247	43.6	1.6
8	4874.00	42.4 AV	54.0	-11.6	1.53 H	247	40.8	1.6
9	7311.00	47.8 PK	74.0	-26.2	1.02 H	300	40.1	7.7
10	7311.00	40.0 AV	54.0	-14.0	1.02 H	300	32.3	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	59.0 PK	74.0	-15.0	1.99 V	240	61.7	-2.7
2	2390.00	47.9 AV	54.0	-6.1	1.99 V	240	50.6	-2.7
3	*2437.00	111.8 PK			1.99 V	240	114.8	-3.0
4	*2437.00	108.3 AV			1.99 V	240	111.3	-3.0
5	2483.50	58.9 PK	74.0	-15.1	1.99 V	240	61.9	-3.0
6	2483.50	47.1 AV	54.0	-6.9	1.99 V	240	50.1	-3.0
7	4874.00	44.5 PK	74.0	-29.5	1.30 V	217	42.9	1.6
8	4874.00	40.8 AV	54.0	-13.2	1.30 V	217	39.2	1.6
9	7311.00	46.0 PK	74.0	-28.0	1.81 V	321	38.3	7.7
10	7311.00	38.0 AV	54.0	-16.0	1.81 V	321	30.3	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	109.9 PK			1.70 H	195	112.9	-3.0
2	*2462.00	106.8 AV			1.70 H	195	109.8	-3.0
3	2483.50	59.6 PK	74.0	-14.4	1.70 H	195	62.6	-3.0
4	2483.50	53.6 AV	54.0	-0.4	1.70 H	195	56.6	-3.0
5	4924.00	41.0 PK	74.0	-33.0	1.51 H	240	39.3	1.7
6	4924.00	35.1 AV	54.0	-18.9	1.51 H	240	33.4	1.7
7	7386.00	46.2 PK	74.0	-27.8	1.10 H	292	38.3	7.9
8	7386.00	33.2 AV	54.0	-20.8	1.10 H	292	25.3	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	106.3 PK			1.94 V	259	109.3	-3.0
2	*2462.00	103.4 AV			1.94 V	259	106.4	-3.0
3	2483.50	59.2 PK	74.0	-14.8	1.94 V	259	62.2	-3.0
4	2483.50	47.9 AV	54.0	-6.1	1.94 V	259	50.9	-3.0
5	4924.00	42.7 PK	74.0	-31.3	1.36 V	196	41.0	1.7
6	4924.00	39.3 AV	54.0	-14.7	1.36 V	196	37.6	1.7
7	7386.00	45.7 PK	74.0	-28.3	1.83 V	349	37.8	7.9
8	7386.00	33.3 AV	54.0	-20.7	1.83 V	349	25.4	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.

802.11g

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	71.8 PK	74.0	-2.2	1.24 H	219	74.5	-2.7
2	2390.00	53.9 AV	54.0	-0.1	1.24 H	219	56.6	-2.7
3	*2412.00	106.9 PK			1.24 H	219	109.6	-2.7
4	*2412.00	98.0 AV			1.24 H	219	100.7	-2.7
5	4824.00	38.5 PK	74.0	-35.5	1.54 H	238	36.9	1.6
6	4824.00	33.7 AV	54.0	-20.3	1.54 H	238	32.1	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	1.94 V	267	72.2	-2.7
2	2390.00	47.6 AV	54.0	-6.4	1.94 V	267	50.3	-2.7
3	*2412.00	103.7 PK			1.94 V	267	106.4	-2.7
4	*2412.00	94.5 AV			1.94 V	267	97.2	-2.7
5	4824.00	44.4 PK	74.0	-29.6	1.24 V	233	42.8	1.6
6	4824.00	39.3 AV	54.0	-14.7	1.24 V	233	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.5 PK	74.0	-6.5	1.01 H	223	70.2	-2.7
2	2390.00	53.7 AV	54.0	-0.3	1.01 H	223	56.4	-2.7
3	*2417.00	109.3 PK			1.01 H	223	112.1	-2.8
4	*2417.00	100.6 AV			1.01 H	223	103.4	-2.8
5	4834.00	40.8 PK	74.0	-33.2	1.49 H	224	39.2	1.6
6	4834.00	37.2 AV	54.0	-16.8	1.49 H	224	35.6	1.6
7	7251.00	44.9 PK	74.0	-29.1	1.22 H	290	37.1	7.8
8	7251.00	36.0 AV	54.0	-18.0	1.22 H	290	28.2	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	65.2 PK	74.0	-8.8	1.89 V	251	67.9	-2.7
2	2390.00	47.4 AV	54.0	-6.6	1.89 V	251	50.1	-2.7
3	*2417.00	106.1 PK			1.89 V	251	108.9	-2.8
4	*2417.00	97.1 AV			1.89 V	251	99.9	-2.8
5	4834.00	39.1 PK	74.0	-34.9	1.26 V	213	37.5	1.6
6	4834.00	37.7 AV	54.0	-16.3	1.26 V	213	36.1	1.6
7	7251.00	43.0 PK	74.0	-31.0	1.78 V	345	35.2	7.8
8	7251.00	34.9 AV	54.0	-19.1	1.78 V	345	27.1	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.9 PK	74.0	-6.1	1.96 H	213	70.6	-2.7
2	2390.00	53.6 AV	54.0	-0.4	1.96 H	213	56.3	-2.7
3	*2437.00	116.4 PK			1.96 H	213	119.4	-3.0
4	*2437.00	107.2 AV			1.96 H	213	110.2	-3.0
5	2483.50	70.3 PK	74.0	-3.7	1.96 H	213	73.3	-3.0
6	2483.50	52.7 AV	54.0	-1.3	1.96 H	213	55.7	-3.0
7	4874.00	43.0 PK	74.0	-31.0	1.52 H	253	41.4	1.6
8	4874.00	40.7 AV	54.0	-13.3	1.52 H	253	39.1	1.6
9	7311.00	47.6 PK	74.0	-26.4	1.27 H	270	39.9	7.7
10	7311.00	39.9 AV	54.0	-14.1	1.27 H	270	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	65.6 PK	74.0	-8.4	1.92 V	258	68.3	-2.7
2	2390.00	47.3 AV	54.0	-6.7	1.92 V	258	50.0	-2.7
3	*2437.00	113.2 PK			1.92 V	258	116.2	-3.0
4	*2437.00	103.7 AV			1.92 V	258	106.7	-3.0
5	2483.50	68.0 PK	74.0	-6.0	1.92 V	258	71.0	-3.0
6	2483.50	46.4 AV	54.0	-7.6	1.92 V	258	49.4	-3.0
7	4874.00	41.9 PK	74.0	-32.1	1.34 V	198	40.3	1.6
8	4874.00	39.8 AV	54.0	-14.2	1.34 V	198	38.2	1.6
9	7311.00	46.0 PK	74.0	-28.0	1.83 V	314	38.3	7.7
10	7311.00	37.7 AV	54.0	-16.3	1.83 V	314	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	108.1 PK			1.67 H	193	111.1	-3.0
2	*2457.00	99.2 AV			1.67 H	193	102.2	-3.0
3	2483.50	67.8 PK	74.0	-6.2	1.67 H	193	70.8	-3.0
4	2483.50	53.6 AV	54.0	-0.4	1.67 H	193	56.6	-3.0
5	4914.00	40.0 PK	74.0	-34.0	1.46 H	231	38.3	1.7
6	4914.00	36.2 AV	54.0	-17.8	1.46 H	231	34.5	1.7
7	7371.00	46.3 PK	74.0	-27.7	1.26 H	287	38.5	7.8
8	7371.00	34.2 AV	54.0	-19.8	1.26 H	287	26.4	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	*2457.00	104.9 PK			1.95 V	268	107.9	-3.0
2	*2457.00	95.7 AV			1.95 V	268	98.7	-3.0
3	2483.50	65.5 PK	74.0	-8.5	1.95 V	268	68.5	-3.0
4	2483.50	47.3 AV	54.0	-6.7	1.95 V	268	50.3	-3.0
5	4914.00	37.8 PK	74.0	-36.2	1.29 V	226	36.1	1.7
6	4914.00	36.7 AV	54.0	-17.3	1.29 V	226	35.0	1.7
7	7371.00	43.2 PK	74.0	-30.8	1.78 V	353	35.4	7.8
8	7371.00	35.6 AV	54.0	-18.4	1.78 V	353	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	109.6 PK			1.21 H	199	112.6	-3.0
2	*2462.00	100.6 AV			1.21 H	199	103.6	-3.0
3	2483.50	72.9 PK	74.0	-1.1	1.21 H	199	75.9	-3.0
4	2483.50	53.6 AV	54.0	-0.4	1.21 H	199	56.6	-3.0
5	4924.00	38.4 PK	74.0	-35.6	1.41 H	241	36.7	1.7
6	4924.00	33.8 AV	54.0	-20.2	1.41 H	241	32.1	1.7
7	7386.00	45.1 PK	74.0	-28.9	1.22 H	277	37.2	7.9
8	7386.00	33.3 AV	54.0	-20.7	1.22 H	277	25.4	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	106.4 PK			1.92 V	261	109.4	-3.0
2	*2462.00	97.1 AV			1.92 V	261	100.1	-3.0
3	2483.50	70.6 PK	74.0	-3.4	1.92 V	261	73.6	-3.0
4	2483.50	47.3 AV	54.0	-6.7	1.92 V	261	50.3	-3.0
5	4924.00	38.1 PK	74.0	-35.9	1.22 V	226	36.4	1.7
6	4924.00	36.9 AV	54.0	-17.1	1.22 V	226	35.2	1.7
7	7386.00	42.8 PK	74.0	-31.2	1.67 V	358	34.9	7.9
8	7386.00	34.9 AV	54.0	-19.1	1.67 V	358	27.0	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)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.3 PK	74.0	-7.7	1.26 H	204	69.0	-2.7
2	2390.00	53.7 AV	54.0	-0.3	1.26 H	204	56.4	-2.7
3	*2412.00	110.7 PK			1.26 H	204	113.4	-2.7
4	*2412.00	97.7 AV			1.26 H	204	100.4	-2.7
5	4824.00	40.2 PK	74.0	-33.8	1.62 H	259	38.6	1.6
6	4824.00	36.3 AV	54.0	-17.7	1.62 H	259	34.7	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	2390.00	64.0 PK	74.0	-10.0	1.90 V	264	66.7	-2.7
2	2390.00	47.4 AV	54.0	-6.6	1.90 V	264	50.1	-2.7
3	*2412.00	107.5 PK			1.90 V	264	110.2	-2.7
4	*2412.00	94.2 AV			1.90 V	264	96.9	-2.7
5	4824.00	39.1 PK	74.0	-34.9	1.33 V	201	37.5	1.6
6	4824.00	37.2 AV	54.0	-16.8	1.33 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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.2 PK	74.0	-8.8	2.08 H	206	67.9	-2.7
2	2390.00	53.6 AV	54.0	-0.4	2.08 H	206	56.3	-2.7
3	*2417.00	115.4 PK			2.08 H	206	118.2	-2.8
4	*2417.00	102.6 AV			2.08 H	206	105.4	-2.8
5	4834.00	39.5 PK	74.0	-34.5	1.64 H	217	37.9	1.6
6	4834.00	36.8 AV	54.0	-17.2	1.64 H	217	35.2	1.6
7	7251.00	42.4 PK	74.0	-31.6	1.28 H	243	34.6	7.8
8	7251.00	35.0 AV	54.0	-19.0	1.28 H	243	27.2	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	62.9 PK	74.0	-11.1	1.97 V	273	65.6	-2.7
2	2390.00	47.3 AV	54.0	-6.7	1.97 V	273	50.0	-2.7
3	*2417.00	112.2 PK			1.97 V	273	115.0	-2.8
4	*2417.00	99.1 AV			1.97 V	273	101.9	-2.8
5	4834.00	38.4 PK	74.0	-35.6	1.23 V	197	36.8	1.6
6	4834.00	37.2 AV	54.0	-16.8	1.23 V	197	35.6	1.6
7	7251.00	41.6 PK	74.0	-32.4	1.74 V	355	33.8	7.8
8	7251.00	34.7 AV	54.0	-19.3	1.74 V	355	26.9	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.8 PK	74.0	-5.2	1.98 H	207	71.5	-2.7
2	2390.00	53.7 AV	54.0	-0.3	1.98 H	207	56.4	-2.7
3	*2437.00	118.7 PK			1.98 H	207	121.7	-3.0
4	*2437.00	105.9 AV			1.98 H	207	108.9	-3.0
5	2483.50	68.6 PK	74.0	-5.4	1.98 H	207	71.6	-3.0
6	2483.50	53.2 AV	54.0	-0.8	1.98 H	207	56.2	-3.0
7	4874.00	44.2 PK	74.0	-29.8	1.60 H	232	42.6	1.6
8	4874.00	41.7 AV	54.0	-12.3	1.60 H	232	40.1	1.6
9	7311.00	47.0 PK	74.0	-27.0	1.31 H	275	39.3	7.7
10	7311.00	39.1 AV	54.0	-14.9	1.31 H	275	31.4	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	66.5 PK	74.0	-7.5	1.93 V	262	69.2	-2.7
2	2390.00	47.4 AV	54.0	-6.6	1.93 V	262	50.1	-2.7
3	*2437.00	115.5 PK			1.93 V	262	118.5	-3.0
4	*2437.00	102.4 AV			1.93 V	262	105.4	-3.0
5	2483.50	66.3 PK	74.0	-7.7	1.93 V	262	69.3	-3.0
6	2483.50	46.9 AV	54.0	-7.1	1.93 V	262	49.9	-3.0
7	4874.00	41.8 PK	74.0	-32.2	1.35 V	196	40.2	1.6
8	4874.00	39.6 AV	54.0	-14.4	1.35 V	196	38.0	1.6
9	7311.00	45.4 PK	74.0	-28.6	1.69 V	328	37.7	7.7
10	7311.00	37.3 AV	54.0	-16.7	1.69 V	328	29.6	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	113.9 PK			2.00 H	204	116.9	-3.0
2	*2457.00	101.5 AV			2.00 H	204	104.5	-3.0
3	2483.50	65.4 PK	74.0	-8.6	2.00 H	204	68.4	-3.0
4	2483.50	53.8 AV	54.0	-0.2	2.00 H	204	56.8	-3.0
5	4914.00	39.8 PK	74.0	-34.2	1.60 H	248	38.1	1.7
6	4914.00	37.0 AV	54.0	-17.0	1.60 H	248	35.3	1.7
7	7371.00	42.8 PK	74.0	-31.2	1.32 H	257	35.0	7.8
8	7371.00	35.0 AV	54.0	-19.0	1.32 H	257	27.2	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	*2457.00	110.7 PK			1.90 V	269	113.7	-3.0
2	*2457.00	98.0 AV			1.90 V	269	101.0	-3.0
3	2483.50	63.1 PK	74.0	-10.9	1.90 V	269	66.1	-3.0
4	2483.50	47.5 AV	54.0	-6.5	1.90 V	269	50.5	-3.0
5	4914.00	39.3 PK	74.0	-34.7	1.17 V	218	37.6	1.7
6	4914.00	38.0 AV	54.0	-16.0	1.17 V	218	36.3	1.7
7	7371.00	43.4 PK	74.0	-30.6	1.74 V	338	35.6	7.8
8	7371.00	35.7 AV	54.0	-18.3	1.74 V	338	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	109.5 PK			1.41 H	203	112.5	-3.0
2	*2462.00	96.8 AV			1.41 H	203	99.8	-3.0
3	2483.50	67.9 PK	74.0	-6.1	1.41 H	203	70.9	-3.0
4	2483.50	53.7 AV	54.0	-0.3	1.41 H	203	56.7	-3.0
5	4924.00	39.4 PK	74.0	-34.6	1.60 H	242	37.7	1.7
6	4924.00	35.4 AV	54.0	-18.6	1.60 H	242	33.7	1.7
7	7386.00	39.6 PK	74.0	-34.4	1.28 H	251	31.7	7.9
8	7386.00	31.8 AV	54.0	-22.2	1.28 H	251	23.9	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	106.3 PK			1.95 V	268	109.3	-3.0
2	*2462.00	93.3 AV			1.95 V	268	96.3	-3.0
3	2483.50	65.6 PK	74.0	-8.4	1.95 V	268	68.6	-3.0
4	2483.50	47.4 AV	54.0	-6.6	1.95 V	268	50.4	-3.0
5	4924.00	38.2 PK	74.0	-35.8	1.25 V	230	36.5	1.7
6	4924.00	37.4 AV	54.0	-16.6	1.25 V	230	35.7	1.7
7	7386.00	43.4 PK	74.0	-30.6	1.77 V	356	35.5	7.9
8	7386.00	35.5 AV	54.0	-18.5	1.77 V	356	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)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.2 PK	74.0	-8.8	1.26 H	202	67.9	-2.7
2	2390.00	53.6 AV	54.0	-0.4	1.26 H	202	56.3	-2.7
3	*2422.00	110.2 PK			1.26 H	202	113.1	-2.9
4	*2422.00	97.3 AV			1.26 H	202	100.2	-2.9
5	4844.00	39.4 PK	74.0	-34.6	1.58 H	235	37.8	1.6
6	4844.00	36.1 AV	54.0	-17.9	1.58 H	235	34.5	1.6
7	7266.00	45.7 PK	74.0	-28.3	1.25 H	243	37.9	7.8
8	7266.00	33.0 AV	54.0	-21.0	1.25 H	243	25.2	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	62.9 PK	74.0	-11.1	1.95 V	267	65.6	-2.7
2	2390.00	47.3 AV	54.0	-6.7	1.95 V	267	50.0	-2.7
3	*2422.00	107.0 PK			1.95 V	267	109.9	-2.9
4	*2422.00	93.8 AV			1.95 V	267	96.7	-2.9
5	4844.00	39.0 PK	74.0	-35.0	1.25 V	221	37.4	1.6
6	4844.00	37.3 AV	54.0	-16.7	1.25 V	221	35.7	1.6
7	7266.00	43.1 PK	74.0	-30.9	1.78 V	333	35.3	7.8
8	7266.00	35.9 AV	54.0	-18.1	1.78 V	333	28.1	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.2 PK	74.0	-7.8	1.98 H	208	68.9	-2.7
2	2390.00	53.9 AV	54.0	-0.1	1.98 H	208	56.6	-2.7
3	*2437.00	111.2 PK			1.98 H	208	114.2	-3.0
4	*2437.00	100.0 AV			1.98 H	208	103.0	-3.0
5	2483.50	66.3 PK	74.0	-7.7	1.98 H	208	69.3	-3.0
6	2483.50	53.9 AV	54.0	-0.1	1.98 H	208	56.9	-3.0
7	4874.00	39.6 PK	74.0	-34.4	1.66 H	242	38.0	1.6
8	4874.00	37.8 AV	54.0	-16.2	1.66 H	242	36.2	1.6
9	7311.00	42.9 PK	74.0	-31.1	1.19 H	258	35.2	7.7
10	7311.00	35.8 AV	54.0	-18.2	1.19 H	258	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	63.9 PK	74.0	-10.1	1.90 V	253	66.6	-2.7
2	2390.00	47.6 AV	54.0	-6.4	1.90 V	253	50.3	-2.7
3	*2437.00	108.0 PK			1.90 V	253	111.0	-3.0
4	*2437.00	96.5 AV			1.90 V	253	99.5	-3.0
5	2483.50	64.0 PK	74.0	-10.0	1.90 V	253	67.0	-3.0
6	2483.50	47.6 AV	54.0	-6.4	1.90 V	253	50.6	-3.0
7	4874.00	38.2 PK	74.0	-35.8	1.18 V	240	36.6	1.6
8	4874.00	37.2 AV	54.0	-16.8	1.18 V	240	35.6	1.6
9	7311.00	43.0 PK	74.0	-31.0	1.78 V	339	35.3	7.7
10	7311.00	35.6 AV	54.0	-18.4	1.78 V	339	27.9	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	109.0 PK			1.93 H	216	112.0	-3.0
2	*2452.00	96.5 AV			1.93 H	216	99.5	-3.0
3	2483.50	71.2 PK	74.0	-2.8	1.93 H	216	74.2	-3.0
4	2483.50	53.9 AV	54.0	-0.1	1.93 H	216	56.9	-3.0
5	4904.00	38.1 PK	74.0	-35.9	1.65 H	229	36.4	1.7
6	4904.00	34.9 AV	54.0	-19.1	1.65 H	229	33.2	1.7
7	7356.00	45.7 PK	74.0	-28.3	1.20 H	234	37.8	7.9
8	7356.00	32.6 AV	54.0	-21.4	1.20 H	234	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	105.8 PK			1.97 V	269	108.8	-3.0
2	*2452.00	93.0 AV			1.97 V	269	96.0	-3.0
3	2483.50	68.9 PK	74.0	-5.1	1.97 V	269	71.9	-3.0
4	2483.50	47.6 AV	54.0	-6.4	1.97 V	269	50.6	-3.0
5	4904.00	38.8 PK	74.0	-35.2	1.25 V	219	37.1	1.7
6	4904.00	37.5 AV	54.0	-16.5	1.25 V	219	35.8	1.7
7	7356.00	43.2 PK	74.0	-30.8	1.73 V	322	35.3	7.9
8	7356.00	35.7 AV	54.0	-18.3	1.73 V	322	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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2387.00	60.2 PK	74.0	-13.8	1.90 H	187	62.9	-2.7
2	2387.00	53.6 AV	54.0	-0.4	1.90 H	187	56.3	-2.7
3	2390.00	53.5 PK	74.0	-20.5	1.90 H	187	56.2	-2.7
4	2390.00	45.2 AV	54.0	-8.8	1.90 H	187	47.9	-2.7
5	*2412.00	107.8 PK			1.90 H	187	110.5	-2.7
6	*2412.00	104.9 AV			1.90 H	187	107.6	-2.7
7	4824.00	43.9 PK	74.0	-30.1	1.56 H	217	42.3	1.6
8	4824.00	40.9 AV	54.0	-13.1	1.56 H	217	39.3	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	59.2 PK	74.0	-14.8	1.28 V	296	61.9	-2.7
2	2387.00	51.8 AV	54.0	-2.2	1.28 V	296	54.5	-2.7
3	2390.00	52.5 PK	74.0	-21.5	1.28 V	296	55.2	-2.7
4	2390.00	43.4 AV	54.0	-10.6	1.28 V	296	46.1	-2.7
5	*2412.00	107.4 PK			1.28 V	296	110.1	-2.7
6	*2412.00	104.4 AV			1.28 V	296	107.1	-2.7
7	4824.00	41.5 PK	74.0	-32.5	1.26 V	222	39.9	1.6
8	4824.00	39.6 AV	54.0	-14.4	1.26 V	222	38.0	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.8 PK	74.0	-16.2	2.07 H	360	60.5	-2.7
2	2390.00	47.0 AV	54.0	-7.0	2.07 H	360	49.7	-2.7
3	*2437.00	108.9 PK			2.07 H	360	111.9	-3.0
4	*2437.00	106.8 AV			2.07 H	360	109.8	-3.0
5	2483.50	59.0 PK	74.0	-15.0	2.07 H	360	62.0	-3.0
6	2483.50	50.5 AV	54.0	-3.5	2.07 H	360	53.5	-3.0
7	4874.00	44.3 PK	74.0	-29.7	1.57 H	248	42.7	1.6
8	4874.00	42.0 AV	54.0	-12.0	1.57 H	248	40.4	1.6
9	7311.00	48.1 PK	74.0	-25.9	1.04 H	298	40.4	7.7
10	7311.00	40.1 AV	54.0	-13.9	1.04 H	298	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	56.8 PK	74.0	-17.2	1.34 V	322	59.5	-2.7
2	2390.00	45.2 AV	54.0	-8.8	1.34 V	322	47.9	-2.7
3	*2437.00	108.5 PK			1.34 V	322	111.5	-3.0
4	*2437.00	106.3 AV			1.34 V	322	109.3	-3.0
5	2483.50	58.0 PK	74.0	-16.0	1.34 V	322	61.0	-3.0
6	2483.50	48.7 AV	54.0	-5.3	1.34 V	322	51.7	-3.0
7	4874.00	42.0 PK	74.0	-32.0	1.31 V	212	40.4	1.6
8	4874.00	39.9 AV	54.0	-14.1	1.31 V	212	38.3	1.6
9	7311.00	45.3 PK	74.0	-28.7	1.73 V	351	37.6	7.7
10	7311.00	37.9 AV	54.0	-16.1	1.73 V	351	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	106.5 PK			2.00 H	356	109.5	-3.0
2	*2462.00	103.6 AV			2.00 H	356	106.6	-3.0
3	2483.50	59.7 PK	74.0	-14.3	2.00 H	356	62.7	-3.0
4	2483.50	50.9 AV	54.0	-3.1	2.00 H	356	53.9	-3.0
5	2486.00	60.1 PK	74.0	-13.9	2.00 H	356	63.0	-2.9
6	2486.00	53.6 AV	54.0	-0.4	2.00 H	356	56.5	-2.9
7	4924.00	42.5 PK	74.0	-31.5	1.62 H	211	40.8	1.7
8	4924.00	40.3 AV	54.0	-13.7	1.62 H	211	38.6	1.7
9	7386.00	45.3 PK	74.0	-28.7	1.20 H	244	37.4	7.9
10	7386.00	38.7 AV	54.0	-15.3	1.20 H	244	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	106.1 PK			1.34 V	304	109.1	-3.0
2	*2462.00	103.1 AV			1.34 V	304	106.1	-3.0
3	2483.50	58.7 PK	74.0	-15.3	1.34 V	304	61.7	-3.0
4	2483.50	49.1 AV	54.0	-4.9	1.34 V	304	52.1	-3.0
5	2486.00	59.1 PK	74.0	-14.9	1.34 V	304	62.0	-2.9
6	2486.00	51.8 AV	54.0	-2.2	1.34 V	304	54.7	-2.9
7	4924.00	40.2 PK	74.0	-33.8	1.29 V	226	38.5	1.7
8	4924.00	37.9 AV	54.0	-16.1	1.29 V	226	36.2	1.7
9	7386.00	44.0 PK	74.0	-30.0	1.72 V	354	36.1	7.9
10	7386.00	36.9 AV	54.0	-17.1	1.72 V	354	29.0	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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.5 PK	74.0	-4.5	1.85 H	185	72.2	-2.7
2	2390.00	53.7 AV	54.0	-0.3	1.85 H	185	56.4	-2.7
3	*2412.00	105.1 PK			1.85 H	185	107.8	-2.7
4	*2412.00	96.1 AV			1.85 H	185	98.8	-2.7
5	4824.00	42.1 PK	74.0	-31.9	1.66 H	250	40.5	1.6
6	4824.00	39.0 AV	54.0	-15.0	1.66 H	250	37.4	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	68.5 PK	74.0	-5.5	1.33 V	298	71.2	-2.7
2	2390.00	51.9 AV	54.0	-2.1	1.33 V	298	54.6	-2.7
3	*2412.00	104.7 PK			1.33 V	298	107.4	-2.7
4	*2412.00	95.6 AV			1.33 V	298	98.3	-2.7
5	4824.00	39.3 PK	74.0	-34.7	1.25 V	240	37.7	1.6
6	4824.00	37.0 AV	54.0	-17.0	1.25 V	240	35.4	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.6 PK	74.0	-3.4	1.88 H	183	73.3	-2.7
2	2390.00	53.8 AV	54.0	-0.2	1.88 H	183	56.5	-2.7
3	*2417.00	107.3 PK			1.88 H	183	110.1	-2.8
4	*2417.00	98.2 AV			1.88 H	183	101.0	-2.8
5	4834.00	42.9 PK	74.0	-31.1	1.60 H	265	41.3	1.6
6	4834.00	40.3 AV	54.0	-13.7	1.60 H	265	38.7	1.6
7	7251.00	45.1 PK	74.0	-28.9	1.36 H	299	37.3	7.8
8	7251.00	37.8 AV	54.0	-16.2	1.36 H	299	30.0	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	69.6 PK	74.0	-4.4	1.28 V	301	72.3	-2.7
2	2390.00	52.0 AV	54.0	-2.0	1.28 V	301	54.7	-2.7
3	*2417.00	106.9 PK			1.28 V	301	109.7	-2.8
4	*2417.00	97.7 AV			1.28 V	301	100.5	-2.8
5	4834.00	39.9 PK	74.0	-34.1	1.18 V	221	38.3	1.6
6	4834.00	37.4 AV	54.0	-16.6	1.18 V	221	35.8	1.6
7	7251.00	42.3 PK	74.0	-31.7	1.67 V	339	34.5	7.8
8	7251.00	35.4 AV	54.0	-18.6	1.67 V	339	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.0 PK	74.0	-9.0	2.07 H	360	67.7	-2.7
2	2390.00	49.9 AV	54.0	-4.1	2.07 H	360	52.6	-2.7
3	*2437.00	109.1 PK			2.07 H	360	112.1	-3.0
4	*2437.00	99.5 AV			2.07 H	360	102.5	-3.0
5	2483.50	69.4 PK	74.0	-4.6	2.07 H	360	72.4	-3.0
6	2483.50	53.9 AV	54.0	-0.1	2.07 H	360	56.9	-3.0
7	4874.00	45.3 PK	74.0	-28.7	1.66 H	262	43.7	1.6
8	4874.00	42.5 AV	54.0	-11.5	1.66 H	262	40.9	1.6
9	7311.00	47.3 PK	74.0	-26.7	1.38 H	290	39.6	7.7
10	7311.00	39.8 AV	54.0	-14.2	1.38 H	290	32.1	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	64.0 PK	74.0	-10.0	1.27 V	298	66.7	-2.7
2	2390.00	48.1 AV	54.0	-5.9	1.27 V	298	50.8	-2.7
3	*2437.00	108.7 PK			1.27 V	298	111.7	-3.0
4	*2437.00	99.0 AV			1.27 V	298	102.0	-3.0
5	2483.50	68.4 PK	74.0	-5.6	1.27 V	298	71.4	-3.0
6	2483.50	52.1 AV	54.0	-1.9	1.27 V	298	55.1	-3.0
7	4874.00	41.5 PK	74.0	-32.5	1.19 V	219	39.9	1.6
8	4874.00	39.7 AV	54.0	-14.3	1.19 V	219	38.1	1.6
9	7311.00	45.4 PK	74.0	-28.6	1.68 V	342	37.7	7.7
10	7311.00	38.0 AV	54.0	-16.0	1.68 V	342	30.3	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	105.2 PK			1.80 H	360	108.2	-3.0
2	*2457.00	96.8 AV			1.80 H	360	99.8	-3.0
3	2483.50	69.6 PK	74.0	-4.4	1.80 H	360	72.6	-3.0
4	2483.50	53.9 AV	54.0	-0.1	1.80 H	360	56.9	-3.0
5	4914.00	42.3 PK	74.0	-31.7	1.64 H	274	40.6	1.7
6	4914.00	39.8 AV	54.0	-14.2	1.64 H	274	38.1	1.7
7	7371.00	44.1 PK	74.0	-29.9	1.31 H	298	36.3	7.8
8	7371.00	37.5 AV	54.0	-16.5	1.31 H	298	29.7	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	104.8 PK			1.32 V	314	107.8	-3.0
2	*2457.00	96.3 AV			1.32 V	314	99.3	-3.0
3	2483.50	68.6 PK	74.0	-5.4	1.32 V	314	71.6	-3.0
4	2483.50	52.1 AV	54.0	-1.9	1.32 V	314	55.1	-3.0
5	4914.00	39.5 PK	74.0	-34.5	1.30 V	221	37.8	1.7
6	4914.00	37.2 AV	54.0	-16.8	1.30 V	221	35.5	1.7
7	7371.00	41.4 PK	74.0	-32.6	1.75 V	335	33.6	7.8
8	7371.00	34.8 AV	54.0	-19.2	1.75 V	335	27.0	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	103.9 PK			2.50 H	360	106.9	-3.0
2	*2462.00	95.6 AV			2.50 H	360	98.6	-3.0
3	2483.50	71.5 PK	74.0	-2.5	2.50 H	360	74.5	-3.0
4	2483.50	53.8 AV	54.0	-0.2	2.50 H	360	56.8	-3.0
5	4924.00	41.6 PK	74.0	-32.4	1.64 H	259	39.9	1.7
6	4924.00	38.7 AV	54.0	-15.3	1.64 H	259	37.0	1.7
7	7386.00	43.0 PK	74.0	-31.0	1.27 H	275	35.1	7.9
8	7386.00	36.4 AV	54.0	-17.6	1.27 H	275	28.5	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	103.5 PK			1.32 V	313	106.5	-3.0
2	*2462.00	95.1 AV			1.32 V	313	98.1	-3.0
3	2483.50	70.5 PK	74.0	-3.5	1.32 V	313	73.5	-3.0
4	2483.50	52.0 AV	54.0	-2.0	1.32 V	313	55.0	-3.0
5	4924.00	39.8 PK	74.0	-34.2	1.11 V	228	38.1	1.7
6	4924.00	37.5 AV	54.0	-16.5	1.11 V	228	35.8	1.7
7	7386.00	40.2 PK	74.0	-33.8	1.70 V	331	32.3	7.9
8	7386.00	34.6 AV	54.0	-19.4	1.70 V	331	26.7	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)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.6 PK	74.0	-8.4	1.45 H	179	68.3	-2.7
2	2390.00	53.9 AV	54.0	-0.1	1.45 H	179	56.6	-2.7
3	*2412.00	106.4 PK			1.45 H	179	109.1	-2.7
4	*2412.00	95.4 AV			1.45 H	179	98.1	-2.7
5	4824.00	41.3 PK	74.0	-32.7	1.77 H	273	39.7	1.6
6	4824.00	39.4 AV	54.0	-14.6	1.77 H	273	37.8	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	64.6 PK	74.0	-9.4	1.32 V	308	67.3	-2.7
2	2390.00	52.1 AV	54.0	-1.9	1.32 V	308	54.8	-2.7
3	*2412.00	106.0 PK			1.32 V	308	108.7	-2.7
4	*2412.00	94.9 AV			1.32 V	308	97.6	-2.7
5	4824.00	40.1 PK	74.0	-33.9	1.22 V	227	38.5	1.6
6	4824.00	38.0 AV	54.0	-16.0	1.22 V	227	36.4	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.6 PK	74.0	-6.4	1.47 H	179	70.3	-2.7
2	2390.00	53.9 AV	54.0	-0.1	1.47 H	179	56.6	-2.7
3	*2417.00	109.4 PK			1.47 H	179	112.2	-2.8
4	*2417.00	97.2 AV			1.47 H	179	100.0	-2.8
5	4834.00	42.5 PK	74.0	-31.5	1.78 H	264	40.9	1.6
6	4834.00	40.4 AV	54.0	-13.6	1.78 H	264	38.8	1.6
7	7251.00	45.3 PK	74.0	-28.7	1.39 H	325	37.5	7.8
8	7251.00	37.2 AV	54.0	-16.8	1.39 H	325	29.4	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	66.6 PK	74.0	-7.4	1.26 V	306	69.3	-2.7
2	2390.00	52.1 AV	54.0	-1.9	1.26 V	306	54.8	-2.7
3	*2417.00	109.0 PK			1.26 V	306	111.8	-2.8
4	*2417.00	96.7 AV			1.26 V	306	99.5	-2.8
5	4834.00	39.4 PK	74.0	-34.6	1.24 V	235	37.8	1.6
6	4834.00	37.3 AV	54.0	-16.7	1.24 V	235	35.7	1.6
7	7251.00	41.8 PK	74.0	-32.2	1.68 V	346	34.0	7.8
8	7251.00	35.2 AV	54.0	-18.8	1.68 V	346	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.2 PK	74.0	-11.8	2.08 H	360	64.9	-2.7
2	2390.00	49.5 AV	54.0	-4.5	2.08 H	360	52.2	-2.7
3	*2437.00	110.2 PK			2.08 H	360	113.2	-3.0
4	*2437.00	98.7 AV			2.08 H	360	101.7	-3.0
5	2483.50	67.9 PK	74.0	-6.1	2.08 H	360	70.9	-3.0
6	2483.50	53.9 AV	54.0	-0.1	2.08 H	360	56.9	-3.0
7	4874.00	44.8 PK	74.0	-29.2	1.74 H	269	43.2	1.6
8	4874.00	42.4 AV	54.0	-11.6	1.74 H	269	40.8	1.6
9	7311.00	47.2 PK	74.0	-26.8	1.31 H	331	39.5	7.7
10	7311.00	39.9 AV	54.0	-14.1	1.31 H	331	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	61.2 PK	74.0	-12.8	1.28 V	312	63.9	-2.7
2	2390.00	47.7 AV	54.0	-6.3	1.28 V	312	50.4	-2.7
3	*2437.00	109.8 PK			1.28 V	312	112.8	-3.0
4	*2437.00	98.2 AV			1.28 V	312	101.2	-3.0
5	2483.50	66.9 PK	74.0	-7.1	1.28 V	312	69.9	-3.0
6	2483.50	52.1 AV	54.0	-1.9	1.28 V	312	55.1	-3.0
7	4874.00	41.5 PK	74.0	-32.5	1.14 V	246	39.9	1.6
8	4874.00	39.9 AV	54.0	-14.1	1.14 V	246	38.3	1.6
9	7311.00	44.9 PK	74.0	-29.1	1.66 V	330	37.2	7.7
10	7311.00	37.6 AV	54.0	-16.4	1.66 V	330	29.9	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	107.8 PK			2.04 H	360	110.8	-3.0
2	*2457.00	95.1 AV			2.04 H	360	98.1	-3.0
3	2483.50	67.8 PK	74.0	-6.2	2.04 H	360	70.8	-3.0
4	2483.50	53.9 AV	54.0	-0.1	2.04 H	360	56.9	-3.0
5	4914.00	42.5 PK	74.0	-31.5	1.72 H	297	40.8	1.7
6	4914.00	39.7 AV	54.0	-14.3	1.72 H	297	38.0	1.7
7	7371.00	44.3 PK	74.0	-29.7	1.33 H	316	36.5	7.8
8	7371.00	37.3 AV	54.0	-16.7	1.33 H	316	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			1.26 V	303	110.4	-3.0
2	*2457.00	94.6 AV			1.26 V	303	97.6	-3.0
3	2483.50	66.8 PK	74.0	-7.2	1.26 V	303	69.8	-3.0
4	2483.50	52.1 AV	54.0	-1.9	1.26 V	303	55.1	-3.0
5	4914.00	39.5 PK	74.0	-34.5	1.25 V	232	37.8	1.7
6	4914.00	37.5 AV	54.0	-16.5	1.25 V	232	35.8	1.7
7	7371.00	41.6 PK	74.0	-32.4	1.81 V	346	33.8	7.8
8	7371.00	35.5 AV	54.0	-18.5	1.81 V	346	27.7	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	107.2 PK			2.52 H	360	110.2	-3.0
2	*2462.00	94.7 AV			2.52 H	360	97.7	-3.0
3	2483.50	67.0 PK	74.0	-7.0	2.52 H	360	70.0	-3.0
4	2483.50	53.9 AV	54.0	-0.1	2.52 H	360	56.9	-3.0
5	4924.00	42.1 PK	74.0	-31.9	1.75 H	269	40.4	1.7
6	4924.00	39.0 AV	54.0	-15.0	1.75 H	269	37.3	1.7
7	7386.00	43.7 PK	74.0	-30.3	1.29 H	343	35.8	7.9
8	7386.00	37.1 AV	54.0	-16.9	1.29 H	343	29.2	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	*2462.00	106.8 PK			1.27 V	297	109.8	-3.0
2	*2462.00	94.2 AV			1.27 V	297	97.2	-3.0
3	2483.50	67.0 PK	74.0	-7.0	1.27 V	297	70.0	-3.0
4	2483.50	52.1 AV	54.0	-1.9	1.27 V	297	55.1	-3.0
5	4924.00	40.5 PK	74.0	-33.5	1.24 V	242	38.8	1.7
6	4924.00	37.9 AV	54.0	-16.1	1.24 V	242	36.2	1.7
7	7386.00	39.8 PK	74.0	-34.2	1.62 V	360	31.9	7.9
8	7386.00	34.4 AV	54.0	-19.6	1.62 V	360	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)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.9 PK	74.0	-8.1	1.88 H	185	68.6	-2.7
2	2390.00	53.9 AV	54.0	-0.1	1.88 H	185	56.6	-2.7
3	*2422.00	105.2 PK			1.88 H	185	108.1	-2.9
4	*2422.00	92.5 AV			1.88 H	185	95.4	-2.9
5	4844.00	37.4 PK	74.0	-36.6	1.75 H	279	35.8	1.6
6	4844.00	34.5 AV	54.0	-19.5	1.75 H	279	32.9	1.6
7	7266.00	45.6 PK	74.0	-28.4	1.38 H	306	37.8	7.8
8	7266.00	31.3 AV	54.0	-22.7	1.38 H	306	23.5	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	2390.00	67.0 PK	74.0	-7.0	1.30 V	310	69.7	-2.7
2	2390.00	52.1 AV	54.0	-1.9	1.30 V	310	54.8	-2.7
3	*2422.00	105.2 PK			1.30 V	310	108.1	-2.9
4	*2422.00	92.4 AV			1.30 V	310	95.3	-2.9
5	4844.00	39.6 PK	74.0	-34.4	1.19 V	235	38.0	1.6
6	4844.00	36.2 AV	54.0	-17.8	1.19 V	235	34.6	1.6
7	7266.00	41.3 PK	74.0	-32.7	1.76 V	342	33.5	7.8
8	7266.00	33.8 AV	54.0	-20.2	1.76 V	342	26.0	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.6 PK	74.0	-9.4	1.84 H	360	67.3	-2.7
2	2390.00	51.2 AV	54.0	-2.8	1.84 H	360	53.9	-2.7
3	*2437.00	103.2 PK			1.84 H	360	106.2	-3.0
4	*2437.00	91.6 AV			1.84 H	360	94.6	-3.0
5	2483.50	67.8 PK	74.0	-6.2	1.84 H	360	70.8	-3.0
6	2483.50	53.9 AV	54.0	-0.1	1.84 H	360	56.9	-3.0
7	4874.00	39.6 PK	74.0	-34.4	1.72 H	285	38.0	1.6
8	4874.00	37.3 AV	54.0	-16.7	1.72 H	285	35.7	1.6
9	7311.00	43.4 PK	74.0	-30.6	1.40 H	311	35.7	7.7
10	7311.00	36.4 AV	54.0	-17.6	1.40 H	311	28.7	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	63.6 PK	74.0	-10.4	1.33 V	305	66.3	-2.7
2	2390.00	49.4 AV	54.0	-4.6	1.33 V	305	52.1	-2.7
3	*2437.00	102.8 PK			1.33 V	305	105.8	-3.0
4	*2437.00	91.1 AV			1.33 V	305	94.1	-3.0
5	2483.50	66.8 PK	74.0	-7.2	1.33 V	305	69.8	-3.0
6	2483.50	52.1 AV	54.0	-1.9	1.33 V	305	55.1	-3.0
7	4874.00	40.4 PK	74.0	-33.6	1.20 V	216	38.8	1.6
8	4874.00	38.2 AV	54.0	-15.8	1.20 V	216	36.6	1.6
9	7311.00	42.5 PK	74.0	-31.5	1.80 V	329	34.8	7.7
10	7311.00	36.0 AV	54.0	-18.0	1.80 V	329	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	103.6 PK			2.05 H	360	106.6	-3.0
2	*2452.00	90.7 AV			2.05 H	360	93.7	-3.0
3	2483.50	71.9 PK	74.0	-2.1	2.05 H	360	74.9	-3.0
4	2483.50	53.7 AV	54.0	-0.3	2.05 H	360	56.7	-3.0
5	4904.00	37.7 PK	74.0	-36.3	1.74 H	274	36.0	1.7
6	4904.00	34.1 AV	54.0	-19.9	1.74 H	274	32.4	1.7
7	7356.00	44.8 PK	74.0	-29.2	1.32 H	330	36.9	7.9
8	7356.00	31.8 AV	54.0	-22.2	1.32 H	330	23.9	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	*2452.00	103.2 PK			1.28 V	313	106.2	-3.0
2	*2452.00	90.2 AV			1.28 V	313	93.2	-3.0
3	2483.50	70.9 PK	74.0	-3.1	1.28 V	313	73.9	-3.0
4	2483.50	51.9 AV	54.0	-2.1	1.28 V	313	54.9	-3.0
5	4904.00	39.2 PK	74.0	-34.8	1.23 V	252	37.5	1.7
6	4904.00	36.8 AV	54.0	-17.2	1.23 V	252	35.1	1.7
7	7356.00	40.7 PK	74.0	-33.3	1.67 V	349	32.8	7.9
8	7356.00	33.8 AV	54.0	-20.2	1.67 V	349	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.

