FCC Test Report

Report No.:	RF160623E04
FCC ID:	PY326200348
Test Model:	C7000v2
Received Date:	June 23, 2016
Test Date:	June 23 to July 21, 2016
Issued Date:	Aug. 15, 2016
Applicant:	NETGEAR, Inc.
Address:	350 East Plumeria Drive San Jose, CA 95134
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
RF160623E04	Original release.	Aug. 15, 2016

1 Certificate of Conformity

Product:	AC1900 WiFi Cable Modem Router
Brand:	NETGEAR
Test Model:	C7000v2
Sample Status:	ENGINEERING SAMPLE
Applicant:	NETGEAR, Inc.
Test Date:	June 23 to July 21, 2016
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. 15, 2016

Claire Kuan / Specialist

Approved by : _____ , **Date:** Aug. 15, 2016

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 -8.85dB at 0.15000MHz.
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -0.1dB at 2390.00MHz and 2483.50MHz
15.247(d)	Antenna Port Emission	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is i-pex (MHF) not a standard connector.

2.1 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	1.83 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.19 dB
	1GHz ~ 6GHz	3.43 dB
Radiated Emissions above 1 GHz	6GHz ~ 18GHz	3.49 dB
	18GHz ~ 40GHz	4.11 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	AC1900 WiFi Cable Modem Router
Brand	NETGEAR
Test Model	C7000v2
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	12Vdc from power adapter
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT (20/40) mode in 2.4GHz
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n: up to 600Mbps 802.11ac: up to 1300Mbps
Operating Frequency	**2.4GHz:** 2.412 ~ 2.462GHz **5GHz:** 5.18 ~ 5.24GHz and 5.745 ~ 5.825GHz
Number of Channel	**2.4GHz:** 802.11b, 802.11g, 802.11n (HT20), VHT20: 11 802.11n (HT40), VHT40: 7 **5GHz:** 802.11a, 802.11n (HT20), 802.11ac (VHT20): 9 802.11n (HT40), 802.11ac (VHT40): 4 802.11ac (VHT80): 2
Output Power	**2.4GHz:** **CDD Mode:** 989.004mW **Beamforming Mode:** 795.949mW **5GHz:** **5.18GHz ~ 5.24GHz:** **CDD Mode:** 966.405mW **Beamforming Mode:** 801.389mW **5.745GHz ~ 5.825GHz:** **CDD Mode:** 968.131mW **Beamforming Mode:** 830.358mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x 1
Data Cable Supplied	NA

Note:

1. Simultaneously transmission condition.

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

2. The EUT must be supplied with a power adapter and following different models could be chosen as following table:

No	Brand Name	Model No.	PN	Spec.
1	NETGEAR	MU42-3120350-A1	332-10762-01	Input: 100-240Vac, 50-60Hz, 1.5A Output: 12Vdc, 3.5A Power cord (Unshielded, 1.8m)
2		2ABN042F NA	332-10761-01	Input: 100-240Vac, 50-60Hz, 1.3A Output: 12Vdc, 3.5A Power cord (Unshielded, 1.8m)
Note: From the above adapterss, the radiated emission worse case was found in Adapter 2. Therefore only the test data of the mode was recorded in this report.				

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

Transmitter Circuit	Brand	Model	Antenna Gain(dBi) <including cable loss>	Frequency range (MHz ~ MHz)	Antenna Type	Connecter Type	Cable Length (mm)
Chain (2)	Masterwave	NA	2	2.4~2.4835 5.15~5.85	PCB	I-pex (MHF)	105
Chain (0)	Masterwave	NA	2	2.4~2.4835 5.15~5.85	PCB	I-pex (MHF)	70
Chain (1)	Masterwave	NA	2	2.4~2.4835 5.15~5.85	PCB	I-pex (MHF)	101

4. The EUT incorporates a MIMO function.

2.4GHz Band			
MODULATION MODE	**DATA RATE (MCS)**	**TX & RX CONFIGURATION**	
802.11b	1 ~ 11Mbps	3TX	3RX
802.11g	6 ~ 54Mbps	3TX	3RX
802.11n (HT20)	MCS 0~7	3TX	3RX
	MCS 8~15	3TX	3RX
	MCS16~23	3TX	3RX
802.11n (HT40)	MCS 0~7	3TX	3RX
	MCS 8~15	3TX	3RX
	MCS16~23	3TX	3RX
VHT20	MCS0~8 Nss=1	3TX	3RX
	MCS0~8 Nss=2	3TX	3RX
	MCS0~9 Nss=3	3TX	3RX
VHT40	MCS0~9 Nss=1	3TX	3RX
	MCS0~9 Nss=2	3TX	3RX
	MCS0~9 Nss=3	3TX	3RX
5GHz Band			
MODULATION MODE	**DATA RATE (MCS)**	**TX & RX CONFIGURATION**	
802.11a	6 ~ 54Mbps	3TX	3RX
802.11n (HT20)	MCS 0~7	3TX	3RX
	MCS 8~15	3TX	3RX
	MCS16~23	3TX	3RX
802.11n (HT40)	MCS 0~7	3TX	3RX
	MCS 8~15	3TX	3RX
	MCS16~23	3TX	3RX
802.11ac (VHT20)	MCS0~8 Nss=1	3TX	3RX
	MCS0~8 Nss=2	3TX	3RX
	MCS0~9 Nss=3	3TX	3RX
802.11ac (VHT40)	MCS0~9 Nss=1	3TX	3RX
	MCS0~9 Nss=2	3TX	3RX
	MCS0~9 Nss=3	3TX	3RX
802.11ac (VHT80)	MCS0~9 Nss=1	3TX	3RX
	MCS0~9 Nss=2	3TX	3RX
	MCS0~9 Nss=3	3TX	3RX

Note:
1. All of modulation mode support beamforming function except 802.11a/b/g modulation mode.

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

3.2 Description of Test Modes

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

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

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

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

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
1	-	-	√	-	EUT with adapter 1
2	√	√	√	√	EUT with adapter 2

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

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

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

Radiated Emission Test (Above 1GHz):

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

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

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

Test Condition:

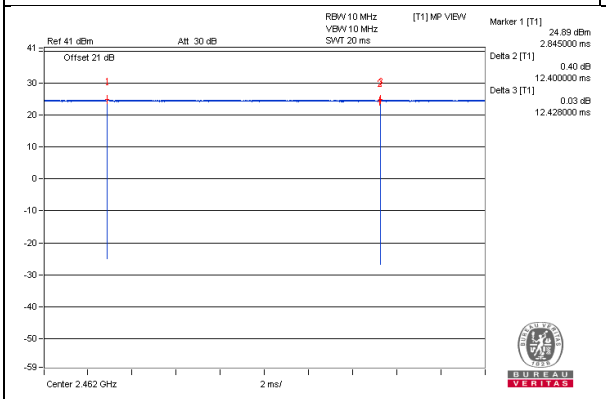
APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 67%RH	120Vac, 60Hz	Gary Cheng
RE<1G	24deg. C, 66%RH	120Vac, 60Hz	Gary Cheng
PLC	26deg. C, 65%RH	120Vac, 60Hz	Jyunchun Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

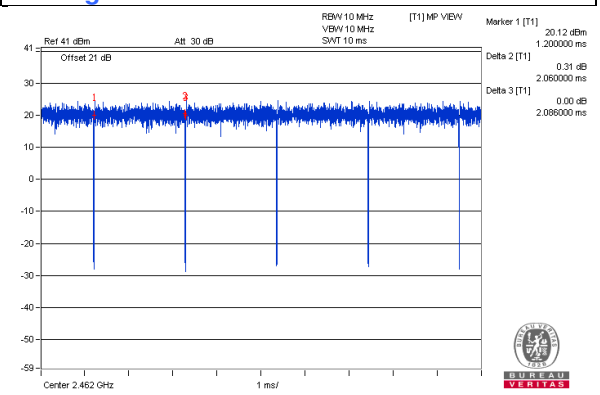
If duty cycle of test signal is ≥ 98 %, duty factor is not required.

802.11b: Duty cycle = 12.4/12.428 = 0.998
802.11g: Duty cycle = 2.06/2.086 = 0.988
VHT20: Duty cycle = 1.914/1.942 = 0.986
VHT40: Duty cycle = 1.001/1.021 = 0.98

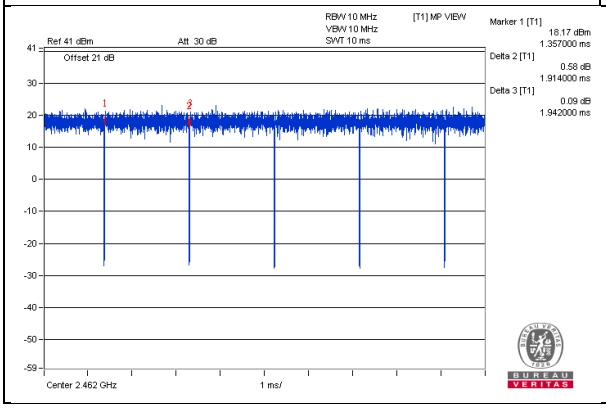
802.11b



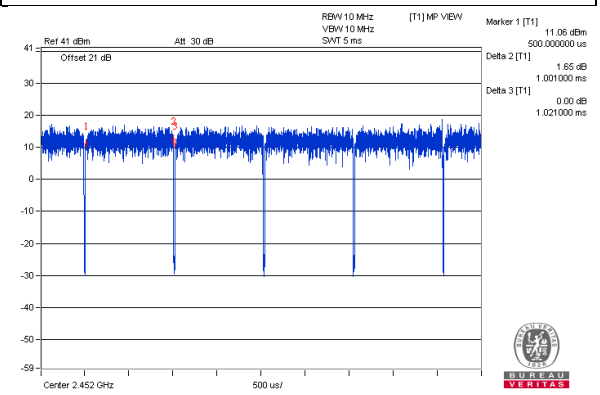
802.11g



VHT20



VHT40



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.

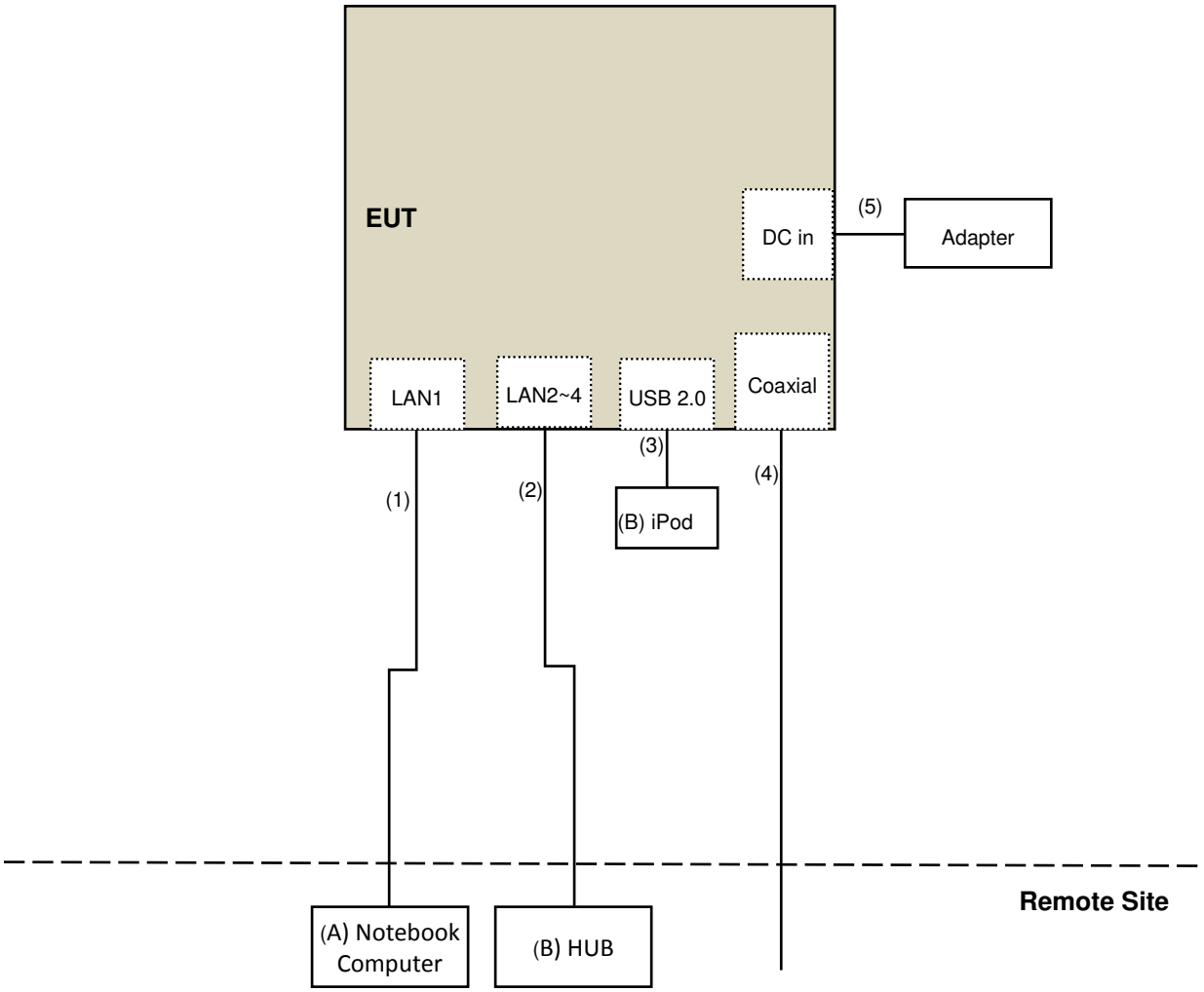
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5430	HYV4VY1	FCC DoC	Provided by Lab
B.	HUB	ZyXEL	ES-116P	S060H02000215	FCC DoC	Provided by Lab
C.	iPod	Apple	MC749TA/A	CC4DMFJUDFDM	NA	Provided by Lab

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	1	10	No	0	Provided by Lab
2.	RJ-45	3	10	No	0	Provided by Lab
3.	USB	1	0.1	Yes	0	Provided by Lab
4.	Coaxial	1	10	Yes	0	Provided by Lab
5.	DC	1	1.8	No	0	Supplied by client

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart C (15.247)
KDB 558074 D01 DTS Meas Guidance v03r05
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 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 20dB under any condition of modulation.

