FCC Test Report

Report No.:	RF170601E12
FCC ID:	2AKCZ-0C2
Model:	APL43-0C2
Received Date:	June 01, 2017
Test Date:	June 15 to Aug. 03, 2017
Issued Date:	Aug. 23, 2017
Applicant:	SonicWall Inc.
Address:	5455 Great America Parkway, Santa Clara, CA 95054 USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location (1):	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location (2):	No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

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Release Control Record

Issue No.	Description	Date Issued
RF170601E12	Original release	Aug. 23, 2017

1 Certificate of Conformity

Product:	Wireless Access Point
Brand:	SONICWALL
Model:	APL43-0C2
Sample Status:	MASS-PRODUCTION
Applicant:	SonicWall Inc.
Test Date:	June 15 to Aug. 03, 2017
Standards:	47 CFR FCC Part 15, Subpart C (Section 15.247) ANSI C63.10:2013

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

Prepared by : _____ , **Date:** Aug. 23, 2017

Claire Kuan / Specialist

Approved by : _____ , **Date:** Aug. 23, 2017

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 -7.94dB at 0.35703MHz
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.1dB at 2483.50, 2390.00MHz.
15.247(d)	Antenna Port Emission	Pass	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	Pass	Meet the requirement of limit.
15.247(b)	Conducted power	Pass	Meet the requirement of limit.
15.247(e)	Power Spectral Density	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	For Dipole antenna: Antenna connector is RSMA not a standard connector. For PIFA antenna: Antenna connector is IPEX 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	5.32 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.14 dB
	6GHz ~ 18GHz	5.04 dB
	18GHz ~ 40GHz	5.25 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Wireless Access Point
Brand	SONICWALL
Model	APL43-0C2
Sample Status	MASS-PRODUCTION
Power Supply Rating	48-55Vdc (POE)
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in VHT20/40
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b:11/ 5.5/ 2/ 1Mbps 802.11g: 54/ 48/ 36/ 24/ 18/ 12/ 9/ 6Mbps 802.11n: up to 600Mbps VHT: up to 800Mbps
Operating Frequency	2412 ~ 2462MHz
Number of Channel	11 for 802.11b, 802.11g, 802.11n (HT20), VHT20 7 for 802.11n (HT40), VHT40
Output Power	Radio 1: CDD Mode: 568.379 mW Beamforming Mode: 263.594 mW Radio 3: CDD Mode: 116.413 mW
Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. The EUT incorporates a MIMO function.

Band	Modulation Mode	TX Function	Beamforming	Radio
2.4GHz	802.11b	4TX	Not Support	Radio 1
	802.11g	4TX	Not Support	
	802.11n (HT20)	4TX	Support	
	802.11n (HT40)	4TX	Support	
	VHT20	4TX	Support	
	VHT40	4TX	Support	
	802.11b	1TX	Not Support	Radio 3
	802.11g	1TX	Not Support	
	802.11n (HT20)	1TX	Not Support	
	802.11n (HT40)	1TX	Not Support	

2. The EUT uses following antennas.

External antenna									Internal antenna	
Type	Dipole								PIFA	
Connecter	RSMA								IPEX	
Radio	1				2				3	4
Frequency	2.4GHz				5GHz				2.4GHz	BT-LE
Antenna	1	2	3	4	5	6	7	8	9	10
Gain (dBi)	5.08	5.08	5.08	5.08	8.41	8.41	8.41	8.41	2.91	3.13

3. Radio 1 & Radio 2 & Radio 3 & BLE technologies can transmit at same time.
4. Spurious emission of the simultaneous operation (2.4GHz, 5GHz and BT LE) has been evaluated and no non-compliance was found.
5. The power setting are list as below:

Radio 1:					
CDD Mode	802.11b	802.11g	VHT20	CDD Mode	VHT40
CH01	20	16.5	16.5	CH03	13
CH06	20	21	21	CH06	16
CH11	19.5	15.5	15.5	CH09	11.5
Beamforming Mode	802.11b	802.11g	VHT20	Beamforming Mode	VHT40
CH01	-	-	16.5	CH03	13
CH06	-	-	18	CH06	16
CH11	-	-	15.5	CH09	11.5
Radio 3:					
1TX Mode	802.11b	802.11g	802.11n (HT20)	1TX Mode	802.11n (HT40)
CH01	25	20	20	CH03	18.5
CH06	26	26	26	CH06	22
CH11	26	20.5	20	CH09	19

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

3.2 Description of Test Modes

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

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

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

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

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	Radio 1 with External antenna (4TX)
B	√	√	√	√	Radio 3 with Internal antenna (1TX)

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

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

Note: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane.**

For EUT Configure Mode A

Radiated Emission Test (Above 1GHz):

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

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

CDD Mode					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
VHT20	1 to 11	1, 6, 11	OFDM	BPSK	6.5
VHT40	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.

CDD Mode					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11g	1 to 11	6	OFDM	BPSK	6

Power Line Conducted Emission Test:

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

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

CDD Mode					
MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11g	1 to 11	6	OFDM	BPSK	6

Antenna Port Conducted Measurement:

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

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

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

CDD Mode					
MODE	**AVAILABLE CHANNEL**	**TESTED CHANNEL**	**MODULATION TECHNOLOGY**	**MODULATION TYPE**	**DATA RATE (Mbps)**
802.11b	1 to 11	1, 6, 11	DSSS	DBPSK	1
802.11g	1 to 11	1, 6, 11	OFDM	BPSK	6
VHT20	1 to 11	1, 6, 11	OFDM	BPSK	6.5
VHT40	3 to 9	3, 6, 9	OFDM	BPSK	13.5
Beamforming Mode (Output power only)					
MODE	**AVAILABLE CHANNEL**	**TESTED CHANNEL**	**MODULATION TECHNOLOGY**	**MODULATION TYPE**	**DATA RATE (Mbps)**
VHT20	1 to 11	1, 6, 11	OFDM	BPSK	6.5
VHT40	3 to 9	3, 6, 9	OFDM	BPSK	13.5

For EUT Configure Mode B

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, 6, 11	OFDM	BPSK	6
802.11n (HT20)	1 to 11	1, 6, 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)
802.11g	1 to 11	6	OFDM	BPSK	6

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)
802.11g	1 to 11	6	OFDM	BPSK	6

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, 6, 11	OFDM	BPSK	6
802.11n (HT20)	1 to 11	1, 6, 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 (SYSTEM)	TESTED BY
RE≥1G	26deg. C, 75%RH	120Vac, 60Hz	And Ho
RE<1G	22deg. C, 67%RH	120Vac, 60Hz	Weiwei Lo
PLC	25deg. C, 75%RH	120Vac, 60Hz	And Ho
APCM	25deg. C, 60%RH	120Vac, 60Hz	Robert Cheng

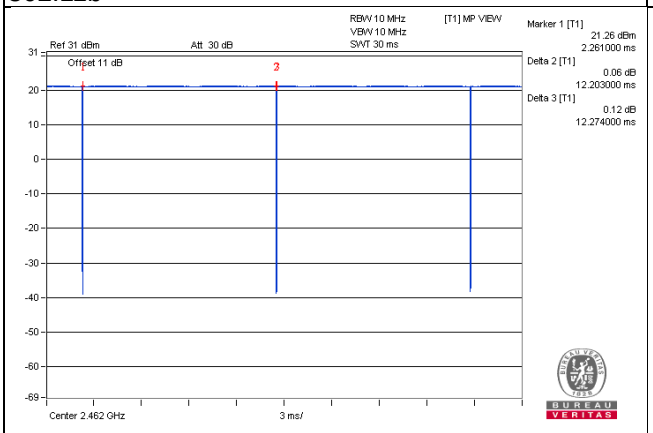
3.3 Duty Cycle of Test Signal

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

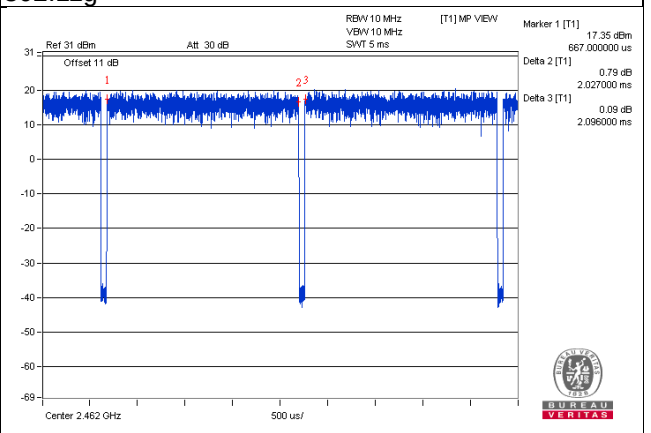
Test Mode A

802.11b: Duty cycle = 12.203/12.274 = 0.994
802.11g: Duty cycle = 2.027/2.096 = 0.967, Duty factor = 10 * log(1/0.967) = 0.15
VHT20: Duty cycle = 4.957/5.025 = 0.986
VHT40: Duty cycle = 2.405/2.474 = 0.972, Duty factor = 10 * log(1/0.972) = 0.12

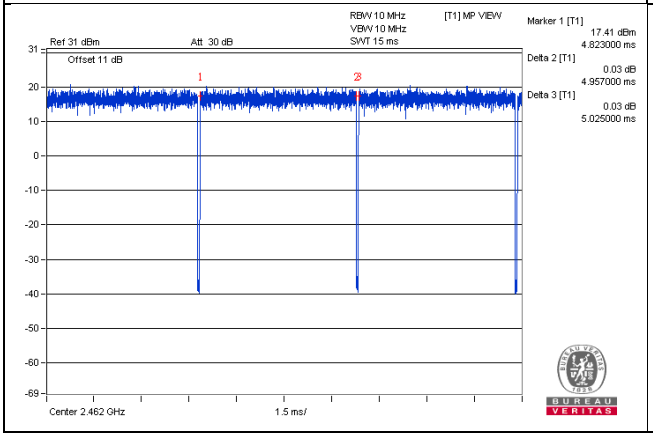
802.11b



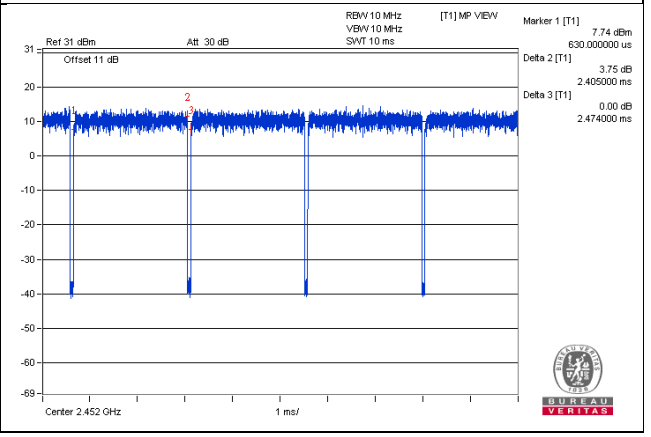
802.11g



VHT20



VHT40



Test Mode B

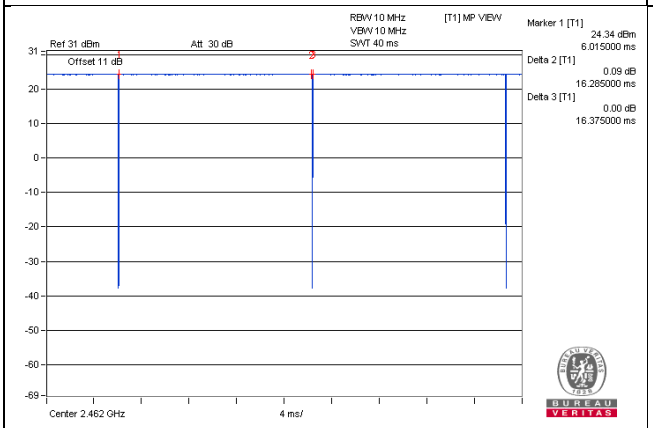
802.11b: Duty cycle = 16.285/16.375 = 0.995

802.11g: Duty cycle = 21.488/21.643 = 0.994

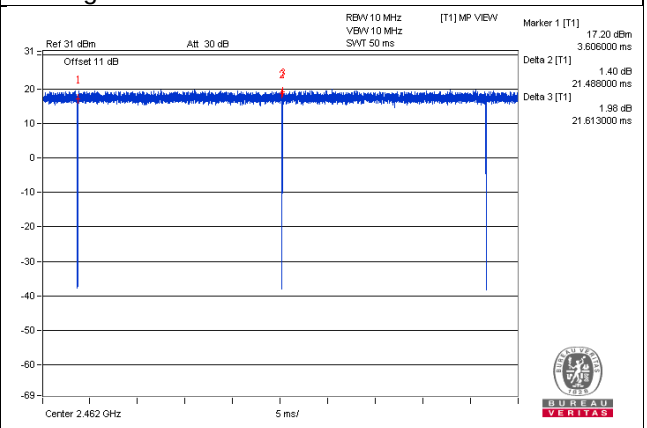
802.11n (HT20): Duty cycle = 19.856/19.956 = 0.995

802.11n (HT40): Duty cycle = 9.521/9.638 = 0.988

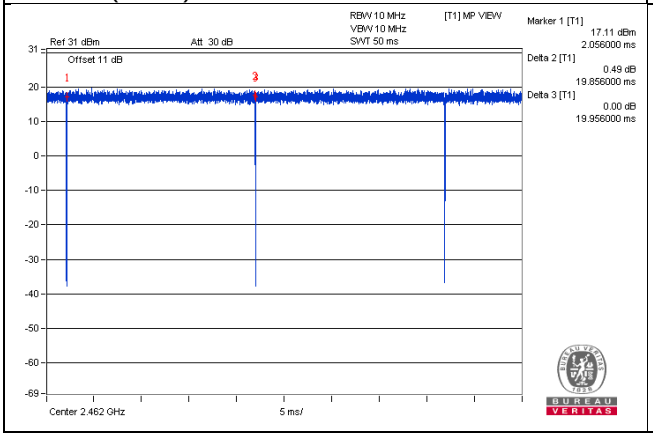
802.11b



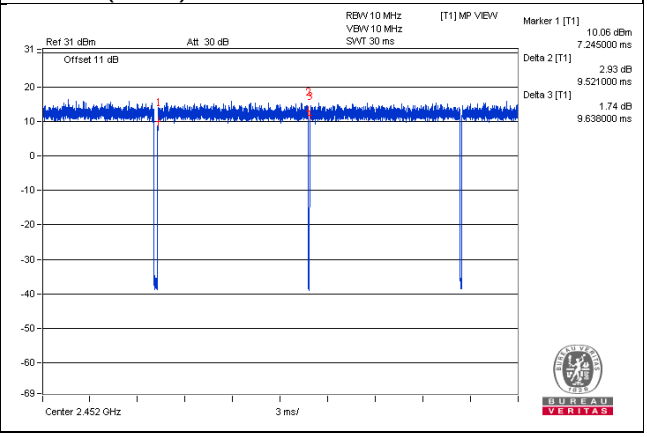
802.11g



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 Adapter	Microsemi	PD-9501-10G	NA	NA	Supplied by client
B.	Laptop	DELL	E5430	HYV4VY1	FCC DoC	Provided by Lab
C.	Laptop	DELL	E5430	GM1SKV1	FCC DoC	Provided by Lab
D.	USB Disk 3.0	Transcend	16GB	NA	NA	Provided by Lab

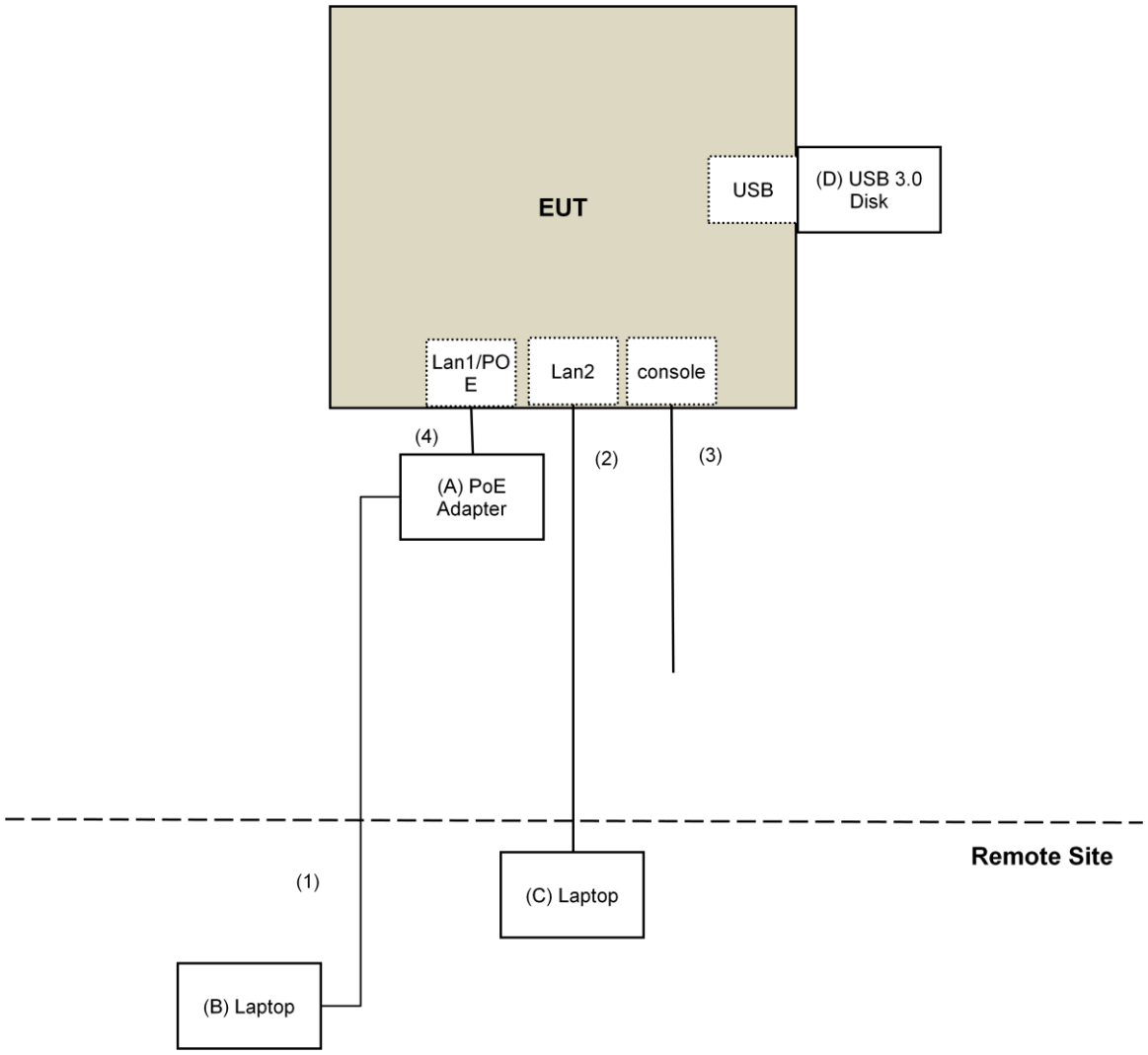
Note:

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

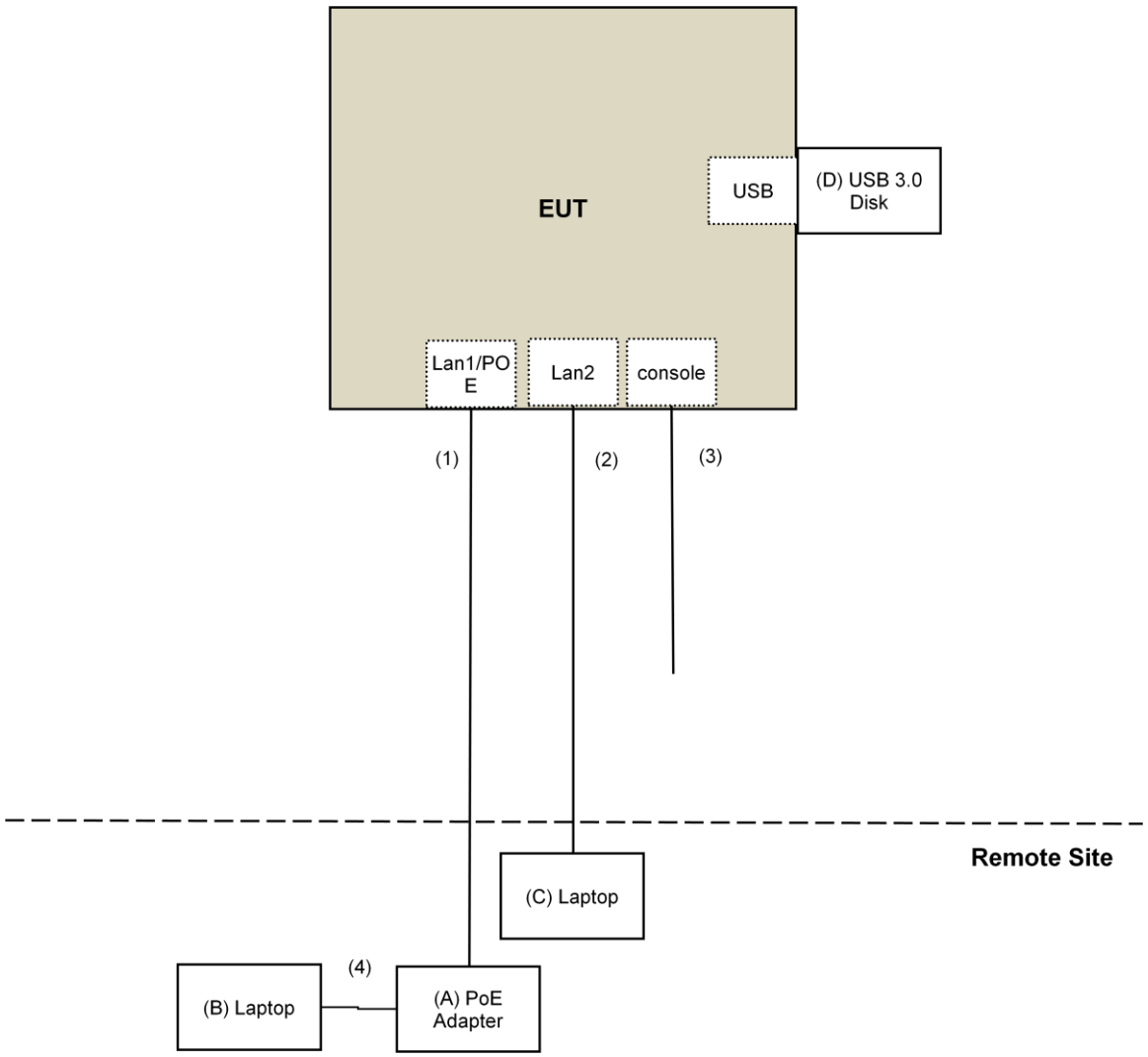
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ-45 Cable	1	10	No	0	Provided by Lab
2.	RJ-45 Cable	1	10	No	0	Provided by Lab
3.	Console Cable	1	1.6	No	0	Provided by Lab
4.	RJ-45 Cable	1	3	No	0	Provided by Lab

3.4.1 Configuration of System under Test

For conducted emission test:



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.

Note: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

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 30dB under any condition of modulation.

