FCC Test Report (WLAN)

Report No.:	RF170510C11
FCC ID:	VUICGA4131
Test Model:	CGA4131
Series Model:	CGA4131XXXXX (X = 0-1, A-Z, a-z, "-" or blank, for marketing purpose)
Received Date:	May 10, 2017
Test Date:	May 12 to 25, 2017
Issued Date:	June 08, 2017
Applicant:	PEGATRON CORPORATION
Address:	5F, No. 76 Ligong St., Beitou, Taipei 112, Taiwan
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.

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RF170510C11	Original release.	June 08, 2017

1 Certificate of Conformity

Product:	D3.1 Cable Gateway
Brand:	Technicolor
Test Model:	CGA4131
Series Model:	CGA4131XXXXX (X = 0-1, A-Z, a-z, "-" or blank, for marketing purpose)
Sample Status:	ENGINEERING SAMPLE
Applicant:	PEGATRON CORPORATION
Test Date:	May 12 to 25, 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:** June 08, 2017

Claire Kuan / Specialist

Approved by : _____ , **Date:** June 08, 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 -0.22dB at 0.43009MHz.
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 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	1.84 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.30 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.16 dB
	6GHz ~ 18GHz	4.91 dB
	18GHz ~ 40GHz	5.30 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	D3.1 Cable Gateway
Brand	Technicolor
Test Model	CGA4131
Series Model:	CGA4131XXXXX (X = 0-1, A-Z, a-z, "-" or blank, for marketing purpose)
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	12Vdc from internal power supply
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only
Modulation Technology	DSSS,OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n: up to 600Mbps 802.11ac: up to 1733.3Mbps
Operating Frequency	**2.4GHz:** 2.412 ~ 2.462GHz **5GHz:** 5.18 ~ 5.24GHz, 5.745 ~ 5.825GHz
Number of Channel	**2.4GHz:** 802.11b, 802.11g, 802.11n (HT20): 11 802.11n (HT40): 7 **5GHz:** 802.11a, 802.11n (HT20), 802.11ac (VHT20): 9 802.11n (HT40), 802.11ac (VHT40): 4 802.11ac (VHT80): 2
Output Power	**2.4GHz:** 537.032mW **CDD Mode:** **5.18 ~ 5.24GHz:** 844.646mW **5.745 ~ 5.825GHz:** 995.2mW **Beamforming Mode:** **5.18 ~ 5.24GHz:** 525.827mW **5.745 ~ 5.825GHz:** 504.677mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	AC cable (Unshielded, 1.8m)
Data Cable Supplied	NA

Note:

1. 2.4GHz and 5GHz technology cannot transmit at same time.
2. The EUT uses following internal power supply as the following table:

Spec.
AC input: 100-240Vac, 1.65A, 50-60Hz DC input: 12Vdc, 10A

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

2.4GHz					
Transmitter Circuit	Antenna Net Gain(dBi)	Frequency range (MHz)	Antenna Type	Connecter Type	Cable Length
Chain 0	2.0	2400 ~ 2483.5	PCB	i-pex(MHF)	95mm
Chain 1	2.0	2400 ~ 2483.5	PCB	i-pex(MHF)	210mm
5GHz					
Transmitter Circuit	Antenna Net Gain(dBi)	Frequency range (MHz)	Antenna Type	Connecter Type	Cable Length
Chain 0	2.1	5150 ~ 5250	PCB	i-pex(MHF)	95mm
	2.6	5250 ~ 5350	PCB	i-pex(MHF)	155mm
	2.4	5470 ~ 5725			
	2.4	5725 ~ 5850			
Chain 1	2.7	5150 ~ 5250	PCB	i-pex(MHF)	210mm
	2.3	5250 ~ 5350	PCB	i-pex(MHF)	135mm
	2.3	5470 ~ 5725			
	2.7	5725 ~ 5850			
Chain 2	2.7	2400 ~ 2483.5	PCB	i-pex(MHF)	170mm
	2.6	5150 ~ 5250			
	2.4	5250 ~ 5350			
	2.4	5470 ~ 5725			
	2.4	5725 ~ 5850			
Chain 3	3.5	5150 ~ 5250	PCB	i-pex(MHF)	240mm
	3.0	5250 ~ 5350			
	3.4	5470 ~ 5725			
	3.9	5725 ~ 5850			

