

FCC Test Report

Report No.: RF180129E01

FCC ID: HEDSSW2AC2600

Test Model: SS-W2-AC2600

Received Date: Jan. 29, 2018

Test Date: Feb. 05 to 14, 2018

Issued Date: Feb. 26, 2018

Applicant: Accton Technology Corporation

Address: No.1, Creation Rd. III, Science-based Industrial Park, Hsinchu, Taiwan, R.O.C.

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

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

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

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



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

Table of Contents

Release Control Record	4
1 Certificate of Conformity.....	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Modification Record	6
3 General Information.....	7
3.1 General Description of EUT	7
3.2 Description of Test Modes	10
3.2.1 Test Mode Applicability and Tested Channel Detail	11
3.3 Duty Cycle of Test Signal	13
3.4 Description of Support Units	14
3.4.1 Configuration of System under Test	15
3.5 General Description of Applied Standards	18
4 Test Types and Results	19
4.1 Radiated Emission and Bandedge Measurement.....	19
4.1.1 Limits of Radiated Emission and Bandedge Measurement	19
4.1.2 Test Instruments	20
4.1.3 Test Procedures.....	22
4.1.4 Deviation from Test Standard	22
4.1.5 Test Setup.....	23
4.1.6 EUT Operating Conditions.....	24
4.1.7 Test Results	25
4.2 Conducted Emission Measurement	48
4.2.1 Limits of Conducted Emission Measurement	48
4.2.2 Test Instruments	48
4.2.3 Test Procedures.....	49
4.2.4 Deviation from Test Standard	49
4.2.5 Test Setup.....	49
4.2.6 EUT Operating Conditions.....	49
4.2.7 Test Results (Mode 1).....	50
4.2.8 Test Results (Mode 2).....	52
4.2.9 Test Results (Mode 3).....	54
4.3 6dB Bandwidth Measurement	56
4.3.1 Limits of 6dB Bandwidth Measurement	56
4.3.2 Test Setup.....	56
4.3.3 Test Instruments	56
4.3.4 Test Procedure	56
4.3.5 Deviation from Test Standard	56
4.3.6 EUT Operating Conditions.....	56
4.3.7 Test Results	57
4.4 Conducted Output Power Measurement.....	59
4.4.1 Limits of Conducted Output Power Measurement	59
4.4.2 Test Setup.....	59
4.4.3 Test Instruments	59
4.4.4 Test Procedures.....	59
4.4.5 Deviation from Test Standard	59
4.4.6 EUT Operating Conditions.....	59
4.4.7 Test Results	60
4.5 Power Spectral Density Measurement.....	62
4.5.1 Limits of Power Spectral Density Measurement	62
4.5.2 Test Setup.....	62
4.5.3 Test Instruments	62
4.5.4 Test Procedure	62

4.5.5	Deviation from Test Standard	62
4.5.6	EUT Operating Condition	62
4.5.7	Test Results	63
4.6	Conducted Out of Band Emission Measurement	68
4.6.1	Limits of Conducted Out of Band Emission Measurement.....	68
4.6.2	Test Setup.....	68
4.6.3	Test Instruments	68
4.6.4	Test Procedure	68
4.6.5	Deviation from Test Standard	68
4.6.6	EUT Operating Condition	68
4.6.7	Test Results	68
5	Pictures of Test Arrangements.....	93
	Appendix – Information on the Testing Laboratories	94

Release Control Record

Issue No.	Description	Date Issued
RF180129E01	Original release.	Feb. 26, 2018

1 Certificate of Conformity

Product: SunSpot Wave 2

Brand: IgniteNet

Test Model: SS-W2-AC2600

Sample Status: ENGINEERING SAMPLE

Applicant: Accton Technology Corporation

Test Date: Feb. 05 to 14, 2018

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

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

Prepared by : Phoenix Huang , **Date:** Feb. 26, 2018
Phoenix Huang / Specialist

Approved by : May Chen , **Date:** Feb. 26, 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 -0.3dB at 21.83959MHz.
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 and 2483.50MHz.
15.247(d)	Antenna Port Emission	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	Antenna connector is i-pex 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	5.10 dB
	6GHz ~ 18GHz	4.85 dB
	18GHz ~ 40GHz	5.24 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	SunSpot Wave 2
Brand	IgniteNet
Test Model	SS-W2-AC2600
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	12Vdc from power adapter or 55Vdc from POE
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode
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: 5.18~ 5.24GHz, 5.745 ~ 5.825GHz
Number of Channel	2.4GHz: 802.11b, 802.11g, 802.11n (HT20): 11 802.11n (HT40): 7 5GHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 9 802.11n (HT40), 802.11ac (VHT40): 4 802.11ac (VHT80): 2 802.11ac (VHT80+80): 1 set
Output Power	2.412 ~ 2.462GHz: 661.408mW 5.18 ~ 5.24GHz: 319.264mW 5.745 ~ 5.825GHz: 649.931mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x1
Data Cable Supplied	NA

Note:

1. This device must needs installed by professional service personnel.
2. Simultaneously transmission condition.

Condition	Technology	
1	WLAN 2.4GHz	WLAN 5GHz

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

3. The EUT must be supplied with a power adapter or POE (only for test not for sale) as following table:

Adapter			
No.	Brand	Model No.	Spec.
1	APD	WA-24Q12FU	Input: 100-240Vac, 50~60Hz, 0.7A Output: 12Vdc, 2.0A DC output cable (Unshielded, 1.8m)
2	MASS POWER	NBS12E120100VU	Input: 100-240Vac, 50/60Hz, 0.3A Output: 12Vdc, 1.0A DC output cable (Unshielded, 1.8m)
POE (Only for test not for sale)			
Brand	Model No.	Spec.	
Meraki 802.3at	MA-INJ-5	Input: 100-240Vac, 50-60Hz, 1.5A Output: 55Vdc, 0.63A	

Note: From above adapters and POE, the radiated emission worst case was found in **POE**. Therefore only the test data of the modes were recorded in this report individually.

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

Antenna No.	Brand	Model No.	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
1	NA	NA	5.7	2.4~2.4835	PCB	i-pex
			7.9	5.15~5.25		
			7.7	5.25~5.35		
			6	5.47~5.725		
			5.9	5.725~5.85		
2	NA	NA	6.5	2.4~2.4835	PCB	i-pex
			8	5.15~5.25		
			8	5.25~5.35		
			7.7	5.47~5.725		
			7.8	5.725~5.85		
3	NA	NA	5.8	2.4~2.4835	PCB	i-pex
			7.8	5.15~5.25		
			8	5.25~5.35		
			5.7	5.47~5.725		
			7.1	5.725~5.85		
4	NA	NA	5	2.4~2.4835	PCB	i-pex
			6.7	5.15~5.25		
			6.5	5.25~5.35		
			5.5	5.47~5.725		
			7.4	5.725~5.85		

5. The EUT incorporates a MIMO function.

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

6. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

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

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

7 channels are provided for 802.11n (HT40):

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

3.2.1 Test Mode Applicability and Tested Channel Detail

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

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: 1. The EUT had been pre-tested on the positioned of each 2 axis. The worst case was found when positioned on **Y-plane**.
2. "-" means no effect.

Radiated Emission Test (Above 1GHz):

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

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, 3, 4, 6, 9, 10, 11	OFDM	BPSK	6
802.11n (HT20)	1 to 11	1, 2, 3, 4, 6, 9, 10, 11	OFDM	BPSK	6.5
802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

Radiated Emission Test (Below 1GHz):

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

Mode	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
802.11b	1 to 11	6	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	6	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, 3, 4, 6, 9, 10, 11	OFDM	BPSK	6
802.11n (HT20)	1 to 11	1, 2, 3, 4, 6, 9, 10, 11	OFDM	BPSK	6.5
802.11n (HT40)	3 to 9	3, 6, 9	OFDM	BPSK	13.5

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE $\geq$ 1G	20deg. C, 62%RH	120Vac, 60Hz (System)	Eason Tseng
RE<1G	22deg. C, 61%RH	120Vac, 60Hz (System)	Eason Tseng
PLC	25deg. C, 70%RH	120Vac, 60Hz, 120Vac, 60Hz (System)	Andy Ho
APCM	14deg. C, 66%RH	120Vac, 60Hz (System)	Jyunchun Lin

3.3 Duty Cycle of Test Signal

If duty cycle of test signal is $\geq 98\%$, duty factor is not required.

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

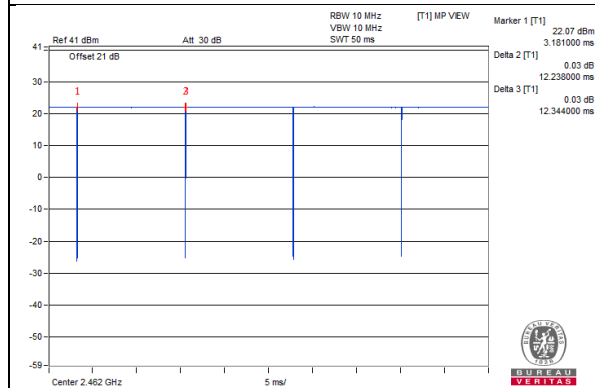
802.11b: Duty cycle = 12.238 ms/12.344 ms = 0.991

802.11g: Duty cycle = 2.023 ms/2.099 ms = 0.964, Duty factor = $10 * \log(1/\text{Duty cycle}) = 0.16$

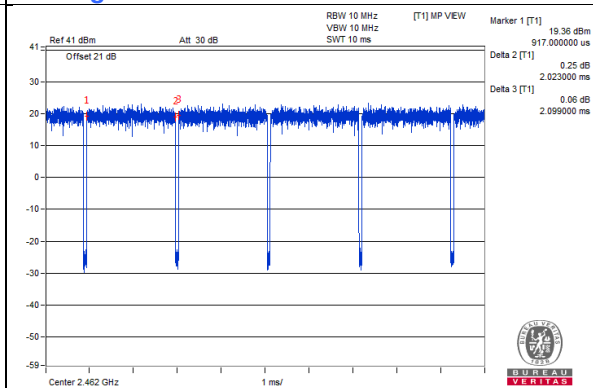
802.11n (HT20): Duty cycle = 4.95 ms/5.032 ms = 0.984

802.11n (HT40): Duty cycle = 2.401 ms/2.494 ms = 0.963, Duty factor = $10 * \log(1/\text{Duty cycle}) = 0.17$

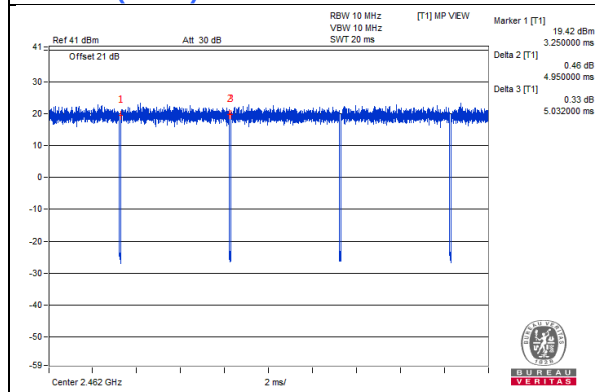
802.11b



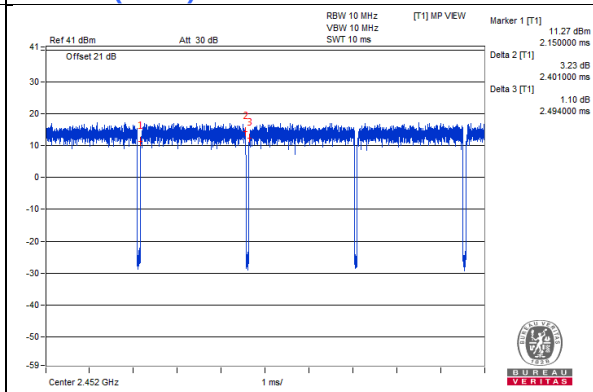
802.11g



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.	POE	Motorola	PD-6555G300	NA	NA	Provided by client
B.	Laptop	DELL	E5430	GM1SKV1	FCC DoC	Provided by Lab
C.	Laptop	DELL	E6420	B92T3R1	FCC DoC	Provided by Lab

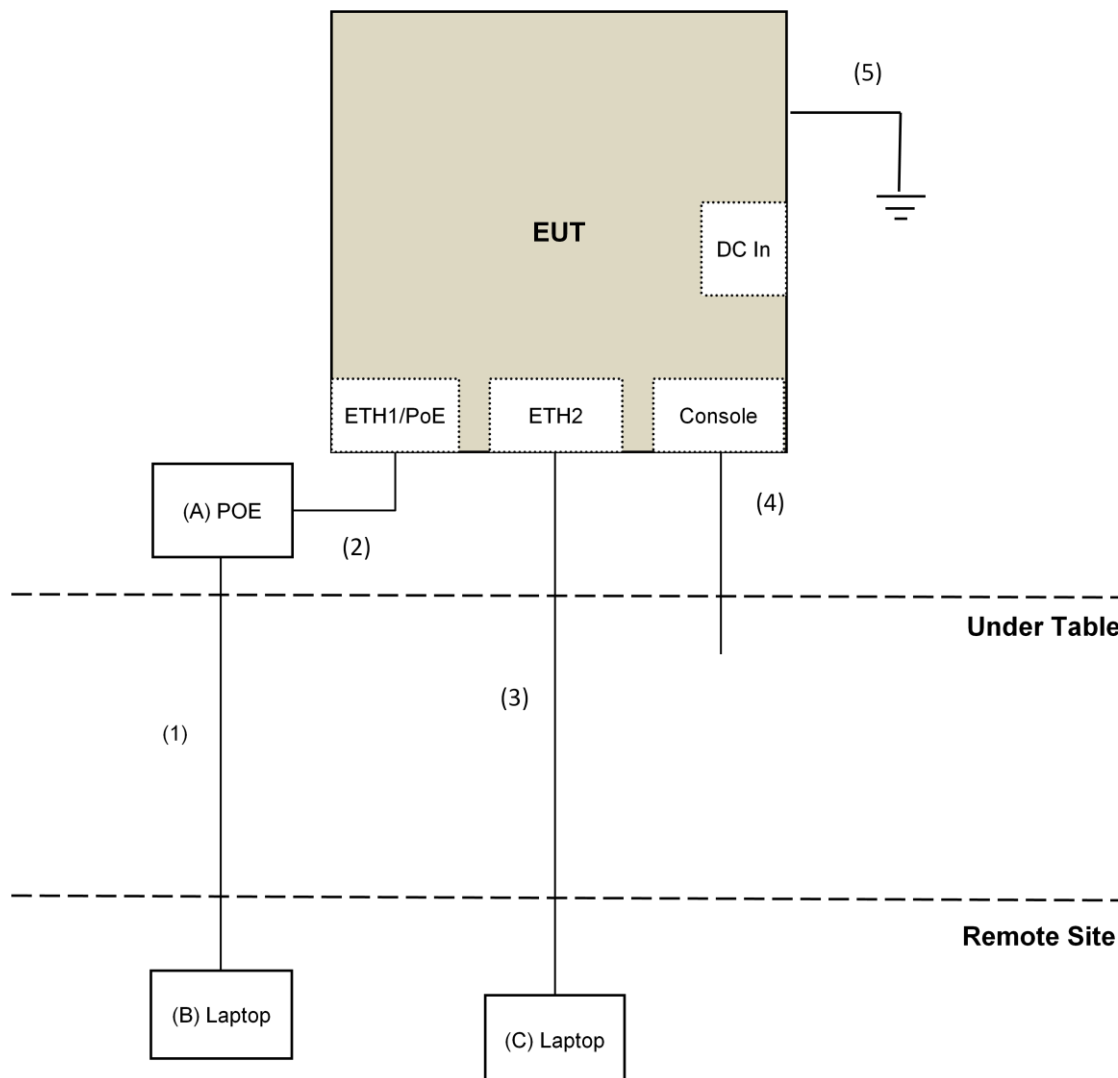
Note:

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

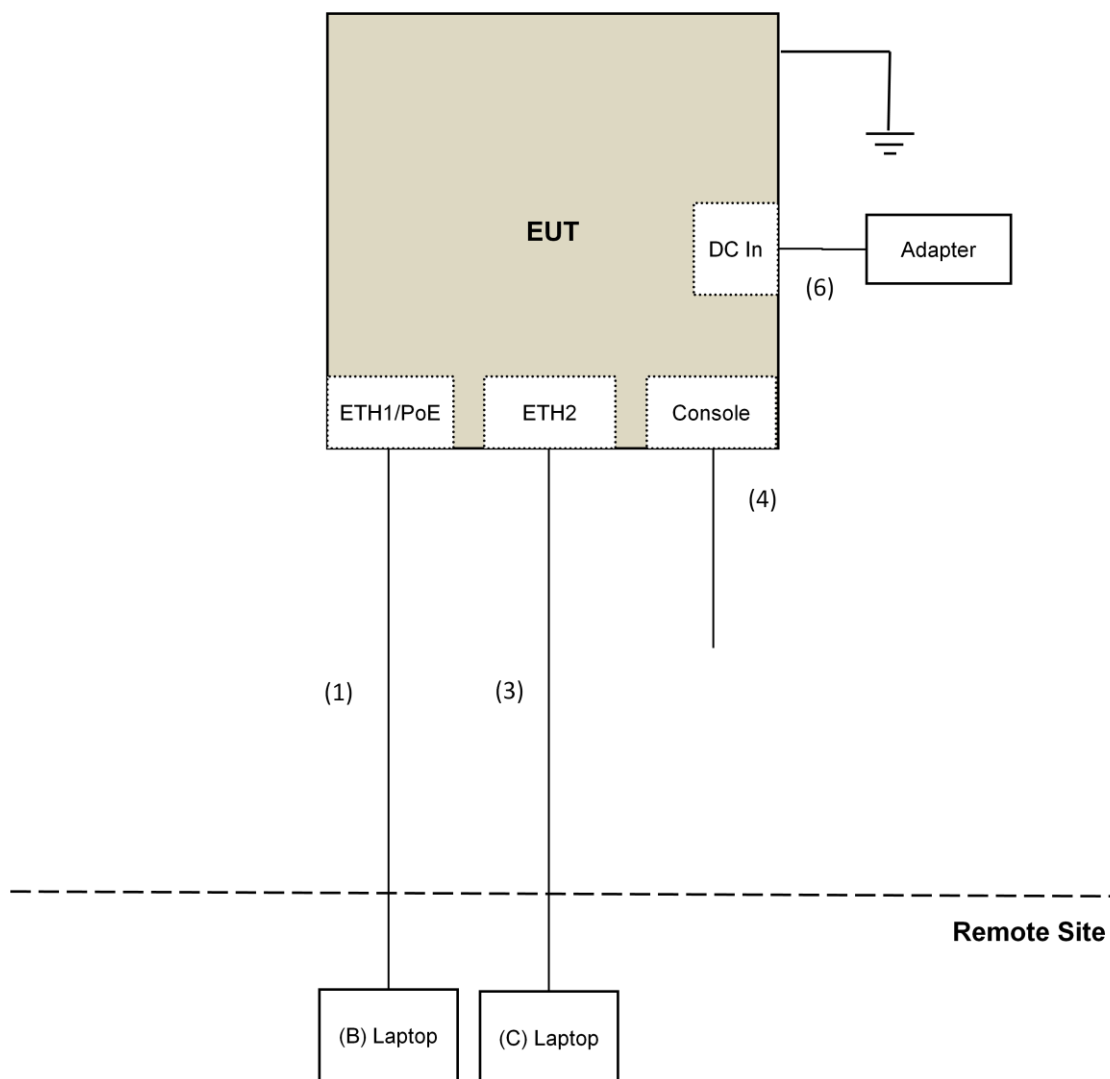
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ-45 Cable	1	10	No	0	Provided by Lab
2.	RJ-45 Cable	1	3	No	0	Provided by Lab
3.	RJ-45 Cable	1	10	No	0	Provided by Lab
4.	Console Cable	1	1.6	No	0	Provided by Lab
5.	GND	1	3	No	0	Provided by Lab
6.	DC Cable	1	1.8	No	0	Supplied by client

3.4.1 Configuration of System under Test

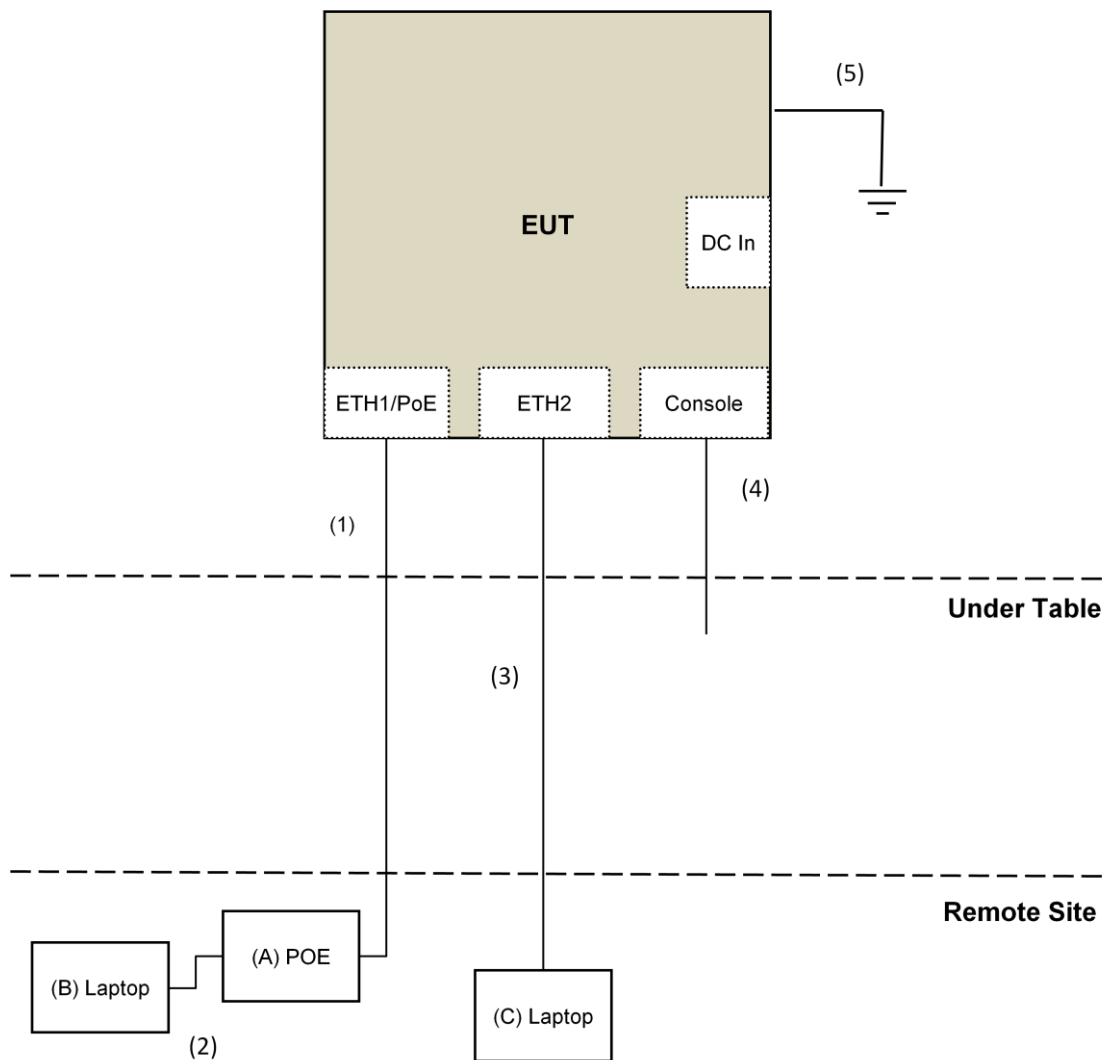
For Conducted Emission (Mode 1):