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	Aug. 18, 2016	Aug. 17, 2017
Pre-Amplifier(*) EMCI	EMC001340	980142	Jan. 20, 2016	Jan. 19, 2018
Loop Antenna(*) Electro-Metrics	EM-6879	264	Dec. 16, 2016	Dec. 15, 2018
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 17, 2017	Jan. 16, 2018
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	May 06, 2017	May 05, 2018
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Dec. 29, 2016	Dec. 28, 2017
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. 05, 2016	Oct. 04, 2017
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Dec. 28, 2016	Dec. 27, 2017
Pre-Amplifier EMCI	EMC12630SE	980384	Feb. 02, 2017	Feb. 01, 2018
RF Cable	EMC104-SM-SM-1200 EMC104-SM-SM-2000 EMC104-SM-SM-5000	160922 150317 150322	Feb. 02, 2017 Mar. 29, 2017 Mar. 29, 2017	Feb. 01, 2018 Mar. 28, 2018 Mar. 28, 2018
Spectrum Analyzer Keysight	N9030A	MY54490520	July 29, 2016	July 28, 2017
Pre-Amplifier EMCI	EMC184045SE	980386	Feb. 02, 2017	Feb. 01, 2018
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Dec. 15, 2016	Dec. 14, 2017
RF Cable	SUCOFLEX 102	36432/2 36433/2	Jan. 15, 2017	Jan. 14, 2018
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Spectrum Analyzer R&S	FSv40	100964	July 1, 2017	June 30, 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 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: July 05 to 28, 2017

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 detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

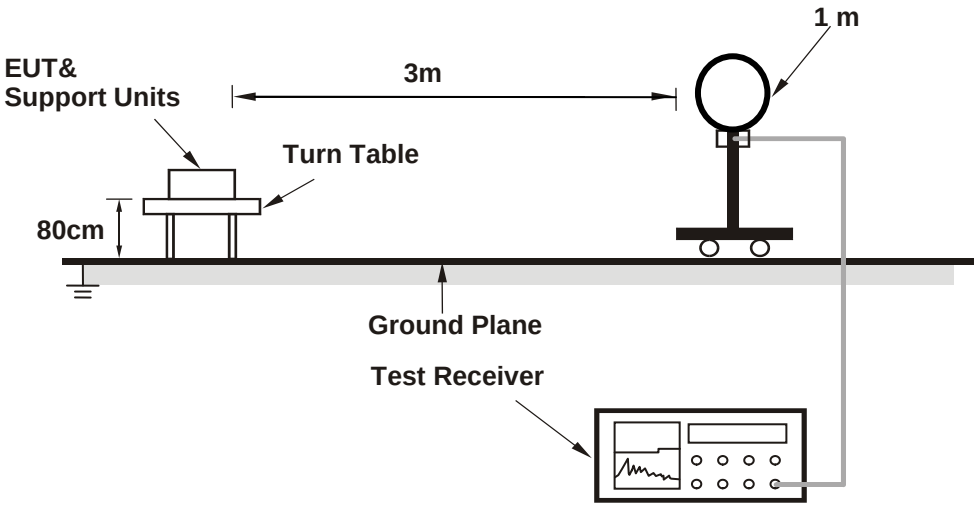
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

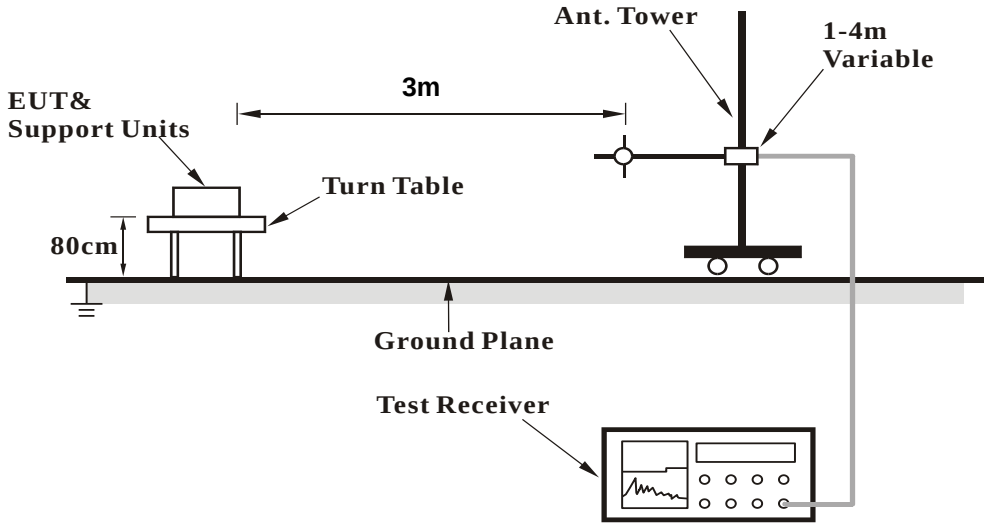
No deviation.

4.1.5 Test Set Up

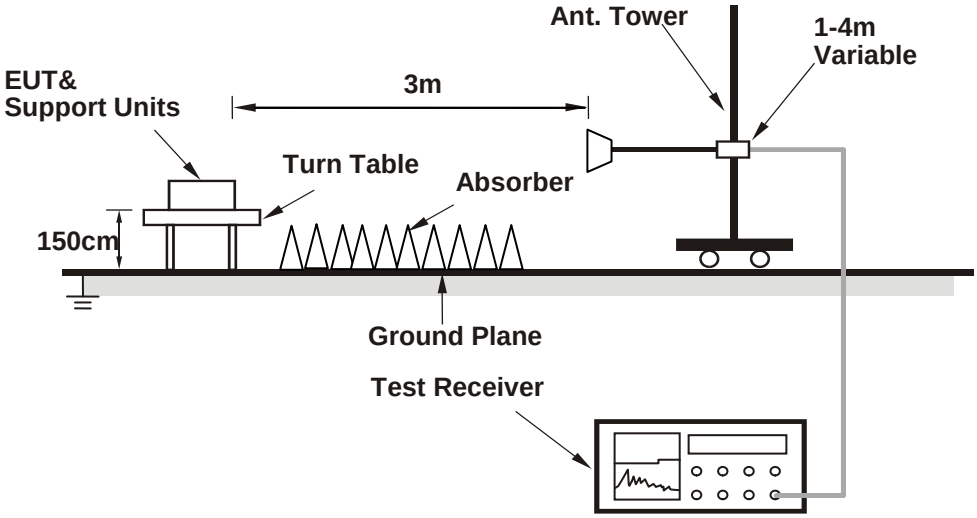
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

a. Connected the EUT with the Laptop which is placed on remote site.
b. Controlling software (QRCT Ver3.0.187.0) has been activated to set the EUT on specific status.

4.1.7 Test Results (Mode A)

Above 1GHz worst-Case data:

802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2374.70	53.8 PK	74.0	-20.2	2.39 H	66	55.4	-1.6
2	2374.70	43.2 AV	54.0	-10.8	2.39 H	66	44.8	-1.6
3	*2412.00	110.0 PK			2.39 H	66	111.5	-1.5
4	*2412.00	110.0 AV			2.39 H	66	111.5	-1.5
5	4824.00	42.3 PK	74.0	-31.7	2.35 H	244	39.3	3.0
6	4824.00	38.9 AV	54.0	-15.1	2.35 H	244	35.9	3.0
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	2374.70	63.0 PK	74.0	-11.0	1.42 V	340	64.6	-1.6
2	2374.70	52.7 AV	54.0	-1.3	1.42 V	340	54.3	-1.6
3	*2412.00	120.3 PK			1.42 V	340	121.8	-1.5
4	*2412.00	118.1 AV			1.42 V	340	119.6	-1.5
5	4824.00	46.7 PK	74.0	-27.3	3.01 V	234	43.7	3.0
6	4824.00	43.6 AV	54.0	-10.4	3.01 V	234	40.6	3.0

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 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	2389.80	53.2 PK	74.0	-20.8	2.39 H	75	54.8	-1.6
2	2389.80	52.6 AV	54.0	-1.4	2.39 H	75	54.2	-1.6
3	*2437.00	112.2 PK			2.39 H	75	113.7	-1.5
4	*2437.00	110.4 AV			2.39 H	75	111.9	-1.5
5	2486.70	55.6 PK	74.0	-18.4	2.39 H	75	57.0	-1.4
6	2486.70	43.3 AV	54.0	-10.7	2.39 H	75	44.7	-1.4
7	4874.00	44.1 PK	74.0	-29.9	2.33 H	254	40.9	3.2
8	4874.00	40.9 AV	54.0	-13.1	2.33 H	254	37.7	3.2
9	7311.00	42.6 PK	74.0	-31.4	2.32 H	160	33.7	8.9
10	7311.00	31.0 AV	54.0	-23.0	2.32 H	160	22.1	8.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2389.80	62.3 PK	74.0	-11.7	1.53 V	342	63.9	-1.6
2	2389.80	52.1 AV	54.0	-1.9	1.53 V	342	53.7	-1.6
3	*2437.00	120.6 PK			1.53 V	342	122.1	-1.5
4	*2437.00	118.6 AV			1.53 V	342	120.1	-1.5
5	2486.70	64.8 PK	74.0	-9.2	1.53 V	342	66.2	-1.4
6	2486.70	52.7 AV	54.0	-1.3	1.53 V	342	54.1	-1.4
7	4874.00	48.6 PK	74.0	-25.4	2.64 V	360	45.4	3.2
8	4874.00	45.6 AV	54.0	-8.4	2.64 V	360	42.4	3.2
9	7311.00	42.5 PK	74.0	-31.5	1.89 V	232	33.6	8.9
10	7311.00	32.8 AV	54.0	-21.2	1.89 V	232	23.9	8.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	111.6 PK			2.36 H	69	113.0	-1.4
2	*2462.00	111.5 AV			2.36 H	69	112.9	-1.4
3	2483.50	59.0 PK	74.0	-15.0	2.36 H	69	60.4	-1.4
4	2483.50	43.4 AV	54.0	-10.6	2.36 H	69	44.8	-1.4
5	4924.00	39.2 PK	74.0	-34.8	2.29 H	262	35.9	3.3
6	4924.00	36.1 AV	54.0	-17.9	2.29 H	262	32.8	3.3
7	7386.00	43.0 PK	74.0	-31.0	2.33 H	150	33.9	9.1
8	7386.00	34.5 AV	54.0	-19.5	2.33 H	150	25.4	9.1
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	*2462.00	122.0 PK			1.30 V	353	123.4	-1.4
2	*2462.00	119.6 AV			1.30 V	353	121.0	-1.4
3	2483.50	68.2 PK	74.0	-5.8	1.30 V	353	69.6	-1.4
4	**2483.50**	**52.9 AV**	**54.0**	**-1.1**	**1.30 V**	**353**	**54.3**	**-1.4**
5	4924.00	43.7 PK	74.0	-30.3	1.52 V	158	40.4	3.3
6	4924.00	40.8 AV	54.0	-13.2	1.52 V	158	37.5	3.3
7	7386.00	47.5 PK	74.0	-26.5	2.82 V	248	38.4	9.1
8	7386.00	39.2 AV	54.0	-14.8	2.82 V	248	30.1	9.1

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.

802.11g

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	55.2 PK	74.0	-18.8	2.36 H	63	56.8	-1.6
2	2390.00	43.3 AV	54.0	-10.7	2.36 H	63	44.9	-1.6
3	*2412.00	110.2 PK			2.36 H	63	111.7	-1.5
4	*2412.00	101.9 AV			2.36 H	63	103.4	-1.5
5	4824.00	39.1 PK	74.0	-34.9	1.01 H	245	36.1	3.0
6	4824.00	31.9 AV	54.0	-22.1	1.01 H	245	28.9	3.0
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	64.4 PK	74.0	-9.6	1.82 V	247	66.0	-1.6
2	2390.00	52.8 AV	54.0	-1.2	1.82 V	247	54.4	-1.6
3	*2412.00	120.5 PK			1.82 V	247	122.0	-1.5
4	*2412.00	110.0 AV			1.82 V	247	111.5	-1.5
5	4824.00	51.2 PK	74.0	-22.8	2.81 V	221	48.2	3.0
6	4824.00	40.0 AV	54.0	-14.0	2.81 V	221	37.0	3.0

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 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	55.6 PK	74.0	-18.4	2.34 H	75	57.2	-1.6
2	2390.00	44.3 AV	54.0	-9.7	2.34 H	75	45.9	-1.6
3	*2437.00	115.2 PK			2.34 H	75	116.7	-1.5
4	*2437.00	107.1 AV			2.34 H	75	108.6	-1.5
5	2483.50	53.2 PK	74.0	-20.8	2.34 H	75	54.6	-1.4
6	2483.50	44.1 AV	54.0	-9.9	2.34 H	75	45.5	-1.4
7	4874.00	39.4 PK	74.0	-34.6	1.05 H	235	36.2	3.2
8	4874.00	32.5 AV	54.0	-21.5	1.05 H	235	29.3	3.2
9	7311.00	42.7 PK	74.0	-31.3	1.60 H	196	33.8	8.9
10	7311.00	33.3 AV	54.0	-20.7	1.60 H	196	24.4	8.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.0 PK	74.0	-8.0	1.71 V	246	67.6	-1.6
2	**2390.00**	**52.9 AV**	**54.0**	**-1.1**	**1.71 V**	**246**	**54.5**	**-1.6**
3	*2437.00	125.8 PK			1.71 V	246	127.3	-1.5
4	*2437.00	115.2 AV			1.71 V	246	116.7	-1.5
5	2483.50	63.5 PK	74.0	-10.5	1.71 V	246	64.9	-1.4
6	2483.50	52.7 AV	54.0	-1.3	1.71 V	246	54.1	-1.4
7	4874.00	52.5 PK	74.0	-21.5	2.80 V	234	49.3	3.2
8	4874.00	41.0 AV	54.0	-13.0	2.80 V	234	37.8	3.2
9	7311.00	47.2 PK	74.0	-26.8	2.19 V	205	38.3	8.9
10	7311.00	34.6 AV	54.0	-19.4	2.19 V	205	25.7	8.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	111.6 PK			2.31 H	50	113.0	-1.4
2	*2462.00	102.6 AV			2.31 H	50	104.0	-1.4
3	2483.50	54.8 PK	74.0	-19.2	2.31 H	50	56.2	-1.4
4	2483.50	44.0 AV	54.0	-10.0	2.31 H	50	45.4	-1.4
5	4924.00	39.1 PK	74.0	-34.9	1.02 H	229	35.8	3.3
6	4924.00	31.9 AV	54.0	-22.1	1.02 H	229	28.6	3.3
7	7386.00	40.9 PK	74.0	-33.1	1.63 H	206	31.8	9.1
8	7386.00	31.7 AV	54.0	-22.3	1.63 H	206	22.6	9.1
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	*2462.00	121.8 PK			1.53 V	245	123.2	-1.4
2	*2462.00	110.7 AV			1.53 V	245	112.1	-1.4
3	2483.50	65.1 PK	74.0	-8.9	1.53 V	245	66.5	-1.4
4	2483.50	52.7 AV	54.0	-1.3	1.53 V	245	54.1	-1.4
5	4924.00	51.3 PK	74.0	-22.7	2.79 V	230	48.0	3.3
6	4924.00	40.1 AV	54.0	-13.9	2.79 V	230	36.8	3.3
7	7386.00	46.2 PK	74.0	-27.8	2.24 V	208	37.1	9.1
8	7386.00	33.3 AV	54.0	-20.7	2.24 V	208	24.2	9.1

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.

VHT20

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	55.3 PK	74.0	-18.7	2.37 H	51	56.9	-1.6
2	2390.00	44.1 AV	54.0	-9.9	2.37 H	51	45.7	-1.6
3	*2412.00	108.4 PK			2.37 H	79	109.9	-1.5
4	*2412.00	99.1 AV			2.37 H	79	100.6	-1.5
5	4824.00	39.3 PK	74.0	-34.7	1.00 H	230	36.3	3.0
6	4824.00	32.2 AV	54.0	-21.8	1.00 H	230	29.2	3.0
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	64.6 PK	74.0	-9.4	1.63 V	250	66.2	-1.6
2	2390.00	52.7 AV	54.0	-1.3	1.63 V	250	54.3	-1.6
3	*2412.00	120.3 PK			1.63 V	250	121.8	-1.5
4	*2412.00	109.7 AV			1.63 V	250	111.2	-1.5
5	4824.00	51.0 PK	74.0	-23.0	2.81 V	208	48.0	3.0
6	4824.00	39.7 AV	54.0	-14.3	2.81 V	208	36.7	3.0

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 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	55.2 PK	74.0	-18.8	2.39 H	59	56.8	-1.6
2	2390.00	44.3 AV	54.0	-9.7	2.39 H	59	45.9	-1.6
3	*2437.00	114.1 PK			2.39 H	59	115.6	-1.5
4	*2437.00	106.2 AV			2.39 H	59	107.7	-1.5
5	2483.50	55.8 PK	74.0	-18.2	2.39 H	59	57.2	-1.4
6	2483.50	43.5 AV	54.0	-10.5	2.39 H	59	44.9	-1.4
7	4874.00	39.6 PK	74.0	-34.4	1.00 H	246	36.4	3.2
8	4874.00	32.5 AV	54.0	-21.5	1.00 H	246	29.3	3.2
9	7311.00	43.1 PK	74.0	-30.9	1.66 H	210	34.2	8.9
10	7311.00	33.5 AV	54.0	-20.5	1.66 H	210	24.6	8.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.2 PK	74.0	-8.8	1.68 V	244	66.8	-1.6
2	**2390.00**	**52.9 AV**	**54.0**	**-1.1**	**1.68 V**	**244**	**54.5**	**-1.6**
3	*2437.00	124.5 PK			1.68 V	244	126.0	-1.5
4	*2437.00	114.2 AV			1.68 V	244	115.7	-1.5
5	2483.50	66.2 PK	74.0	-7.8	1.68 V	244	67.6	-1.4
6	2483.50	52.1 AV	54.0	-1.9	1.68 V	244	53.5	-1.4
7	4874.00	52.9 PK	74.0	-21.1	2.84 V	230	49.7	3.2
8	4874.00	41.2 AV	54.0	-12.8	2.84 V	230	38.0	3.2
9	7311.00	46.6 PK	74.0	-27.4	2.20 V	192	37.7	8.9
10	7311.00	34.1 AV	54.0	-19.9	2.20 V	192	25.2	8.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	110.7 PK			2.38 H	76	112.1	-1.4
2	*2462.00	102.1 AV			2.38 H	76	103.5	-1.4
3	2483.50	55.6 PK	74.0	-18.4	2.38 H	76	57.0	-1.4
4	2483.50	44.4 AV	54.0	-9.6	2.38 H	76	45.8	-1.4
5	4924.00	39.1 PK	74.0	-34.9	1.07 H	232	35.8	3.3
6	4924.00	31.9 AV	54.0	-22.1	1.07 H	232	28.6	3.3
7	7386.00	40.7 PK	74.0	-33.3	1.58 H	209	31.6	9.1
8	7386.00	31.7 AV	54.0	-22.3	1.58 H	209	22.6	9.1
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	*2462.00	121.1 PK			1.78 V	247	122.5	-1.4
2	*2462.00	110.3 AV			1.78 V	247	111.7	-1.4
3	2483.50	66.0 PK	74.0	-8.0	1.78 V	247	67.4	-1.4
4	**2483.50**	**52.9 AV**	**54.0**	**-1.1**	**1.78 V**	**247**	**54.3**	**-1.4**
5	4924.00	51.3 PK	74.0	-22.7	2.73 V	223	48.0	3.3
6	4924.00	39.9 AV	54.0	-14.1	2.73 V	223	36.6	3.3
7	7386.00	46.2 PK	74.0	-27.8	2.24 V	200	37.1	9.1
8	7386.00	33.1 AV	54.0	-20.9	2.24 V	200	24.0	9.1

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.

VHT40

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	53.3 PK	74.0	-20.7	2.37 H	49	54.9	-1.6
2	2390.00	44.1 AV	54.0	-9.9	2.37 H	49	45.7	-1.6
3	*2422.00	102.6 PK			2.37 H	49	104.2	-1.6
4	*2422.00	92.8 AV			2.37 H	49	94.4	-1.6
5	4844.00	38.6 PK	74.0	-35.4	1.14 H	250	35.5	3.1
6	4844.00	31.4 AV	54.0	-22.6	1.14 H	250	28.3	3.1
7	7266.00	40.6 PK	74.0	-33.4	1.58 H	209	31.7	8.9
8	7266.00	31.6 AV	54.0	-22.4	1.58 H	209	22.7	8.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.8 PK	74.0	-10.2	1.94 V	249	65.4	-1.6
2	2390.00	52.6 AV	54.0	-1.4	1.94 V	249	54.2	-1.6
3	*2422.00	114.9 PK			1.94 V	249	116.5	-1.6
4	*2422.00	104.7 AV			1.94 V	249	106.3	-1.6
5	4844.00	50.8 PK	74.0	-23.2	2.70 V	228	47.7	3.1
6	4844.00	39.3 AV	54.0	-14.7	2.70 V	228	36.2	3.1
7	7266.00	45.4 PK	74.0	-28.6	2.27 V	190	36.5	8.9
8	7266.00	32.3 AV	54.0	-21.7	2.27 V	190	23.4	8.9

REMARKS:

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

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Peak (PK)
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	55.8 PK	74.0	-18.2	2.38 H	63	57.4	-1.6
2	2390.00	44.3 AV	54.0	-9.7	2.38 H	63	45.9	-1.6
3	*2437.00	106.0 PK			2.38 H	63	107.5	-1.5
4	*2437.00	96.4 AV			2.38 H	63	97.9	-1.5
5	2483.50	55.5 PK	74.0	-18.5	2.38 H	63	56.9	-1.4
6	2483.50	43.4 AV	54.0	-10.6	2.38 H	63	44.8	-1.4
7	4874.00	39.0 PK	74.0	-35.0	1.11 H	240	35.8	3.2
8	4874.00	31.8 AV	54.0	-22.2	1.11 H	240	28.6	3.2
9	7311.00	41.0 PK	74.0	-33.0	1.62 H	215	32.1	8.9
10	7311.00	32.0 AV	54.0	-22.0	1.62 H	215	23.1	8.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.0 PK	74.0	-8.0	1.99 V	244	67.6	-1.6
2	**2390.00**	**52.9 AV**	**54.0**	**-1.1**	**1.99 V**	**244**	**54.5**	**-1.6**
3	*2437.00	118.3 PK			1.99 V	244	119.8	-1.5
4	*2437.00	108.2 AV			1.99 V	244	109.7	-1.5
5	2483.50	66.0 PK	74.0	-8.0	1.99 V	244	67.4	-1.4
6	2483.50	52.0 AV	54.0	-2.0	1.99 V	244	53.4	-1.4
7	4874.00	51.2 PK	74.0	-22.8	2.74 V	213	48.0	3.2
8	4874.00	39.7 AV	54.0	-14.3	2.74 V	213	36.5	3.2
9	7311.00	45.8 PK	74.0	-28.2	2.21 V	203	36.9	8.9
10	7311.00	32.7 AV	54.0	-21.3	2.21 V	203	23.8	8.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	102.4 PK			2.45 H	269	103.9	-1.5
2	*2452.00	92.2 AV			2.45 H	269	93.7	-1.5
3	2483.50	57.0 PK	74.0	-17.0	2.45 H	269	58.4	-1.4
4	2483.50	44.3 AV	54.0	-9.7	2.45 H	269	45.7	-1.4
5	4904.00	38.4 PK	74.0	-35.6	1.12 H	246	35.2	3.2
6	4904.00	31.3 AV	54.0	-22.7	1.12 H	246	28.1	3.2
7	7356.00	40.5 PK	74.0	-33.5	1.63 H	211	31.4	9.1
8	7356.00	31.4 AV	54.0	-22.6	1.63 H	211	22.3	9.1
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	*2452.00	114.7 PK			1.98 V	240	116.2	-1.5
2	*2452.00	104.1 AV			1.98 V	240	105.6	-1.5
3	2483.50	67.4 PK	74.0	-6.6	1.98 V	240	68.8	-1.4
4	**2483.50**	**52.9 AV**	**54.0**	**-1.1**	**1.98 V**	**240**	**54.3**	**-1.4**
5	4904.00	50.7 PK	74.0	-23.3	2.76 V	209	47.5	3.2
6	4904.00	39.2 AV	54.0	-14.8	2.76 V	209	36.0	3.2
7	7356.00	45.2 PK	74.0	-28.8	2.18 V	203	36.1	9.1
8	7356.00	32.1 AV	54.0	-21.9	2.18 V	203	23.0	9.1

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.

