FCC Test Report (WLAN)

Report No.: RF180625E05

FCC ID: 2ABTEG1500

Test Model: Fios-G1500

Received Date: July 20, 2018

Test Date: Aug. 09 to 23, 2018

Issued Date: Sep. 12, 2018

Applicant: Verizon Online LLC

Address: 1300 I Street NW, Room 400W, Washington, District of Columbia, 20005 United State

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

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Release Control Record

Issue No.	Description	Date Issued
RF180625E05	Original release.	Sep. 12, 2018

1 Certificate of Conformity

Product: Fios-G1500

Brand: Verizon

Test Model: Fios-G1500

Sample Status: ENGINEERING SAMPLE

Applicant: Verizon Online LLC

Test Date: Aug. 09 to 23, 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 : _____ , **Date:** Sep. 12, 2018
Phoenix Huang / Specialist

Approved by : _____ , **Date:** Sep. 12, 2018
May Chen / Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
FCC Clause	Test Item	Result	Remarks
15.207	AC Power Conducted Emission	PASS	Meet the requirement of limit. Minimum passing margin is -3.26dB at 0.35703MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -0.1dB at 2390.00MHz.
15.247(d)	Antenna Port Emission	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is 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) (±)
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	Fios-G1500
Brand	Verizon
Test Model	Fios-G1500
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	12Vdc from power adapter
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT (20/40) mode in 2.4GHz
Modulation Technology	DSSS,OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n: up to 600Mbps 802.11ac: up to 1733.3Mbps
Operating Frequency	**2.4GHz:** 2.412 ~ 2.462GHz **5GHz:** 5.18GHz ~ 5.24GHz, 5.745GHz ~ 5.825GHz
Number of Channel	**2.4GHz:** 802.11b, 802.11g, 802.11n (HT20), VHT20: 11 802.11n (HT40), VHT40: 7 **5GHz:** 802.11a, 802.11n (HT20), 802.11ac (VHT20): 9 802.11n (HT40), 802.11ac (VHT40): 4 802.11ac (VHT80): 2
Output Power	**2.4GHz:** 996.372mW **5GHz:** **CDD Mode:** **5.18 ~ 5.24GHz:** 564.338mW **5.745 ~ 5.825GHz:** 480.318mW **Beamforming Mode:** **5.18 ~ 5.24GHz:** 564.338mW **5.745 ~ 5.825GHz:** 480.318Mw **SDM Mode:** **5.18 ~ 5.24GHz:** 564.338mW **5.745 ~ 5.825GHz:** 480.318mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x 1
Data Cable Supplied	NA

Note:

1. There are WLAN and Z-Wave technology used for the EUT. The EUT has below radios as following table:

Radio 1	Radio 2	Radio 3
WLAN (2.4GHz)	WLAN (5GHz)	Z-Wave

2. Simultaneously transmission condition.

Condition	Technology		
1	WLAN 2.4GHz	WLAN 5GHz	Z-Wave
Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.			

3. The USB port of the EUT, it can't connect a WiFi/WWAN dongle and transmit simultaneously.

4. The EUT must be supplied with a power adapter as following table:

No.	Brand	Model No.	Spec.
1	Ktec	KSA20C1200300HU	Input: 100-240Vac, 1A, 50-60Hz Output: 12V, 3A DC output cable: Unshielded, 1.5m
2	LEI	MU36-D120300-A1	Input: 100-240Vac, 1.5A, 50-60Hz Output: 12V, 3A DC output cable: Unshielded, 1.5m
Note: From the above adapters, the radiated emissions worse case was found in **Adapter No. 2**. Therefore only the test data of the mode was recorded in this report.			

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

WLAN Directional gain table			
Frequency range (GHz)	Directional Antenna Gain (dBi)	Antenna Type	Antenna Connector
2.4 ~ 2.4835	2.94	Dipole	i-pex(MHF)
5.15 ~ 5.25	3.56		
5.25 ~ 5.35	3.56		
5.47 ~ 5.725	3.56		
5.725 ~ 5.85	3.56		
Z-Wave antenna spec.			
Antenna Net Gain (dBi)	Frequency range (MHz)	Antenna Type	Antenna Connector
1.73	902~928	Dipole	None
Note: More detailed information, please refer to operating description.			

6. The EUT incorporates a MIMO function:

2.4GHz Band			
MODULATION MODE	**DATA RATE (MCS)**	**TX & RX CONFIGURATION**	
802.11b	1 ~ 11Mbps	3TX	3RX
802.11g	6 ~ 54Mbps	3TX	3RX
802.11n (HT20)	MCS 0~7	3TX	3RX
	MCS 8~15	3TX	3RX
	MCS 16~23	3TX	3RX
802.11n (HT40)	MCS 0~7	3TX	3RX
	MCS 8~15	3TX	3RX
	MCS 16~23	3TX	3RX
VHT20	MCS0~8 Nss=1	3TX	3RX
	MCS0~8 Nss=2	3TX	3RX
	MCS0~9 Nss=3	3TX	3RX
VHT40	MCS0~9 Nss=1	3TX	3RX
	MCS0~9 Nss=2	3TX	3RX
	MCS0~9 Nss=3	3TX	3RX
5GHz Band			
MODULATION MODE	**DATA RATE (MCS)**	**TX & RX CONFIGURATION**	
802.11a	6 ~ 54Mbps	4TX	4RX
802.11n (HT20)	MCS 0~7	4TX	4RX
	MCS 8~15	4TX	4RX
	MCS 16~23	4TX	4RX
	MCS 24~31	4TX	4RX
802.11n (HT40)	MCS 0~7	4TX	4RX
	MCS 8~15	4TX	4RX
	MCS 16~23	4TX	4RX
	MCS 24~31	4TX	4RX
802.11ac (VHT20)	MCS0~8 Nss=1	4TX	4RX
	MCS0~8 Nss=2	4TX	4RX
	MCS0~9 Nss=3	4TX	4RX
	MCS0~8 Nss=4	4TX	4RX
802.11ac (VHT40)	MCS0~9 Nss=1	4TX	4RX
	MCS0~9 Nss=2	4TX	4RX
	MCS0~9 Nss=3	4TX	4RX
	MCS0~9 Nss=4	4TX	4RX
802.11ac (VHT80)	MCS0~9 Nss=1	4TX	4RX
	MCS0~9 Nss=2	4TX	4RX
	MCS0~9 Nss=3	4TX	4RX
	MCS0~9 Nss=4	4TX	4RX

Note:
1. All of modulation mode support beamforming function except 2.4GHz & 802.11a modulation mode.
2. 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)

7. 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:

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

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

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

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
1	√	√	√	√	Adapter No. 2
2	-	-	√	-	Adapter No. 1

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

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

Note: "-"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.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 2, 6, 10, 11	OFDM	BPSK	6
802.11n (HT20)	1 to 11	1, 2, 6, 10, 11	OFDM	BPSK	6.5
802.11n (HT40)	3 to 9	3, 4, 6, 8, 9	OFDM	BPSK	13.5

Radiated Emission Test (Below 1GHz):

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

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	11	DSSS	DBPSK	1

Power Line Conducted Emission Test:

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

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	11	DSSS	DBPSK	1

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

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

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

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 2, 6, 10, 11	OFDM	BPSK	6
802.11n (HT20)	1 to 11	1, 2, 6, 10, 11	OFDM	BPSK	6.5
802.11n (HT40)	3 to 9	3, 4, 6, 8, 9	OFDM	BPSK	13.5

Test Condition:

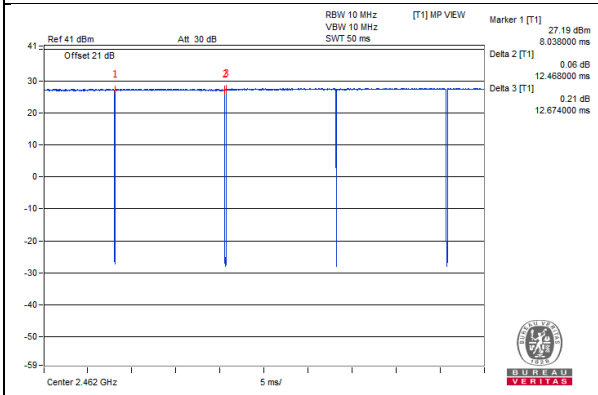
APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	23deg. C, 66%RH	120Vac, 60Hz	Frank Chuang
RE<1G	21deg. C, 67%RH	120Vac, 60Hz	Eason Tseng
PLC	25deg. C, 75%RH	120Vac, 60Hz	Frank Chuang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

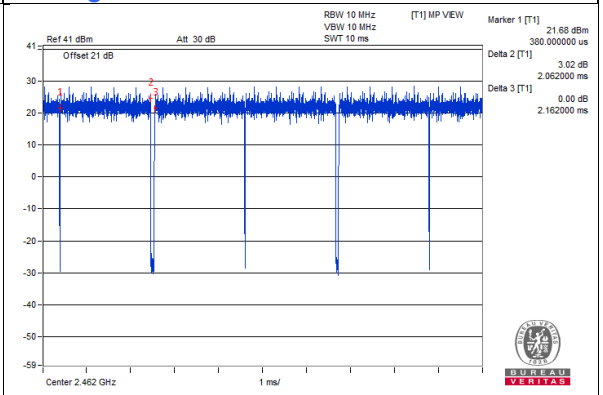
If duty cycle of test signal is ≥ 98 %, duty factor is not required.
If duty cycle of test signal is < 98%, duty factor shall be considered.

802.11b: Duty cycle = 12.468/12.674 = 0.984
802.11g: Duty cycle = 2.062/2.162 = 0.954, Duty factor = 10 * log(1/0.954) = 0.21
802.11n (HT20): Duty cycle = 1.919/1.94 = 0.989
802.11n (HT40): Duty cycle = 0.942/0.971 = 0.97, Duty factor = 10 * log(1/0.97) = 0.13

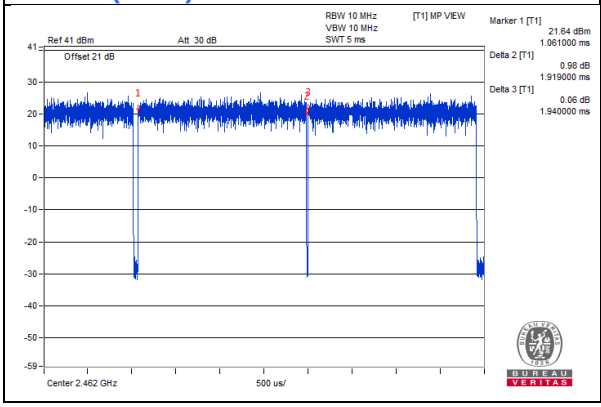
802.11b



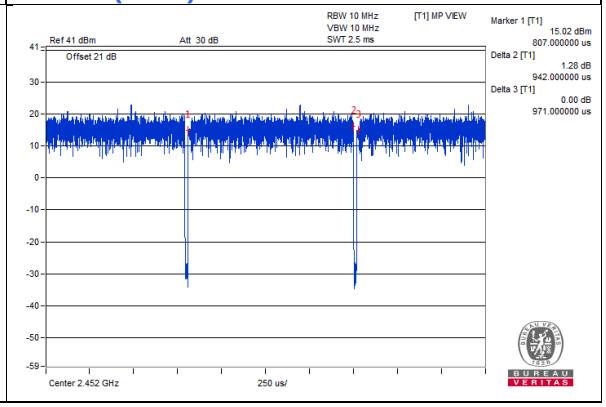
802.11g



802.11n (HT20)



802.11n (HT40)



3.4 Description of Support Units

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

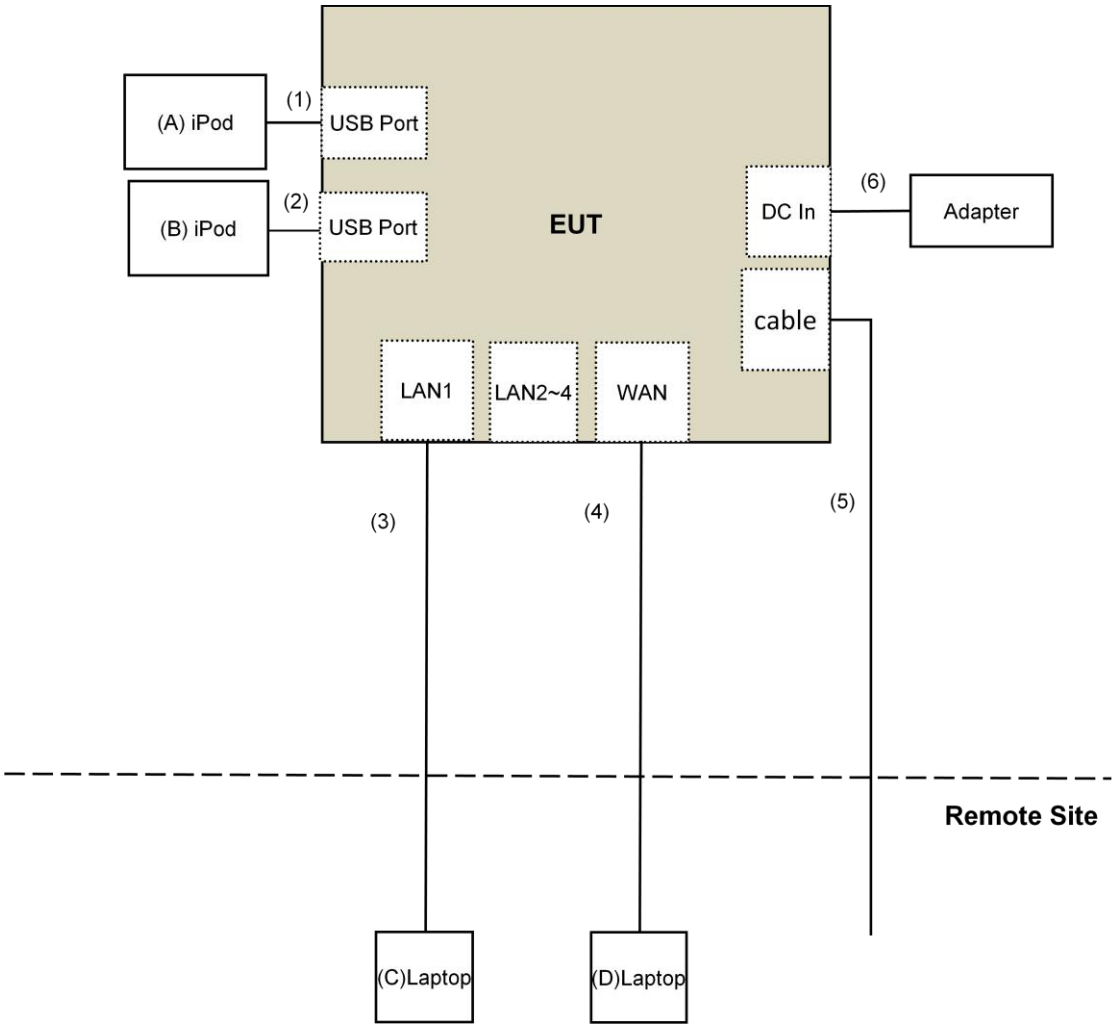
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	iPod	Apple	MC749TA/A	CC4DMFKUDFDM	NA	Provided by Lab
B.	iPod	Apple	MD778TA/A	CC4JMH7LF4T1	NA	Provided by Lab
C.	Laptop	DELL	E5430	HYV4VY1	FCC DoC	Provided by Lab
D.	Laptop	DELL	E6420	B92T3R1	FCC DoC	Provided by Lab

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.	USB Cable	1	0.1	Yes	0	Provided by Lab
2.	USB Cable	1	0.1	Yes	0	Provided by Lab
3.	RJ-45 Cable	1	10	No	0	Provided by Lab
4.	RJ-45 Cable	1	10	No	0	Provided by Lab
5.	Coaxial Cable	1	10	Yes	0	Provided by Lab
6.	DC Cable	1	1.5	No	0	Supplied by client