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY54450088	July 24, 2015	July 23, 2016
Pre-Amplifier(*) EMCI	EMC001340	980142	Jan. 20, 2016	Jan. 19, 2018
Loop Antenna(*) Electro-Metrics	EM-6879	264	Dec. 16, 2014	Dec. 15, 2016
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 18, 2016	Jan. 17, 2017
Pre-Amplifier Mini-Circuits	ZFL-1000VH2 B	AMP-ZFL-01	Nov. 11, 2015	Nov. 10, 2016
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Jan. 04, 2016	Jan. 03, 2017
RF Cable	8D	966-4-1 966-4-2 966-4-3	Apr. 02, 2016	Apr. 01, 2017
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Jan. 19, 2016	Jan. 18, 2017
Pre-Amplifier Agilent	8449B	3008A01922	Sep. 19, 2015	Sep. 18, 2016
RF Cable	EMC104-SM-SM-2000 EMC104-SM-SM-5000 EMC104-SM-SM-5000	150318 150323 150324	Mar. 30, 2016	Mar. 29, 2017
Pre-Amplifier EMCI	EMC184045	980143	Jan. 15, 2016	Jan. 14, 2017
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Jan. 08, 2016	Jan. 07, 2017
RF Cable	SUCOFLEX 102	36432/2 36441/2	Jan. 16, 2016	Jan. 15, 2017
Software	ADT_Radiated_V8.7.07	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208410	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP02	NA	NA
Spectrum Analyzer R&S	FSP40	100060	May 11, 2016	May 10, 2017
Power meter Anritsu	ML2495A	1014008	May 05, 2016	May 04, 2017
Power sensor Anritsu	MA2411B	0917122	May 05, 2016	May 04, 2017

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 4.
3. The FCC Site Registration No. is 292998
4. The CANADA Site Registration No. is 20331-2
5. Tested Date: June 23 to July 19, 2016

4.1.3 Test Procedures

a. The EUT was placed on the top of a rotating table 0.8 meters (for below 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:

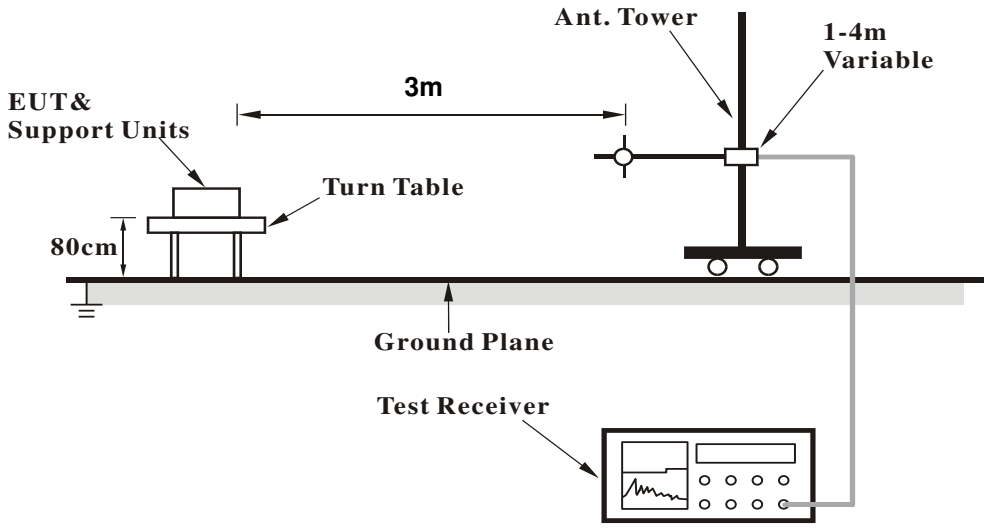
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor (10 log(1/duty cycle)).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

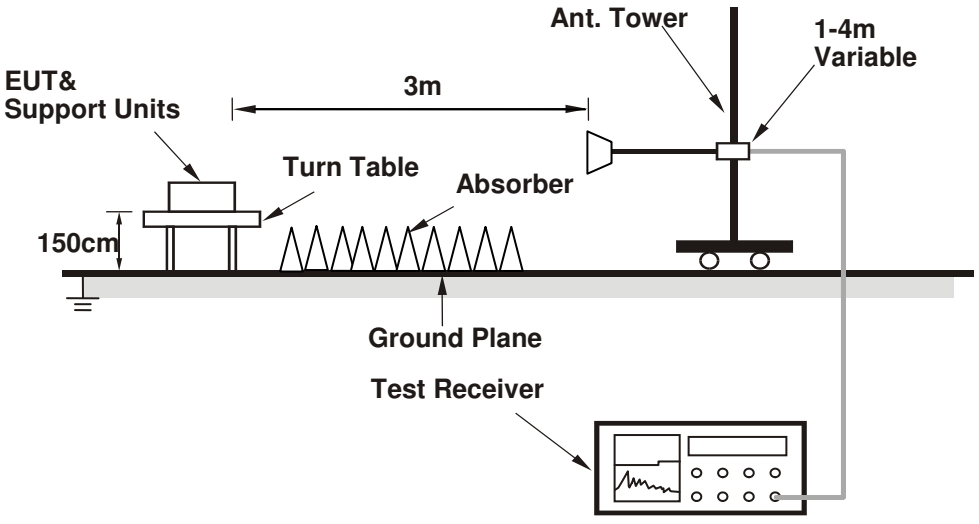
No deviation.

4.1.5 Test Setup

<Frequency Range below 1GHz>



<Frequency Range 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 Notebook Computer which is placed on remote site.
b. Contorlling software (Mtool.exe [2.0.1.0]) has been activated to set the EUT on specific status.

4.1.7 Test Results

Above 1GHz Data:

802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.3 PK	74.0	-13.7	1.33 H	139	65.9	-5.6
2	2390.00	50.8 AV	54.0	-3.2	1.33 H	139	56.4	-5.6
3	*2412.00	114.2 PK			1.33 H	139	119.7	-5.5
4	*2412.00	111.2 AV			1.33 H	139	116.7	-5.5
5	4824.00	48.2 PK	74.0	-25.8	1.82 H	266	47.3	0.9
6	4824.00	44.3 AV	54.0	-9.7	1.82 H	266	43.4	0.9
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	61.1 PK	74.0	-12.9	1.18 V	65	66.7	-5.6
2	2390.00	53.2 AV	54.0	-0.8	1.18 V	65	58.8	-5.6
3	*2412.00	116.5 PK			1.18 V	65	122.0	-5.5
4	*2412.00	113.3 AV			1.18 V	65	118.8	-5.5
5	4824.00	48.1 PK	74.0	-25.9	1.84 V	109	47.2	0.9
6	4824.00	44.6 AV	54.0	-9.4	1.84 V	109	43.7	0.9

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	50.2 PK	74.0	-23.8	2.04 H	220	55.8	-5.6
2	2390.00	38.0 AV	54.0	-16.0	2.04 H	220	43.6	-5.6
3	*2437.00	114.2 PK			2.04 H	220	119.6	-5.4
4	*2437.00	111.8 AV			2.04 H	220	117.2	-5.4
5	2483.50	52.8 PK	74.0	-21.2	2.04 H	220	58.1	-5.3
6	2483.50	39.5 AV	54.0	-14.5	2.04 H	220	44.8	-5.3
7	4874.00	48.6 PK	74.0	-25.4	1.57 H	203	47.6	1.0
8	4874.00	46.0 AV	54.0	-8.0	1.57 H	203	45.0	1.0
9	7311.00	55.5 PK	74.0	-18.5	1.54 H	271	47.9	7.6
10	7311.00	50.4 AV	54.0	-3.6	1.54 H	271	42.8	7.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	49.9 PK	74.0	-24.1	2.40 V	176	55.5	-5.6
2	2390.00	37.6 AV	54.0	-16.4	2.40 V	176	43.2	-5.6
3	*2437.00	115.7 PK			2.40 V	176	121.1	-5.4
4	*2437.00	113.2 AV			2.40 V	176	118.6	-5.4
5	2483.50	51.2 PK	74.0	-22.8	2.40 V	176	56.5	-5.3
6	2483.50	39.2 AV	54.0	-14.8	2.40 V	176	44.5	-5.3
7	4874.00	49.0 PK	74.0	-25.0	1.71 V	301	48.0	1.0
8	4874.00	46.6 AV	54.0	-7.4	1.71 V	301	45.6	1.0
9	7311.00	51.6 PK	74.0	-22.4	2.23 V	205	44.0	7.6
10	7311.00	45.5 AV	54.0	-8.5	2.23 V	205	37.9	7.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	115.6 PK			1.25 H	140	120.9	-5.3
2	*2462.00	112.9 AV			1.25 H	140	118.2	-5.3
3	2483.50	60.6 PK	74.0	-13.4	1.25 H	140	65.9	-5.3
4	2483.50	53.8 AV	54.0	-0.2	1.25 H	140	59.1	-5.3
5	4924.00	49.4 PK	74.0	-24.6	1.88 H	283	48.1	1.3
6	4924.00	46.4 AV	54.0	-7.6	1.88 H	283	45.1	1.3
7	7386.00	53.1 PK	74.0	-20.9	1.60 H	214	45.4	7.7
8	7386.00	46.1 AV	54.0	-7.9	1.60 H	214	38.4	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	114.7 PK			1.44 V	186	120.0	-5.3
2	*2462.00	112.1 AV			1.44 V	186	117.4	-5.3
3	2483.50	58.8 PK	74.0	-15.2	1.44 V	186	64.1	-5.3
4	2483.50	51.1 AV	54.0	-2.9	1.44 V	186	56.4	-5.3
5	4924.00	48.5 PK	74.0	-25.5	1.55 V	317	47.2	1.3
6	4924.00	44.8 AV	54.0	-9.2	1.55 V	317	43.5	1.3
7	7386.00	51.0 PK	74.0	-23.0	1.94 V	238	43.3	7.7
8	7386.00	43.5 AV	54.0	-10.5	1.94 V	238	35.8	7.7

REMARKS:

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

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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	70.3 PK	74.0	-3.7	1.80 H	76	75.9	-5.6
2	**2390.00**	**53.9 AV**	**54.0**	**-0.1**	**1.80 H**	**76**	**59.5**	**-5.6**
3	*2412.00	112.9 PK			1.80 H	76	118.4	-5.5
4	*2412.00	102.7 AV			1.80 H	76	108.2	-5.5
5	4824.00	46.2 PK	74.0	-27.8	1.64 H	180	45.3	0.9
6	4824.00	42.6 AV	54.0	-11.4	1.64 H	180	41.7	0.9
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	61.8 PK	74.0	-12.2	1.43 V	290	67.4	-5.6
2	2390.00	46.8 AV	54.0	-7.2	1.43 V	290	52.4	-5.6
3	*2412.00	113.8 PK			1.43 V	290	119.3	-5.5
4	*2412.00	104.1 AV			1.43 V	290	109.6	-5.5
5	4824.00	42.2 PK	74.0	-31.8	1.65 V	294	41.3	0.9
6	4824.00	40.8 AV	54.0	-13.2	1.65 V	294	39.9	0.9

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	59.4 PK	74.0	-14.6	1.53 H	136	65.0	-5.6
2	2390.00	43.8 AV	54.0	-10.2	1.53 H	136	49.4	-5.6
3	*2437.00	117.9 PK			1.53 H	136	123.3	-5.4
4	*2437.00	107.8 AV			1.53 H	136	113.2	-5.4
5	2483.50	61.7 PK	74.0	-12.3	1.53 H	136	67.0	-5.3
6	2483.50	45.3 AV	54.0	-8.7	1.53 H	136	50.6	-5.3
7	4874.00	48.9 PK	74.0	-25.1	1.60 H	189	47.9	1.0
8	4874.00	46.1 AV	54.0	-7.9	1.60 H	189	45.1	1.0
9	7311.00	52.2 PK	74.0	-21.8	1.56 H	261	44.6	7.6
10	7311.00	48.6 AV	54.0	-5.4	1.56 H	261	41.0	7.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	58.1 PK	74.0	-15.9	1.01 V	261	63.7	-5.6
2	2390.00	42.6 AV	54.0	-11.4	1.01 V	261	48.2	-5.6
3	*2437.00	120.3 PK			1.01 V	261	125.7	-5.4
4	*2437.00	109.9 AV			1.01 V	261	115.3	-5.4
5	2483.50	65.3 PK	74.0	-8.7	1.01 V	261	70.6	-5.3
6	2483.50	47.6 AV	54.0	-6.4	1.01 V	261	52.9	-5.3
7	4874.00	46.0 PK	74.0	-28.0	1.67 V	289	45.0	1.0
8	4874.00	44.3 AV	54.0	-9.7	1.67 V	289	43.3	1.0
9	7311.00	50.6 PK	74.0	-23.4	2.26 V	204	43.0	7.6
10	7311.00	43.6 AV	54.0	-10.4	2.26 V	204	36.0	7.6

REMARKS:

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

CHANNEL	TX Channel 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	112.8 PK			1.59 H	138	118.1	-5.3
2	*2462.00	102.5 AV			1.59 H	138	107.8	-5.3
3	2483.50	68.4 PK	74.0	-5.6	1.59 H	138	73.7	-5.3
4	2483.50	50.2 AV	54.0	-3.8	1.59 H	138	55.5	-5.3
5	4924.00	46.4 PK	74.0	-27.6	1.61 H	194	45.1	1.3
6	4924.00	42.6 AV	54.0	-11.4	1.61 H	194	41.3	1.3
7	7386.00	49.6 PK	74.0	-24.4	1.60 H	251	41.9	7.7
8	7386.00	45.4 AV	54.0	-8.6	1.60 H	251	37.7	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	115.1 PK			2.10 V	334	120.4	-5.3
2	*2462.00	104.8 AV			2.10 V	334	110.1	-5.3
3	2483.50	72.5 PK	74.0	-1.5	2.10 V	334	77.8	-5.3
4	**2483.50**	**53.9 AV**	**54.0**	**-0.1**	**2.10 V**	**334**	**59.2**	**-5.3**
5	4924.00	42.2 PK	74.0	-31.8	1.62 V	303	40.9	1.3
6	4924.00	40.5 AV	54.0	-13.5	1.62 V	303	39.2	1.3
7	7386.00	47.6 PK	74.0	-26.4	2.26 V	193	39.9	7.7
8	7386.00	40.3 AV	54.0	-13.7	2.26 V	193	32.6	7.7

REMARKS:

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

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	66.1 PK	74.0	-7.9	1.45 H	147	71.7	-5.6
2	2390.00	47.6 AV	54.0	-6.4	1.45 H	147	53.2	-5.6
3	*2412.00	111.2 PK			1.45 H	147	116.7	-5.5
4	*2412.00	100.2 AV			1.45 H	147	105.7	-5.5
5	4824.00	46.5 PK	74.0	-27.5	1.67 H	184	45.6	0.9
6	4824.00	42.2 AV	54.0	-11.8	1.67 H	184	41.3	0.9
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	73.8 PK	74.0	-0.2	1.03 V	273	79.4	-5.6
2	2390.00	53.3 AV	54.0	-0.7	1.03 V	273	58.9	-5.6
3	*2412.00	113.1 PK			1.03 V	273	118.6	-5.5
4	*2412.00	102.2 AV			1.03 V	273	107.7	-5.5
5	4824.00	41.6 PK	74.0	-32.4	1.71 V	302	40.7	0.9
6	4824.00	40.3 AV	54.0	-13.7	1.71 V	302	39.4	0.9

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	58.9 PK	74.0	-15.1	1.55 H	120	64.5	-5.6
2	2390.00	43.5 AV	54.0	-10.5	1.55 H	120	49.1	-5.6
3	*2437.00	118.3 PK			1.55 H	120	123.7	-5.4
4	*2437.00	108.1 AV			1.55 H	120	113.5	-5.4
5	2483.50	61.8 PK	74.0	-12.2	1.55 H	120	67.1	-5.3
6	2483.50	45.6 AV	54.0	-8.4	1.55 H	120	50.9	-5.3
7	4874.00	49.3 PK	74.0	-24.7	1.63 H	203	48.3	1.0
8	4874.00	46.2 AV	54.0	-7.8	1.63 H	203	45.2	1.0
9	7311.00	52.4 PK	74.0	-21.6	1.61 H	272	44.8	7.6
10	7311.00	48.6 AV	54.0	-5.4	1.61 H	272	41.0	7.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	66.8 PK	74.0	-7.2	1.03 V	259	72.4	-5.6
2	2390.00	47.6 AV	54.0	-6.4	1.03 V	259	53.2	-5.6
3	*2437.00	120.6 PK			1.03 V	259	126.0	-5.4
4	*2437.00	109.8 AV			1.03 V	259	115.2	-5.4
5	2483.50	63.4 PK	74.0	-10.6	1.03 V	259	68.7	-5.3
6	2483.50	48.3 AV	54.0	-5.7	1.03 V	259	53.6	-5.3
7	4874.00	46.3 PK	74.0	-27.7	1.71 V	282	45.3	1.0
8	4874.00	44.3 AV	54.0	-9.7	1.71 V	282	43.3	1.0
9	7311.00	49.9 PK	74.0	-24.1	2.25 V	201	42.3	7.6
10	7311.00	43.1 AV	54.0	-10.9	2.25 V	201	35.5	7.6

REMARKS:

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

CHANNEL	TX Channel 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	111.8 PK			1.75 H	137	117.1	-5.3
2	*2462.00	101.0 AV			1.75 H	137	106.3	-5.3
3	2483.50	71.2 PK	74.0	-2.8	1.75 H	137	76.5	-5.3
4	2483.50	50.5 AV	54.0	-3.5	1.75 H	137	55.8	-5.3
5	4924.00	45.8 PK	74.0	-28.2	1.60 H	166	44.5	1.3
6	4924.00	41.8 AV	54.0	-12.2	1.60 H	166	40.5	1.3
7	7386.00	50.0 PK	74.0	-24.0	1.58 H	262	42.3	7.7
8	7386.00	45.8 AV	54.0	-8.2	1.58 H	262	38.1	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	112.2 PK			1.13 V	257	117.5	-5.3
2	*2462.00	101.2 AV			1.13 V	257	106.5	-5.3
3	2483.50	73.1 PK	74.0	-0.9	1.13 V	257	78.4	-5.3
4	**2483.50**	**53.9 AV**	**54.0**	**-0.1**	**1.13 V**	**257**	**59.2**	**-5.3**
5	4924.00	41.5 PK	74.0	-32.5	1.64 V	298	40.2	1.3
6	4924.00	40.0 AV	54.0	-14.0	1.64 V	298	38.7	1.3
7	7386.00	47.5 PK	74.0	-26.5	2.29 V	183	39.8	7.7
8	7386.00	40.1 AV	54.0	-13.9	2.29 V	183	32.4	7.7

REMARKS:

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

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	67.5 PK	74.0	-6.5	1.71 H	78	73.1	-5.6
2	2390.00	52.3 AV	54.0	-1.7	1.71 H	78	57.9	-5.6
3	*2422.00	108.5 PK			1.71 H	78	113.9	-5.4
4	*2422.00	96.2 AV			1.71 H	78	101.6	-5.4
5	4844.00	43.2 PK	74.0	-30.8	1.62 H	205	42.3	0.9
6	4844.00	40.2 AV	54.0	-13.8	1.62 H	205	39.3	0.9
7	7266.00	46.5 PK	74.0	-27.5	1.70 H	246	38.8	7.7
8	7266.00	42.6 AV	54.0	-11.4	1.70 H	246	34.9	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.2 PK	74.0	-4.8	1.26 V	261	74.8	-5.6
2	2390.00	53.7 AV	54.0	-0.3	1.26 V	261	59.3	-5.6
3	*2422.00	109.4 PK			1.26 V	261	114.8	-5.4
4	*2422.00	96.9 AV			1.26 V	261	102.3	-5.4
5	4844.00	40.5 PK	74.0	-33.5	1.71 V	301	39.6	0.9
6	4844.00	37.7 AV	54.0	-16.3	1.71 V	301	36.8	0.9
7	7266.00	43.2 PK	74.0	-30.8	2.20 V	173	35.5	7.7
8	7266.00	40.6 AV	54.0	-13.4	2.20 V	173	32.9	7.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.8 PK	74.0	-8.2	1.68 H	81	71.4	-5.6
2	2390.00	48.3 AV	54.0	-5.7	1.68 H	81	53.9	-5.6
3	*2437.00	110.6 PK			1.68 H	81	116.0	-5.4
4	*2437.00	99.5 AV			1.68 H	81	104.9	-5.4
5	2483.50	70.6 PK	74.0	-3.4	1.68 H	81	75.9	-5.3
6	2483.50	51.9 AV	54.0	-2.1	1.68 H	81	57.2	-5.3
7	4874.00	46.5 PK	74.0	-27.5	1.62 H	202	45.5	1.0
8	4874.00	43.3 AV	54.0	-10.7	1.62 H	202	42.3	1.0
9	7311.00	48.3 PK	74.0	-25.7	1.66 H	259	40.7	7.6
10	7311.00	45.5 AV	54.0	-8.5	1.66 H	259	37.9	7.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.5 PK	74.0	-6.5	1.03 V	265	73.1	-5.6
2	2390.00	49.9 AV	54.0	-4.1	1.03 V	265	55.5	-5.6
3	*2437.00	111.6 PK			1.03 V	265	117.0	-5.4
4	*2437.00	100.5 AV			1.03 V	265	105.9	-5.4
5	2483.50	72.5 PK	74.0	-1.5	1.03 V	265	77.8	-5.3
6	2483.50	53.3 AV	54.0	-0.7	1.03 V	265	58.6	-5.3
7	4874.00	42.6 PK	74.0	-31.4	1.69 V	291	41.6	1.0
8	4874.00	39.6 AV	54.0	-14.4	1.69 V	291	38.6	1.0
9	7311.00	43.3 PK	74.0	-30.7	2.20 V	185	35.7	7.6
10	7311.00	40.9 AV	54.0	-13.1	2.20 V	185	33.3	7.6

REMARKS:

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

CHANNEL	TX Channel 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	107.9 PK			1.98 H	145	113.3	-5.4
2	*2452.00	96.3 AV			1.98 H	145	101.7	-5.4
3	2483.50	69.6 PK	74.0	-4.4	1.98 H	145	74.9	-5.3
4	2483.50	53.7 AV	54.0	-0.3	1.98 H	145	59.0	-5.3
5	4904.00	42.9 PK	74.0	-31.1	1.65 H	220	41.7	1.2
6	4904.00	40.0 AV	54.0	-14.0	1.65 H	220	38.8	1.2
7	7356.00	47.0 PK	74.0	-27.0	1.65 H	248	39.3	7.7
8	7356.00	43.0 AV	54.0	-11.0	1.65 H	248	35.3	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	107.9 PK			1.53 V	297	113.3	-5.4
2	*2452.00	96.1 AV			1.53 V	297	101.5	-5.4
3	2483.50	69.2 PK	74.0	-4.8	1.53 V	297	74.5	-5.3
4	2483.50	53.1 AV	54.0	-0.9	1.53 V	297	58.4	-5.3
5	4904.00	40.7 PK	74.0	-33.3	1.67 V	317	39.5	1.2
6	4904.00	38.1 AV	54.0	-15.9	1.67 V	317	36.9	1.2
7	7356.00	43.2 PK	74.0	-30.8	2.17 V	184	35.5	7.7
8	7356.00	40.5 AV	54.0	-13.5	2.17 V	184	32.8	7.7

REMARKS:

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

Below 1GHz Data:

802.11g

CHANNEL	TX Channel 6	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 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	49.50	36.8 QP	40.0	-3.2	1.00 H	120	45.6	-8.8
2	87.16	34.9 QP	40.0	-5.1	1.10 H	100	49.5	-14.6
3	107.44	39.4 QP	43.5	-4.1	1.40 H	100	51.1	-11.7
4	375.46	38.4 QP	46.0	-7.6	2.50 H	120	44.5	-6.1
5	499.90	39.0 QP	46.0	-7.0	2.00 H	123	41.7	-2.7
6	874.90	40.2 QP	46.0	-5.8	1.50 H	104	36.8	3.4
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	59.12	36.5 QP	40.0	-3.5	1.00 V	102	45.4	-8.9
2	107.32	36.4 QP	43.5	-7.1	1.10 V	212	48.1	-11.7
3	130.40	40.4 QP	43.5	-3.1	1.10 V	211	50.3	-9.9
4	250.15	39.2 QP	46.0	-6.8	1.10 V	106	49.2	-10.0
5	460.70	37.1 QP	46.0	-8.9	1.00 V	260	40.6	-3.5
6	625.00	39.4 QP	46.0	-6.6	1.50 V	103	39.4	0.0

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. 23, 2015	Oct. 22, 2016
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Oct. 28, 2015	Oct. 27, 2016
RF Cable	5D-FB	COACAB-002	Mar. 04, 2016	Mar. 03, 2017
10 dB PAD Mini-Circuits	HAT-10+	CONATT-004	June 20, 2016	June 19, 2017
Software BVADT	BVADT_Cond_ V7.3.7.3	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: July 12, 2016

4.2.3 Test Procedures

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

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

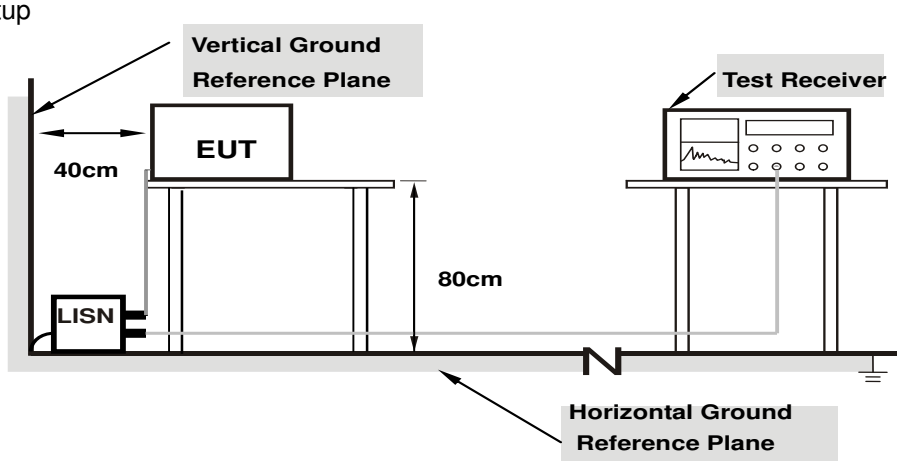
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

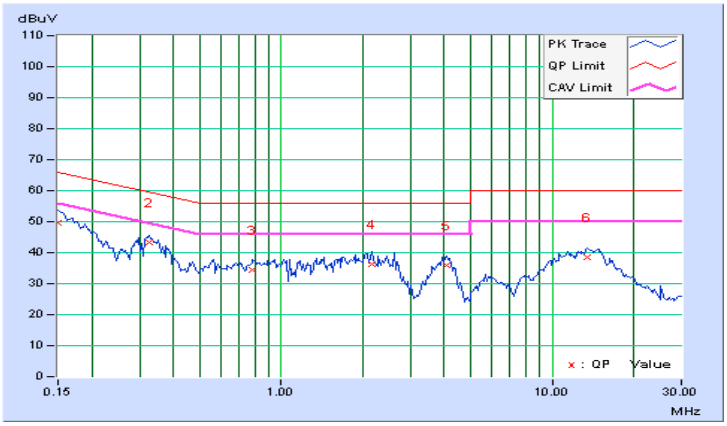
4.2.7 Test Results (Mode 1)

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

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.21	39.55	28.92	49.76	39.13	66.00	56.00	-16.24	-16.87
2	0.32578	10.22	32.94	26.39	43.16	36.61	59.56	49.56	-16.40	-12.95
3	0.78672	10.25	24.11	17.81	34.36	28.06	56.00	46.00	-21.64	-17.94
4	2.17578	10.31	25.89	20.36	36.20	30.67	56.00	46.00	-19.80	-15.33
5	4.10156	10.30	25.58	20.80	35.88	31.10	56.00	46.00	-20.12	-14.90
6	13.46875	10.93	27.68	23.37	38.61	34.30	60.00	50.00	-21.39	-15.70