Below 1GHz worst-case data:

802.11g

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	89.02	35.6 QP	43.5	-7.9	2.00 H	284	49.7	-14.1
2	107.67	35.2 QP	43.5	-8.3	3.00 H	271	46.4	-11.2
3	499.99	31.0 QP	46.0	-15.0	2.00 H	309	34.1	-3.1
4	600.02	30.7 QP	46.0	-15.3	3.00 H	360	31.6	-0.9
5	750.06	33.6 QP	46.0	-12.4	1.00 H	316	32.0	1.6
6	800.01	36.6 QP	46.0	-9.4	3.00 H	360	34.6	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	71.88	33.5 QP	40.0	-6.5	2.00 V	341	44.4	-10.9
2	88.66	31.6 QP	43.5	-11.9	2.00 V	2	45.7	-14.1
3	108.47	31.4 QP	43.5	-12.1	1.00 V	292	42.6	-11.2
4	300.00	32.4 QP	46.0	-13.6	1.00 V	0	39.9	-7.5
5	600.02	35.0 QP	46.0	-11.0	1.00 V	198	35.9	-0.9
6	800.01	35.3 QP	46.0	-10.7	1.00 V	0	33.3	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

4.1.8 Test Results (Mode B)

Above 1GHz worst-Case data:

802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	56.4 PK	74.0	-17.6	1.18 H	75	58.0	-1.6
2	2390.00	47.2 AV	54.0	-6.8	1.18 H	75	48.8	-1.6
3	*2412.00	101.4 PK			1.18 H	75	102.9	-1.5
4	*2412.00	97.6 AV			1.18 H	75	99.1	-1.5
5	4824.00	51.7 PK	74.0	-22.3	3.64 H	213	48.7	3.0
6	4824.00	50.4 AV	54.0	-3.6	3.64 H	213	47.4	3.0
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	58.5 PK	74.0	-15.5	2.12 V	309	60.1	-1.6
2	2390.00	52.8 AV	54.0	-1.2	2.12 V	309	54.4	-1.6
3	*2412.00	111.6 PK			2.12 V	309	113.1	-1.5
4	*2412.00	107.9 AV			2.12 V	309	109.4	-1.5
5	4824.00	50.9 PK	74.0	-23.1	3.46 V	31	47.9	3.0
6	4824.00	49.0 AV	54.0	-5.0	3.46 V	31	46.0	3.0

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 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	52.8 PK	74.0	-21.2	1.17 H	56	54.4	-1.6
2	2390.00	36.6 AV	54.0	-17.4	1.17 H	56	38.2	-1.6
3	*2437.00	102.7 PK			1.17 H	56	104.2	-1.5
4	*2437.00	99.4 AV			1.17 H	56	100.9	-1.5
5	2483.50	53.2 PK	74.0	-20.8	1.17 H	56	54.6	-1.4
6	2483.50	36.7 AV	54.0	-17.3	1.17 H	56	38.1	-1.4
7	4874.00	52.1 PK	74.0	-21.9	3.71 H	217	48.9	3.2
8	4874.00	50.5 AV	54.0	-3.5	3.71 H	217	47.3	3.2
9	7311.00	43.1 PK	74.0	-30.9	2.85 H	360	34.2	8.9
10	7311.00	31.9 AV	54.0	-22.1	2.85 H	360	23.0	8.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	55.1 PK	74.0	-18.9	1.66 V	308	56.7	-1.6
2	2390.00	42.2 AV	54.0	-11.8	1.66 V	308	43.8	-1.6
3	*2437.00	112.9 PK			1.66 V	308	114.4	-1.5
4	*2437.00	109.7 AV			1.66 V	308	111.2	-1.5
5	2483.50	55.1 PK	74.0	-18.9	1.66 V	308	56.5	-1.4
6	2483.50	42.3 AV	54.0	-11.7	1.66 V	308	43.7	-1.4
7	4874.00	50.7 PK	74.0	-23.3	3.41 V	45	47.5	3.2
8	4874.00	48.8 AV	54.0	-5.2	3.41 V	45	45.6	3.2
9	7311.00	45.1 PK	74.0	-28.9	2.21 V	284	36.2	8.9
10	7311.00	37.2 AV	54.0	-16.8	2.21 V	284	28.3	8.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	100.0 PK			1.23 H	63	101.4	-1.4
2	*2462.00	97.6 AV			1.23 H	63	99.0	-1.4
3	2483.50	55.1 PK	74.0	-18.9	1.23 H	63	56.5	-1.4
4	2483.50	43.1 AV	54.0	-10.9	1.23 H	63	44.5	-1.4
5	4924.00	51.5 PK	74.0	-22.5	3.68 H	225	48.2	3.3
6	4924.00	50.0 AV	54.0	-4.0	3.68 H	225	46.7	3.3
7	7386.00	43.0 PK	74.0	-31.0	2.80 H	359	33.9	9.1
8	7386.00	31.9 AV	54.0	-22.1	2.80 H	359	22.8	9.1
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	*2462.00	110.2 PK			2.34 V	310	111.6	-1.4
2	*2462.00	107.9 AV			2.34 V	310	109.3	-1.4
3	2483.50	57.1 PK	74.0	-16.9	2.34 V	310	58.5	-1.4
4	2483.50	48.2 AV	54.0	-5.8	2.34 V	310	49.6	-1.4
5	4924.00	50.3 PK	74.0	-23.7	3.40 V	45	47.0	3.3
6	4924.00	48.6 AV	54.0	-5.4	3.40 V	45	45.3	3.3
7	7386.00	45.3 PK	74.0	-28.7	2.19 V	278	36.2	9.1
8	7386.00	37.5 AV	54.0	-16.5	2.19 V	278	28.4	9.1

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.

802.11g

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.3 PK	74.0	-8.7	1.23 H	63	66.9	-1.6
2	2390.00	47.4 AV	54.0	-6.6	1.23 H	63	49.0	-1.6
3	*2412.00	97.6 PK			1.23 H	63	99.1	-1.5
4	*2412.00	88.6 AV			1.23 H	63	90.1	-1.5
5	4824.00	51.3 PK	74.0	-22.7	3.59 H	220	48.3	3.0
6	4824.00	49.8 AV	54.0	-4.2	3.59 H	220	46.8	3.0
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	68.2 PK	74.0	-5.8	1.61 V	94	69.8	-1.6
2	**2390.00**	**52.9 AV**	**54.0**	**-1.1**	**1.61 V**	**94**	**54.5**	**-1.6**
3	*2412.00	107.8 PK			1.61 V	94	109.3	-1.5
4	*2412.00	98.9 AV			1.61 V	94	100.4	-1.5
5	4824.00	49.5 PK	74.0	-24.5	3.36 V	57	46.5	3.0
6	4824.00	47.1 AV	54.0	-6.9	3.36 V	57	44.1	3.0

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.2 PK	74.0	-14.8	1.28 H	55	60.8	-1.6
2	2390.00	39.9 AV	54.0	-14.1	1.28 H	55	41.5	-1.6
3	*2437.00	102.7 PK			1.28 H	55	104.2	-1.5
4	*2437.00	92.3 AV			1.28 H	55	93.8	-1.5
5	2483.50	59.3 PK	74.0	-14.7	1.28 H	55	60.7	-1.4
6	2483.50	40.5 AV	54.0	-13.5	1.28 H	55	41.9	-1.4
7	4874.00	52.4 PK	74.0	-21.6	3.65 H	216	49.2	3.2
8	4874.00	50.7 AV	54.0	-3.3	3.65 H	216	47.5	3.2
9	7311.00	42.8 PK	74.0	-31.2	2.82 H	353	33.9	8.9
10	7311.00	31.6 AV	54.0	-22.4	2.82 H	353	22.7	8.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	61.3 PK	74.0	-12.7	2.04 V	356	62.9	-1.6
2	2390.00	45.5 AV	54.0	-8.5	2.04 V	356	47.1	-1.6
3	*2437.00	112.9 PK			2.04 V	356	114.4	-1.5
4	*2437.00	102.5 AV			2.04 V	356	104.0	-1.5
5	2483.50	61.4 PK	74.0	-12.6	2.04 V	356	62.8	-1.4
6	2483.50	46.1 AV	54.0	-7.9	2.04 V	356	47.5	-1.4
7	4874.00	50.7 PK	74.0	-23.3	3.35 V	41	47.5	3.2
8	4874.00	48.6 AV	54.0	-5.4	3.35 V	41	45.4	3.2
9	7311.00	45.5 PK	74.0	-28.5	2.16 V	278	36.6	8.9
10	7311.00	37.6 AV	54.0	-16.4	2.16 V	278	28.7	8.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	98.2 PK			1.20 H	56	99.6	-1.4
2	*2462.00	86.2 AV			1.20 H	56	87.6	-1.4
3	2483.50	63.3 PK	74.0	-10.7	1.20 H	56	64.7	-1.4
4	2483.50	47.4 AV	54.0	-6.6	1.20 H	56	48.8	-1.4
5	4924.00	51.4 PK	74.0	-22.6	3.63 H	231	48.1	3.3
6	4924.00	49.6 AV	54.0	-4.4	3.63 H	231	46.3	3.3
7	7386.00	41.8 PK	74.0	-32.2	2.82 H	354	32.7	9.1
8	7386.00	30.8 AV	54.0	-23.2	2.82 H	354	21.7	9.1
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	*2462.00	108.3 PK			2.25 V	352	109.7	-1.4
2	*2462.00	96.5 AV			2.25 V	352	97.9	-1.4
3	2483.50	67.4 PK	74.0	-6.6	2.25 V	352	68.8	-1.4
4	2483.50	52.8 AV	54.0	-1.2	2.25 V	352	54.2	-1.4
5	4924.00	49.8 PK	74.0	-24.2	3.30 V	40	46.5	3.3
6	4924.00	47.9 AV	54.0	-6.1	3.30 V	40	44.6	3.3
7	7386.00	44.7 PK	74.0	-29.3	2.11 V	280	35.6	9.1
8	7386.00	36.6 AV	54.0	-17.4	2.11 V	280	27.5	9.1

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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.5 PK	74.0	-10.5	1.17 H	49	65.1	-1.6
2	2390.00	47.5 AV	54.0	-6.5	1.17 H	49	49.1	-1.6
3	*2412.00	95.3 PK			1.17 H	49	96.8	-1.5
4	*2412.00	84.3 AV			1.17 H	49	85.8	-1.5
5	4824.00	50.1 PK	74.0	-23.9	3.59 H	246	47.1	3.0
6	4824.00	48.1 AV	54.0	-5.9	3.59 H	246	45.1	3.0
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	66.5 PK	74.0	-7.5	3.99 V	119	68.1	-1.6
2	2390.00	52.8 AV	54.0	-1.2	3.99 V	119	54.4	-1.6
3	*2412.00	105.3 PK			3.99 V	119	106.8	-1.5
4	*2412.00	94.6 AV			3.99 V	119	96.1	-1.5
5	4824.00	49.2 PK	74.0	-24.8	3.22 V	38	46.2	3.0
6	4824.00	47.3 AV	54.0	-6.7	3.22 V	38	44.3	3.0

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.3 PK	74.0	-15.7	1.26 H	62	59.9	-1.6
2	2390.00	40.0 AV	54.0	-14.0	1.26 H	62	41.6	-1.6
3	*2437.00	101.9 PK			1.26 H	62	103.4	-1.5
4	*2437.00	91.2 AV			1.26 H	62	92.7	-1.5
5	2483.50	57.6 PK	74.0	-16.4	1.26 H	62	59.0	-1.4
6	2483.50	40.6 AV	54.0	-13.4	1.26 H	62	42.0	-1.4
7	4874.00	52.7 PK	74.0	-21.3	3.65 H	203	49.5	3.2
8	4874.00	51.0 AV	54.0	-3.0	3.65 H	203	47.8	3.2
9	7311.00	43.1 PK	74.0	-30.9	2.88 H	360	34.2	8.9
10	7311.00	32.1 AV	54.0	-21.9	2.88 H	360	23.2	8.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.3 PK	74.0	-13.7	1.96 V	355	61.9	-1.6
2	2390.00	45.4 AV	54.0	-8.6	1.96 V	355	47.0	-1.6
3	*2437.00	112.0 PK			1.96 V	355	113.5	-1.5
4	*2437.00	101.4 AV			1.96 V	355	102.9	-1.5
5	2483.50	59.5 PK	74.0	-14.5	1.96 V	355	60.9	-1.4
6	2483.50	45.9 AV	54.0	-8.1	1.96 V	355	47.3	-1.4
7	4874.00	50.8 PK	74.0	-23.2	3.45 V	33	47.6	3.2
8	4874.00	49.0 AV	54.0	-5.0	3.45 V	33	45.8	3.2
9	7311.00	44.9 PK	74.0	-29.1	2.16 V	269	36.0	8.9
10	7311.00	37.1 AV	54.0	-16.9	2.16 V	269	28.2	8.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	96.8 PK			1.24 H	67	98.2	-1.4
2	*2462.00	86.0 AV			1.24 H	67	87.4	-1.4
3	2483.50	65.6 PK	74.0	-8.4	1.24 H	67	67.0	-1.4
4	2483.50	47.5 AV	54.0	-6.5	1.24 H	67	48.9	-1.4
5	4924.00	51.1 PK	74.0	-22.9	3.57 H	235	47.8	3.3
6	4924.00	49.1 AV	54.0	-4.9	3.57 H	235	45.8	3.3
7	7386.00	41.5 PK	74.0	-32.5	2.77 H	338	32.4	9.1
8	7386.00	30.6 AV	54.0	-23.4	2.77 H	338	21.5	9.1
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	*2462.00	106.9 PK			2.21 V	354	108.3	-1.4
2	*2462.00	96.3 AV			2.21 V	354	97.7	-1.4
3	2483.50	68.5 PK	74.0	-5.5	2.21 V	354	69.9	-1.4
4	**2483.50**	**52.9 AV**	**54.0**	**-1.1**	**2.21 V**	**354**	**54.3**	**-1.4**
5	4924.00	50.3 PK	74.0	-23.7	3.26 V	35	47.0	3.3
6	4924.00	48.3 AV	54.0	-5.7	3.26 V	35	45.0	3.3
7	7386.00	44.9 PK	74.0	-29.1	2.06 V	287	35.8	9.1
8	7386.00	36.7 AV	54.0	-17.3	2.06 V	287	27.6	9.1

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.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.3 PK	74.0	-9.7	1.20 H	67	65.9	-1.6
2	2390.00	47.3 AV	54.0	-6.7	1.20 H	67	48.9	-1.6
3	*2422.00	90.8 PK			1.20 H	67	92.4	-1.6
4	*2422.00	80.7 AV			1.20 H	67	82.3	-1.6
5	4844.00	41.8 PK	74.0	-32.2	1.80 H	233	38.7	3.1
6	4844.00	29.1 AV	54.0	-24.9	1.80 H	233	26.0	3.1
7	7266.00	41.9 PK	74.0	-32.1	1.67 H	249	33.0	8.9
8	7266.00	29.8 AV	54.0	-24.2	1.67 H	249	20.9	8.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.3 PK	74.0	-6.7	1.52 V	295	68.9	-1.6
2	**2390.00**	**52.9 AV**	**54.0**	**-1.1**	**1.52 V**	**295**	**54.5**	**-1.6**
3	*2422.00	100.9 PK			1.52 V	295	102.5	-1.6
4	*2422.00	90.9 AV			1.52 V	295	92.5	-1.6
5	4844.00	43.1 PK	74.0	-30.9	1.65 V	353	40.0	3.1
6	4844.00	29.5 AV	54.0	-24.5	1.65 V	353	26.4	3.1
7	7266.00	42.4 PK	74.0	-31.6	1.95 V	176	33.5	8.9
8	7266.00	29.8 AV	54.0	-24.2	1.95 V	176	20.9	8.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	64.9 PK	74.0	-9.1	1.26 H	59	66.5	-1.6
2	2390.00	47.2 AV	54.0	-6.8	1.26 H	59	48.8	-1.6
3	*2437.00	93.2 PK			1.26 H	59	94.7	-1.5
4	*2437.00	83.1 AV			1.26 H	59	84.6	-1.5
5	2483.50	54.3 PK	74.0	-19.7	1.26 H	59	55.7	-1.4
6	2483.50	38.6 AV	54.0	-15.4	1.26 H	59	40.0	-1.4
7	4874.00	50.9 PK	74.0	-23.1	3.61 H	234	47.7	3.2
8	4874.00	48.7 AV	54.0	-5.3	3.61 H	234	45.5	3.2
9	7311.00	41.8 PK	74.0	-32.2	2.81 H	333	32.9	8.9
10	7311.00	30.9 AV	54.0	-23.1	2.81 H	333	22.0	8.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.9 PK	74.0	-7.1	1.59 V	313	68.5	-1.6
2	2390.00	52.8 AV	54.0	-1.2	1.59 V	313	54.4	-1.6
3	*2437.00	103.3 PK			1.59 V	313	104.8	-1.5
4	*2437.00	93.2 AV			1.59 V	313	94.7	-1.5
5	2483.50	56.3 PK	74.0	-17.7	1.59 V	313	57.7	-1.4
6	2483.50	44.2 AV	54.0	-9.8	1.59 V	313	45.6	-1.4
7	4874.00	51.1 PK	74.0	-22.9	3.24 V	47	47.9	3.2
8	4874.00	48.8 AV	54.0	-5.2	3.24 V	47	45.6	3.2
9	7311.00	45.2 PK	74.0	-28.8	2.03 V	276	36.3	8.9
10	7311.00	37.1 AV	54.0	-16.9	2.03 V	276	28.2	8.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	93.2 PK			2.58 H	62	94.7	-1.5
2	*2452.00	82.3 AV			2.58 H	62	83.8	-1.5
3	2483.50	56.2 PK	74.0	-17.8	2.58 H	62	57.6	-1.4
4	2483.50	43.9 AV	54.0	-10.1	2.58 H	62	45.3	-1.4
5	4904.00	42.9 PK	74.0	-31.1	1.78 H	248	39.7	3.2
6	4904.00	30.2 AV	54.0	-23.8	1.78 H	248	27.0	3.2
7	7356.00	42.2 PK	74.0	-31.8	1.68 H	245	33.1	9.1
8	7356.00	30.0 AV	54.0	-24.0	1.68 H	245	20.9	9.1
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	*2452.00	103.3 PK			1.80 V	354	104.8	-1.5
2	*2452.00	92.5 AV			1.80 V	354	94.0	-1.5
3	2483.50	65.6 PK	74.0	-8.4	1.80 V	354	67.0	-1.4
4	**2483.50**	**52.9 AV**	**54.0**	**-1.1**	**1.80 V**	**354**	**54.3**	**-1.4**
5	4904.00	44.0 PK	74.0	-30.0	1.68 V	353	40.8	3.2
6	4904.00	30.4 AV	54.0	-23.6	1.68 V	353	27.2	3.2
7	7356.00	42.6 PK	74.0	-31.4	2.01 V	189	33.5	9.1
8	7356.00	30.1 AV	54.0	-23.9	2.01 V	189	21.0	9.1

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.

Below 1GHz worst-case data:

802.11g

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	89.27	35.8 QP	43.5	-7.7	2.00 H	68	49.8	-14.0
2	109.37	36.2 QP	43.5	-7.3	3.00 H	252	47.3	-11.1
3	300.02	29.4 QP	46.0	-16.6	1.00 H	30	36.9	-7.5
4	600.02	31.4 QP	46.0	-14.6	1.00 H	360	32.3	-0.9
5	750.06	33.4 QP	46.0	-12.6	1.00 H	317	31.8	1.6
6	799.99	35.5 QP	46.0	-10.5	3.00 H	360	33.5	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	71.54	31.8 QP	40.0	-8.2	1.00 V	0	42.6	-10.8
2	108.89	32.4 QP	43.5	-11.1	1.00 V	296	43.5	-11.1
3	300.00	31.6 QP	46.0	-14.4	1.00 V	0	39.1	-7.5
4	500.01	30.3 QP	46.0	-15.7	1.00 V	276	33.3	-3.0
5	600.02	33.5 QP	46.0	-12.5	1.00 V	186	34.4	-0.9
6	799.99	33.9 QP	46.0	-12.1	1.00 V	0	31.9	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	Oct. 24, 2016	Oct. 23, 2017
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 26, 2016	Oct. 25, 2017
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100072	June 03, 2017	June 02, 2018
50 ohms Terminator	N/A	EMC-02	Sep. 29, 2016	Sep. 28, 2017
RF Cable	5D-FB	COCCAB-001	Sep. 30, 2016	Sep. 29, 2017
10 dB PAD Mini-Circuits	HAT-10+	CONATT-004	June 20, 2016	June 19, 2017
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 Shielded Room No. 1.
3 Tested Date: June 15, 2017

4.2.3 Test Procedures

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

b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

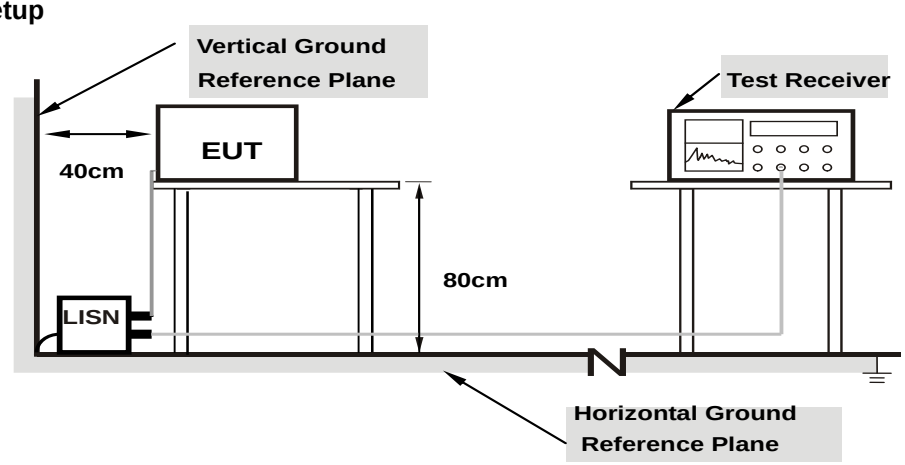
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

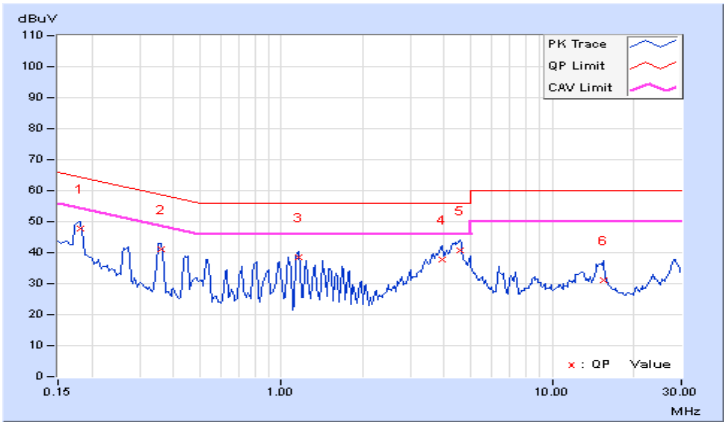
4.2.7 Test Results (Mode A)

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18125	10.19	37.56	31.32	47.75	41.51	64.43	54.43	-16.68	-12.92
2	0.35844	10.21	30.99	30.47	41.20	40.68	58.76	48.76	-17.56	-8.08
3	1.15625	10.26	28.39	19.00	38.65	29.26	56.00	46.00	-17.35	-16.74
4	3.95313	10.24	27.39	22.41	37.63	32.65	56.00	46.00	-18.37	-13.35
5	4.55469	10.27	30.65	27.16	40.92	37.43	56.00	46.00	-15.08	-8.57
6	15.50391	11.08	20.05	14.06	31.13	25.14	60.00	50.00	-28.87	-24.86

Remarks:

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

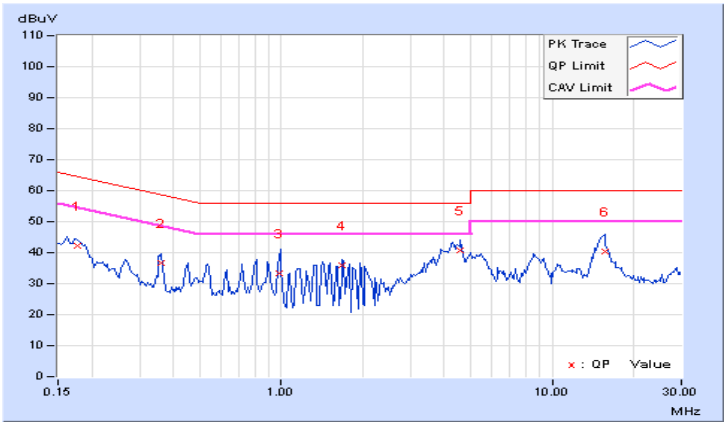


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17722	10.17	32.12	23.22	42.29	33.39	64.61	54.61	-22.32	-21.22
2	0.36094	10.20	26.45	23.59	36.65	33.79	58.71	48.71	-22.06	-14.92
3	0.98950	10.23	23.11	15.30	33.34	25.53	56.00	46.00	-22.66	-20.47
4	1.68750	10.26	25.50	18.01	35.76	28.27	56.00	46.00	-20.24	-17.73
5	4.58203	10.19	30.58	27.23	40.77	37.42	56.00	46.00	-15.23	-8.58
6	15.61328	10.91	29.44	19.37	40.35	30.28	60.00	50.00	-19.65	-19.72

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.