3.4.1 Configuration of System under Test



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

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
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
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

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. 09 to 21, 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:

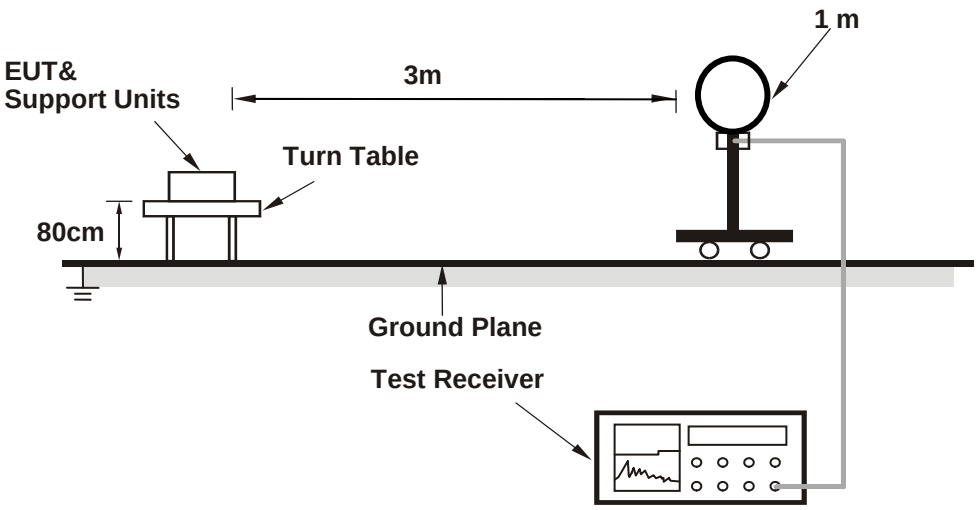
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

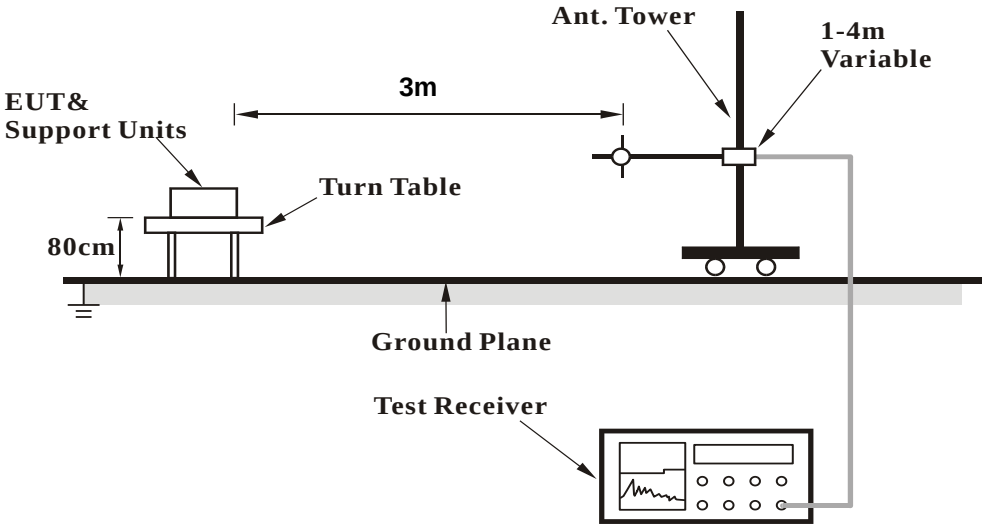
No deviation.

4.1.5 Test Setup

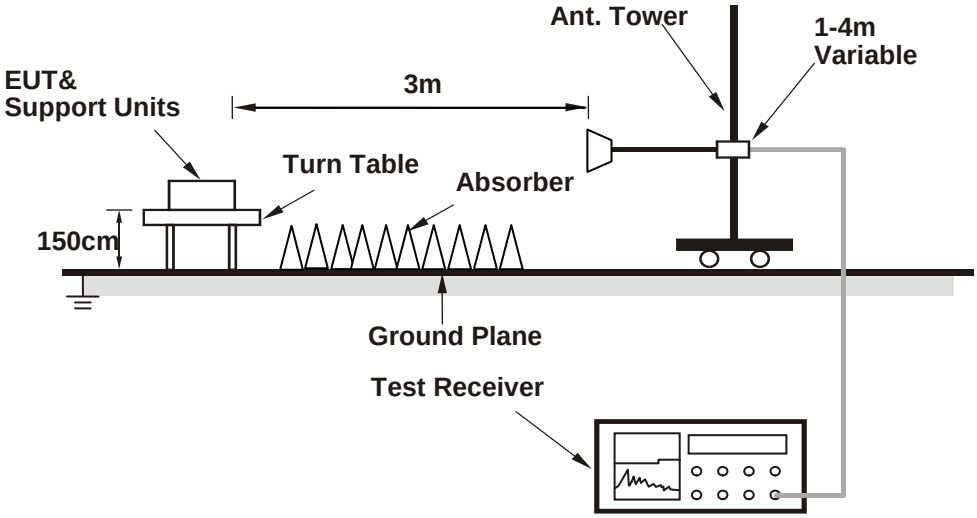
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

a. Connected the EUT with the Laptop which is placed on remote site.
b. Controlling software (Telnet paste command) has been activated to set the EUT on specific status.

4.1.7 Test Results

Above 1GHz Data：

802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**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	3.79 H	60	61.3	-2.7
2	2390.00	50.2 AV	54.0	-3.8	3.79 H	60	52.9	-2.7
3	*2412.00	111.4 PK			3.79 H	60	114.1	-2.7
4	*2412.00	109.2 AV			3.79 H	60	111.9	-2.7
5	4824.00	43.9 PK	74.0	-30.1	1.13 H	75	42.3	1.6
6	4824.00	40.1 AV	54.0	-13.9	1.13 H	75	38.5	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	64.1 PK	74.0	-9.9	2.39 V	167	66.8	-2.7
2	**2390.00**	**53.9 AV**	**54.0**	**-0.1**	**2.39 V**	**167**	**56.6**	**-2.7**
3	*2412.00	115.0 PK			2.39 V	167	117.7	-2.7
4	*2412.00	112.7 AV			2.39 V	167	115.4	-2.7
5	4824.00	38.9 PK	74.0	-35.1	2.10 V	90	37.3	1.6
6	4824.00	31.0 AV	54.0	-23.0	2.10 V	90	29.4	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 6	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.9 PK	74.0	-17.1	1.05 H	320	59.6	-2.7
2	2390.00	44.3 AV	54.0	-9.7	1.05 H	320	47.0	-2.7
3	*2437.00	115.5 PK			1.05 H	320	118.5	-3.0
4	*2437.00	113.2 AV			1.05 H	320	116.2	-3.0
5	2483.50	57.0 PK	74.0	-17.0	1.05 H	320	60.0	-3.0
6	2483.50	45.0 AV	54.0	-9.0	1.05 H	320	48.0	-3.0
7	4874.00	44.1 PK	74.0	-29.9	1.13 H	61	42.5	1.6
8	4874.00	40.1 AV	54.0	-13.9	1.13 H	61	38.5	1.6
9	7311.00	48.4 PK	74.0	-25.6	1.82 H	180	40.7	7.7
10	7311.00	42.2 AV	54.0	-11.8	1.82 H	180	34.5	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.4 PK	74.0	-16.6	1.85 V	210	60.1	-2.7
2	2390.00	46.0 AV	54.0	-8.0	1.85 V	210	48.7	-2.7
3	*2437.00	116.9 PK			1.85 V	210	119.9	-3.0
4	*2437.00	114.9 AV			1.85 V	210	117.9	-3.0
5	2483.50	58.1 PK	74.0	-15.9	1.85 V	210	61.1	-3.0
6	2483.50	45.0 AV	54.0	-9.0	1.85 V	210	48.0	-3.0
7	4874.00	39.2 PK	74.0	-34.8	2.09 V	105	37.6	1.6
8	4874.00	31.3 AV	54.0	-22.7	2.09 V	105	29.7	1.6
9	7311.00	44.5 PK	74.0	-29.5	3.80 V	29	36.8	7.7
10	7311.00	35.3 AV	54.0	-18.7	3.80 V	29	27.6	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 11	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	115.8 PK			1.51 H	30	118.8	-3.0
2	*2462.00	113.4 AV			1.51 H	30	116.4	-3.0
3	2483.50	56.8 PK	74.0	-17.2	1.51 H	30	59.8	-3.0
4	2483.50	43.6 AV	54.0	-10.4	1.51 H	30	46.6	-3.0
5	4924.00	44.1 PK	74.0	-29.9	1.11 H	57	42.4	1.7
6	4924.00	40.0 AV	54.0	-14.0	1.11 H	57	38.3	1.7
7	7386.00	48.0 PK	74.0	-26.0	1.78 H	185	40.1	7.9
8	7386.00	41.9 AV	54.0	-12.1	1.78 H	185	34.0	7.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	117.6 PK			1.34 V	192	120.6	-3.0
2	*2462.00	115.3 AV			1.34 V	192	118.3	-3.0
3	2483.50	62.1 PK	74.0	-11.9	1.34 V	192	65.1	-3.0
4	2483.50	51.4 AV	54.0	-2.6	1.34 V	192	54.4	-3.0
5	4924.00	38.7 PK	74.0	-35.3	2.05 V	106	37.0	1.7
6	4924.00	31.0 AV	54.0	-23.0	2.05 V	106	29.3	1.7
7	7386.00	45.1 PK	74.0	-28.9	3.75 V	20	37.2	7.9
8	7386.00	35.6 AV	54.0	-18.4	3.75 V	20	27.7	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.

802.11g

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.8 PK	74.0	-4.2	1.78 H	106	72.5	-2.7
2	2390.00	53.0 AV	54.0	-1.0	1.78 H	106	55.7	-2.7
3	*2412.00	114.1 PK			1.78 H	106	116.8	-2.7
4	*2412.00	102.4 AV			1.78 H	106	105.1	-2.7
5	4824.00	43.7 PK	74.0	-30.3	1.14 H	60	42.1	1.6
6	4824.00	39.6 AV	54.0	-14.4	1.14 H	60	38.0	1.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	71.1 PK	74.0	-2.9	2.08 V	199	73.8	-2.7
2	2390.00	53.5 AV	54.0	-0.5	2.08 V	199	56.2	-2.7
3	*2412.00	115.4 PK			2.08 V	199	118.1	-2.7
4	*2412.00	105.8 AV			2.08 V	199	108.5	-2.7
5	4824.00	39.2 PK	74.0	-34.8	2.09 V	113	37.6	1.6
6	4824.00	31.6 AV	54.0	-22.4	2.09 V	113	30.0	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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.9 PK	74.0	-4.1	1.89 H	93	72.6	-2.7
2	2390.00	53.1 AV	54.0	-0.9	1.89 H	93	55.8	-2.7
3	*2417.00	115.1 PK			1.89 H	93	117.9	-2.8
4	*2417.00	104.2 AV			1.89 H	93	107.0	-2.8
5	4834.00	44.4 PK	74.0	-29.6	1.23 H	70	42.8	1.6
6	4834.00	40.4 AV	54.0	-13.6	1.23 H	70	38.8	1.6
7	7251.00	49.1 PK	74.0	-24.9	1.75 H	150	41.3	7.8
8	7251.00	43.2 AV	54.0	-10.8	1.75 H	150	35.4	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	72.2 PK	74.0	-1.8	2.14 V	205	74.9	-2.7
2	2390.00	53.8 AV	54.0	-0.2	2.14 V	205	56.5	-2.7
3	*2417.00	116.5 PK			2.14 V	205	119.3	-2.8
4	*2417.00	106.7 AV			2.14 V	205	109.5	-2.8
5	4834.00	39.9 PK	74.0	-34.1	2.21 V	127	38.3	1.6
6	4834.00	32.8 AV	54.0	-21.2	2.21 V	127	31.2	1.6
7	7251.00	44.2 PK	74.0	-29.8	3.76 V	75	36.4	7.8
8	7251.00	36.4 AV	54.0	-17.6	3.76 V	75	28.6	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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.9 PK	74.0	-13.1	1.73 H	95	63.6	-2.7
2	2390.00	48.3 AV	54.0	-5.7	1.73 H	95	51.0	-2.7
3	*2437.00	117.1 PK			1.73 H	95	120.1	-3.0
4	*2437.00	107.2 AV			1.73 H	95	110.2	-3.0
5	2483.50	60.0 PK	74.0	-14.0	1.73 H	95	63.0	-3.0
6	2483.50	46.9 AV	54.0	-7.1	1.73 H	95	49.9	-3.0
7	4874.00	44.3 PK	74.0	-29.7	1.11 H	62	42.7	1.6
8	4874.00	40.1 AV	54.0	-13.9	1.11 H	62	38.5	1.6
9	7311.00	48.3 PK	74.0	-25.7	1.87 H	178	40.6	7.7
10	7311.00	42.0 AV	54.0	-12.0	1.87 H	178	34.3	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	62.2 PK	74.0	-11.8	1.37 V	176	64.9	-2.7
2	2390.00	49.3 AV	54.0	-4.7	1.37 V	176	52.0	-2.7
3	*2437.00	118.4 PK			1.37 V	176	121.4	-3.0
4	*2437.00	109.6 AV			1.37 V	176	112.6	-3.0
5	2483.50	61.3 PK	74.0	-12.7	1.37 V	176	64.3	-3.0
6	2483.50	47.9 AV	54.0	-6.1	1.37 V	176	50.9	-3.0
7	4874.00	39.7 PK	74.0	-34.3	2.05 V	94	38.1	1.6
8	4874.00	31.6 AV	54.0	-22.4	2.05 V	94	30.0	1.6
9	7311.00	44.5 PK	74.0	-29.5	3.79 V	14	36.8	7.7
10	7311.00	35.0 AV	54.0	-19.0	3.79 V	14	27.3	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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	114.6 PK			1.93 H	105	117.6	-3.0
2	*2457.00	103.9 AV			1.93 H	105	106.9	-3.0
3	2483.50	69.9 PK	74.0	-4.1	1.93 H	105	72.9	-3.0
4	2483.50	52.4 AV	54.0	-1.6	1.93 H	105	55.4	-3.0
5	4914.00	44.6 PK	74.0	-29.4	1.24 H	68	42.9	1.7
6	4914.00	40.8 AV	54.0	-13.2	1.24 H	68	39.1	1.7
7	7371.00	49.6 PK	74.0	-24.4	1.75 H	165	41.8	7.8
8	7371.00	43.5 AV	54.0	-10.5	1.75 H	165	35.7	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	116.3 PK			2.04 V	185	119.3	-3.0
2	*2457.00	106.4 AV			2.04 V	185	109.4	-3.0
3	2483.50	71.2 PK	74.0	-2.8	2.04 V	185	74.2	-3.0
4	2483.50	53.6 AV	54.0	-0.4	2.04 V	185	56.6	-3.0
5	4914.00	39.6 PK	74.0	-34.4	2.11 V	131	37.9	1.7
6	4914.00	32.5 AV	54.0	-21.5	2.11 V	131	30.8	1.7
7	7371.00	45.4 PK	74.0	-28.6	3.77 V	42	37.6	7.8
8	7371.00	36.1 AV	54.0	-17.9	3.77 V	42	28.3	7.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.9 PK			1.80 H	92	116.9	-3.0
2	*2462.00	103.3 AV			1.80 H	92	106.3	-3.0
3	2483.50	69.9 PK	74.0	-4.1	1.80 H	92	72.9	-3.0
4	2483.50	52.2 AV	54.0	-1.8	1.80 H	92	55.2	-3.0
5	4924.00	43.9 PK	74.0	-30.1	1.13 H	66	42.2	1.7
6	4924.00	39.7 AV	54.0	-14.3	1.13 H	66	38.0	1.7
7	7386.00	49.0 PK	74.0	-25.0	1.84 H	173	41.1	7.9
8	7386.00	42.6 AV	54.0	-11.4	1.84 H	173	34.7	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	115.2 PK			2.00 V	173	118.2	-3.0
2	*2462.00	105.7 AV			2.00 V	173	108.7	-3.0
3	2483.50	71.2 PK	74.0	-2.8	2.00 V	173	74.2	-3.0
4	2483.50	53.2 AV	54.0	-0.8	2.00 V	173	56.2	-3.0
5	4924.00	39.7 PK	74.0	-34.3	2.03 V	119	38.0	1.7
6	4924.00	31.7 AV	54.0	-22.3	2.03 V	119	30.0	1.7
7	7386.00	44.6 PK	74.0	-29.4	3.84 V	25	36.7	7.9
8	7386.00	35.2 AV	54.0	-18.8	3.84 V	25	27.3	7.9