For Conducted Emission (Mode 2-3):



For Other test items:



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 DTS Meas Guidance v04

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 30dB below the highest level of the desired power:

Frequencies (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

Note:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.1.2 Test Instruments

For Below 1GHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	July 12, 2017	July 11, 2018
Loop Antenna(*) TESEQ	HLA 6121	45745	May 19, 2017	May 18, 2018
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-05	May 06, 2017	May 05, 2018
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 29, 2017	Nov. 28, 2018
RF Cable	8D	966-3-1 966-3-2 966-3-3	Apr. 01, 2017	Mar. 31, 2018
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Oct. 03, 2017	Oct. 02, 2018
Software	ADT_Radiated _V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. *The 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: Feb. 14, 2018

For Above 1GHz:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 08, 2017	July 07, 2018
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Dec. 12, 2017	Dec. 11, 2018
Pre-Amplifier EMCI	EMC12630SE	980385	Jan. 29, 2018	Jan. 28, 2019
RF Cable	EMC104-SM-SM-1200	160923	Jan. 29, 2018	Jan. 28, 2019
	EMC104-SM-SM-2000	150318	Jan. 29, 2018	Jan. 28, 2019
	EMC104-SM-SM-5000	150321	Jan. 29, 2018	Jan. 28, 2019
Pre-Amplifier EMCI	EMC184045S E	980387	Jan. 29, 2018	Jan. 28, 2019
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Dec. 14, 2017	Dec. 13, 2018
RF Cable	EMC102-KM-KM-1200	160925	Jan. 29, 2018	Jan. 28, 2019
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208410	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP02	NA	NA
Spectrum Analyzer Agilent	E4446A	MY48250254	Nov. 21, 2017	Nov. 20, 2018
Power meter Anritsu	ML2495A	1014008	May 11, 2017	May 10, 2018
Power sensor Anritsu	MA2411B	0917122	May 11, 2017	May 10, 2018

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 4.
3. The CANADA Site Registration No. is 20331-2
4. Tested Date: Feb. 05, 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. Both X and Y axes of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

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

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

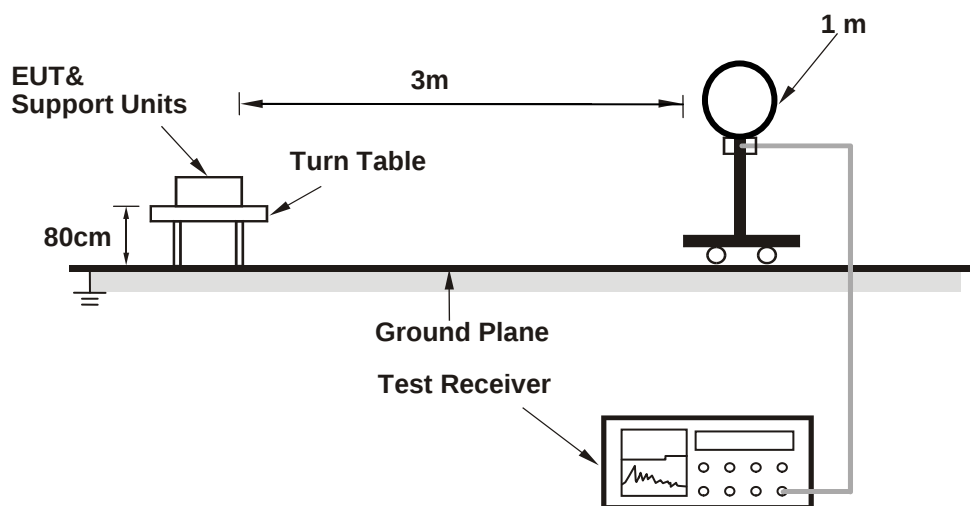
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

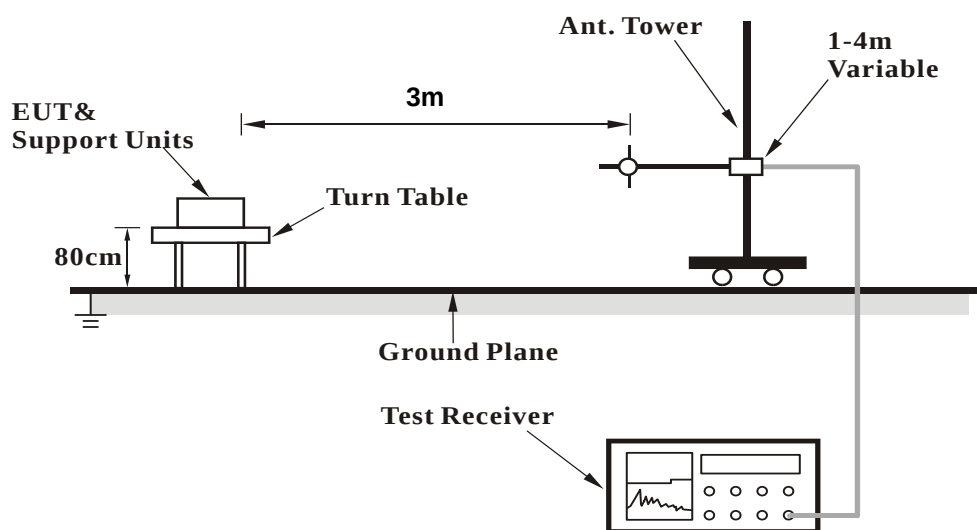
No deviation.

4.1.5 Test Setup

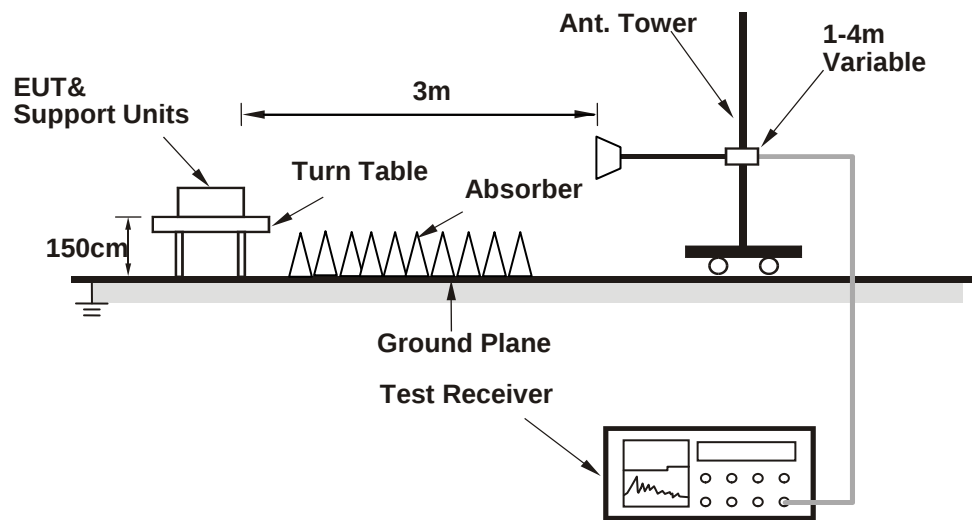
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

- Connected the EUT with the Laptop which is placed on remote site.
- Controlling software (QDART-Connectivity100038.exe) 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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.2 PK	74.0	-13.8	1.37 H	360	61.2	-1.0
2	2390.00	53.9 AV	54.0	-0.1	1.37 H	360	54.9	-1.0
3	*2412.00	116.1 PK			1.37 H	360	117.1	-1.0
4	*2412.00	113.9 AV			1.37 H	360	114.9	-1.0
5	4824.00	44.3 PK	74.0	-29.7	1.52 H	323	41.2	3.1
6	4824.00	41.1 AV	54.0	-12.9	1.52 H	323	38.0	3.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.4 PK	74.0	-14.6	1.70 V	353	60.4	-1.0
2	2390.00	53.2 AV	54.0	-0.8	1.70 V	353	54.2	-1.0
3	*2412.00	113.8 PK			1.70 V	353	114.8	-1.0
4	*2412.00	112.0 AV			1.70 V	353	113.0	-1.0
5	4824.00	47.2 PK	74.0	-26.8	3.49 V	350	44.1	3.1
6	4824.00	45.1 AV	54.0	-8.9	3.49 V	350	42.0	3.1

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.3 PK	74.0	-13.7	1.22 H	355	61.3	-1.0
2	2390.00	53.9 AV	54.0	-0.1	1.22 H	355	54.9	-1.0
3	*2437.00	116.8 PK			1.22 H	355	118.2	-1.4
4	*2437.00	114.9 AV			1.22 H	355	116.3	-1.4
5	2483.50	57.4 PK	74.0	-16.6	1.22 H	355	58.6	-1.2
6	2483.50	46.3 AV	54.0	-7.7	1.22 H	355	47.5	-1.2
7	4874.00	49.7 PK	74.0	-24.3	1.56 H	325	46.4	3.3
8	4874.00	47.5 AV	54.0	-6.5	1.56 H	325	44.2	3.3
9	7311.00	44.6 PK	74.0	-29.4	1.06 H	252	34.6	10.0
10	7311.00	38.1 AV	54.0	-15.9	1.06 H	252	28.1	10.0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.5 PK	74.0	-14.5	1.68 V	339	60.5	-1.0
2	2390.00	53.2 AV	54.0	-0.8	1.68 V	339	54.2	-1.0
3	*2437.00	114.5 PK			1.68 V	339	115.9	-1.4
4	*2437.00	113.0 AV			1.68 V	339	114.4	-1.4
5	2483.50	57.2 PK	74.0	-16.8	1.68 V	339	58.4	-1.2
6	2483.50	46.0 AV	54.0	-8.0	1.68 V	339	47.2	-1.2
7	4874.00	52.5 PK	74.0	-21.5	3.49 V	342	49.2	3.3
8	4874.00	51.6 AV	54.0	-2.4	3.49 V	342	48.3	3.3
9	7311.00	46.0 PK	74.0	-28.0	1.67 V	310	36.0	10.0
10	7311.00	41.0 AV	54.0	-13.0	1.67 V	310	31.0	10.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	116.1 PK			1.74 H	354	117.5	-1.4
2	*2462.00	113.7 AV			1.74 H	354	115.1	-1.4
3	2483.50	62.1 PK	74.0	-11.9	1.74 H	354	63.3	-1.2
4	2483.50	53.9 AV	54.0	-0.1	1.74 H	354	55.1	-1.2
5	4924.00	44.4 PK	74.0	-29.6	1.55 H	313	40.9	3.5
6	4924.00	41.2 AV	54.0	-12.8	1.55 H	313	37.7	3.5
7	7386.00	46.7 PK	74.0	-27.3	1.03 H	260	36.5	10.2
8	7386.00	40.4 AV	54.0	-13.6	1.03 H	260	30.2	10.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.8 PK			1.72 V	337	115.2	-1.4
2	*2462.00	111.8 AV			1.72 V	337	113.2	-1.4
3	2483.50	61.9 PK	74.0	-12.1	1.72 V	337	63.1	-1.2
4	2483.50	53.6 AV	54.0	-0.4	1.72 V	337	54.8	-1.2
5	4924.00	47.2 PK	74.0	-26.8	3.48 V	354	43.7	3.5
6	4924.00	45.3 AV	54.0	-8.7	3.48 V	354	41.8	3.5
7	7386.00	48.1 PK	74.0	-25.9	1.63 V	295	37.9	10.2
8	7386.00	43.3 AV	54.0	-10.7	1.63 V	295	33.1	10.2

REMARKS:

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

802.11g

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.3 PK	74.0	-7.7	2.28 H	349	67.3	-1.0
2	2390.00	53.8 AV	54.0	-0.2	2.28 H	349	54.8	-1.0
3	*2412.00	118.0 PK			2.28 H	349	119.0	-1.0
4	*2412.00	106.4 AV			2.28 H	349	107.4	-1.0
5	4824.00	32.1 PK	74.0	-41.9	1.59 H	309	29.0	3.1
6	4824.00	29.1 AV	54.0	-24.9	1.59 H	309	26.0	3.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.5 PK	74.0	-8.5	1.63 V	342	66.5	-1.0
2	2390.00	53.1 AV	54.0	-0.9	1.63 V	342	54.1	-1.0
3	*2412.00	115.7 PK			1.63 V	342	116.7	-1.0
4	*2412.00	104.5 AV			1.63 V	342	105.5	-1.0
5	4824.00	34.6 PK	74.0	-39.4	3.42 V	332	31.5	3.1
6	4824.00	33.2 AV	54.0	-20.8	3.42 V	332	30.1	3.1

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.0 PK	74.0	-5.0	2.08 H	358	70.0	-1.0
2	2390.00	53.8 AV	54.0	-0.2	2.08 H	358	54.8	-1.0
3	*2417.00	120.8 PK			2.08 H	358	121.9	-1.1
4	*2417.00	108.8 AV			2.08 H	358	109.9	-1.1
5	4834.00	33.3 PK	74.0	-40.7	1.60 H	307	30.2	3.1
6	4834.00	30.0 AV	54.0	-24.0	1.60 H	307	26.9	3.1
7	7251.00	37.3 PK	74.0	-36.7	1.01 H	266	27.6	9.7
8	7251.00	30.9 AV	54.0	-23.1	1.01 H	266	21.2	9.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.2 PK	74.0	-5.8	1.66 V	324	69.2	-1.0
2	2390.00	53.1 AV	54.0	-0.9	1.66 V	324	54.1	-1.0
3	*2417.00	118.5 PK			1.66 V	324	119.6	-1.1
4	*2417.00	106.9 AV			1.66 V	324	108.0	-1.1
5	4834.00	35.7 PK	74.0	-38.3	3.45 V	331	32.6	3.1
6	4834.00	34.6 AV	54.0	-19.4	3.45 V	331	31.5	3.1
7	7251.00	39.3 PK	74.0	-34.7	1.64 V	314	29.6	9.7
8	7251.00	34.0 AV	54.0	-20.0	1.64 V	314	24.3	9.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.2 PK	74.0	-4.8	2.12 H	348	70.2	-1.0
2	2390.00	53.9 AV	54.0	-0.1	2.12 H	348	54.9	-1.0
3	*2422.00	121.2 PK			2.12 H	348	122.5	-1.3
4	*2422.00	108.9 AV			2.12 H	348	110.2	-1.3
5	4844.00	33.5 PK	74.0	-40.5	1.54 H	297	30.4	3.1
6	4844.00	30.4 AV	54.0	-23.6	1.54 H	297	27.3	3.1
7	7266.00	36.9 PK	74.0	-37.1	1.06 H	272	27.1	9.8
8	7266.00	30.7 AV	54.0	-23.3	1.06 H	272	20.9	9.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.4 PK	74.0	-5.6	1.66 V	349	69.4	-1.0
2	2390.00	53.2 AV	54.0	-0.8	1.66 V	349	54.2	-1.0
3	*2422.00	118.9 PK			1.66 V	349	120.2	-1.3
4	*2422.00	107.0 AV			1.66 V	349	108.3	-1.3
5	4844.00	35.8 PK	74.0	-38.2	3.43 V	342	32.7	3.1
6	4844.00	34.5 AV	54.0	-19.5	3.43 V	342	31.4	3.1
7	7266.00	39.3 PK	74.0	-34.7	1.62 V	301	29.5	9.8
8	7266.00	33.7 AV	54.0	-20.3	1.62 V	301	23.9	9.8

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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.7 PK	74.0	-8.3	2.10 H	360	66.7	-1.0
2	2390.00	53.8 AV	54.0	-0.2	2.10 H	360	54.8	-1.0
3	*2427.00	121.6 PK			2.10 H	360	122.9	-1.3
4	*2427.00	109.7 AV			2.10 H	360	111.0	-1.3
5	4854.00	34.1 PK	74.0	-39.9	1.55 H	302	30.9	3.2
6	4854.00	30.8 AV	54.0	-23.2	1.55 H	302	27.6	3.2
7	7281.00	37.9 PK	74.0	-36.1	1.05 H	273	28.1	9.8
8	7281.00	31.8 AV	54.0	-22.2	1.05 H	273	22.0	9.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.9 PK	74.0	-9.1	1.63 V	335	65.9	-1.0
2	2390.00	53.1 AV	54.0	-0.9	1.63 V	335	54.1	-1.0
3	*2427.00	119.3 PK			1.63 V	335	120.6	-1.3
4	*2427.00	107.8 AV			1.63 V	335	109.1	-1.3
5	4854.00	36.2 PK	74.0	-37.8	3.47 V	330	33.0	3.2
6	4854.00	35.1 AV	54.0	-18.9	3.47 V	330	31.9	3.2
7	7281.00	40.2 PK	74.0	-33.8	1.65 V	287	30.4	9.8
8	7281.00	34.5 AV	54.0	-19.5	1.65 V	287	24.7	9.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.7 PK	74.0	-6.3	2.23 H	359	68.7	-1.0
2	2390.00	53.9 AV	54.0	-0.1	2.23 H	359	54.9	-1.0
3	*2437.00	123.6 PK			2.23 H	359	125.0	-1.4
4	*2437.00	112.5 AV			2.23 H	359	113.9	-1.4
5	2483.50	68.7 PK	74.0	-5.3	2.23 H	359	69.9	-1.2
6	2483.50	52.1 AV	54.0	-1.9	2.23 H	359	53.3	-1.2
7	4874.00	35.1 PK	74.0	-38.9	1.62 H	321	31.8	3.3
8	4874.00	31.9 AV	54.0	-22.1	1.62 H	321	28.6	3.3
9	7311.00	39.4 PK	74.0	-34.6	1.00 H	261	29.4	10.0
10	7311.00	33.2 AV	54.0	-20.8	1.00 H	261	23.2	10.0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.9 PK	74.0	-7.1	1.68 V	329	67.9	-1.0
2	2390.00	53.2 AV	54.0	-0.8	1.68 V	329	54.2	-1.0
3	*2437.00	120.6 PK			1.63 V	341	122.0	-1.4
4	*2437.00	109.9 AV			1.63 V	341	111.3	-1.4
5	2483.50	68.5 PK	74.0	-5.5	1.68 V	318	69.7	-1.2
6	2483.50	51.8 AV	54.0	-2.2	1.68 V	318	53.0	-1.2
7	4874.00	37.1 PK	74.0	-36.9	3.49 V	335	33.8	3.3
8	4874.00	36.3 AV	54.0	-17.7	3.49 V	335	33.0	3.3
9	7311.00	41.2 PK	74.0	-32.8	1.69 V	319	31.2	10.0
10	7311.00	36.1 AV	54.0	-17.9	1.69 V	319	26.1	10.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	120.0 PK			1.98 H	360	121.4	-1.4
2	*2452.00	108.5 AV			1.98 H	360	109.9	-1.4
3	2483.50	68.8 PK	74.0	-5.2	1.98 H	360	70.0	-1.2
4	2483.50	53.8 AV	54.0	-0.2	1.98 H	360	55.0	-1.2
5	4904.00	35.2 PK	74.0	-38.8	1.60 H	324	31.7	3.5
6	4904.00	31.8 AV	54.0	-22.2	1.60 H	324	28.3	3.5
7	7356.00	39.8 PK	74.0	-34.2	1.03 H	276	29.6	10.2
8	7356.00	33.6 AV	54.0	-20.4	1.03 H	276	23.4	10.2
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	117.7 PK			1.66 V	335	119.1	-1.4
2	*2452.00	106.6 AV			1.66 V	335	108.0	-1.4
3	2483.50	68.6 PK	74.0	-5.4	1.66 V	335	69.8	-1.2
4	2483.50	53.5 AV	54.0	-0.5	1.66 V	335	54.7	-1.2
5	4904.00	37.0 PK	74.0	-37.0	3.43 V	316	33.5	3.5
6	4904.00	36.1 AV	54.0	-17.9	3.43 V	316	32.6	3.5
7	7356.00	41.6 PK	74.0	-32.4	1.65 V	336	31.4	10.2
8	7356.00	36.4 AV	54.0	-17.6	1.65 V	336	26.2	10.2

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	119.3 PK			2.22 H	360	120.7	-1.4
2	*2457.00	107.6 AV			2.22 H	360	109.0	-1.4
3	2483.50	70.8 PK	74.0	-3.2	2.22 H	360	72.0	-1.2
4	2483.50	53.9 AV	54.0	-0.1	2.22 H	360	55.1	-1.2
5	4914.00	35.6 PK	74.0	-38.4	1.58 H	314	32.1	3.5
6	4914.00	32.4 AV	54.0	-21.6	1.58 H	314	28.9	3.5
7	7371.00	40.1 PK	74.0	-33.9	1.00 H	272	29.9	10.2
8	7371.00	33.9 AV	54.0	-20.1	1.00 H	272	23.7	10.2
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	117.0 PK			1.70 V	332	118.4	-1.4
2	*2457.00	105.7 AV			1.70 V	332	107.1	-1.4
3	2483.50	70.6 PK	74.0	-3.4	1.70 V	332	71.8	-1.2
4	2483.50	53.6 AV	54.0	-0.4	1.70 V	332	54.8	-1.2
5	4914.00	36.8 PK	74.0	-37.2	3.53 V	310	33.3	3.5
6	4914.00	36.0 AV	54.0	-18.0	3.53 V	310	32.5	3.5
7	7371.00	41.3 PK	74.0	-32.7	1.62 V	335	31.1	10.2
8	7371.00	36.1 AV	54.0	-17.9	1.62 V	335	25.9	10.2

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	118.5 PK			2.29 H	360	119.9	-1.4
2	*2462.00	107.0 AV			2.29 H	360	108.4	-1.4
3	2483.50	66.3 PK	74.0	-7.7	2.29 H	360	67.5	-1.2
4	2483.50	53.6 AV	54.0	-0.4	2.29 H	360	54.8	-1.2
5	4924.00	35.6 PK	74.0	-38.4	1.56 H	308	32.1	3.5
6	4924.00	32.2 AV	54.0	-21.8	1.56 H	308	28.7	3.5
7	7386.00	40.0 PK	74.0	-34.0	1.00 H	266	29.8	10.2
8	7386.00	33.7 AV	54.0	-20.3	1.00 H	266	23.5	10.2
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	116.2 PK			1.67 V	336	117.6	-1.4
2	*2462.00	105.1 AV			1.67 V	336	106.5	-1.4
3	2483.50	66.1 PK	74.0	-7.9	1.67 V	336	67.3	-1.2
4	2483.50	53.3 AV	54.0	-0.7	1.67 V	336	54.5	-1.2
5	4924.00	36.8 PK	74.0	-37.2	3.49 V	326	33.3	3.5
6	4924.00	36.0 AV	54.0	-18.0	3.49 V	326	32.5	3.5
7	7386.00	41.6 PK	74.0	-32.4	1.67 V	323	31.4	10.2
8	7386.00	36.3 AV	54.0	-17.7	1.67 V	323	26.1	10.2

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.3 PK	74.0	-7.7	2.27 H	357	67.3	-1.0
2	2390.00	53.9 AV	54.0	-0.1	2.27 H	357	54.9	-1.0
3	*2412.00	117.4 PK			2.27 H	357	118.4	-1.0
4	*2412.00	106.0 AV			2.27 H	357	107.0	-1.0
5	4824.00	32.8 PK	74.0	-41.2	1.61 H	297	29.7	3.1
6	4824.00	29.5 AV	54.0	-24.5	1.61 H	297	26.4	3.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.5 PK	74.0	-8.5	1.73 V	330	66.5	-1.0
2	2390.00	53.2 AV	54.0	-0.8	1.73 V	330	54.2	-1.0
3	*2412.00	115.1 PK			1.73 V	330	116.1	-1.0
4	*2412.00	104.1 AV			1.73 V	330	105.1	-1.0
5	4824.00	34.9 PK	74.0	-39.1	3.47 V	347	31.8	3.1
6	4824.00	33.3 AV	54.0	-20.7	3.47 V	347	30.2	3.1