4. The EUT incorporates a MIMO function.

2.4GHz Band			
MODULATION MODE	**DATA RATE (MCS)**	**TX & RX CONFIGURATION**	
802.11b	1 ~ 11Mbps	1TX Fixed Chain 0	1RX Diversity
802.11g	6 ~ 54Mbps	2TX	2RX
802.11n (HT20)	MCS 0~7	2TX	2RX
	MCS 8~15	2TX	2RX
802.11n (HT40)	MCS 0~7	2TX	2RX
	MCS 8~15	2TX	2RX
5GHz Band			
MODULATION MODE	**DATA RATE (MCS)**	**TX & RX CONFIGURATION**	
802.11a	6 ~ 54Mbps	4TX	4RX
802.11n (HT20)	MCS 0~7	4TX	4RX
	MCS 8~15	4TX	4RX
	MCS 16~23	4TX	4RX
	MCS 24~31	4TX	4RX
802.11n (HT40)	MCS 0~7	4TX	4RX
	MCS 8~15	4TX	4RX
	MCS 16~23	4TX	4RX
	MCS 24~31	4TX	4RX
802.11ac (VHT20)	MCS0~8 Nss=1	4TX	4RX
	MCS0~8 Nss=2	4TX	4RX
	MCS0~9 Nss=3	4TX	4RX
	MCS0~8 Nss=4	4TX	4RX
802.11ac (VHT40)	MCS0~9 Nss=1	4TX	4RX
	MCS0~9 Nss=2	4TX	4RX
	MCS0~9 Nss=3	4TX	4RX
	MCS0~9 Nss=4	4TX	4RX
802.11ac (VHT80)	MCS0~9 Nss=1	4TX	4RX
	MCS0~9 Nss=2	4TX	4RX
	MCS0~9 Nss=3	4TX	4RX
	MCS0~9 Nss=4	4TX	4RX
Note: 1. All of modulation mode support beamforming function except 2.4GHz and 5GHz (802.11a) 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):

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):

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	
-	√	√	√	√	-

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 2 axis. The worst case was found when positioned on **X-plane**.

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)
802.11n (HT20)	1 to 11	6	OFDM	BPSK	6.5

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)
802.11n (HT20)	1 to 11	6	OFDM	BPSK	6.5

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:

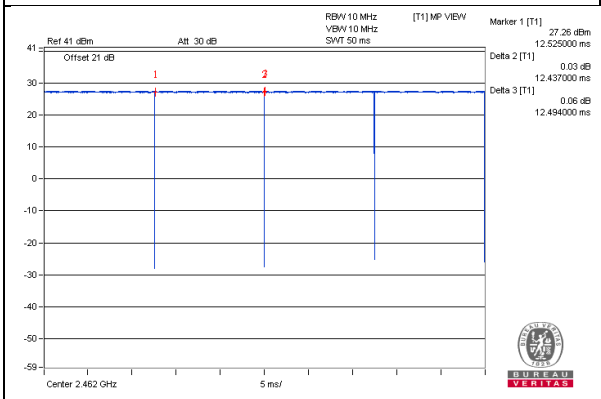
APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 66%RH	120Vac, 60Hz	Jyunchun Lin
RE<1G	22deg. C, 68%RH	120Vac, 60Hz	Weiwei Lo
PLC	25deg. C, 75%RH	120Vac, 60Hz	Andy Ho
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