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

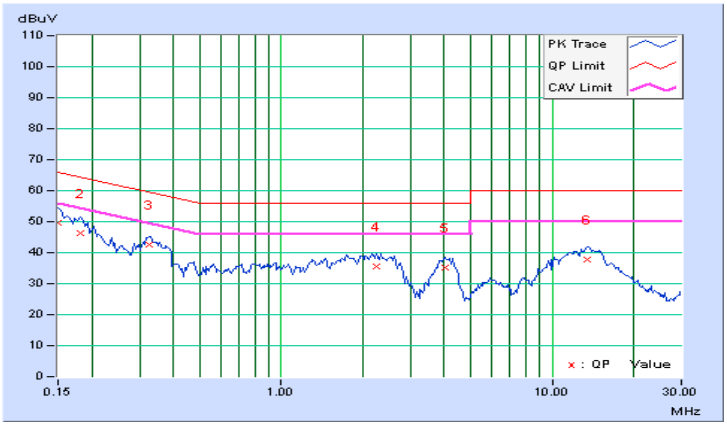


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	10.19	39.38	28.18	49.57	38.37	66.00	56.00	-16.43	-17.63
2	0.18125	10.20	36.01	26.58	46.21	36.78	64.43	54.43	-18.22	-17.65
3	0.32578	10.20	32.51	26.46	42.71	36.66	59.56	49.56	-16.84	-12.89
4	2.24609	10.29	25.24	20.38	35.53	30.67	56.00	46.00	-20.47	-15.33
5	4.01563	10.25	25.07	20.68	35.32	30.93	56.00	46.00	-20.68	-15.07
6	13.44922	10.77	27.12	22.97	37.89	33.74	60.00	50.00	-22.11	-16.26

Remarks:

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



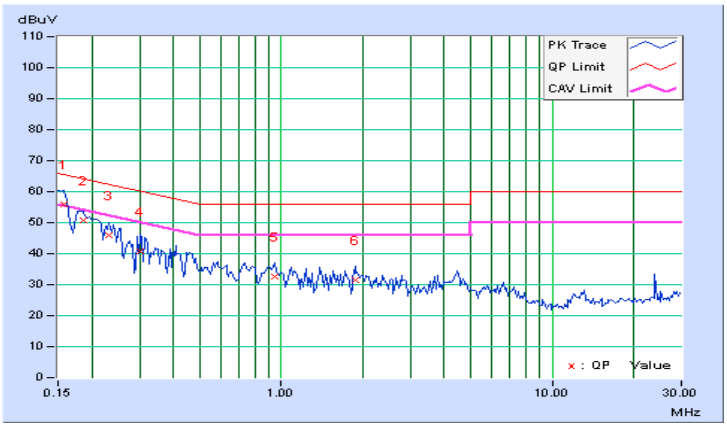
4.2.8 Test Results (Mode 2)

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

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	10.21	45.89	28.55	56.10	38.76	65.58	55.58	-9.48	-16.82
2	0.18516	10.22	40.40	26.51	50.62	36.73	64.25	54.25	-13.63	-17.52
3	0.23203	10.22	35.62	22.98	45.84	33.20	62.38	52.38	-16.54	-19.18
4	0.30234	10.22	30.35	12.22	40.57	22.44	60.18	50.18	-19.61	-27.74
5	0.94297	10.26	22.21	14.89	32.47	25.15	56.00	46.00	-23.53	-20.85
6	1.88281	10.30	21.30	14.35	31.60	24.65	56.00	46.00	-24.40	-21.35

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

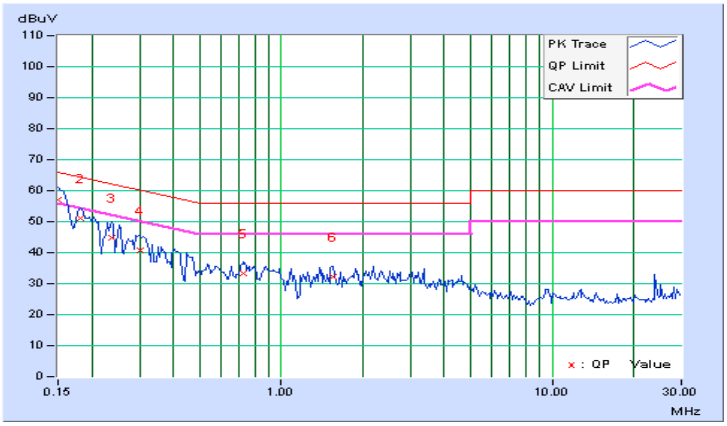


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

Phase Of Power : Neutral (N)										
No	**Frequency (MHz)**	**Correction Factor (dB)**	**Reading Value (dBuV)**		**Emission Level (dBuV)**		**Limit (dBuV)**		**Margin (dB)**	
			Q.P.	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**	**Q.P.**	**AV.**
1	**0.15000**	**10.19**	**46.96**	**28.98**	**57.15**	**39.17**	**66.00**	**56.00**	**-8.85**	**-16.83**
2	0.18125	10.20	40.76	27.15	50.96	37.35	64.43	54.43	-13.47	-17.08
3	0.23594	10.21	34.71	21.14	44.92	31.35	62.24	52.24	-17.32	-20.89
4	0.30234	10.20	30.53	12.46	40.73	22.66	60.18	50.18	-19.44	-27.51
5	0.72813	10.22	23.16	14.75	33.38	24.97	56.00	46.00	-22.62	-21.03
6	1.56250	10.27	21.88	14.61	32.15	24.88	56.00	46.00	-23.85	-21.12

Remarks:

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

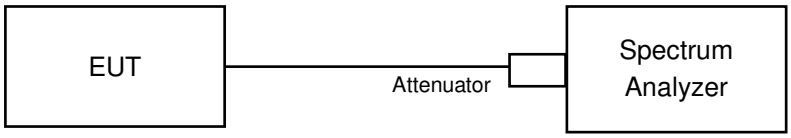


4.3 6dB Bandwidth Measurement

4.3.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.3.2 Test Setup



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

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

4.3.5 Deviation fromTest Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
1	2412	9.07	9.07	9.07	0.5	PASS
6	2437	9.06	8.61	9.09	0.5	PASS
11	2462	9.03	9.08	9.08	0.5	PASS

802.11g

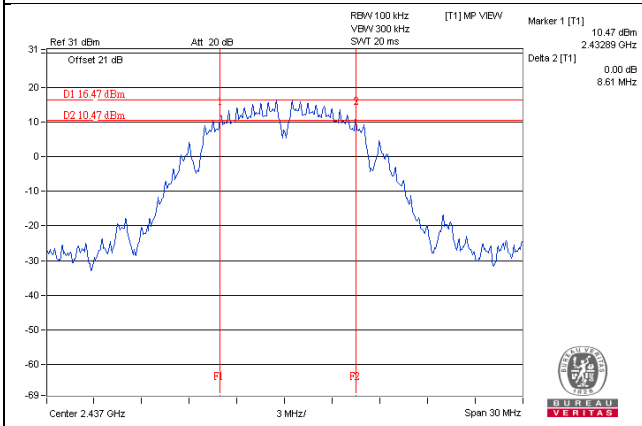
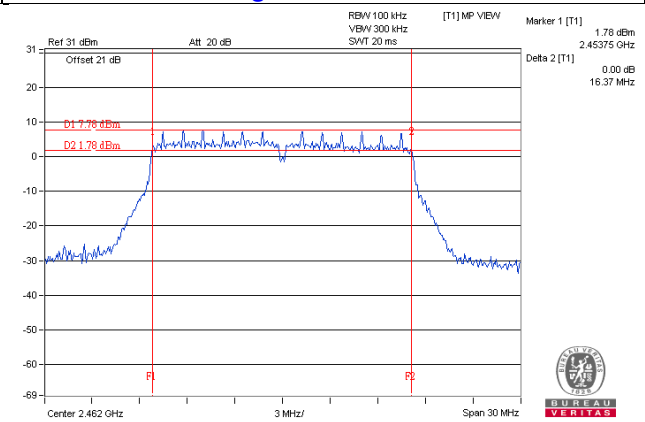
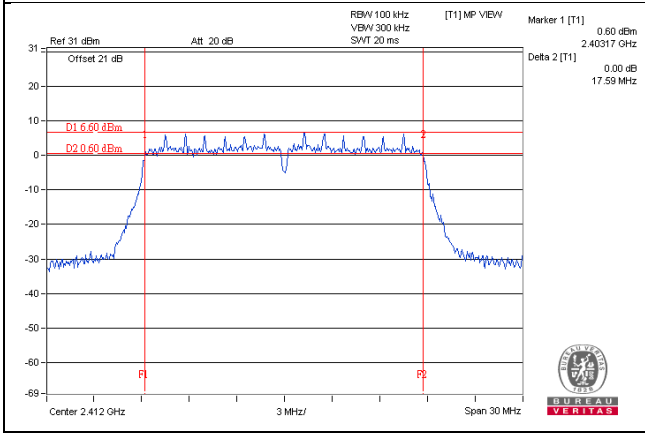
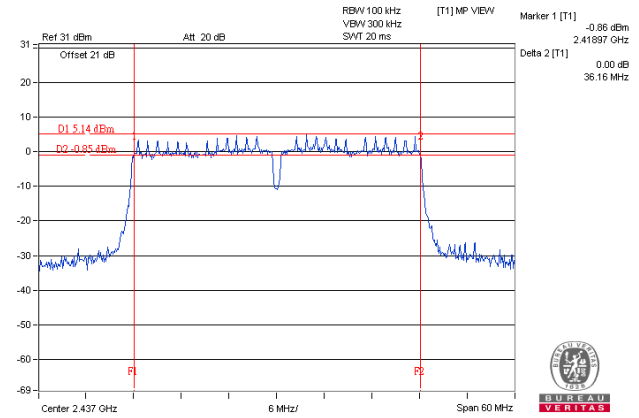
Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
1	2412	16.45	16.42	16.41	0.5	PASS
6	2437	16.42	16.39	16.41	0.5	PASS
11	2462	16.42	16.37	16.39	0.5	PASS

VHT20

Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
1	2412	17.63	17.64	17.59	0.5	PASS
6	2437	17.64	17.62	17.60	0.5	PASS
11	2462	17.63	17.64	17.62	0.5	PASS

VHT40

Channel	Frequency (MHz)	6dB Bandwidth (MHz)			Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2		
3	2422	36.28	36.45	36.43	0.5	PASS
6	2437	36.40	36.44	36.16	0.5	PASS
9	2452	35.89	36.03	36.24	0.5	PASS

Spectrum Plot of Worst Value	
802.11b / Chain 1 : CH6	**802.11g / Chain 1 : CH11**
	
VHT20 / Chain 2 : CH1	**VHT40 / Chain 2 : CH6**
	

4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

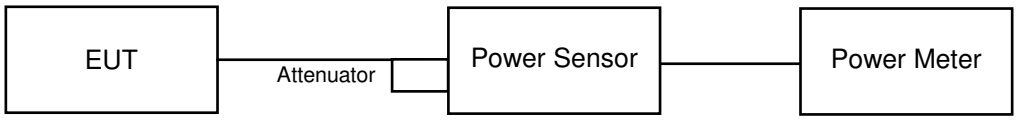
For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

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

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

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

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedures

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

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

Same as Item 4.3.6.

4.4.7 Test Results

CDD Mode

802.11b

Chan.	Frequency (MHz)	Avg. Power (dBm)			Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2				
1	2412	25.26	24.22	24.70	895.1	29.52	30	Pass
6	2437	24.31	25.31	25.24	943.594	29.75	30	Pass
11	2462	22.67	23.05	22.17	551.58	27.42	30	Pass

802.11g

Chan.	Frequency (MHz)	Avg. Power (dBm)			Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2				
1	2412	18.64	18.75	18.04	211.783	23.26	30	Pass
6	2437	25.08	25.18	25.28	989.004	29.95	30	Pass
11	2462	19.14	19.10	18.60	235.762	23.72	30	Pass

VHT20

Chan.	Frequency (MHz)	Avg. Power (dBm)			Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2				
1	2412	17.56	17.66	17.21	167.963	22.25	30	Pass
6	2437	25.13	25.13	25.25	986.639	29.94	30	Pass
11	2462	17.20	17.45	16.74	155.277	21.91	30	Pass

VHT40

Chan.	Frequency (MHz)	Avg. Power (dBm)			Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2				
3	2422	15.93	16.11	15.33	114.125	20.57	30	Pass
6	2437	18.72	18.93	18.24	219.317	23.41	30	Pass
9	2452	15.21	15.32	14.42	94.899	19.77	30	Pass

Beamforming Mode

Nss = 1:

VHT20

Chan.	Frequency (MHz)	Avg. Power (dBm)			Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2				
1	2412	17.56	17.66	17.21	167.963	22.25	29.23	Pass
6	2437	24.21	24.14	24.36	795.949	29.01	29.23	Pass
11	2462	17.20	17.45	16.74	155.277	21.91	29.23	Pass

Note: 1. Directional gain = 2dBi + 10log(3) = 6.77dBi > 6dBi , so the power limit shall be reduced to 30-(6.77-6) = 29.23dBm.

VHT40

Chan.	Frequency (MHz)	Avg. Power (dBm)			Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2				
3	2422	15.93	16.11	15.33	114.125	20.57	29.23	Pass
6	2437	18.72	18.93	18.24	219.317	23.41	29.23	Pass
9	2452	15.21	15.32	14.42	94.899	19.77	29.23	Pass

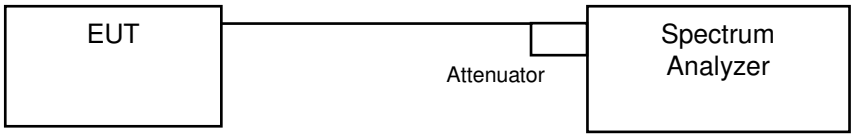
Note: 1. Directional gain = 2dBi + 10log(3) = 6.77dBi > 6dBi , so the power limit shall be reduced to 30-(6.77-6) = 29.23dBm.

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm.

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

a) 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.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6

4.5.7 Test Results

802.11b

TX chain	Channel	Freq. (MHz)	PSD (dBm/10kHz)	10 log (N=3) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-3.00	4.77	1.77	7.23	Pass
	6	2437	-3.00	4.77	1.77	7.23	Pass
	11	2462	-5.98	4.77	-1.21	7.23	Pass
1	1	2412	-2.64	4.77	2.13	7.23	Pass
	6	2437	-2.15	4.77	2.62	7.23	Pass
	11	2462	-3.02	4.77	1.75	7.23	Pass
2	1	2412	-4.30	4.77	0.47	7.23	Pass
	6	2437	-3.09	4.77	1.68	7.23	Pass
	11	2462	-5.59	4.77	-0.82	7.23	Pass

NOTE: Directional gain = 2dBi + 10log(3) = 6.77dBi > 6dBi , so the power density limit shall be reduced to 8-(6.77-6) = 7.23dBm.