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.7 PK	74.0	-5.3	2.06 H	356	69.7	-1.0
2	2390.00	53.8 AV	54.0	-0.2	2.06 H	356	54.8	-1.0
3	*2417.00	120.9 PK			2.06 H	356	122.0	-1.1
4	*2417.00	108.8 AV			2.06 H	356	109.9	-1.1
5	4834.00	33.4 PK	74.0	-40.6	1.56 H	317	30.3	3.1
6	4834.00	29.9 AV	54.0	-24.1	1.56 H	317	26.8	3.1
7	7251.00	37.3 PK	74.0	-36.7	1.06 H	250	27.6	9.7
8	7251.00	30.9 AV	54.0	-23.1	1.06 H	250	21.2	9.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.9 PK	74.0	-6.1	1.67 V	342	68.9	-1.0
2	2390.00	53.1 AV	54.0	-0.9	1.67 V	342	54.1	-1.0
3	*2417.00	118.6 PK			1.67 V	342	119.7	-1.1
4	*2417.00	106.9 AV			1.67 V	342	108.0	-1.1
5	4834.00	36.2 PK	74.0	-37.8	3.48 V	333	33.1	3.1
6	4834.00	34.8 AV	54.0	-19.2	3.48 V	333	31.7	3.1
7	7251.00	38.9 PK	74.0	-35.1	1.65 V	307	29.2	9.7
8	7251.00	33.6 AV	54.0	-20.4	1.65 V	307	23.9	9.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.9 PK	74.0	-5.1	2.14 H	359	69.9	-1.0
2	2390.00	53.9 AV	54.0	-0.1	2.14 H	359	54.9	-1.0
3	*2422.00	120.9 PK			2.14 H	359	122.2	-1.3
4	*2422.00	108.8 AV			2.14 H	359	110.1	-1.3
5	4844.00	32.7 PK	74.0	-41.3	1.64 H	318	29.6	3.1
6	4844.00	29.5 AV	54.0	-24.5	1.64 H	318	26.4	3.1
7	7266.00	37.3 PK	74.0	-36.7	1.04 H	254	27.5	9.8
8	7266.00	30.9 AV	54.0	-23.1	1.04 H	254	21.1	9.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.1 PK	74.0	-5.9	1.74 V	331	69.1	-1.0
2	2390.00	53.2 AV	54.0	-0.8	1.74 V	331	54.2	-1.0
3	*2422.00	118.6 PK			1.74 V	331	119.9	-1.3
4	*2422.00	106.9 AV			1.74 V	331	108.2	-1.3
5	4844.00	35.5 PK	74.0	-38.5	3.49 V	325	32.4	3.1
6	4844.00	34.5 AV	54.0	-19.5	3.49 V	325	31.4	3.1
7	7266.00	39.1 PK	74.0	-34.9	1.63 V	322	29.3	9.8
8	7266.00	33.9 AV	54.0	-20.1	1.63 V	322	24.1	9.8

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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.3 PK	74.0	-7.7	2.13 H	351	67.3	-1.0
2	2390.00	53.8 AV	54.0	-0.2	2.13 H	351	54.8	-1.0
3	*2427.00	122.1 PK			2.13 H	351	123.4	-1.3
4	*2427.00	110.0 AV			2.13 H	351	111.3	-1.3
5	4854.00	33.9 PK	74.0	-40.1	1.64 H	308	30.7	3.2
6	4854.00	30.4 AV	54.0	-23.6	1.64 H	308	27.2	3.2
7	7281.00	37.2 PK	74.0	-36.8	1.00 H	257	27.4	9.8
8	7281.00	31.0 AV	54.0	-23.0	1.00 H	257	21.2	9.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.5 PK	74.0	-8.5	1.69 V	332	66.5	-1.0
2	2390.00	53.1 AV	54.0	-0.9	1.69 V	332	54.1	-1.0
3	*2427.00	119.8 PK			1.69 V	332	121.1	-1.3
4	*2427.00	108.1 AV			1.69 V	332	109.4	-1.3
5	4854.00	35.4 PK	74.0	-38.6	3.41 V	347	32.2	3.2
6	4854.00	34.2 AV	54.0	-19.8	3.41 V	347	31.0	3.2
7	7281.00	39.7 PK	74.0	-34.3	1.67 V	324	29.9	9.8
8	7281.00	34.4 AV	54.0	-19.6	1.67 V	324	24.6	9.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.4 PK	74.0	-6.6	2.27 H	358	68.4	-1.0
2	2390.00	53.5 AV	54.0	-0.5	2.27 H	358	54.5	-1.0
3	*2437.00	123.4 PK			2.27 H	358	124.8	-1.4
4	*2437.00	112.2 AV			2.27 H	358	113.6	-1.4
5	2483.50	68.3 PK	74.0	-5.7	2.27 H	358	69.5	-1.2
6	2483.50	51.9 AV	54.0	-2.1	2.27 H	358	53.1	-1.2
7	4874.00	34.6 PK	74.0	-39.4	1.62 H	332	31.3	3.3
8	4874.00	31.6 AV	54.0	-22.4	1.62 H	332	28.3	3.3
9	7311.00	39.8 PK	74.0	-34.2	1.01 H	262	29.8	10.0
10	7311.00	33.6 AV	54.0	-20.4	1.01 H	262	23.6	10.0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.1 PK	74.0	-7.9	1.68 V	332	67.1	-1.0
2	2390.00	52.9 AV	54.0	-1.1	1.68 V	332	53.9	-1.0
3	*2437.00	121.1 PK			1.68 V	332	122.5	-1.4
4	*2437.00	110.3 AV			1.68 V	332	111.7	-1.4
5	2483.50	67.4 PK	74.0	-6.6	1.68 V	332	68.6	-1.2
6	2483.50	50.8 AV	54.0	-3.2	1.68 V	332	52.0	-1.2
7	4874.00	37.6 PK	74.0	-36.4	3.44 V	345	34.3	3.3
8	4874.00	36.7 AV	54.0	-17.3	3.44 V	345	33.4	3.3
9	7311.00	40.6 PK	74.0	-33.4	1.65 V	307	30.6	10.0
10	7311.00	35.7 AV	54.0	-18.3	1.65 V	307	25.7	10.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	120.1 PK			2.00 H	358	121.5	-1.4
2	*2452.00	108.6 AV			2.00 H	358	110.0	-1.4
3	2483.50	68.4 PK	74.0	-5.6	2.00 H	358	69.6	-1.2
4	2483.50	53.9 AV	54.0	-0.1	2.00 H	358	55.1	-1.2
5	4904.00	35.4 PK	74.0	-38.6	1.59 H	321	31.9	3.5
6	4904.00	32.2 AV	54.0	-21.8	1.59 H	321	28.7	3.5
7	7356.00	39.8 PK	74.0	-34.2	1.01 H	267	29.6	10.2
8	7356.00	33.6 AV	54.0	-20.4	1.01 H	267	23.4	10.2
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	117.8 PK			1.67 V	332	119.2	-1.4
2	*2452.00	106.7 AV			1.67 V	332	108.1	-1.4
3	2483.50	68.2 PK	74.0	-5.8	1.67 V	332	69.4	-1.2
4	2483.50	53.6 AV	54.0	-0.4	1.67 V	332	54.8	-1.2
5	4904.00	36.5 PK	74.0	-37.5	3.53 V	338	33.0	3.5
6	4904.00	35.9 AV	54.0	-18.1	3.53 V	338	32.4	3.5
7	7356.00	41.6 PK	74.0	-32.4	1.62 V	322	31.4	10.2
8	7356.00	36.3 AV	54.0	-17.7	1.62 V	322	26.1	10.2

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	119.2 PK			2.28 H	360	120.6	-1.4
2	*2457.00	107.7 AV			2.28 H	360	109.1	-1.4
3	2483.50	71.2 PK	74.0	-2.8	2.28 H	360	72.4	-1.2
4	2483.50	53.7 AV	54.0	-0.3	2.28 H	360	54.9	-1.2
5	4914.00	35.5 PK	74.0	-38.5	1.53 H	323	32.0	3.5
6	4914.00	32.0 AV	54.0	-22.0	1.53 H	323	28.5	3.5
7	7371.00	39.7 PK	74.0	-34.3	1.04 H	275	29.5	10.2
8	7371.00	33.3 AV	54.0	-20.7	1.04 H	275	23.1	10.2
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	116.9 PK			1.65 V	349	118.3	-1.4
2	*2457.00	105.8 AV			1.65 V	349	107.2	-1.4
3	2483.50	71.0 PK	74.0	-3.0	1.65 V	349	72.2	-1.2
4	2483.50	53.4 AV	54.0	-0.6	1.65 V	349	54.6	-1.2
5	4914.00	36.5 PK	74.0	-37.5	3.45 V	332	33.0	3.5
6	4914.00	35.7 AV	54.0	-18.3	3.45 V	332	32.2	3.5
7	7371.00	41.3 PK	74.0	-32.7	1.64 V	313	31.1	10.2
8	7371.00	36.3 AV	54.0	-17.7	1.64 V	313	26.1	10.2

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	118.4 PK			2.28 H	360	119.8	-1.4
2	*2462.00	106.9 AV			2.28 H	360	108.3	-1.4
3	2483.50	66.5 PK	74.0	-7.5	2.28 H	360	67.7	-1.2
4	2483.50	53.8 AV	54.0	-0.2	2.28 H	360	55.0	-1.2
5	4924.00	35.1 PK	74.0	-38.9	1.54 H	322	31.6	3.5
6	4924.00	31.9 AV	54.0	-22.1	1.54 H	322	28.4	3.5
7	7386.00	40.3 PK	74.0	-33.7	1.07 H	254	30.1	10.2
8	7386.00	33.8 AV	54.0	-20.2	1.07 H	254	23.6	10.2
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	116.1 PK			1.72 V	337	117.5	-1.4
2	*2462.00	105.0 AV			1.72 V	337	106.4	-1.4
3	2483.50	66.3 PK	74.0	-7.7	1.72 V	337	67.5	-1.2
4	2483.50	53.5 AV	54.0	-0.5	1.72 V	337	54.7	-1.2
5	4924.00	37.2 PK	74.0	-36.8	3.48 V	321	33.7	3.5
6	4924.00	36.2 AV	54.0	-17.8	3.48 V	321	32.7	3.5
7	7386.00	42.1 PK	74.0	-31.9	1.69 V	335	31.9	10.2
8	7386.00	36.6 AV	54.0	-17.4	1.69 V	335	26.4	10.2

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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)
FREQUENCY RANGE	1GHz ~ 25GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.4 PK	74.0	-7.6	1.58 H	352	67.4	-1.0
2	2390.00	53.9 AV	54.0	-0.1	1.58 H	352	54.9	-1.0
3	*2422.00	111.8 PK			1.58 H	352	113.1	-1.3
4	*2422.00	102.1 AV			1.58 H	352	103.4	-1.3
5	4844.00	35.6 PK	74.0	-38.4	1.56 H	331	32.5	3.1
6	4844.00	32.3 AV	54.0	-21.7	1.56 H	331	29.2	3.1
7	7266.00	40.5 PK	74.0	-33.5	1.03 H	241	30.7	9.8
8	7266.00	34.0 AV	54.0	-20.0	1.03 H	241	24.2	9.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.7 PK	74.0	-6.3	2.22 V	2	68.7	-1.0
2	2390.00	53.9 AV	54.0	-0.1	2.22 V	2	54.9	-1.0
3	*2422.00	108.8 PK			2.22 V	2	110.1	-1.3
4	*2422.00	99.2 AV			2.22 V	2	100.5	-1.3
5	4844.00	37.6 PK	74.0	-36.4	3.44 V	318	34.5	3.1
6	4844.00	36.5 AV	54.0	-17.5	3.44 V	318	33.4	3.1
7	7266.00	41.7 PK	74.0	-32.3	1.74 V	337	31.9	9.8
8	7266.00	36.2 AV	54.0	-17.8	1.74 V	337	26.4	9.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.3 PK	74.0	-6.7	1.59 H	358	68.3	-1.0
2	2390.00	53.9 AV	54.0	-0.1	1.59 H	358	54.9	-1.0
3	*2437.00	113.0 PK			1.59 H	358	114.4	-1.4
4	*2437.00	104.9 AV			1.59 H	358	106.3	-1.4
5	2483.50	65.3 PK	74.0	-8.7	1.59 H	358	66.5	-1.2
6	2483.50	51.3 AV	54.0	-2.7	1.59 H	358	52.5	-1.2
7	4874.00	35.6 PK	74.0	-38.4	1.56 H	309	32.3	3.3
8	4874.00	32.1 AV	54.0	-21.9	1.56 H	309	28.8	3.3
9	7311.00	40.5 PK	74.0	-33.5	1.10 H	256	30.5	10.0
10	7311.00	33.7 AV	54.0	-20.3	1.10 H	256	23.7	10.0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.5 PK	74.0	-5.5	2.17 V	11	69.5	-1.0
2	2390.00	53.9 AV	54.0	-0.1	2.17 V	11	54.9	-1.0
3	*2437.00	110.0 PK			2.17 V	11	111.4	-1.4
4	*2437.00	102.0 AV			2.17 V	11	103.4	-1.4
5	2483.50	66.3 PK	74.0	-7.7	2.17 V	11	67.5	-1.2
6	2483.50	51.1 AV	54.0	-2.9	2.17 V	11	52.3	-1.2
7	4874.00	37.6 PK	74.0	-36.4	3.48 V	310	34.3	3.3
8	4874.00	36.4 AV	54.0	-17.6	3.48 V	310	33.1	3.3
9	7311.00	42.5 PK	74.0	-31.5	1.74 V	321	32.5	10.0
10	7311.00	37.0 AV	54.0	-17.0	1.74 V	321	27.0	10.0

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	112.1 PK			1.52 H	358	113.5	-1.4
2	*2452.00	102.4 AV			1.52 H	358	103.8	-1.4
3	2483.50	65.6 PK	74.0	-8.4	1.52 H	358	66.8	-1.2
4	2483.50	53.8 AV	54.0	-0.2	1.52 H	358	55.0	-1.2
5	4904.00	34.9 PK	74.0	-39.1	1.50 H	337	31.4	3.5
6	4904.00	31.5 AV	54.0	-22.5	1.50 H	337	28.0	3.5
7	7356.00	40.1 PK	74.0	-33.9	1.11 H	244	29.9	10.2
8	7356.00	33.5 AV	54.0	-20.5	1.11 H	244	23.3	10.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	109.1 PK			2.23 V	15	110.5	-1.4
2	*2452.00	99.4 AV			2.23 V	15	100.8	-1.4
3	2483.50	66.8 PK	74.0	-7.2	2.23 V	15	68.0	-1.2
4	2483.50	53.7 AV	54.0	-0.3	2.23 V	15	54.9	-1.2
5	4904.00	37.6 PK	74.0	-36.4	3.47 V	331	34.1	3.5
6	4904.00	36.6 AV	54.0	-17.4	3.47 V	331	33.1	3.5
7	7356.00	42.4 PK	74.0	-31.6	1.66 V	344	32.2	10.2
8	7356.00	36.7 AV	54.0	-17.3	1.66 V	344	26.5	10.2

REMARKS:

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

Below 1GHz Data:

802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	31.12	34.3 QP	40.0	-5.7	1.92 H	102	43.2	-8.9
2	98.05	36.3 QP	43.5	-7.2	1.57 H	118	49.3	-13.0
3	170.53	38.9 QP	43.5	-4.6	1.86 H	309	47.7	-8.8
4	231.76	40.1 QP	46.0	-5.9	1.98 H	279	50.5	-10.4
5	250.04	41.6 QP	46.0	-4.4	1.31 H	156	50.9	-9.3
6	750.01	39.6 QP	46.0	-6.4	1.00 H	212	37.6	2.0
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	38.15	37.5 QP	40.0	-2.5	1.00 V	265	46.0	-8.5
2	227.23	36.9 QP	46.0	-9.1	1.00 V	246	47.8	-10.9
3	310.89	36.9 QP	46.0	-9.1	1.00 V	243	43.8	-6.9
4	500.01	38.7 QP	46.0	-7.3	1.50 V	243	41.4	-2.7
5	625.02	37.9 QP	46.0	-8.1	1.50 V	308	38.0	-0.1
6	750.01	40.4 QP	46.0	-5.6	2.00 V	271	38.4	2.0

REMARKS:

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

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 03, 2017	June 02, 2018
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
10 dB PAD Mini-Circuits	HAT-10+	CONATT-004	June 18, 2017	June 17, 2018
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: Feb. 08 to 14, 2018

4.2.3 Test Procedures

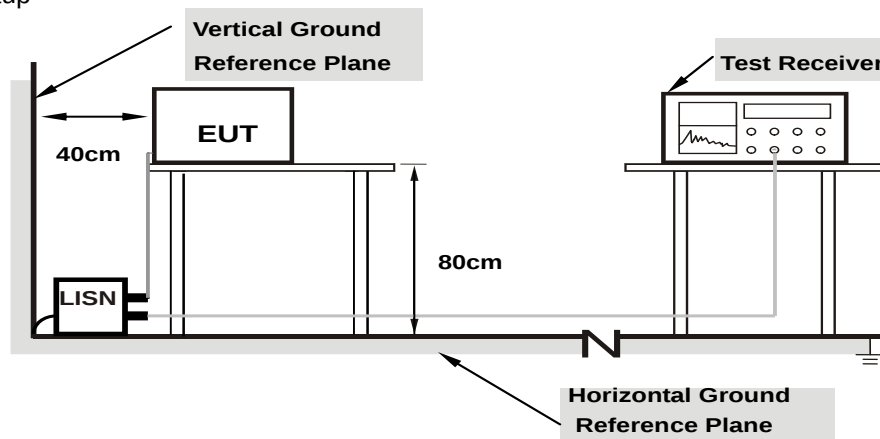
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

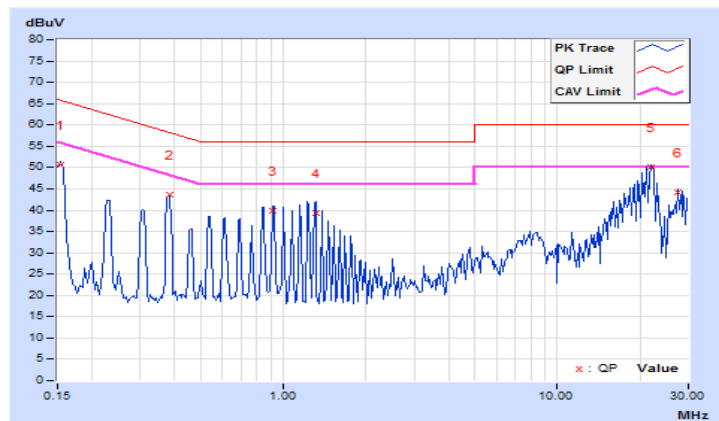
4.2.7 Test Results (Mode 1)

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

No	Freq.	Corr.	Reading Value		Emission Level		Limit		Margin	
	[MHz]	Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.13	40.59	37.93	50.72	48.06	65.79	55.79	-15.07	-7.73
2	0.38438	10.19	33.47	32.61	43.66	42.80	58.18	48.18	-14.52	-5.38
3	0.91953	10.22	29.70	28.83	39.92	39.05	56.00	46.00	-16.08	-6.95
4	1.31250	10.24	29.17	14.31	39.41	24.55	56.00	46.00	-16.59	-21.45
5	21.83959	11.24	38.76	38.46	50.00	49.70	60.00	50.00	-10.00	-0.30
6	27.61328	11.31	32.81	32.28	44.12	43.59	60.00	50.00	-15.88	-6.41

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

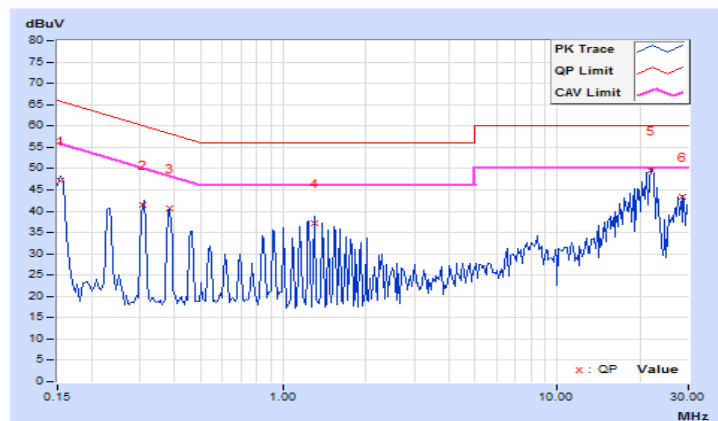


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	-----------------------------------

No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.04	37.13	34.47	47.17	44.51	65.79	55.79	-18.62	-11.28
2	0.30691	10.06	31.32	31.10	41.38	41.16	60.05	50.05	-18.67	-8.89
3	0.38438	10.08	30.55	29.73	40.63	39.81	58.18	48.18	-17.55	-8.37
4	1.29688	10.12	26.92	16.04	37.04	26.16	56.00	46.00	-18.96	-19.84
5	21.83984	11.03	38.62	38.44	49.65	49.47	60.00	50.00	-10.35	-0.53
6	28.36719	11.08	32.33	31.80	43.41	42.88	60.00	50.00	-16.59	-7.12

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. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.14	37.91	26.47	48.05	36.61	66.00	56.00	-17.95	-19.39
2	0.25938	10.16	26.72	17.77	36.88	27.93	61.45	51.45	-24.57	-23.52
3	0.38047	10.20	31.81	24.65	42.01	34.85	58.27	48.27	-16.26	-13.42
4	4.51172	10.47	18.19	10.08	28.66	20.55	56.00	46.00	-27.34	-25.45
5	12.93750	11.02	21.74	14.41	32.76	25.43	60.00	50.00	-27.24	-24.57
6	29.13672	11.70	14.23	7.29	25.93	18.99	60.00	50.00	-34.07	-31.01

Remarks:

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

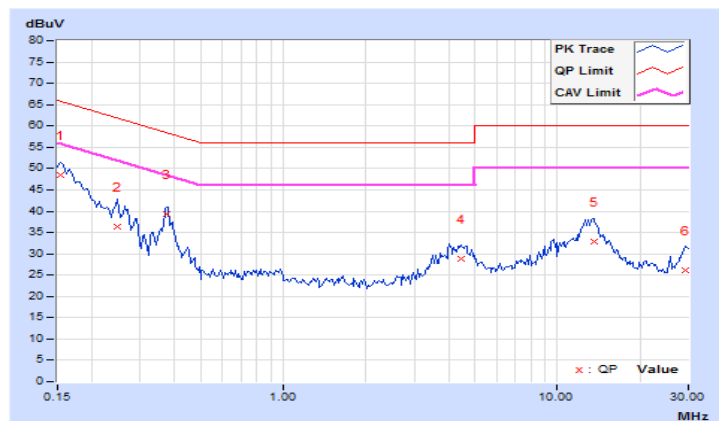


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.05	38.37	24.90	48.42	34.95	65.79	55.79	-17.37	-20.84
2	0.24766	10.06	26.38	15.96	36.44	26.02	61.84	51.84	-25.40	-25.82
3	0.37656	10.09	29.33	26.45	39.42	36.54	58.35	48.35	-18.93	-11.81
4	4.44922	10.32	18.59	10.27	28.91	20.59	56.00	46.00	-27.09	-25.41
5	13.55078	10.88	21.87	15.69	32.75	26.57	60.00	50.00	-27.25	-23.43
6	29.33594	11.42	14.75	7.50	26.17	18.92	60.00	50.00	-33.83	-31.08