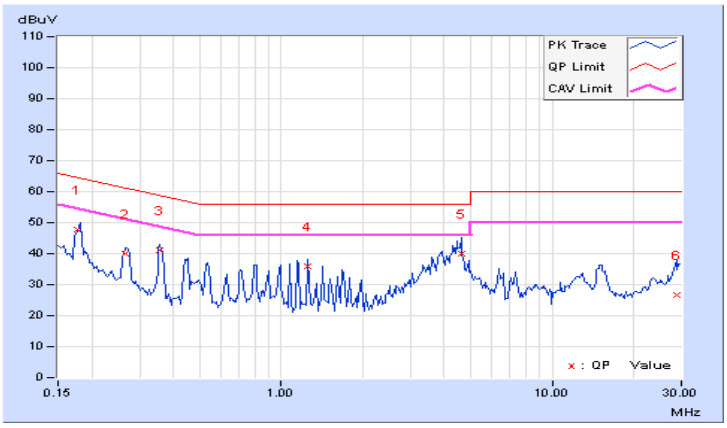
4.2.8 Test Results (Mode B)

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17713	10.19	37.46	32.98	47.65	43.17	64.62	54.62	-16.97	-11.45
2	0.26719	10.20	29.65	25.69	39.85	35.89	61.20	51.20	-21.35	-15.31
3	**0.35703**	**10.21**	**31.05**	**30.65**	**41.26**	**40.86**	**58.80**	**48.80**	**-17.54**	**-7.94**
4	1.25000	10.26	25.68	16.65	35.94	26.91	56.00	46.00	-20.06	-19.09
5	4.63281	10.27	29.76	26.16	40.03	36.43	56.00	46.00	-15.97	-9.57
6	28.78516	11.46	15.26	14.57	26.72	26.03	60.00	50.00	-33.28	-23.97

Remarks:

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

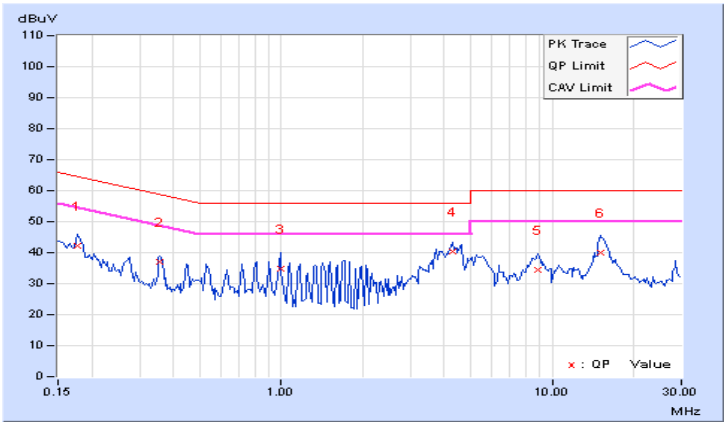


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17734	10.17	32.02	23.52	42.19	33.69	64.61	54.61	-22.42	-20.92
2	0.35703	10.20	26.83	26.03	37.03	36.23	58.80	48.80	-21.77	-12.57
3	0.98984	10.23	24.70	16.92	34.93	27.15	56.00	46.00	-21.07	-18.85
4	4.32031	10.18	30.25	26.19	40.43	36.37	56.00	46.00	-15.57	-9.63
5	8.80859	10.42	24.12	12.19	34.54	22.61	60.00	50.00	-25.46	-27.39
6	15.01563	10.88	29.28	19.89	40.16	30.77	60.00	50.00	-19.84	-19.23

Remarks:

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

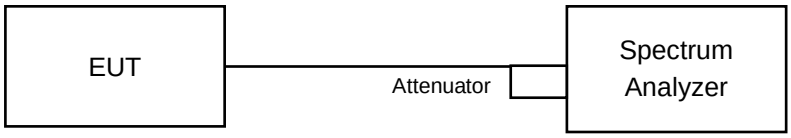


4.3 6dB Bandwidth Measurement

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

a. Set resolution bandwidth (RBW) = 100kHz

b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = average.

c. Trace mode = max hold.

d. Sweep = auto couple.

e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

4.3.5 Deviation fromTest Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result (Mode A)

CDD Mode

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	8.12	8.13	8.14	8.59	0.5	Pass
6	2437	8.12	8.12	8.58	8.13	0.5	Pass
11	2462	8.11	8.11	8.12	8.60	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	16.34	16.34	16.35	16.10	0.5	Pass
6	2437	16.39	16.36	16.39	16.41	0.5	Pass
11	2462	16.37	16.35	16.38	16.38	0.5	Pass

VHT20

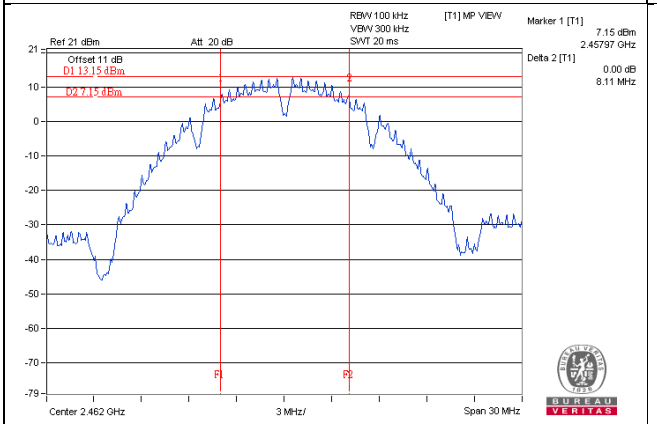
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
1	2412	16.95	16.95	16.93	16.94	0.5	Pass
6	2437	17.54	17.19	17.55	16.60	0.5	Pass
11	2462	17.18	17.60	16.94	16.93	0.5	Pass

VHT40

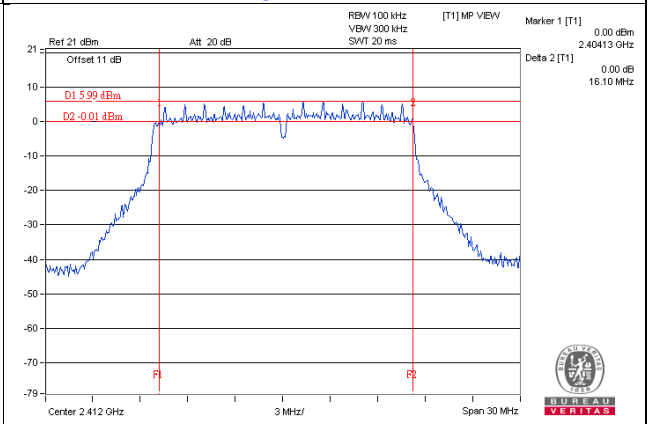
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
3	2422	35.23	35.29	34.09	35.27	0.5	Pass
6	2437	35.15	35.26	35.26	34.01	0.5	Pass
9	2452	35.29	35.27	35.15	35.30	0.5	Pass

Spectrum Plot of Worst Value

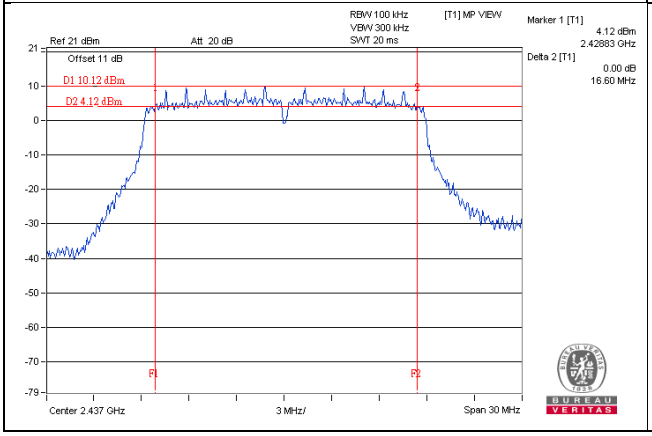
802.11b / Chain 1 : CH11



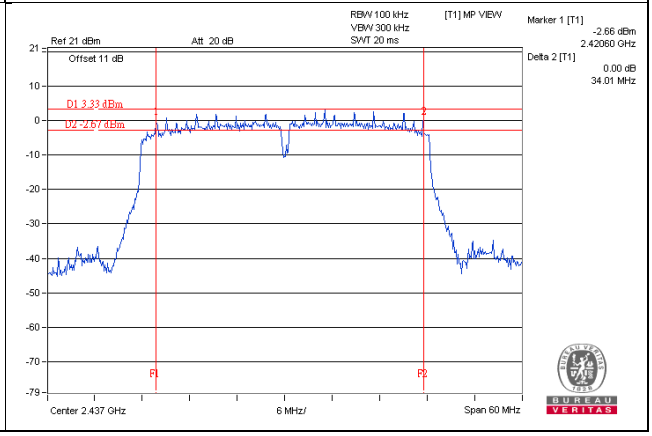
802.11g / Chain 3 : CH1



VHT20 / Chain 3 : CH6



VHT40 / Chain 3 : CH6



4.3.8 Test Result (Mode B)

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	7.10	0.5	Pass
6	2437	7.10	0.5	Pass
11	2462	7.10	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.38	0.5	Pass
6	2437	16.38	0.5	Pass
11	2462	16.37	0.5	Pass

802.11n (HT20)

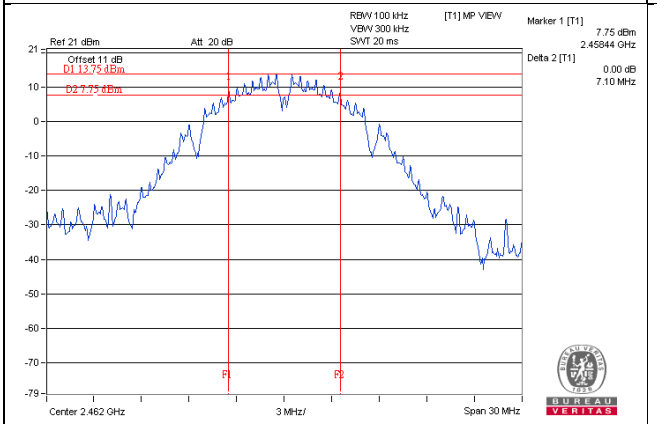
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	17.30	0.5	Pass
6	2437	17.55	0.5	Pass
11	2462	17.56	0.5	Pass

802.11n (HT40)

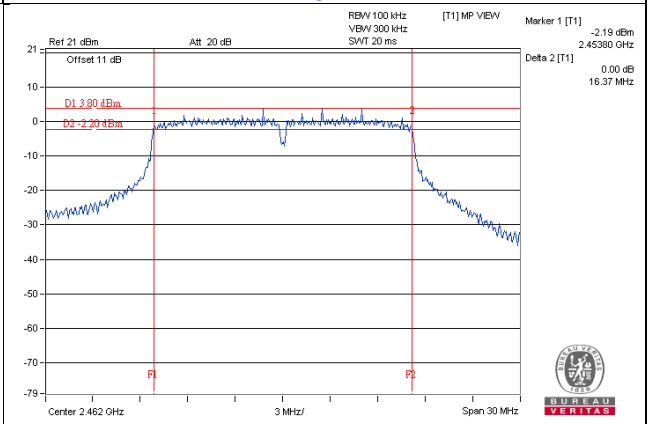
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3	2422	36.33	0.5	Pass
6	2437	36.34	0.5	Pass
9	2452	35.53	0.5	Pass

Spectrum Plot of Worst Value

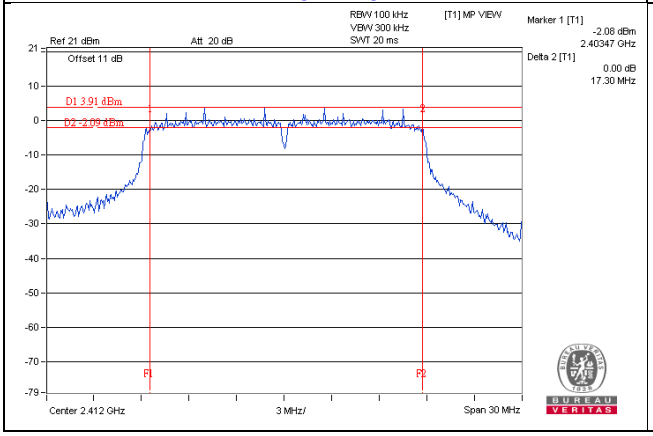
802.11b / CH11



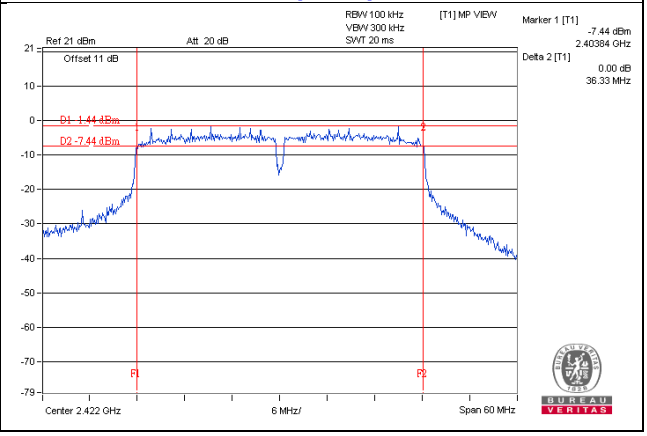
802.11g / CH11



802.11n (HT20) / CH1



802.11n (HT40) / CH3



4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

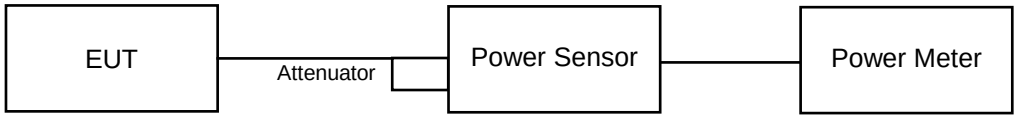
For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

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 Result (Mode A)

CDD Mode

802.11b

Channel	Frequency (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	20.27	22.09	21.38	20.43	516.034	27.13	30	Pass
6	2437	20.04	22.41	21.62	20.31	527.716	27.22	30	Pass
11	2462	19.11	22.05	21.23	19.79	469.814	26.72	30	Pass

802.11g

Channel	Frequency (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	16.53	18.04	16.92	16.61	203.676	23.09	30	Pass
6	2437	20.67	22.68	21.43	21.05	568.379	27.55	30	Pass
11	2462	15.38	17.98	16.50	15.68	178.971	22.53	30	Pass

VHT20

Channel	Frequency (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	16.09	17.83	16.55	16.31	189.26	22.77	30	Pass
6	2437	20.55	22.40	20.94	20.76	530.57	27.25	30	Pass
11	2462	15.08	17.45	16.10	15.39	163.133	22.13	30	Pass

VHT40

Channel	Frequency (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
3	2422	13.68	15.08	14.25	13.36	103.83	20.16	30	Pass
6	2437	16.66	18.39	17.19	16.45	211.886	23.26	30	Pass
9	2452	12.04	14.08	12.90	12.14	77.448	18.89	30	Pass

Beamforming Mode:

VHT20

Channel	Frequency (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
1	2412	16.09	17.83	16.55	16.31	189.26	22.77	24.90	Pass
6	2437	17.50	19.38	17.87	17.74	263.594	24.21	24.90	Pass
11	2462	15.08	17.45	16.10	15.39	163.133	22.13	24.90	Pass

Note: Directional gain = 5.08dBi + 10log(4) = 11.1dBi > 6dBi , so the power limit shall be reduced to 30-(11.1-6) = 24.90dBm.

VHT40

Channel	Frequency (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
3	2422	13.68	15.08	14.25	13.36	103.83	20.16	24.90	Pass
6	2437	16.66	18.39	17.19	16.45	211.886	23.26	24.90	Pass
9	2452	12.04	14.08	12.90	12.14	77.448	18.89	24.90	Pass

Note: Directional gain = 5.08dBi + 10log(4) = 11.1dBi > 6dBi , so the power limit shall be reduced to 30-(11.1-6) = 24.90dBm.

4.4.8 Test Result (Mode B)

802.11b

Channel	Frequency (MHz)	Avg. Power (mW)	Avg. Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	106.905	20.29	30	Pass
6	2437	114.815	20.60	30	Pass
11	2462	116.413	20.66	30	Pass

802.11g

Channel	Frequency (MHz)	Avg. Power (mW)	Avg. Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	27.797	14.44	30	Pass
6	2437	113.763	20.56	30	Pass
11	2462	28.973	14.62	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Avg. Power (mW)	Avg. Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	27.227	14.35	30	Pass
6	2437	109.901	20.41	30	Pass
11	2462	25.41	14.05	30	Pass

802.11n (HT40)

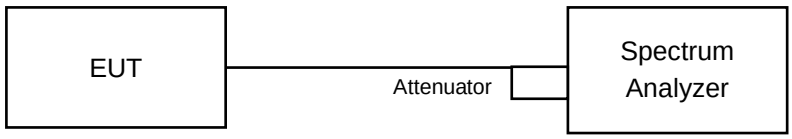
Channel	Frequency (MHz)	Avg. Power (mW)	Avg. Power (dBm)	Limit (dBm)	Pass / Fail
3	2422	19.055	12.80	30	Pass
6	2437	31.477	14.98	30	Pass
9	2452	19.634	12.93	30	Pass

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

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

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

Test Mode A:

For 802.11b, VHT20

Test Mode B:

For 802.11b, 802.11g, 802.11n (HT20), 802.11n (HT40)

For duty cycle ≥ 98%

a. Set instrument center frequency to DTS channel center frequency.

b. Set span to at least 1.5 times the OBW.

c. Set RBW to: 3 kHz ≤ RBW ≤ 100 kHz. .

d. Set VBW ≥3 x RBW.

e. Detector = power averaging (RMS) or sample detector (when RMS not available).

f. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.

g. Sweep time = auto couple.

h. Employ trace averaging (RMS) mode over a minimum of 100 traces.

i. Use the peak marker function to determine the maximum amplitude level.

Test Mode A:

For 802.11g, VHT40

For duty cycle < 98%

a. Measure the duty cycle (x).

b. Set instrument center frequency to DTS channel center frequency.

c. Set span to at least 1.5 times the OBW.

d. Set RBW to: 3 kHz ≤ RBW ≤ 100 kHz..

e. Set VBW ≥3 x RBW.

f. Detector = power averaging (RMS) or sample detector (when RMS not available).

g. Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.

h. Sweep time = auto couple.

i. Do not use sweep triggering. Allow sweep to “free run”.

j. Employ trace averaging (RMS) mode over a minimum of 100 traces.

k. Use the peak marker function to determine the maximum amplitude level.

l. Add 10 log (1/x), where x is the duty cycle measured in step (a, to the measured PSD to compute the average PSD during the actual transmission time.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6

4.5.7 Test Result (Mode A)

CDD Mode

802.11b

TX chain	Channel	Frequency (MHz)	PSD (dBm/3kHz)	10 log (N=4) dB	Total PSD (dBm/3kHz)	Limit (dBm /3kHz)	Pass / Fail
0	1	2412	-11.14	6.02	-5.12	2.90	Pass
	6	2437	-10.84	6.02	-4.82	2.90	Pass
	11	2462	-11.10	6.02	-5.08	2.90	Pass
1	1	2412	-10.08	6.02	-4.06	2.90	Pass
	6	2437	-9.33	6.02	-3.31	2.90	Pass
	11	2462	-9.40	6.02	-3.38	2.90	Pass
2	1	2412	-9.63	6.02	-3.61	2.90	Pass
	6	2437	-9.86	6.02	-3.84	2.90	Pass
	11	2462	-9.89	6.02	-3.87	2.90	Pass
3	1	2412	-10.23	6.02	-4.21	2.90	Pass
	6	2437	-10.33	6.02	-4.31	2.90	Pass
	11	2462	-11.12	6.02	-5.10	2.90	Pass

Note: Directional gain = 5.08dBi + 10log(3) = 11.1dBi > 6dBi , so the power density limit shall be reduced to 8-(11.1-6) = 2.90dBm.