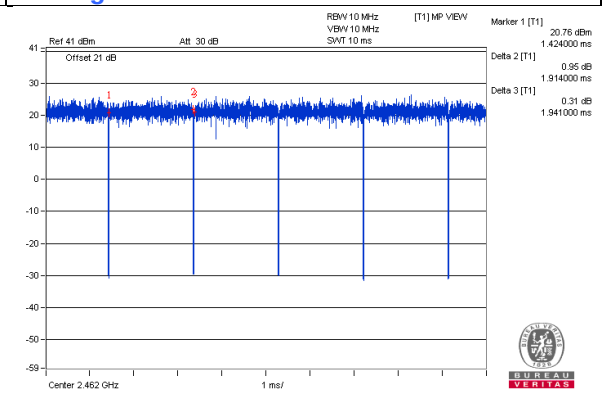
If duty cycle of test signal is ≥ 98 %, duty factor is not required.

802.11b: Duty cycle = 12.437 / 12.494 = 0.995
802.11g: Duty cycle = 2.093 / 2.107 = 0.993
802.11n (HT20): Duty cycle = 1.914 / 1.941 = 0.986
802.11n (HT40): Duty cycle = 0.955 / 0.973 = 0.982

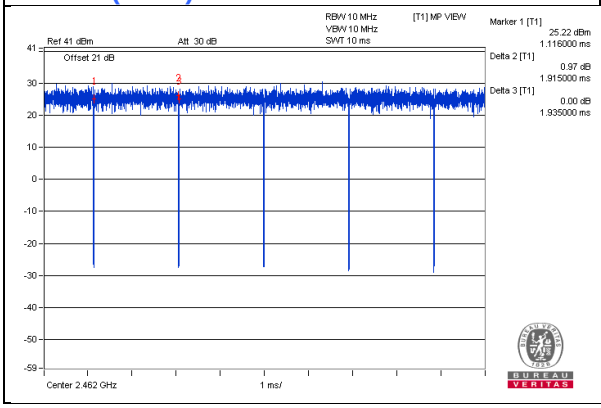
802.11b



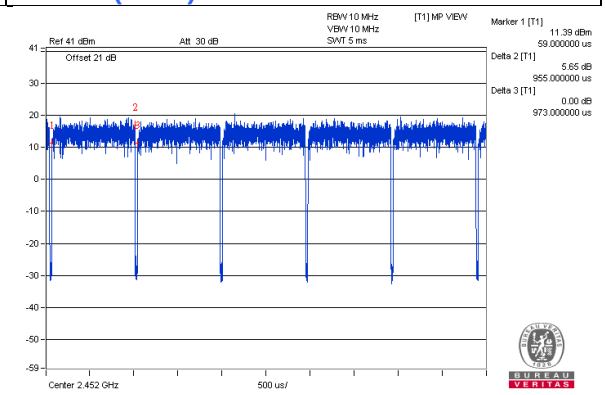
802.11g



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.