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



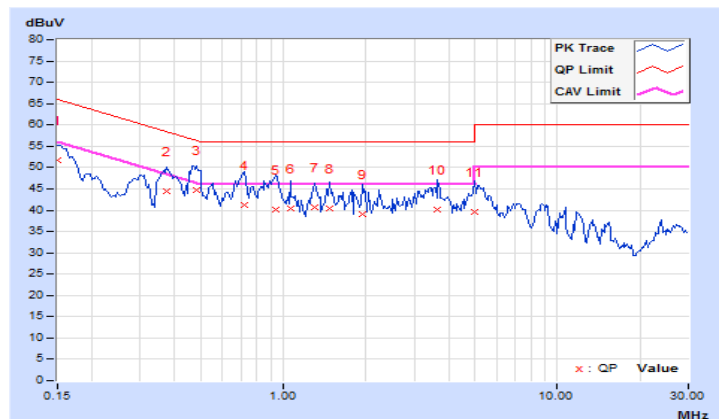
4.2.9 Test Results (Mode 3)

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

No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.14	41.62	29.39	51.76	39.53	66.00	56.00	-14.24	-16.47
2	0.37656	10.19	34.31	25.46	44.50	35.65	58.35	48.35	-13.85	-12.70
3	0.48203	10.21	34.44	24.77	44.65	34.98	56.30	46.30	-11.65	-11.32
4	0.71641	10.23	31.05	21.71	41.28	31.94	56.00	46.00	-14.72	-14.06
5	0.93516	10.24	29.87	21.78	40.11	32.02	56.00	46.00	-15.89	-13.98
6	1.05859	10.25	30.02	20.77	40.27	31.02	56.00	46.00	-15.73	-14.98
7	1.29688	10.26	30.45	21.62	40.71	31.88	56.00	46.00	-15.29	-14.12
8	1.47656	10.27	30.24	21.53	40.51	31.80	56.00	46.00	-15.49	-14.20
9	1.94141	10.30	28.82	20.71	39.12	31.01	56.00	46.00	-16.88	-14.99
10	3.65234	10.42	29.78	21.75	40.20	32.17	56.00	46.00	-15.80	-13.83
11	4.98047	10.50	29.13	21.44	39.63	31.94	56.00	46.00	-16.37	-14.06

Remarks:

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

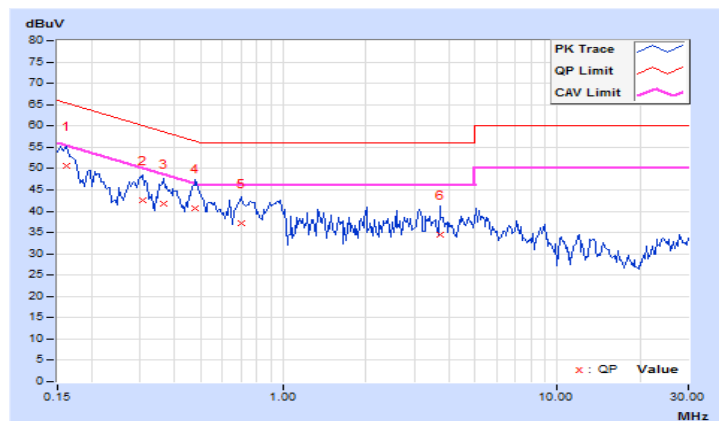


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

No	Freq. [MHz]	Corr.	Reading Value		Emission Level		Limit		Margin	
		Factor	[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
		(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16172	10.05	40.63	28.57	50.68	38.62	65.38	55.38	-14.70	-16.76
2	0.30625	10.08	32.50	22.62	42.58	32.70	60.07	50.07	-17.49	-17.37
3	0.36484	10.09	31.72	23.22	41.81	33.31	58.62	48.62	-16.81	-15.31
4	0.47813	10.10	30.69	22.12	40.79	32.22	56.37	46.37	-15.58	-14.15
5	0.70078	10.11	27.01	19.54	37.12	29.65	56.00	46.00	-18.88	-16.35
6	3.72266	10.27	24.27	17.49	34.54	27.76	56.00	46.00	-21.46	-18.24

Remarks:

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

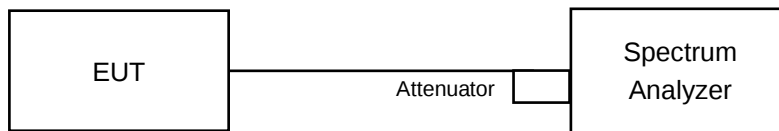


4.3 6dB Bandwidth Measurement

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

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.3.7 Test Results

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	8.09	8.10	8.12	8.07	0.5	Pass
6	2437	9.06	9.59	8.55	8.55	0.5	Pass
11	2462	8.10	8.08	8.57	8.09	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	16.37	16.35	16.36	16.38	0.5	Pass
2	2417	16.38	16.34	16.37	16.40	0.5	Pass
3	2422	16.35	16.34	16.36	16.37	0.5	Pass
4	2427	16.38	16.34	16.35	16.39	0.5	Pass
6	2437	16.38	16.37	16.36	16.39	0.5	Pass
9	2452	16.36	16.35	16.36	16.38	0.5	Pass
10	2457	16.38	16.34	16.35	16.37	0.5	Pass
11	2462	16.36	16.34	16.36	16.37	0.5	Pass

802.11n (HT20)

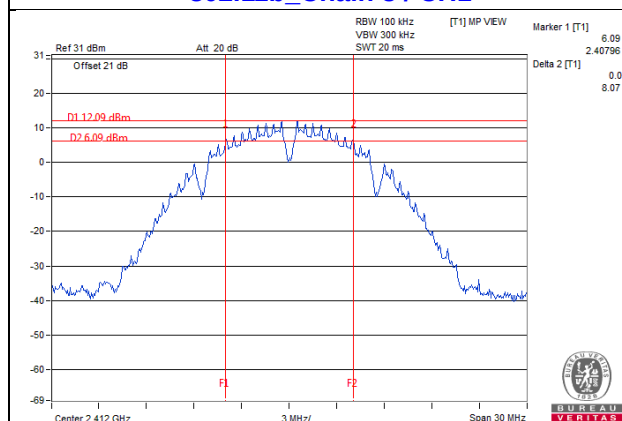
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	17.55	16.34	17.17	17.59	0.5	Pass
2	2417	17.53	16.35	17.56	17.58	0.5	Pass
3	2422	17.22	16.81	16.96	17.65	0.5	Pass
4	2427	17.30	17.20	17.17	17.56	0.5	Pass
6	2437	17.38	17.30	17.56	17.61	0.5	Pass
9	2452	17.22	16.97	17.21	17.62	0.5	Pass
10	2457	17.57	17.58	17.58	17.63	0.5	Pass
11	2462	17.22	16.72	17.58	17.58	0.5	Pass

802.11n (HT40)

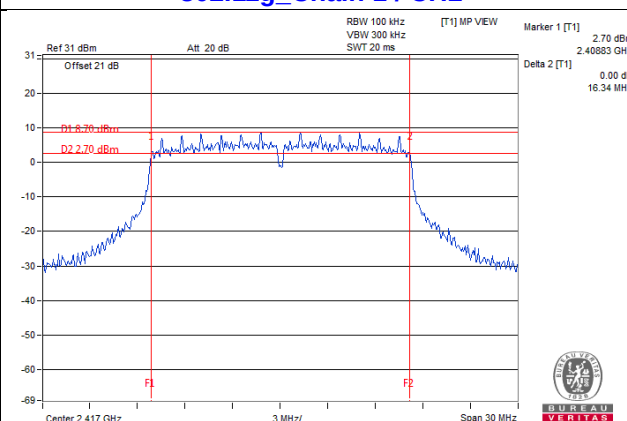
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
3	2422	35.18	35.12	35.16	34.01	0.5	Pass
6	2437	35.37	35.20	35.16	35.09	0.5	Pass
9	2452	35.23	35.24	35.40	35.18	0.5	Pass

Spectrum Plot of Worst Value

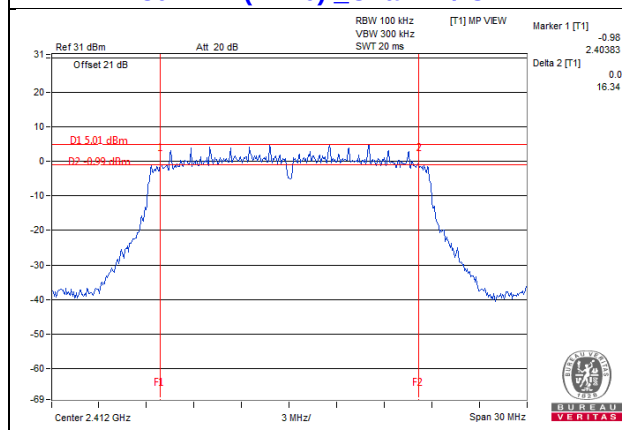
802.11b_Chain 3 / CH1



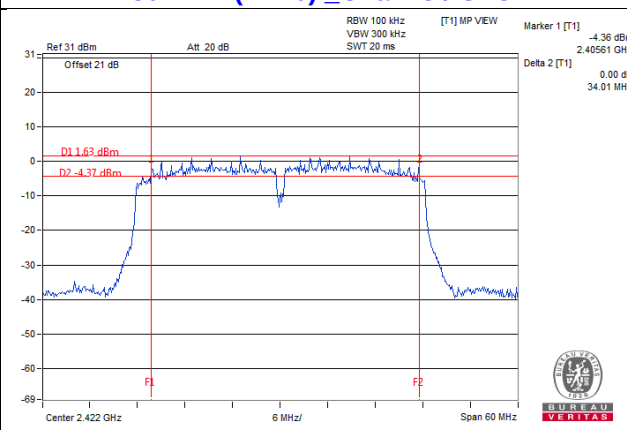
802.11g_Chain 1 / CH2



802.11n (HT20)_Chain 1 / CH1



802.11n (HT40)_Chain 3 / 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,

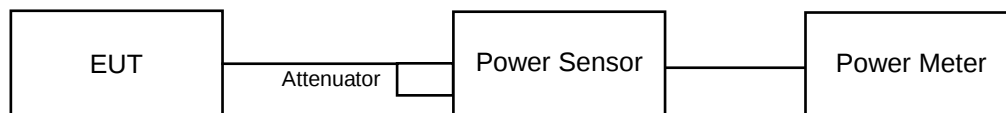
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

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

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

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	Chain 3				
1	2412	19.77	20.08	20.07	20.08	400.185	26.02	29.50	Pass
6	2437	22.01	22.21	22.17	22.34	661.408	28.20	29.50	Pass
11	2462	19.66	20.11	20.05	20.06	397.584	25.99	29.50	Pass

Note: The max gain is 6.5dBi > 6dBi, therefore the limit needs to reduce, so the power limit shall be reduced to $30-(6.5-6) = 29.5\text{dBm}$.

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	15.47	16.09	15.59	16.16	153.41	21.86	29.50	Pass
2	2417	18.97	19.51	18.95	19.55	336.898	25.27	29.50	Pass
3	2422	18.99	19.61	18.98	19.74	343.918	25.36	29.50	Pass
4	2427	20.22	20.91	20.19	20.16	436.731	26.40	29.50	Pass
6	2437	21.27	21.85	21.37	21.29	558.751	27.47	29.50	Pass
9	2452	19.67	19.82	19.99	19.73	382.365	25.82	29.50	Pass
10	2457	18.57	18.74	18.84	18.63	296.268	24.72	29.50	Pass
11	2462	17.77	17.65	17.81	17.79	238.563	23.78	29.50	Pass

Note: The max gain is 6.5dBi > 6dBi, therefore the limit needs to reduce, so the power limit shall be reduced to $30-(6.5-6) = 29.5\text{dBm}$.

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	Chain 3				
1	2412	15.31	15.87	15.32	15.97	146.178	21.65	29.50	Pass
2	2417	18.27	18.84	18.47	19.31	299.32	24.76	29.50	Pass
3	2422	18.22	18.23	18.17	19.14	280.551	24.48	29.50	Pass
4	2427	19.71	20.31	19.96	20.24	405.705	26.08	29.50	Pass
6	2437	21.22	21.24	21.35	21.01	528.12	27.23	29.50	Pass
9	2452	19.08	19.57	19.22	20.19	359.515	25.56	29.50	Pass
10	2457	18.14	18.23	18.26	18.34	266.912	24.26	29.50	Pass
11	2462	17.25	17.14	17.31	17.29	212.256	23.27	29.50	Pass

Note: The max gain is 6.5dBi > 6dBi, therefore the limit needs to reduce, so the power limit shall be reduced to $30-(6.5-6) = 29.5\text{dBm}$.

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	Chain 3				
3	2422	14.91	15.20	14.65	15.31	127.224	21.05	29.50	Pass
6	2437	16.23	16.82	16.26	16.35	175.479	22.44	29.50	Pass
9	2452	15.43	15.37	15.29	15.71	140.394	21.47	29.50	Pass

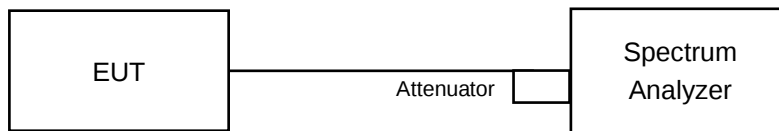
Note: The max gain is 6.5dBi > 6dBi, therefore the limit needs to reduce, so the power limit shall be reduced to $30 - (6.5 - 6) = 29.5\text{dBm}$.

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

For 802.11b, 802.11n (HT20)

- Set instrument center frequency to DTS channel center frequency.
- Set span to at least 1.5 times the OBW.
- Set RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set VBW $\geq 3 \times \text{RBW}$.
- Detector = power averaging (RMS) or sample detector (when RMS not available).
- Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span/RBW}$.
- Sweep time = auto couple.
- Employ trace averaging (RMS) mode over a minimum of 100 traces.
- Use the peak marker function to determine the maximum amplitude level.

For 802.11g, 802.11n (HT40)

- Measure the duty cycle (x).
- Set instrument center frequency to DTS channel center frequency.
- Set span to at least 1.5 times the OBW.
- Set RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set VBW $\geq 3 \times \text{RBW}$.
- Detector = power averaging (RMS) or sample detector (when RMS not available).
- Ensure that the number of measurement points in the sweep $\geq 2 \times \text{span/RBW}$.
- Sweep time = auto couple.
- Do not use sweep triggering. Allow sweep to "free run".
- Employ trace averaging (RMS) mode over a minimum of 100 traces.
- Use the peak marker function to determine the maximum amplitude level.
- 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=4) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-10.73	6.02	-4.71	2.21	Pass
	6	2437	-8.39	6.02	-2.37	2.21	Pass
	11	2462	-11.08	6.02	-5.06	2.21	Pass
1	1	2412	-9.90	6.02	-3.88	2.21	Pass
	6	2437	-7.06	6.02	-1.04	2.21	Pass
	11	2462	-10.35	6.02	-4.33	2.21	Pass
2	1	2412	-11.23	6.02	-5.21	2.21	Pass
	6	2437	-9.04	6.02	-3.02	2.21	Pass
	11	2462	-10.82	6.02	-4.80	2.21	Pass
3	1	2412	-10.06	6.02	-4.04	2.21	Pass
	6	2437	-8.82	6.02	-2.80	2.21	Pass
	11	2462	-9.96	6.02	-3.94	2.21	Pass

Note: Directional gain = $10 \log[(10^{\text{Chain0/20}} + 10^{\text{Chain1/20}} + 10^{\text{Chain2/20}} + 10^{\text{Chain3/20}})^2 / 4] = 11.79\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8 - (11.79 - 6) = 2.21\text{dBm}$.

802.11g

TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=4) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-17.77	6.02	0.16	-11.59	2.21	Pass
	2	2417	-14.81	6.02	0.16	-8.63	2.21	Pass
	3	2422	-14.28	6.02	0.16	-8.10	2.21	Pass
	4	2427	-13.15	6.02	0.16	-6.97	2.21	Pass
	6	2437	-12.08	6.02	0.16	-5.90	2.21	Pass
	9	2452	-13.45	6.02	0.16	-7.27	2.21	Pass
	10	2457	-14.52	6.02	0.16	-8.34	2.21	Pass
	11	2462	-15.02	6.02	0.16	-8.84	2.21	Pass
1	1	2412	-16.98	6.02	0.16	-10.80	2.21	Pass
	2	2417	-13.06	6.02	0.16	-6.88	2.21	Pass
	3	2422	-13.17	6.02	0.16	-6.99	2.21	Pass
	4	2427	-11.56	6.02	0.16	-5.38	2.21	Pass
	6	2437	-10.85	6.02	0.16	-4.67	2.21	Pass
	9	2452	-12.96	6.02	0.16	-6.78	2.21	Pass
	10	2457	-13.94	6.02	0.16	-7.76	2.21	Pass
	11	2462	-15.29	6.02	0.16	-9.11	2.21	Pass
2	1	2412	-16.78	6.02	0.16	-10.60	2.21	Pass
	2	2417	-13.56	6.02	0.16	-7.38	2.21	Pass
	3	2422	-12.84	6.02	0.16	-6.66	2.21	Pass
	4	2427	-12.50	6.02	0.16	-6.32	2.21	Pass
	6	2437	-10.93	6.02	0.16	-4.75	2.21	Pass
	9	2452	-13.00	6.02	0.16	-6.82	2.21	Pass
	10	2457	-13.65	6.02	0.16	-7.47	2.21	Pass
	11	2462	-15.02	6.02	0.16	-8.84	2.21	Pass
3	1	2412	-15.86	6.02	0.16	-9.68	2.21	Pass
	2	2417	-13.32	6.02	0.16	-7.14	2.21	Pass
	3	2422	-13.83	6.02	0.16	-7.65	2.21	Pass
	4	2427	-13.01	6.02	0.16	-6.83	2.21	Pass
	6	2437	-11.12	6.02	0.16	-4.94	2.21	Pass
	9	2452	-13.30	6.02	0.16	-7.12	2.21	Pass
	10	2457	-13.60	6.02	0.16	-7.42	2.21	Pass
	11	2462	-14.81	6.02	0.16	-8.63	2.21	Pass

Note: 1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20} + 10^{\text{Chain2}/20} + 10^{\text{Chain3}/20})^2 / 4] = 11.79\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8 - (11.79 - 6) = 2.21\text{dBm}$.

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=4) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-17.68	6.02	-11.66	2.21	Pass
	2	2417	-13.93	6.02	-7.91	2.21	Pass
	3	2422	-15.00	6.02	-8.98	2.21	Pass
	4	2427	-13.36	6.02	-7.34	2.21	Pass
	6	2437	-11.74	6.02	-5.72	2.21	Pass
	9	2452	-13.86	6.02	-7.84	2.21	Pass
	10	2457	-15.40	6.02	-9.38	2.21	Pass
	11	2462	-15.30	6.02	-9.28	2.21	Pass
1	1	2412	-17.83	6.02	-11.81	2.21	Pass
	2	2417	-13.95	6.02	-7.93	2.21	Pass
	3	2422	-14.15	6.02	-8.13	2.21	Pass
	4	2427	-12.94	6.02	-6.92	2.21	Pass
	6	2437	-11.35	6.02	-5.33	2.21	Pass
	9	2452	-13.26	6.02	-7.24	2.21	Pass
	10	2457	-14.22	6.02	-8.20	2.21	Pass
	11	2462	-16.40	6.02	-10.38	2.21	Pass
2	1	2412	-17.36	6.02	-11.34	2.21	Pass
	2	2417	-13.72	6.02	-7.70	2.21	Pass
	3	2422	-14.51	6.02	-8.49	2.21	Pass
	4	2427	-12.34	6.02	-6.32	2.21	Pass
	6	2437	-11.30	6.02	-5.28	2.21	Pass
	9	2452	-13.18	6.02	-7.16	2.21	Pass
	10	2457	-14.32	6.02	-8.30	2.21	Pass
	11	2462	-15.21	6.02	-9.19	2.21	Pass
3	1	2412	-17.41	6.02	-11.39	2.21	Pass
	2	2417	-14.04	6.02	-8.02	2.21	Pass
	3	2422	-14.35	6.02	-8.33	2.21	Pass
	4	2427	-13.42	6.02	-7.40	2.21	Pass
	6	2437	-12.25	6.02	-6.23	2.21	Pass
	9	2452	-12.47	6.02	-6.45	2.21	Pass
	10	2457	-14.70	6.02	-8.68	2.21	Pass
	11	2462	-15.97	6.02	-9.95	2.21	Pass

Note: Directional gain = $10 \log[(10^{\text{Chain0/20}} + 10^{\text{Chain1/20}} + 10^{\text{Chain2/20}} + 10^{\text{Chain3/20}})^2 / 4] = 11.79\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8 - (11.79 - 6) = 2.21\text{dBm}$.

802.11n (HT40)

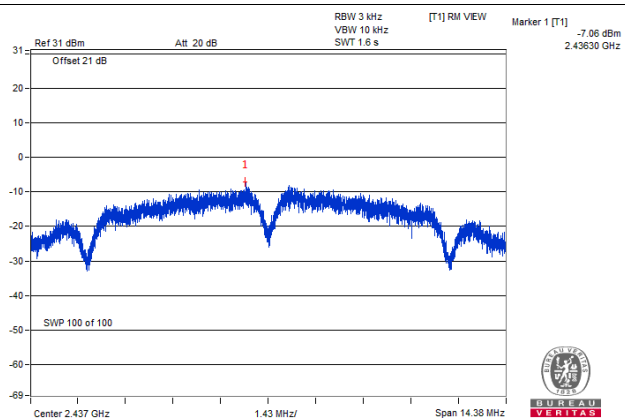
TX chain	Channel	Freq. (MHz)	PSD W/O Duty Factor (dBm/3kHz)	10 log (N=4) dB	Duty Factor (dB)	TOTAL PSD With Duty Factor (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	3	2422	-20.26	6.02	0.17	-14.07	2.21	Pass
	6	2437	-19.21	6.02	0.17	-13.02	2.21	Pass
	9	2452	-19.94	6.02	0.17	-13.75	2.21	Pass
1	3	2422	-20.66	6.02	0.17	-14.47	2.21	Pass
	6	2437	-18.61	6.02	0.17	-12.42	2.21	Pass
	9	2452	-20.41	6.02	0.17	-14.22	2.21	Pass
2	3	2422	-20.56	6.02	0.17	-14.37	2.21	Pass
	6	2437	-19.18	6.02	0.17	-12.99	2.21	Pass
	9	2452	-20.37	6.02	0.17	-14.18	2.21	Pass
3	3	2422	-19.53	6.02	0.17	-13.34	2.21	Pass
	6	2437	-18.63	6.02	0.17	-12.44	2.21	Pass
	9	2452	-20.47	6.02	0.17	-14.28	2.21	Pass

Note: 1. Directional gain = $10 \log[(10^{\text{Chain0}/20} + 10^{\text{Chain1}/20} + 10^{\text{Chain2}/20} + 10^{\text{Chain3}/20})^2 / 4] = 11.79\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $8 - (11.79 - 6) = 2.21\text{dBm}$.