802.11g

TX chain	Channel	Frequency (MHz)	PSD (dBm/ 3kHz)	10 log (N=4) dB	Duty Factor	Total PSD with Duty Factor (dBm/3kHz)	Limit (dBm /3kHz)	Pass / Fail
0	1	2412	-15.97	6.02	0.15	-9.80	2.90	Pass
	6	2437	-12.99	6.02	0.15	-6.82	2.90	Pass
	11	2462	-17.64	6.02	0.15	-11.47	2.90	Pass
1	1	2412	-14.26	6.02	0.15	-8.09	2.90	Pass
	6	2437	-11.54	6.02	0.15	-5.37	2.90	Pass
	11	2462	-14.76	6.02	0.15	-8.59	2.90	Pass
2	1	2412	-15.51	6.02	0.15	-9.34	2.90	Pass
	6	2437	-10.94	6.02	0.15	-4.77	2.90	Pass
	11	2462	-16.75	6.02	0.15	-10.58	2.90	Pass
3	1	2412	-15.99	6.02	0.15	-9.82	2.90	Pass
	6	2437	-11.76	6.02	0.15	-5.59	2.90	Pass
	11	2462	-17.81	6.02	0.15	-11.64	2.90	Pass

Note:
1. Directional gain = 5.08dBi + 10log(3) = 11.1dBi > 6dBi , so the power density limit shall be reduced to 8-(11.1-6) = 2.90dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

VHT20

TX chain	Channel	Frequency (MHz)	PSD (dBm/3kHz)	10 log (N=4) dB	Total PSD (dBm/3kHz)	Limit (dBm /3kHz)	Pass / Fail
0	1	2412	-17.23	6.02	-11.21	2.90	Pass
	6	2437	-13.52	6.02	-7.50	2.90	Pass
	11	2462	-17.96	6.02	-11.94	2.90	Pass
1	1	2412	-14.96	6.02	-8.94	2.90	Pass
	6	2437	-12.02	6.02	-6.00	2.90	Pass
	11	2462	-16.02	6.02	-10.00	2.90	Pass
2	1	2412	-16.86	6.02	-10.84	2.90	Pass
	6	2437	-12.06	6.02	-6.04	2.90	Pass
	11	2462	-17.51	6.02	-11.49	2.90	Pass
3	1	2412	-16.47	6.02	-10.45	2.90	Pass
	6	2437	-12.47	6.02	-6.45	2.90	Pass
	11	2462	-16.44	6.02	-10.42	2.90	Pass

Note:
1. Directional gain = 5.08dBi + 10log(3) = 11.1dBi > 6dBi , so the power density limit shall be reduced to 8-(11.1-6) = 2.90dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

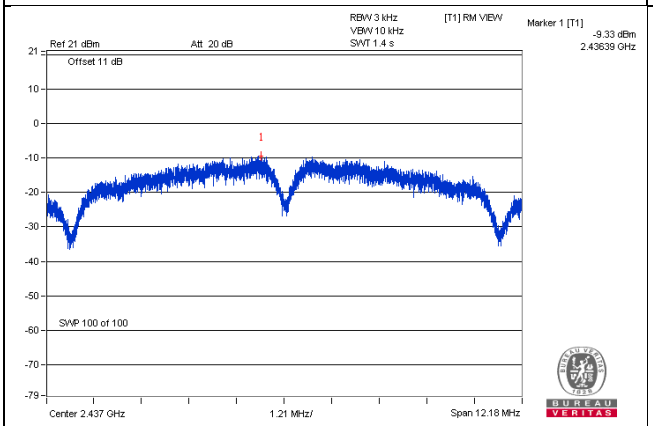
VHT40

TX chain	Channel	Frequency (MHz)	PSD (dBm/ 3kHz)	10 log (N=4) dB	Duty Factor	Total PSD with Duty Factor (dBm/3kHz)	Limit (dBm /3kHz)	Pass / Fail
0	3	2422	-22.18	6.02	0.12	-16.04	2.90	Pass
	6	2437	-19.22	6.02	0.12	-13.08	2.90	Pass
	9	2452	-22.87	6.02	0.12	-16.73	2.90	Pass
1	3	2422	-20.32	6.02	0.12	-14.18	2.90	Pass
	6	2437	-17.02	6.02	0.12	-10.88	2.90	Pass
	9	2452	-21.56	6.02	0.12	-15.42	2.90	Pass
2	3	2422	-20.62	6.02	0.12	-14.48	2.90	Pass
	6	2437	-18.22	6.02	0.12	-12.08	2.90	Pass
	9	2452	-20.54	6.02	0.12	-14.40	2.90	Pass
3	3	2422	-21.76	6.02	0.12	-15.62	2.90	Pass
	6	2437	-19.13	6.02	0.12	-12.99	2.90	Pass
	9	2452	-22.90	6.02	0.12	-16.76	2.90	Pass

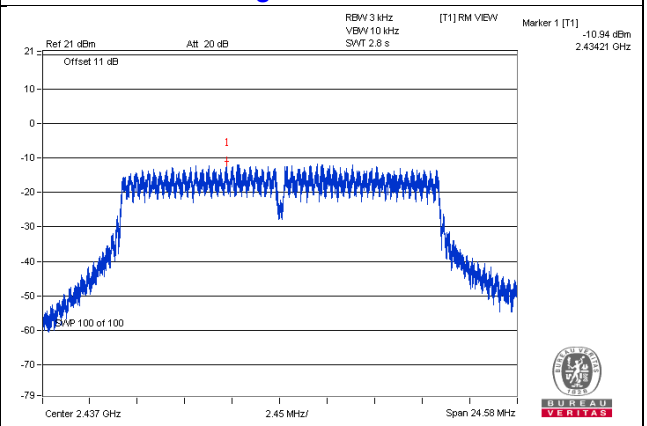
Note:
1. Directional gain = 5.08dBi + 10log(3) = 11.1dBi > 6dBi , so the power density limit shall be reduced to 8-(11.1-6) = 2.90dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

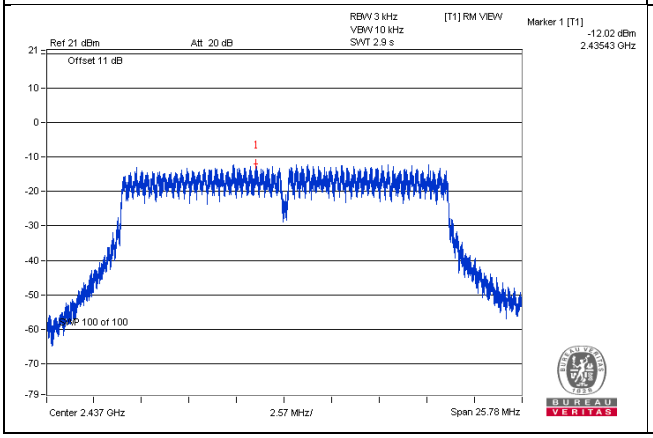
802.11b / Chain 1 : CH6



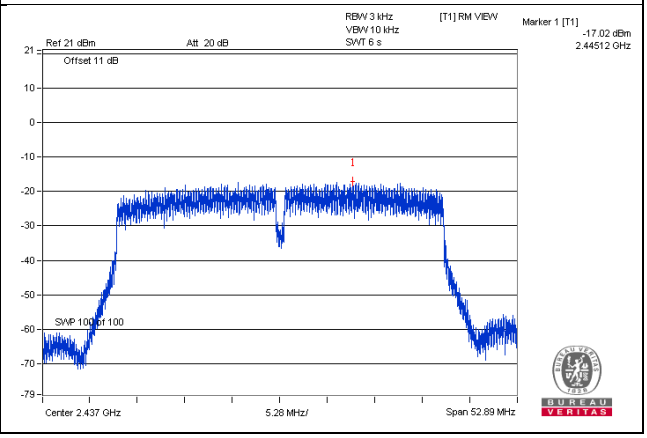
802.11g / Chain 2 : CH6



VHT20 / Chain 1 : CH6



VHT40 / Chain 1 : CH6



4.5.8 Test Result (Mode B)

802.11b

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-0.68	8	Pass
6	2437	-0.14	8	Pass
11	2462	-0.92	8	Pass

802.11g

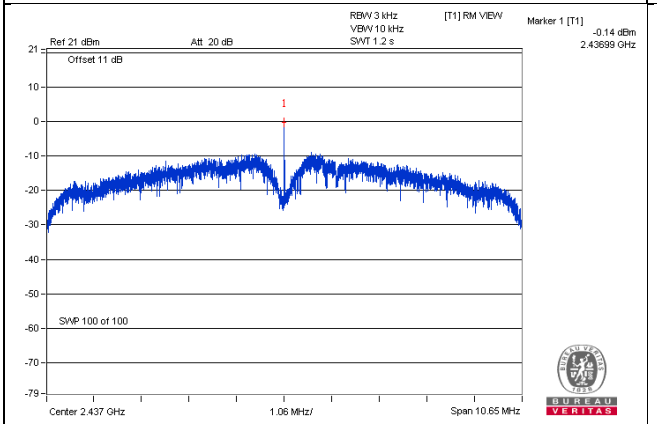
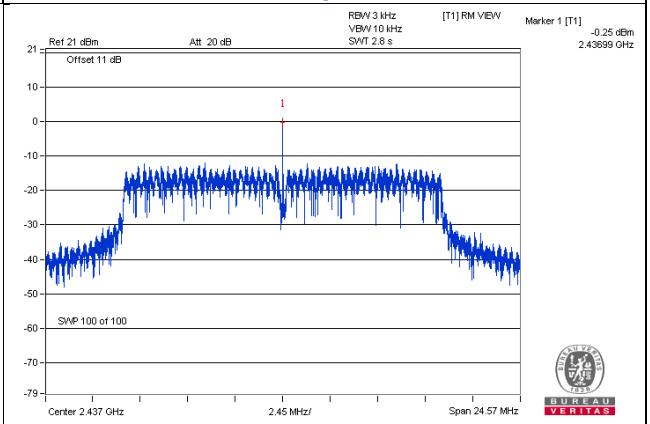
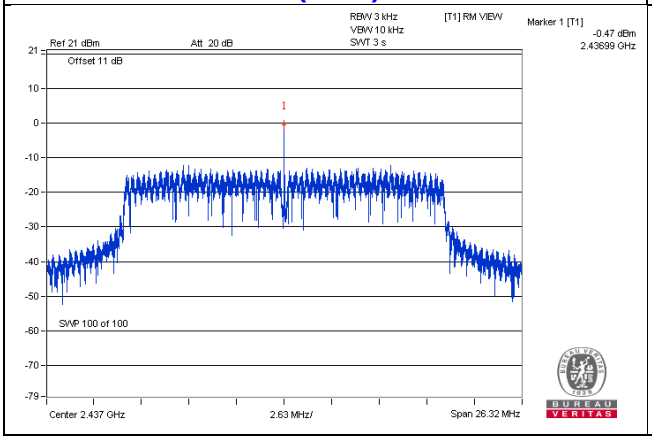
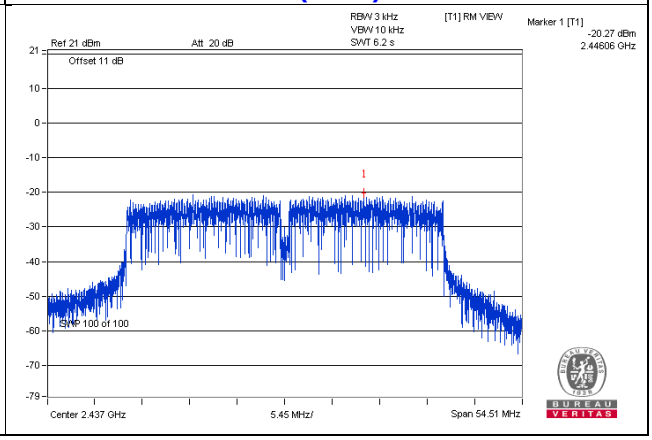
Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-18.02	8	Pass
6	2437	-0.25	8	Pass
11	2462	-18.21	8	Pass

802.11n (HT20)

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-18.46	8	Pass
6	2437	-0.47	8	Pass
11	2462	-17.97	8	Pass

802.11n (HT40)

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
3	2422	-22.45	8	Pass
6	2437	-20.27	8	Pass
9	2452	-22.67	8	Pass

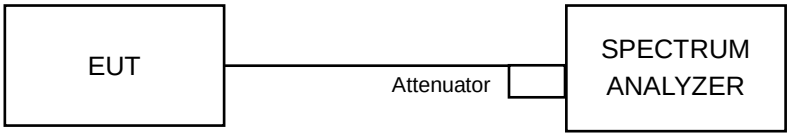
Spectrum Plot of Worst Value	
802.11b / CH6	**802.11g / CH6**
	
802.11n (HT20) / CH6	**802.11n (HT40) / CH6**
	

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

a. Set the RBW = 100 kHz.

b. Set the VBW ≥ 300 kHz.

c. Detector = average.

d. Sweep time = auto couple.

e. Trace mode = max hold.

f. Allow trace to fully stabilize.

g. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

a. Set RBW = 100 kHz.

b. Set VBW ≥ 300 kHz.

c. Ensure that the number of measurement points ≥ span/RBW

d. According to measurement points to set differ measurement span.

e. Detector = average.

f. Trace Mode = max hold.

g. Sweep = auto couple.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

Same as Item 4.3.6

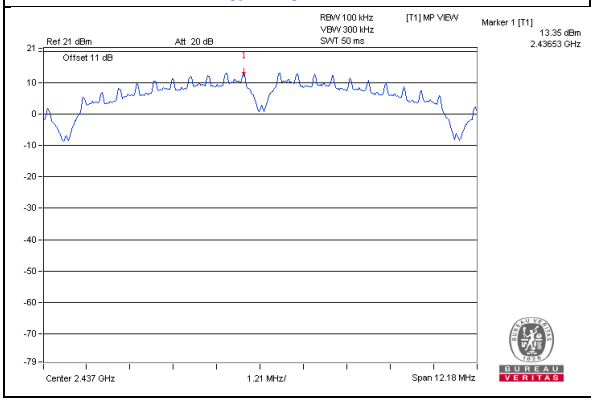
4.6.7 Test Results

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.