REMARKS:

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

802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	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	67.4 PK	74.0	-6.6	1.77 H	119	70.1	-2.7
2	2390.00	52.9 AV	54.0	-1.1	1.77 H	119	55.6	-2.7
3	*2412.00	113.8 PK			1.77 H	119	116.5	-2.7
4	*2412.00	103.2 AV			1.77 H	119	105.9	-2.7
5	4824.00	43.7 PK	74.0	-30.3	1.11 H	61	42.1	1.6
6	4824.00	39.8 AV	54.0	-14.2	1.11 H	61	38.2	1.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.7 PK	74.0	-5.3	2.27 V	204	71.4	-2.7
2	**2390.00**	**53.9 AV**	**54.0**	**-0.1**	**2.27 V**	**204**	**56.6**	**-2.7**
3	*2412.00	115.1 PK			2.27 V	204	117.8	-2.7
4	*2412.00	105.6 AV			2.27 V	204	108.3	-2.7
5	4824.00	39.3 PK	74.0	-34.7	2.10 V	116	37.7	1.6
6	4824.00	31.6 AV	54.0	-22.4	2.10 V	116	30.0	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) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.5 PK	74.0	-4.5	1.88 H	122	72.2	-2.7
2	2390.00	51.6 AV	54.0	-2.4	1.88 H	122	54.3	-2.7
3	*2417.00	114.6 PK			1.88 H	122	117.4	-2.8
4	*2417.00	104.2 AV			1.88 H	122	107.0	-2.8
5	4834.00	44.5 PK	74.0	-29.5	1.19 H	65	42.9	1.6
6	4834.00	40.2 AV	54.0	-13.8	1.19 H	65	38.6	1.6
7	7251.00	47.9 PK	74.0	-26.1	1.67 H	145	40.1	7.8
8	7251.00	43.2 AV	54.0	-10.8	1.67 H	145	35.4	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	70.5 PK	74.0	-3.5	2.14 V	212	73.2	-2.7
2	2390.00	53.8 AV	54.0	-0.2	2.14 V	212	56.5	-2.7
3	*2417.00	116.4 PK			2.14 V	212	119.2	-2.8
4	*2417.00	106.5 AV			2.14 V	212	109.3	-2.8
5	4834.00	39.6 PK	74.0	-34.4	2.25 V	122	38.0	1.6
6	4834.00	32.5 AV	54.0	-21.5	2.25 V	122	30.9	1.6
7	7251.00	44.3 PK	74.0	-29.7	3.76 V	67	36.5	7.8
8	7251.00	37.1 AV	54.0	-16.9	3.76 V	67	29.3	7.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.2 PK	74.0	-14.8	1.79 H	91	61.9	-2.7
2	2390.00	47.4 AV	54.0	-6.6	1.79 H	91	50.1	-2.7
3	*2437.00	117.9 PK			1.79 H	91	120.9	-3.0
4	*2437.00	107.4 AV			1.79 H	91	110.4	-3.0
5	2483.50	60.6 PK	74.0	-13.4	1.79 H	91	63.6	-3.0
6	2483.50	48.1 AV	54.0	-5.9	1.79 H	91	51.1	-3.0
7	4874.00	44.4 PK	74.0	-29.6	1.14 H	53	42.8	1.6
8	4874.00	40.2 AV	54.0	-13.8	1.14 H	53	38.6	1.6
9	7311.00	48.4 PK	74.0	-25.6	1.80 H	174	40.7	7.7
10	7311.00	42.0 AV	54.0	-12.0	1.80 H	174	34.3	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	60.5 PK	74.0	-13.5	1.28 V	210	63.2	-2.7
2	2390.00	48.4 AV	54.0	-5.6	1.28 V	210	51.1	-2.7
3	*2437.00	119.2 PK			1.28 V	210	122.2	-3.0
4	*2437.00	109.8 AV			1.28 V	210	112.8	-3.0
5	2483.50	61.9 PK	74.0	-12.1	1.28 V	210	64.9	-3.0
6	2483.50	49.1 AV	54.0	-4.9	1.28 V	210	52.1	-3.0
7	4874.00	39.3 PK	74.0	-34.7	2.12 V	101	37.7	1.6
8	4874.00	31.4 AV	54.0	-22.6	2.12 V	101	29.8	1.6
9	7311.00	44.8 PK	74.0	-29.2	3.83 V	22	37.1	7.7
10	7311.00	35.7 AV	54.0	-18.3	3.83 V	22	28.0	7.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	114.5 PK			1.84 H	86	117.5	-3.0
2	*2457.00	104.0 AV			1.84 H	86	107.0	-3.0
3	2483.50	70.2 PK	74.0	-3.8	1.84 H	86	73.2	-3.0
4	2483.50	51.8 AV	54.0	-2.2	1.84 H	86	54.8	-3.0
5	4914.00	44.4 PK	74.0	-29.6	1.22 H	65	42.7	1.7
6	4914.00	40.3 AV	54.0	-13.7	1.22 H	65	38.6	1.7
7	7371.00	48.7 PK	74.0	-25.3	1.73 H	142	40.9	7.8
8	7371.00	43.2 AV	54.0	-10.8	1.73 H	142	35.4	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	116.2 PK			2.03 V	192	119.2	-3.0
2	*2457.00	106.2 AV			2.03 V	192	109.2	-3.0
3	2483.50	70.7 PK	74.0	-3.3	2.03 V	192	73.7	-3.0
4	2483.50	53.7 AV	54.0	-0.3	2.03 V	192	56.7	-3.0
5	4914.00	40.2 PK	74.0	-33.8	2.12 V	111	38.5	1.7
6	4914.00	32.5 AV	54.0	-21.5	2.12 V	111	30.8	1.7
7	7371.00	45.4 PK	74.0	-28.6	3.81 V	47	37.6	7.8
8	7371.00	36.2 AV	54.0	-17.8	3.81 V	47	28.4	7.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.6 PK			1.72 H	91	116.6	-3.0
2	*2462.00	102.9 AV			1.72 H	91	105.9	-3.0
3	2483.50	66.4 PK	74.0	-7.6	1.72 H	91	69.4	-3.0
4	2483.50	52.5 AV	54.0	-1.5	1.72 H	91	55.5	-3.0
5	4924.00	43.9 PK	74.0	-30.1	1.15 H	76	42.2	1.7
6	4924.00	39.9 AV	54.0	-14.1	1.15 H	76	38.2	1.7
7	7386.00	48.2 PK	74.0	-25.8	1.85 H	184	40.3	7.9
8	7386.00	42.2 AV	54.0	-11.8	1.85 H	184	34.3	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	114.9 PK			2.31 V	194	117.9	-3.0
2	*2462.00	105.3 AV			2.31 V	194	108.3	-3.0
3	2483.50	67.7 PK	74.0	-6.3	2.31 V	194	70.7	-3.0
4	2483.50	53.5 AV	54.0	-0.5	2.31 V	194	56.5	-3.0
5	4924.00	39.4 PK	74.0	-34.6	2.13 V	95	37.7	1.7
6	4924.00	31.5 AV	54.0	-22.5	2.13 V	95	29.8	1.7
7	7386.00	44.7 PK	74.0	-29.3	3.81 V	21	36.8	7.9
8	7386.00	35.5 AV	54.0	-18.5	3.81 V	21	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.

802.11n (HT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.2 PK	74.0	-4.8	1.83 H	96	71.9	-2.7
2	2390.00	52.7 AV	54.0	-1.3	1.83 H	96	55.4	-2.7
3	*2422.00	109.3 PK			1.83 H	96	112.2	-2.9
4	*2422.00	95.7 AV			1.83 H	96	98.6	-2.9
5	4844.00	44.0 PK	74.0	-30.0	1.09 H	52	42.4	1.6
6	4844.00	40.2 AV	54.0	-13.8	1.09 H	52	38.6	1.6
7	7266.00	48.4 PK	74.0	-25.6	1.85 H	191	40.6	7.8
8	7266.00	42.3 AV	54.0	-11.7	1.85 H	191	34.5	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	70.5 PK	74.0	-3.5	1.82 V	223	73.2	-2.7
2	2390.00	53.7 AV	54.0	-0.3	1.82 V	223	56.4	-2.7
3	*2422.00	110.6 PK			1.82 V	223	113.5	-2.9
4	*2422.00	98.1 AV			1.82 V	223	101.0	-2.9
5	4844.00	38.7 PK	74.0	-35.3	2.14 V	116	37.1	1.6
6	4844.00	31.0 AV	54.0	-23.0	2.14 V	116	29.4	1.6
7	7266.00	44.3 PK	74.0	-29.7	3.85 V	32	36.5	7.8
8	7266.00	35.3 AV	54.0	-18.7	3.85 V	32	27.5	7.8

REMARKS:

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

CHANNEL	TX Channel 4	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.1 PK	74.0	-4.9	1.83 H	109	71.8	-2.7
2	2390.00	52.6 AV	54.0	-1.4	1.83 H	109	55.3	-2.7
3	*2427.00	110.1 PK			1.83 H	109	113.0	-2.9
4	*2427.00	96.8 AV			1.83 H	109	99.7	-2.9
5	4854.00	43.9 PK	74.0	-30.1	1.13 H	69	42.3	1.6
6	4854.00	39.9 AV	54.0	-14.1	1.13 H	69	38.3	1.6
7	7281.00	48.6 PK	74.0	-25.4	1.81 H	180	40.7	7.9
8	7281.00	42.7 AV	54.0	-11.3	1.81 H	180	34.8	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	2390.00	70.4 PK	74.0	-3.6	1.97 V	235	73.1	-2.7
2	2390.00	53.6 AV	54.0	-0.4	1.97 V	235	56.3	-2.7
3	*2427.00	111.4 PK			1.97 V	235	114.3	-2.9
4	*2427.00	99.2 AV			1.97 V	235	102.1	-2.9
5	4854.00	39.6 PK	74.0	-34.4	2.15 V	118	38.0	1.6
6	4854.00	31.5 AV	54.0	-22.5	2.15 V	118	29.9	1.6
7	7281.00	44.9 PK	74.0	-29.1	3.81 V	28	37.0	7.9
8	7281.00	35.7 AV	54.0	-18.3	3.81 V	28	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.9 PK	74.0	-5.1	1.80 H	96	71.6	-2.7
2	2390.00	52.7 AV	54.0	-1.3	1.80 H	96	55.4	-2.7
3	*2437.00	110.8 PK			1.80 H	96	113.8	-3.0
4	*2437.00	98.4 AV			1.80 H	96	101.4	-3.0
5	2483.50	66.8 PK	74.0	-7.2	1.80 H	96	69.8	-3.0
6	2483.50	49.2 AV	54.0	-4.8	1.80 H	96	52.2	-3.0
7	4874.00	43.9 PK	74.0	-30.1	1.13 H	72	42.3	1.6
8	4874.00	40.1 AV	54.0	-13.9	1.13 H	72	38.5	1.6
9	7311.00	48.3 PK	74.0	-25.7	1.87 H	178	40.6	7.7
10	7311.00	42.0 AV	54.0	-12.0	1.87 H	178	34.3	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	70.2 PK	74.0	-3.8	1.50 V	225	72.9	-2.7
2	2390.00	53.7 AV	54.0	-0.3	1.50 V	225	56.4	-2.7
3	*2437.00	112.1 PK			1.50 V	225	115.1	-3.0
4	*2437.00	100.8 AV			1.50 V	225	103.8	-3.0
5	2483.50	68.1 PK	74.0	-5.9	1.50 V	225	71.1	-3.0
6	2483.50	50.2 AV	54.0	-3.8	1.50 V	225	53.2	-3.0
7	4874.00	39.2 PK	74.0	-34.8	2.13 V	118	37.6	1.6
8	4874.00	31.1 AV	54.0	-22.9	2.13 V	118	29.5	1.6
9	7311.00	44.6 PK	74.0	-29.4	3.76 V	40	36.9	7.7
10	7311.00	35.5 AV	54.0	-18.5	3.76 V	40	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 8	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 25GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2447.00	110.1 PK			1.76 H	97	113.1	-3.0
2	*2447.00	97.5 AV			1.76 H	97	100.5	-3.0
3	2483.50	71.1 PK	74.0	-2.9	1.76 H	97	74.1	-3.0
4	2483.50	52.7 AV	54.0	-1.3	1.76 H	97	55.7	-3.0
5	4894.00	44.4 PK	74.0	-29.6	1.19 H	61	42.7	1.7
6	4894.00	40.4 AV	54.0	-13.6	1.19 H	61	38.7	1.7
7	7341.00	48.6 PK	74.0	-25.4	1.80 H	182	40.7	7.9
8	7341.00	42.3 AV	54.0	-11.7	1.80 H	182	34.4	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	*2447.00	111.4 PK			2.05 V	231	114.4	-3.0
2	*2447.00	99.9 AV			2.05 V	231	102.9	-3.0
3	2483.50	72.4 PK	74.0	-1.6	2.05 V	231	75.4	-3.0
4	2483.50	53.7 AV	54.0	-0.3	2.05 V	231	56.7	-3.0
5	4894.00	39.2 PK	74.0	-34.8	2.06 V	105	37.5	1.7
6	4894.00	31.5 AV	54.0	-22.5	2.06 V	105	29.8	1.7
7	7341.00	44.0 PK	74.0	-30.0	3.79 V	25	36.1	7.9
8	7341.00	35.1 AV	54.0	-18.9	3.79 V	25	27.2	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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	109.4 PK			1.84 H	95	112.4	-3.0
2	*2452.00	96.7 AV			1.84 H	95	99.7	-3.0
3	2483.50	70.8 PK	74.0	-3.2	1.84 H	95	73.8	-3.0
4	2483.50	52.6 AV	54.0	-1.4	1.84 H	95	55.6	-3.0
5	4904.00	44.3 PK	74.0	-29.7	1.18 H	53	42.6	1.7
6	4904.00	40.0 AV	54.0	-14.0	1.18 H	53	38.3	1.7
7	7356.00	48.9 PK	74.0	-25.1	1.78 H	193	41.0	7.9
8	7356.00	42.5 AV	54.0	-11.5	1.78 H	193	34.6	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	110.7 PK			1.97 V	225	113.7	-3.0
2	*2452.00	99.1 AV			1.97 V	225	102.1	-3.0
3	2483.50	72.1 PK	74.0	-1.9	1.97 V	225	75.1	-3.0
4	2483.50	53.6 AV	54.0	-0.4	1.97 V	225	56.6	-3.0
5	4904.00	39.0 PK	74.0	-35.0	2.03 V	111	37.3	1.7
6	4904.00	31.0 AV	54.0	-23.0	2.03 V	111	29.3	1.7
7	7356.00	45.1 PK	74.0	-28.9	3.84 V	29	37.2	7.9
8	7356.00	35.6 AV	54.0	-18.4	3.84 V	29	27.7	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:

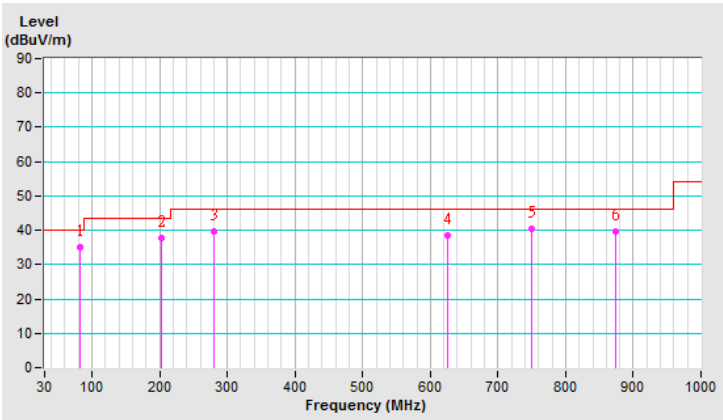
802.11b

CHANNEL	TX Channel 11	**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	82.45	35.1 QP	40.0	-4.9	1.50 H	149	48.3	-13.2
2	202.60	37.8 QP	43.5	-5.7	1.50 H	249	48.7	-10.9
3	280.62	39.5 QP	46.0	-6.5	1.50 H	71	47.1	-7.6
4	625.66	38.5 QP	46.0	-7.5	1.50 H	133	37.6	0.9
5	749.34	40.5 QP	46.0	-5.5	1.00 H	179	37.2	3.3
6	873.88	39.5 QP	46.0	-6.5	1.00 H	310	35.0	4.5

REMARKS:

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

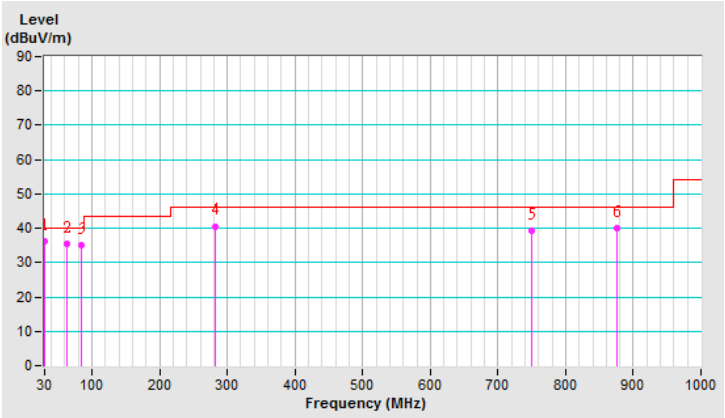


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.65	36.2 QP	40.0	-3.8	1.50 V	275	45.3	-9.1
2	62.91	35.6 QP	40.0	-4.4	1.00 V	127	44.5	-8.9
3	83.98	35.1 QP	40.0	-4.9	2.00 V	277	48.5	-13.4
4	282.54	40.6 QP	46.0	-5.4	1.50 V	283	48.2	-7.6
5	749.98	39.4 QP	46.0	-6.6	1.50 V	13	36.1	3.3
6	874.99	40.1 QP	46.0	-5.9	1.00 V	184	35.6	4.5

REMARKS:

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



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	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. 23, 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.

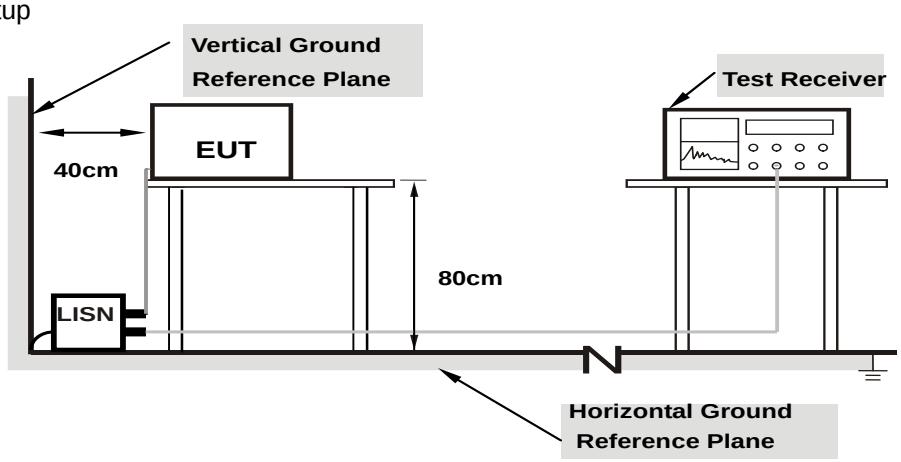
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

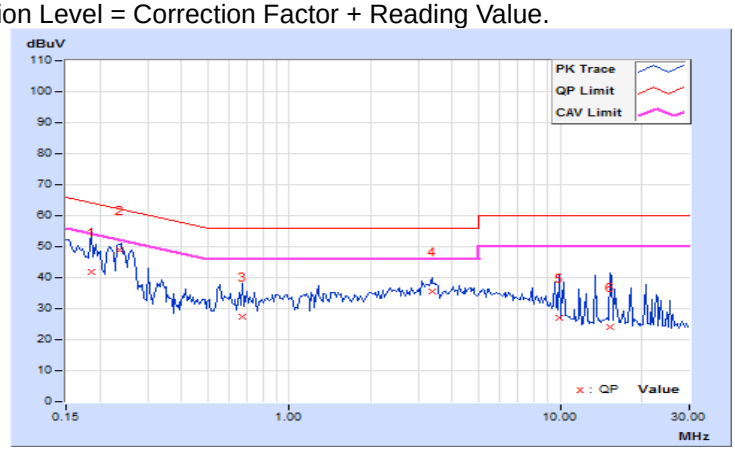
4.2.7 Test Results (Mode 1)

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18516	10.06	31.97	21.58	42.03	31.64	64.25	54.25	-22.22	-22.61
2	0.23594	10.08	38.69	35.26	48.77	45.34	62.24	52.24	-13.47	-6.90
3	0.67344	10.14	17.13	13.30	27.27	23.44	56.00	46.00	-28.73	-22.56
4	3.37109	10.30	25.29	18.65	35.59	28.95	56.00	46.00	-20.41	-17.05
5	9.87891	10.70	16.32	10.55	27.02	21.25	60.00	50.00	-32.98	-28.75
6	15.30859	11.08	13.14	4.23	24.22	15.31	60.00	50.00	-35.78	-34.69

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.

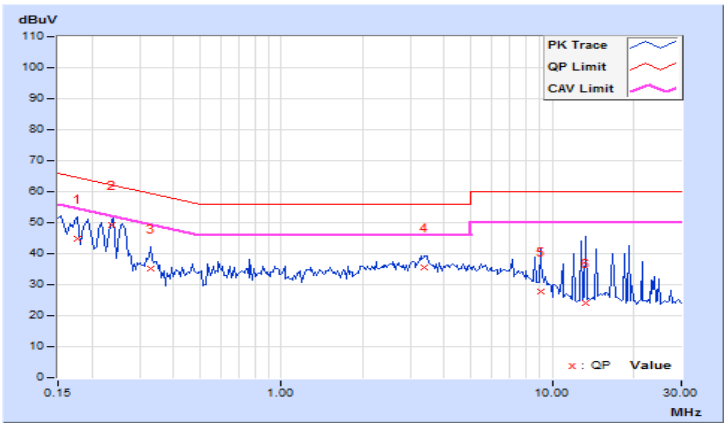


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17734	9.96	34.97	20.22	44.93	30.18	64.61	54.61	-19.68	-24.43
2	0.23594	9.98	39.11	36.19	49.09	46.17	62.24	52.24	-13.15	-6.07
3	0.32969	10.00	25.31	20.37	35.31	30.37	59.46	49.46	-24.15	-19.09
4	3.35547	10.16	25.57	18.64	35.73	28.80	56.00	46.00	-20.27	-17.20
5	9.10547	10.49	17.33	12.17	27.82	22.66	60.00	50.00	-32.18	-27.34
6	13.30859	10.76	13.43	2.88	24.19	13.64	60.00	50.00	-35.81	-36.36

REMARKS:

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



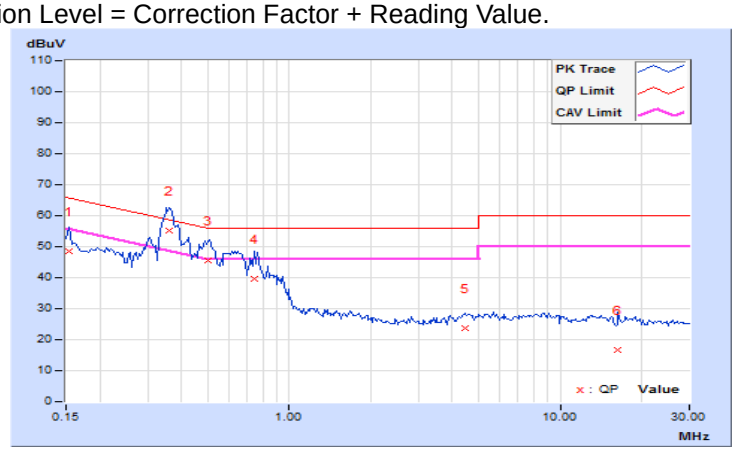
4.2.8 Test Results (Mode 2)

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.05	38.52	23.62	48.57	33.67	65.79	55.79	-17.22	-22.12
2	0.36094	10.11	45.21	29.96	55.32	40.07	58.71	48.71	-3.39	-8.64
3	0.50000	10.13	35.27	17.37	45.40	27.50	56.00	46.00	-10.60	-18.50
4	0.73984	10.15	29.44	15.59	39.59	25.74	56.00	46.00	-16.41	-20.26
5	4.46875	10.37	13.22	7.69	23.59	18.06	56.00	46.00	-32.41	-27.94
6	16.33984	11.15	5.42	0.63	16.57	11.78	60.00	50.00	-43.43	-38.22

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.

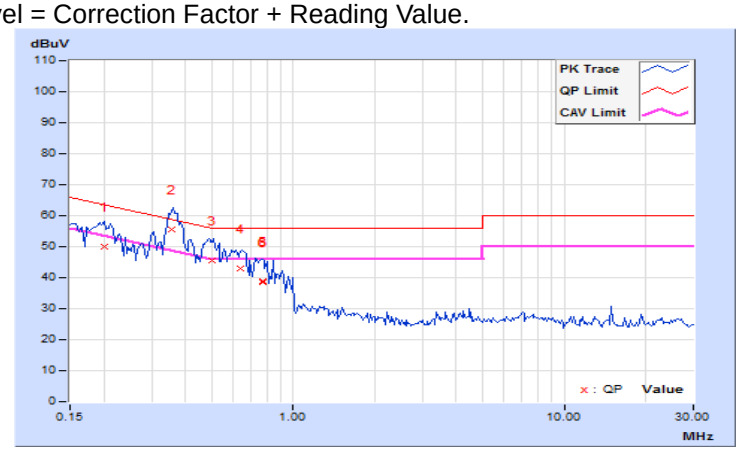


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20078	9.97	40.07	23.07	50.04	33.04	63.58	53.58	-13.54	-20.54
2	**0.35703**	**10.01**	**45.53**	**30.04**	**55.54**	**40.05**	**58.80**	**48.80**	**-3.26**	**-8.75**
3	0.50000	10.02	35.62	18.38	45.64	28.40	56.00	46.00	-10.36	-17.60
4	0.63828	10.03	33.05	17.26	43.08	27.29	56.00	46.00	-12.92	-18.71
5	0.77109	10.03	29.03	15.58	39.06	25.61	56.00	46.00	-16.94	-20.39
6	0.77109	10.03	28.54	15.56	38.57	25.59	56.00	46.00	-17.43	-20.41

REMARKS:

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

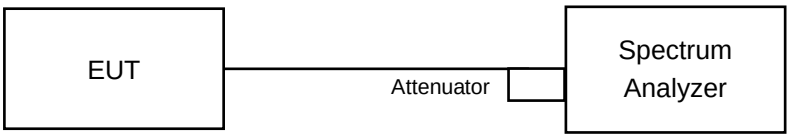


4.3 6dB Bandwidth Measurement

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

a. Set resolution bandwidth (RBW) = 100kHz
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.3.5 Deviation fromTest 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

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
1	2412	10.18	10.18	10.18	0.5	Pass
6	2437	10.15	10.15	10.15	0.5	Pass
11	2462	10.15	10.15	10.14	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
1	2412	15.69	15.69	15.70	0.5	Pass
2	2417	15.62	15.32	15.70	0.5	Pass
6	2437	15.67	15.48	15.99	0.5	Pass
10	2457	15.65	15.41	15.17	0.5	Pass
11	2462	15.64	15.78	15.21	0.5	Pass

802.11n (HT20)

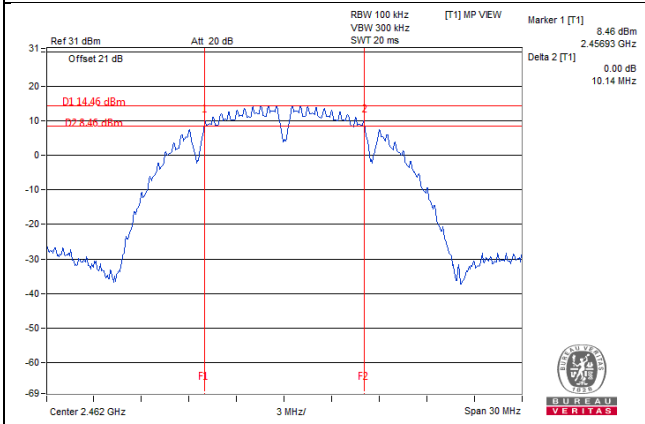
Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
1	2412	15.42	15.47	15.48	0.5	Pass
2	2417	15.41	15.53	15.25	0.5	Pass
6	2437	15.42	15.48	15.22	0.5	Pass
10	2457	15.44	15.23	15.49	0.5	Pass
11	2462	15.46	15.51	15.51	0.5	Pass

802.11n (HT40)

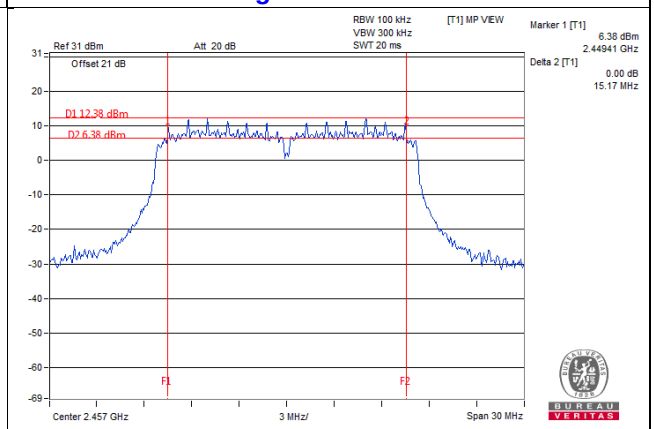
Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
3	2422	35.14	35.18	35.19	0.5	Pass
4	2427	35.23	35.25	35.18	0.5	Pass
6	2437	35.14	35.27	35.33	0.5	Pass
8	2447	35.22	35.28	35.22	0.5	Pass
9	2452	35.31	35.25	35.25	0.5	Pass

Spectrum Plot of Worst Value

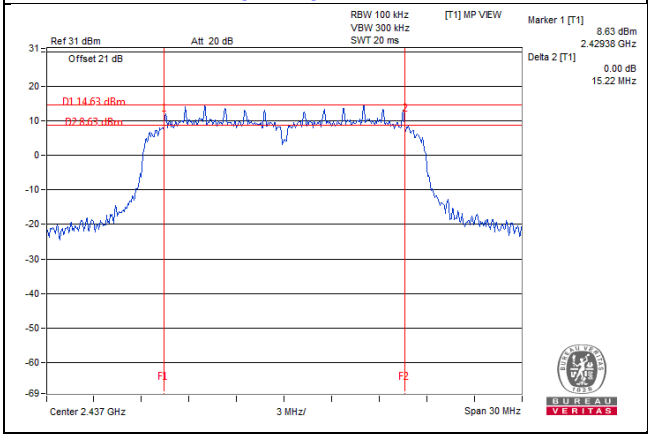
802.11b / Chain 2 : CH11



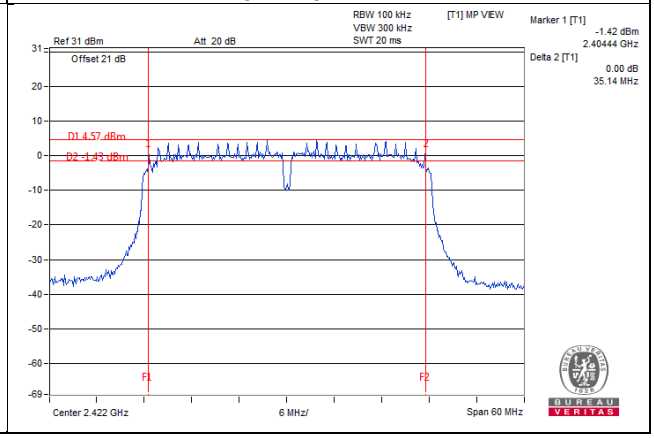
802.11g / Chain 2 : CH10



802.11n (HT20) / Chain 2 : CH6



802.11n (HT40) / Chain 0 : CH3



4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

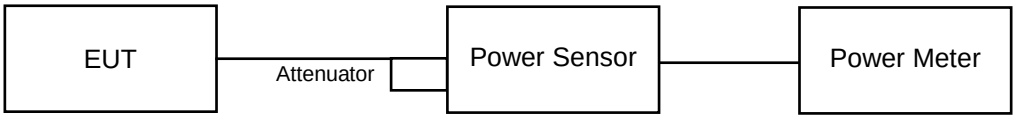
For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

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

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

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

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedures

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

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

Same as Item 4.3.6.