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-02	Sep. 22, 2017	Sep. 21, 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

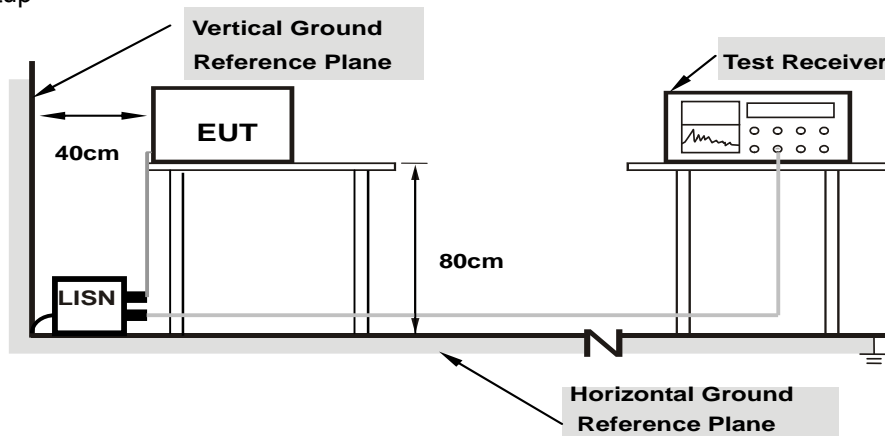
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

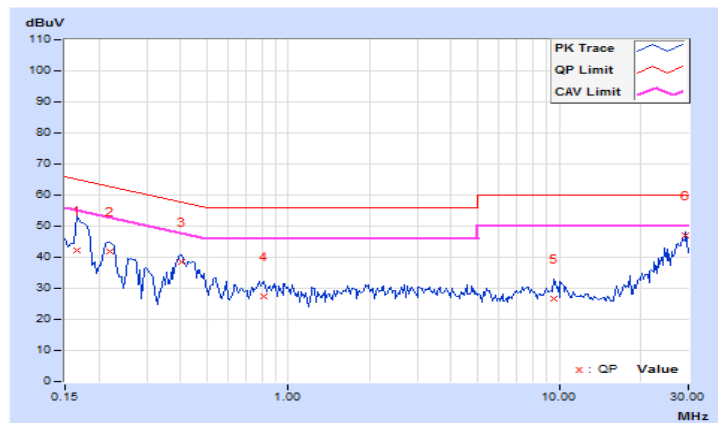
4.2.7 Test Results

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

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	0.16562	10.04	32.29	16.74	42.33	26.78	65.18	55.18	-22.85
2	0.22031	10.07	31.94	22.47	42.01	32.54	62.81	52.81	-20.80	-20.27
3	0.40391	10.11	28.32	19.14	38.43	29.25	57.77	47.77	-19.34	-18.52
4	0.81797	10.14	17.10	7.81	27.24	17.95	56.00	46.00	-28.76	-28.05
5	9.55078	10.52	15.97	9.50	26.49	20.02	60.00	50.00	-33.51	-29.98
6	29.23438	11.23	35.74	33.00	46.97	44.23	60.00	50.00	-13.03	-5.77

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

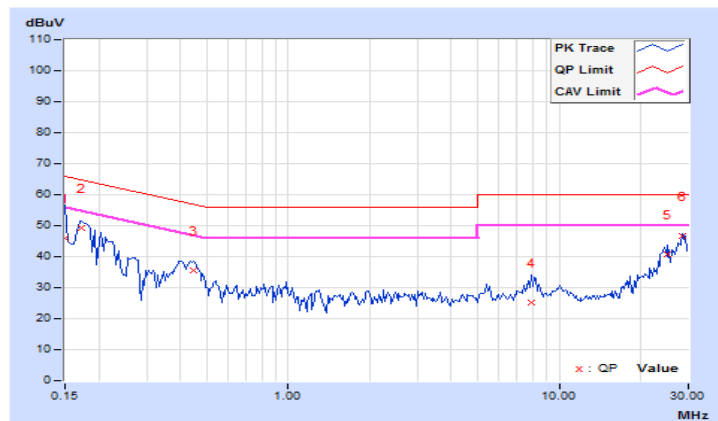


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	-----------------------------------

No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.94	35.99	9.17	45.93	19.11	66.00	56.00	-20.07	-36.89
2	0.17344	9.95	39.17	28.38	49.12	38.33	64.79	54.79	-15.67	-16.46
3	0.44688	10.00	25.45	16.12	35.45	26.12	56.93	46.93	-21.48	-20.81
4	7.88672	10.30	14.79	8.57	25.09	18.87	60.00	50.00	-34.91	-31.13
5	25.23828	10.92	29.76	27.78	40.68	38.70	60.00	50.00	-19.32	-11.30
6	28.68750	10.97	35.85	33.09	46.82	44.06	60.00	50.00	-13.18	-5.94

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

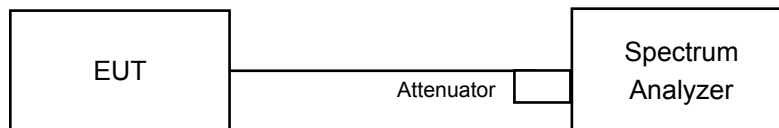


4.3 6dB Bandwidth Measurement

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 specific channel frequencies individually.

4.3.7 Test Result (Mode 1)

Non-Beamforming Mode
802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	8.08	8.14	8.07	7.58	0.5	Pass
6	2437	10.12	10.12	10.02	10.11	0.5	Pass
11	2462	8.07	9.55	8.56	8.08	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	16.37	16.37	16.45	16.44	0.5	Pass
2	2417	16.38	16.40	16.44	16.43	0.5	Pass
6	2437	16.34	16.37	16.42	16.42	0.5	Pass
10	2457	16.39	16.39	16.44	16.43	0.5	Pass
11	2462	16.35	16.39	16.40	16.43	0.5	Pass

802.11ax (HE20)

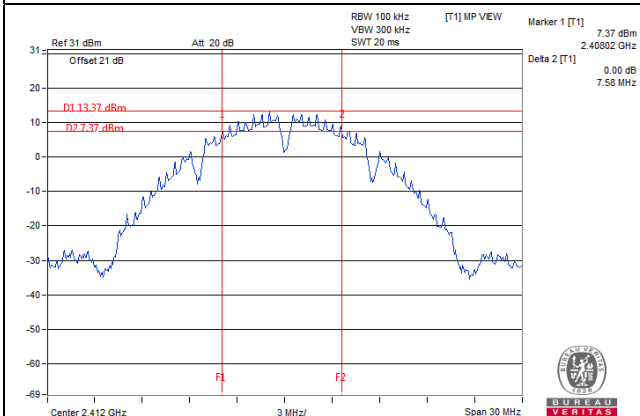
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	18.95	18.88	18.92	18.98	0.5	Pass
2	2417	18.68	18.67	18.91	18.94	0.5	Pass
6	2437	18.72	18.88	18.79	18.58	0.5	Pass
10	2457	18.79	18.89	18.89	19.04	0.5	Pass
11	2462	18.75	18.50	18.94	18.65	0.5	Pass

802.11ax (HE40)

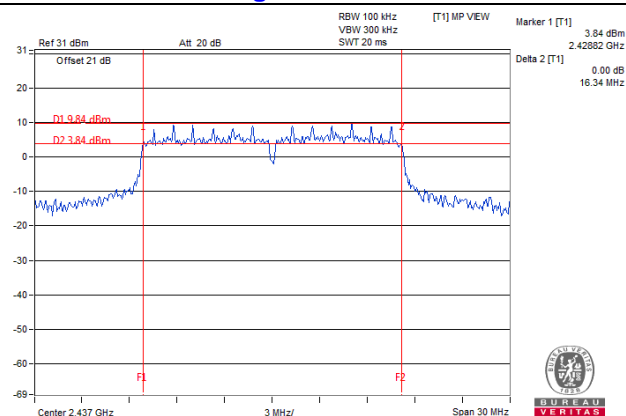
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
3	2422	37.87	37.93	37.90	35.68	0.5	Pass
6	2437	37.46	37.95	38.18	38.09	0.5	Pass
9	2452	38.01	37.29	37.98	35.80	0.5	Pass

Spectrum Plot of Worst Value

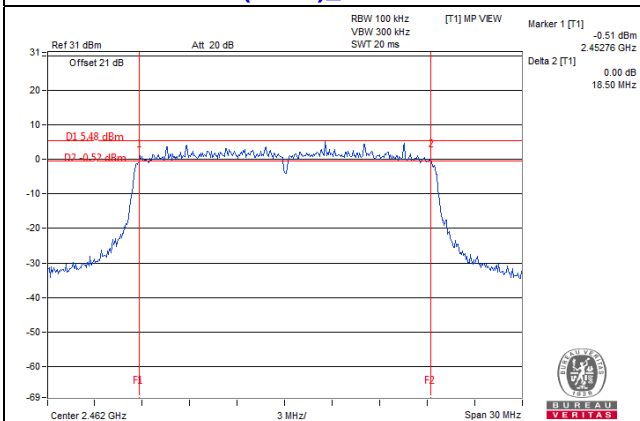
802.11b_Chain 3 / CH1



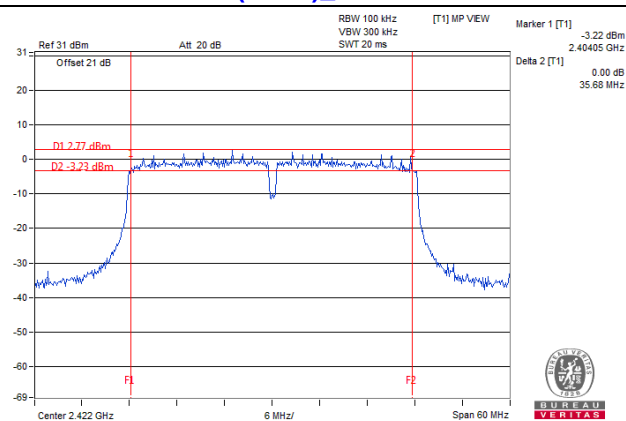
802.11g_Chain 0 / CH6



802.11ax (HE20)_Chain 1 / CH11



802.11ax (HE40)_Chain 3 / CH3



4.3.8 Test Result (Mode 2)

Non-Beamforming Mode

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 3		
1	2412	8.03	8.12	0.5	Pass
6	2437	10.12	10.08	0.5	Pass
11	2462	8.55	8.10	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 3		
1	2412	16.43	16.44	0.5	Pass
2	2417	16.42	16.41	0.5	Pass
6	2437	16.39	16.36	0.5	Pass
10	2457	16.41	16.41	0.5	Pass
11	2462	16.40	16.39	0.5	Pass