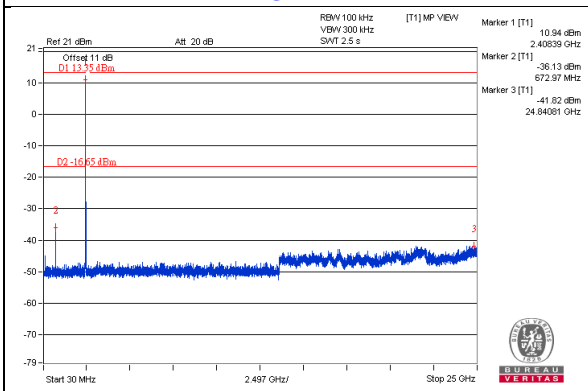
Test Mode A

802.11b_Chain 0

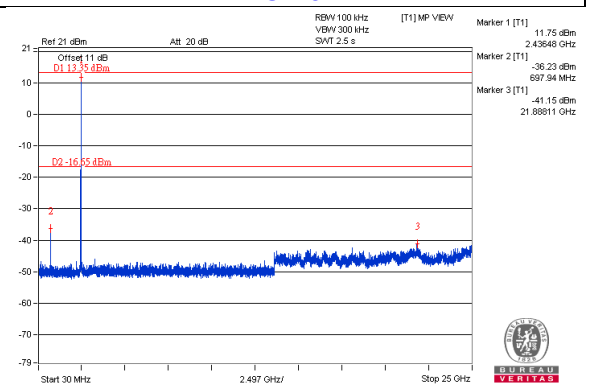
Maximum REF



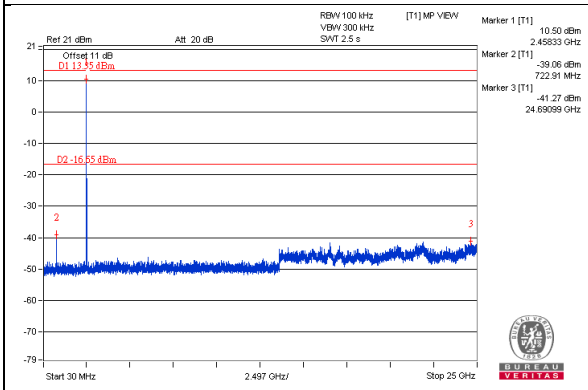
CH 1



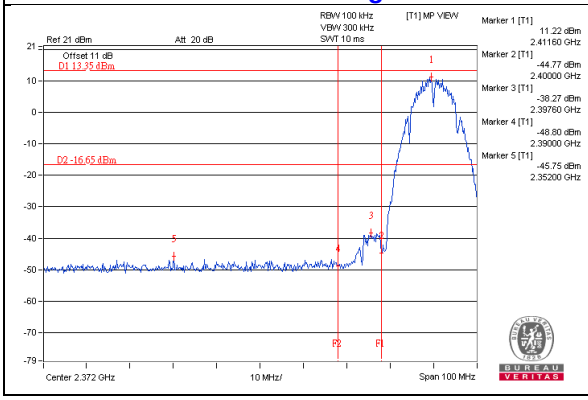
CH 6



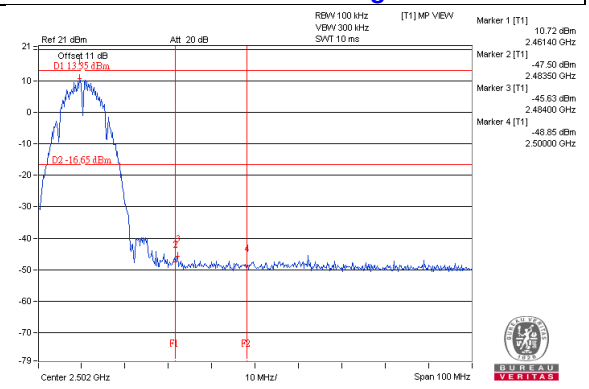
CH 11



CH 1 Band edge

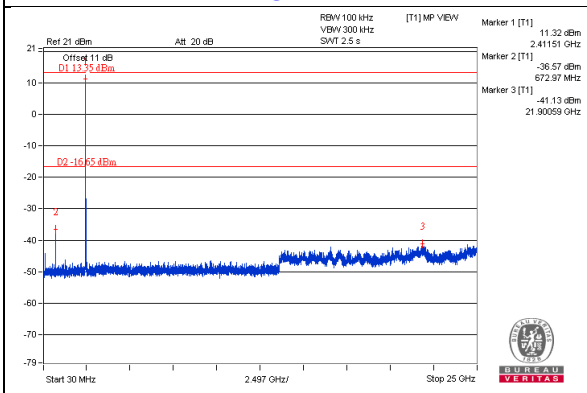


CH 11 Band edge

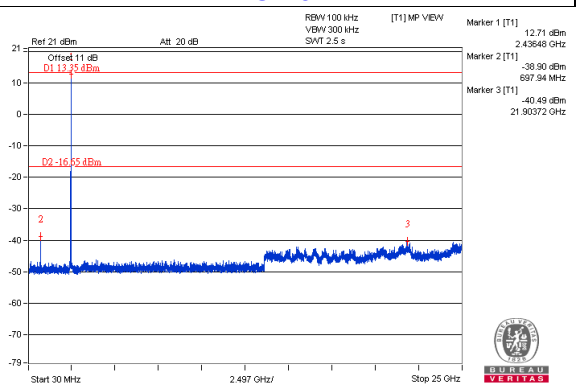


802.11b_Chain 1

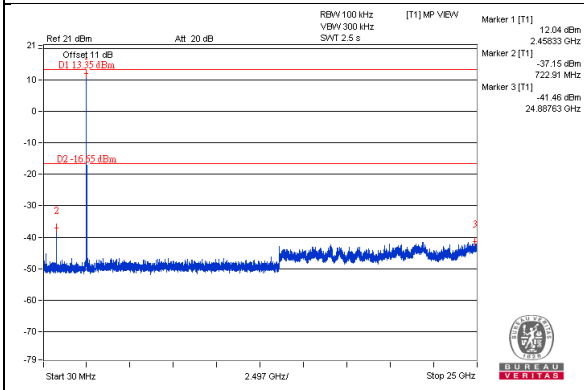
CH 1



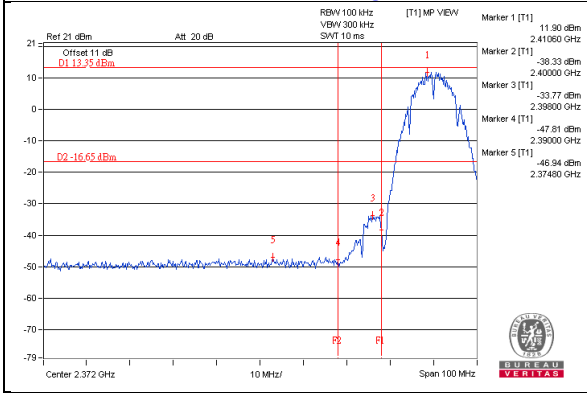
CH 6



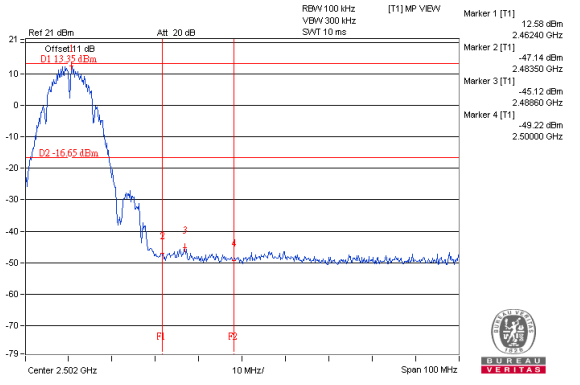
CH 11



CH 1 Band edge

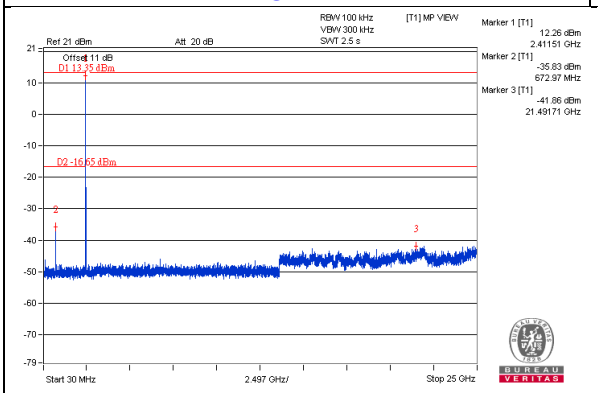


CH 11 Band edge

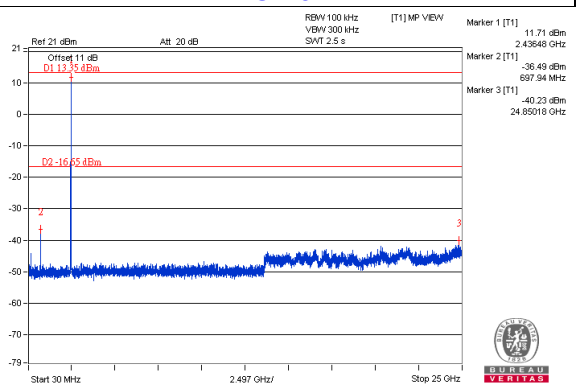


802.11b_Chain 2

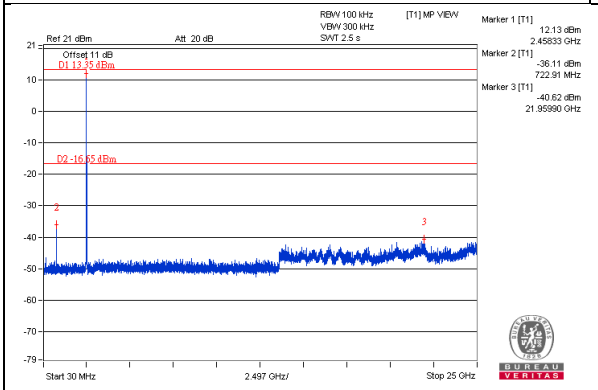
CH 1



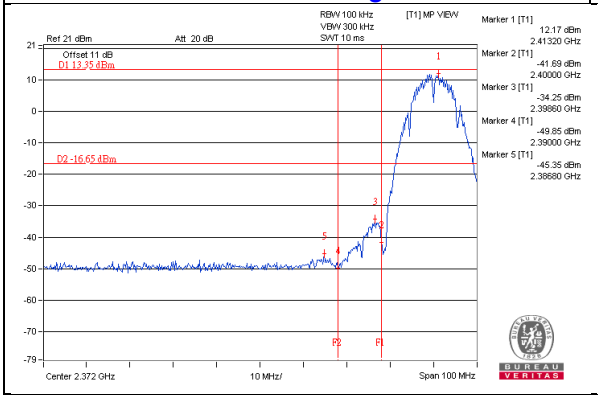
CH 6



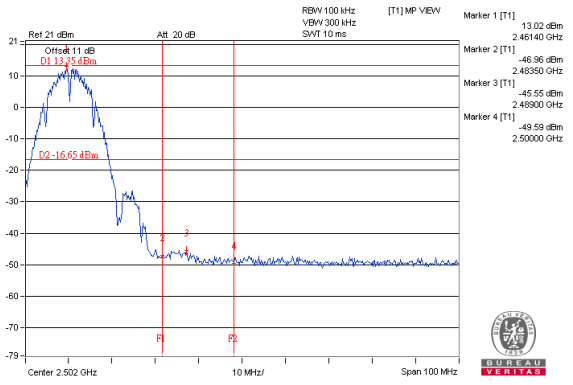
CH 11



CH 1 Band edge

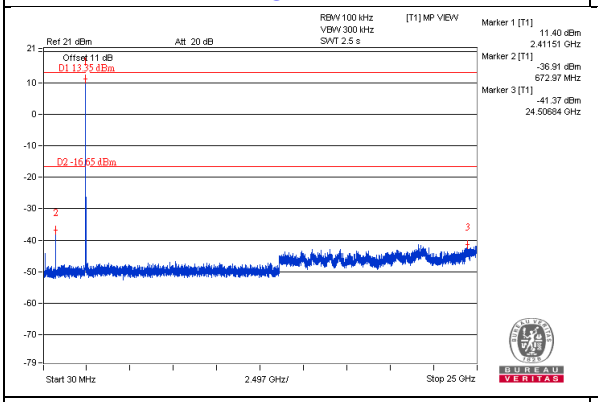


CH 11 Band edge

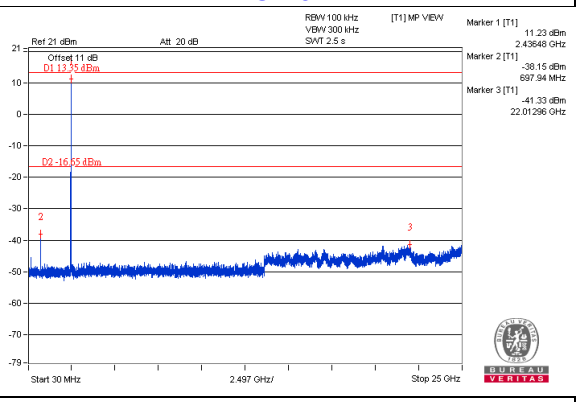


802.11b_Chain 3

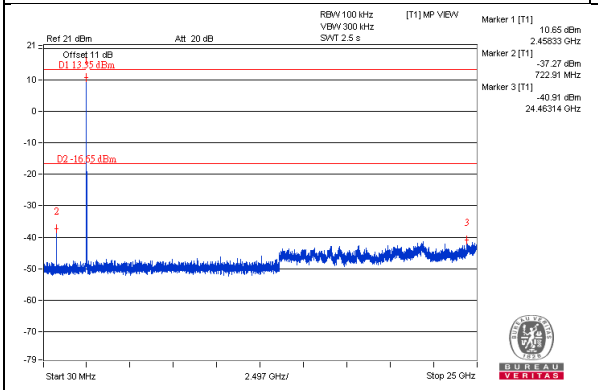
CH 1



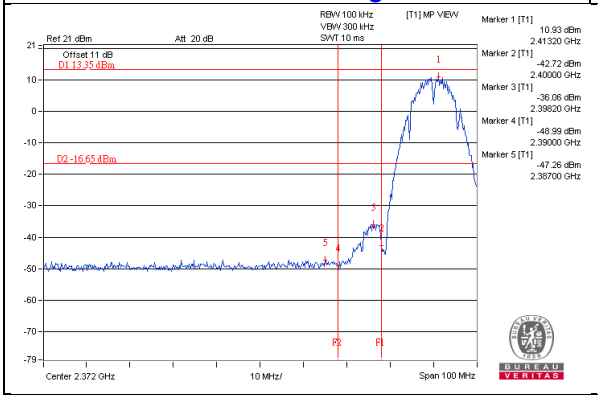
CH 6



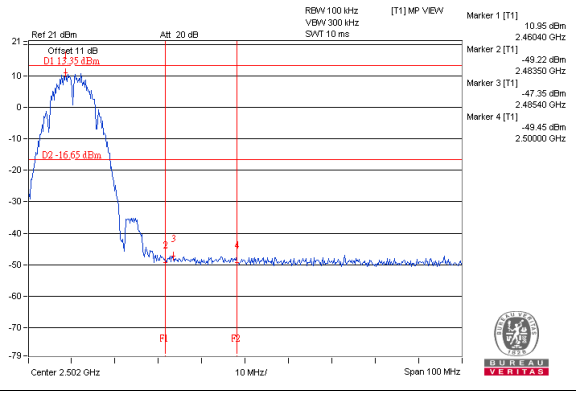
CH 11



CH 1 Band edge

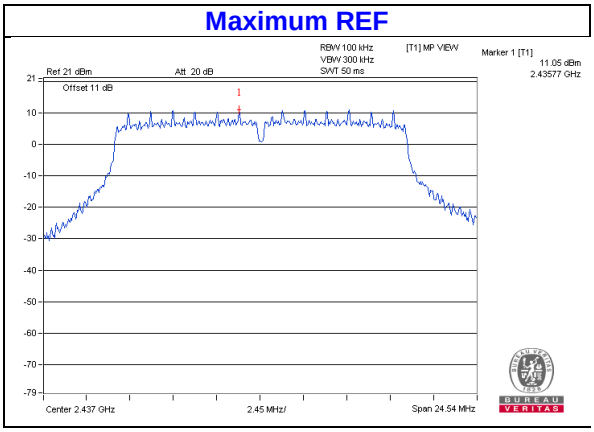


CH 11 Band edge

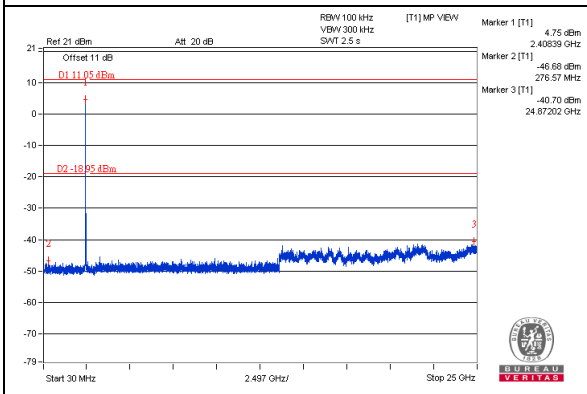


802.11g_Chain 0

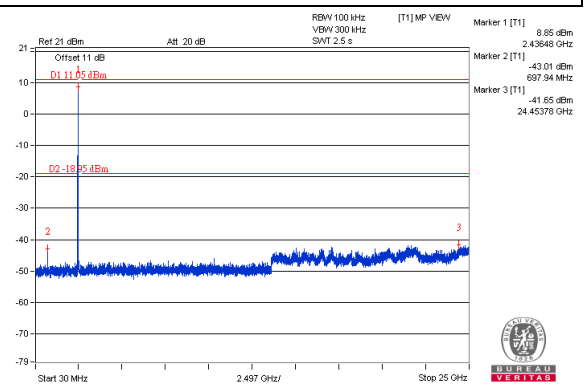
Maximum REF



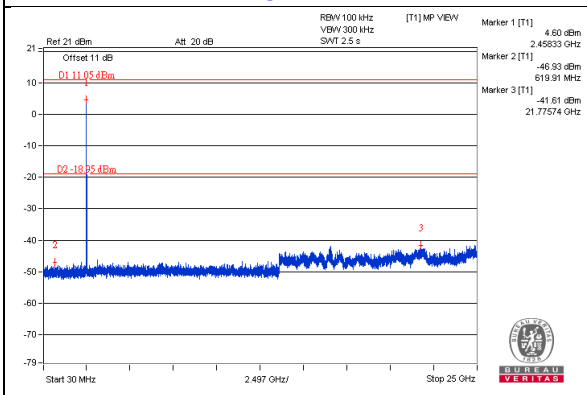
CH 1



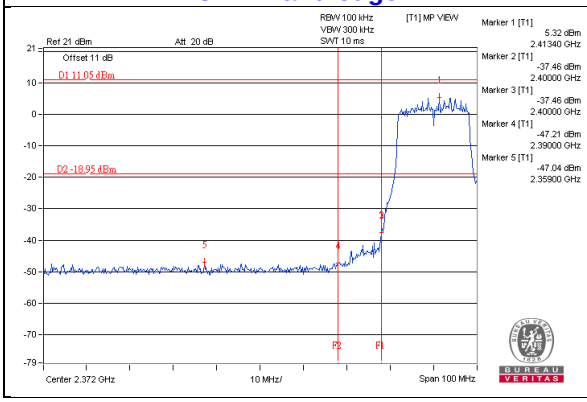
CH 6



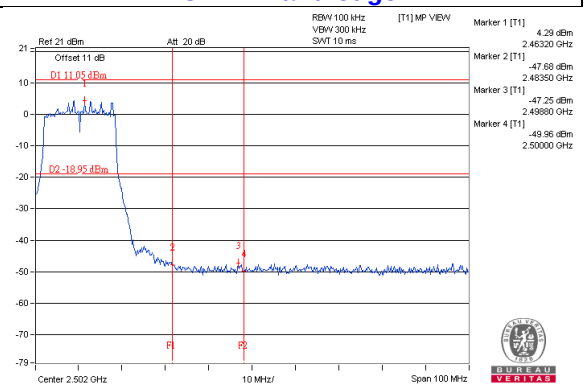
CH 11



CH 1 Band edge

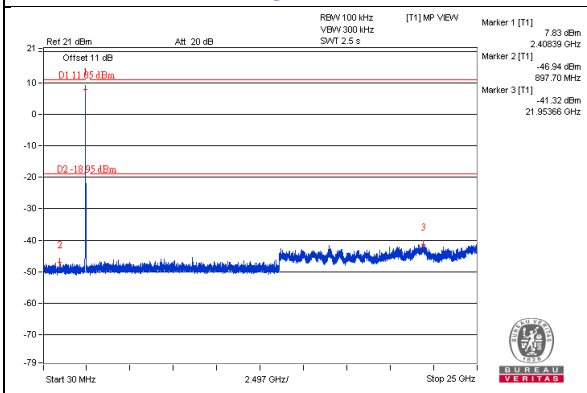


CH 11 Band edge

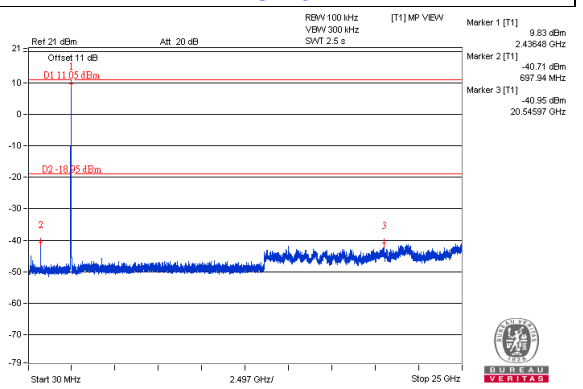


802.11g_Chain 1

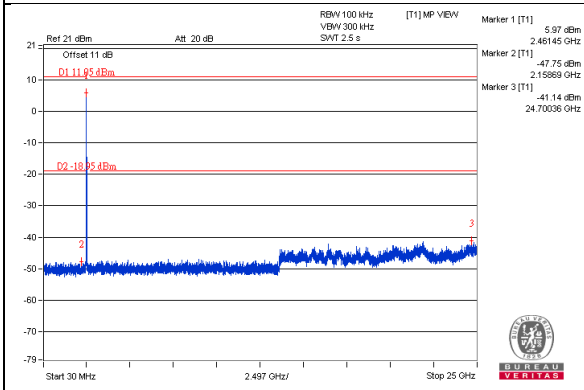
CH 1



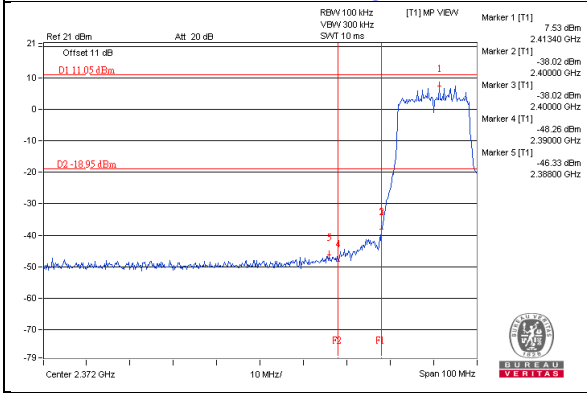
CH 6



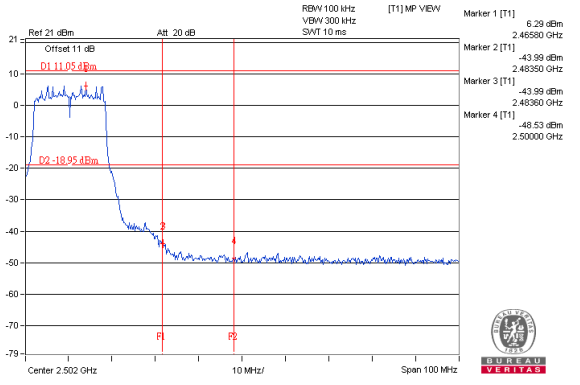
CH 11



CH 1 Band edge

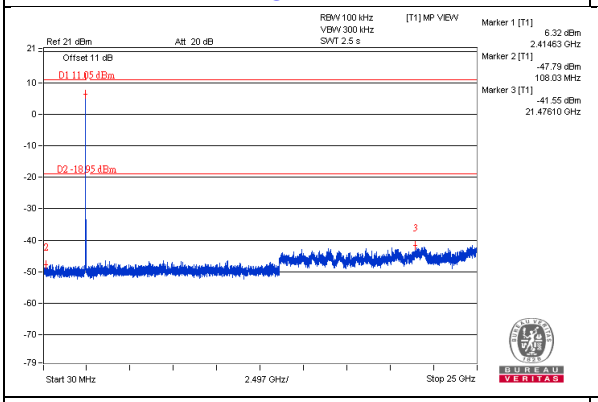


CH 11 Band edge

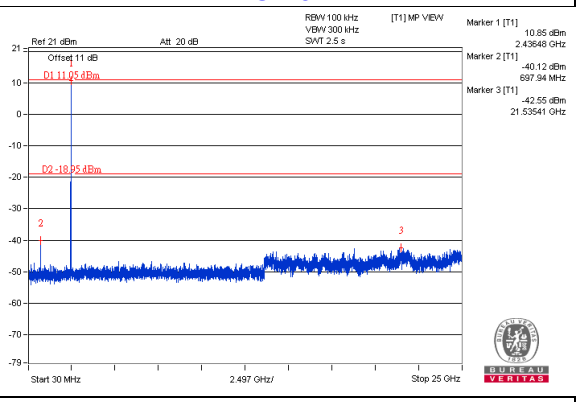


802.11g_Chain 2

CH 1



CH 6



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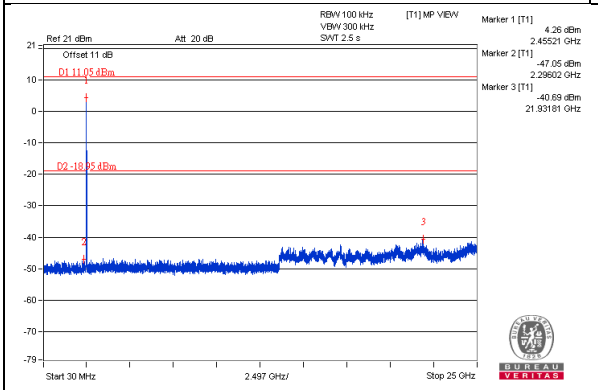
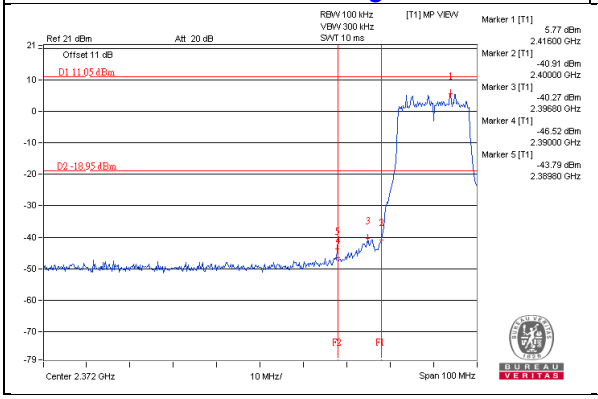
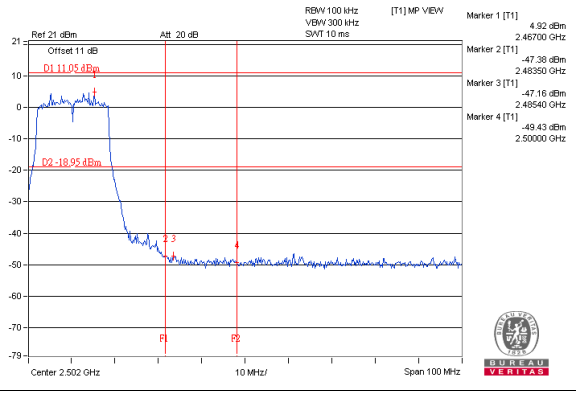


CH 1 Band edge

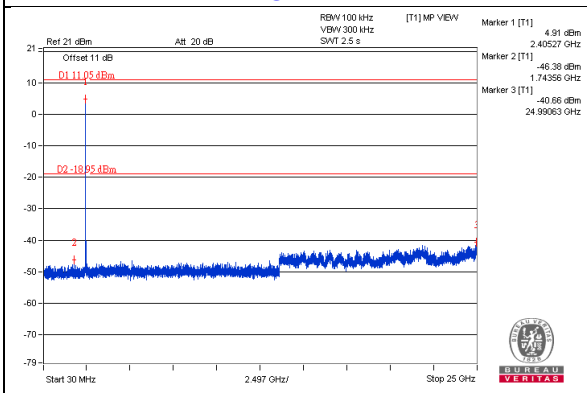


CH 11 Band edge

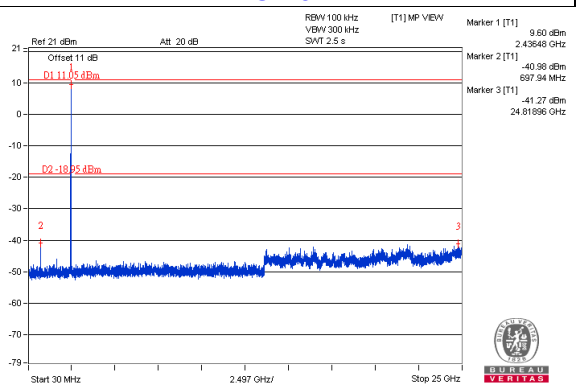


802.11g_Chain 3

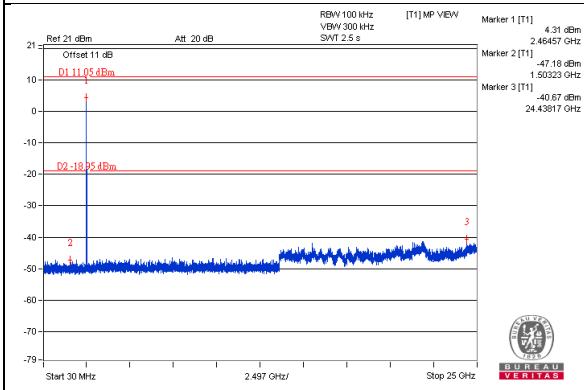
CH 1



CH 6



CH 11



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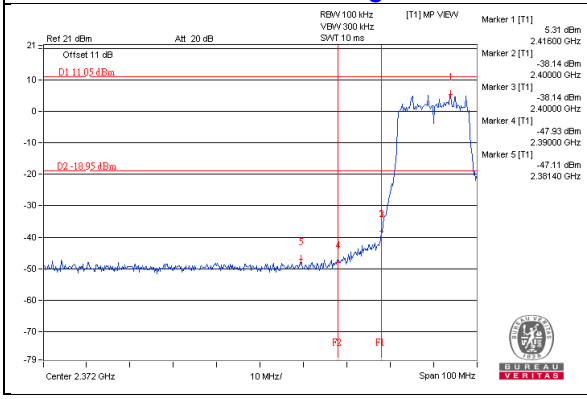
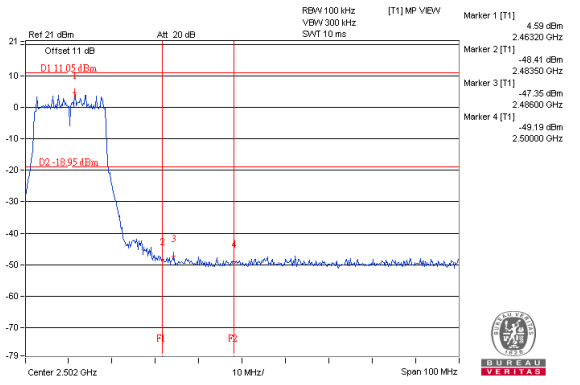
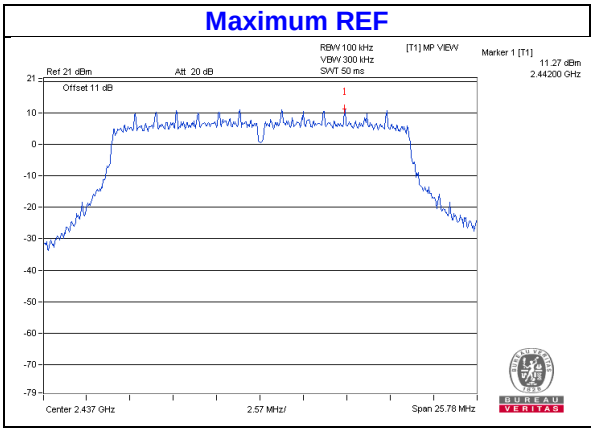