4.4.7 Test Results

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				
1	2412	24.71	24.94	25.31	947.315	29.76	30.00	Pass
6	2437	24.64	24.86	24.72	893.751	29.51	30.00	Pass
11	2462	25.56	25.20	24.85	996.372	29.98	30.00	Pass

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
1	2412	20.23	20.03	20.21	311.086	24.93	30.00	Pass
2	2417	21.35	21.12	21.36	402.651	26.05	30.00	Pass
6	2437	24.58	24.80	25.31	928.698	29.68	30.00	Pass
10	2457	21.43	21.08	21.29	401.814	26.04	30.00	Pass
11	2462	20.32	20.02	20.34	316.252	25.00	30.00	Pass

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
1	2412	19.93	19.63	19.86	287.062	24.58	30.00	Pass
2	2417	20.89	20.58	20.93	360.912	25.57	30.00	Pass
6	2437	24.71	24.60	24.79	885.505	29.47	30.00	Pass
10	2457	21.25	20.85	21.18	386.191	25.87	30.00	Pass
11	2462	20.30	19.97	20.22	311.66	24.94	30.00	Pass

802.11n (HT40)

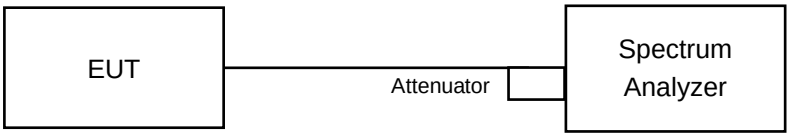
Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
3	2422	19.68	19.10	19.52	263.716	24.21	30.00	Pass
4	2427	20.96	19.65	19.99	316.765	25.01	30.00	Pass
6	2437	21.65	21.76	21.99	454.311	26.57	30.00	Pass
8	2447	19.97	19.57	19.89	287.384	24.58	30.00	Pass
9	2452	18.71	18.16	18.58	211.877	23.26	30.00	Pass

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

802.11b, 802.11n (HT20)

a) Set instrument center frequency to DTS channel center frequency.
b) Set span to at least 1.5 times the OBW.
c) Set RBW to: 3 kHz ≤ RBW ≤ 100 kHz. .
d) Set VBW ≥3 x RBW.
e) Detector = power averaging (RMS) or sample detector (when RMS not available).
f) Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
g) Sweep time = auto couple.
h) Employ trace averaging (RMS) mode over a minimum of 100 traces.
i) Use the peak marker function to determine the maximum amplitude level.

802.11g, 802.11n (HT40)

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6

4.5.7 Test Results

802.11b

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=3) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-7.26	4.77	-2.49	8.00	Pass
	6	2437	-8.19	4.77	-3.42	8.00	Pass
	11	2462	-7.34	4.77	-2.57	8.00	Pass
1	1	2412	-7.47	4.77	-2.70	8.00	Pass
	6	2437	-7.38	4.77	-2.61	8.00	Pass
	11	2462	-7.36	4.77	-2.59	8.00	Pass
2	1	2412	-6.89	4.77	-2.12	8.00	Pass
	6	2437	-7.63	4.77	-2.86	8.00	Pass
	11	2462	-7.14	4.77	-2.37	8.00	Pass

Note: 1. Directional gain = 2.94dBi < 6dBi, so the power density limit shall be not reduced.

802.11g

TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=3) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-13.21	4.77	0.21	-8.23	8.00	Pass
	2	2417	-11.24	4.77	0.21	-6.26	8.00	Pass
	6	2437	-9.02	4.77	0.21	-4.04	8.00	Pass
	10	2457	-11.64	4.77	0.21	-6.66	8.00	Pass
	11	2462	-12.63	4.77	0.21	-7.65	8.00	Pass
1	1	2412	-13.50	4.77	0.21	-8.52	8.00	Pass
	2	2417	-10.63	4.77	0.21	-5.65	8.00	Pass
	6	2437	-8.65	4.77	0.21	-3.67	8.00	Pass
	10	2457	-12.20	4.77	0.21	-7.22	8.00	Pass
	11	2462	-12.30	4.77	0.21	-7.32	8.00	Pass
2	1	2412	-12.55	4.77	0.21	-7.57	8.00	Pass
	2	2417	-3.78	4.77	0.21	1.20	8.00	Pass
	6	2437	-8.98	4.77	0.21	-4.00	8.00	Pass
	10	2457	-9.38	4.77	0.21	-4.40	8.00	Pass
	11	2462	-10.02	4.77	0.21	-5.04	8.00	Pass

Note: 1. Directional gain = 2.94dBi < 6dBi, so the power density limit shall be not reduced.

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

802.11n (HT20)

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=3) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-13.23	4.77	-8.46	8.00	Pass
	2	2417	-12.08	4.77	-7.31	8.00	Pass
	6	2437	-9.32	4.77	-4.55	8.00	Pass
	10	2457	-13.72	4.77	-8.95	8.00	Pass
	11	2462	-13.95	4.77	-9.18	8.00	Pass
1	1	2412	-12.50	4.77	-7.73	8.00	Pass
	2	2417	-10.40	4.77	-5.63	8.00	Pass
	6	2437	-8.09	4.77	-3.32	8.00	Pass
	10	2457	-10.14	4.77	-5.37	8.00	Pass
	11	2462	-13.26	4.77	-8.49	8.00	Pass
2	1	2412	-11.77	4.77	-7.00	8.00	Pass
	2	2417	-4.21	4.77	0.56	8.00	Pass
	6	2437	-8.74	4.77	-3.97	8.00	Pass
	10	2457	-5.09	4.77	-0.32	8.00	Pass
	11	2462	-10.29	4.77	-5.52	8.00	Pass

Note: 1. Directional gain = 2.94dBi < 6dBi, so the power density limit shall be not reduced.

802.11n (HT40)

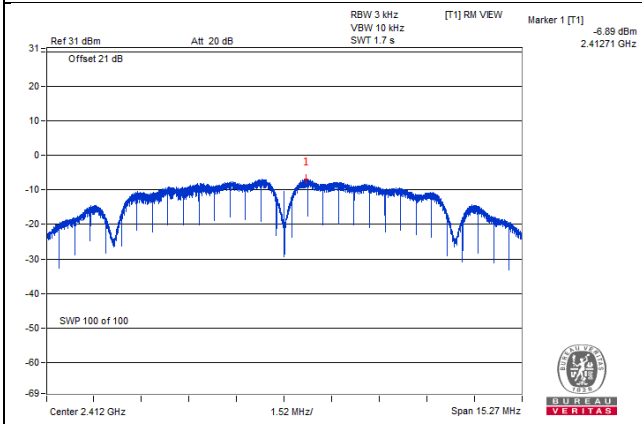
TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=3) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	3	2422	-16.96	4.77	0.13	-12.06	8.00	Pass
	4	2427	-16.48	4.77	0.13	-11.58	8.00	Pass
	6	2437	-14.53	4.77	0.13	-9.63	8.00	Pass
	8	2447	-15.49	4.77	0.13	-10.59	8.00	Pass
	9	2452	-16.02	4.77	0.13	-11.12	8.00	Pass
1	3	2422	-16.77	4.77	0.13	-11.87	8.00	Pass
	4	2427	-14.72	4.77	0.13	-9.82	8.00	Pass
	6	2437	-13.65	4.77	0.13	-8.75	8.00	Pass
	8	2447	-13.74	4.77	0.13	-8.84	8.00	Pass
	9	2452	-16.98	4.77	0.13	-12.08	8.00	Pass
2	3	2422	-15.69	4.77	0.13	-10.79	8.00	Pass
	4	2427	-16.49	4.77	0.13	-11.59	8.00	Pass
	6	2437	-7.42	4.77	0.13	-2.52	8.00	Pass
	8	2447	-11.25	4.77	0.13	-6.35	8.00	Pass
	9	2452	-16.16	4.77	0.13	-11.26	8.00	Pass

Note: 1. Directional gain = 2.94dBi < 6dBi, so the power density limit shall be not reduced.

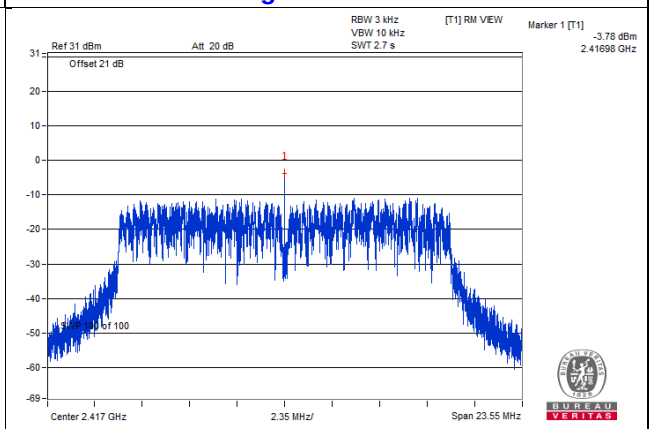
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

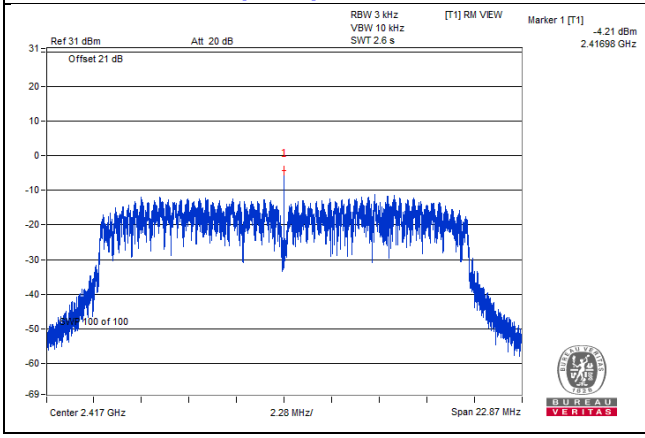
802.11b / Chain 2 : CH1



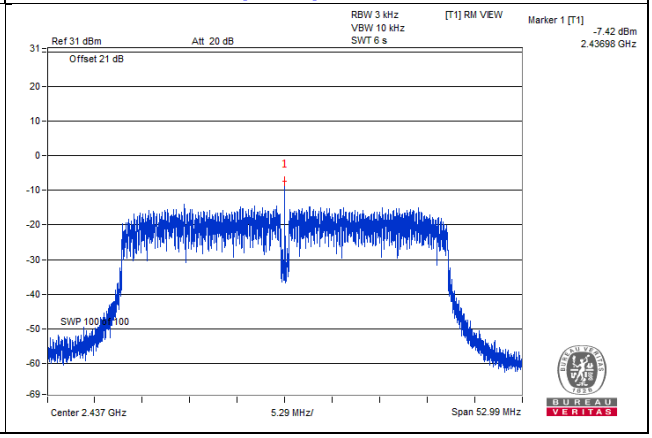
802.11g / Chain 2 : CH2



802.11n (HT20) / Chain 2 : CH2



802.11n (HT40) / Chain 2 : CH6

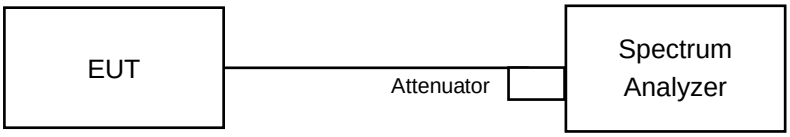


4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted Out of Band Emission Measurement