802.11ax (HE20)

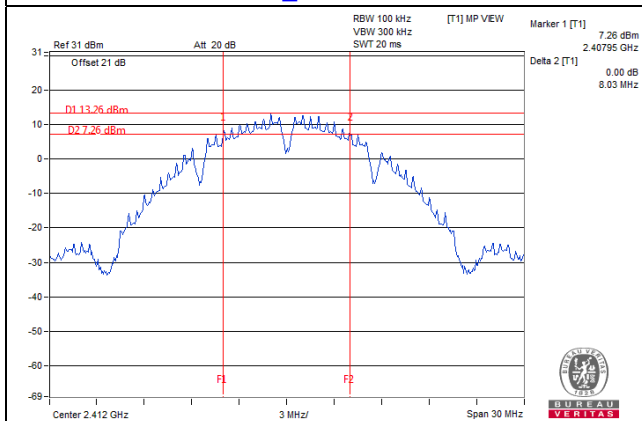
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 3		
1	2412	18.98	18.93	0.5	Pass
2	2417	18.96	18.84	0.5	Pass
6	2437	18.97	18.64	0.5	Pass
10	2457	18.92	19.01	0.5	Pass
11	2462	18.90	18.94	0.5	Pass

802.11ax (HE40)

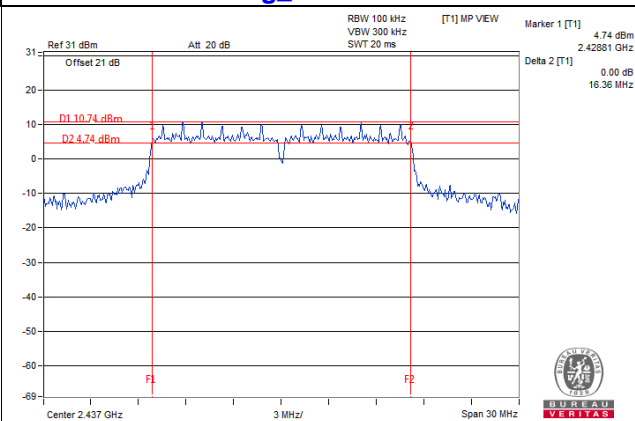
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 1	Chain 3		
3	2422	38.04	37.96	0.5	Pass
6	2437	37.89	37.81	0.5	Pass
9	2452	38.13	37.92	0.5	Pass

Spectrum Plot of Worst Value

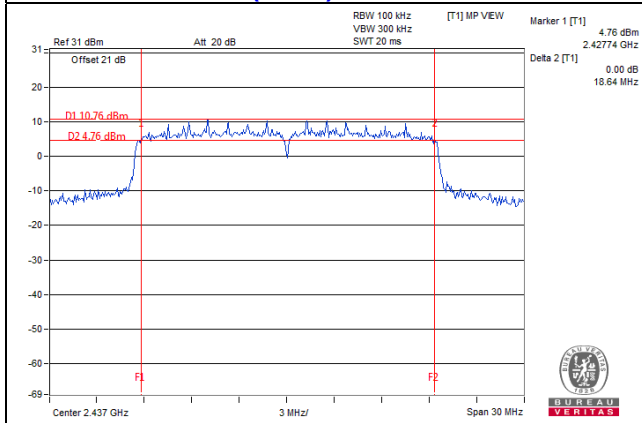
802.11b_Chain 1 / CH1



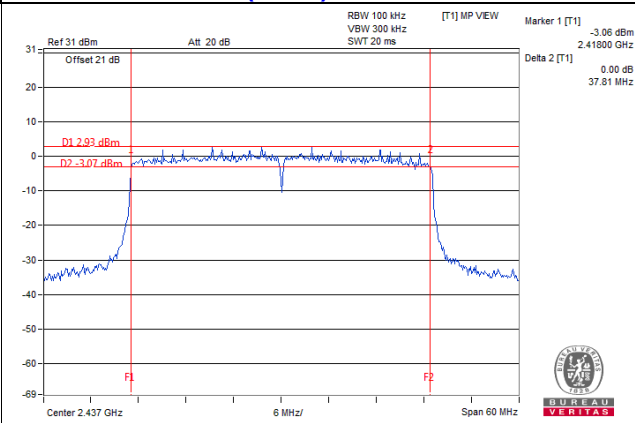
802.11g_Chain 3 / CH6



802.11ax (HE20)_Chain 3 / CH6



802.11ax (HE40)_Chain 3 / CH6



4.3.9 Test Result (Mode 3)

Non-Beamforming Mode

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	7.64	0.5	Pass
6	2437	10.12	0.5	Pass
11	2462	7.63	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.43	0.5	Pass
2	2417	16.41	0.5	Pass
6	2437	16.41	0.5	Pass
10	2457	16.41	0.5	Pass
11	2462	16.39	0.5	Pass

802.11ax (HE20)

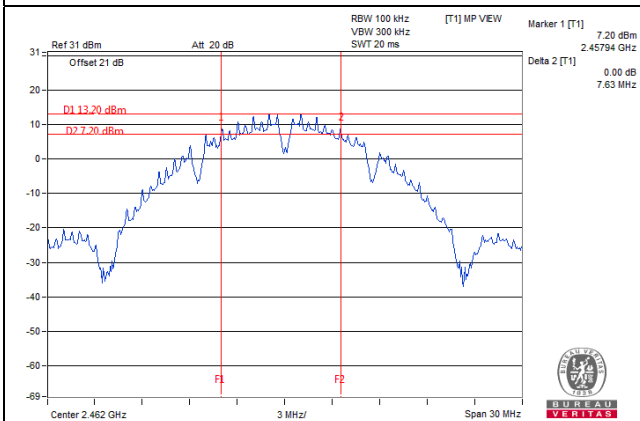
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	18.86	0.5	Pass
2	2417	18.82	0.5	Pass
6	2437	18.93	0.5	Pass
10	2457	18.86	0.5	Pass
11	2462	18.96	0.5	Pass

802.11ax (HE40)

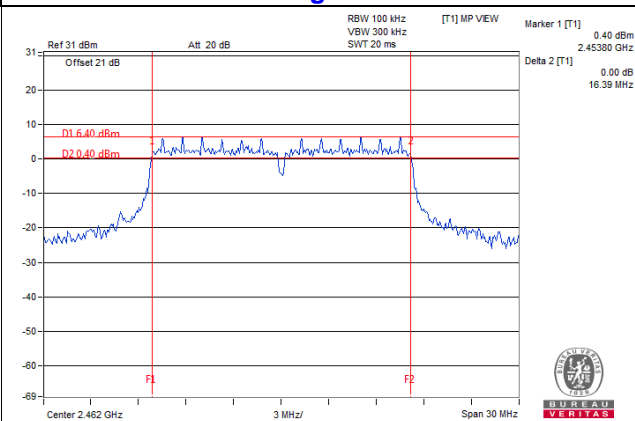
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3	2422	37.96	0.5	Pass
6	2437	37.92	0.5	Pass
9	2452	38.01	0.5	Pass

Spectrum Plot of Worst Value

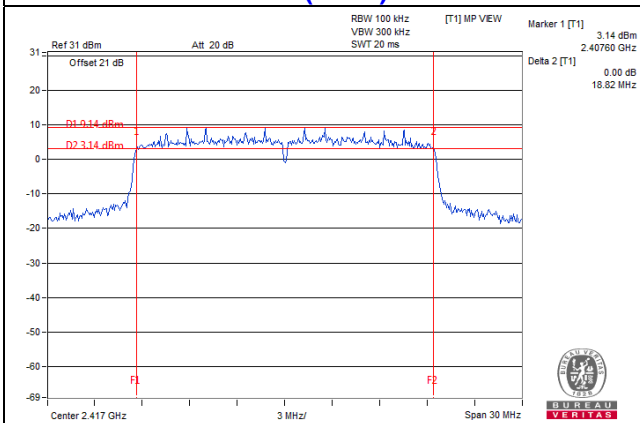
802.11b / CH11



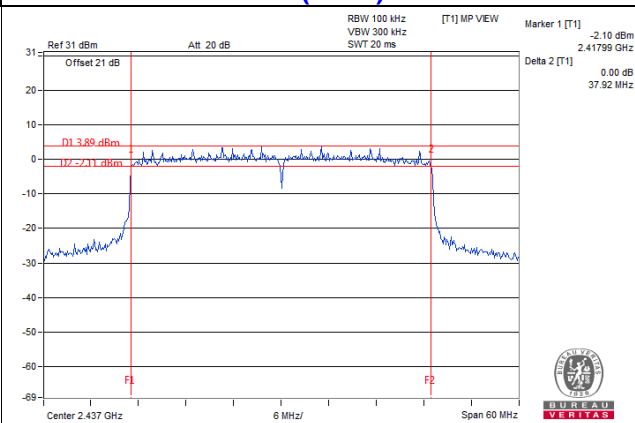
802.11g / CH11



802.11ax (HE20) / CH2



802.11ax (HE40) / CH6



4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

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

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

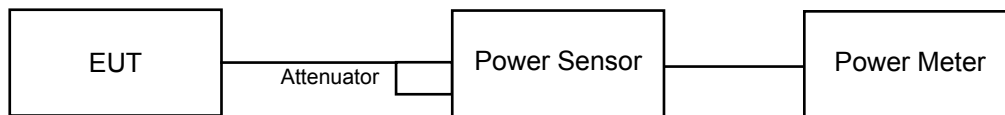
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedures

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	20.28	20.54	20.16	20.92	447.248	26.51	30	Pass
6	2437	23.11	23.21	23.13	23.89	864.55	29.37	30	Pass
11	2462	20.12	20.67	20.18	20.45	434.632	26.38	30	Pass

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	17.08	17.48	17.32	17.89	222.495	23.47	30	Pass
2	2417	18.49	18.50	18.64	18.93	292.704	24.66	30	Pass
6	2437	20.57	20.92	20.63	20.82	474.012	26.76	30	Pass
10	2457	17.49	17.82	17.68	17.84	236.067	23.73	30	Pass
11	2462	16.04	16.26	16.22	16.41	168.077	22.26	30	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	17.10	17.08	17.24	17.38	210.004	23.22	30	Pass
2	2417	17.07	17.30	17.18	17.90	218.536	23.40	30	Pass
6	2437	20.13	20.37	20.28	20.72	436.624	26.40	30	Pass
10	2457	16.64	16.69	16.42	16.90	185.629	22.69	30	Pass
11	2462	15.60	15.58	16.08	15.90	151.905	21.82	30	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	16.98	16.79	16.54	17.04	193.305	22.86	30	Pass
6	2437	17.15	17.08	17.10	16.99	204.219	23.10	30	Pass
9	2452	14.75	14.57	15.24	14.79	122.046	20.87	30	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	17.16	17.33	17.42	17.54	218.037	23.39	30	Pass
2	2417	17.48	17.81	17.56	18.32	241.307	23.83	30	Pass
6	2437	20.64	20.86	20.64	21.10	482.48	26.83	30	Pass
10	2457	17.02	17.11	16.93	17.39	205.899	23.14	30	Pass
11	2462	15.99	15.94	16.47	16.35	166.496	22.21	30	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	17.09	16.96	16.69	17.23	200.338	23.02	30	Pass
6	2437	17.33	17.24	17.30	17.25	213.832	23.30	30	Pass
9	2452	14.99	14.85	15.42	15.06	128.996	21.11	30	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	17.10	17.08	17.24	17.38	210.004	23.22	30	Pass
2	2417	17.07	17.30	17.18	17.90	218.536	23.40	30	Pass
6	2437	20.13	20.37	20.28	20.72	436.624	26.40	30	Pass
10	2457	16.64	16.69	16.42	16.90	185.629	22.69	30	Pass
11	2462	15.60	15.58	16.08	15.90	151.905	21.82	30	Pass

Note: The directional gain is 5.43dBi < 6dBi, so the power limit shall not be reduced.

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	16.98	16.79	16.54	17.04	193.305	22.86	30	Pass
6	2437	17.15	17.08	17.10	16.99	204.219	23.10	30	Pass
9	2452	14.75	14.57	15.24	14.79	122.046	20.87	30	Pass

Note: The directional gain is 5.43dBi < 6dBi, so the power limit shall not be reduced.

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	17.16	17.33	17.42	17.54	218.037	23.39	30	Pass
2	2417	17.48	17.81	17.56	18.32	241.307	23.83	30	Pass
6	2437	20.64	20.86	20.64	21.10	482.48	26.83	30	Pass
10	2457	17.02	17.11	16.93	17.39	205.899	23.14	30	Pass
11	2462	15.99	15.94	16.47	16.35	166.496	22.21	30	Pass

Note: The directional gain is 5.43dBi < 6dBi, so the power limit shall not be reduced.

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	17.09	16.96	16.69	17.23	200.338	23.02	30	Pass
6	2437	17.33	17.24	17.30	17.25	213.832	23.30	30	Pass
9	2452	14.99	14.85	15.42	15.06	128.996	21.11	30	Pass

Note: The directional gain is 5.43dBi < 6dBi, so the power limit shall not be reduced.

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 1	Chain 3				
1	2412	21.12	21.14	259.437	24.14	30	Pass
6	2437	23.25	23.90	456.82	26.60	30	Pass
11	2462	20.63	20.92	239.206	23.79	30	Pass

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 1	Chain 3				
1	2412	16.52	16.99	94.878	19.77	30	Pass
2	2417	18.78	19.25	159.649	22.03	30	Pass
6	2437	21.00	21.20	257.719	24.11	30	Pass
10	2457	17.89	18.10	126.083	21.01	30	Pass
11	2462	16.40	16.70	90.426	19.56	30	Pass

VHT20

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 1	Chain 3				
1	2412	16.50	16.70	91.442	19.61	30	Pass
2	2417	18.86	19.02	156.712	21.95	30	Pass
6	2437	21.10	21.20	260.651	24.16	30	Pass
10	2457	17.98	18.02	126.193	21.01	30	Pass
11	2462	16.49	16.70	91.34	19.61	30	Pass

VHT40

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 1	Chain 3				
3	2422	15.00	15.35	65.9	18.19	30	Pass
6	2437	16.48	16.78	92.106	19.64	30	Pass
9	2452	14.50	14.76	58.107	17.64	30	Pass

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 1	Chain 3				
1	2412	16.55	16.79	92.939	19.68	30	Pass
2	2417	18.98	19.12	160.726	22.06	30	Pass
6	2437	21.12	21.30	264.316	24.22	30	Pass
10	2457	18.01	18.22	129.615	21.13	30	Pass
11	2462	16.52	16.79	92.628	19.67	30	Pass

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 1	Chain 3				
3	2422	15.05	15.45	67.064	18.26	30	Pass
6	2437	16.52	16.86	93.404	19.70	30	Pass
9	2452	14.53	14.82	58.718	17.69	30	Pass

Beamforming Mode

VHT20

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 1	Chain 3				
1	2412	16.50	16.70	91.442	19.61	29.67	Pass
2	2417	18.86	19.02	156.712	21.95	29.67	Pass
6	2437	21.10	21.20	260.651	24.16	29.67	Pass
10	2457	17.98	18.02	126.193	21.01	29.67	Pass
11	2462	16.49	16.70	91.34	19.61	29.67	Pass

Note: The directional gain is 6.33dBi > 6dBi, so the power limit shall be reduced to $30-(6.33-6) = 29.67$ dBm.

VHT40

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 1	Chain 3				
3	2422	15.00	15.35	65.9	18.19	29.67	Pass
6	2437	16.48	16.78	92.106	19.64	29.67	Pass
9	2452	14.50	14.76	58.107	17.64	29.67	Pass

Note: The directional gain is 6.33dBi > 6dBi, so the power limit shall be reduced to $30-(6.33-6) = 29.67$ dBm.

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 1	Chain 3				
1	2412	16.55	16.79	92.939	19.68	29.67	Pass
2	2417	18.98	19.12	160.726	22.06	29.67	Pass
6	2437	21.12	21.30	264.316	24.22	29.67	Pass
10	2457	18.01	18.22	129.615	21.13	29.67	Pass
11	2462	16.52	16.79	92.628	19.67	29.67	Pass

Note: The directional gain is 6.33dBi > 6dBi, so the power limit shall be reduced to $30-(6.33-6) = 29.67$ dBm.

802.11ax (HE40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 1	Chain 3				
3	2422	15.05	15.45	67.064	18.26	29.67	Pass
6	2437	16.52	16.86	93.404	19.70	29.67	Pass
9	2452	14.53	14.82	58.718	17.69	29.67	Pass

Note: The directional gain is 6.33dBi > 6dBi, so the power limit shall be reduced to $30-(6.33-6) = 29.67$ 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	133.352	21.25	30	Pass
6	2437	204.174	23.10	30	Pass
11	2462	129.122	21.11	30	Pass

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	52	17.16	30	Pass
2	2417	92.47	19.66	30	Pass
6	2437	199.986	23.01	30	Pass
10	2457	73.282	18.65	30	Pass
11	2462	57.148	17.57	30	Pass

VHT20

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	52.24	17.18	30	Pass
2	2417	100.462	20.02	30	Pass
6	2437	199.526	23.00	30	Pass
10	2457	67.92	18.32	30	Pass
11	2462	56.624	17.53	30	Pass

VHT40

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
3	2422	40.926	16.12	30	Pass
6	2437	56.624	17.53	30	Pass
9	2452	35.645	15.52	30	Pass

802.11ax (HE20)

Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	52.966	17.24	30	Pass
2	2417	102.802	20.12	30	Pass
6	2437	204.174	23.10	30	Pass
10	2457	75.509	18.78	30	Pass
11	2462	58.884	17.70	30	Pass

802.11ax (HE40)

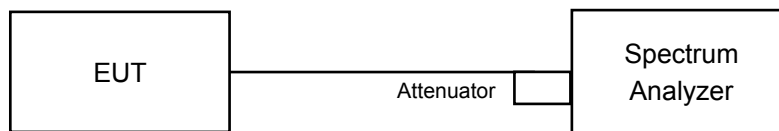
Chan.	Chan. Freq. (MHz)	Average Power (mW)	Average Power (dBm)	Limit (dBm)	Pass / Fail
3	2422	42.17	16.25	30	Pass
6	2437	59.156	17.72	30	Pass
9	2452	37.325	15.72	30	Pass

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm 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)

Non-Beamforming Mode

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	-8.11	6.02	1.15	-0.94	8	Pass
	6	2437	-6.56	6.02	1.15	0.61	8	Pass
	11	2462	-10.23	6.02	1.15	-3.06	8	Pass
1	1	2412	-8.63	6.02	1.15	-1.46	8	Pass
	6	2437	-8.44	6.02	1.15	-1.27	8	Pass
	11	2462	-8.34	6.02	1.15	-1.17	8	Pass
2	1	2412	-9.48	6.02	1.15	-2.31	8	Pass
	6	2437	-6.94	6.02	1.15	0.23	8	Pass
	11	2462	-9.86	6.02	1.15	-2.69	8	Pass
3	1	2412	-9.20	6.02	1.15	-2.03	8	Pass
	6	2437	-7.38	6.02	1.15	-0.21	8	Pass
	11	2462	-9.39	6.02	1.15	-2.22	8	Pass

- Note: 1. The directional gain is 5.43dBi < 6dBi, so the power density limit shall not be reduced.
 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	-15.55	6.02	0.33	-9.20	8	Pass
	2	2417	-13.63	6.02	0.33	-7.28	8	Pass
	6	2437	-12.02	6.02	0.33	-5.67	8	Pass
	10	2457	-15.03	6.02	0.33	-8.68	8	Pass
	11	2462	-16.20	6.02	0.33	-9.85	8	Pass
1	1	2412	-15.01	6.02	0.33	-8.66	8	Pass
	2	2417	-13.22	6.02	0.33	-6.87	8	Pass
	6	2437	-11.93	6.02	0.33	-5.58	8	Pass
	10	2457	-14.78	6.02	0.33	-8.43	8	Pass
	11	2462	-15.48	6.02	0.33	-9.13	8	Pass
2	1	2412	-14.19	6.02	0.33	-7.84	8	Pass
	2	2417	-14.17	6.02	0.33	-7.82	8	Pass
	6	2437	-11.78	6.02	0.33	-5.43	8	Pass
	10	2457	-15.40	6.02	0.33	-9.05	8	Pass
	11	2462	-15.89	6.02	0.33	-9.54	8	Pass
3	1	2412	-15.58	6.02	0.33	-9.23	8	Pass
	2	2417	-13.91	6.02	0.33	-7.56	8	Pass
	6	2437	-12.00	6.02	0.33	-5.65	8	Pass
	10	2457	-14.82	6.02	0.33	-8.47	8	Pass
	11	2462	-17.01	6.02	0.33	-10.66	8	Pass

Note: 1. The directional gain is 5.43dBi < 6dBi, so the power density limit shall not be reduced.
 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	-15.61	6.02	0.23	-9.36	8	Pass
	2	2417	-15.37	6.02	0.23	-9.12	8	Pass
	6	2437	-12.27	6.02	0.23	-6.02	8	Pass
	10	2457	-14.95	6.02	0.23	-8.70	8	Pass
	11	2462	-16.94	6.02	0.23	-10.69	8	Pass
1	1	2412	-15.07	6.02	0.23	-8.82	8	Pass
	2	2417	-15.87	6.02	0.23	-9.62	8	Pass
	6	2437	-12.93	6.02	0.23	-6.68	8	Pass
	10	2457	-16.41	6.02	0.23	-10.16	8	Pass
	11	2462	-16.72	6.02	0.23	-10.47	8	Pass
2	1	2412	-15.48	6.02	0.23	-9.23	8	Pass
	2	2417	-15.10	6.02	0.23	-8.85	8	Pass
	6	2437	-12.71	6.02	0.23	-6.46	8	Pass
	10	2457	-16.43	6.02	0.23	-10.18	8	Pass
	11	2462	-16.91	6.02	0.23	-10.66	8	Pass
3	1	2412	-14.34	6.02	0.23	-8.09	8	Pass
	2	2417	-14.51	6.02	0.23	-8.26	8	Pass
	6	2437	-11.69	6.02	0.23	-5.44	8	Pass
	10	2457	-16.11	6.02	0.23	-9.86	8	Pass
	11	2462	-16.40	6.02	0.23	-10.15	8	Pass

Note: 1. The directional gain is 5.43dBi < 6dBi, so the power density limit shall not be reduced.
 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	-18.26	6.02	0.37	-11.87	8	Pass
	6	2437	-18.21	6.02	0.37	-11.82	8	Pass
	9	2452	-20.46	6.02	0.37	-14.07	8	Pass
1	3	2422	-18.95	6.02	0.37	-12.56	8	Pass
	6	2437	-18.92	6.02	0.37	-12.53	8	Pass
	9	2452	-19.99	6.02	0.37	-13.60	8	Pass
2	3	2422	-18.88	6.02	0.37	-12.49	8	Pass
	6	2437	-18.84	6.02	0.37	-12.45	8	Pass
	9	2452	-20.52	6.02	0.37	-14.13	8	Pass
3	3	2422	-17.77	6.02	0.37	-11.38	8	Pass
	6	2437	-17.72	6.02	0.37	-11.33	8	Pass
	9	2452	-20.67	6.02	0.37	-14.28	8	Pass

- Note: 1. The directional gain is 5.43dBi < 6dBi, so the power density limit shall not be reduced.
 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	-16.99	6.02	0.15	-10.82	8	Pass
	2	2417	-16.32	6.02	0.15	-10.15	8	Pass
	6	2437	-13.94	6.02	0.15	-7.77	8	Pass
	10	2457	-13.83	6.02	0.15	-7.66	8	Pass
	11	2462	-17.65	6.02	0.15	-11.48	8	Pass
1	1	2412	-16.44	6.02	0.15	-10.27	8	Pass
	2	2417	-16.09	6.02	0.15	-9.92	8	Pass
	6	2437	-13.30	6.02	0.15	-7.13	8	Pass
	10	2457	-17.80	6.02	0.15	-11.63	8	Pass
	11	2462	-18.18	6.02	0.15	-12.01	8	Pass
2	1	2412	-16.89	6.02	0.15	-10.72	8	Pass
	2	2417	-16.68	6.02	0.15	-10.51	8	Pass
	6	2437	-14.85	6.02	0.15	-8.68	8	Pass
	10	2457	-17.15	6.02	0.15	-10.98	8	Pass
	11	2462	-17.48	6.02	0.15	-11.31	8	Pass
3	1	2412	-16.51	6.02	0.15	-10.34	8	Pass
	2	2417	-16.38	6.02	0.15	-10.21	8	Pass
	6	2437	-13.85	6.02	0.15	-7.68	8	Pass
	10	2457	-17.08	6.02	0.15	-10.91	8	Pass
	11	2462	-18.37	6.02	0.15	-12.20	8	Pass

Note: 1. The directional gain is 5.43dBi < 6dBi, so the power density limit shall not be reduced.
 2. Refer to section 3.3 for duty cycle spectrum plot.