802.11g

TX chain	Channel	Freq. (MHz)	PSD (dBm/10kHz)	10 log (N=3) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-10.95	4.77	-6.18	7.23	Pass
	6	2437	-4.70	4.77	0.07	7.23	Pass
	11	2462	-10.75	4.77	-5.98	7.23	Pass
1	1	2412	-7.32	4.77	-2.55	7.23	Pass
	6	2437	-3.39	4.77	1.38	7.23	Pass
	11	2462	-7.17	4.77	-2.40	7.23	Pass
2	1	2412	-10.63	4.77	-5.86	7.23	Pass
	6	2437	-3.72	4.77	1.05	7.23	Pass
	11	2462	-9.93	4.77	-5.16	7.23	Pass

NOTE: Directional gain = 2dBi + 10log(3) = 6.77dBi > 6dBi , so the power density limit shall be reduced to 8-(6.77-6) = 7.23dBm.

VHT20

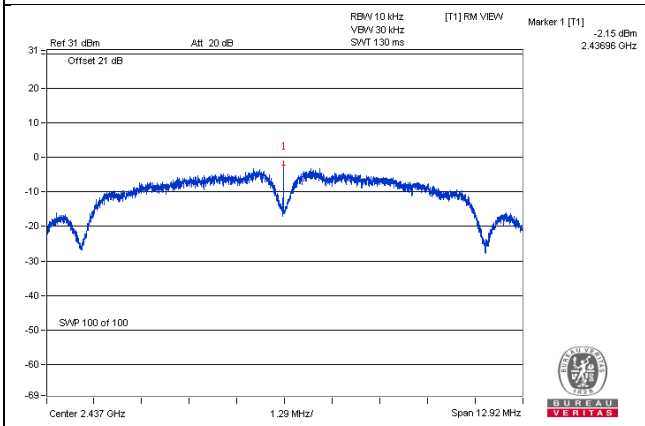
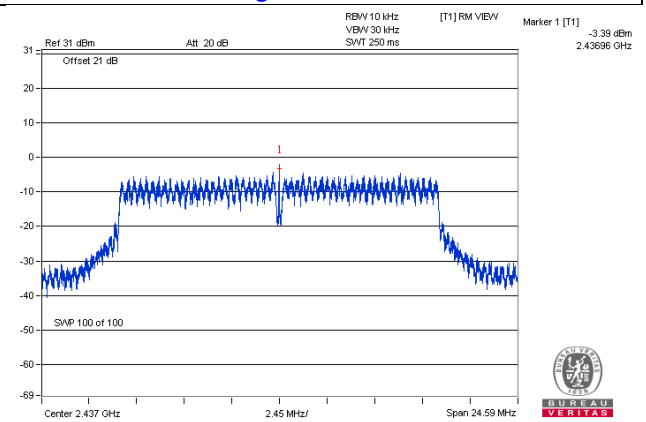
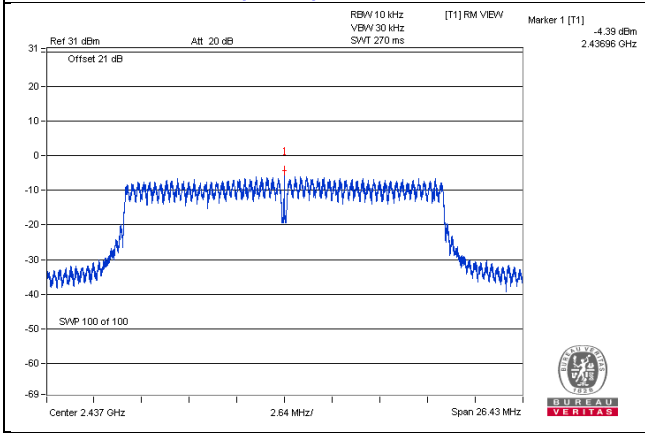
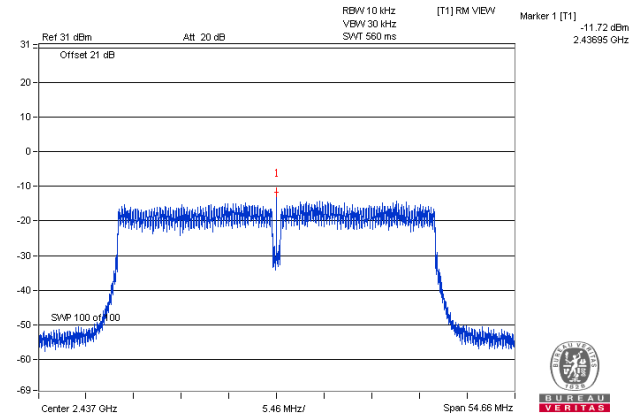
TX chain	Channel	Freq. (MHz)	PSD (dBm/10kHz)	10 log (N=3) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-14.02	4.77	-9.25	7.23	Pass
	6	2437	-6.51	4.77	-1.74	7.23	Pass
	11	2462	-13.95	4.77	-9.18	7.23	Pass
1	1	2412	-8.81	4.77	-4.04	7.23	Pass
	6	2437	-4.39	4.77	0.38	7.23	Pass
	11	2462	-9.21	4.77	-4.44	7.23	Pass
2	1	2412	-13.35	4.77	-8.58	7.23	Pass
	6	2437	-5.96	4.77	-1.19	7.23	Pass
	11	2462	-13.49	4.77	-8.72	7.23	Pass

NOTE: Directional gain = 2dBi + 10log(3) = 6.77dBi > 6dBi , so the power density limit shall be reduced to 8-(6.77-6) = 7.23dBm.

VHT40

TX chain	Channel	Freq. (MHz)	PSD (dBm/10kHz)	10 log (N=3) dB	Total PSD (dBm/10kHz)	Limit (dBm/3kHz)	Pass /Fail
0	3	2422	-17.03	4.77	-12.26	7.23	Pass
	6	2437	-14.80	4.77	-10.03	7.23	Pass
	9	2452	-17.74	4.77	-12.97	7.23	Pass
1	3	2422	-13.55	4.77	-8.78	7.23	Pass
	6	2437	-11.72	4.77	-6.95	7.23	Pass
	9	2452	-13.43	4.77	-8.66	7.23	Pass
2	3	2422	-17.16	4.77	-12.39	7.23	Pass
	6	2437	-13.21	4.77	-8.44	7.23	Pass
	9	2452	-17.63	4.77	-12.86	7.23	Pass

NOTE: Directional gain = 2dBi + 10log(3) = 6.77dBi > 6dBi , so the power density limit shall be reduced to 8-(6.77-6) = 7.23dBm.

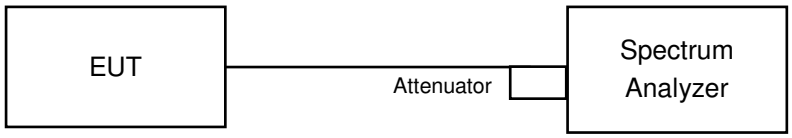
Spectrum Plot of Worst Value	
802.11b / Chain 1 : CH6	**802.11g / Chain 1 : CH6**
	
802.11n (HT20) / Chain 1 : CH6	**802.11n (HT40) / Chain 1 : CH6**
	

4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted Out of Band Emission Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