Below -30dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

MEASUREMENT PROCEDURE OOBE

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

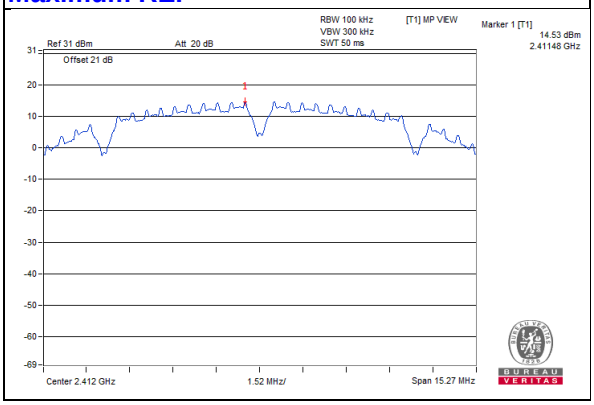
Same as Item 4.3.6

4.6.7 Test Results

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

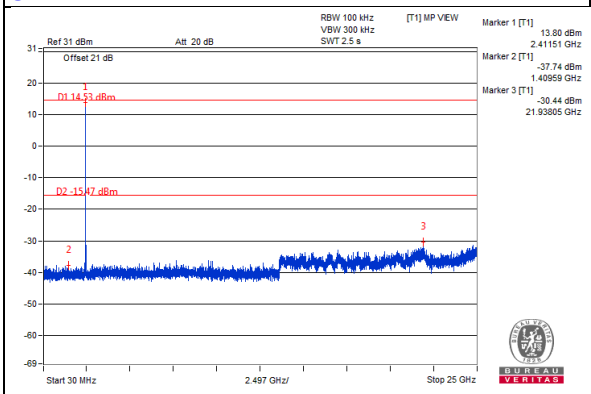
802.11b

Maximum REF

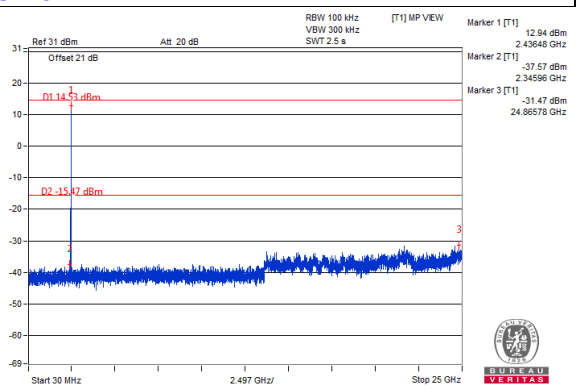


Chain 0

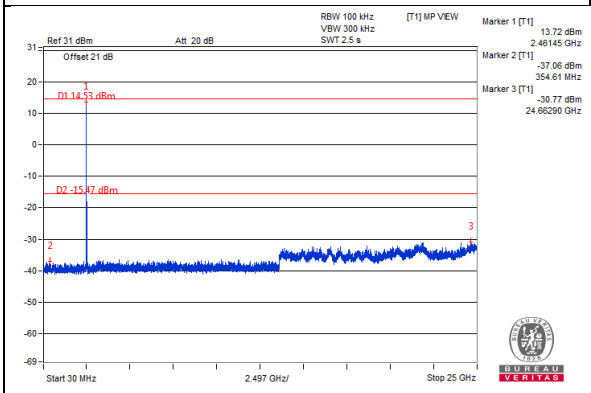
CH 1



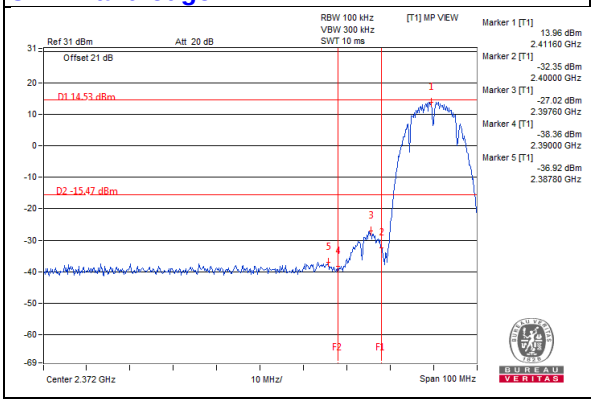
CH 6



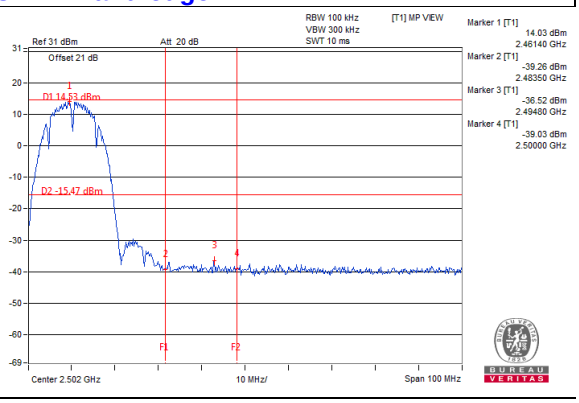
CH 11



CH 1 Band edge

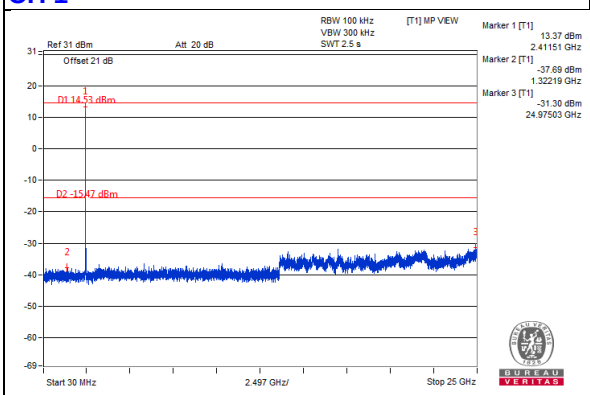


CH 11 Band edge

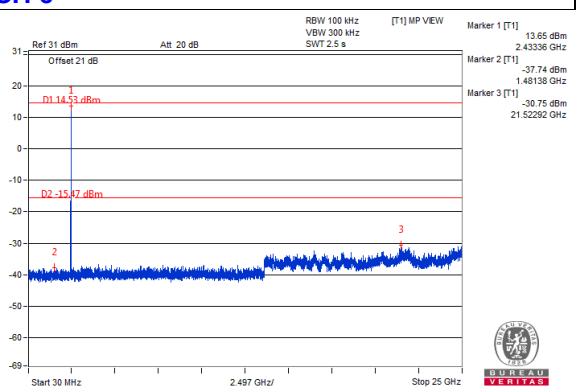


Chain 1

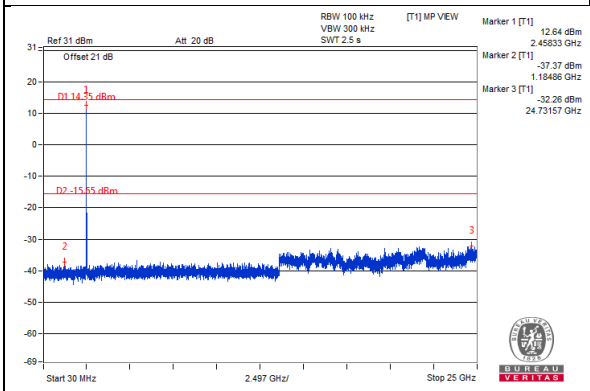
CH 1



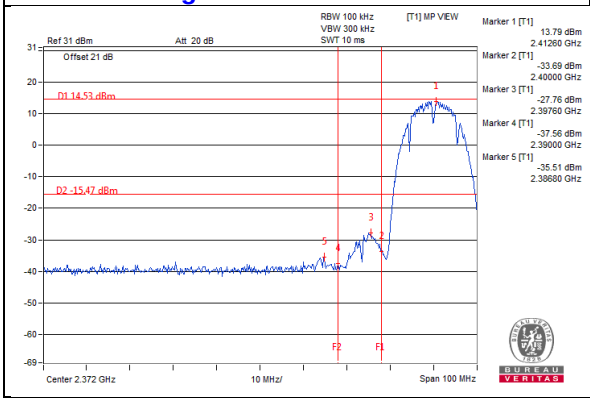
CH 6



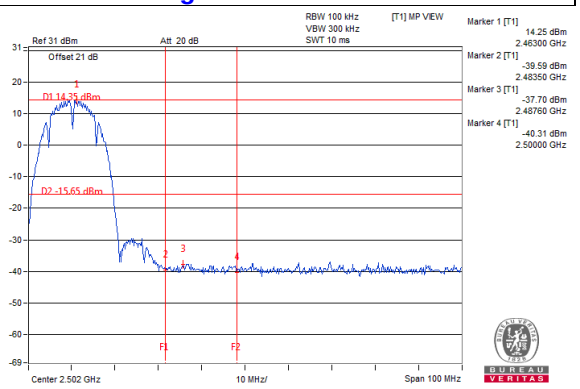
CH 11



CH 1 Band edge

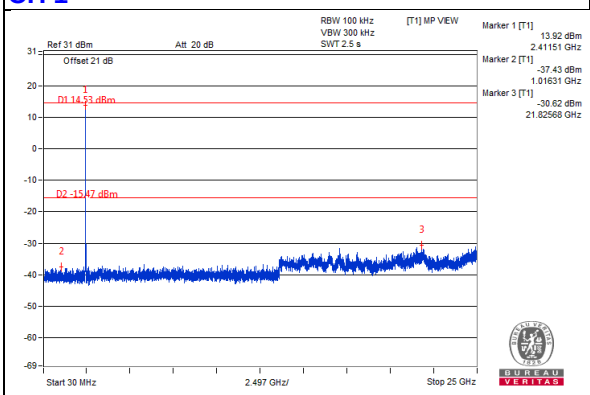


CH 11 Band edge

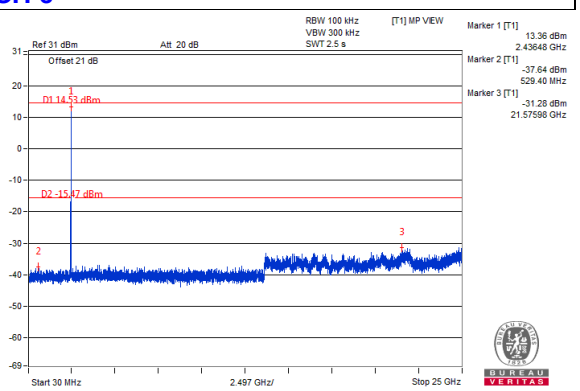


Chain 2

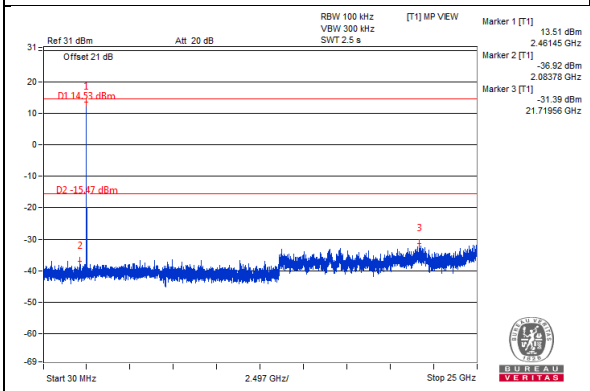
CH 1



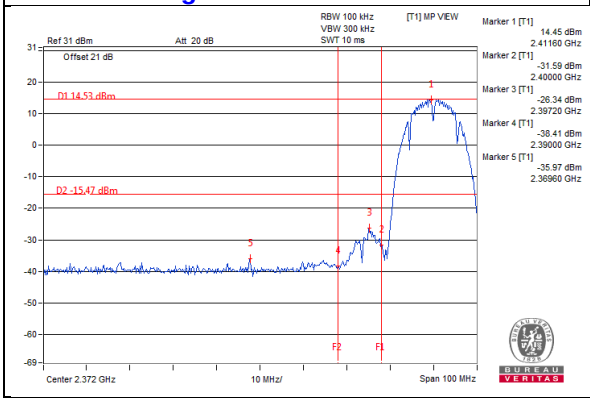
CH 6