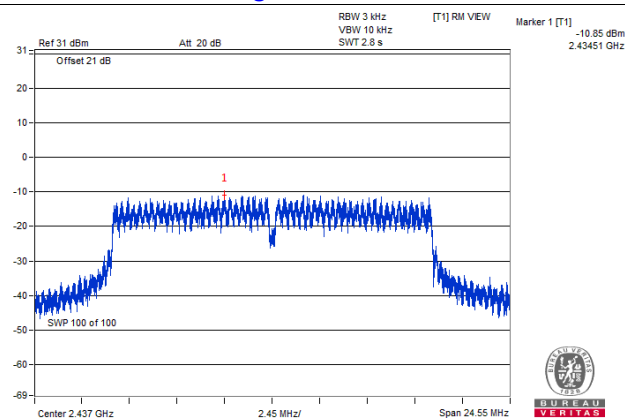
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

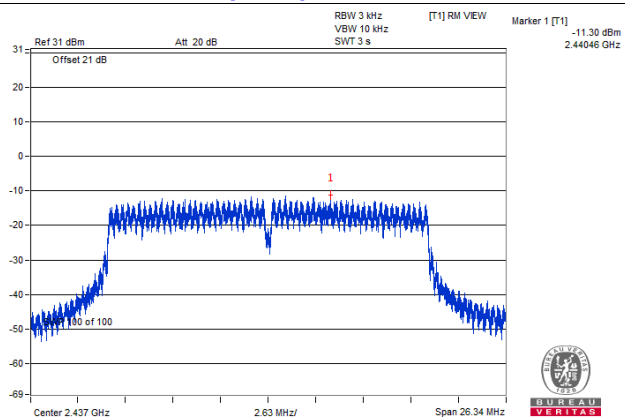
802.11b_Chain 1 / CH6



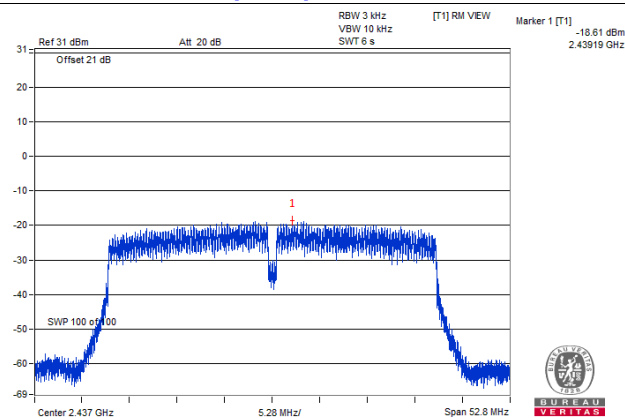
802.11g_Chain 1 / CH6



802.11n (HT20)_Chain 2 / CH6



802.11n (HT40)_Chain 1 / CH6

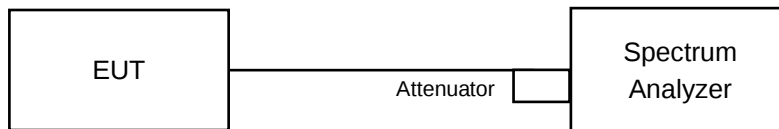


4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted Out of Band Emission Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

MEASUREMENT PROCEDURE OOB

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

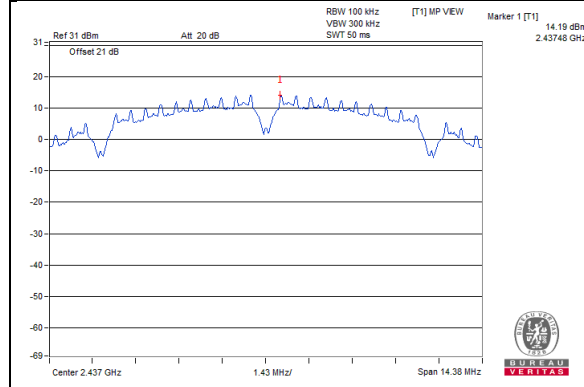
Same as Item 4.3.6

4.6.7 Test Results

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.

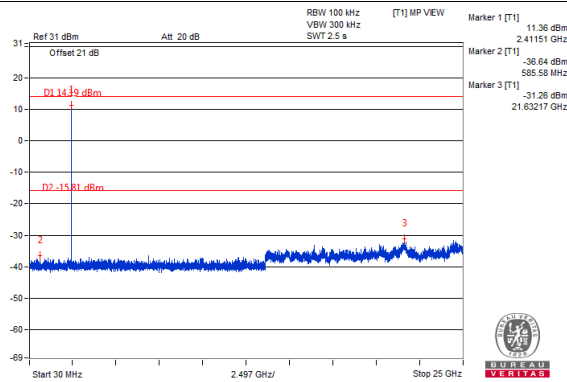
802.11b

Maximum REF

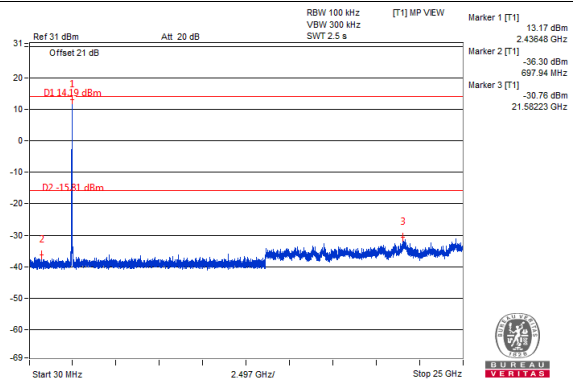


Chain 0

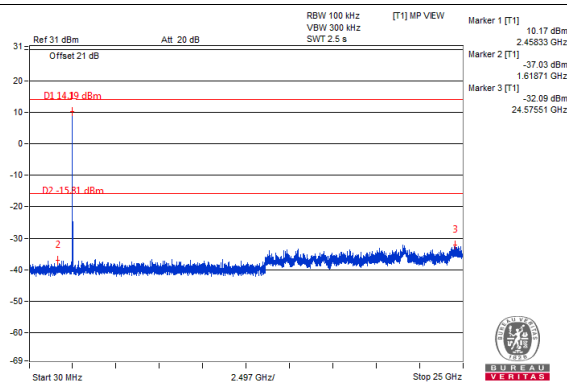
CH 1



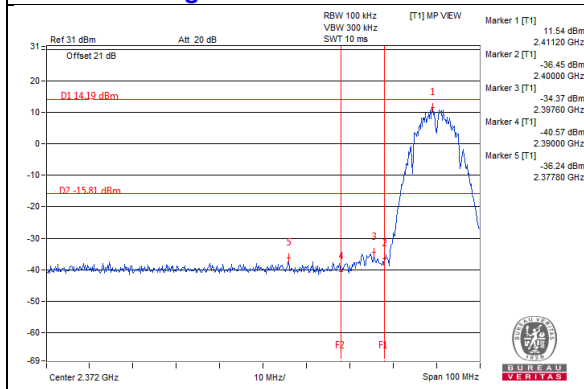
CH 6



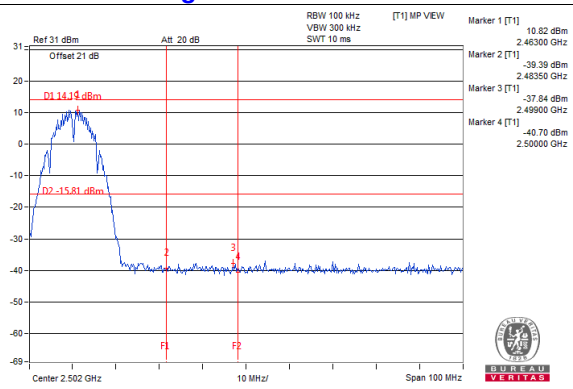
CH 11



CH 1 Band edge

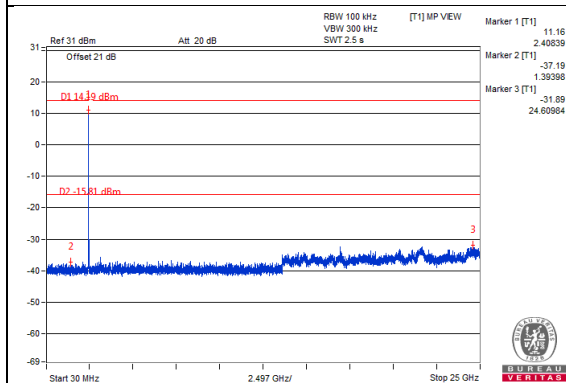


CH 11 Band edge

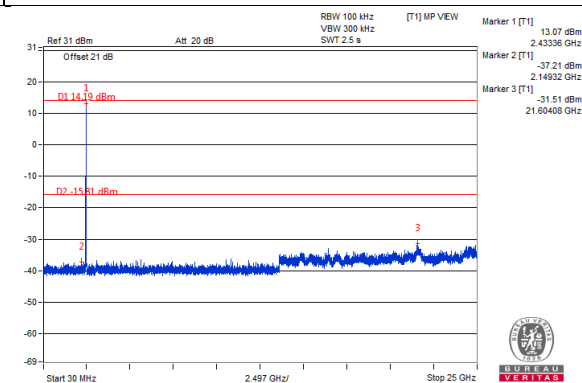


Chain 1

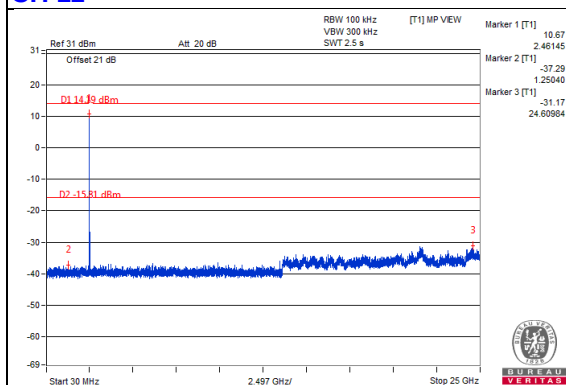
CH 1



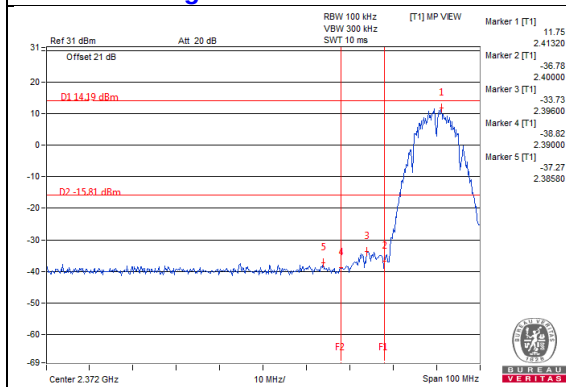
CH 6



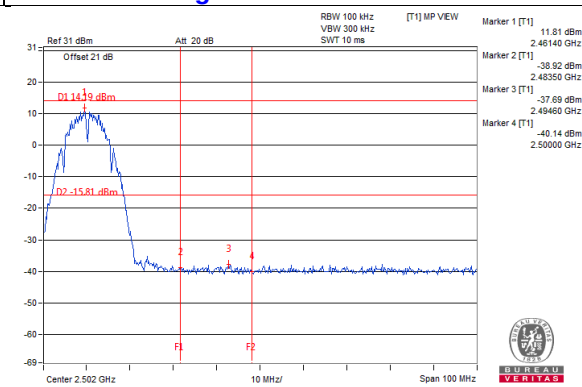
CH 11



CH 1 Band edge

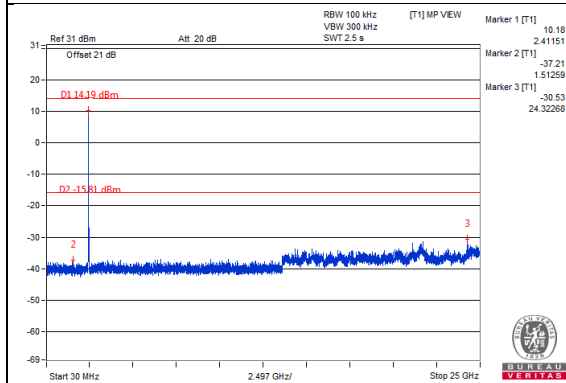


CH 11 Band edge

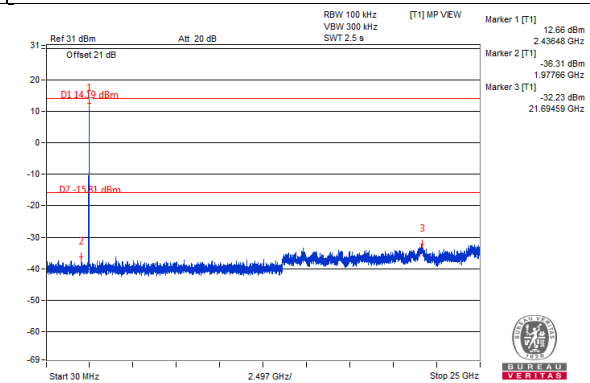


Chain 2

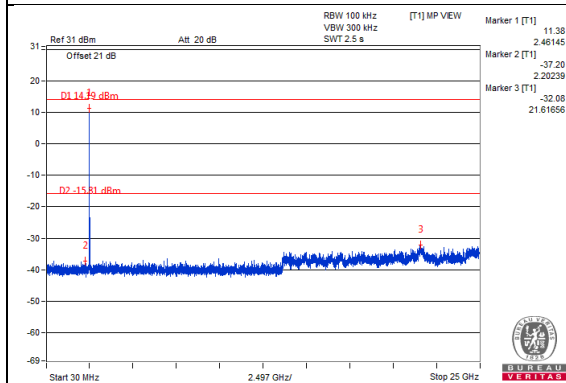
CH 1



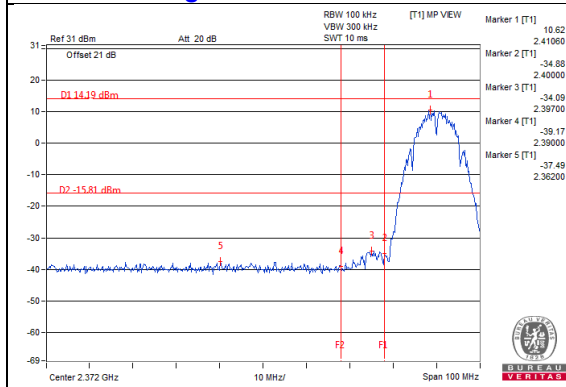
CH 6



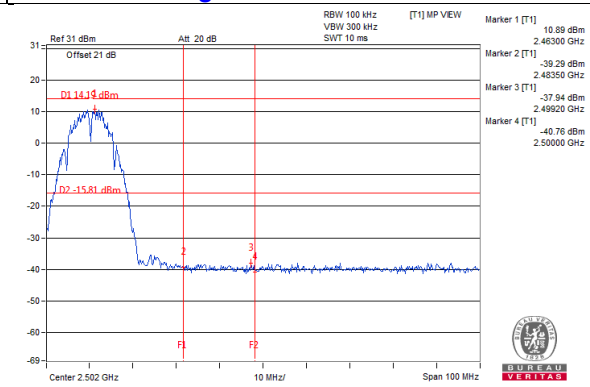
CH 11



CH 1 Band edge

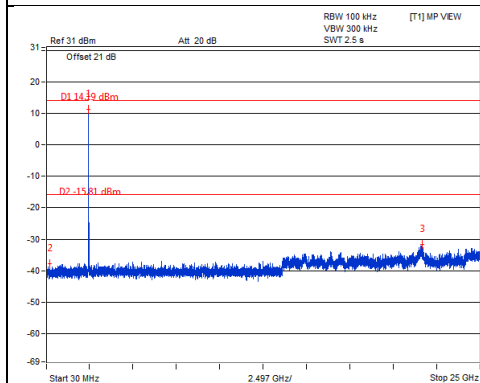


CH 11 Band edge

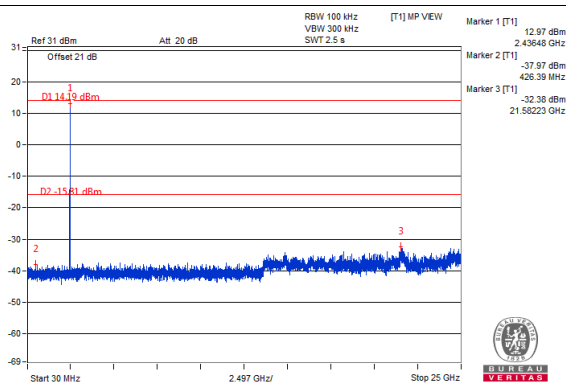


Chain 3

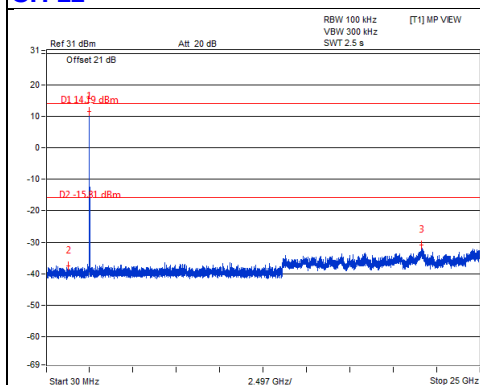
CH 1



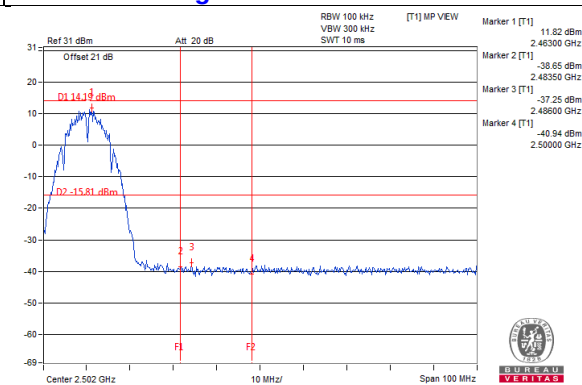
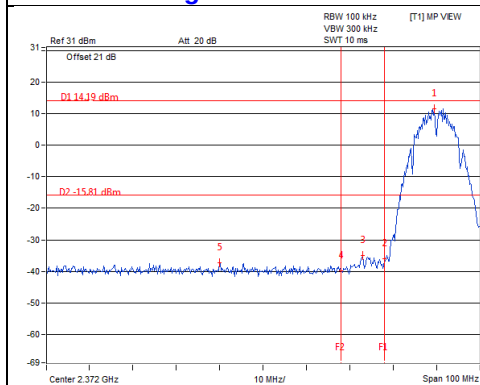
CH 6