MEASUREMENT PROCEDURE OOBE

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

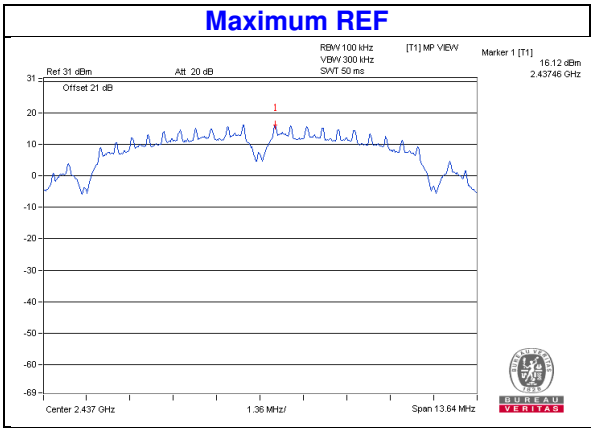
Same as Item 4.3.6

4.6.7 Test Results

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

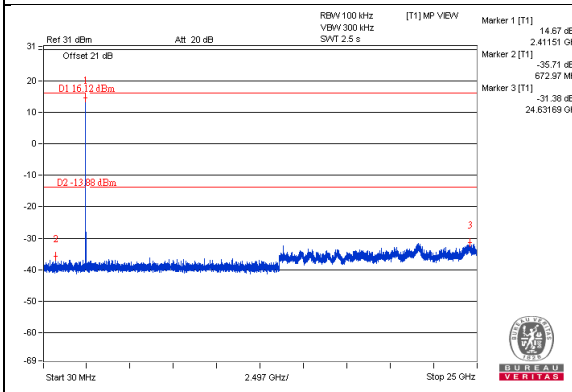
802.11b

Maximum REF

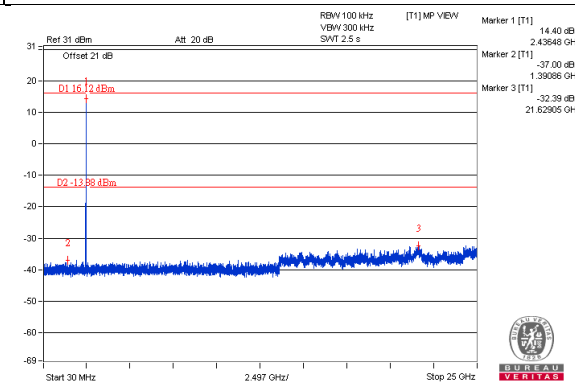


CHAIN 0

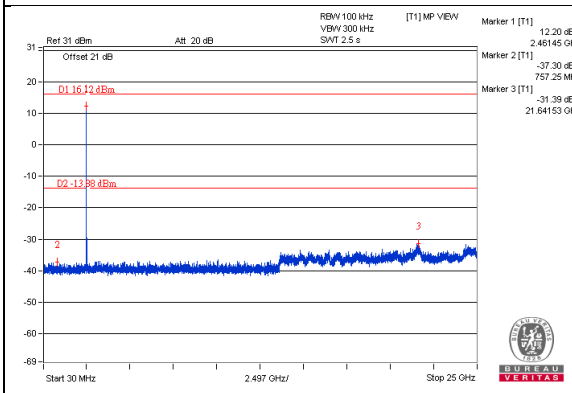
CH 1



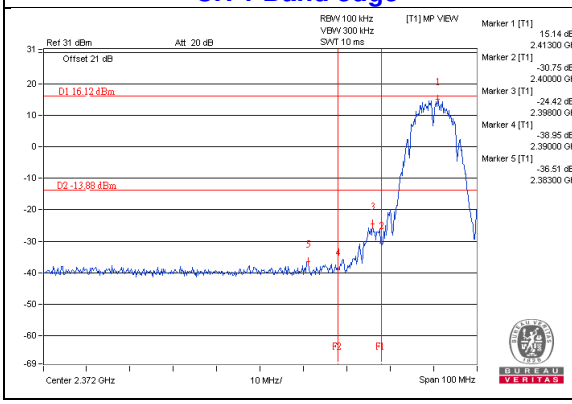
CH 6



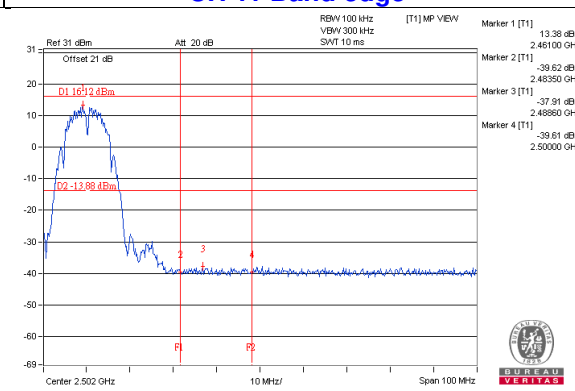
CH 11



CH 1 Band edge

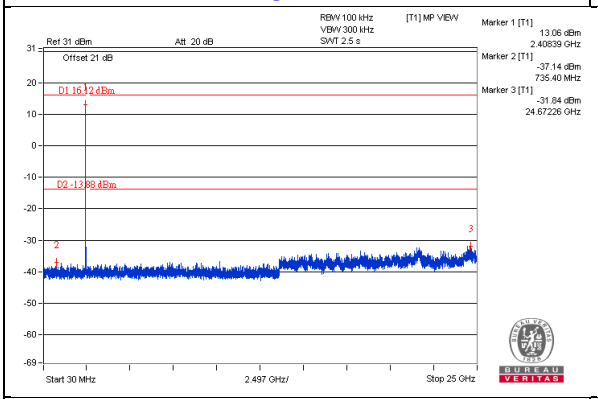


CH 11 Band edge

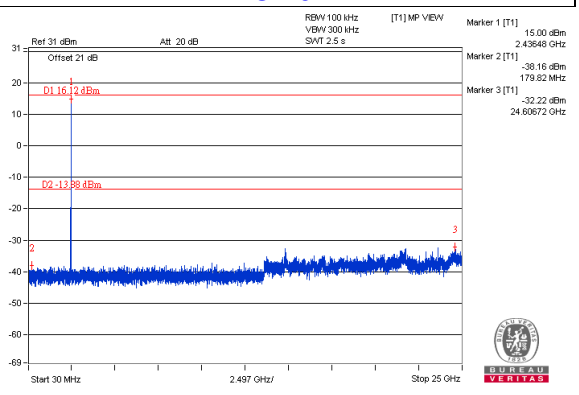


CHAIN 1

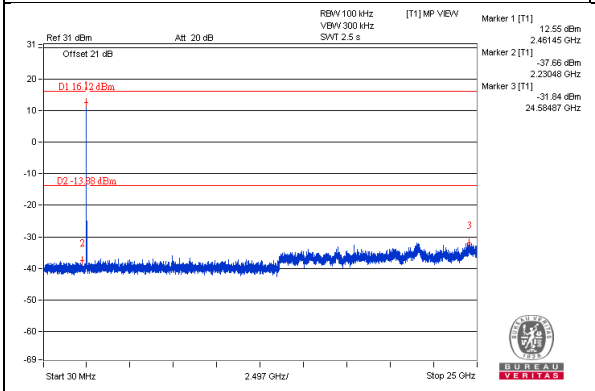
CH 1



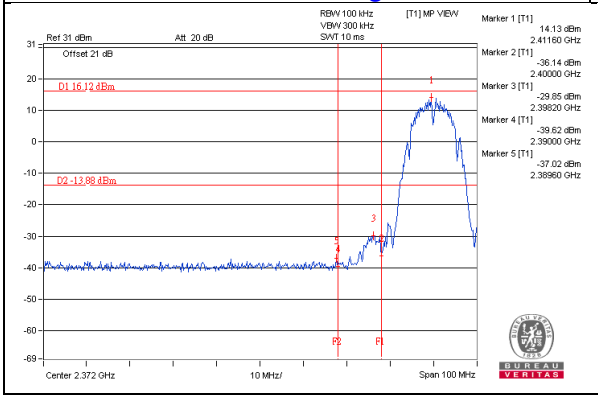
CH 6



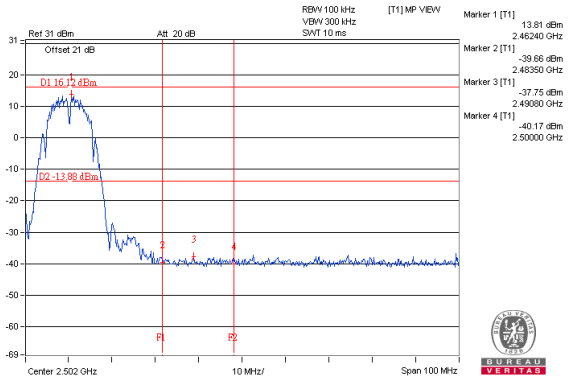
CH 11



CH 1 Band edge

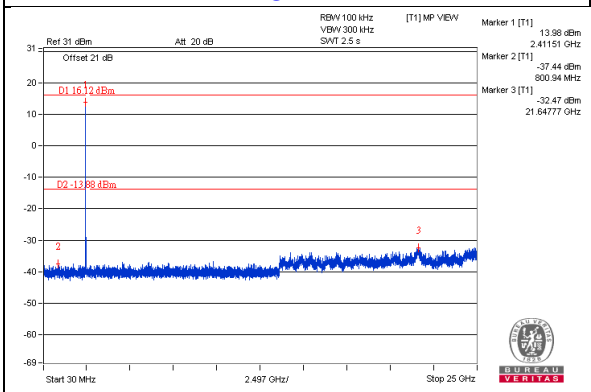


CH 11 Band edge

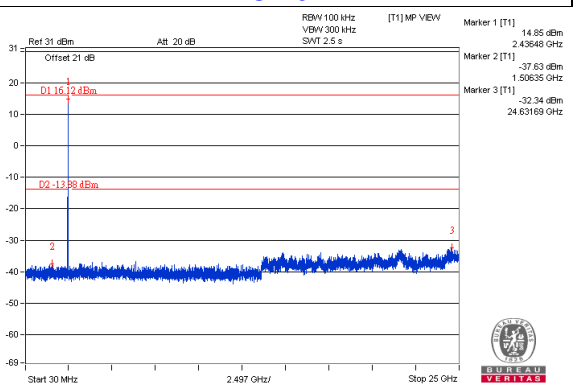


CHAIN 2

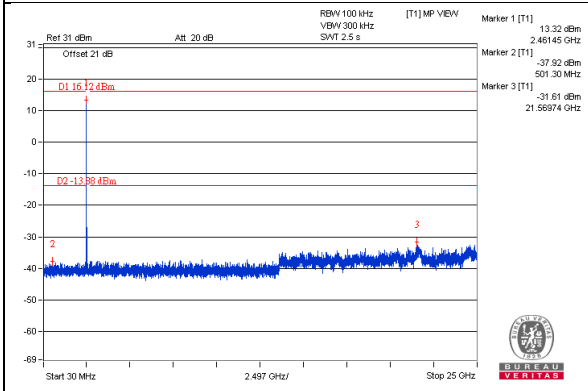
CH 1



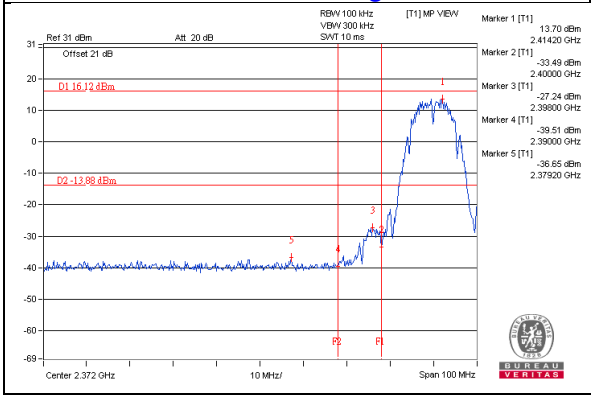
CH 6



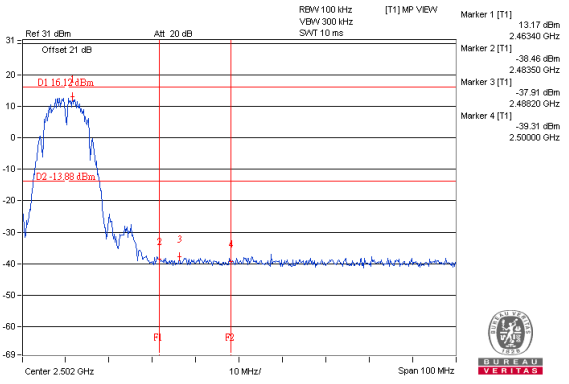
CH 11



CH 1 Band edge

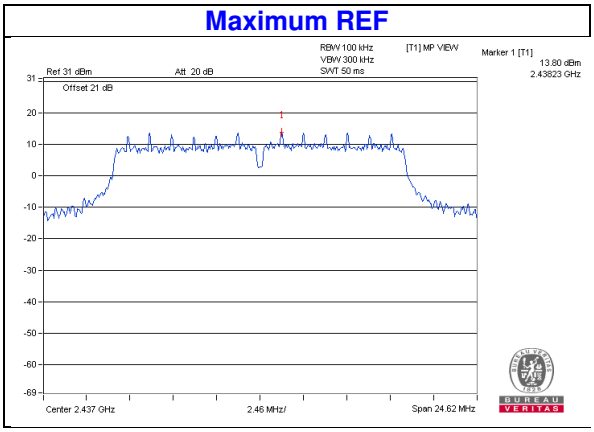


CH 11 Band edge



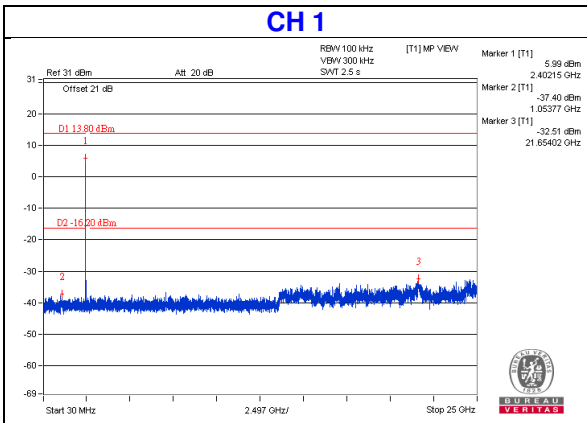
802.11g

Maximum REF

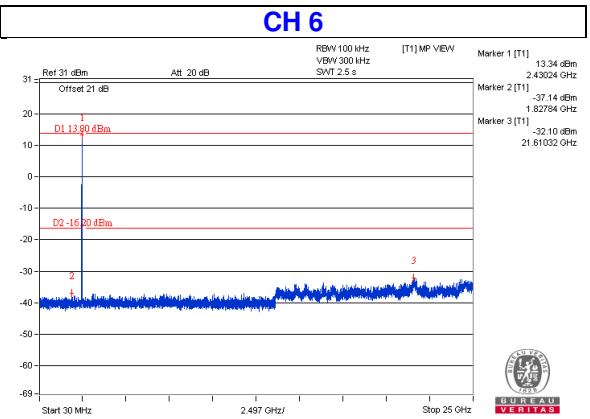


CHAIN 0

CH 1



CH 6



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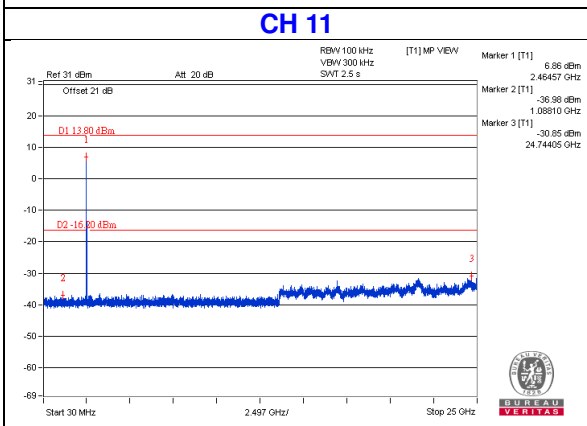
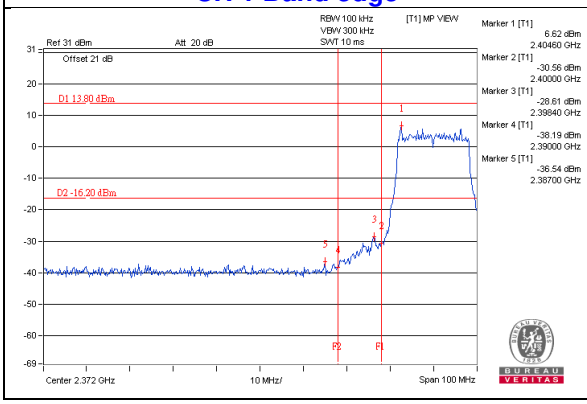
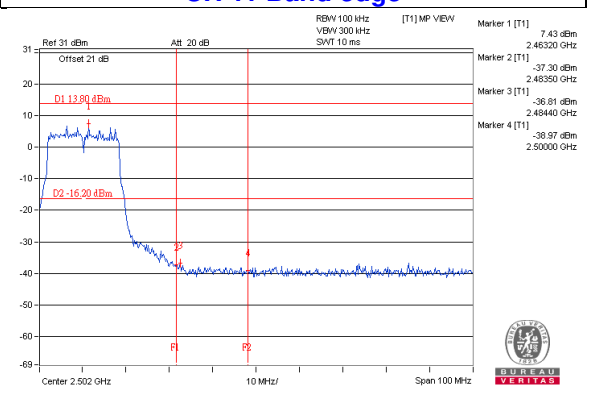