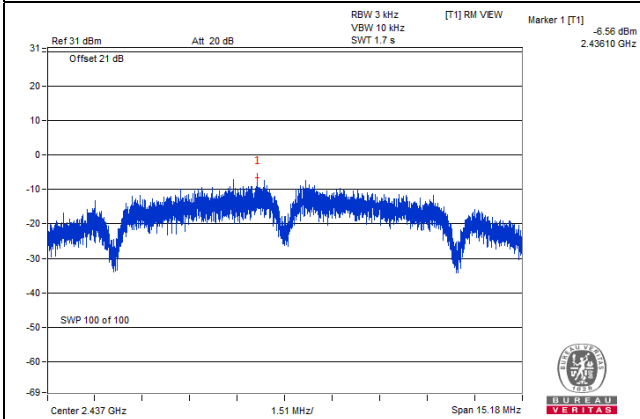
802.11ax (HE40)

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	-20.16	6.02	0.18	-13.96	8	Pass
	6	2437	-19.48	6.02	0.18	-13.28	8	Pass
	9	2452	-21.56	6.02	0.18	-15.36	8	Pass
1	3	2422	-20.03	6.02	0.18	-13.83	8	Pass
	6	2437	-20.19	6.02	0.18	-13.99	8	Pass
	9	2452	-22.28	6.02	0.18	-16.08	8	Pass
2	3	2422	-19.76	6.02	0.18	-13.56	8	Pass
	6	2437	-18.81	6.02	0.18	-12.61	8	Pass
	9	2452	-22.12	6.02	0.18	-15.92	8	Pass
3	3	2422	-19.32	6.02	0.18	-13.12	8	Pass
	6	2437	-18.80	6.02	0.18	-12.60	8	Pass
	9	2452	-21.51	6.02	0.18	-15.31	8	Pass

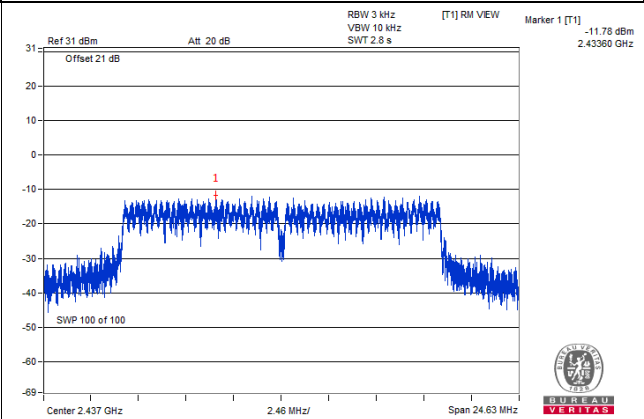
- Note: 1. The directional gain is 5.43dBi < 6dBi, so the power density limit shall not be reduced.
 2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

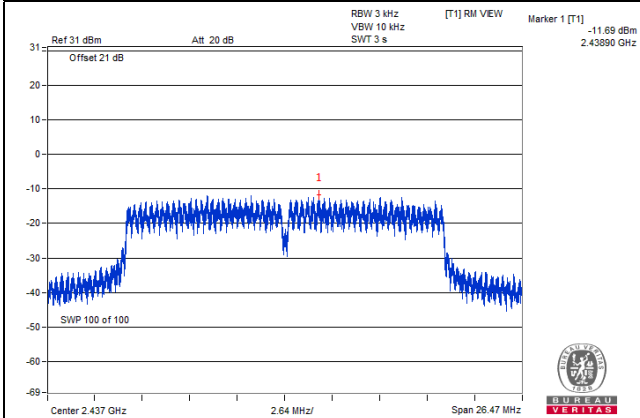
802.11b_Chain 0 / CH6



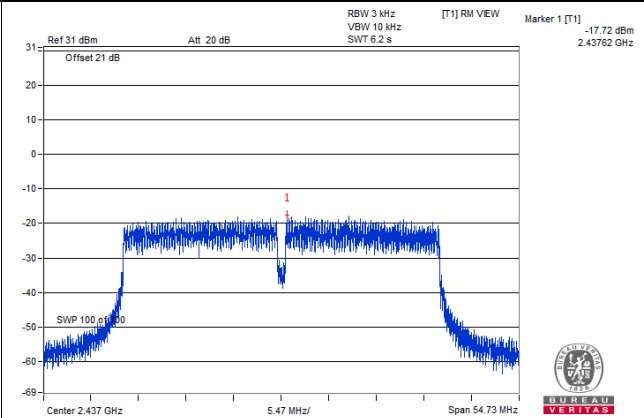
802.11g_Chain 2 / CH6



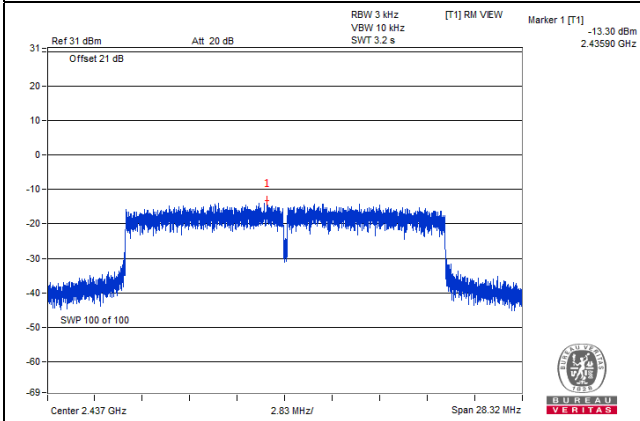
VHT20_Chain 3 / CH6



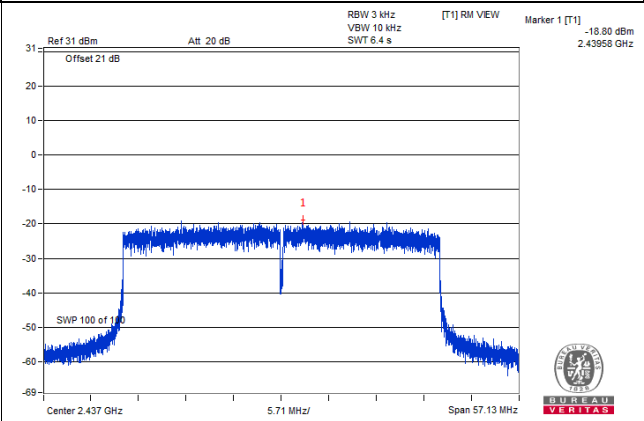
VHT40_Chain 3 / CH6



802.11ax (HE20)_Chain 1 / CH6



802.11ax (HE40)_Chain 3 / CH6



4.5.8 Test Results (Mode 2)

Non-Beamforming Mode

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
1	1	2412	-7.55	3.01	1.15	-3.39	7.67	Pass
	6	2437	-7.24	3.01	1.15	-3.08	7.67	Pass
	11	2462	-8.13	3.01	1.15	-3.97	7.67	Pass
3	1	2412	-7.14	3.01	1.15	-2.98	7.67	Pass
	6	2437	-6.41	3.01	1.15	-2.25	7.67	Pass
	11	2462	-8.73	3.01	1.15	-4.57	7.67	Pass

Note: 1. The directional gain is 6.33dBi > 6dBi, so the power density limit shall be reduced to $8-(6.33-6) = 7.67\text{dBm}$.

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
1	1	2412	-15.43	3.01	0.33	-12.09	7.67	Pass
	2	2427	-13.73	3.01	0.33	-10.39	7.67	Pass
	6	2437	-12.16	3.01	0.33	-8.82	7.67	Pass
	10	2457	-14.76	3.01	0.33	-11.42	7.67	Pass
	11	2462	-15.34	3.01	0.33	-12.00	7.67	Pass
3	1	2412	-15.17	3.01	0.33	-11.83	7.67	Pass
	2	2427	-13.23	3.01	0.33	-9.89	7.67	Pass
	6	2437	-11.07	3.01	0.33	-7.73	7.67	Pass
	10	2457	-14.34	3.01	0.33	-11.00	7.67	Pass
	11	2462	-15.91	3.01	0.33	-12.57	7.67	Pass

Note: 1. The directional gain is 6.33dBi > 6dBi, so the power density limit shall be reduced to $8-(6.33-6) = 7.67\text{dBm}$.

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
1	1	2412	-15.73	3.01	0.23	-12.49	7.67	Pass
	2	2427	-13.35	3.01	0.23	-10.11	7.67	Pass
	6	2437	-11.89	3.01	0.23	-8.65	7.67	Pass
	10	2457	-15.27	3.01	0.23	-12.03	7.67	Pass
	11	2462	-16.68	3.01	0.23	-13.44	7.67	Pass
3	1	2412	-15.77	3.01	0.23	-12.53	7.67	Pass
	2	2427	-13.56	3.01	0.23	-10.32	7.67	Pass
	6	2437	-11.51	3.01	0.23	-8.27	7.67	Pass
	10	2457	-14.68	3.01	0.23	-11.44	7.67	Pass
	11	2462	-16.60	3.01	0.23	-13.36	7.67	Pass

Note: 1. The directional gain is 6.33dBi > 6dBi, so the power density limit shall be reduced to $8-(6.33-6) = 7.67\text{dBm}$.

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
1	3	2422	-20.62	3.01	0.37	-17.24	7.67	Pass
	6	2437	-18.86	3.01	0.37	-15.48	7.67	Pass
	9	2452	-20.10	3.01	0.37	-16.72	7.67	Pass
3	3	2422	-20.06	3.01	0.37	-16.68	7.67	Pass
	6	2437	-19.02	3.01	0.37	-15.64	7.67	Pass
	9	2452	-20.41	3.01	0.37	-17.03	7.67	Pass

Note: 1. The directional gain is 6.33dBi > 6dBi, so the power density limit shall be reduced to $8-(6.33-6) = 7.67\text{dBm}$.

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
1	1	2412	-16.97	3.01	0.15	-13.81	7.67	Pass
	2	2427	-15.44	3.01	0.15	-12.28	7.67	Pass
	6	2437	-12.86	3.01	0.15	-9.70	7.67	Pass
	10	2457	-15.86	3.01	0.15	-12.70	7.67	Pass
	11	2462	-17.82	3.01	0.15	-14.66	7.67	Pass
3	1	2412	-16.87	3.01	0.15	-13.71	7.67	Pass
	2	2427	-14.21	3.01	0.15	-11.05	7.67	Pass
	6	2437	-13.15	3.01	0.15	-9.99	7.67	Pass
	10	2457	-16.09	3.01	0.15	-12.93	7.67	Pass
	11	2462	-17.57	3.01	0.15	-14.41	7.67	Pass

Note: 1. The directional gain is 6.33dBi > 6dBi, so the power density limit shall be reduced to $8-(6.33-6) = 7.67\text{dBm}$.

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

802.11ax (HE40)

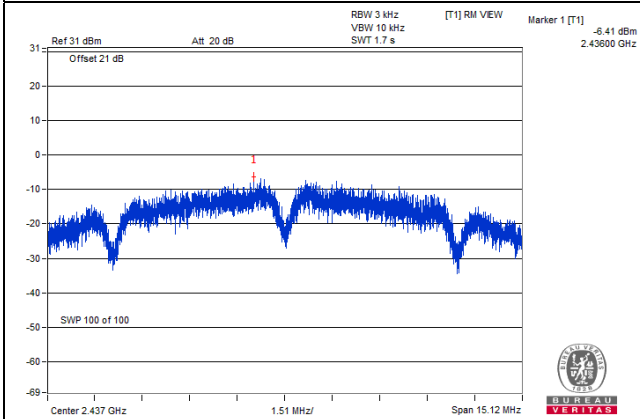
TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	3	2422	-21.24	3.01	0.18	-18.05	7.67	Pass
	6	2437	-20.12	3.01	0.18	-16.93	7.67	Pass
	9	2452	-21.49	3.01	0.18	-18.30	7.67	Pass
3	3	2422	-21.15	3.01	0.18	-17.96	7.67	Pass
	6	2437	-20.22	3.01	0.18	-17.03	7.67	Pass
	9	2452	-21.52	3.01	0.18	-18.33	7.67	Pass

Note: 1. The directional gain is 6.33dBi > 6dBi, so the power density limit shall be reduced to $8-(6.33-6) = 7.67\text{dBm}$.

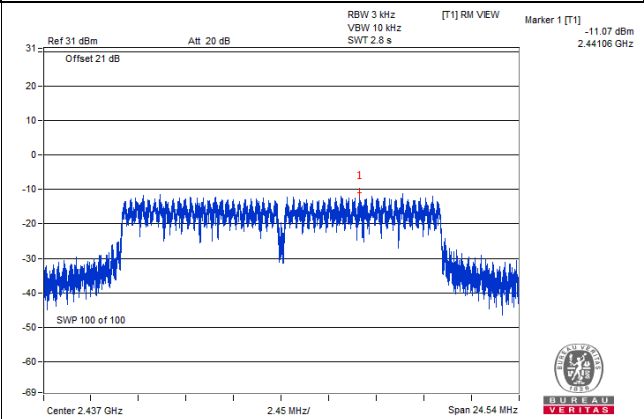
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

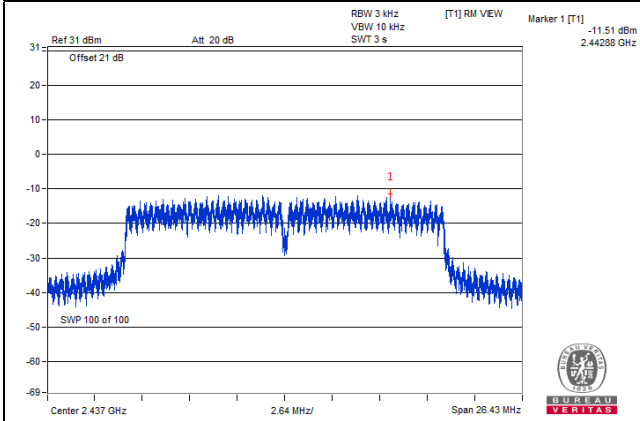
802.11b_Chain 3 / CH6



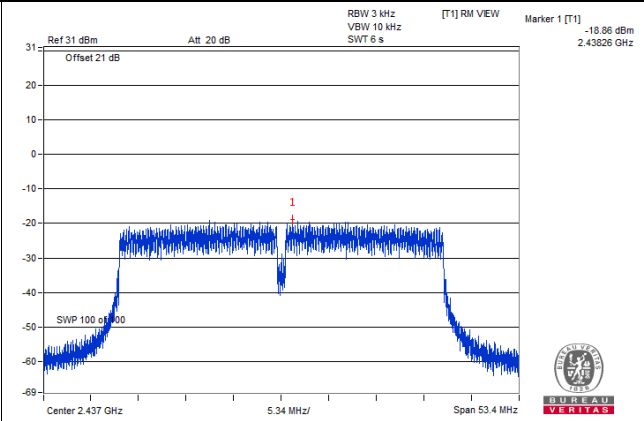
802.11g_Chain 3 / CH6



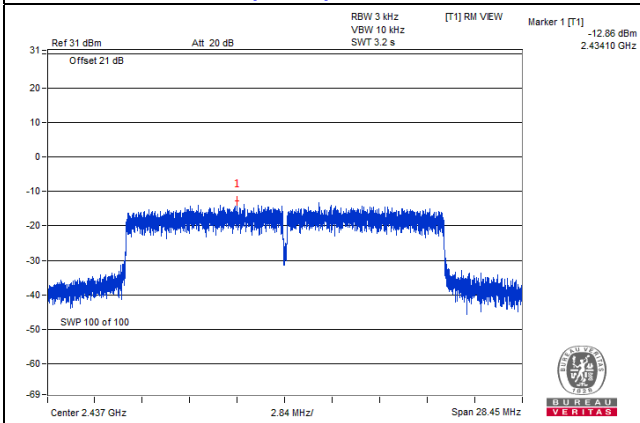
VHT20_Chain 3 / CH6



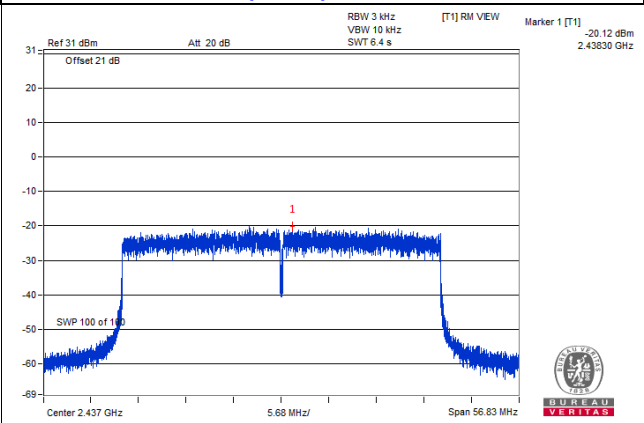
VHT40_Chain 1 / CH6



802.11ax (HE20)_Chain 1 / CH6



802.11ax (HE40)_Chain 1 / CH6



4.5.9 Test Results (Mode 3)

Non-Beamforming Mode

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	-8.34	1.15	-7.19	8	Pass
6	2437	-6.24	1.15	-5.09	8	Pass
11	2462	-8.28	1.15	-7.13	8	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	-15.27	0.33	-14.94	8	Pass
2	2417	-12.69	0.33	-12.36	8	Pass
6	2437	-10.11	0.33	-9.78	8	Pass
10	2457	-14.28	0.33	-13.95	8	Pass
11	2462	-14.98	0.33	-14.65	8	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	-15.34	0.23	-15.11	8	Pass
2	2417	-12.41	0.23	-12.18	8	Pass
6	2437	-10.36	0.23	-10.13	8	Pass
10	2457	-14.69	0.23	-14.46	8	Pass
11	2462	-14.82	0.23	-14.59	8	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	-18.87	0.37	-18.50	8	Pass
6	2437	-17.35	0.37	-16.98	8	Pass
9	2452	-19.22	0.37	-18.85	8	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	-16.22	0.15	-16.07	8	Pass
2	2417	-13.57	0.15	-13.42	8	Pass
6	2437	-11.79	0.15	-11.64	8	Pass
10	2457	-14.46	0.15	-14.31	8	Pass
11	2462	-16.54	0.15	-16.39	8	Pass

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

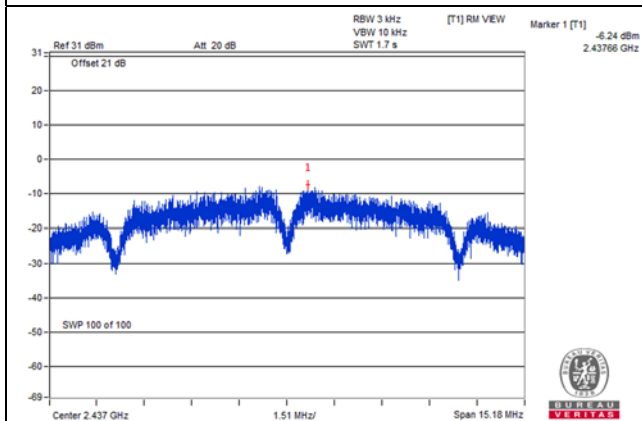
802.11ax (HE40)

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	-20.19	0.18	-20.01	8	Pass
6	2437	-18.89	0.18	-18.71	8	Pass
9	2452	-20.31	0.18	-20.13	8	Pass

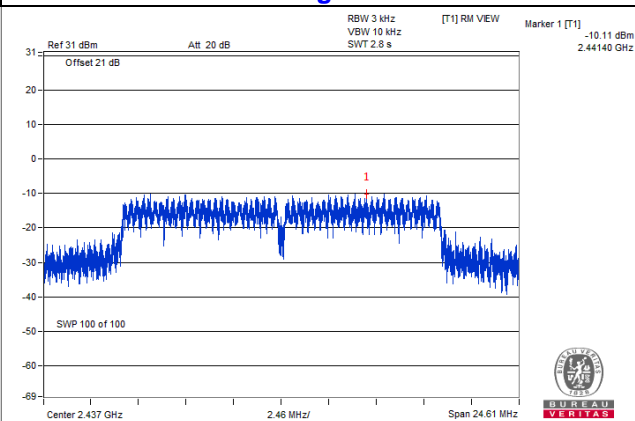
Note: 1. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

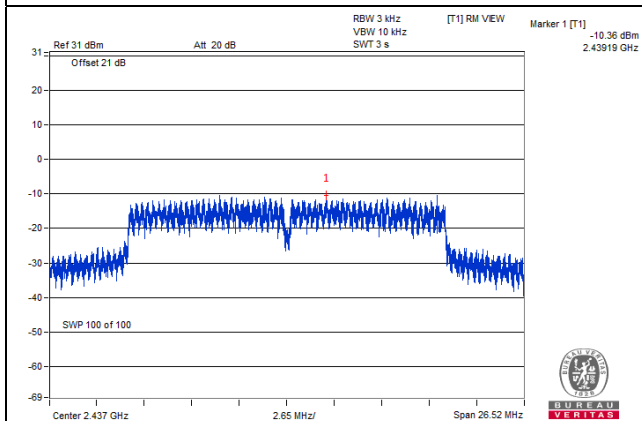
802.11b / CH6



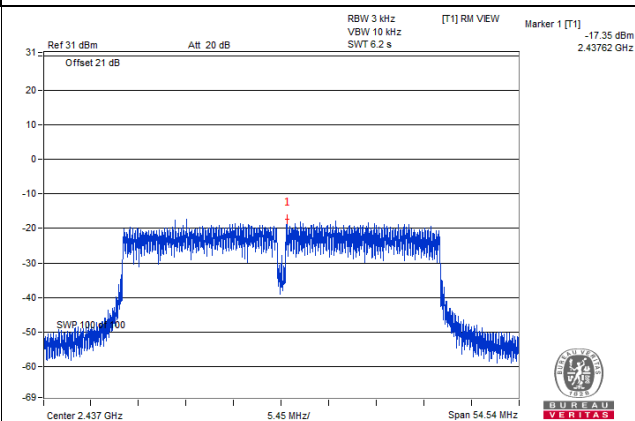
802.11g / CH6



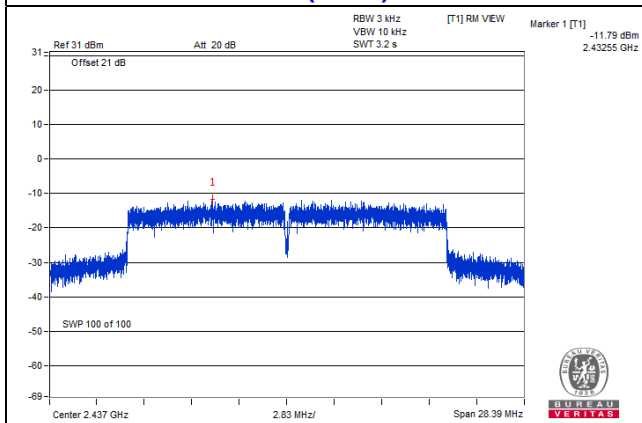
VHT20 / CH6



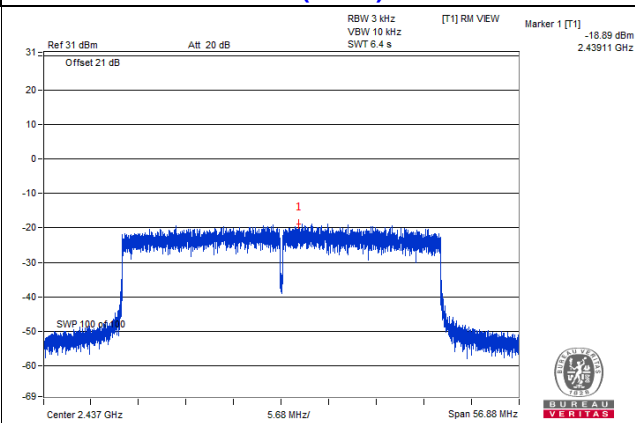
VHT40 / CH6



802.11ax (HE20) / CH6



802.11ax (HE40) / CH6

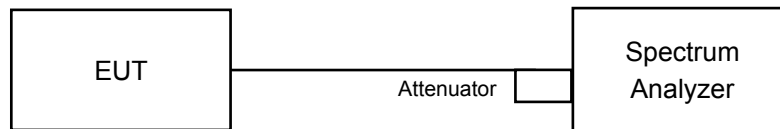


4.6 Conducted Out of Band Emission Measurement

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.

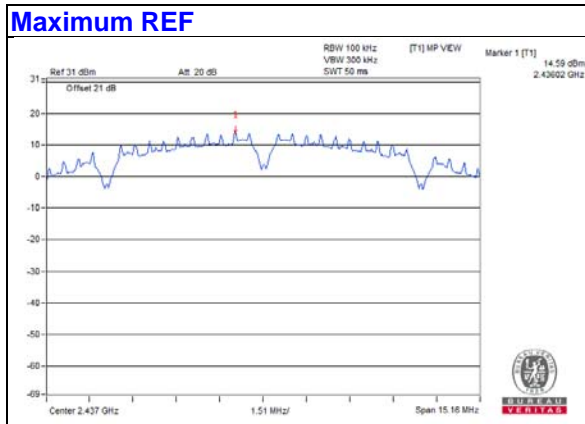
4.6.6 EUT Operating Condition

Same as Item 4.3.6

4.6.7 Test Results (Mode 1)

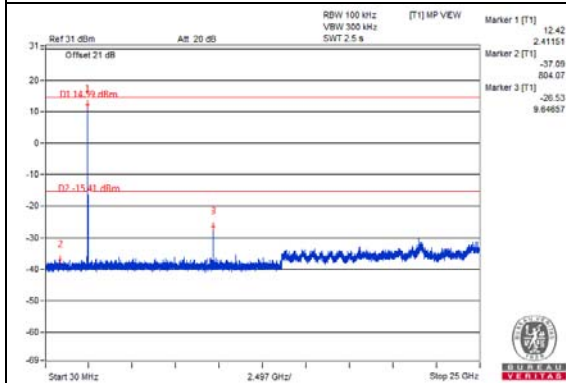
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