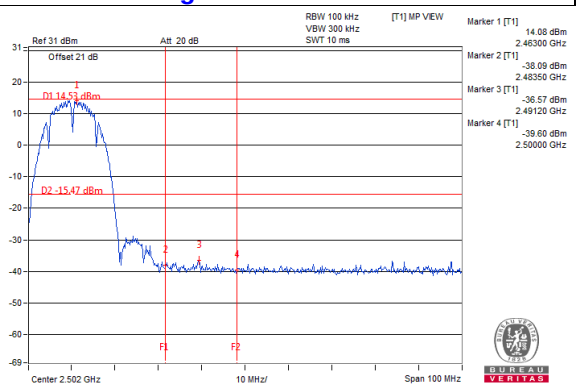
CH 11



CH 1 Band edge

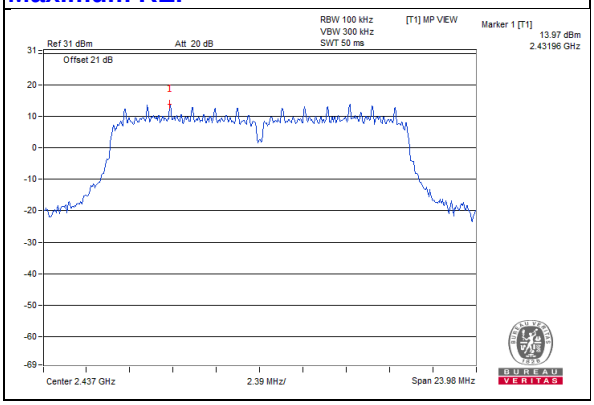


CH 11 Band edge



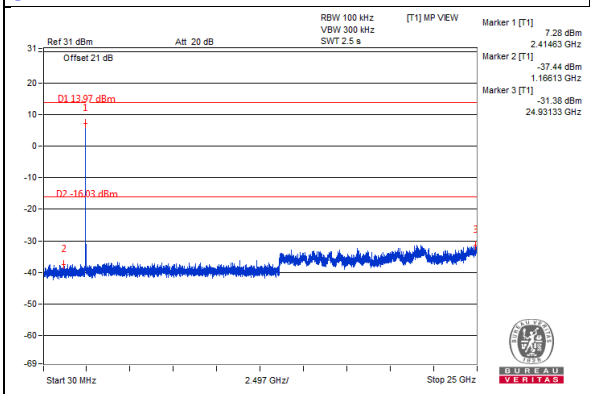
802.11g

Maximum REF

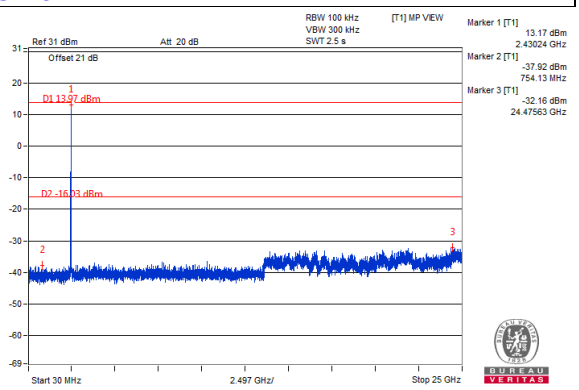


Chain 0

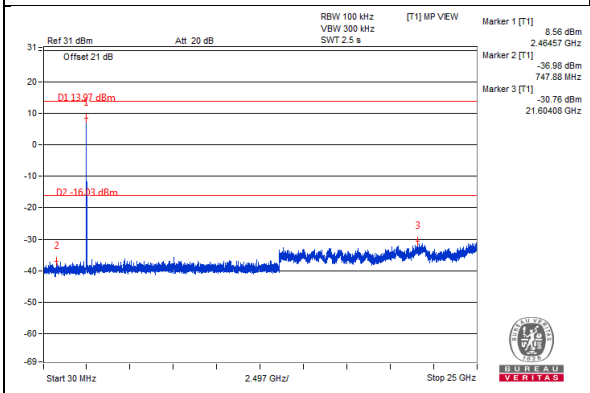
CH 1



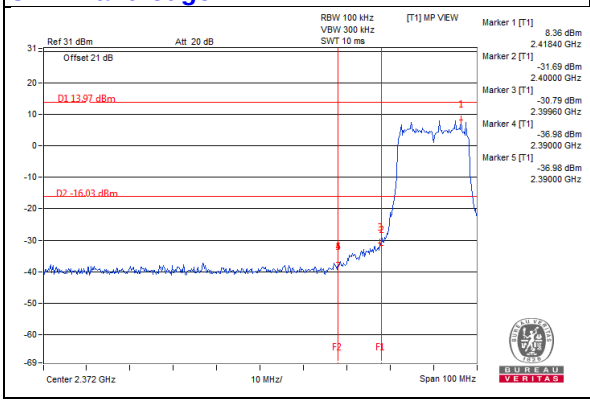
CH 6



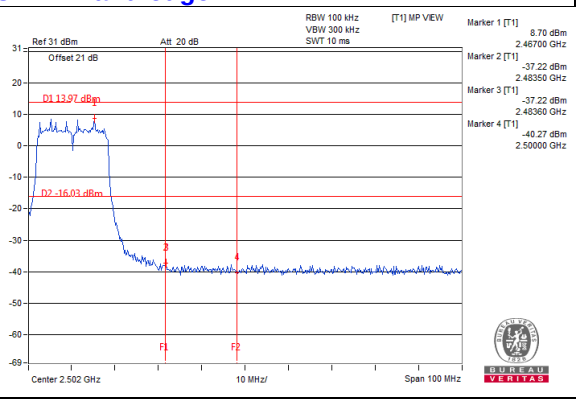
CH 11



CH 1 Band edge

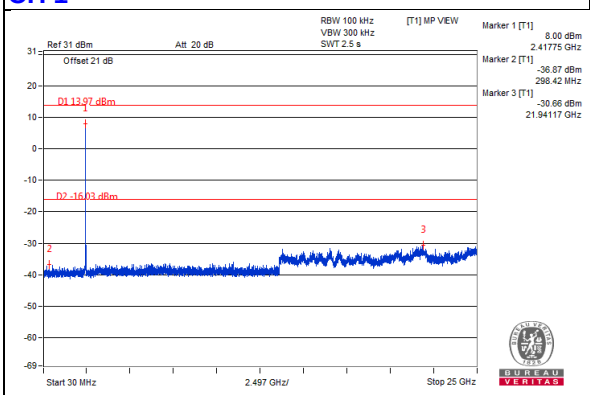


CH 11 Band edge

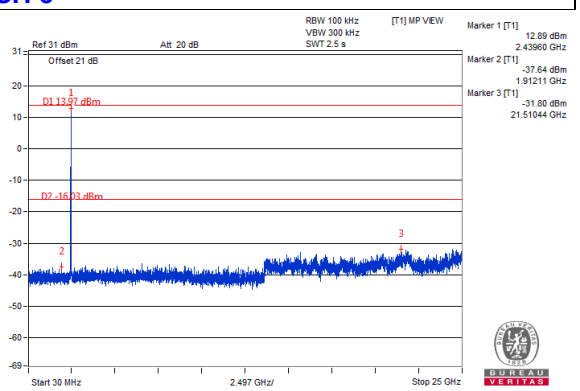


Chain 1

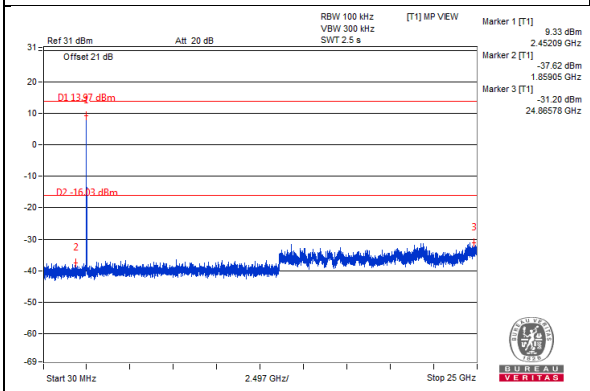
CH 1



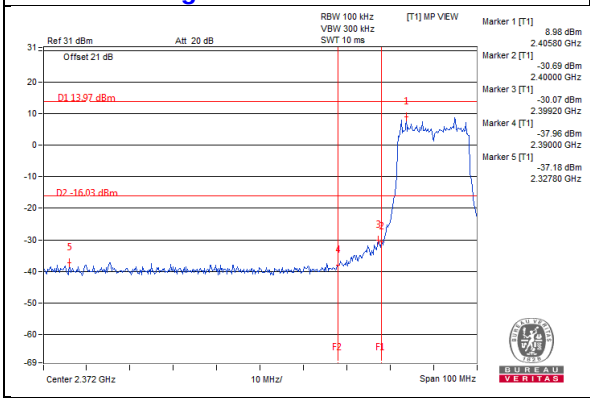
CH 6



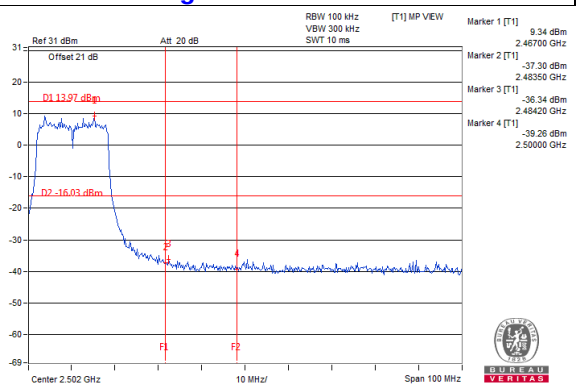
CH 11



CH 1 Band edge

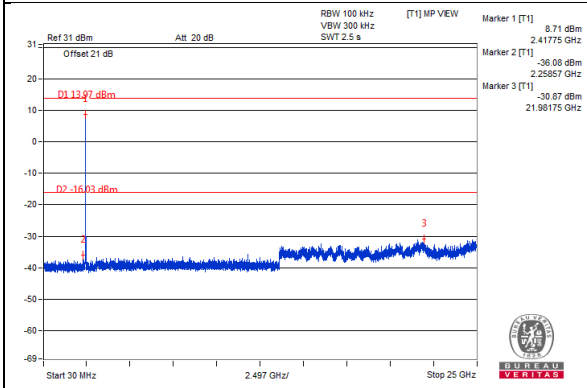


CH 11 Band edge

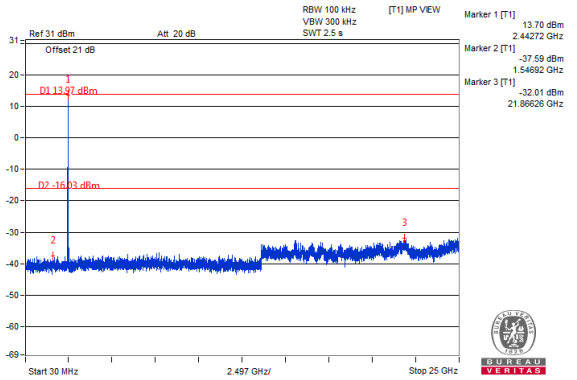


Chain 2

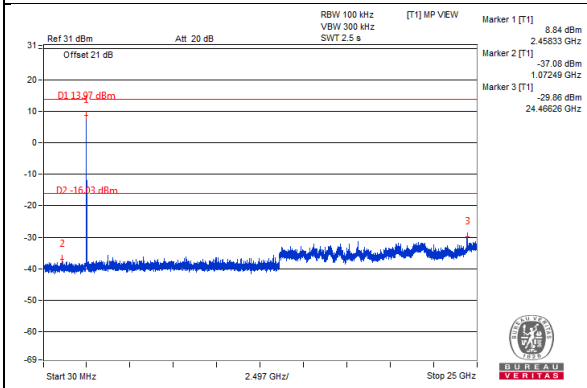
CH 1



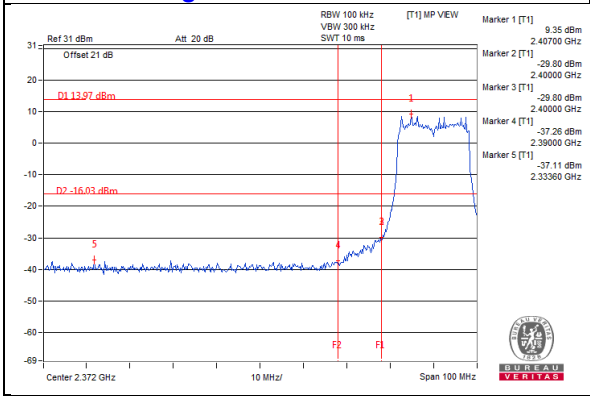
CH 6



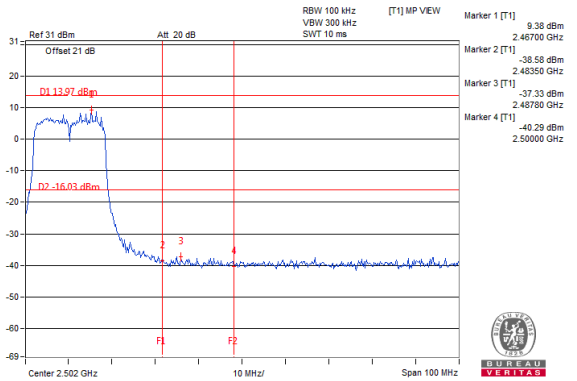
CH 11



CH 1 Band edge

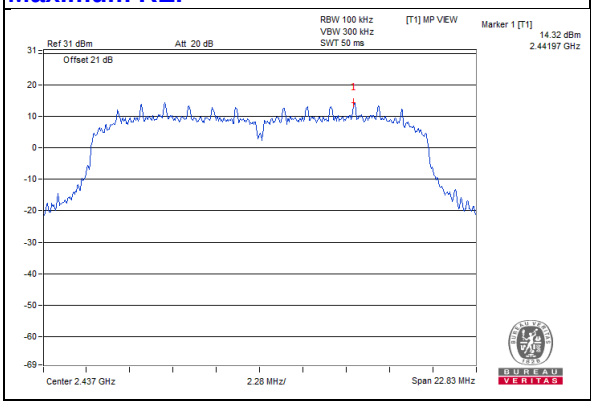


CH 11 Band edge



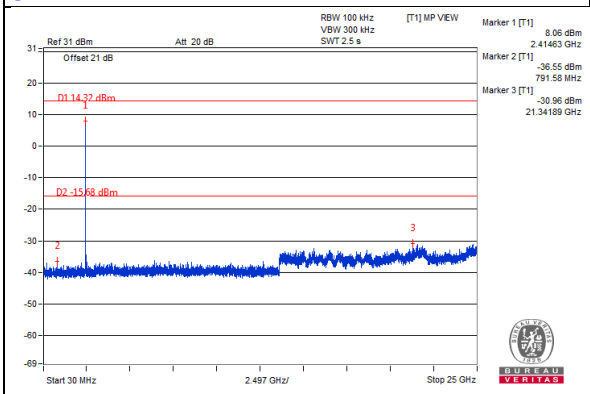
802.11n (HT20)