CH 1 Band edge

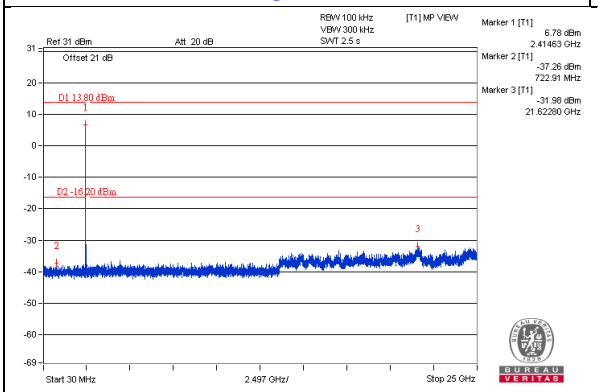


CH 11 Band edge

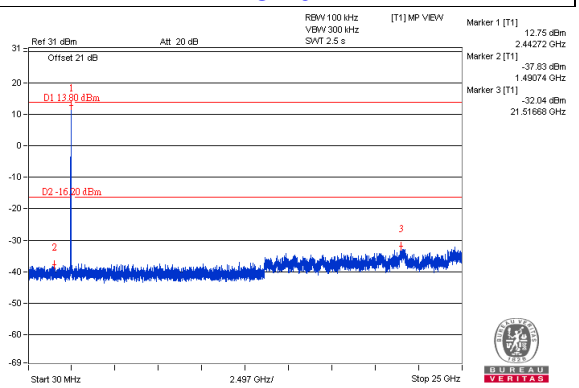


CHAIN 1

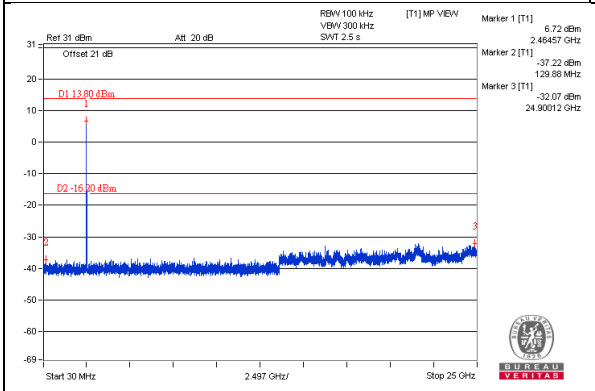
CH 1



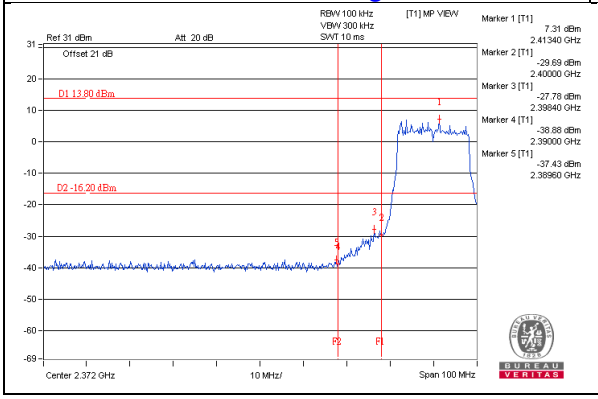
CH 6



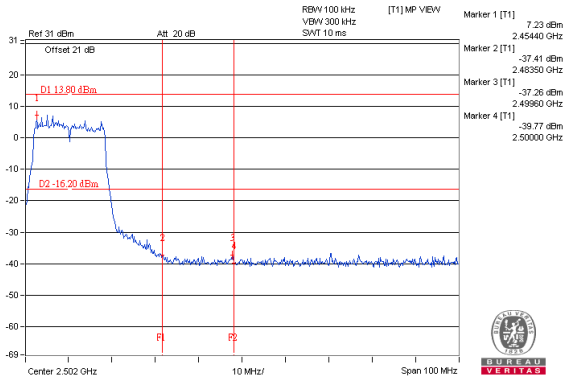
CH 11



CH 1 Band edge

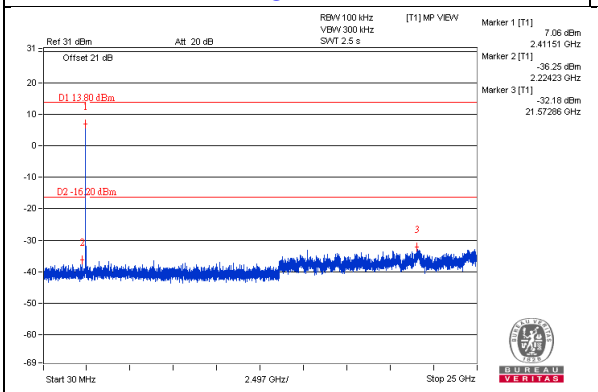


CH 11 Band edge



CHAIN 2

CH 1



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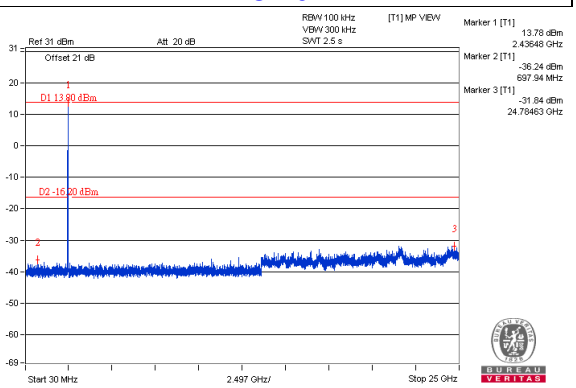
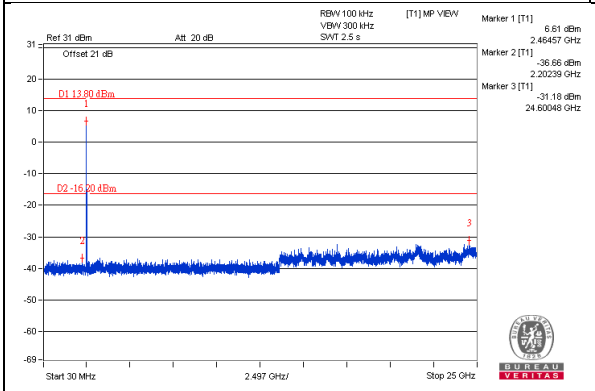
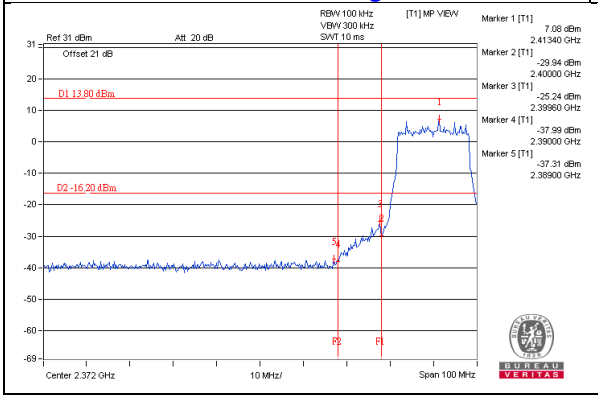