CH 11

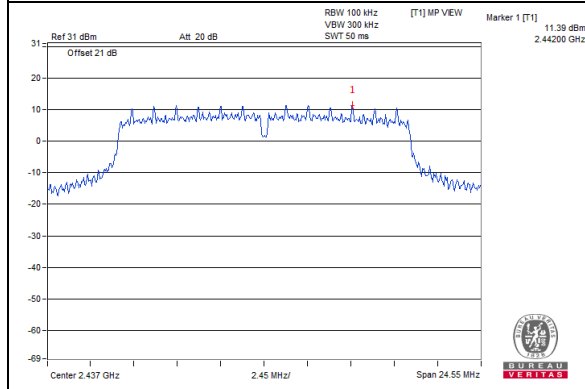


CH 11 Band edge



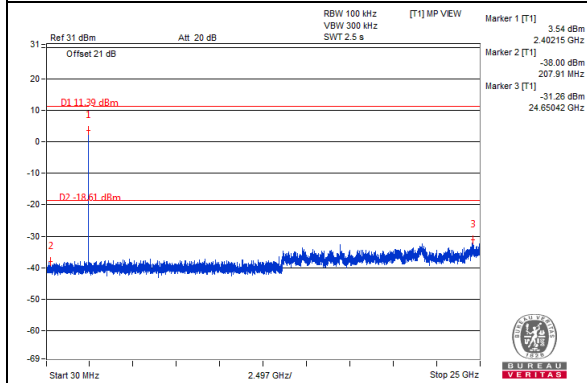
802.11g

Maximum REF

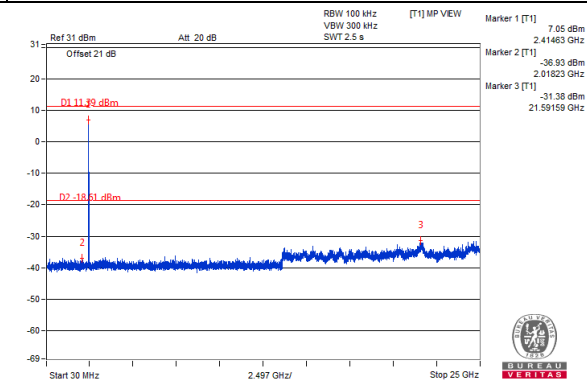


Chain 0

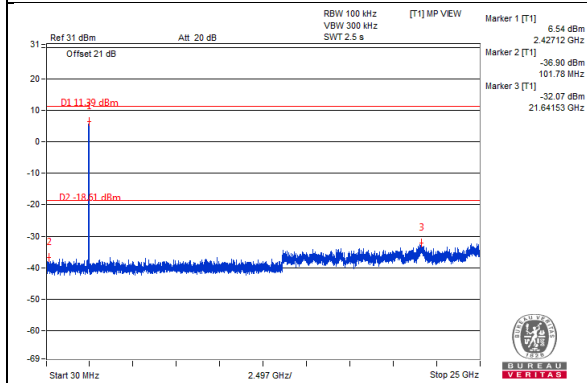
CH 1



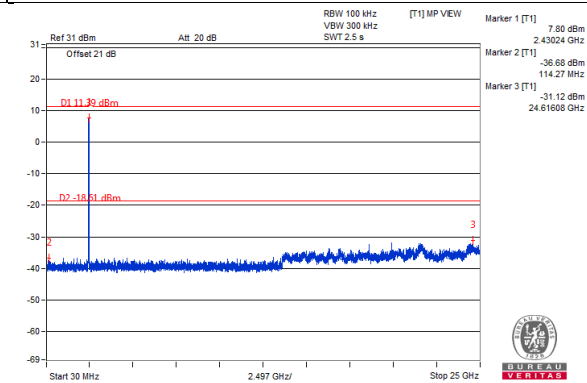
CH 2



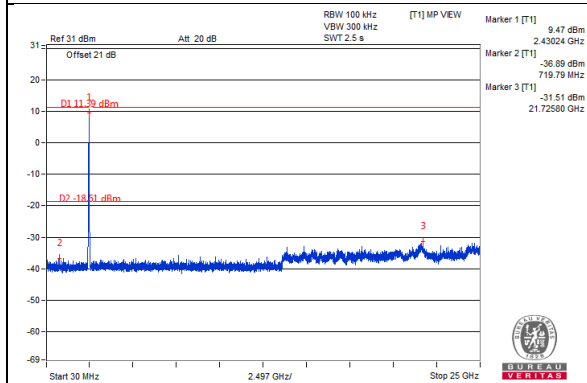
CH 3



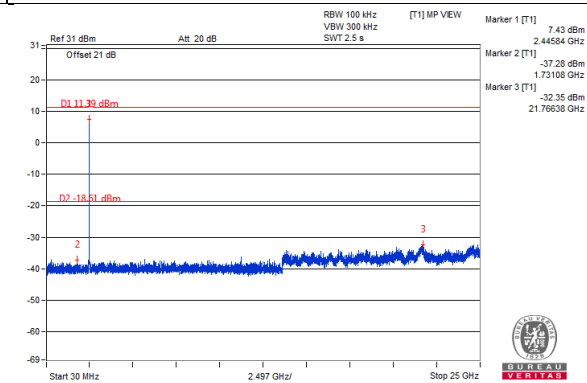
CH 4



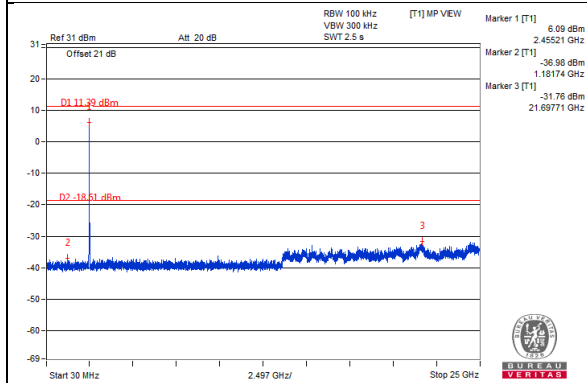
CH 6



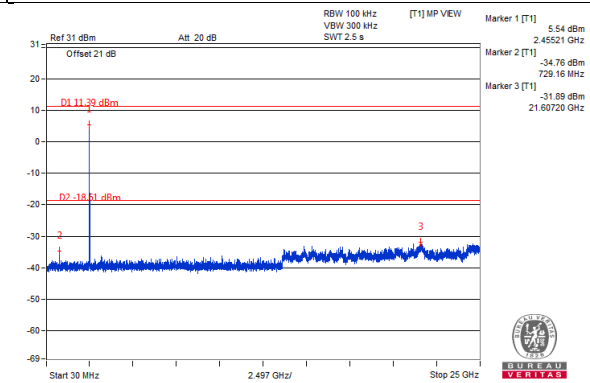
CH 9



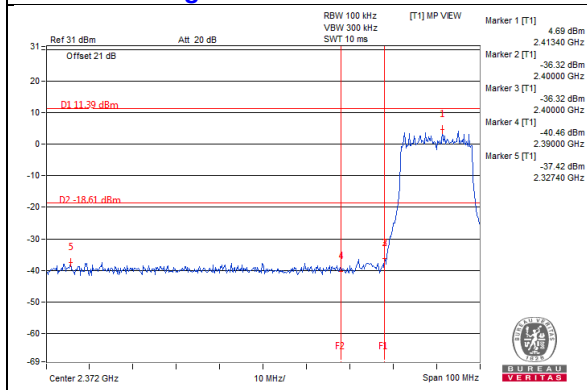
CH 10



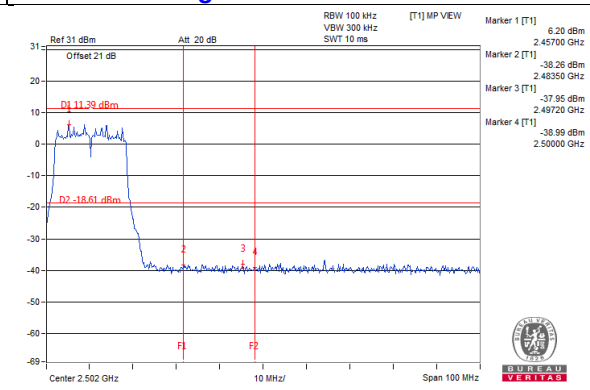
CH 11



CH 10 Band edge

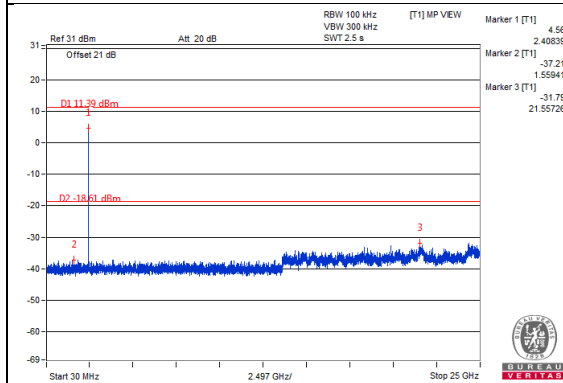


CH 11 Band edge

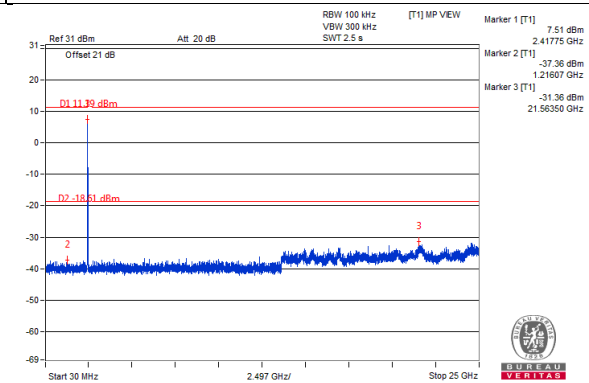


Chain 1

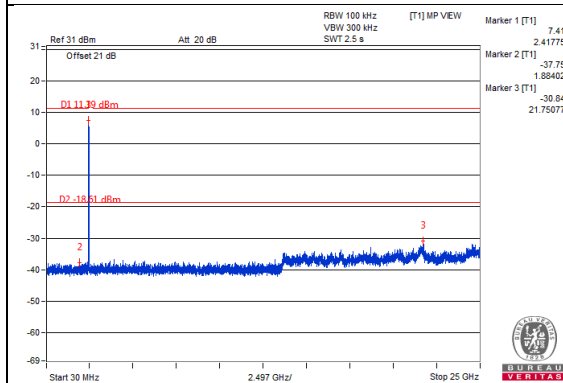
CH 1



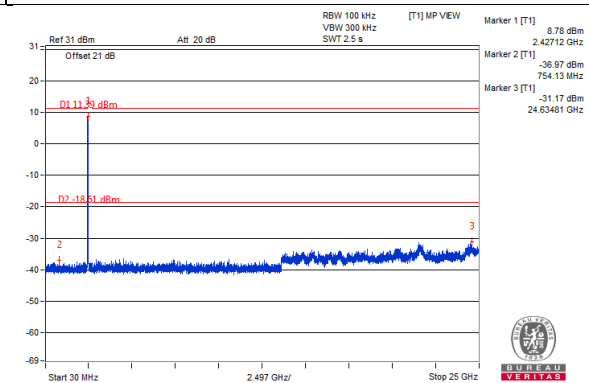
CH 2



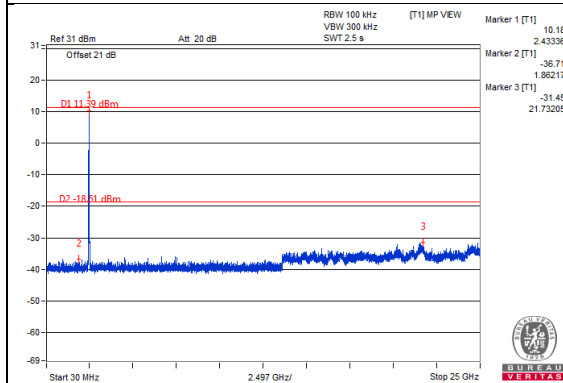
CH 3



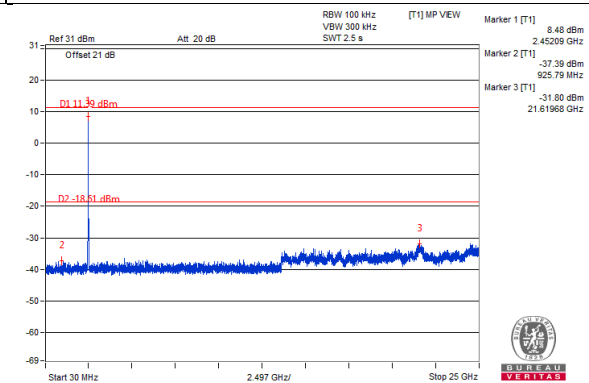
CH 4



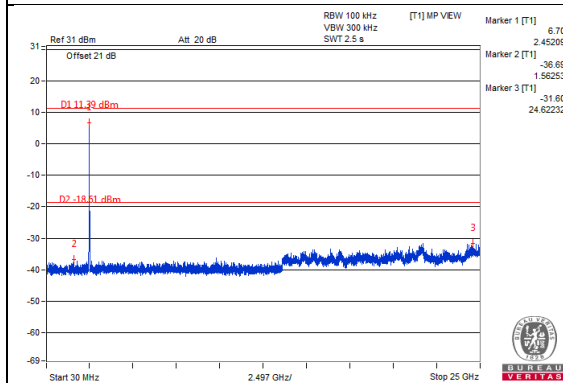
CH 6



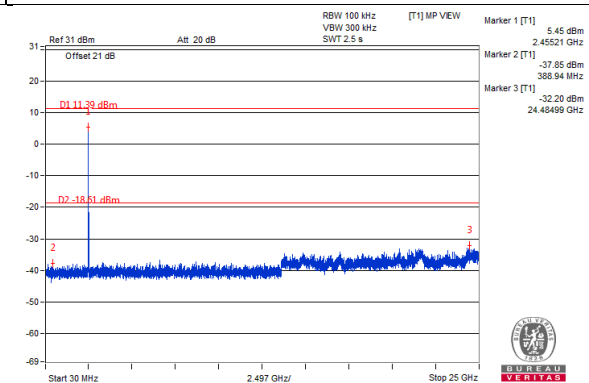
CH 9



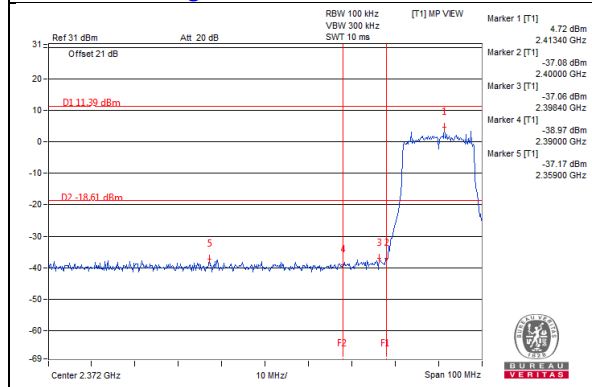
CH 10



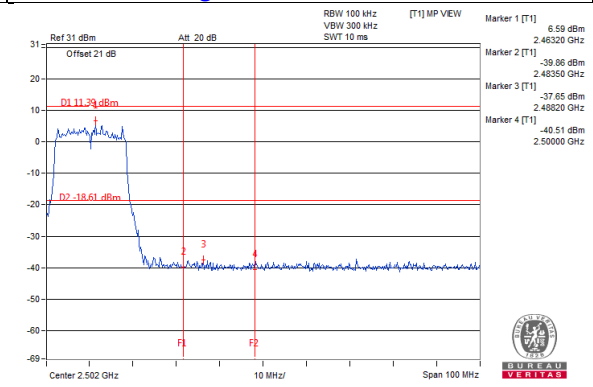
CH 11



CH 1 Band edge

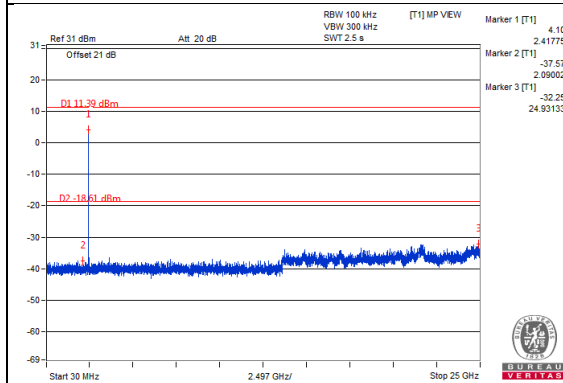


CH 11 Band edge

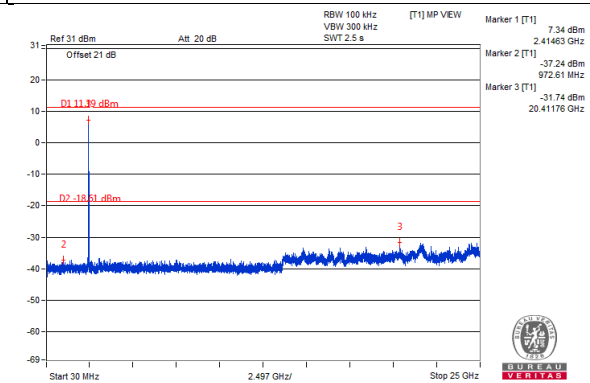


Chain 2

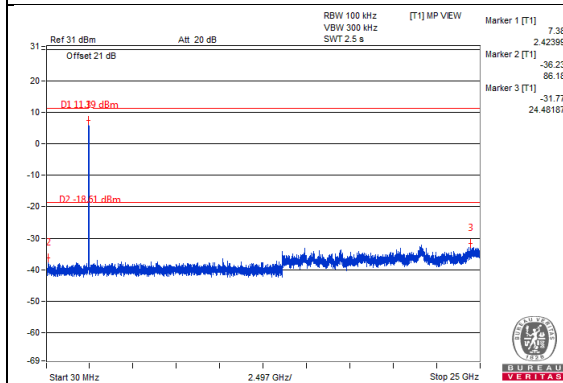
CH 1



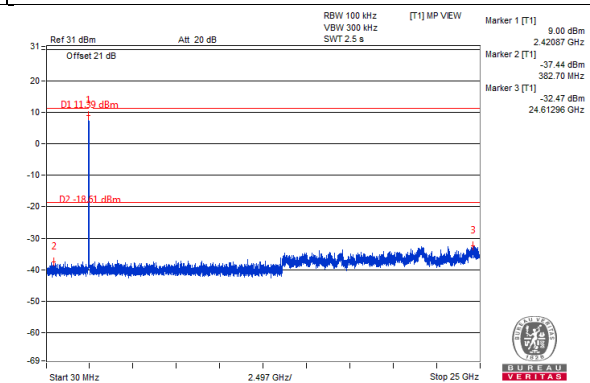
CH 2



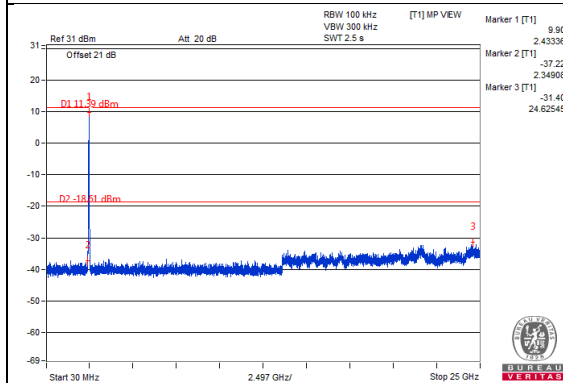
CH 3



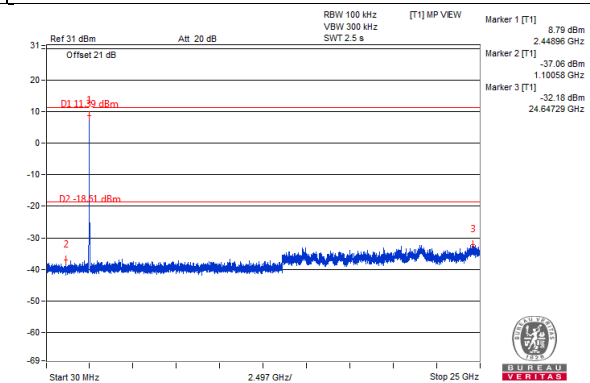
CH 4



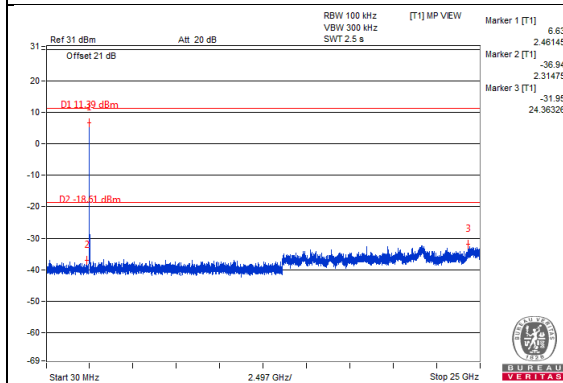
CH 6



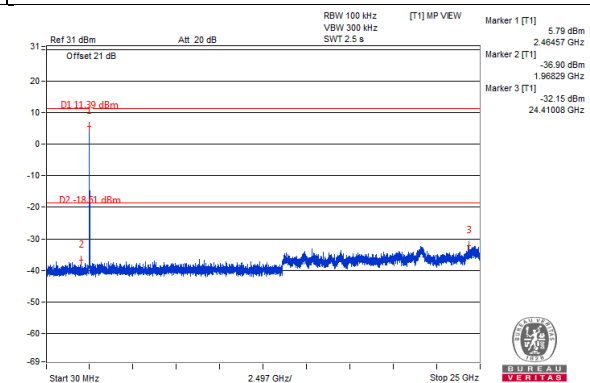
CH 9



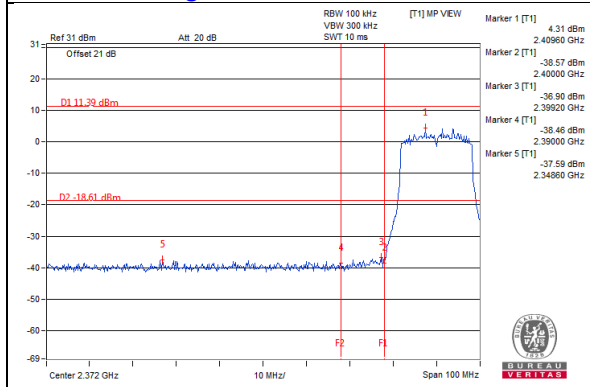
CH 10



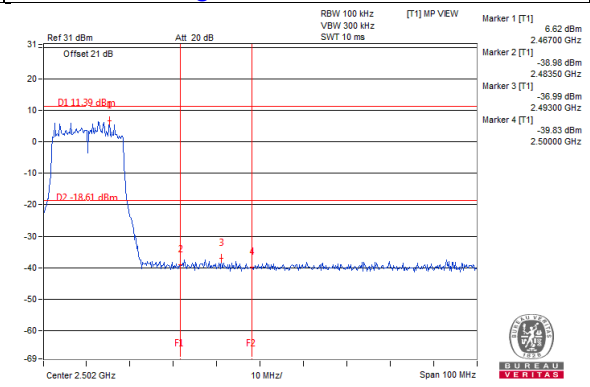
CH 11



CH 1 Band edge

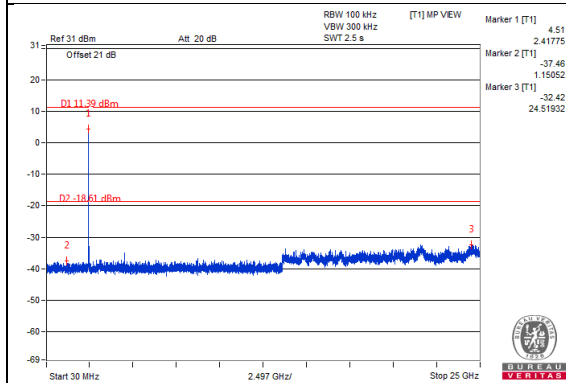


CH 11 Band edge

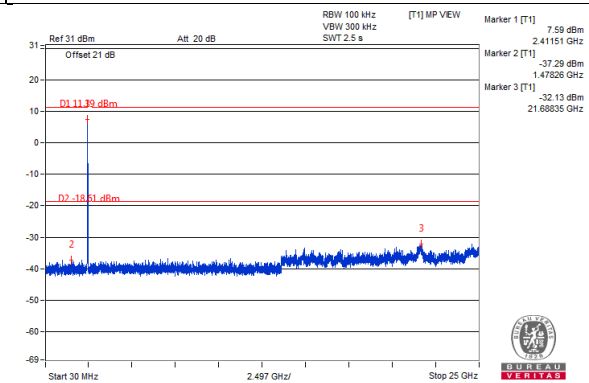


Chain 3

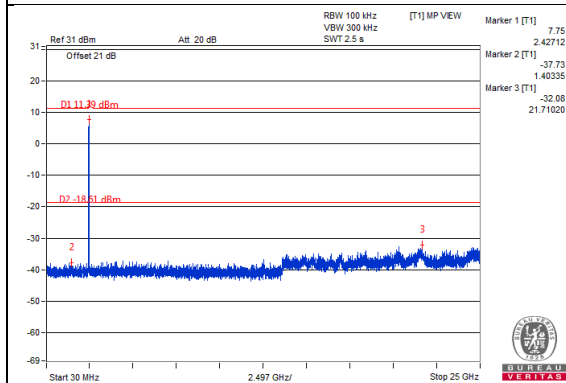
CH 1



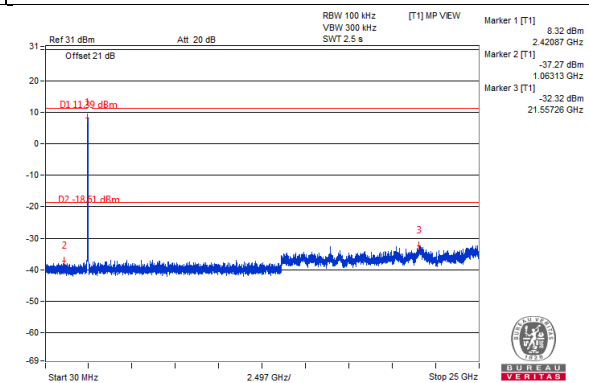
CH 2



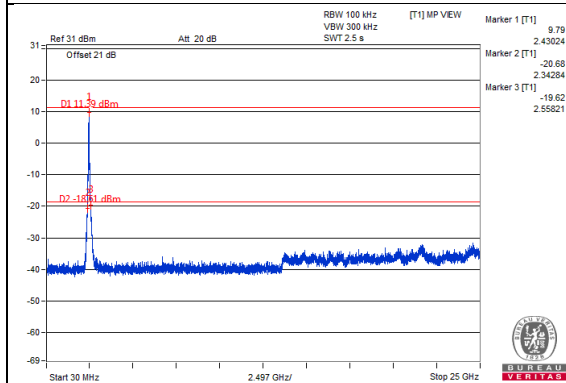
CH 3



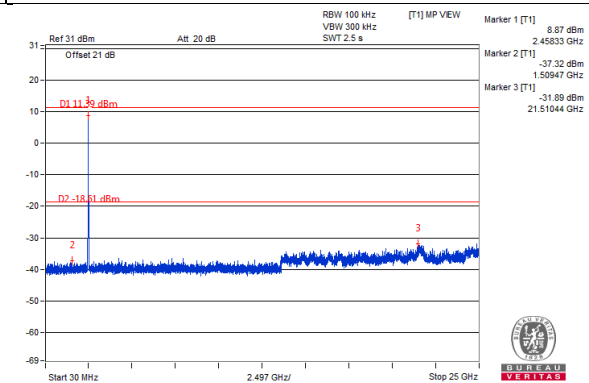
CH 4



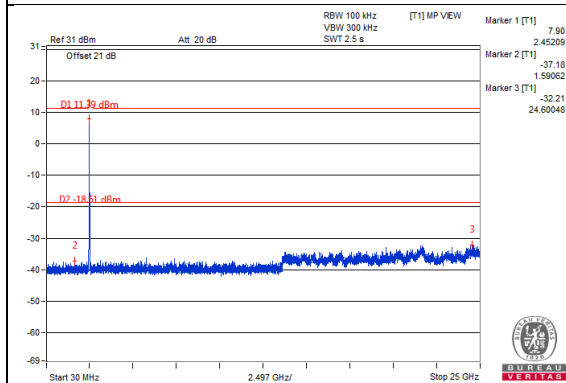
CH 6



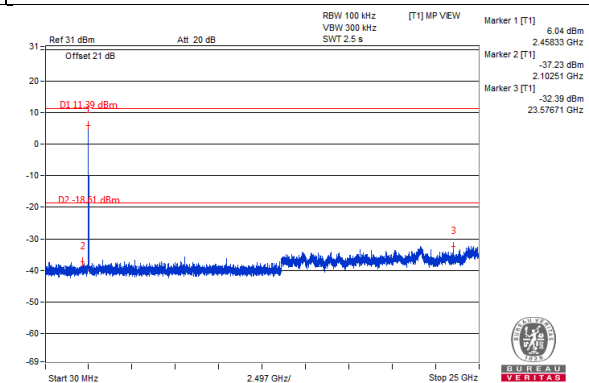
CH 9



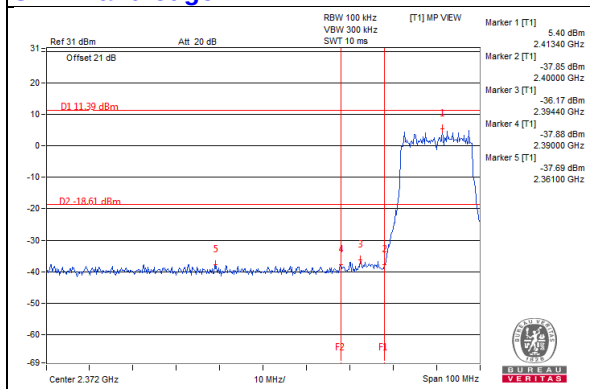
CH 10



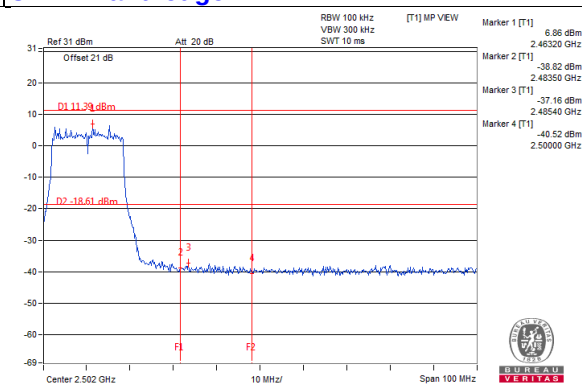
CH 11



CH 1 Band edge

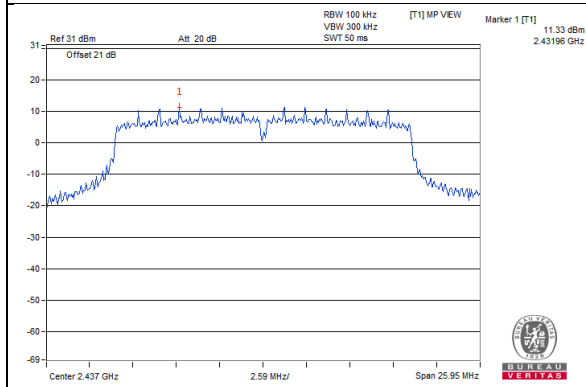


CH 11 Band edge



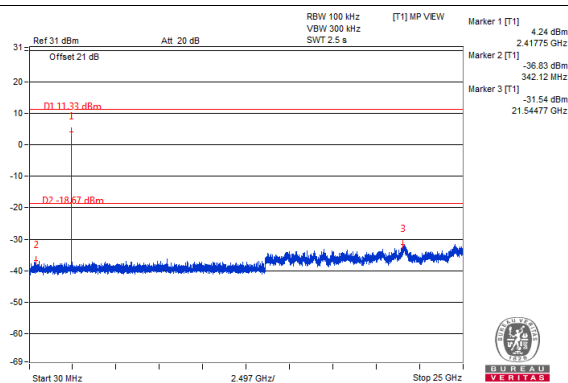
802.11n (HT20)