Maximum REF

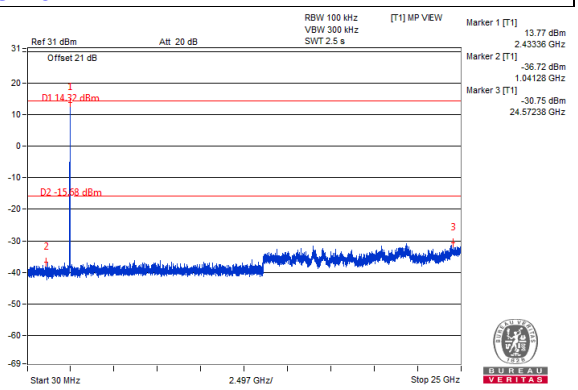


Chain 0

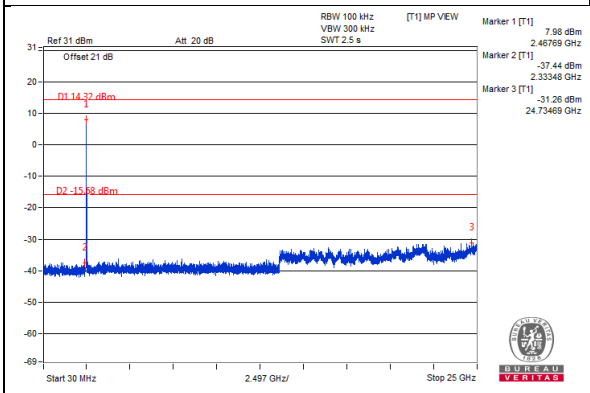
CH 1



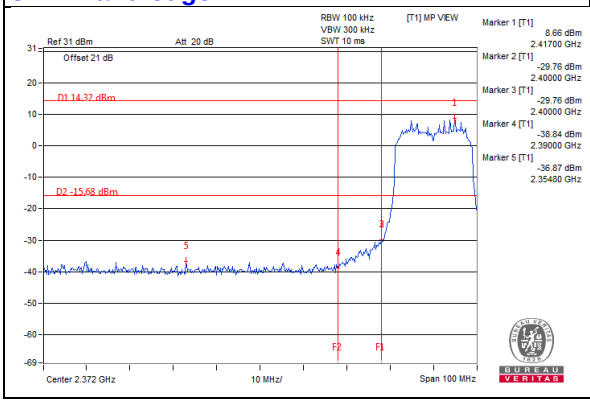
CH 6



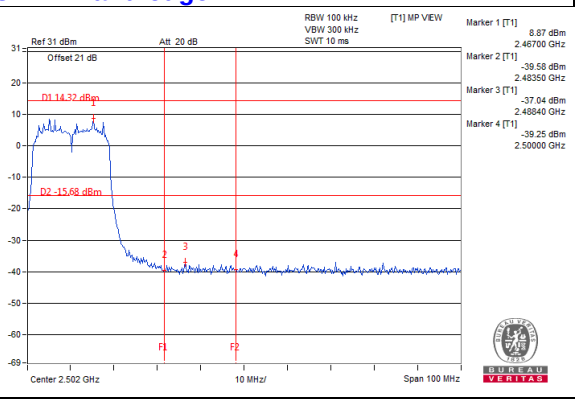
CH 11



CH 1 Band edge

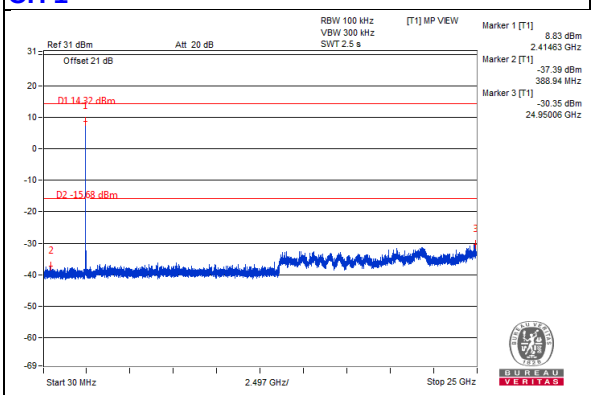


CH 11 Band edge

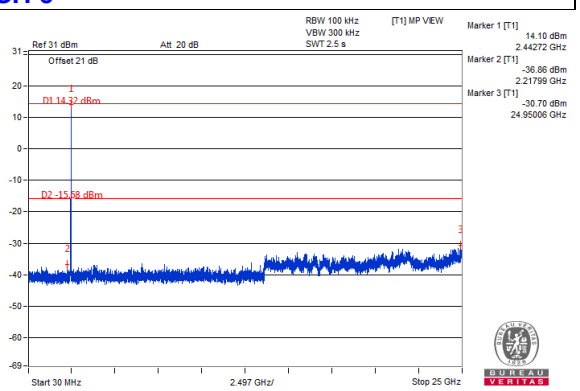


Chain 1

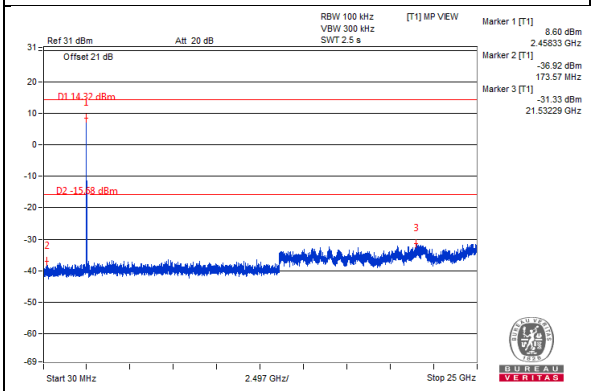
CH 1



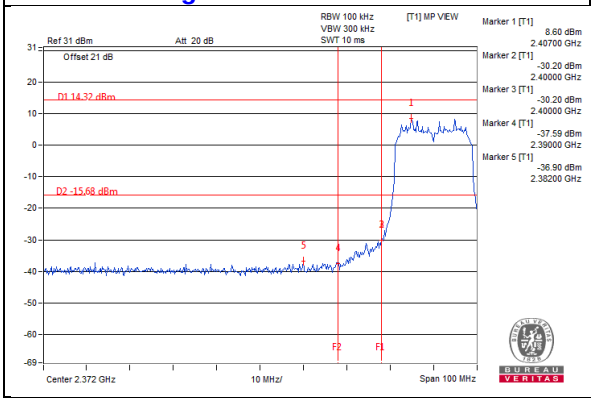
CH 6



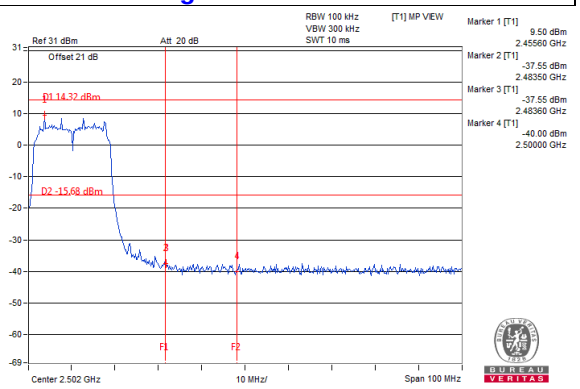
CH 11



CH 1 Band edge

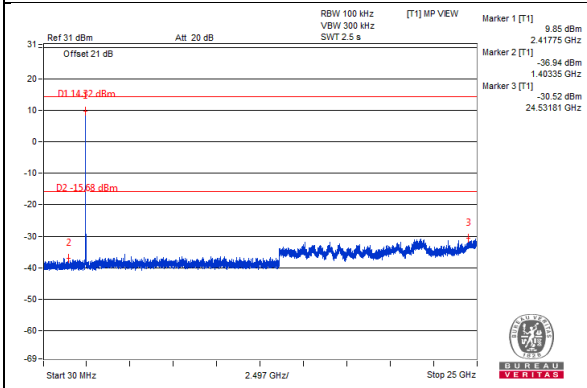


CH 11 Band edge

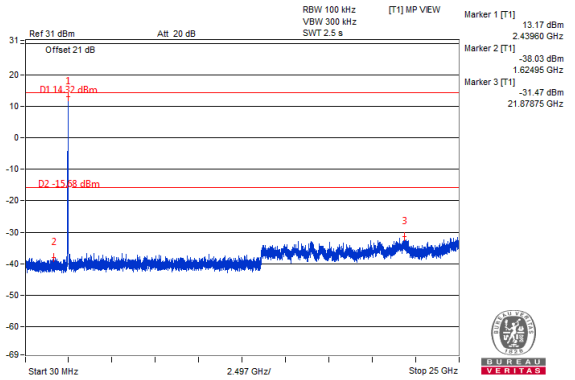


Chain 2

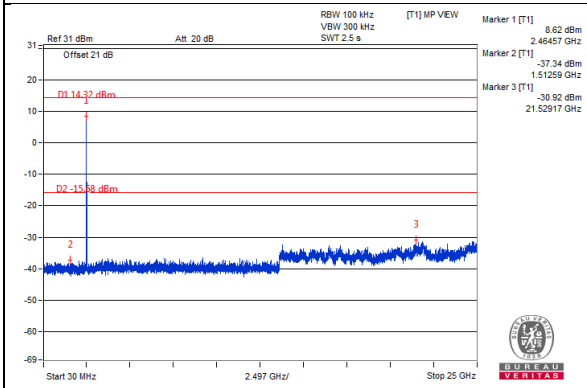
CH 1



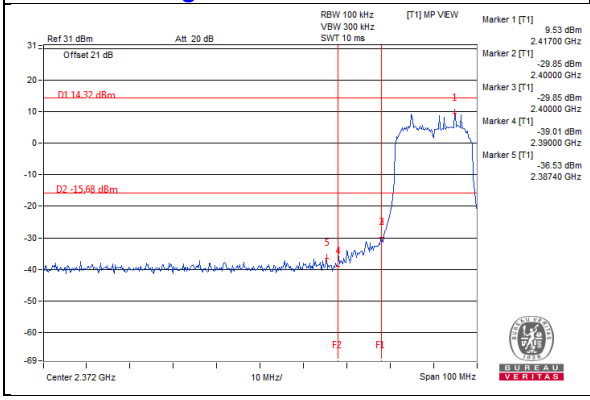
CH 6



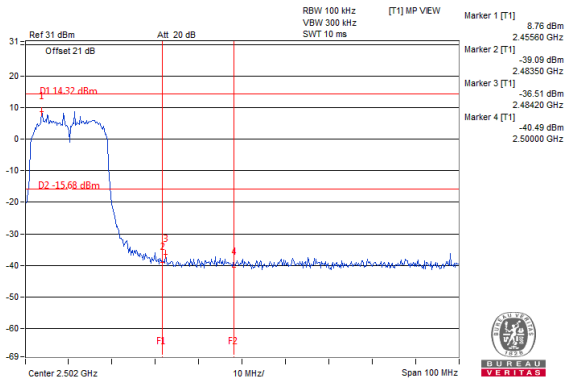
CH 11



CH 1 Band edge

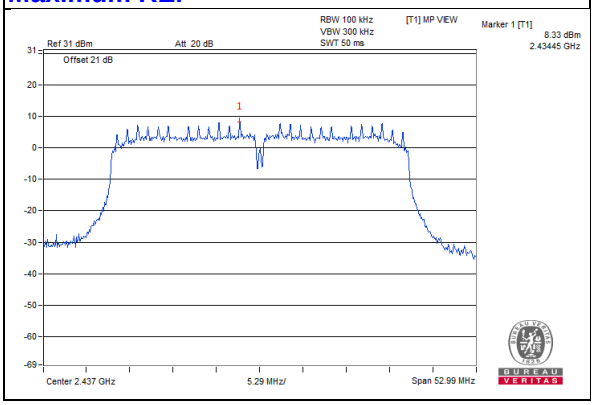


CH 11 Band edge



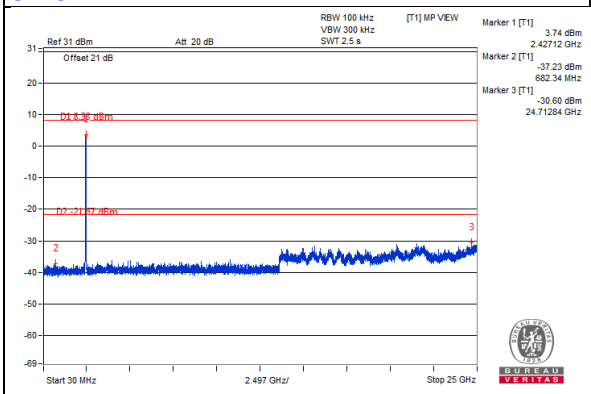
802.11n (HT40)

Maximum REF

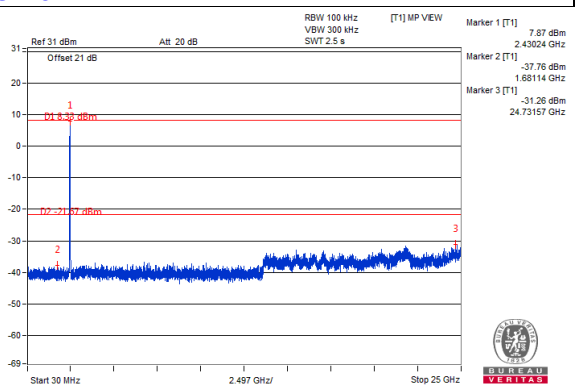


Chain 0

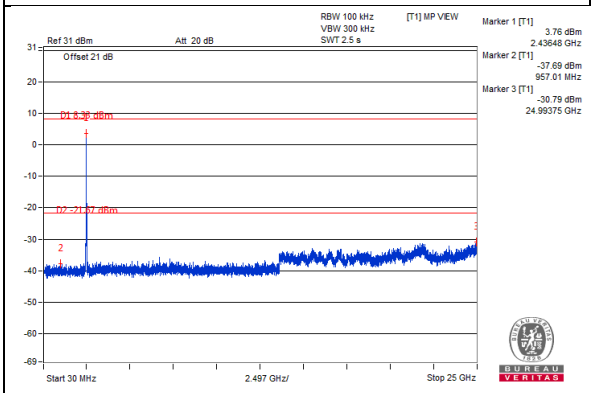
CH 3



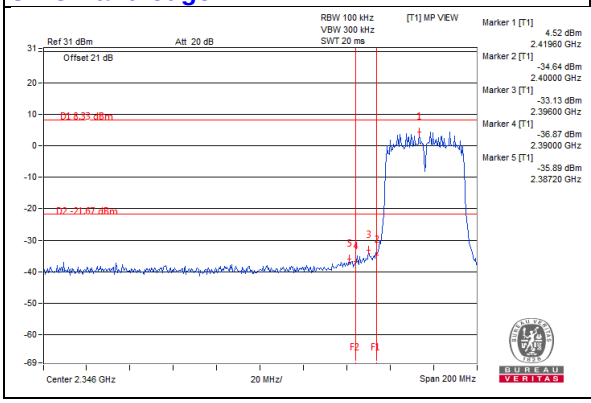
CH 6



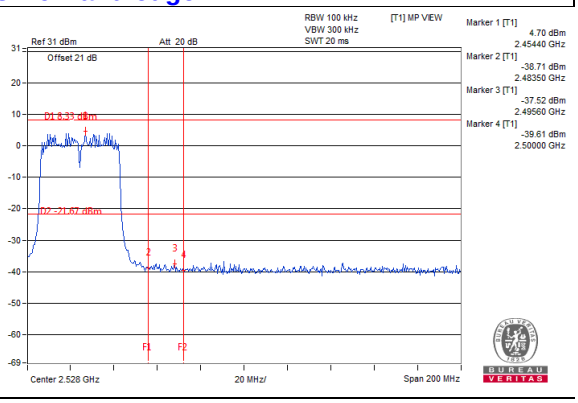
CH 9



CH 3 Band edge

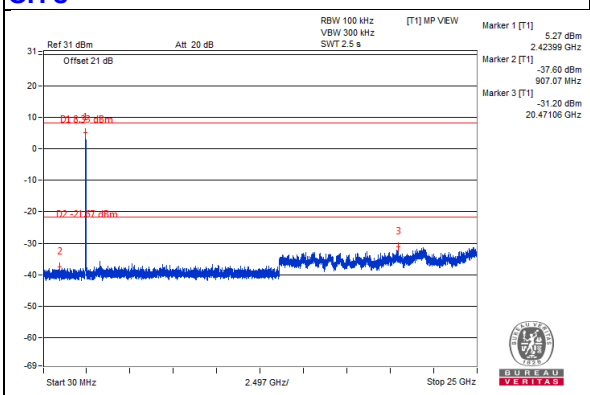


CH 9 Band edge

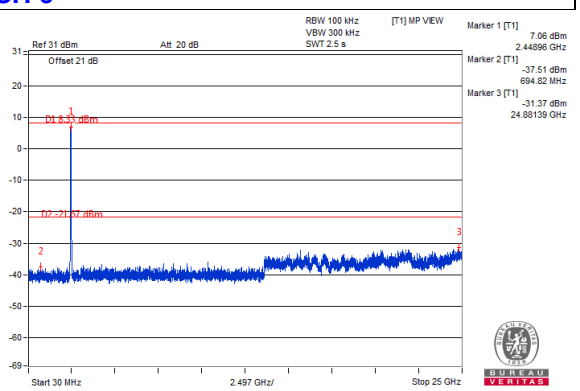


Chain 1

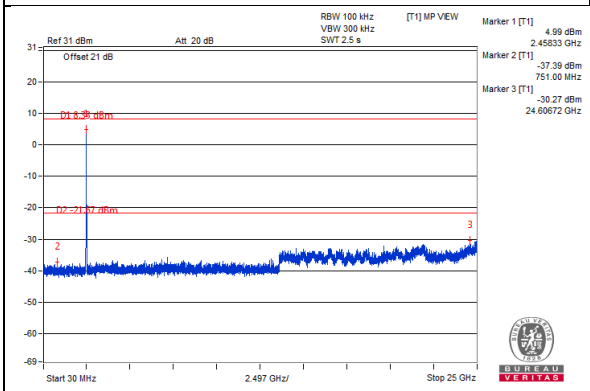
CH 3



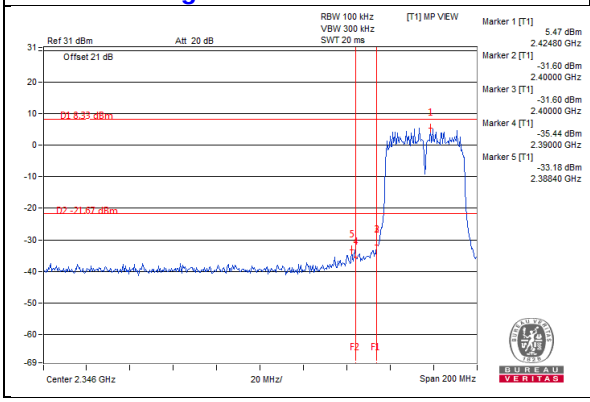
CH 6



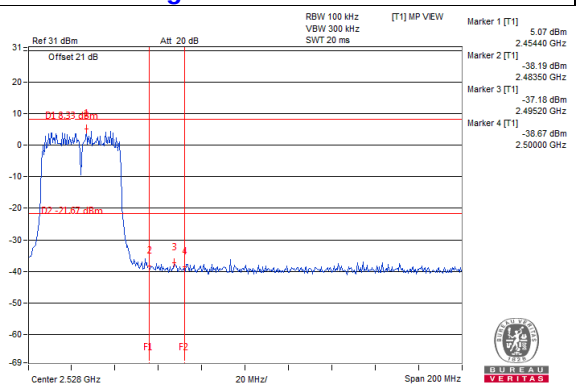
CH 9



CH 3 Band edge

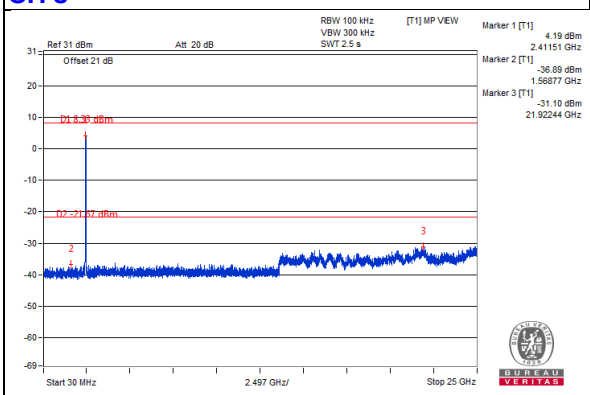


CH 9 Band edge

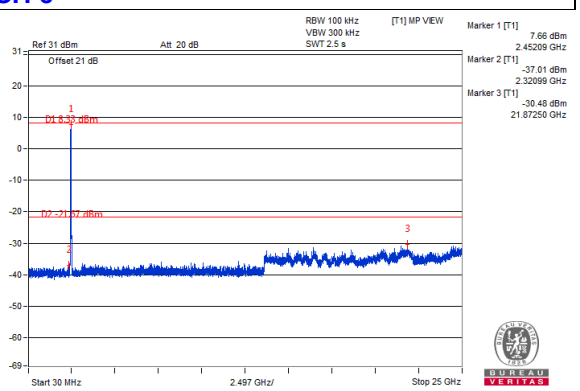


Chain 2

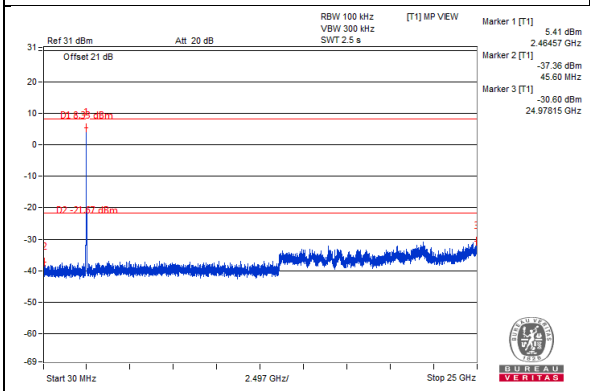
CH 3



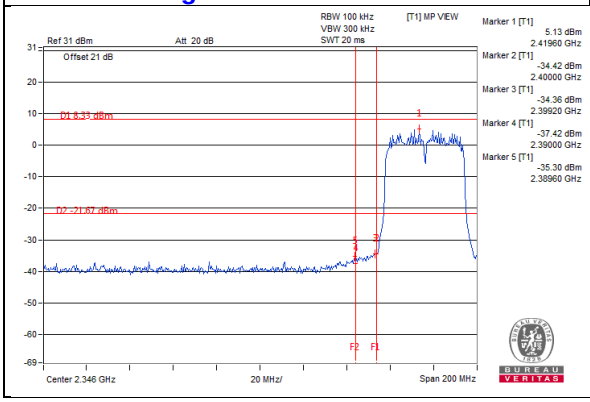
CH 6



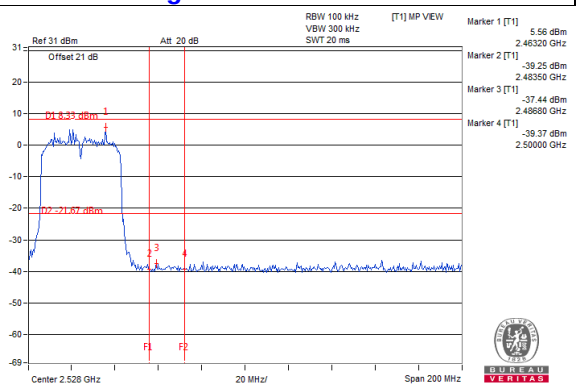
CH 9



CH 3 Band edge



CH 9 Band edge



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 ---