802.11b

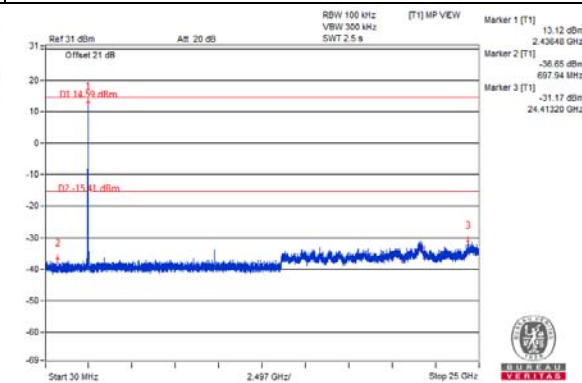


Chain 0

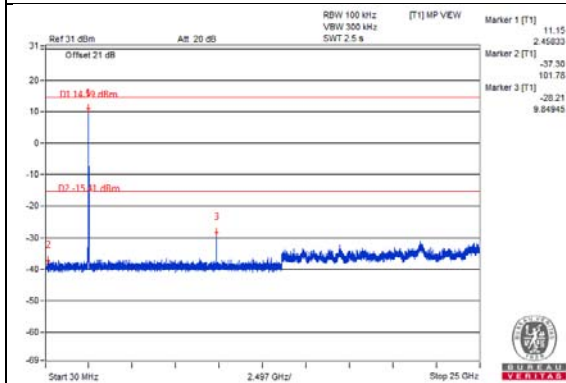
CH 1



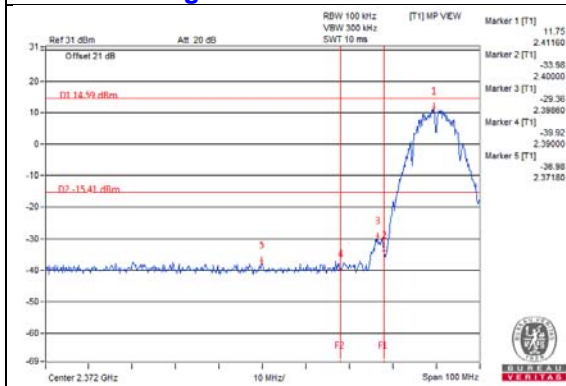
CH 6



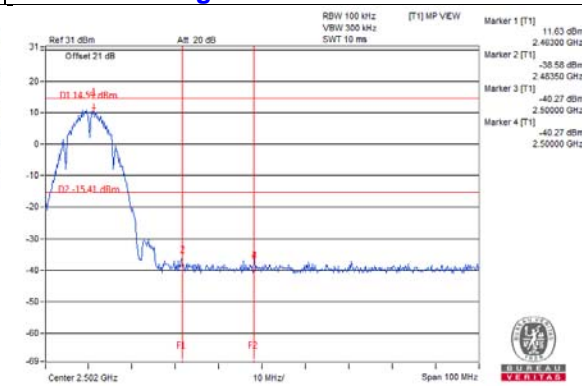
CH 11



CH 1 Band edge

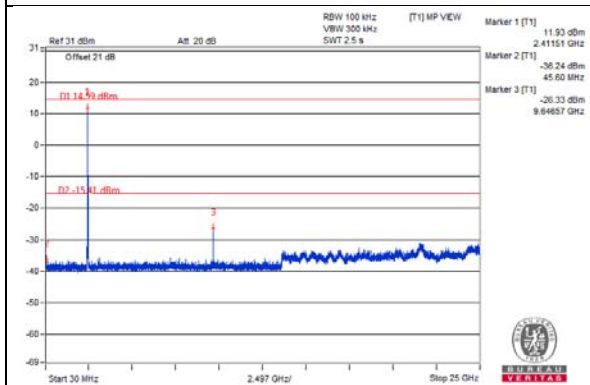


CH 11 Band edge

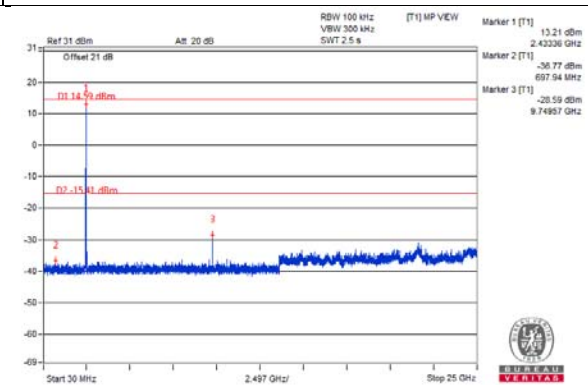


Chain 1

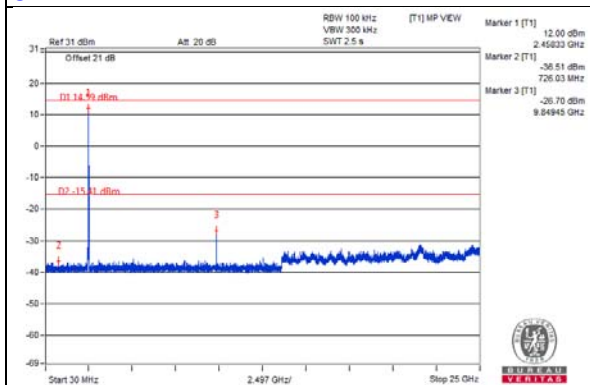
CH 1



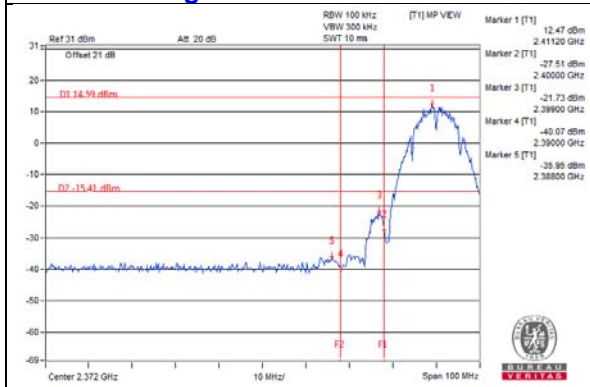
CH 6



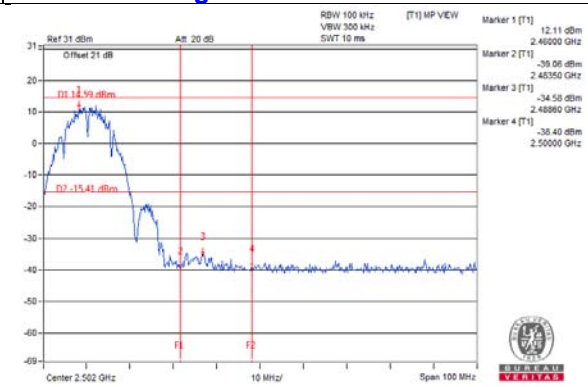
CH 11



CH 1 Band edge

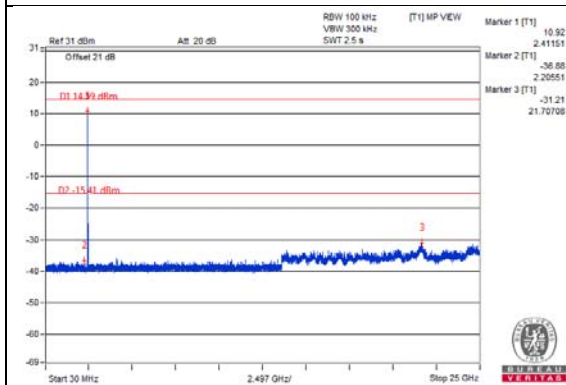


CH 11 Band edge

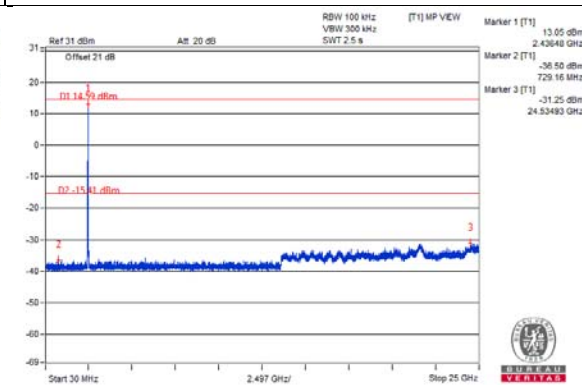


Chain 2

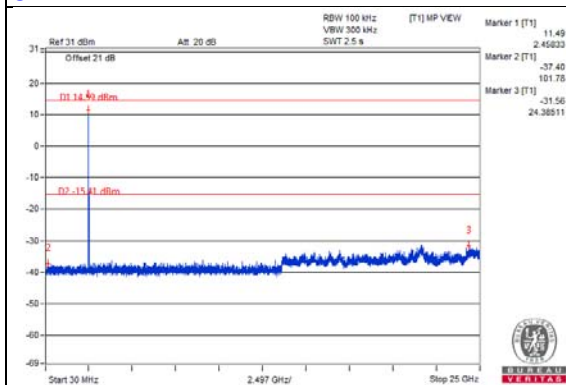
CH 1



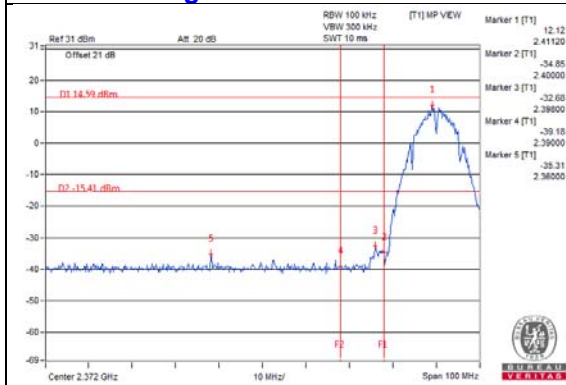
CH 6



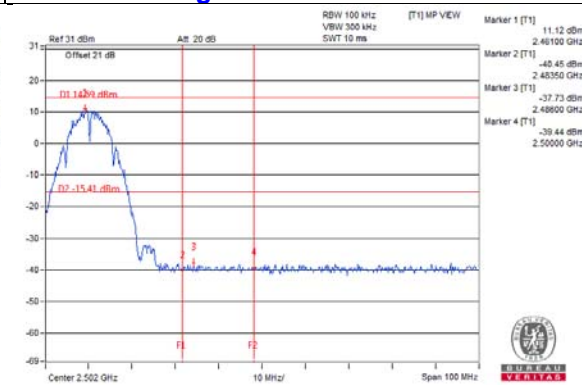
CH 11



CH 1 Band edge

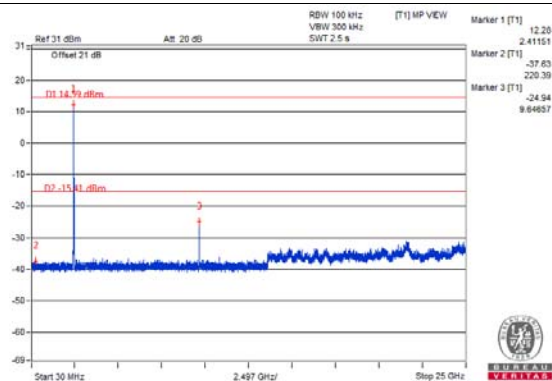


CH 11 Band edge

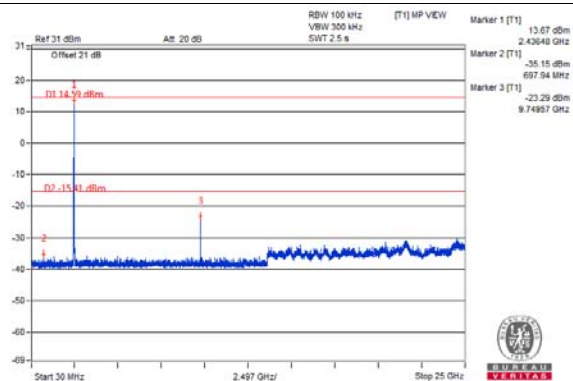


Chain 3

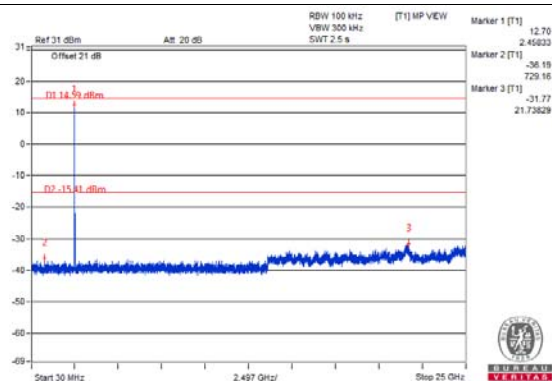
CH 1



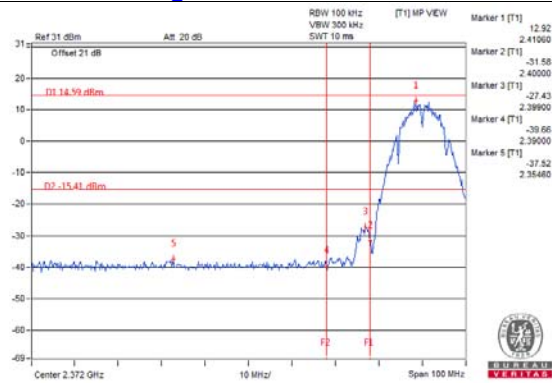
CH 6



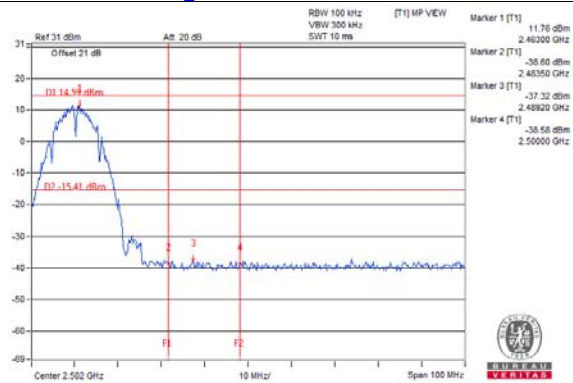
CH 11



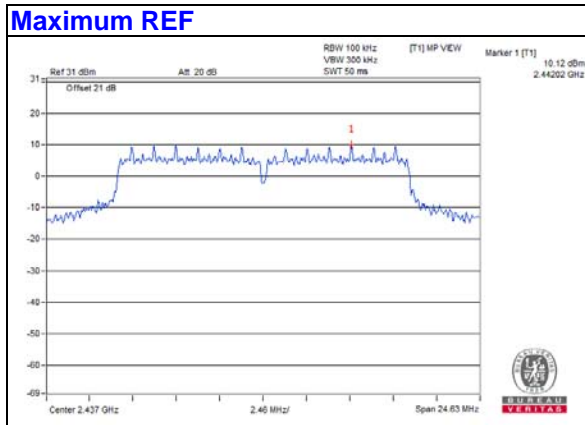
CH 1 Band edge



CH 11 Band edge

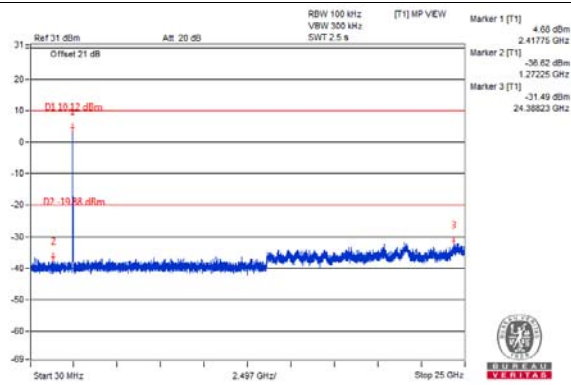


802.11g

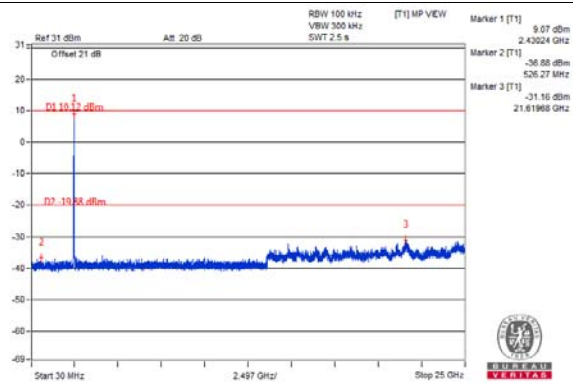


Chain 0

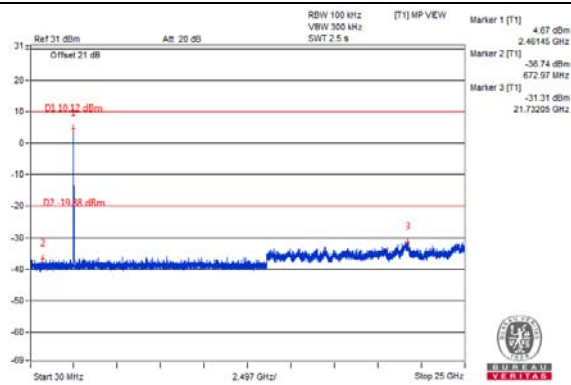
CH 1



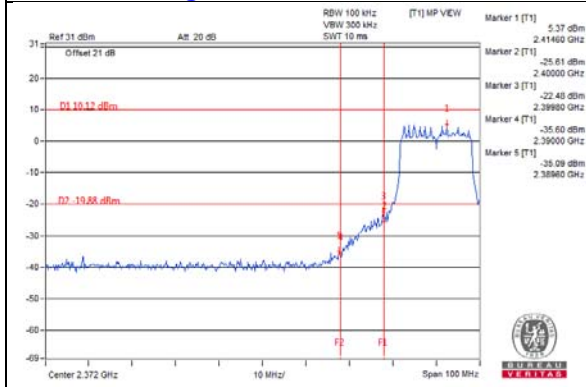
CH 6



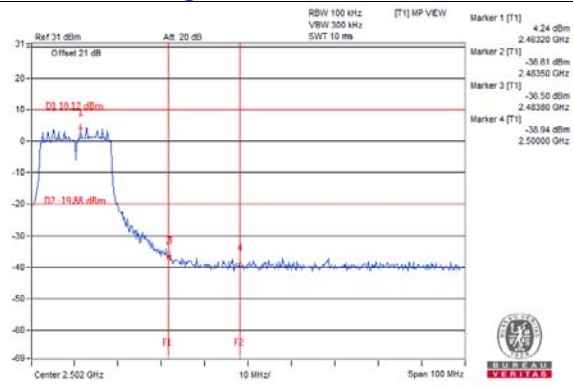
CH 11



CH 1 Band edge

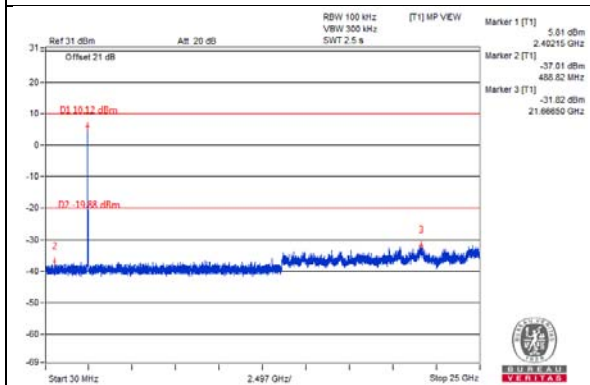


CH 11 Band edge

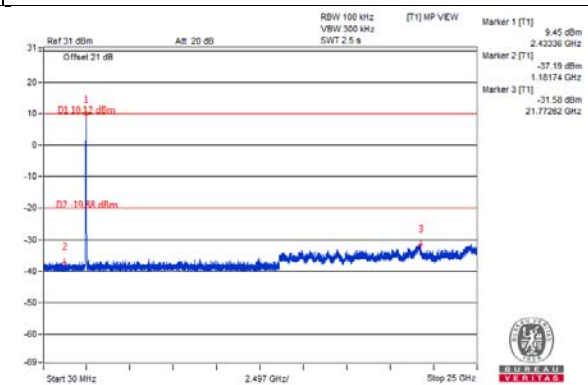


Chain 1

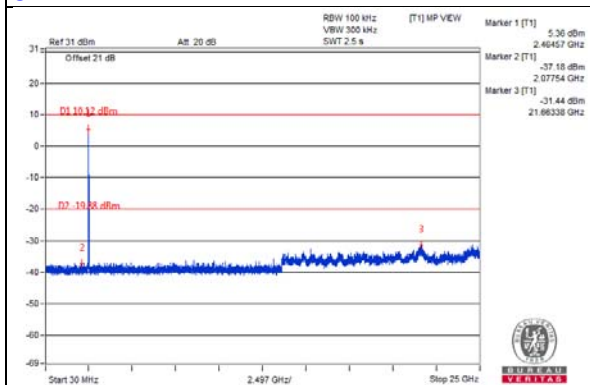
CH 1



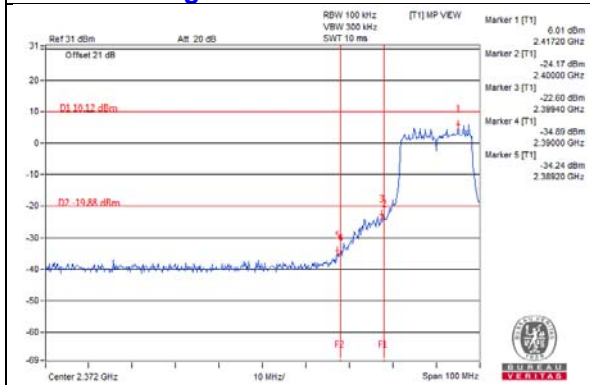
CH 6



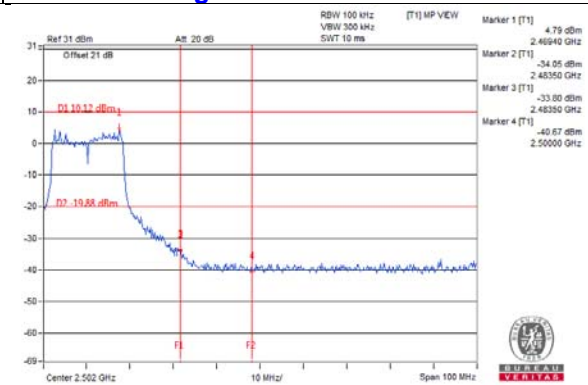
CH 11



CH 1 Band edge

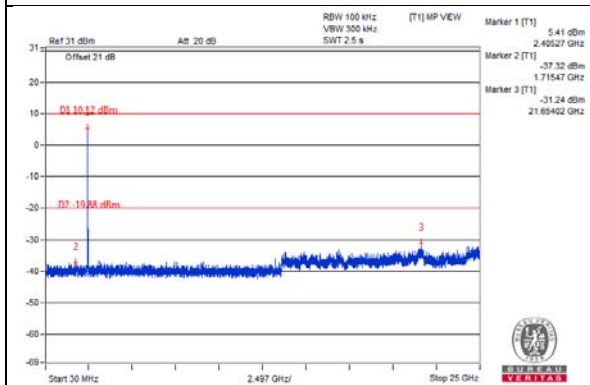


CH 11 Band edge

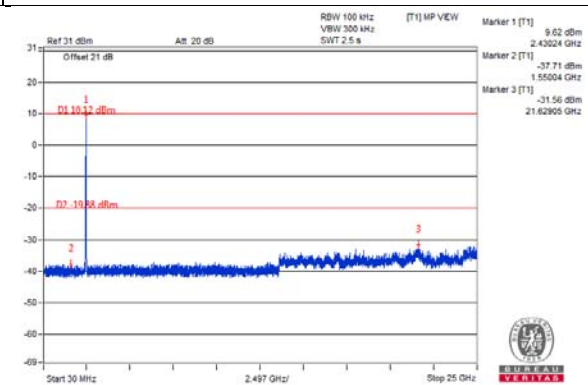


Chain 2

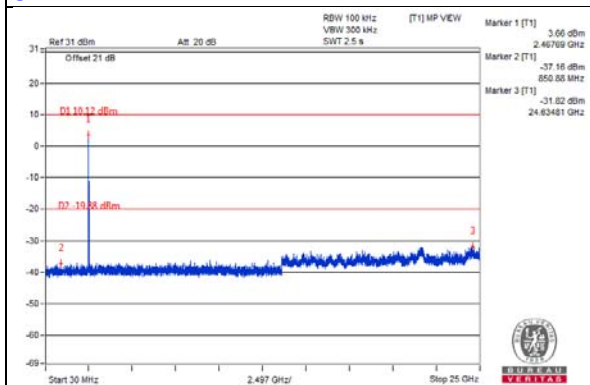
CH 1



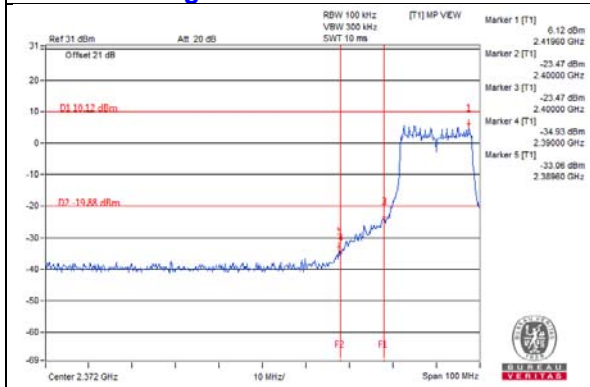
CH 6



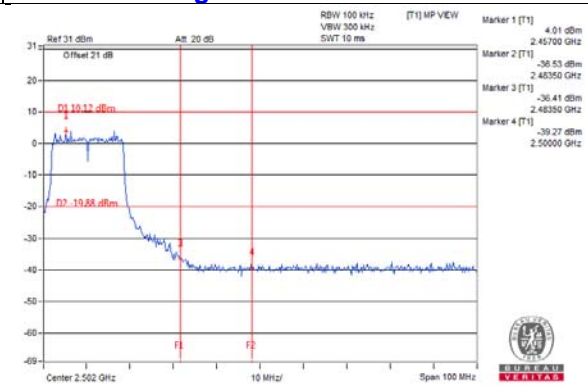
CH 11



CH 1 Band edge

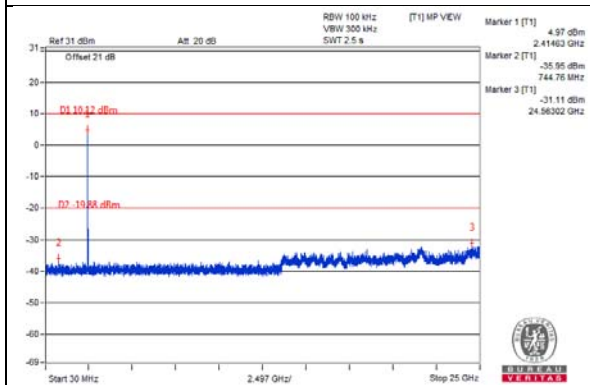


CH 11 Band edge

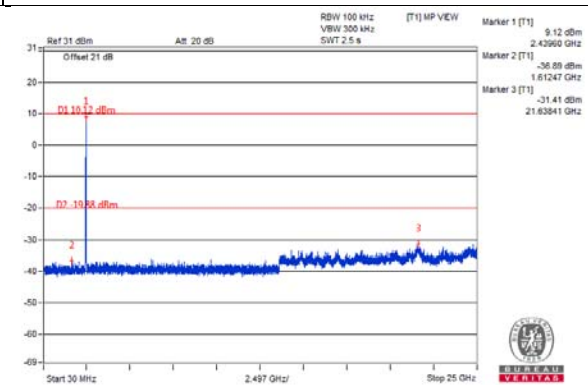


Chain 3

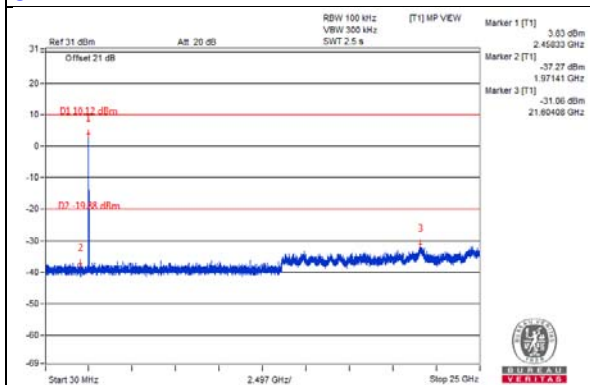
CH 1



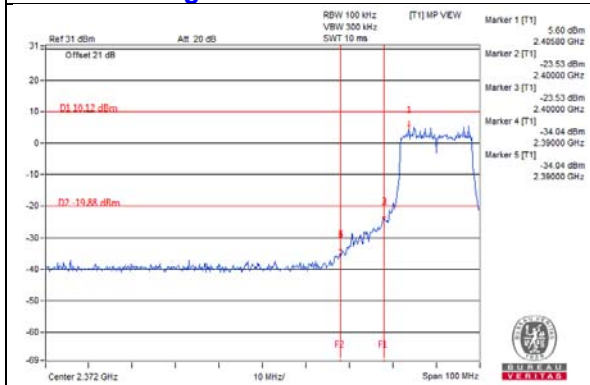
CH 6



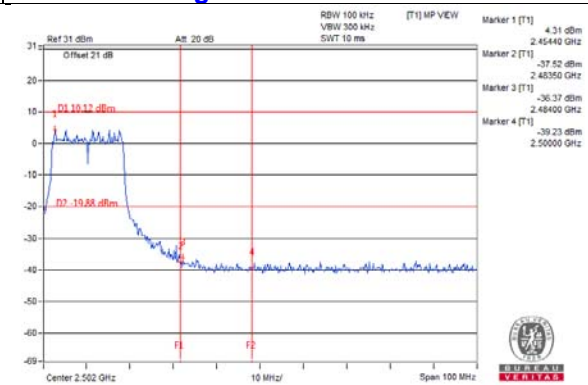
CH 11



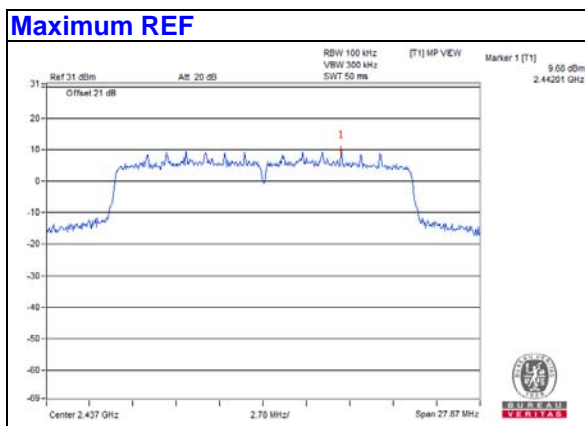
CH 1 Band edge



CH 11 Band edge

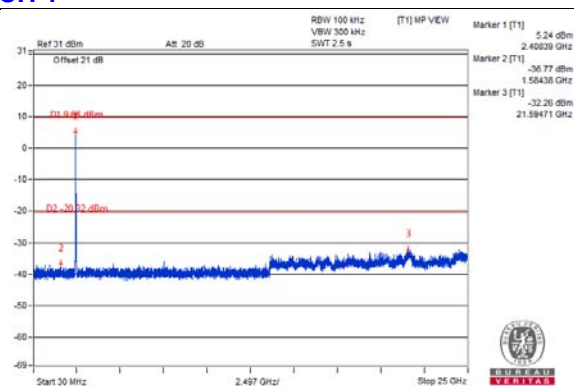


802.11ax (HE20)