Maximum REF

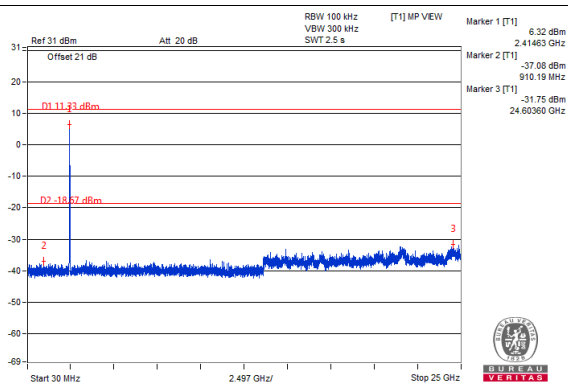


Chain 0

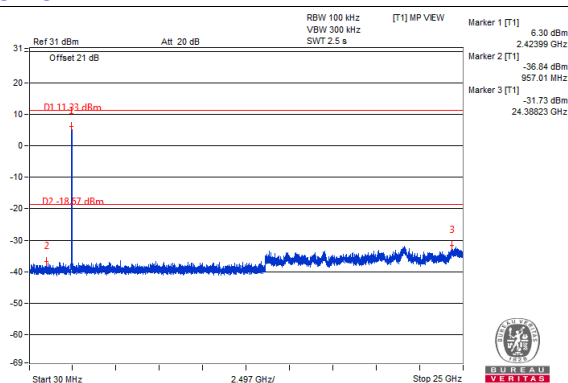
CH 1



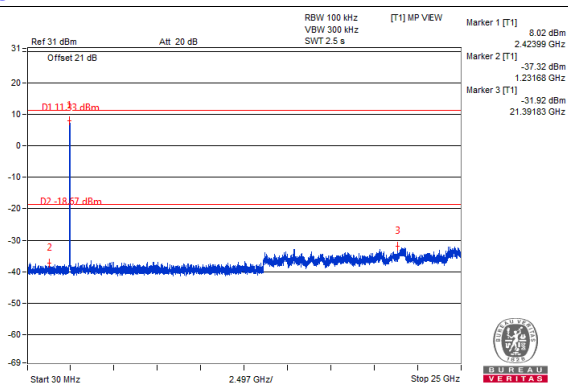
CH 2



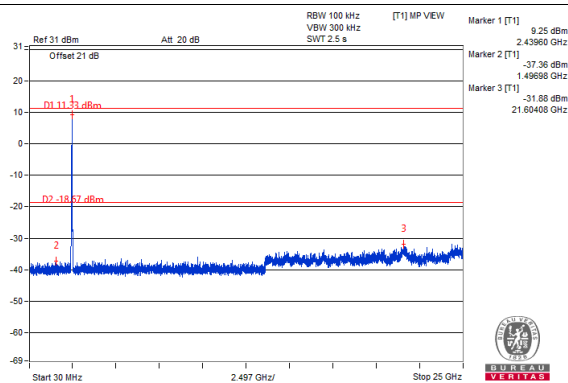
CH 3



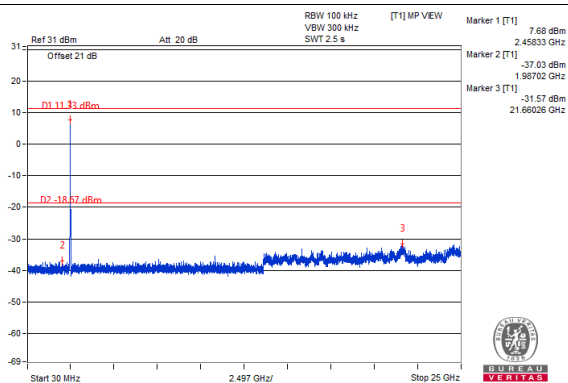
CH 4



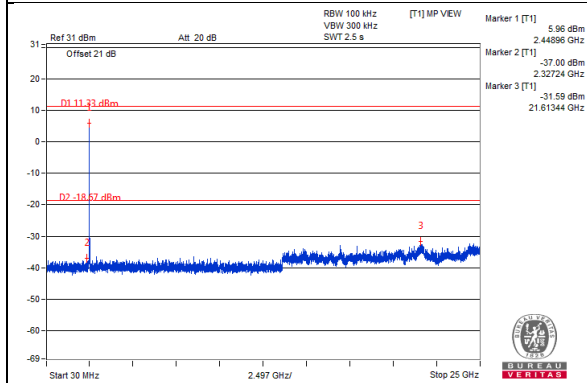
CH 6



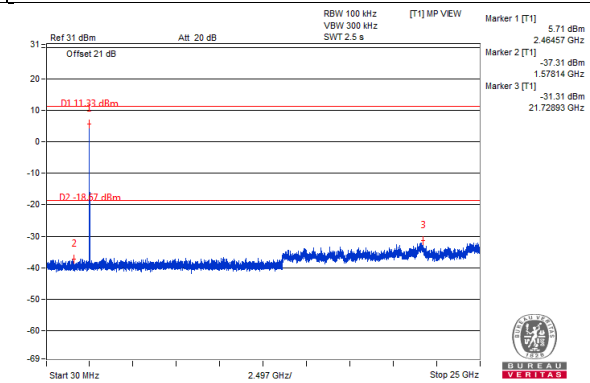
CH 9



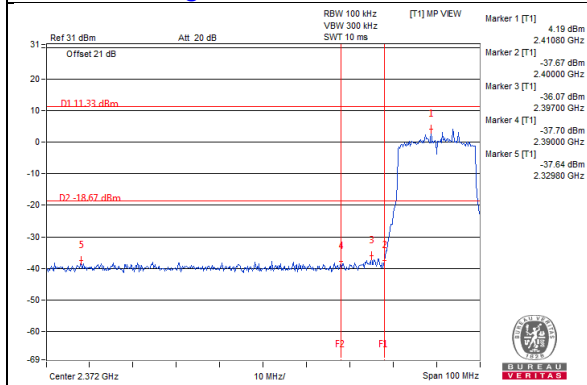
CH 10



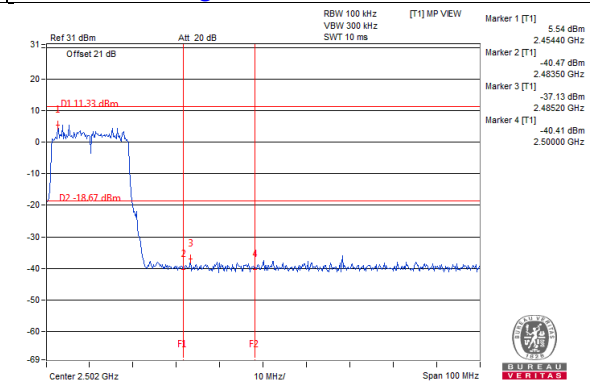
CH 11



CH 10 Band edge

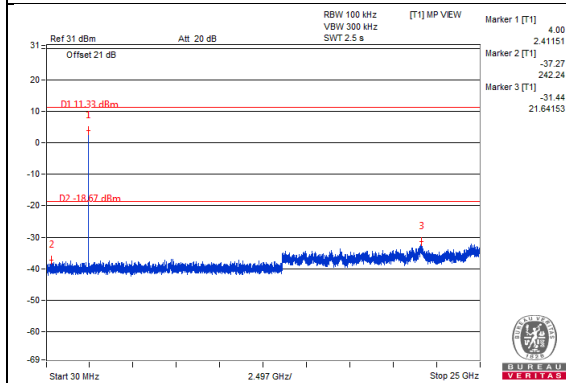


CH 11 Band edge

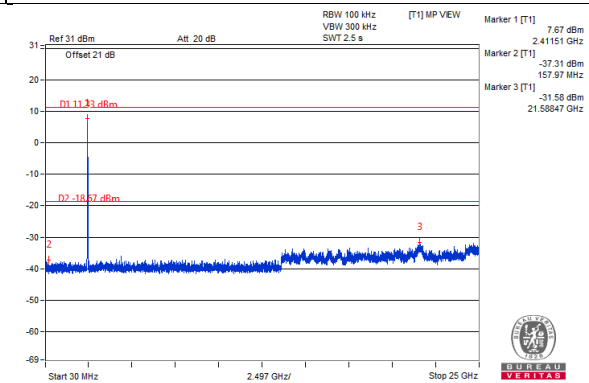


Chain 1

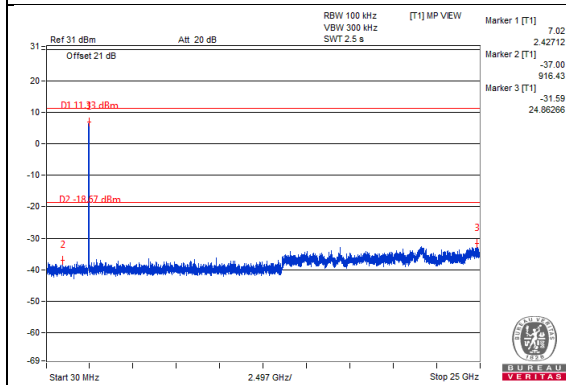
CH 1



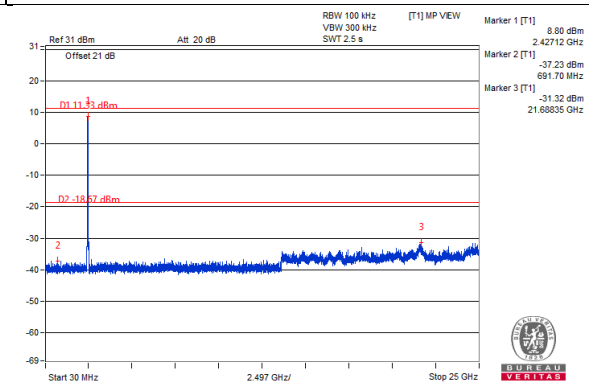
CH 2



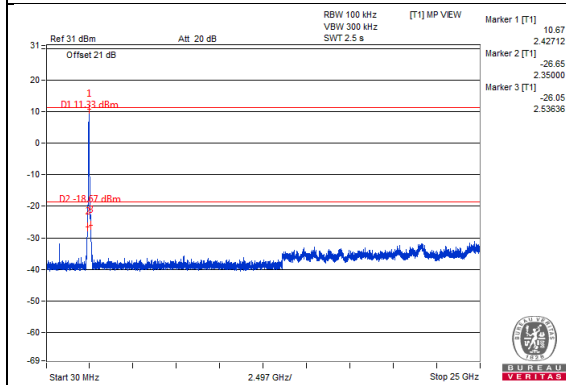
CH 3



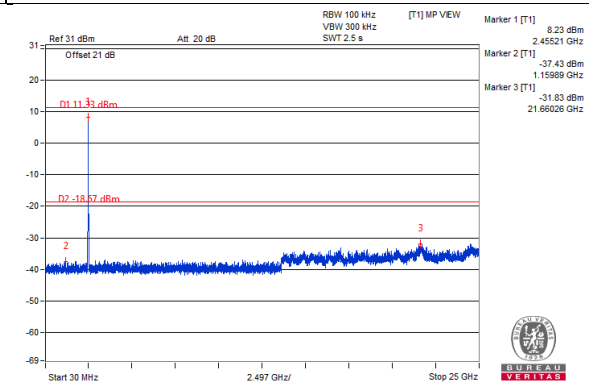
CH 4



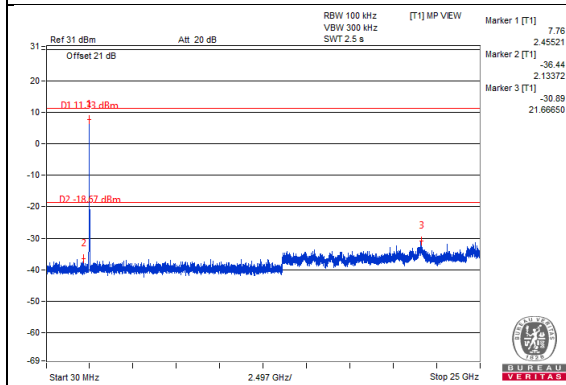
CH 6



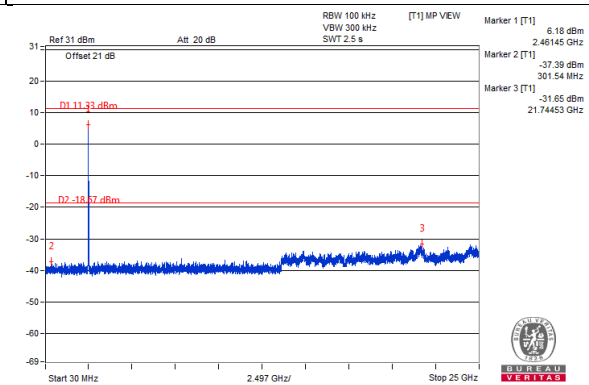
CH 9



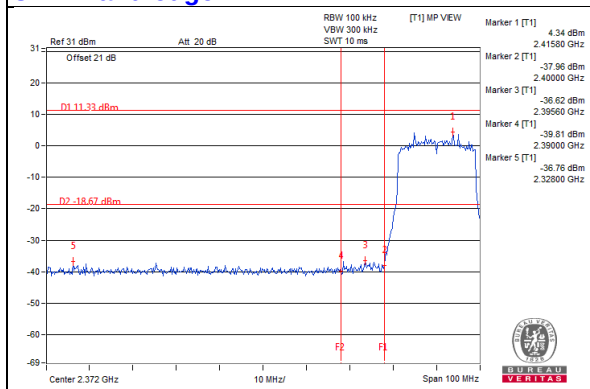
CH 10



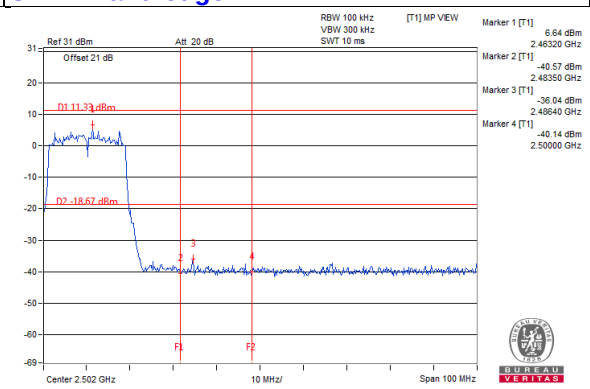
CH 11



CH 1 Band edge

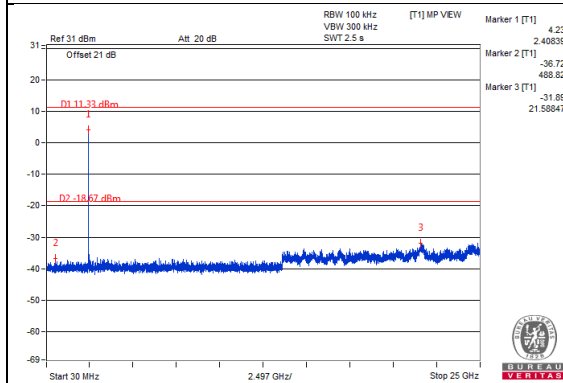


CH 11 Band edge

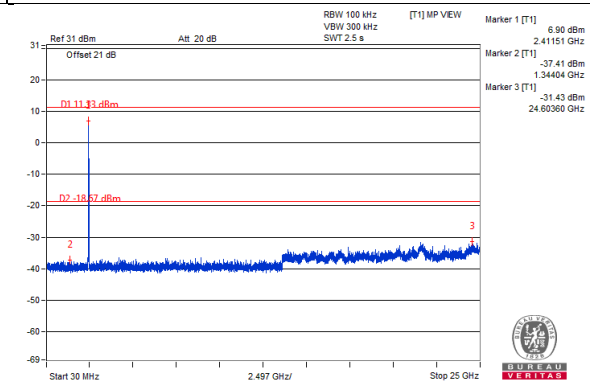


Chain 2

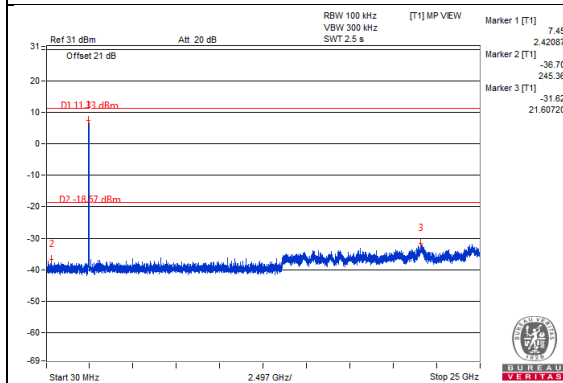
CH 1



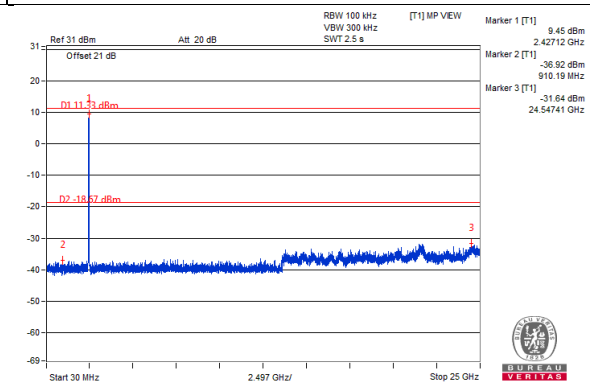
CH 2



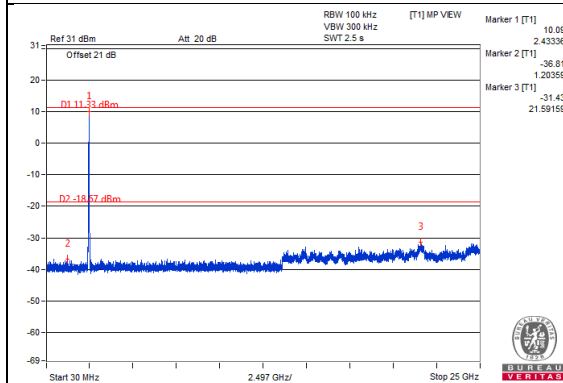
CH 3



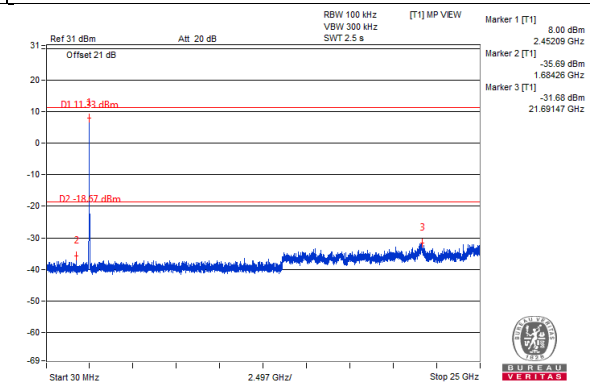
CH 4



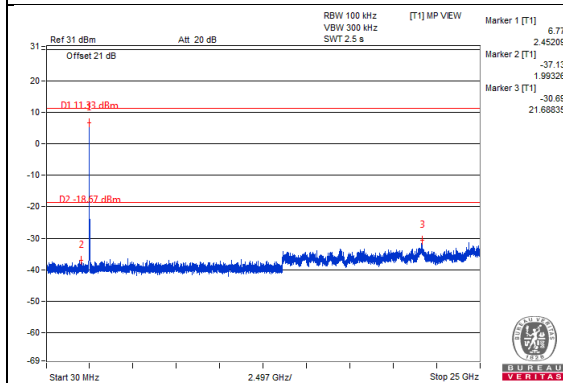
CH 6



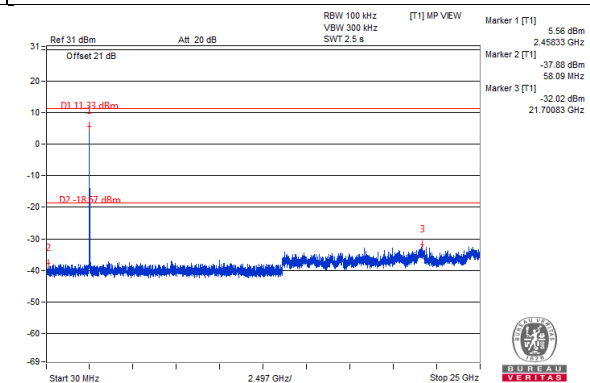
CH 9



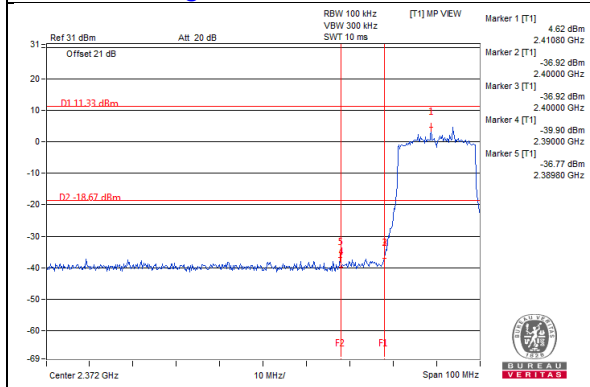
CH 10



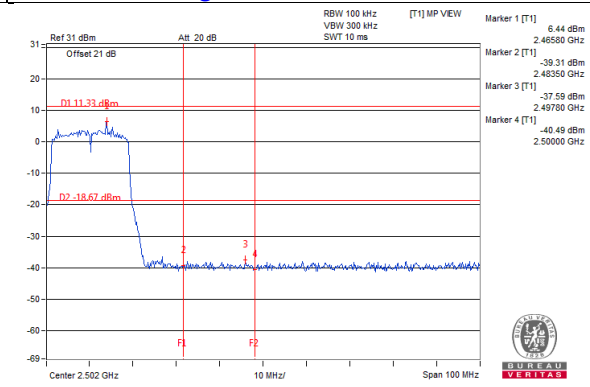
CH 11



CH 1 Band edge

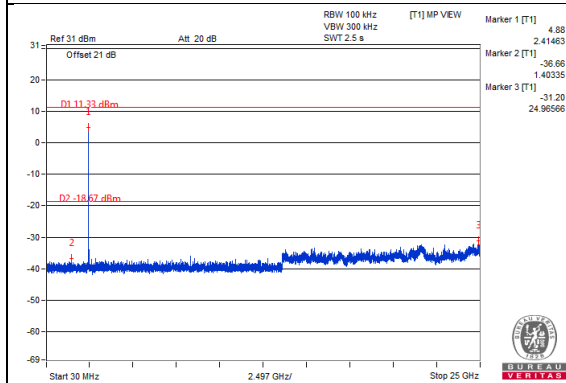


CH 11 Band edge

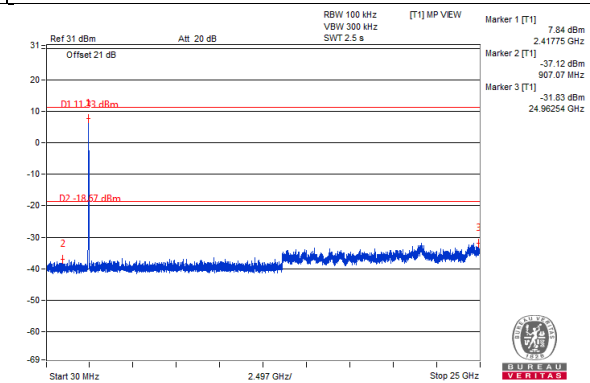


Chain 3

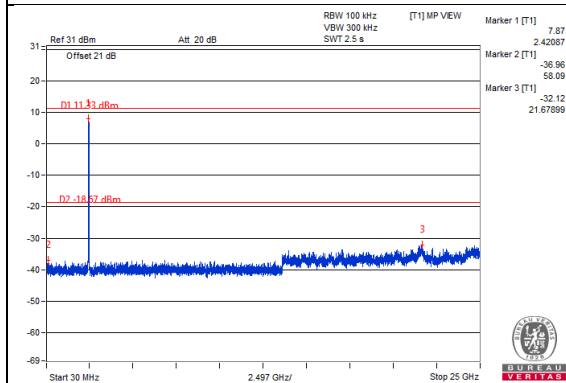
CH 1