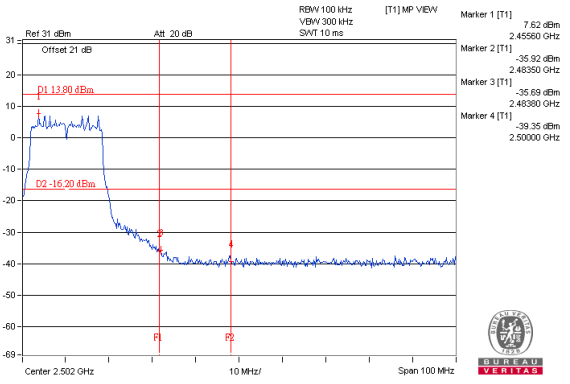
CH 11



CH 1 Band edge

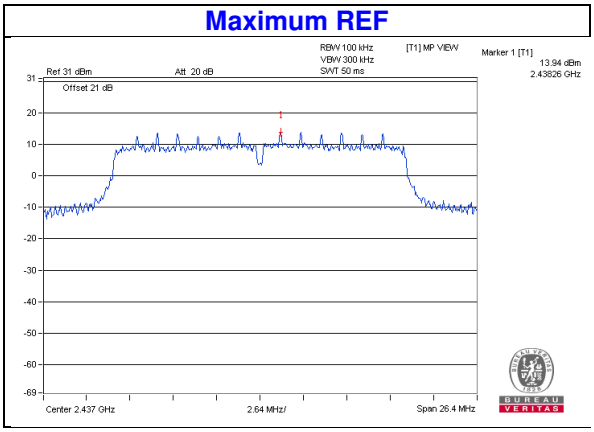


CH 11 Band edge



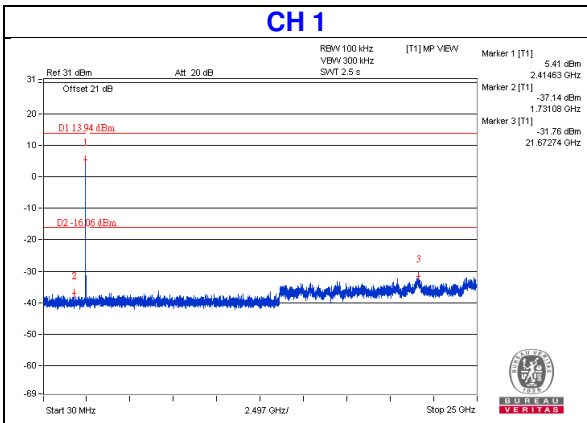
VHT20

Maximum REF

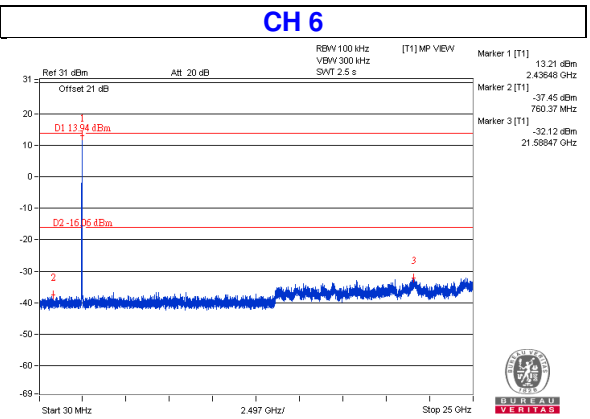


CHAIN 0

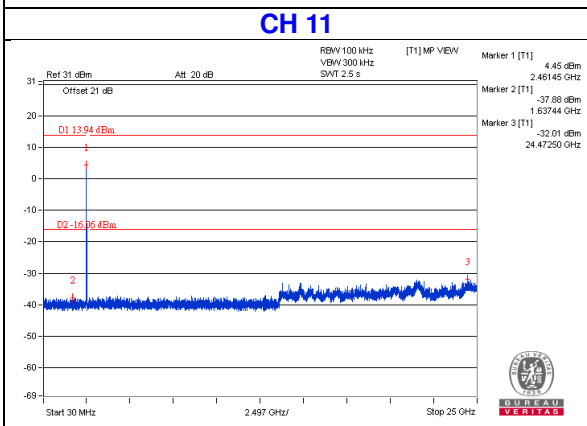
CH 1



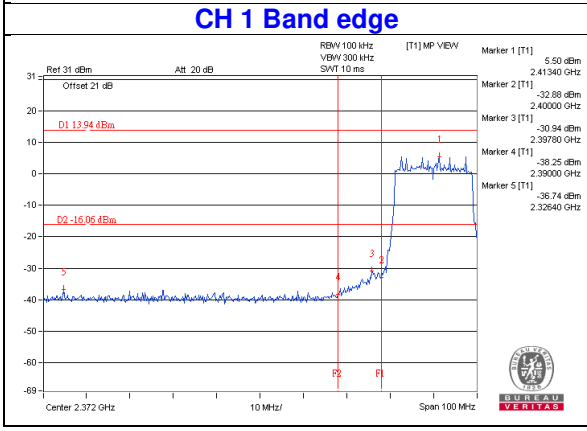
CH 6



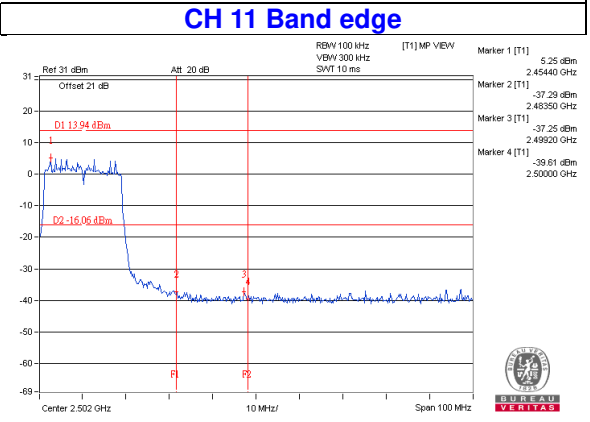
CH 11



CH 1 Band edge

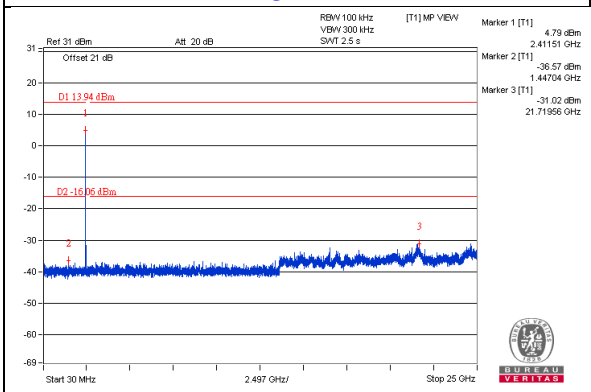


CH 11 Band edge

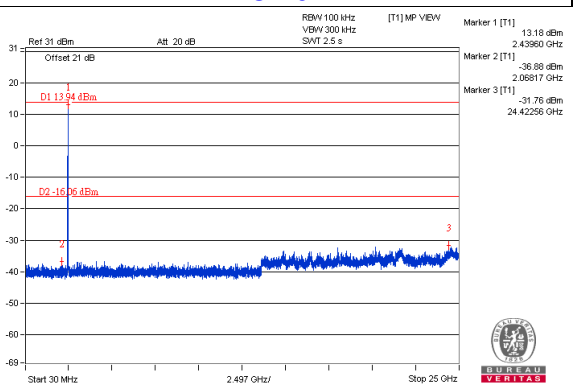


CHAIN 1

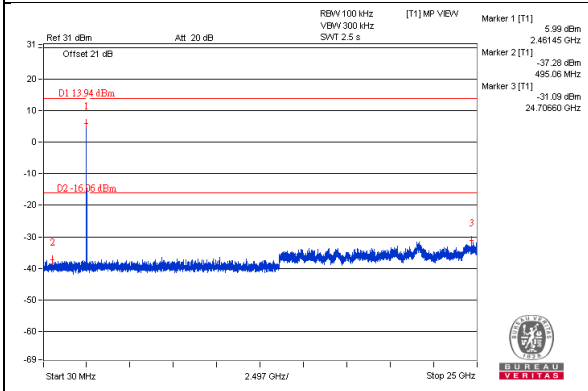
CH 1



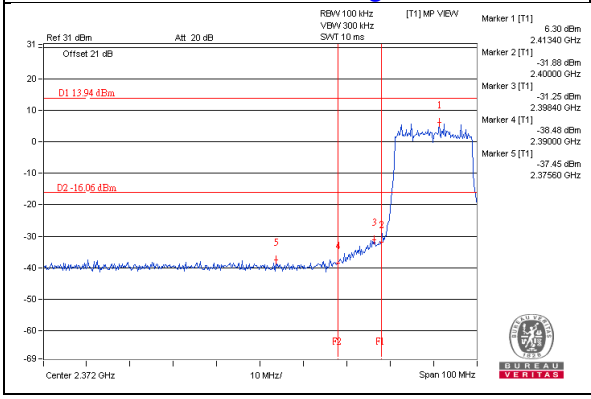
CH 6



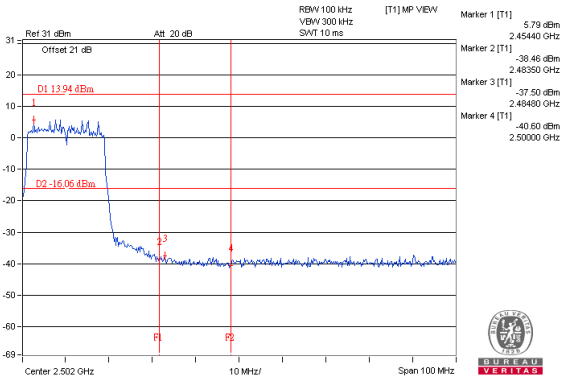
CH 11



CH 1 Band edge

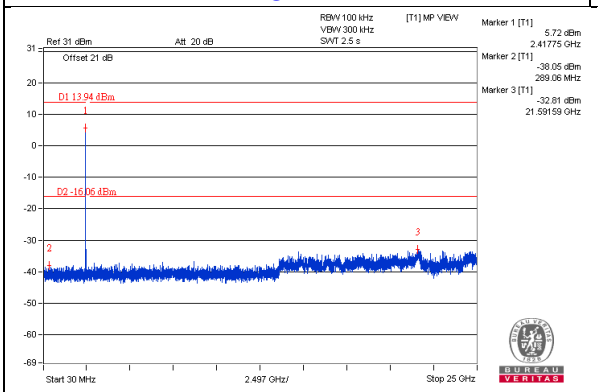


CH 11 Band edge

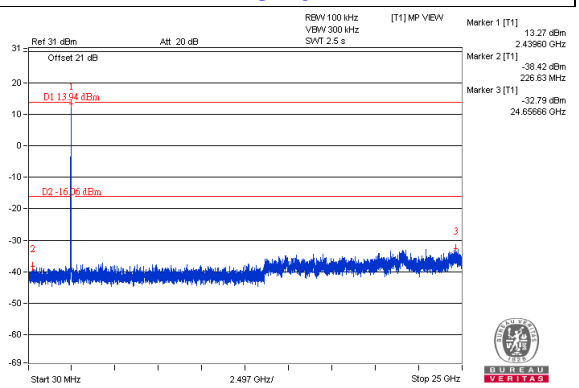


CHAIN 2

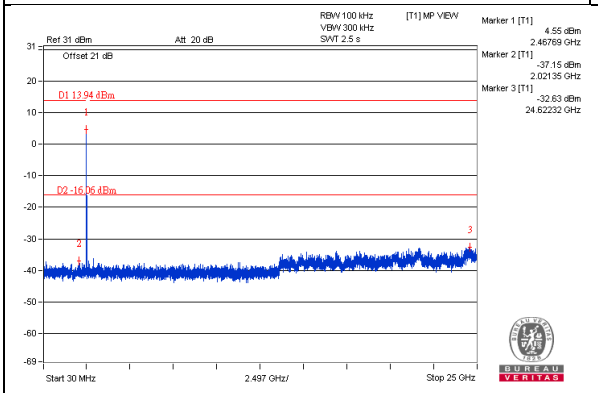
CH 1



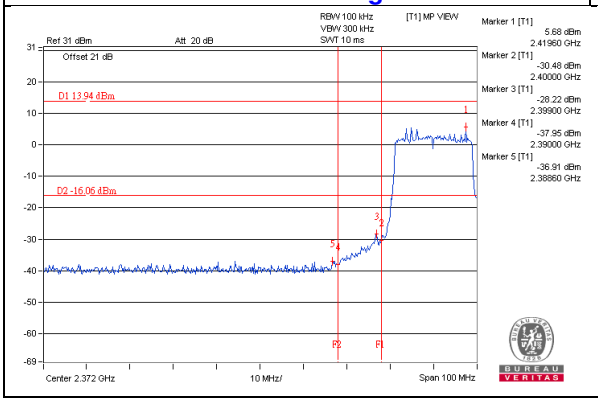
CH 6



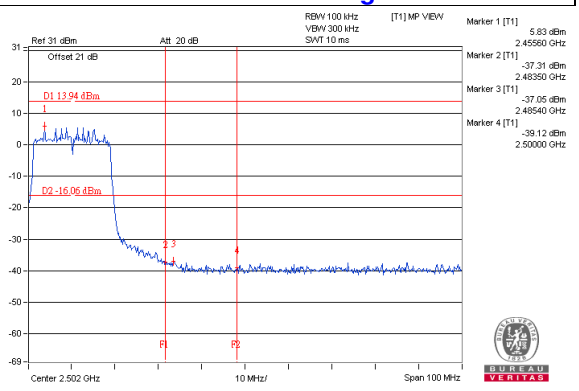
CH 11



CH 1 Band edge

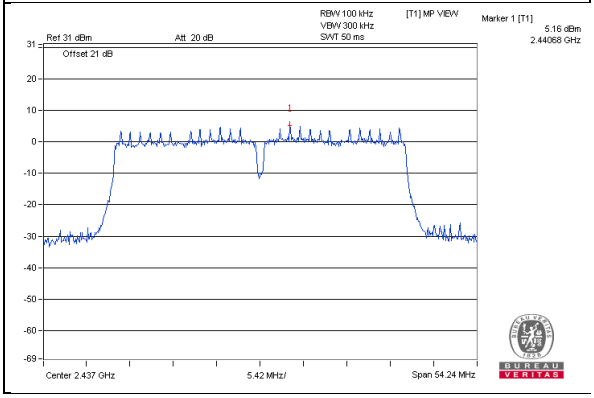


CH 11 Band edge



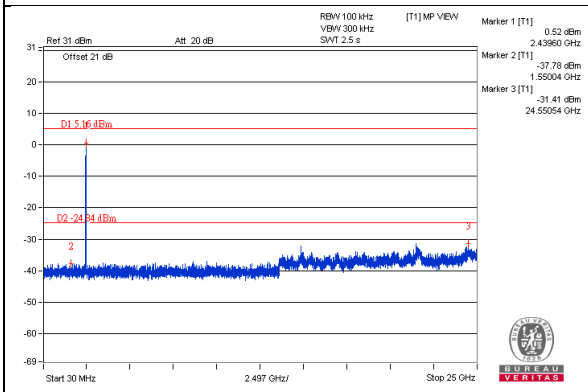
VHT40

Maximum REF

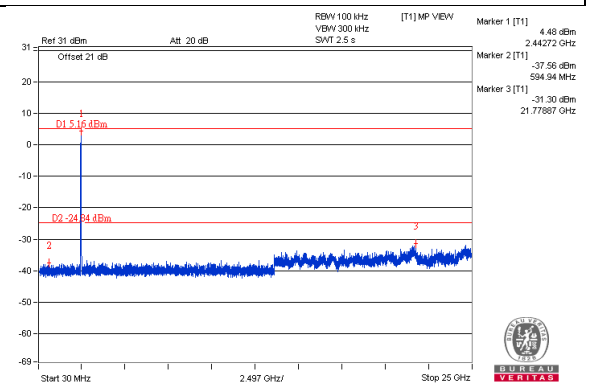


CHAIN 0

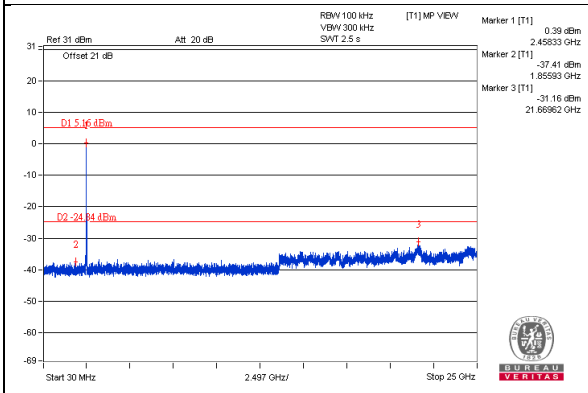
CH 3



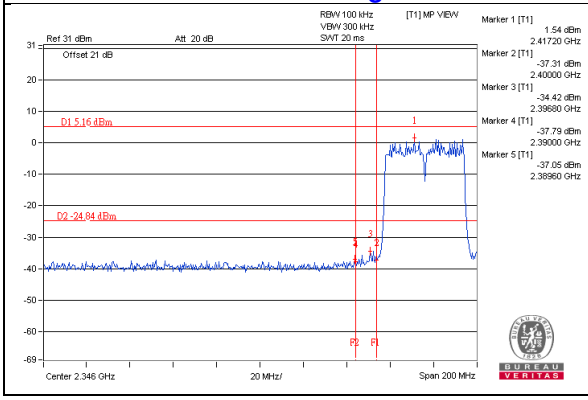
CH 6



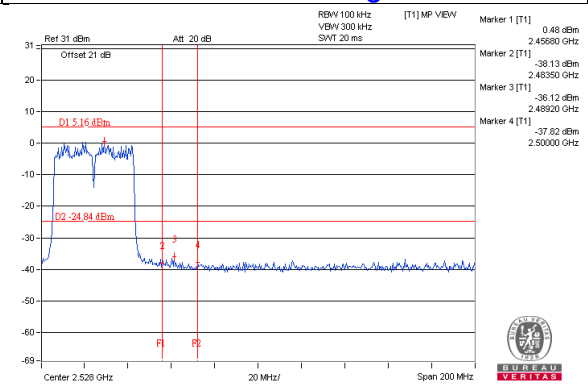
CH 9



CH 3 Band edge

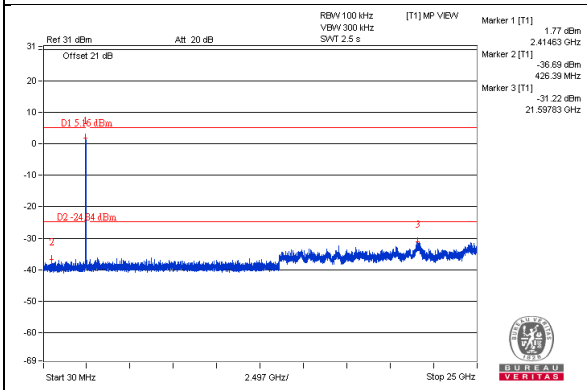


CH 9 Band edge

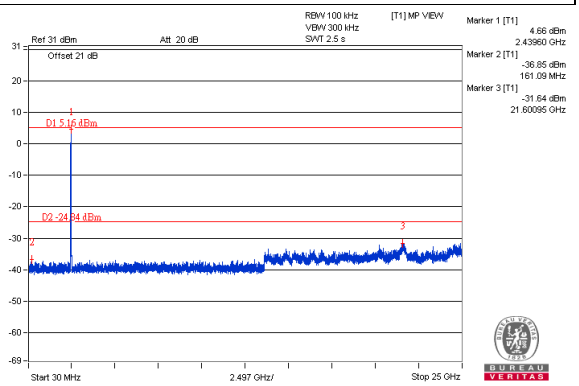


CHAIN 1

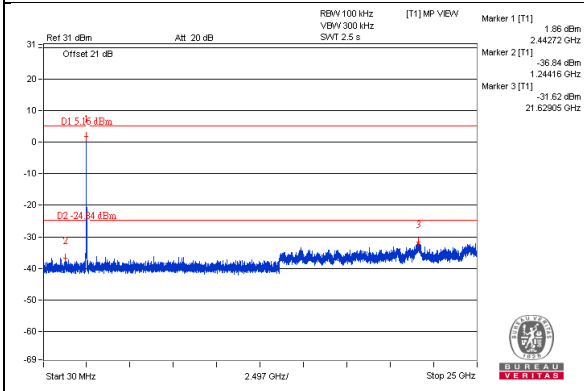
CH 3



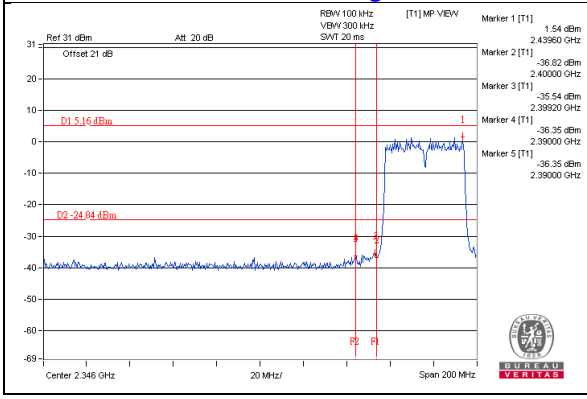
CH 6



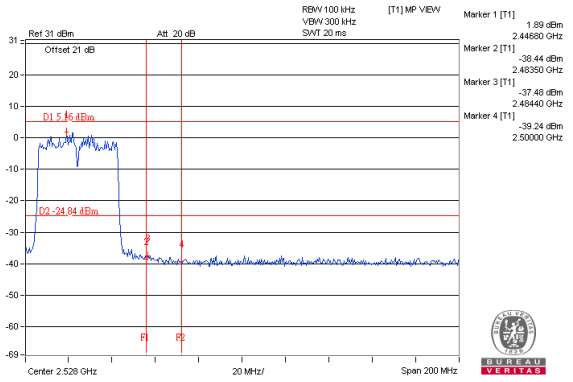
CH 9



CH 3 Band edge

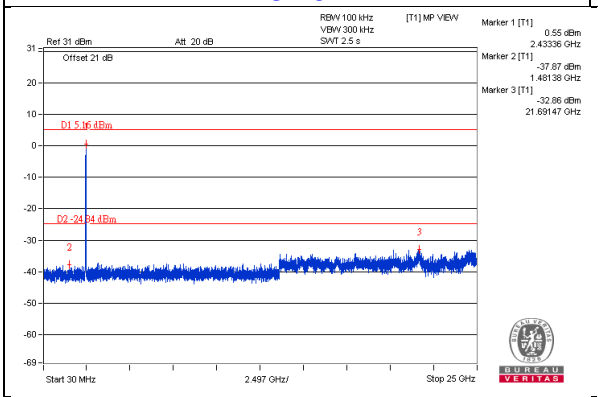


CH 9 Band edge

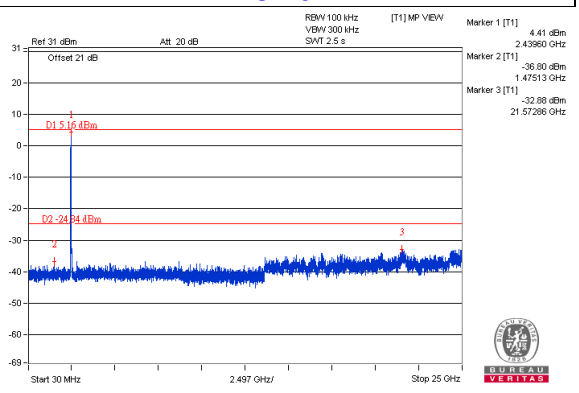


CHAIN 2

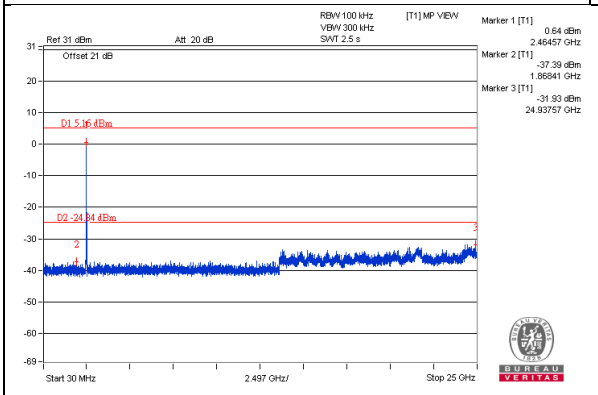
CH 3



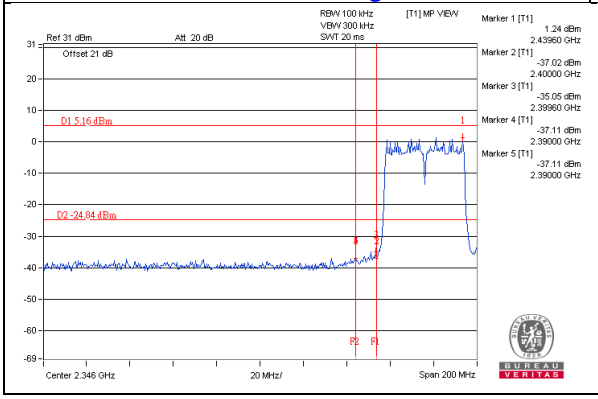
CH 6



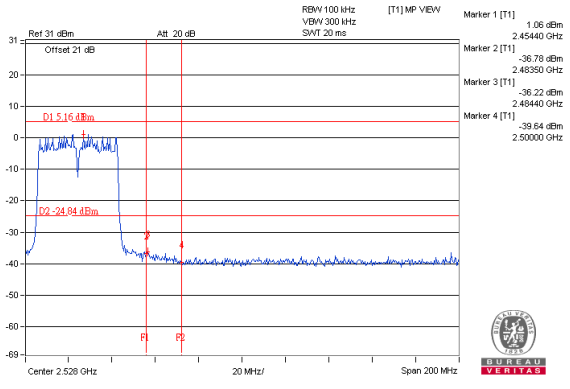
CH 9



CH 3 Band edge



CH 9 Band edge



5 Pictures of Test Arrangements

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

Appendix – Information on the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are 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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