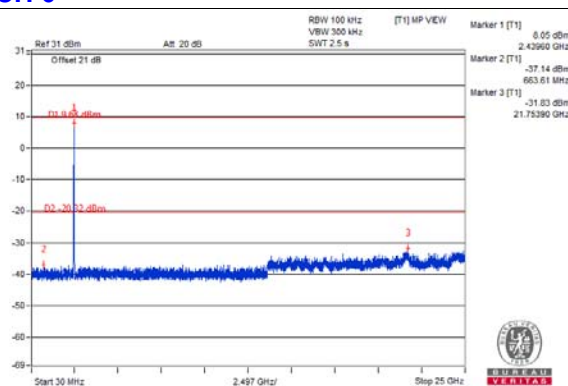


Chain 0

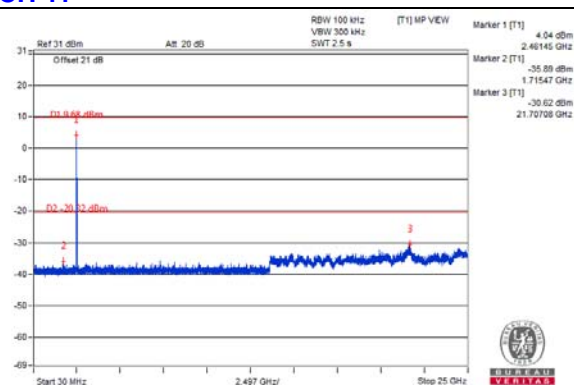
CH 1



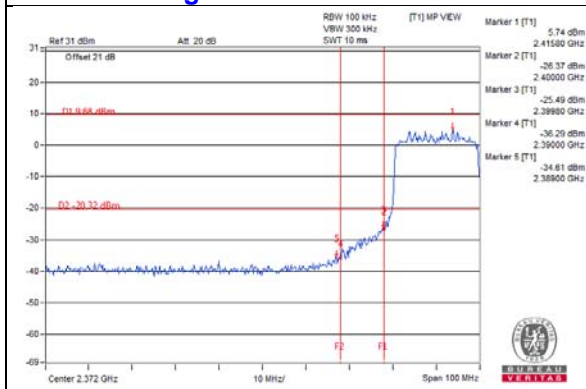
CH 6



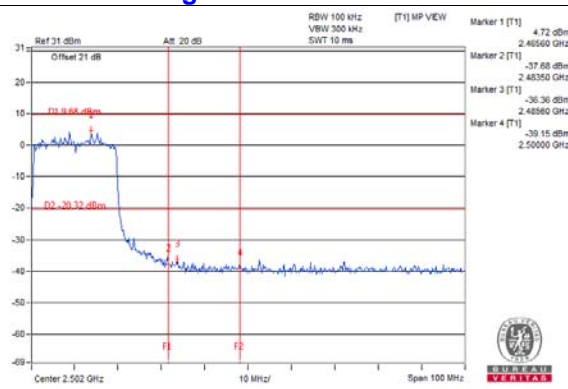
CH 11



CH 1 Band edge

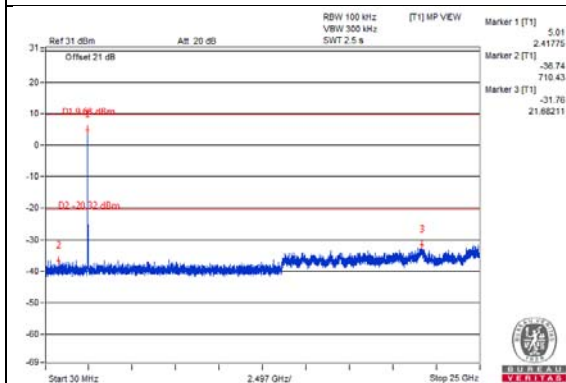


CH 11 Band edge

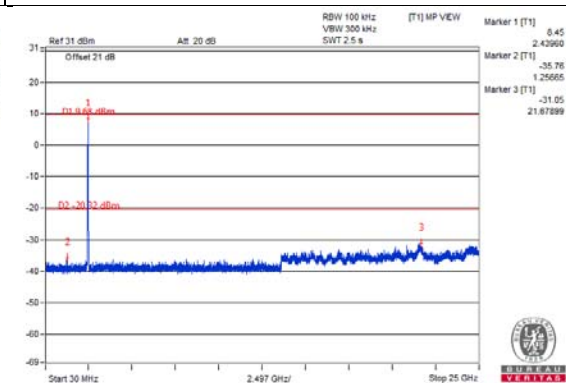


Chain 1

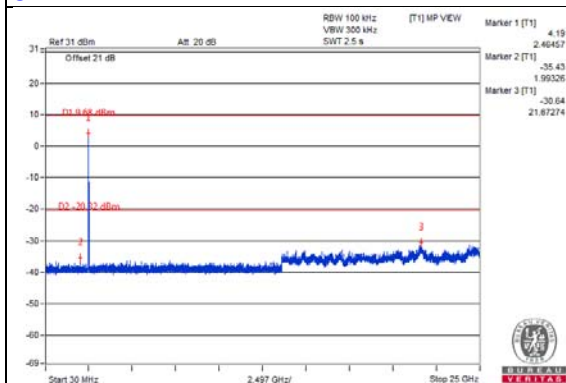
CH 1



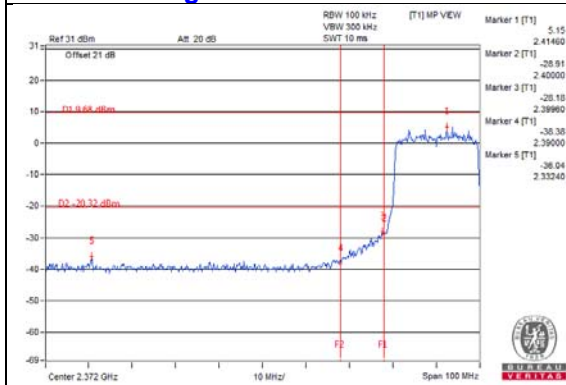
CH 6



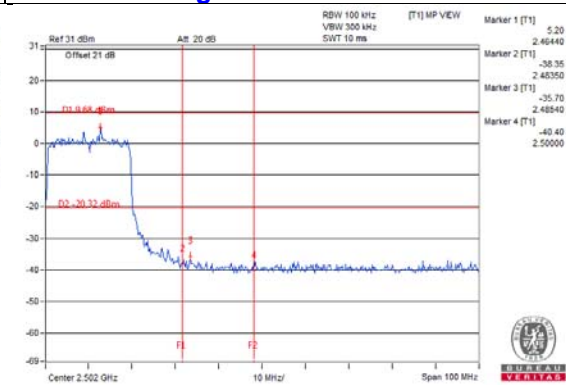
CH 11



CH 1 Band edge

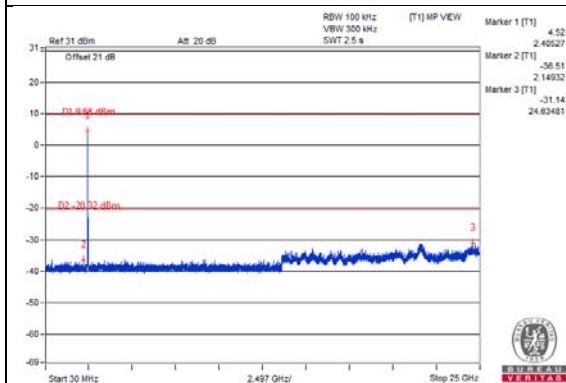


CH 11 Band edge

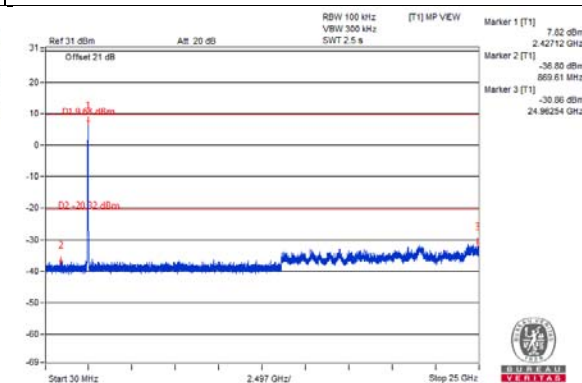


Chain 2

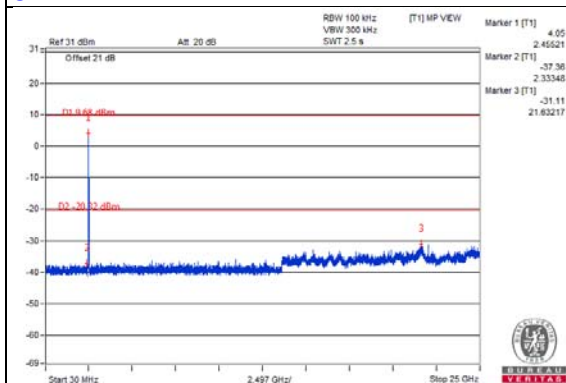
CH 1



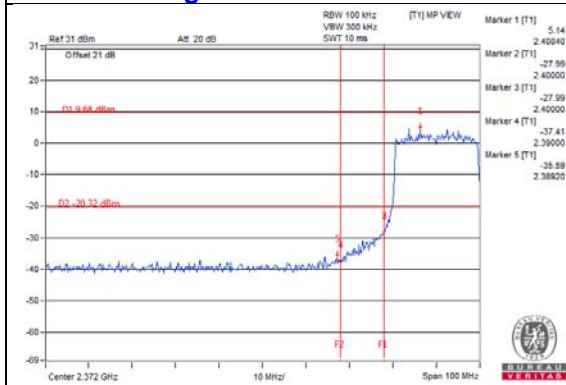
CH 6



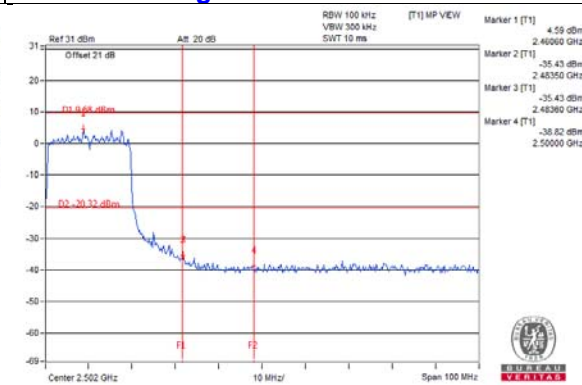
CH 11



CH 1 Band edge

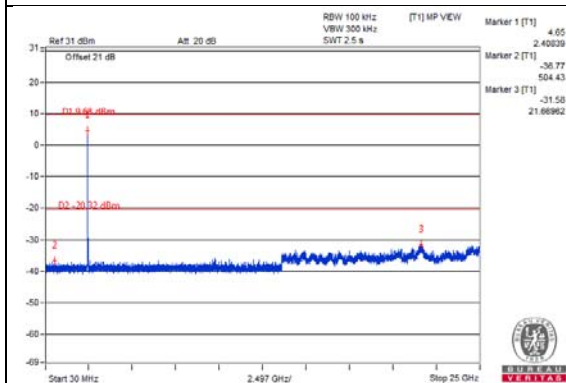


CH 11 Band edge

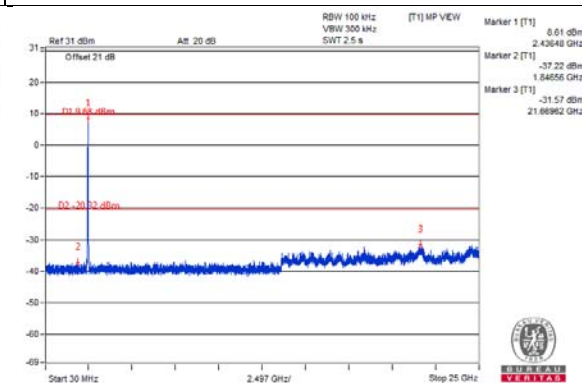


Chain 3

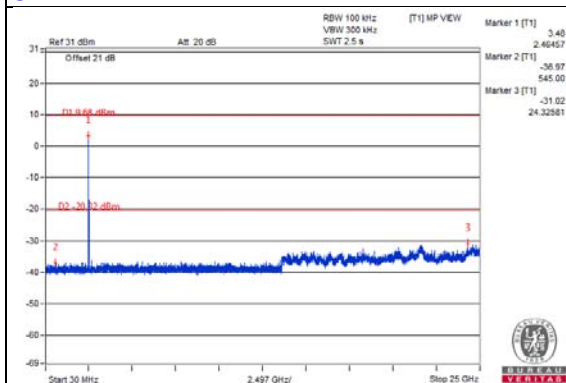
CH 1



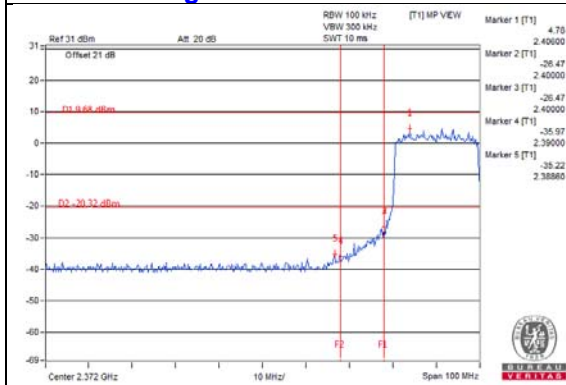
CH 6



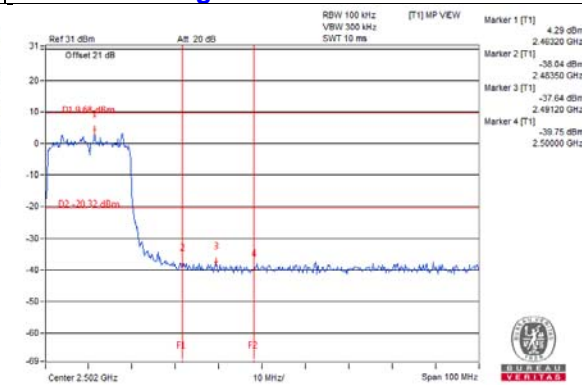
CH 11



CH 1 Band edge

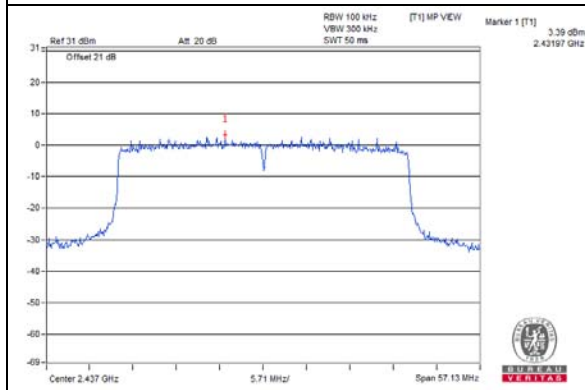


CH 11 Band edge



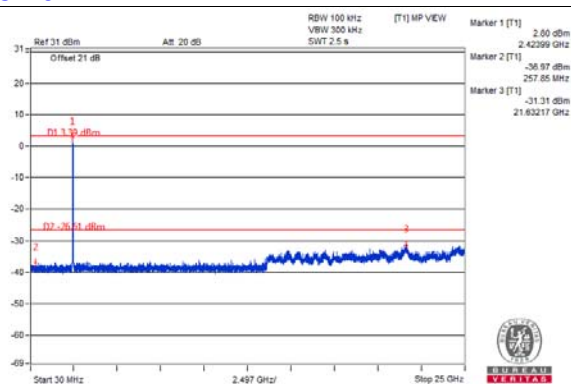
802.11ax (HE40)