CH 11 Band edge

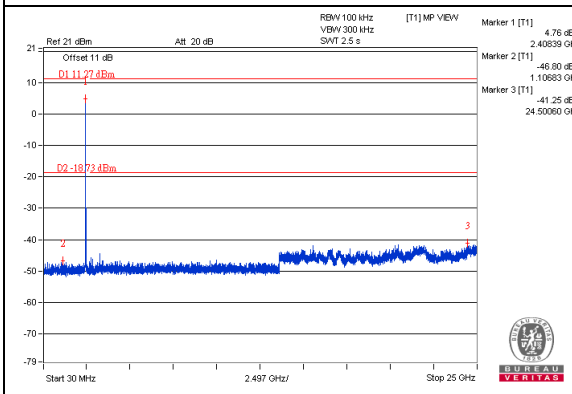


VHT20_Chain 0

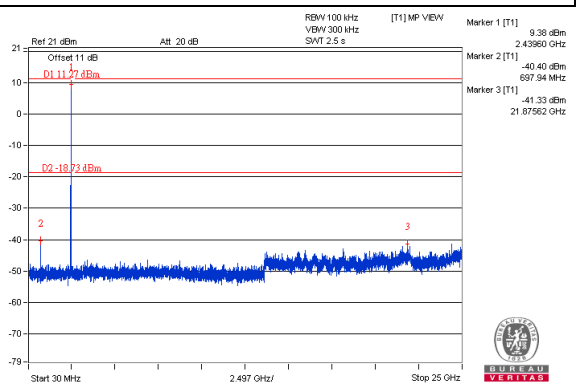
Maximum REF



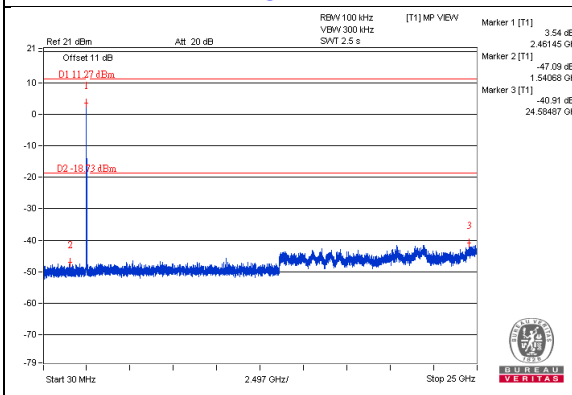
CH 1



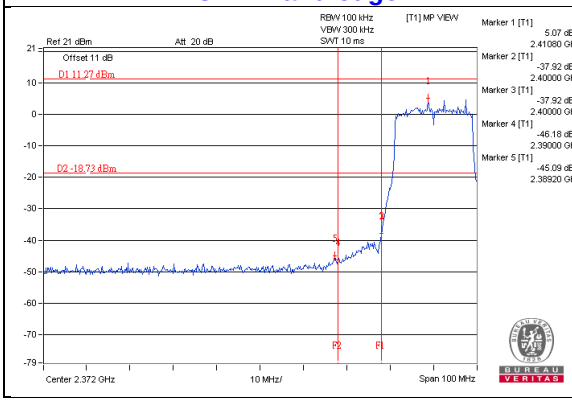
CH 6



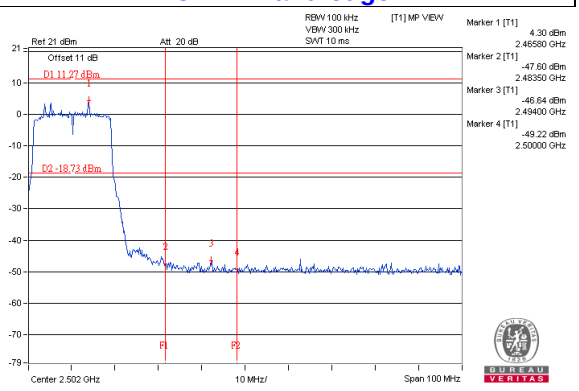
CH 11



CH 1 Band edge

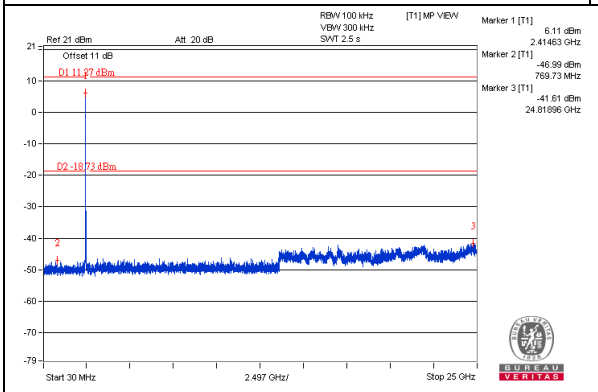


CH 11 Band edge

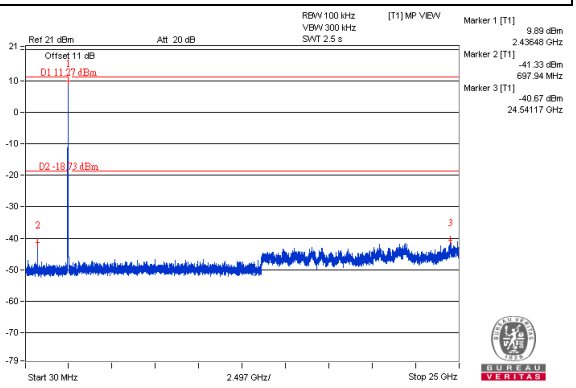


VHT20_Chain 1

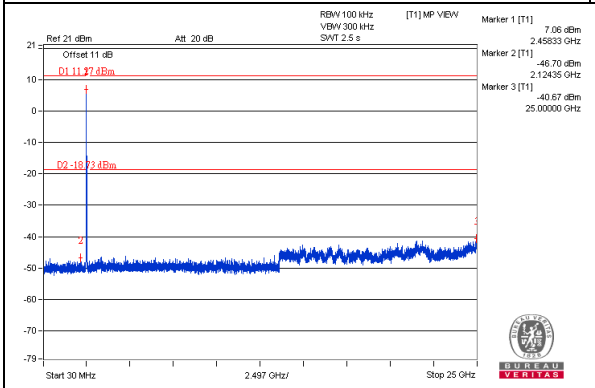
CH 1



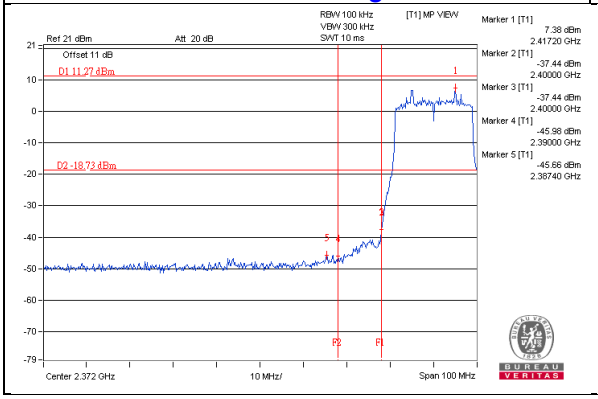
CH 6



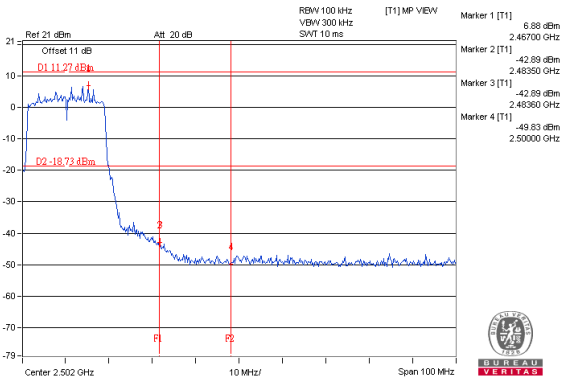
CH 11



CH 1 Band edge

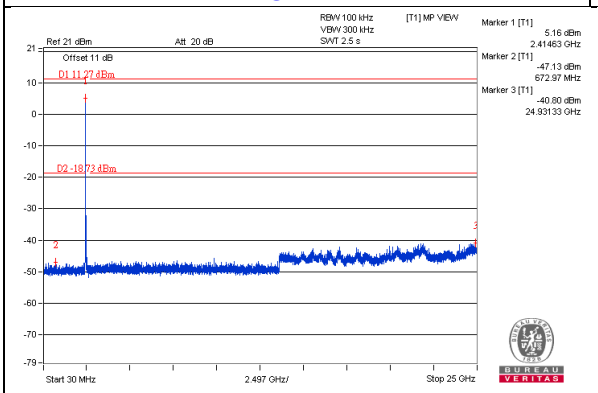


CH 11 Band edge

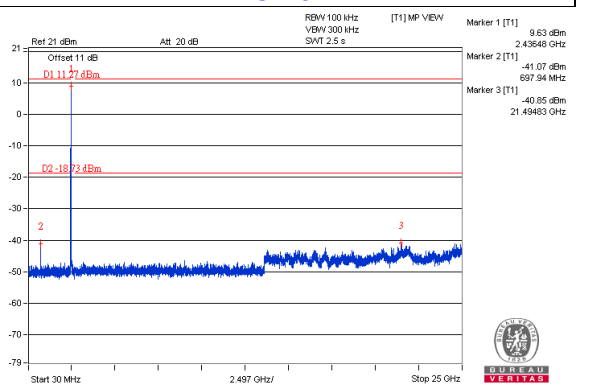


VHT20_Chain 2

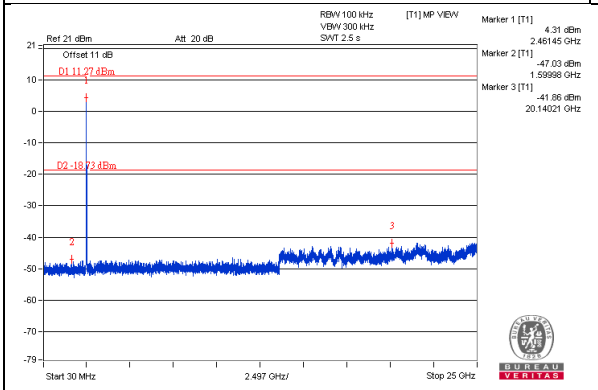
CH 1



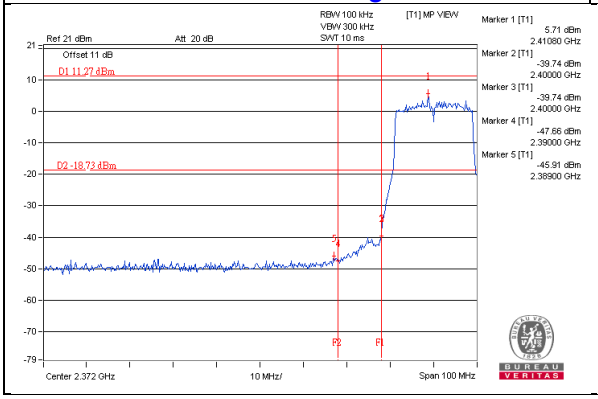
CH 6



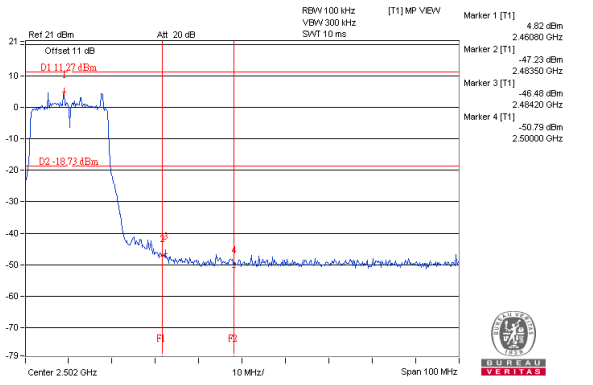
CH 11



CH 1 Band edge

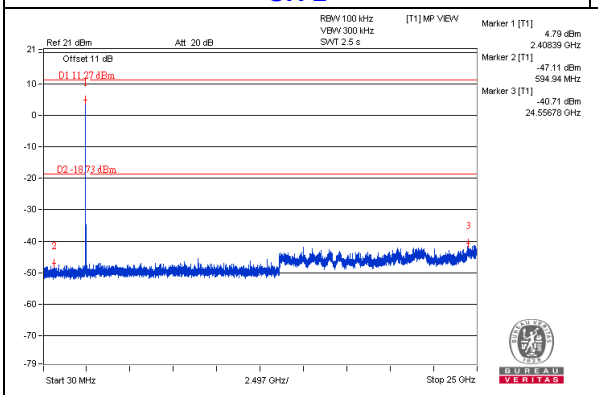


CH 11 Band edge

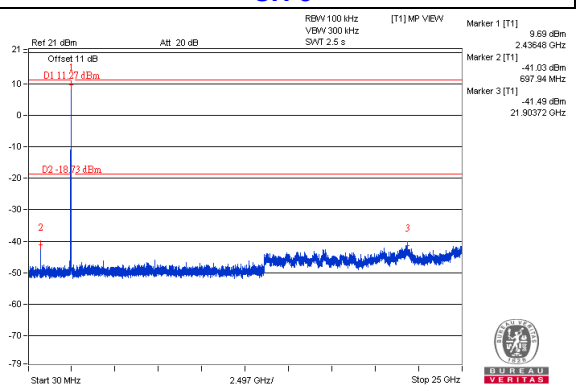


VHT20_Chain 3

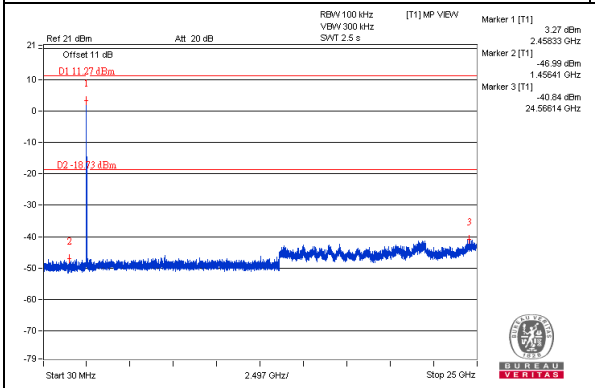
CH 1



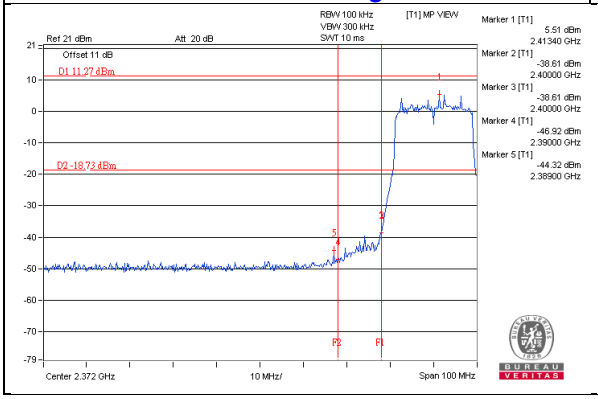
CH 6



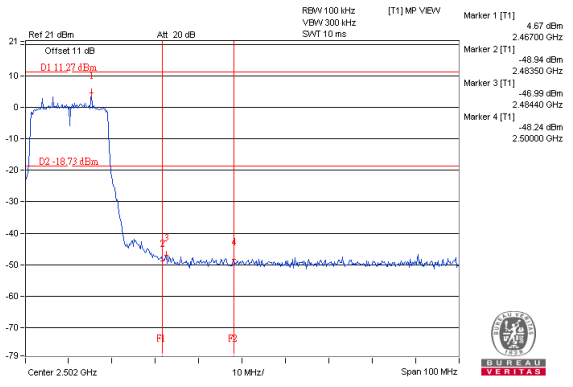
CH 11



CH 1 Band edge

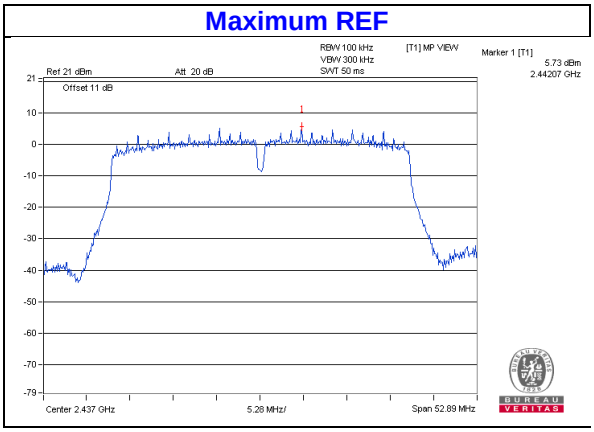


CH 11 Band edge

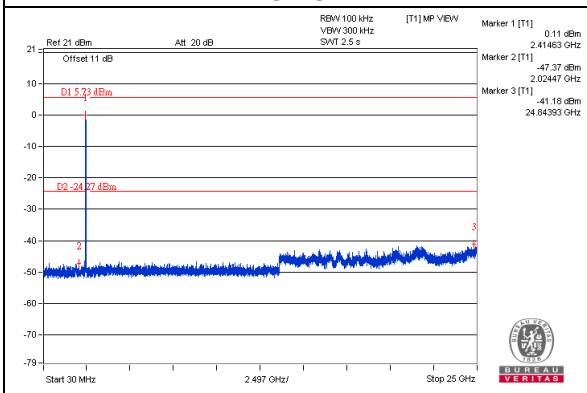


802.11n (HT40)_Chain 0

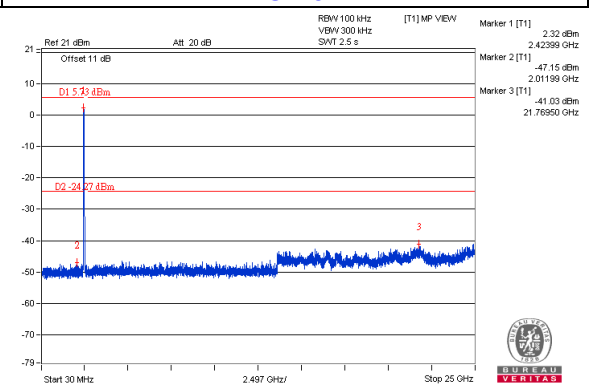
Maximum REF



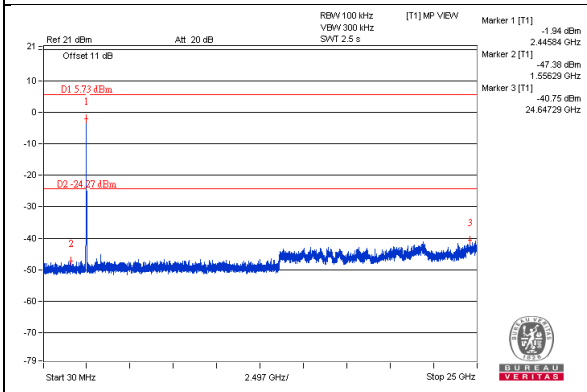
CH 3



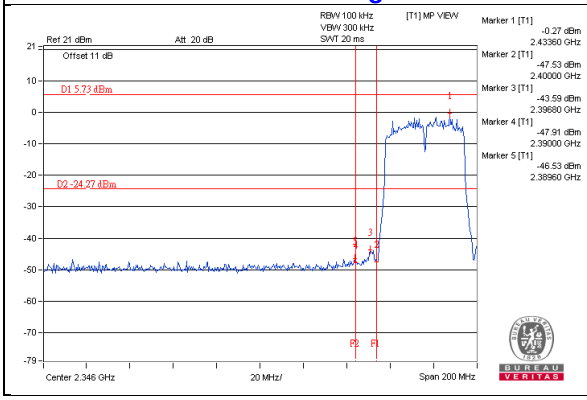
CH 6



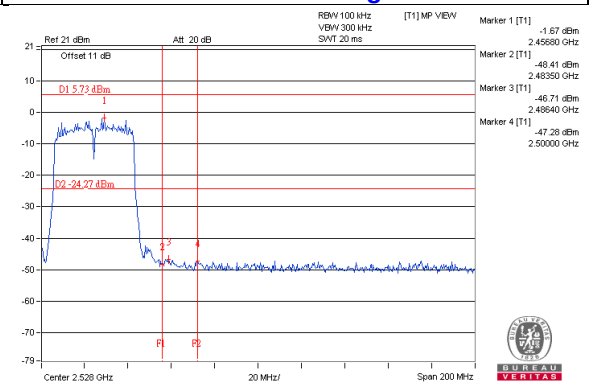
CH 9



CH 3 Band edge

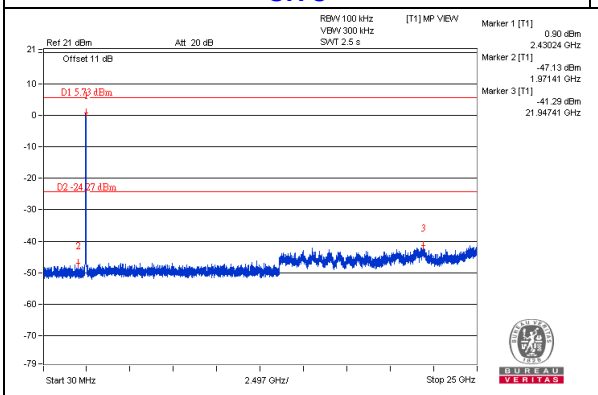


CH 9 Band edge

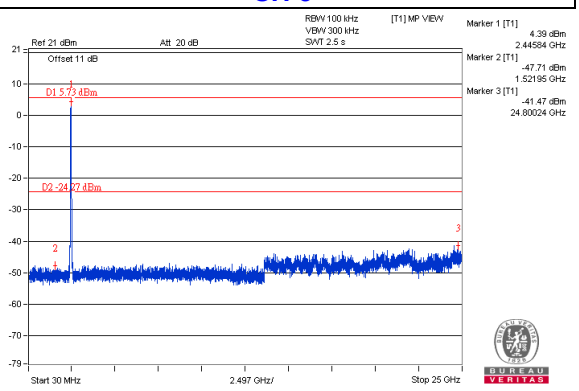


802.11n (HT40)_Chain 1

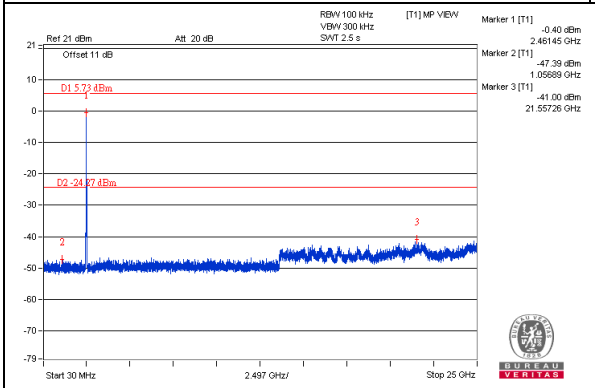
CH 3



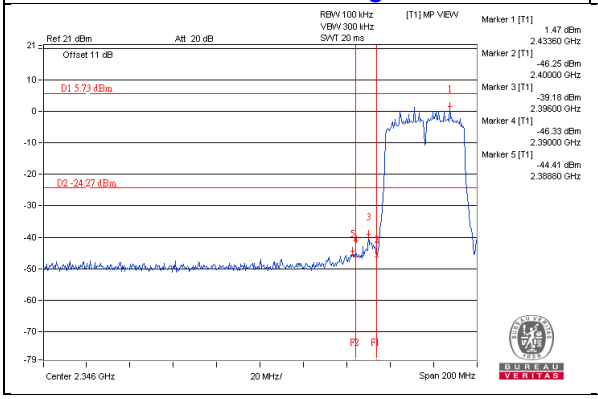
CH 6



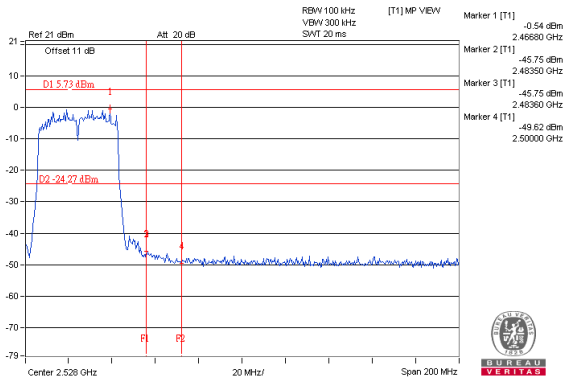
CH 9



CH 3 Band edge

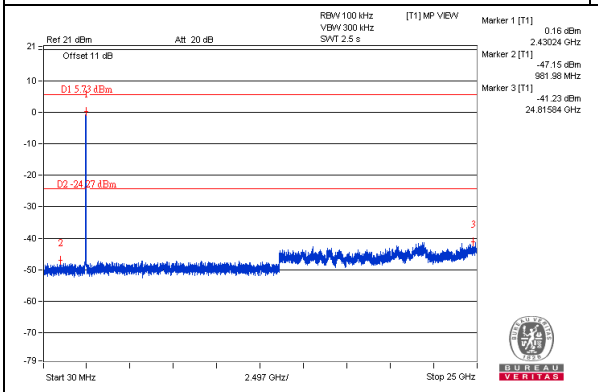


CH 9 Band edge

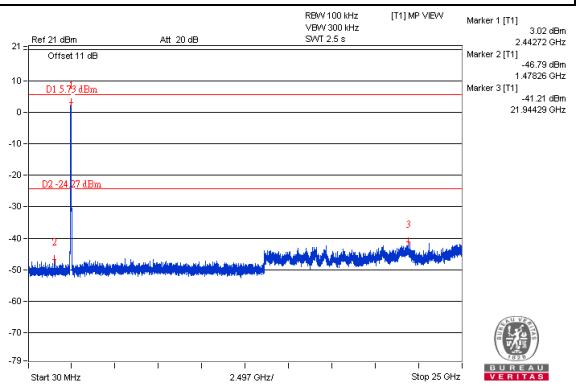


802.11n (HT40)_Chain 2

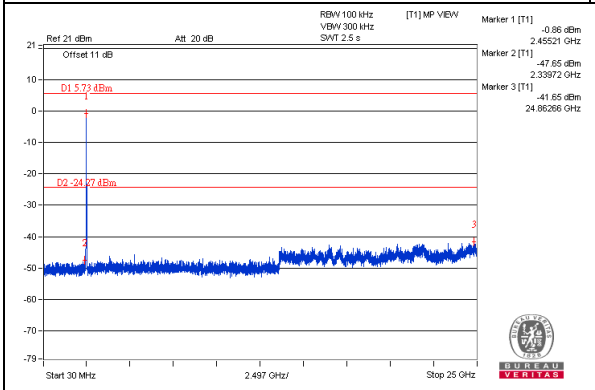
CH 3



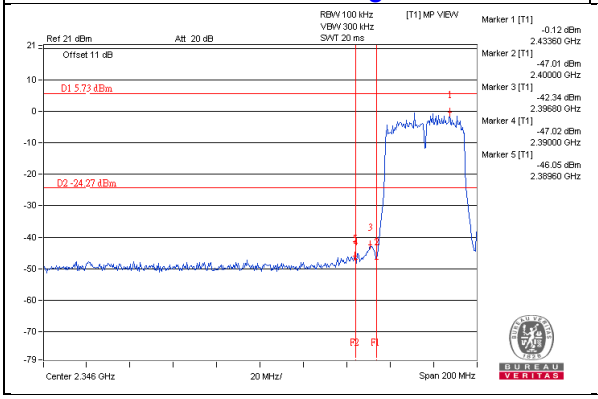
CH 6



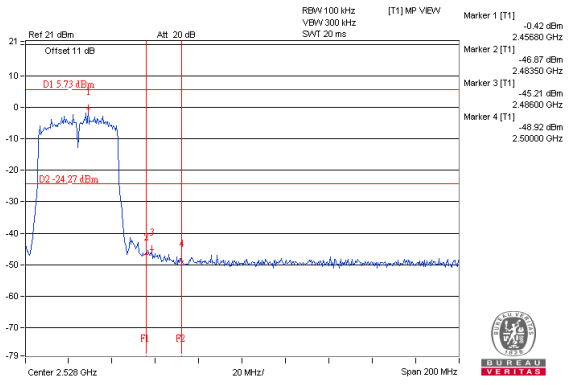