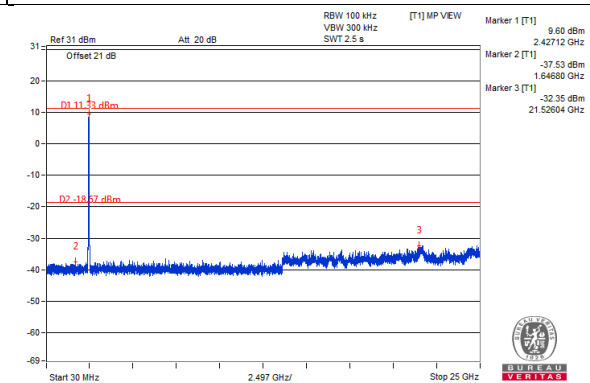
CH 2



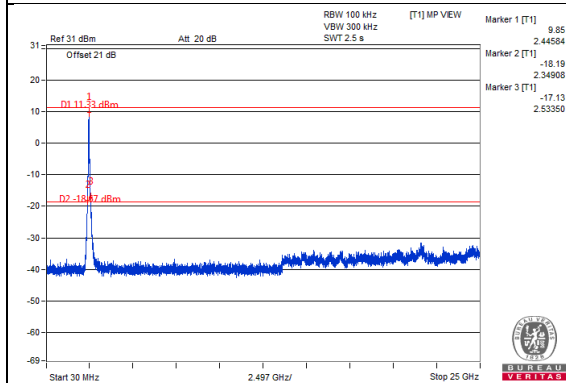
CH 3



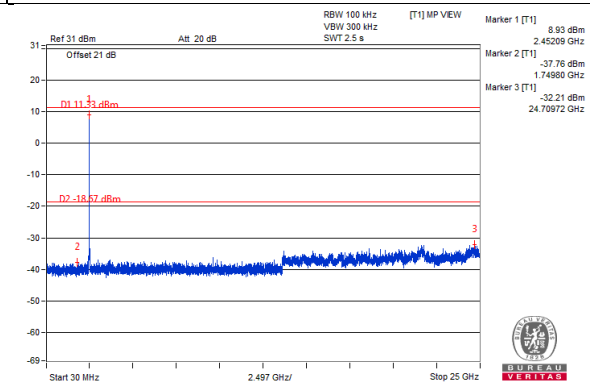
CH 4



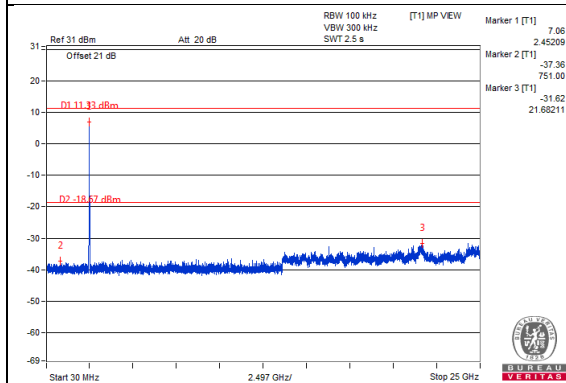
CH 6



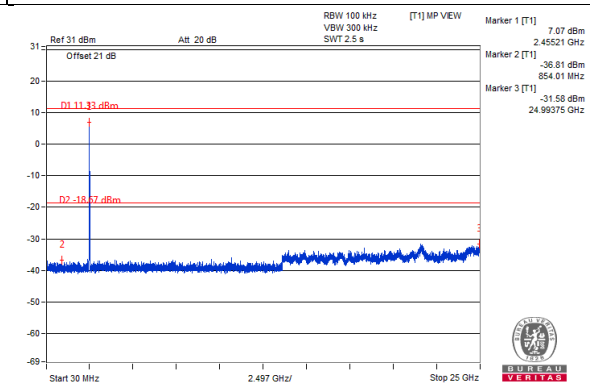
CH 9



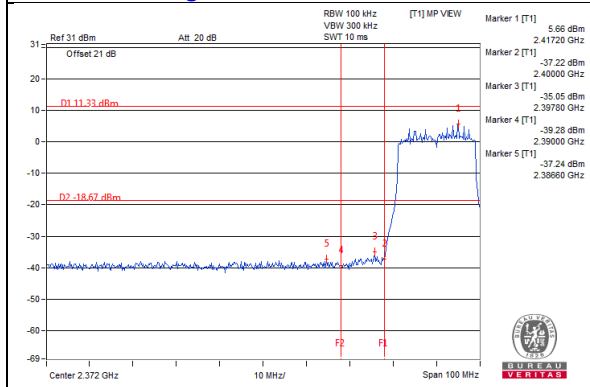
CH 10



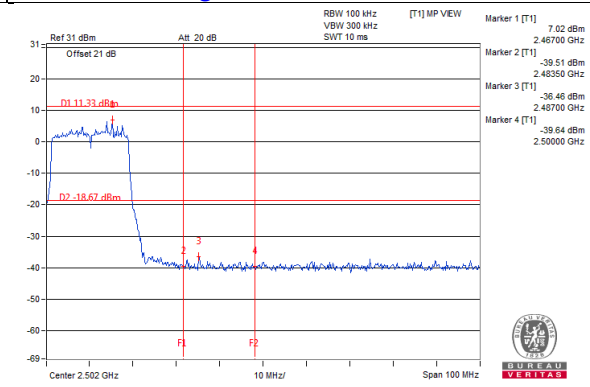
CH 11



CH 1 Band edge

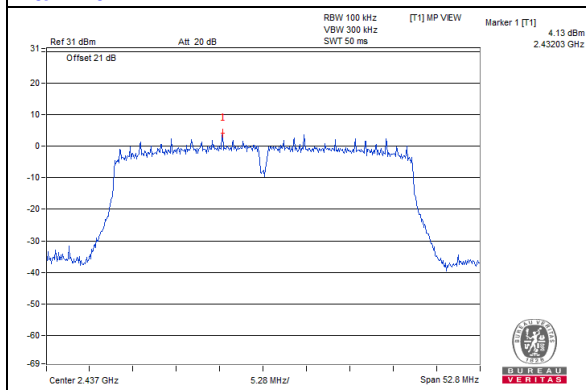


CH 11 Band edge



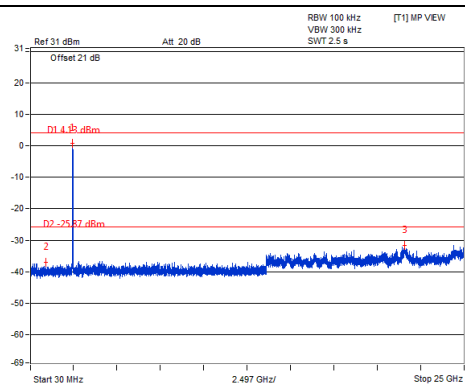
802.11n (HT40)

Maximum REF

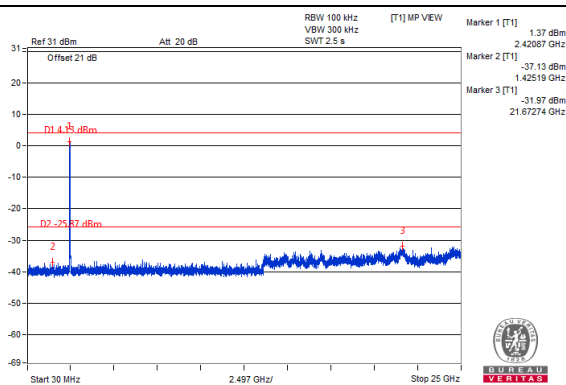


Chain 0

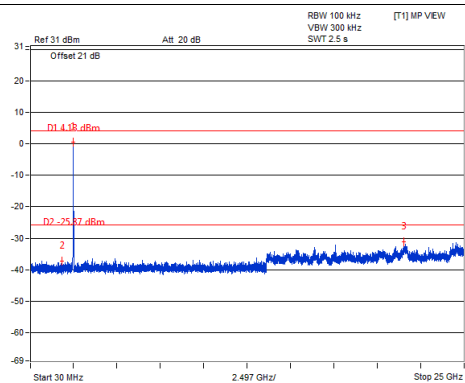
CH 3



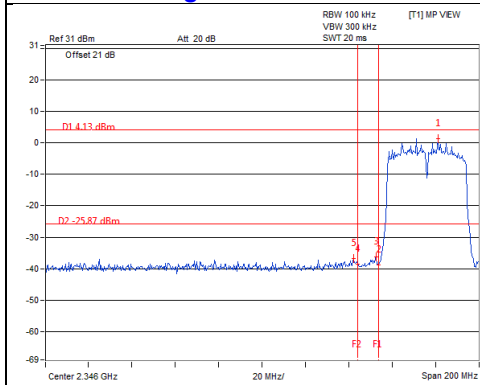
CH 6



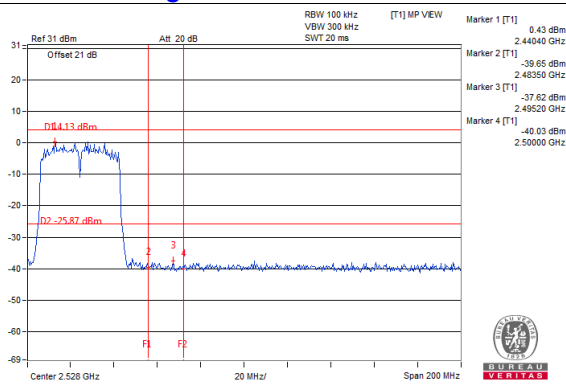
CH 9



CH 3 Band edge

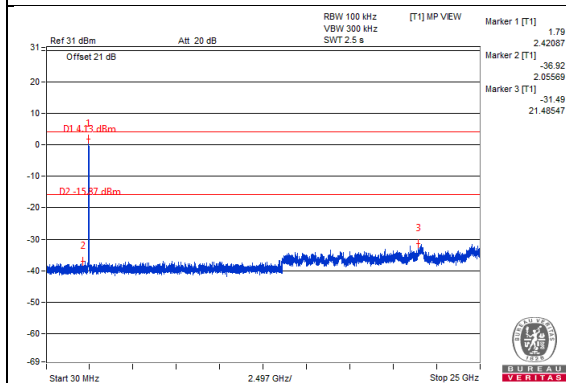


CH 9 Band edge

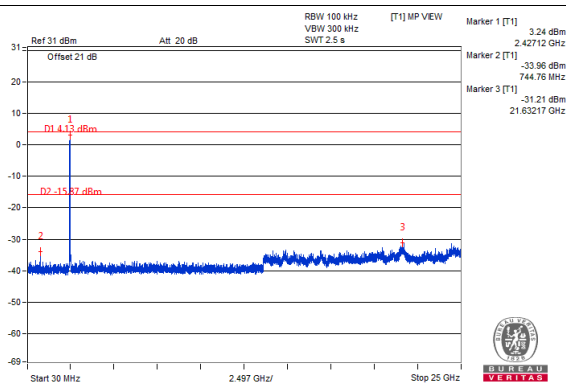


Chain 1

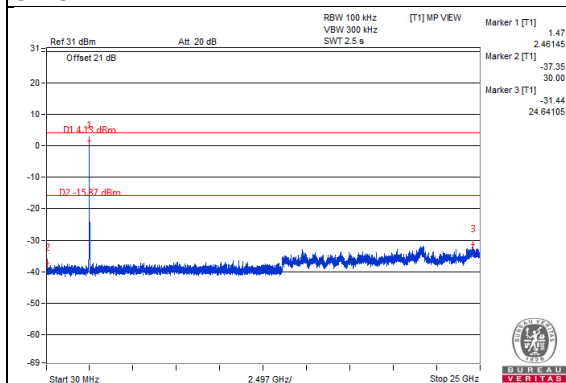
CH 3



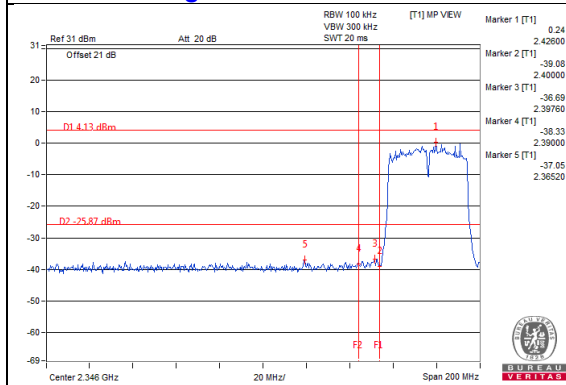
CH 6



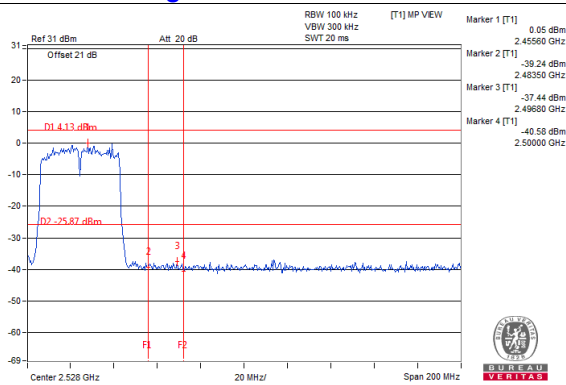
CH 9



CH 3 Band edge

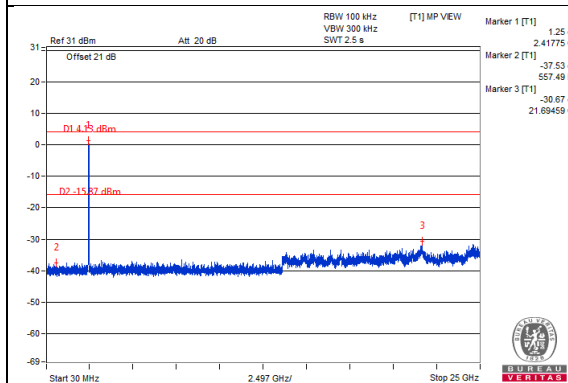


CH 9 Band edge

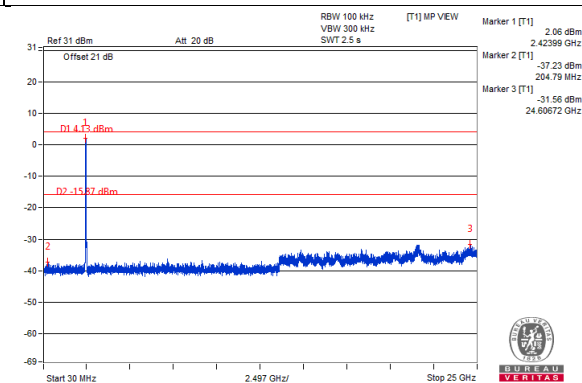


Chain 2

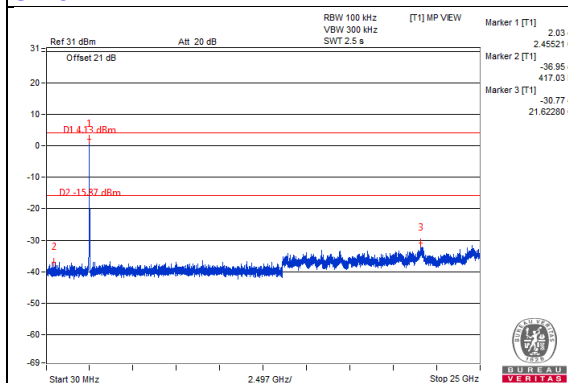
CH 3



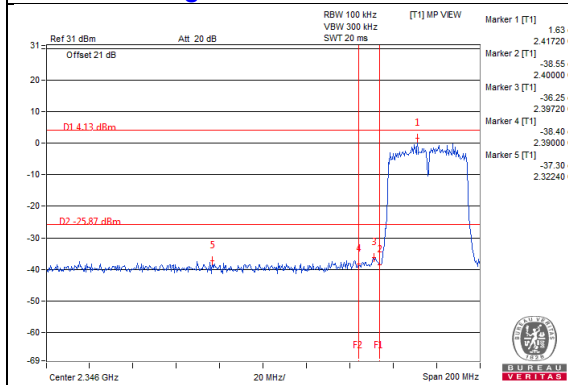
CH 6



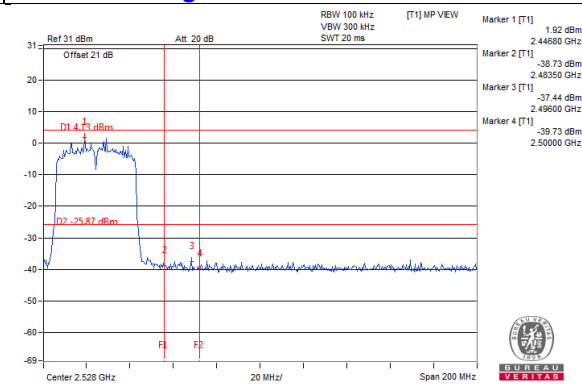
CH 9



CH 3 Band edge

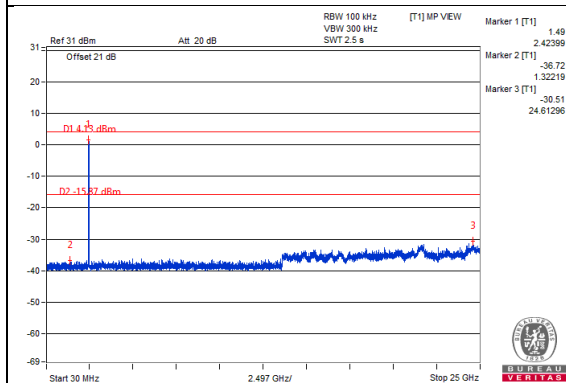


CH 9 Band edge

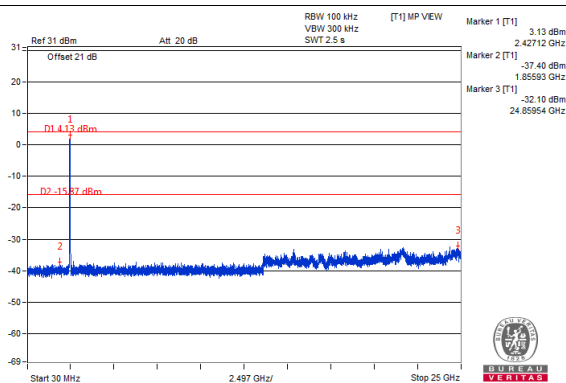


Chain 3

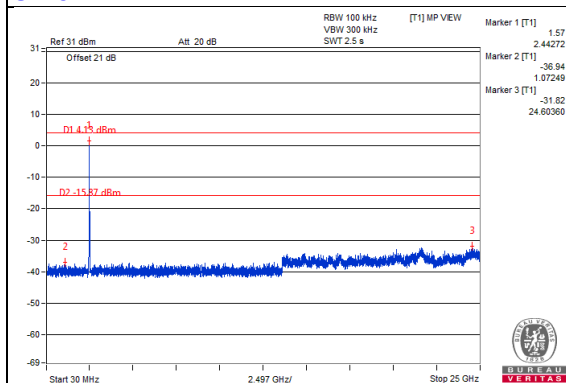
CH 3



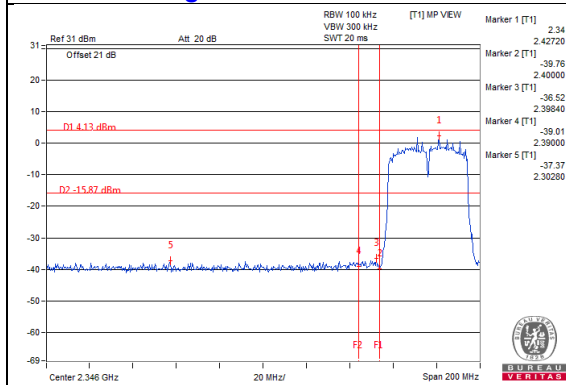
CH 6



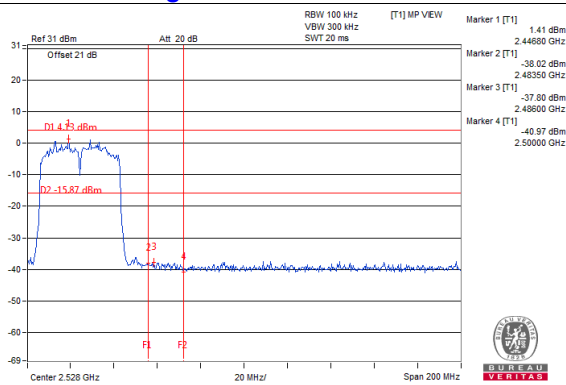
CH 9



CH 3 Band edge



CH 9 Band edge



5 Pictures of Test Arrangements

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

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 ---