Maximum REF

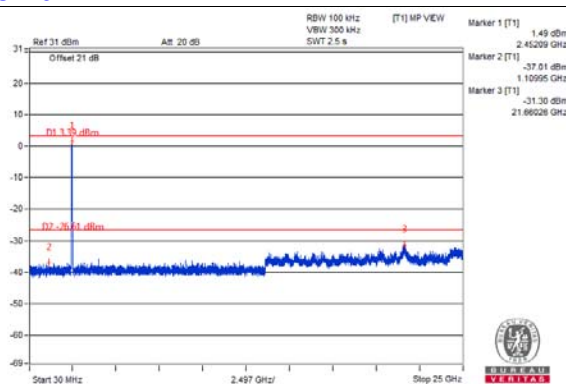


Chain 0

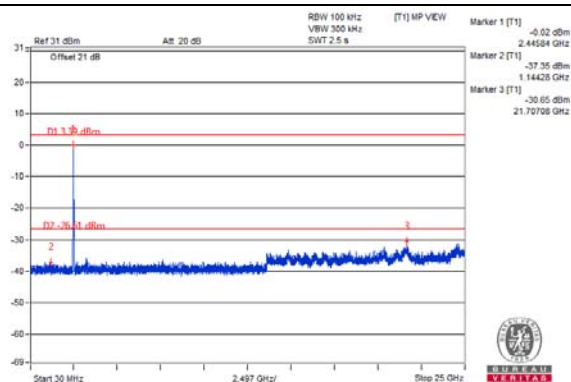
CH 3



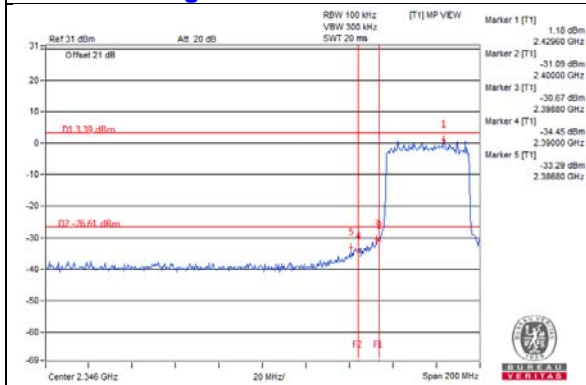
CH 6



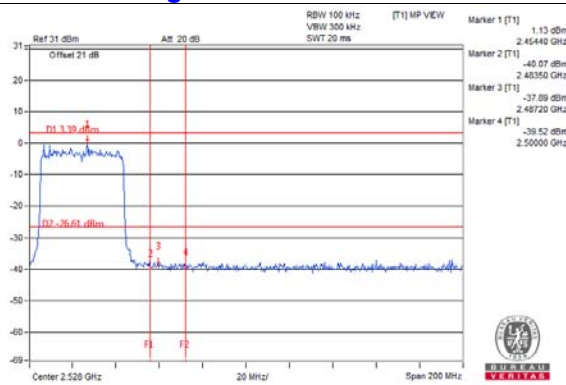
CH 9



CH 3 Band edge

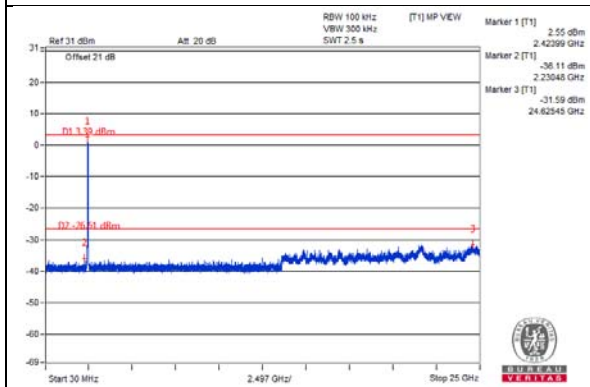


CH 9 Band edge

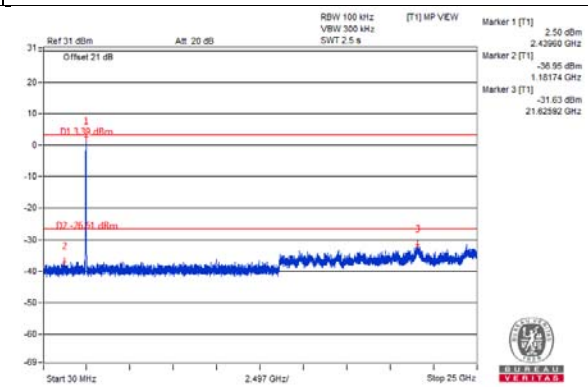


Chain 1

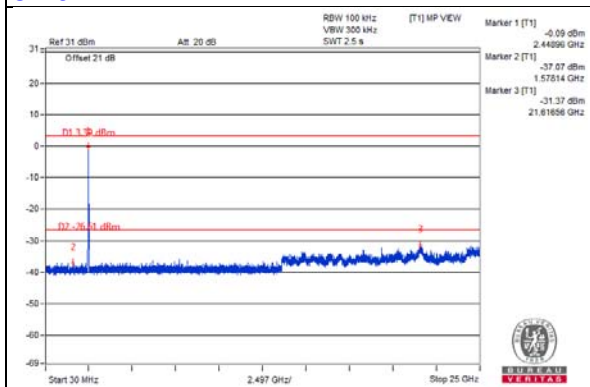
CH 3



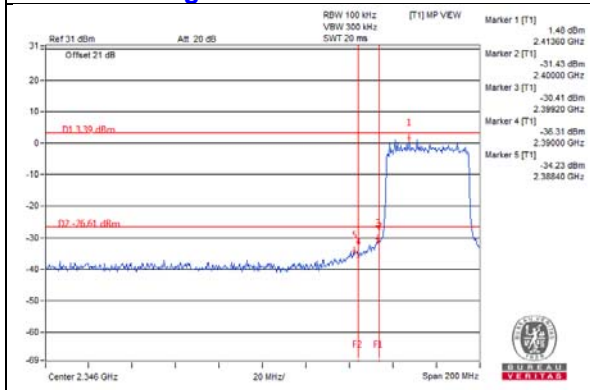
CH 6



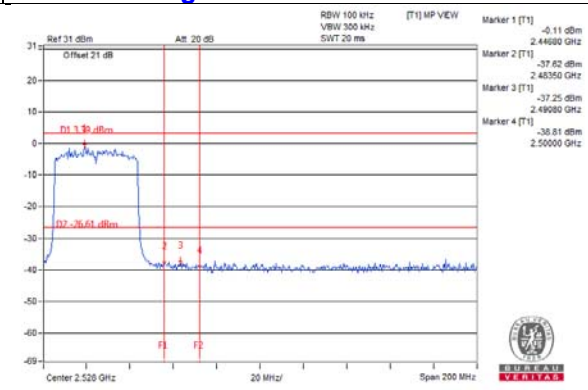
CH 9



CH 3 Band edge

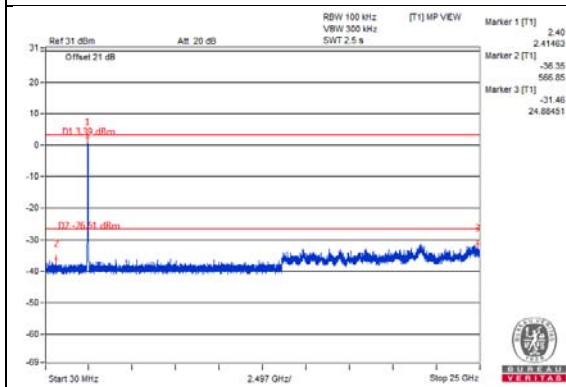


CH 9 Band edge

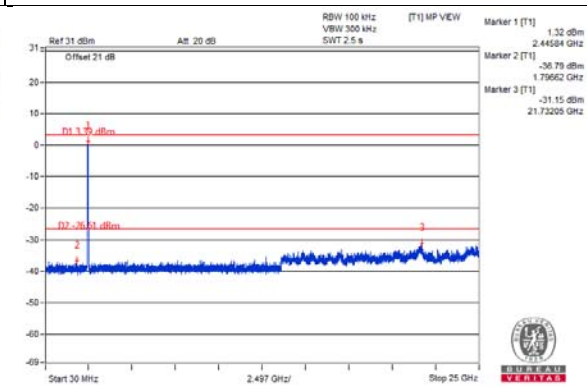


Chain 2

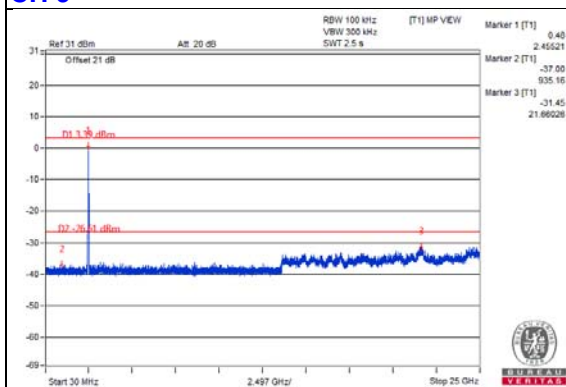
CH 3



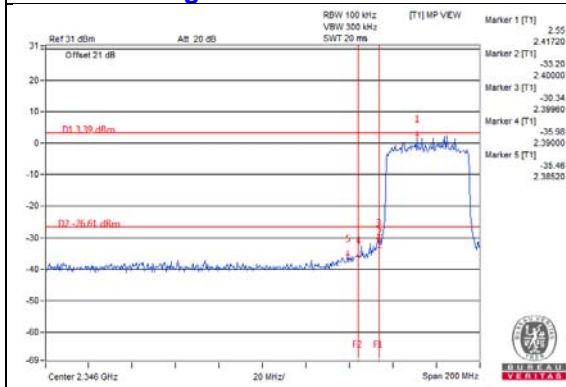
CH 6



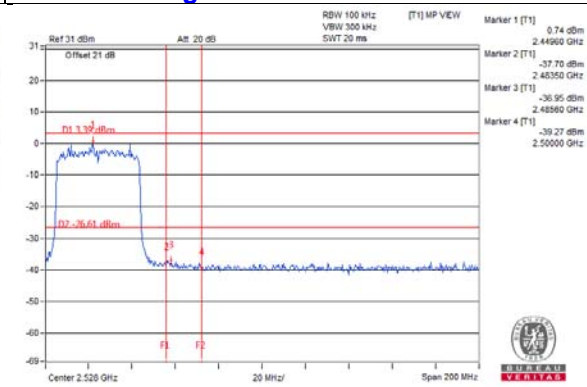
CH 9



CH 3 Band edge

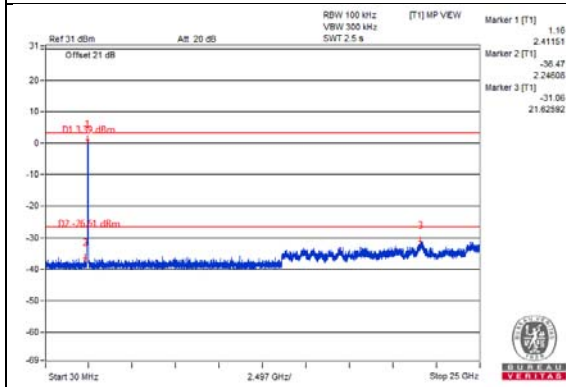


CH 9 Band edge

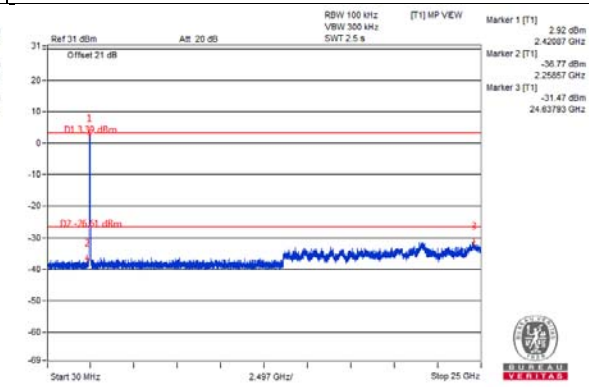


Chain 3

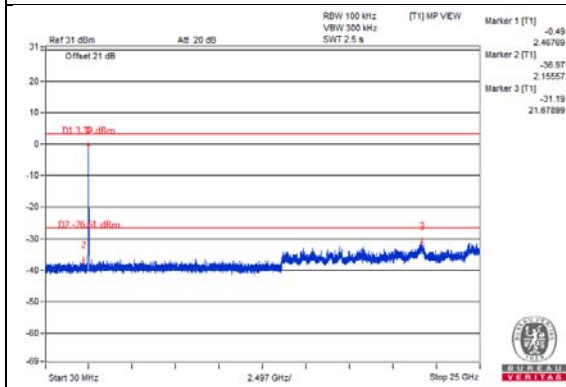
CH 3



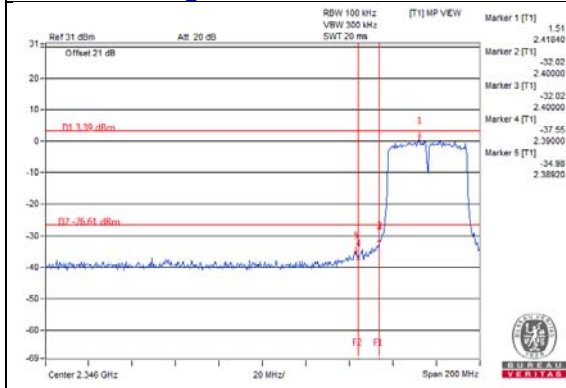
CH 6



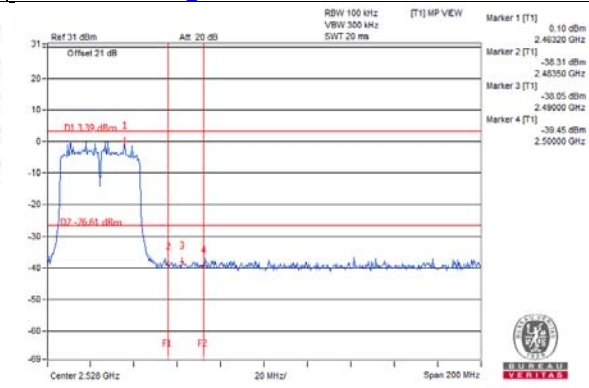
CH 9



CH 3 Band edge



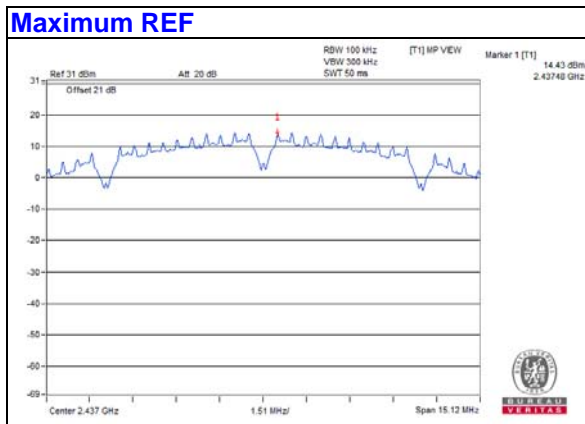
CH 9 Band edge



4.6.8 Test Results (Mode 2)

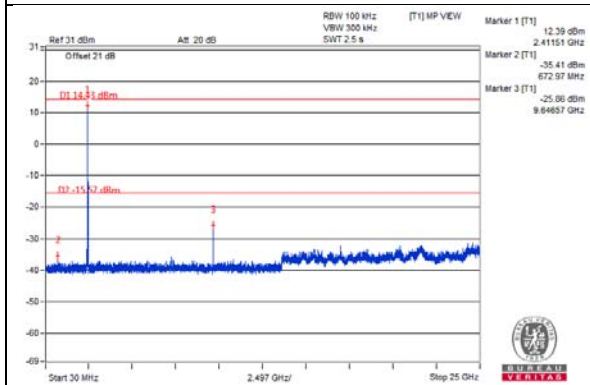
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dB offset below D1. It shows compliance with the requirement.

802.11b

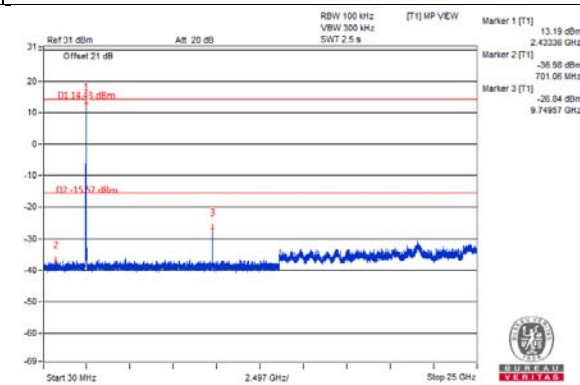


Chain 1

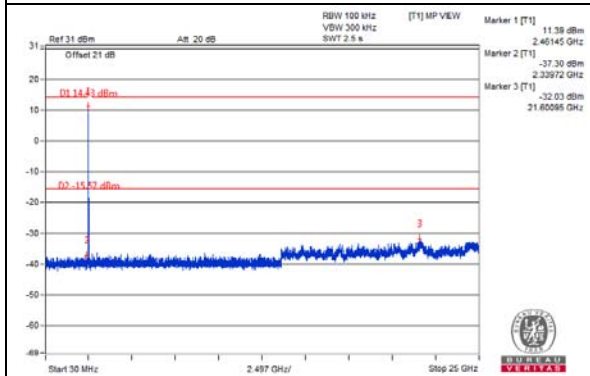
CH 1



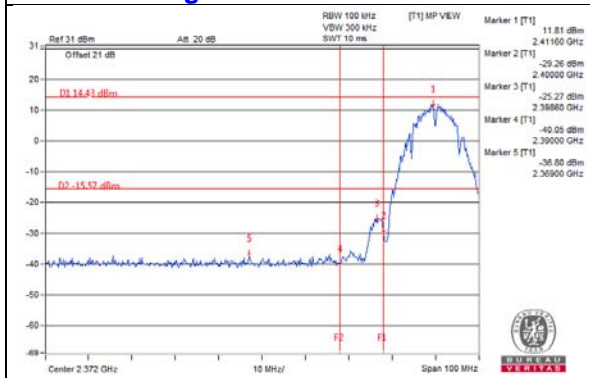
CH 6



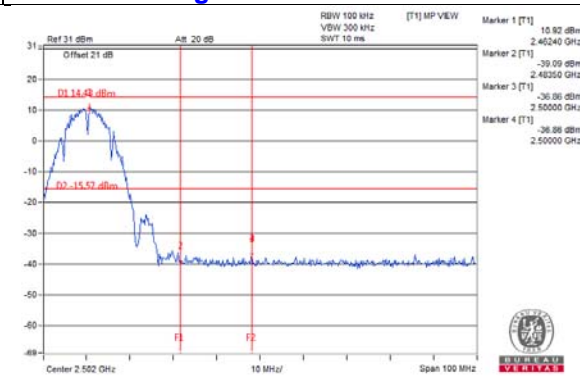
CH 11



CH 1 Band edge

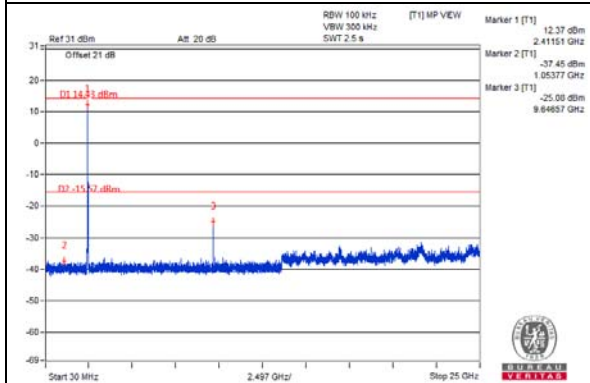


CH 11 Band edge

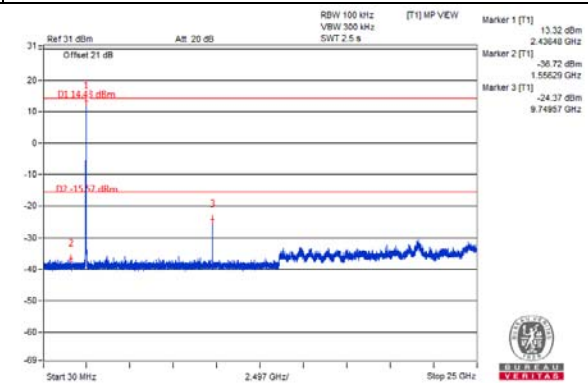


Chain 3

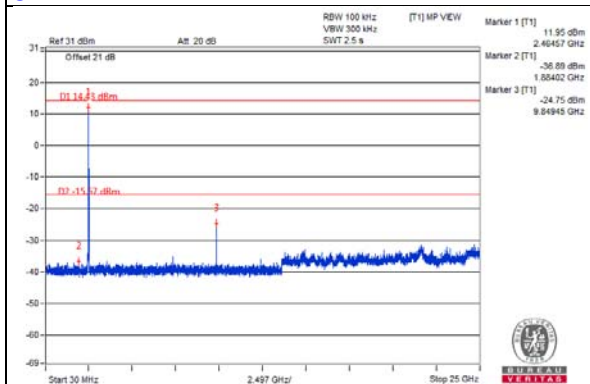
CH 1



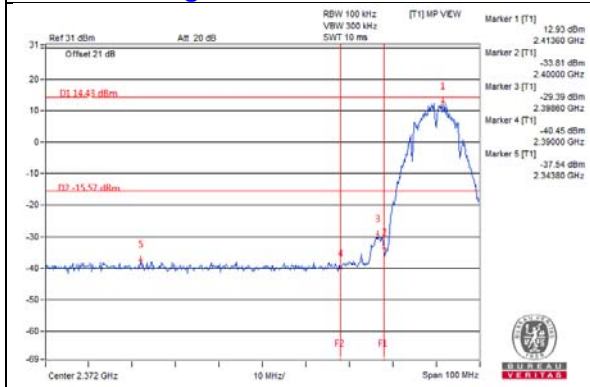
CH 6



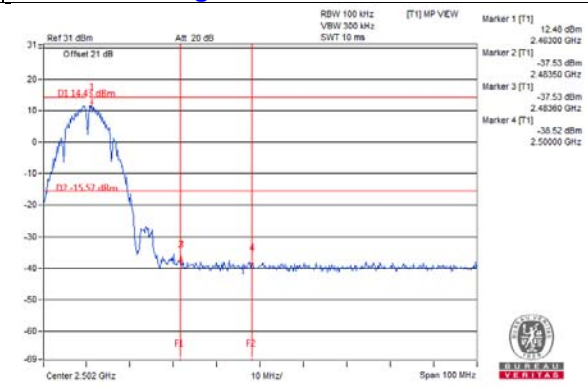
CH 11



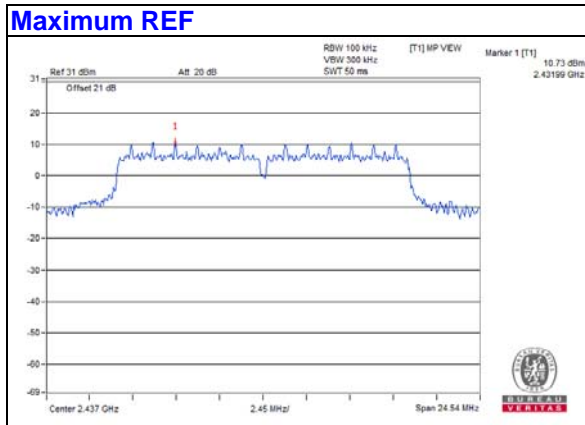
CH 1 Band edge



CH 11 Band edge

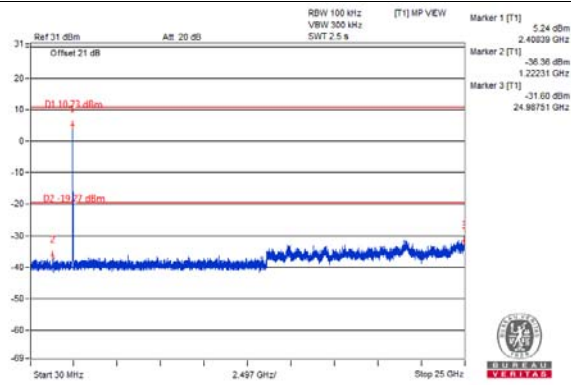


802.11g

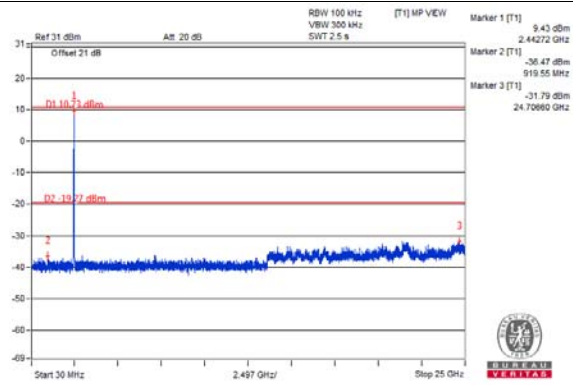


Chain 1

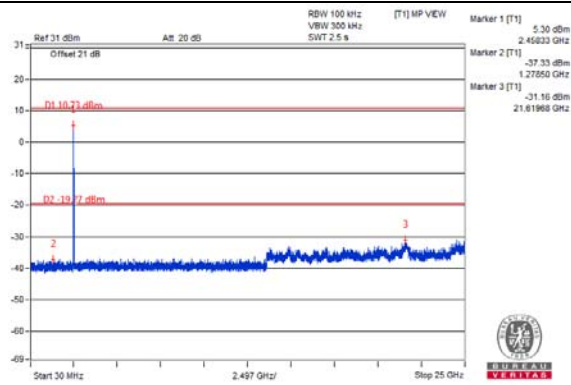
CH 1



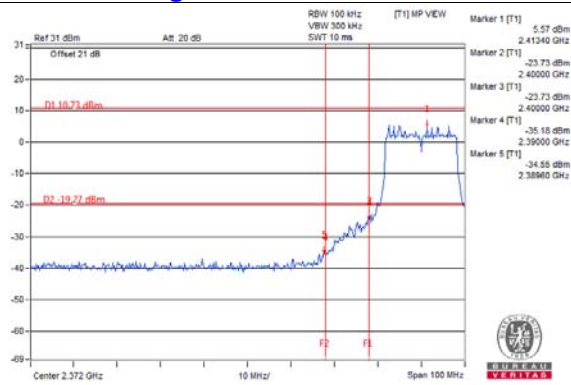
CH 6



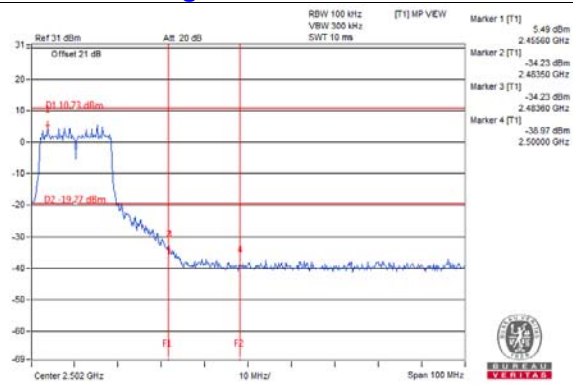
CH 11



CH 1 Band edge

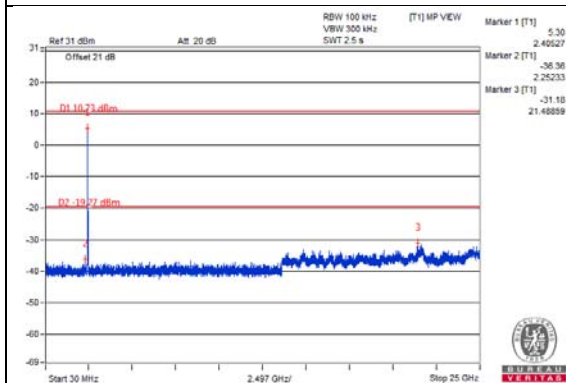


CH 11 Band edge

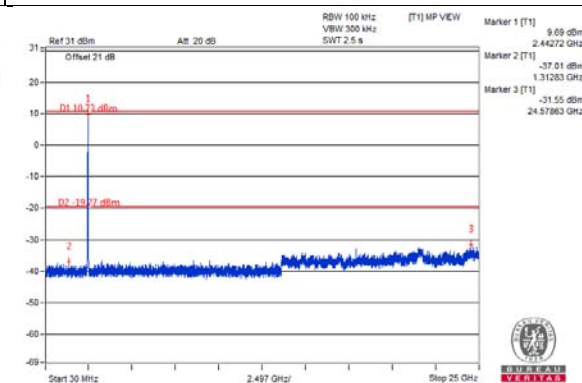


Chain 3

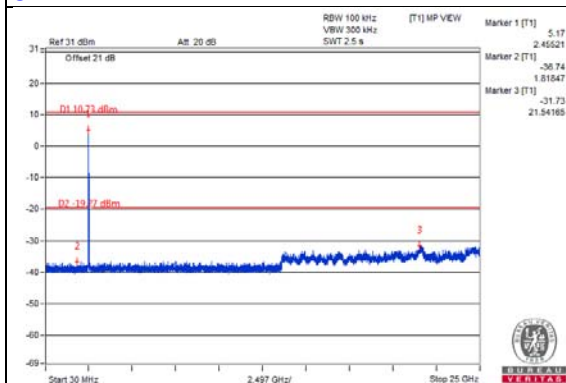
CH 1



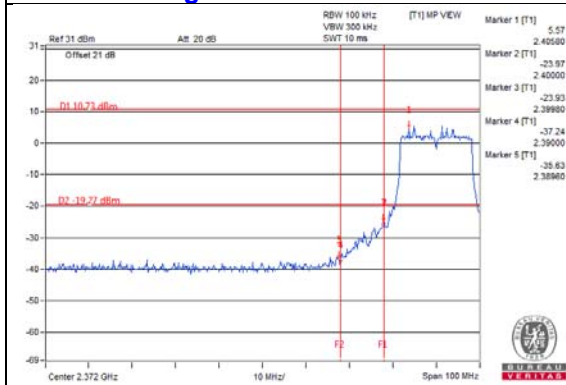
CH 6



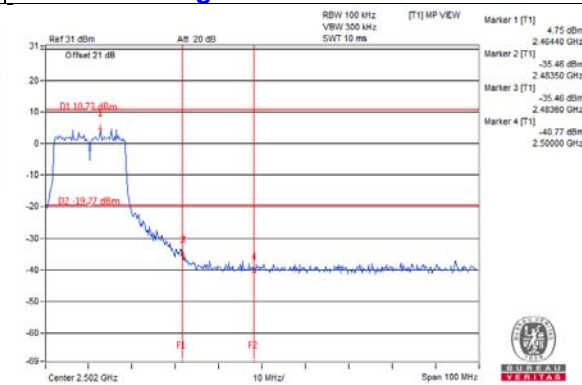
CH 11



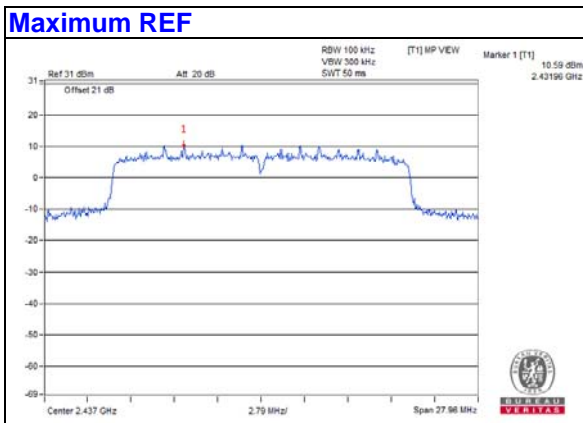
CH 1 Band edge



CH 11 Band edge

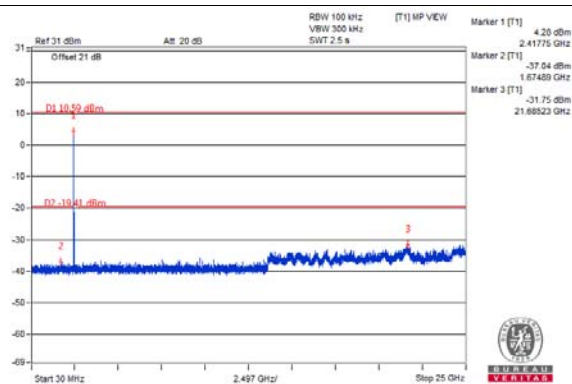


802.11ax (HE20)

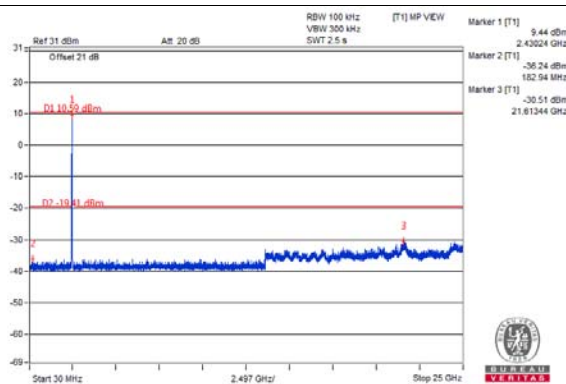


Chain 1

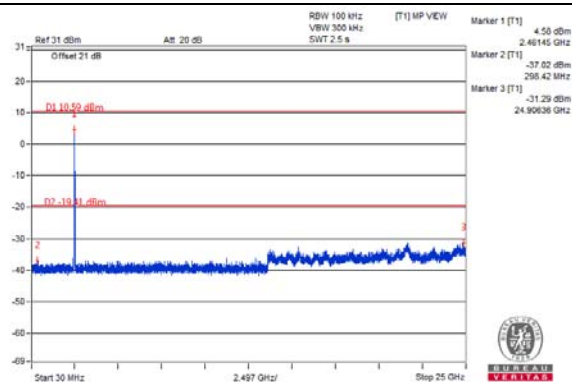
CH 1



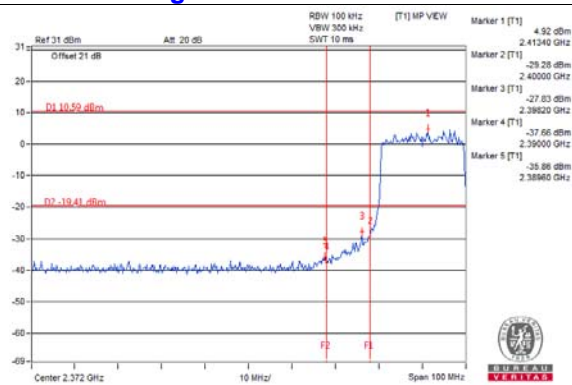
CH 6



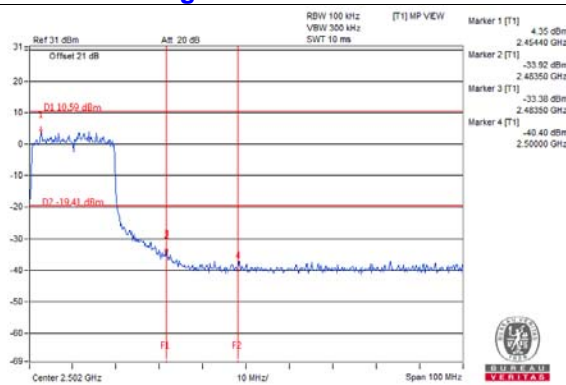
CH 11



CH 1 Band edge

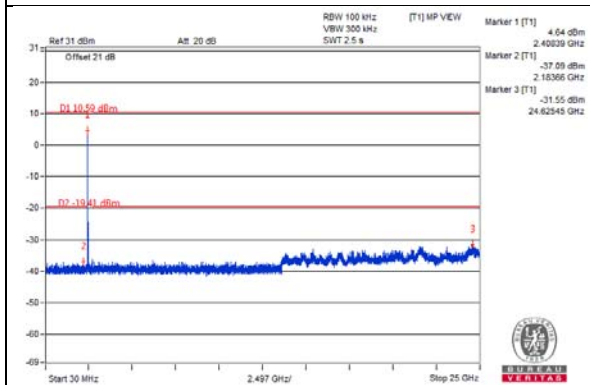


CH 11 Band edge

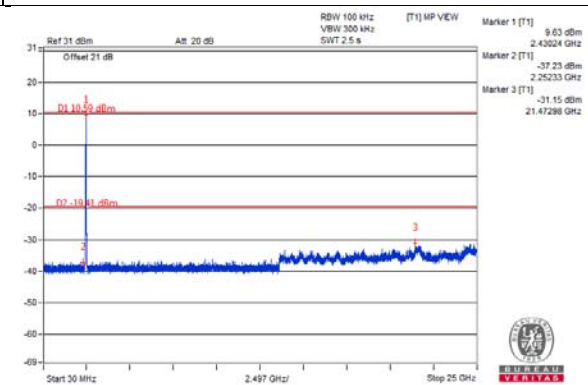


Chain 3

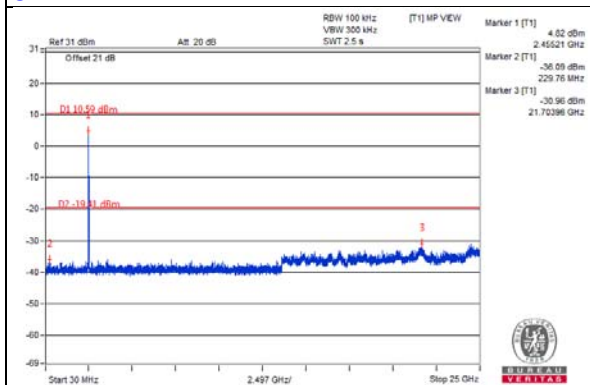
CH 1



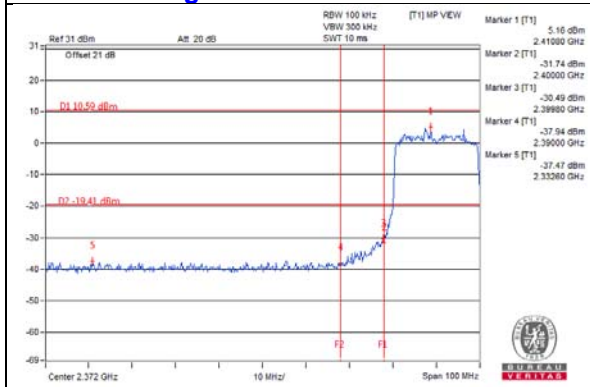
CH 6



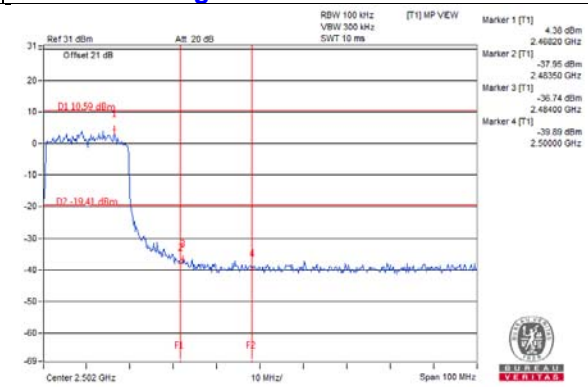
CH 11



CH 1 Band edge

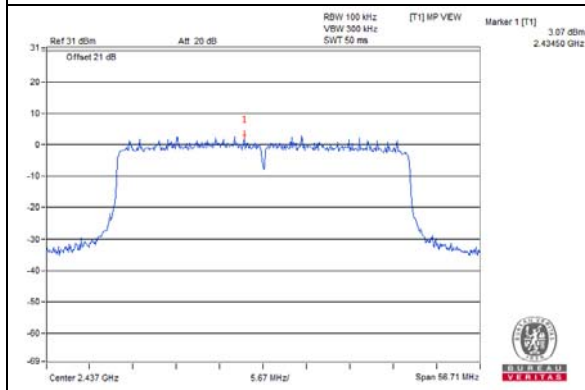


CH 11 Band edge



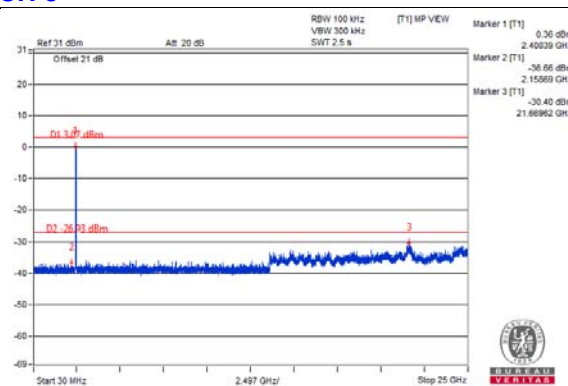
802.11ax (HE40)