CH 9



CH 3 Band edge

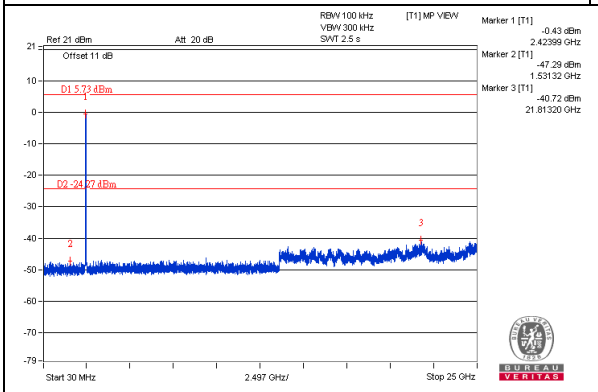


CH 9 Band edge

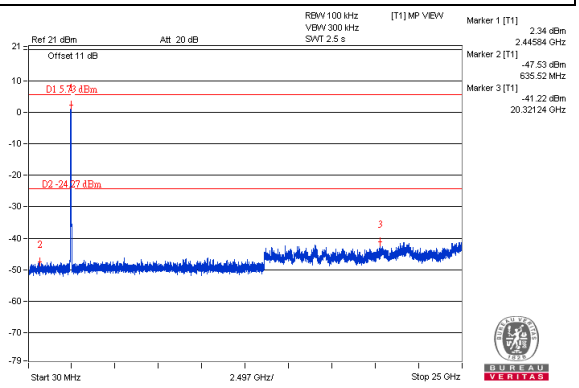


802.11n (HT40)_Chain 3

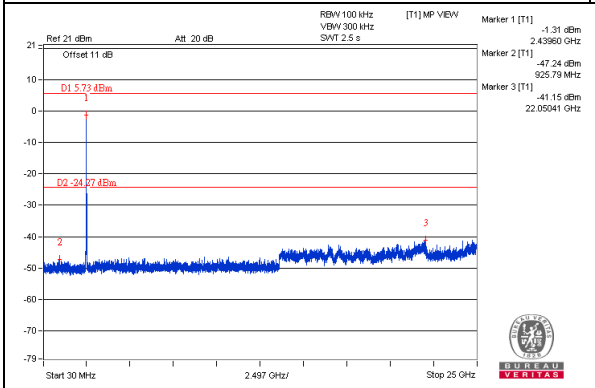
CH 3



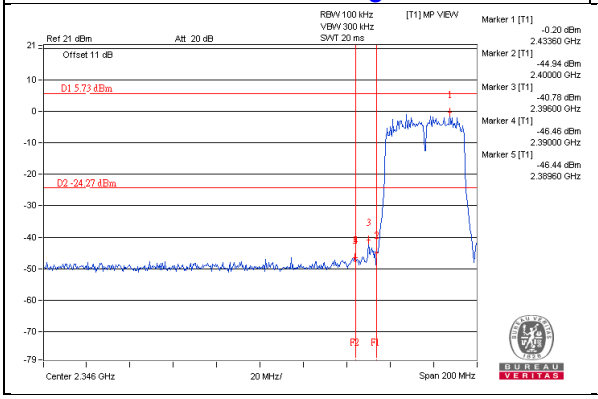
CH 6



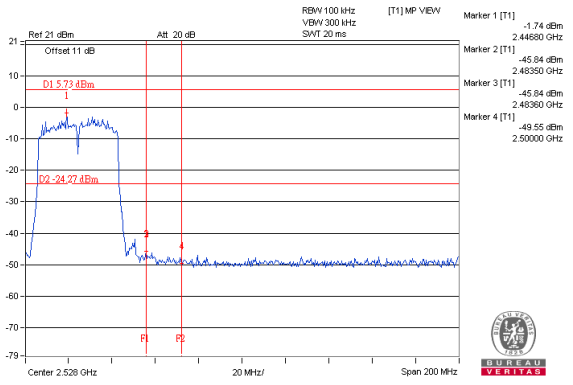
CH 9



CH 3 Band edge



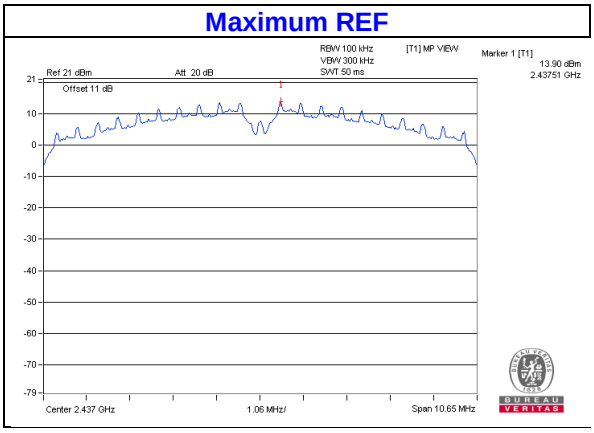
CH 9 Band edge



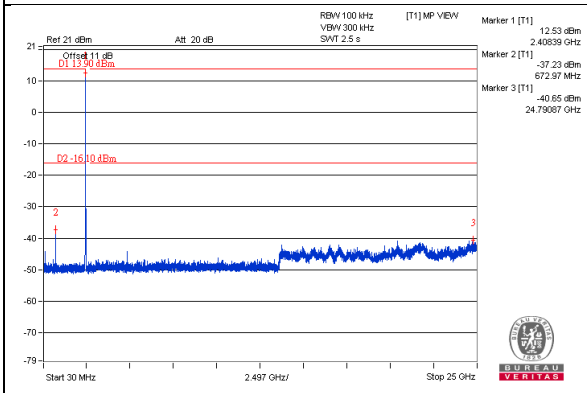
Test Mode B

802.11b

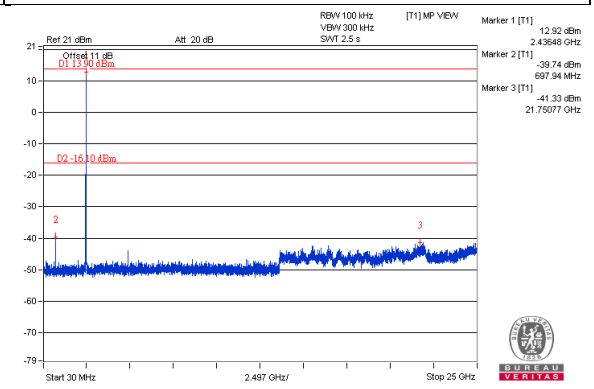
Maximum REF



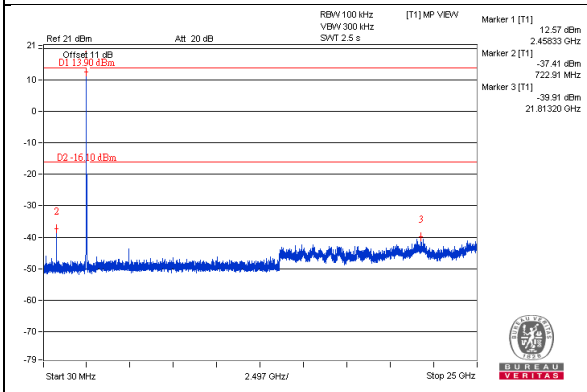
CH 1



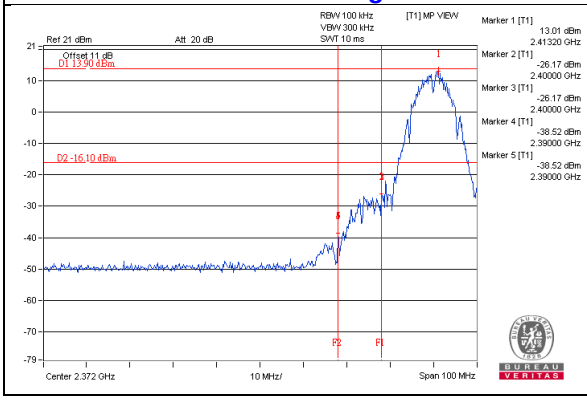
CH 6



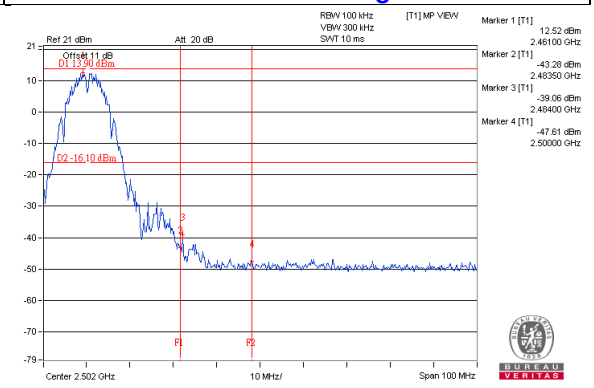
CH 11



CH 1 Band edge

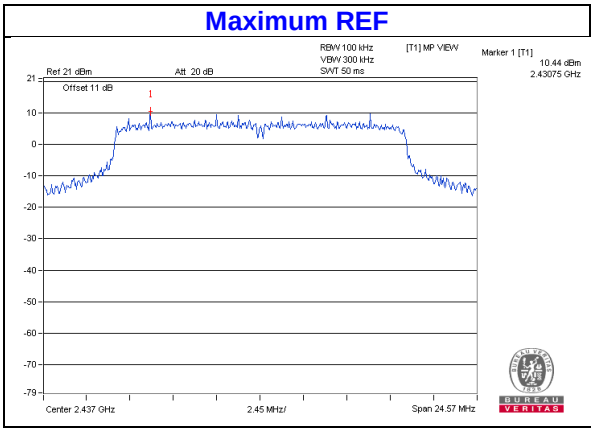


CH 11 Band edge

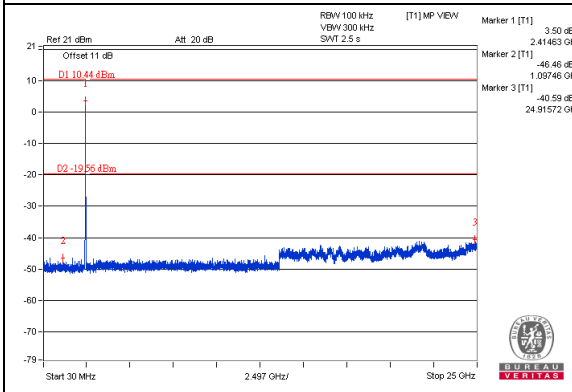


802.11g

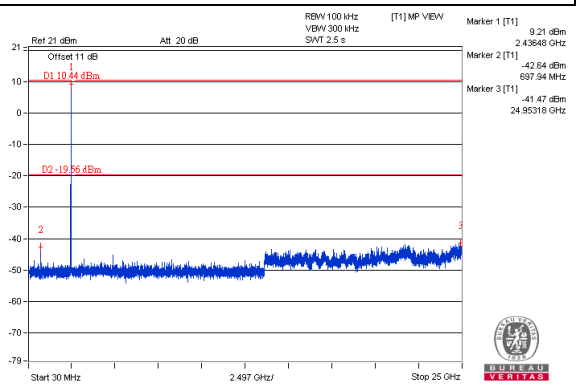
Maximum REF



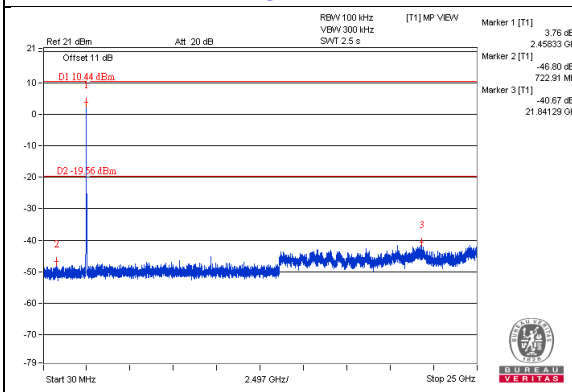
CH 1



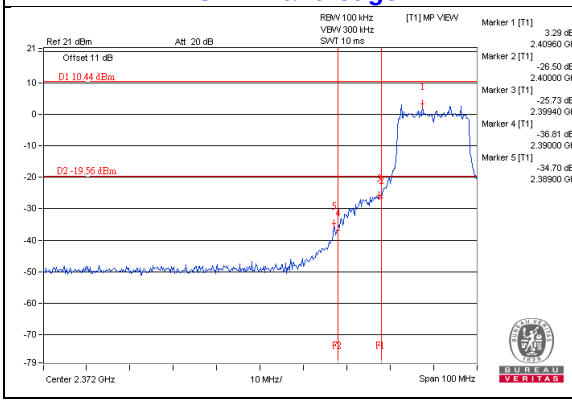
CH 6



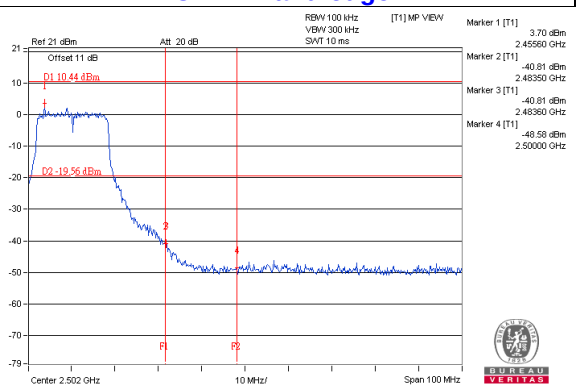
CH 11



CH 1 Band edge

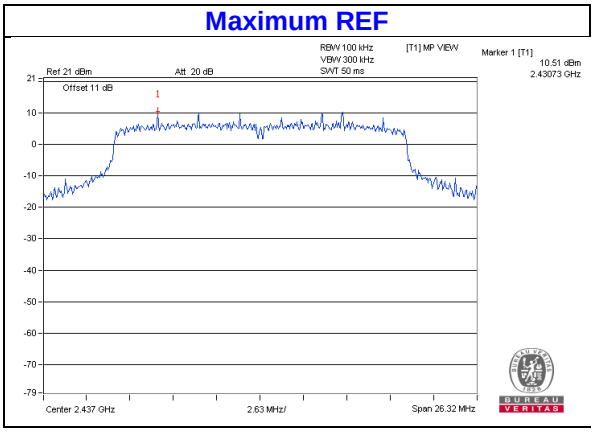


CH 11 Band edge

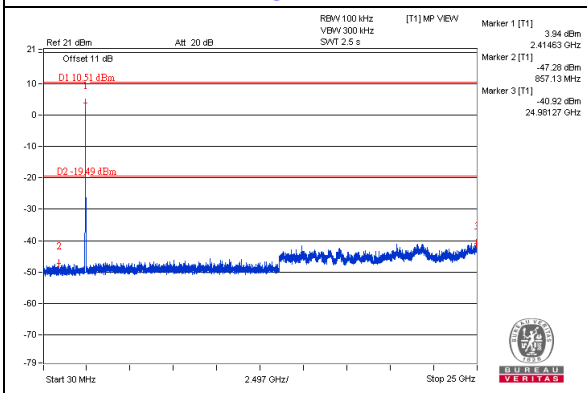


802.11n (HT20)

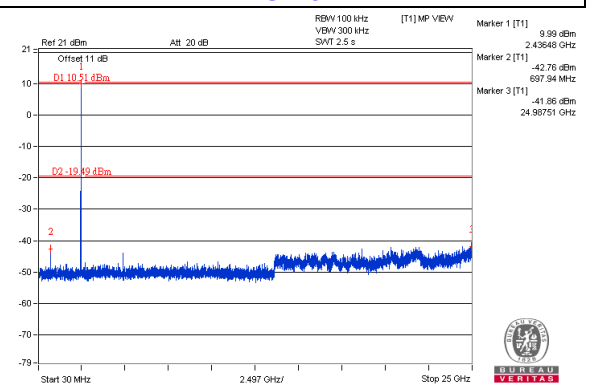
Maximum REF



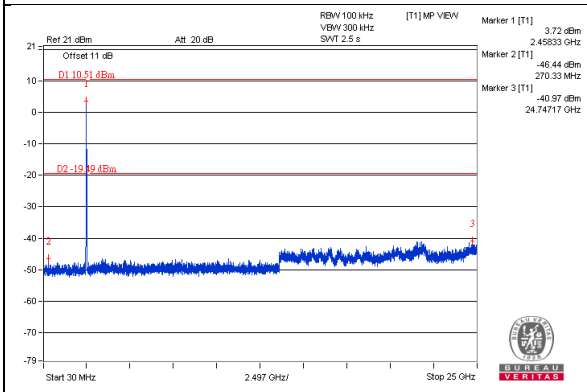
CH 1



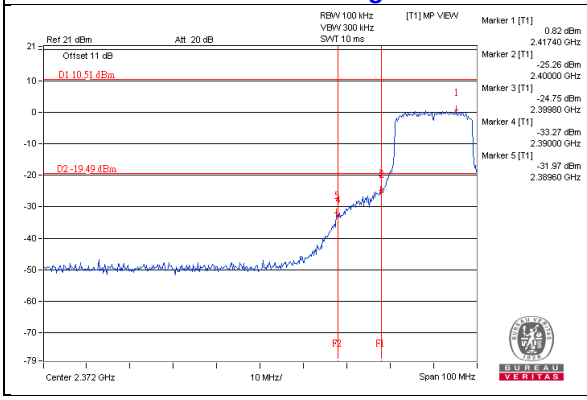
CH 6



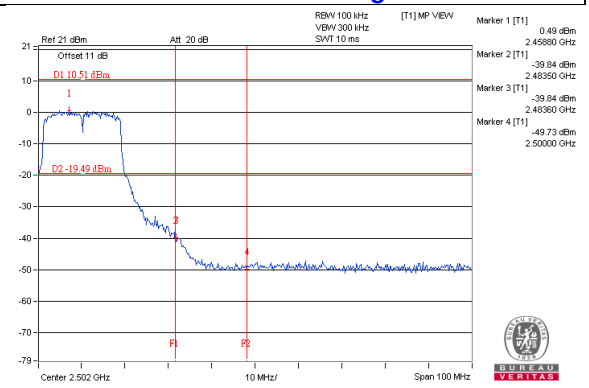
CH 11



CH 1 Band edge

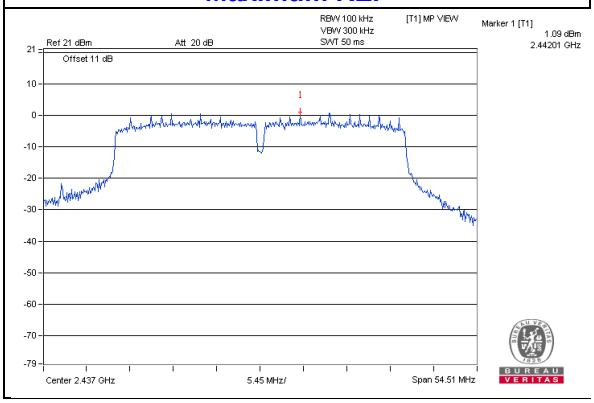


CH 11 Band edge

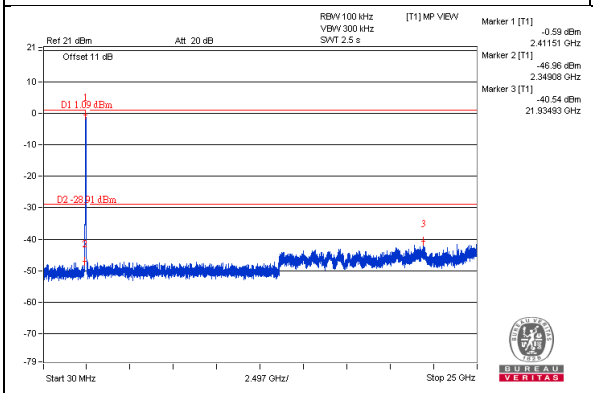


802.11n (HT40)

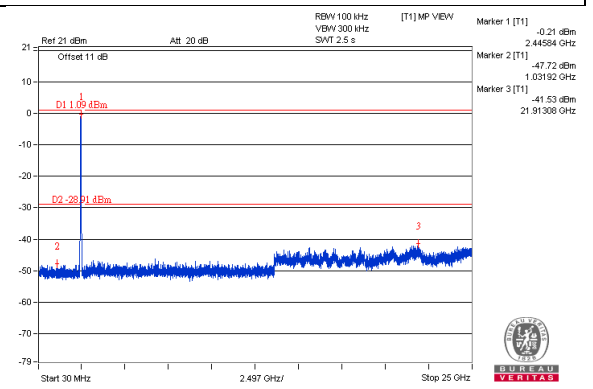
Maximum REF



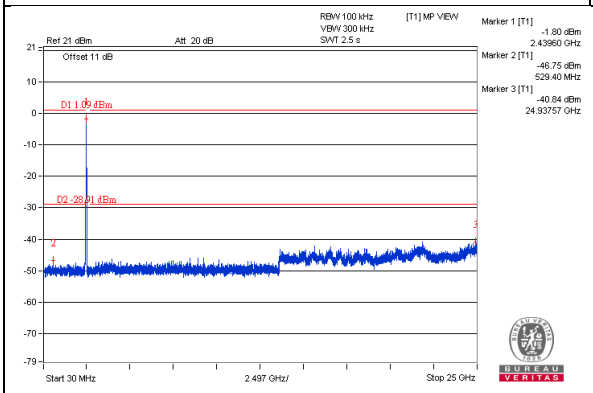
CH 3



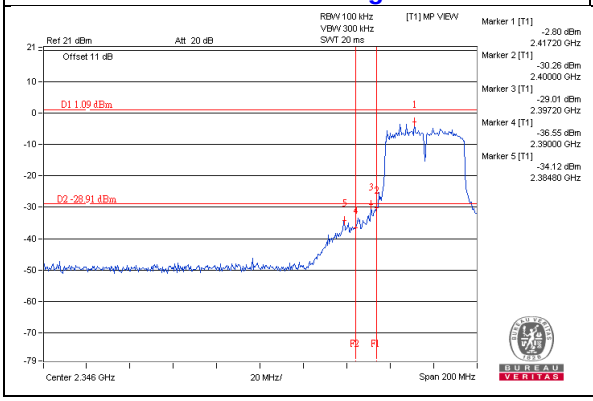
CH 6



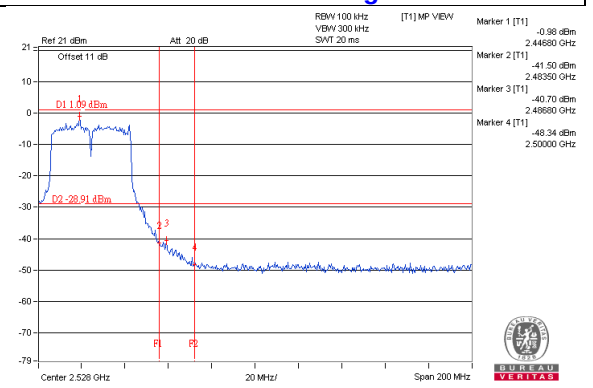
CH 9



CH 3 Band edge



CH 9 Band edge



5 Pictures of Test Arrangements

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

Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

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

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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.

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