Maximum REF

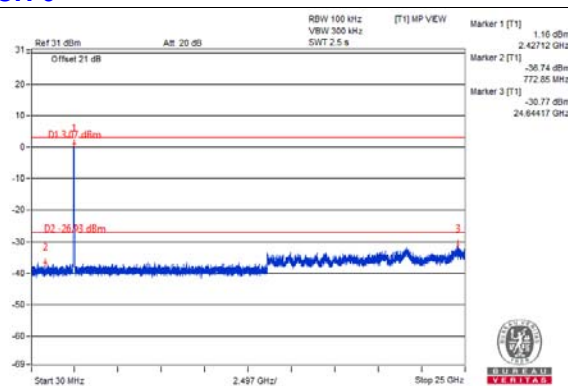


Chain 1

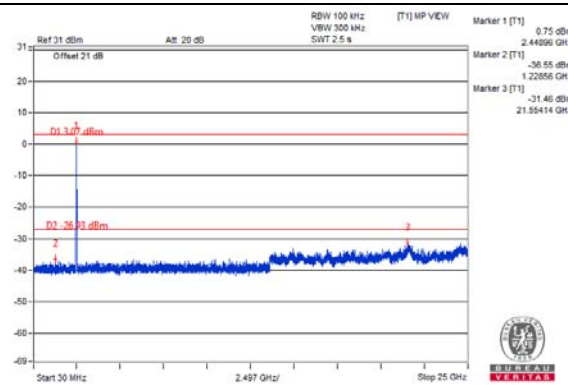
CH 3



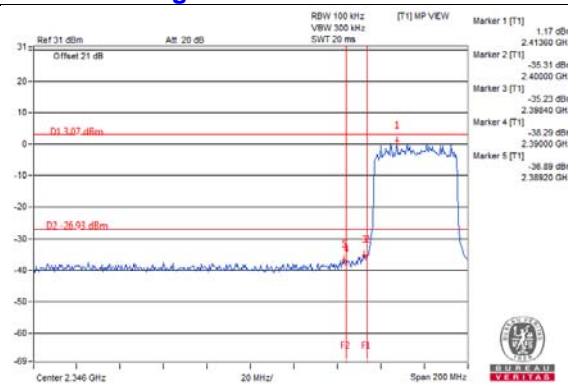
CH 6



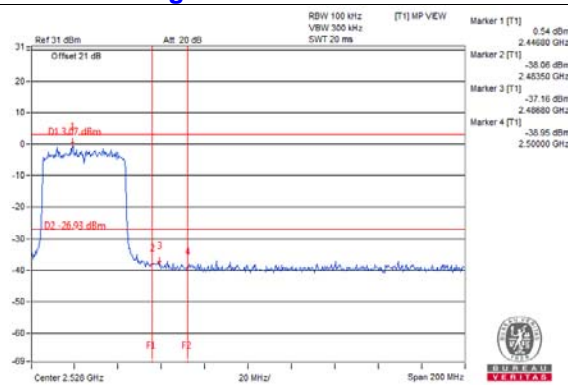
CH 9



CH 3 Band edge

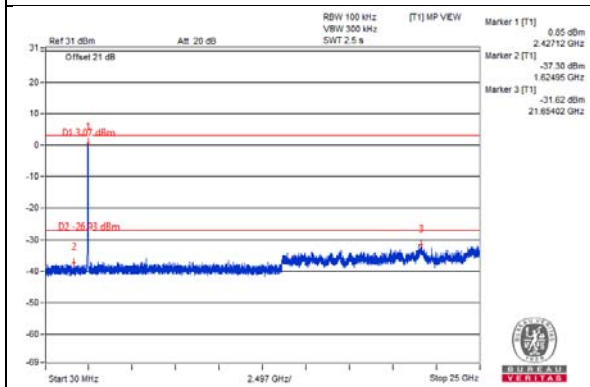


CH 9 Band edge

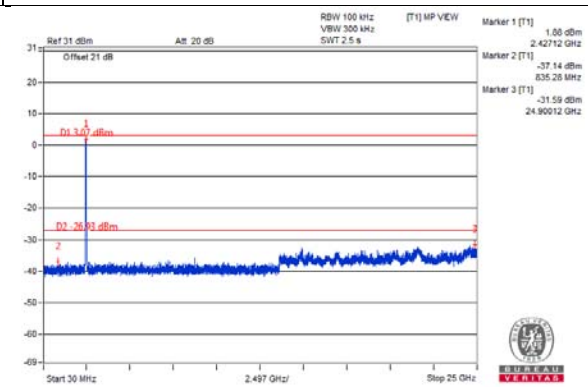


Chain 3

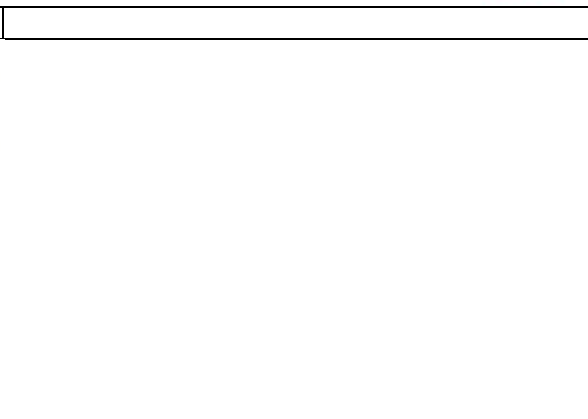
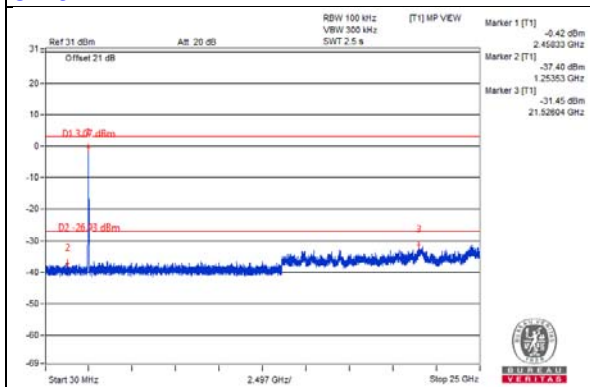
CH 3



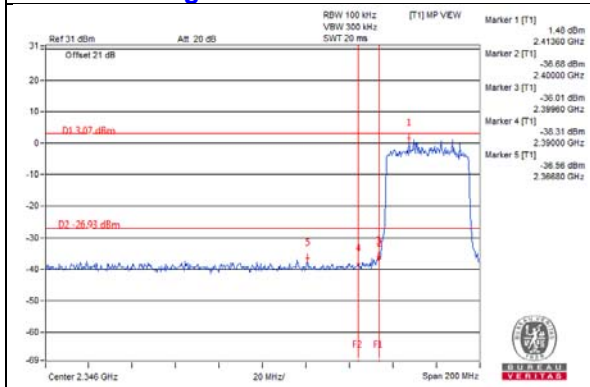
CH 6



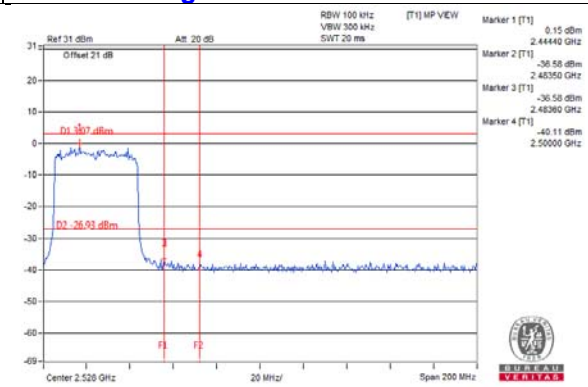
CH 9



CH 3 Band edge



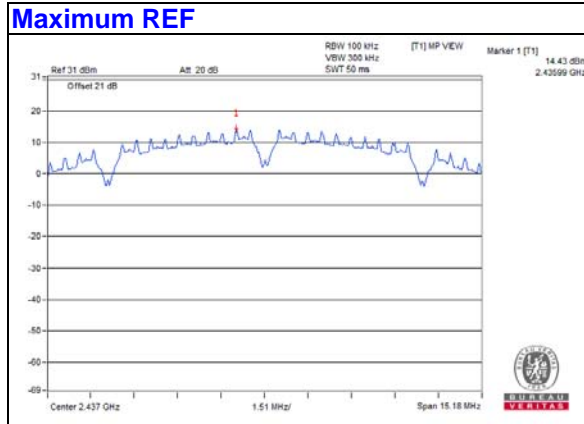
CH 9 Band edge



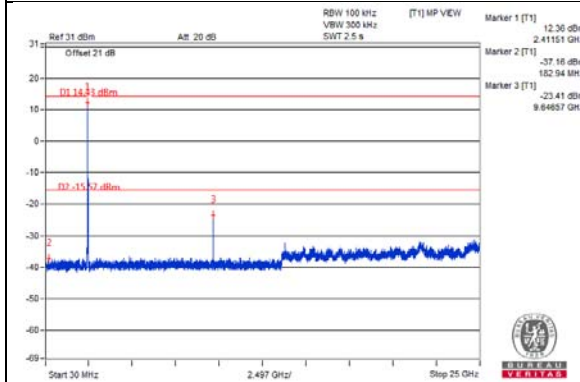
4.6.9 Test Results (Mode 3)

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.

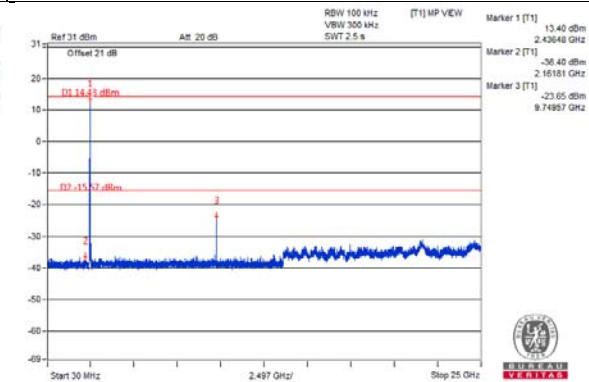
802.11b



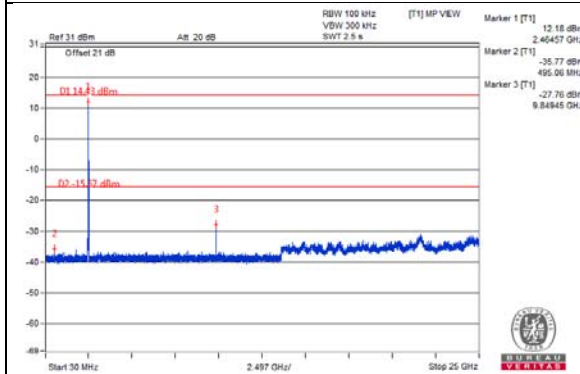
CH 1



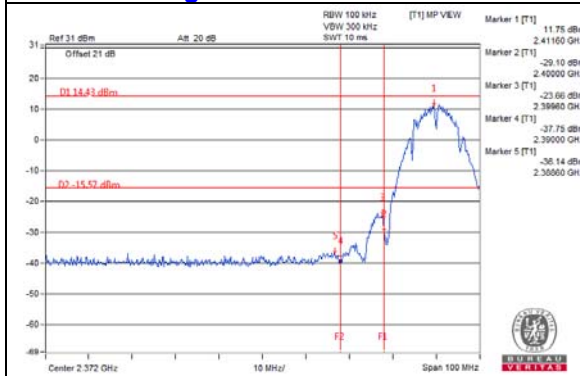
CH 6



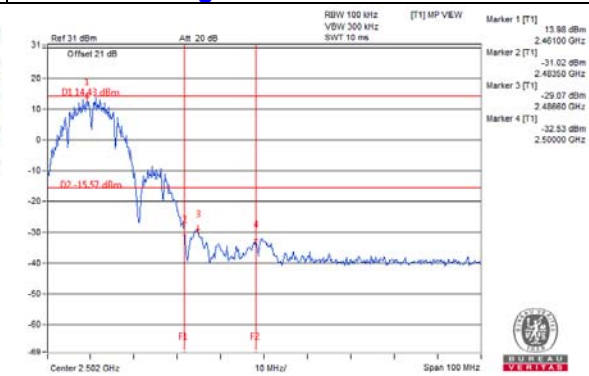
CH 11



CH 1 Band edge

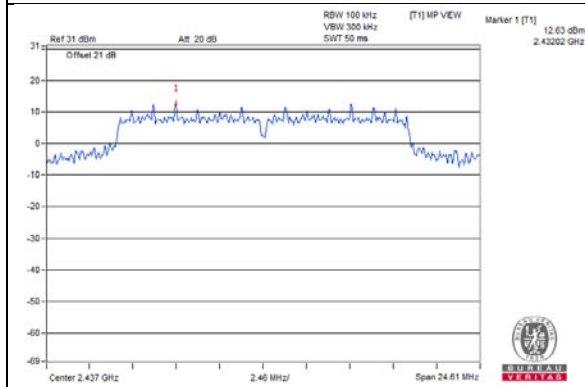


CH 11 Band edge

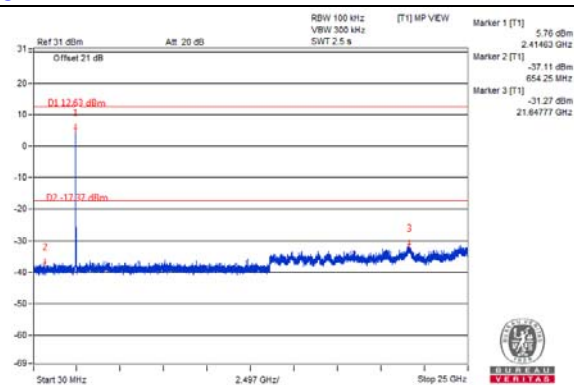


802.11g

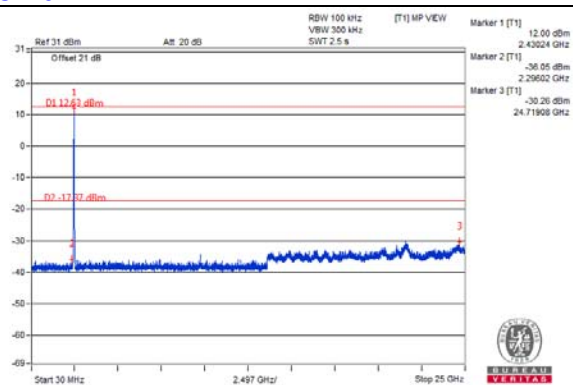
Maximum REF



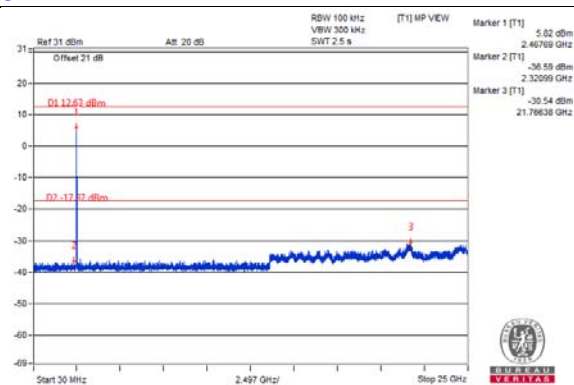
CH 1



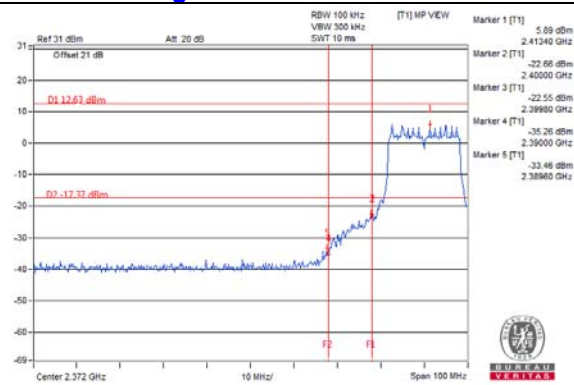
CH 6



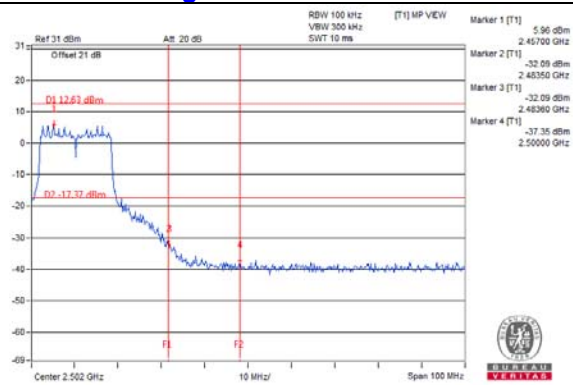
CH 11



CH 1 Band edge

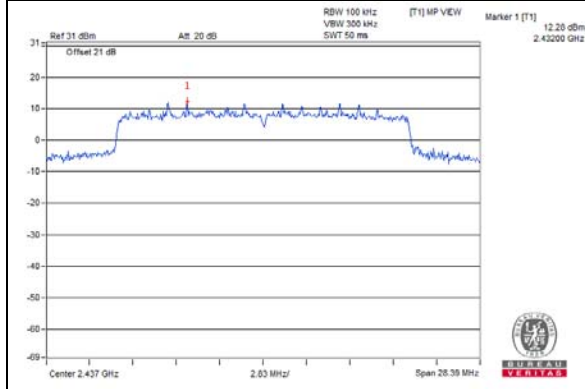


CH 11 Band edge

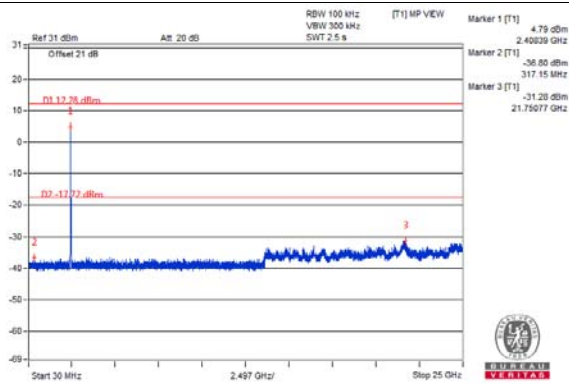


802.11ax (HE20)

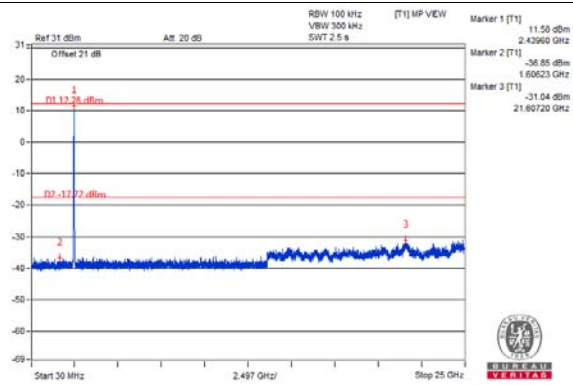
Maximum REF



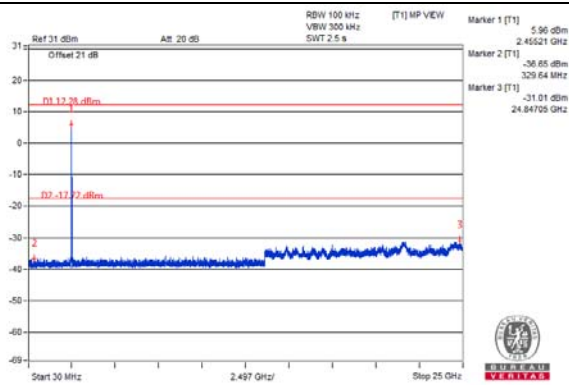
CH 1



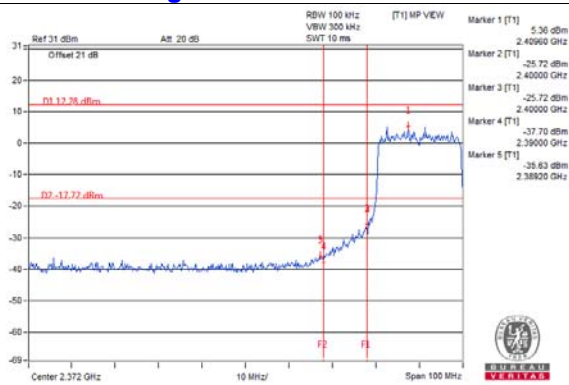
CH 6



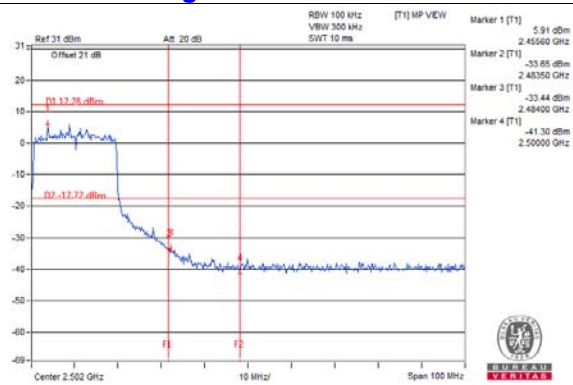
CH 11



CH 1 Band edge

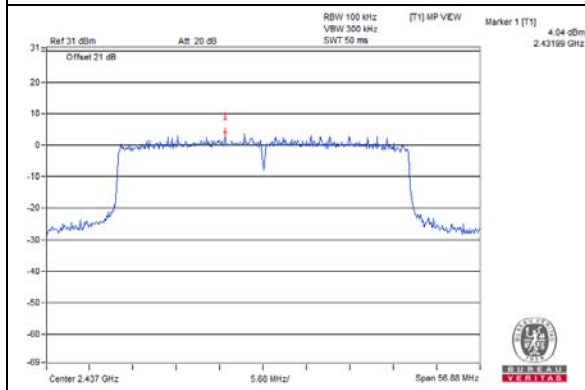


CH 11 Band edge

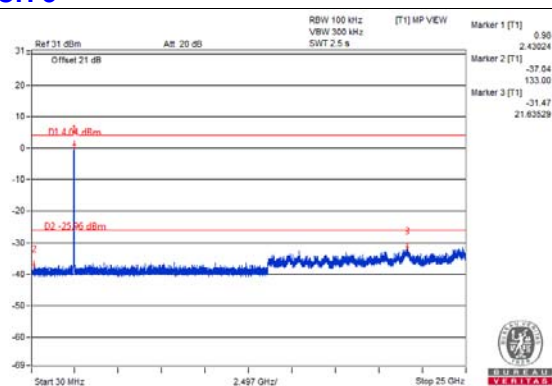


802.11ax (HE40)

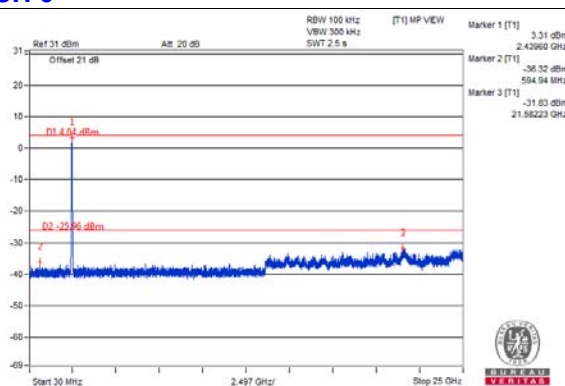
Maximum REF



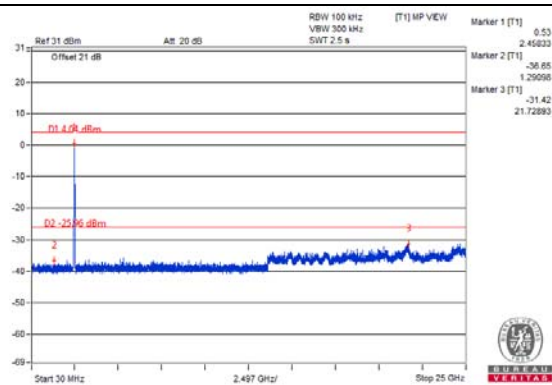
CH 3



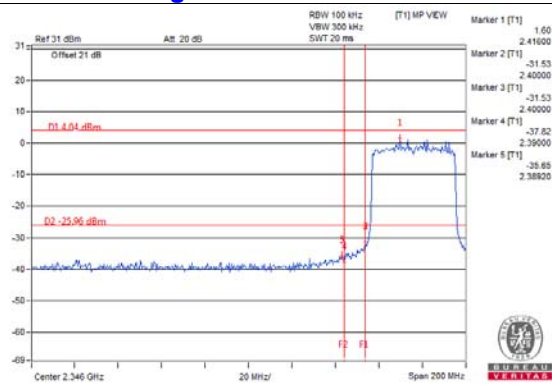
CH 6



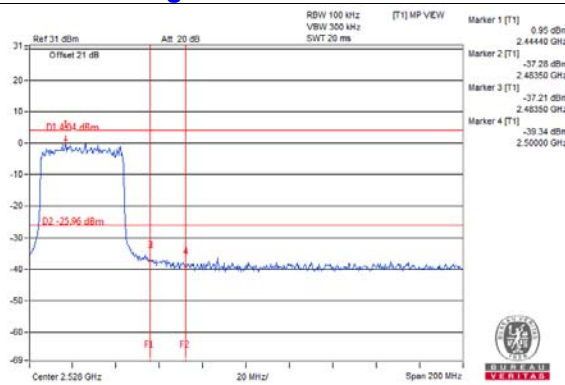
CH 9



CH 3 Band edge



CH 9 Band edge



5 Pictures of Test Arrangements

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

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.

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

Linkou EMC/RF Lab

Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

--- END ---