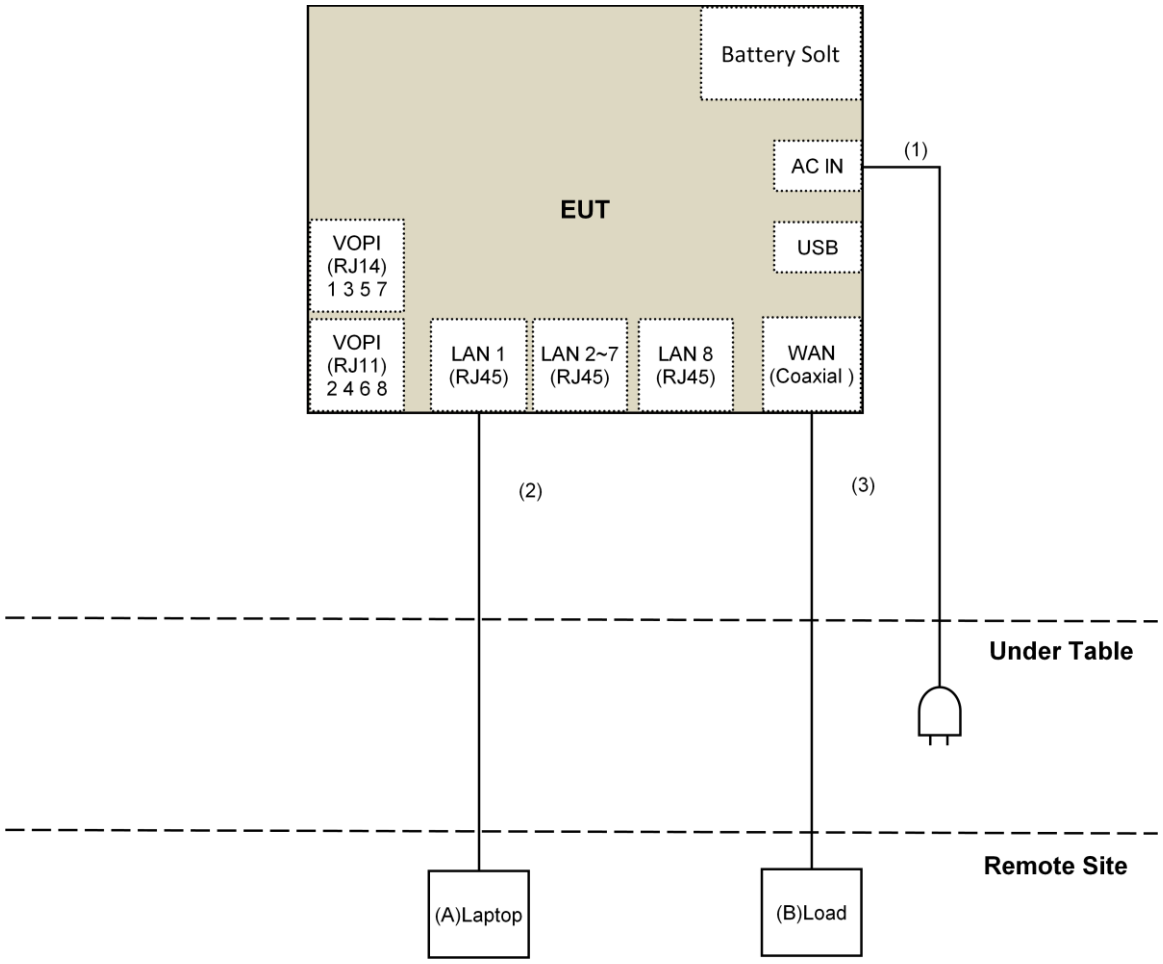
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Laptop	HP	Pavilion 14-ab023TU	5CD5340WXZ	NA	Provided by Lab
B.	Load	NA	NA	NA	NA	Provided by Lab

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.	AC Cable	1	1.7	No	0	Supplied by client
2.	RJ-45 Cable	1	10	No	0	Provided by Lab
3.	Coaxial Cable	1	10	Yes	0	Provided by Lab

3.4.1 Configuration of System under Test



NOTE: The test configuration was defined by the applicant requirement.

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 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 Keysight	N9038A	MY54450088	July 20, 2016	July 19, 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-01	Nov. 10, 2016	Nov. 09, 2017
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Dec. 13, 2016	Dec. 12, 2017
RF Cable	8D	966-4-1 966-4-2 966-4-3	Apr. 01, 2017	Mar. 31, 2018
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-4-01	Oct. 05, 2016	Oct. 04, 2017
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Dec. 27, 2016	Dec. 26, 2017
Pre-Amplifier EMCI	EMC12630SE	980385	Feb. 02, 2017	Feb. 01, 2018
RF Cable	EMC104-SM-SM-1200	160923	Feb. 02, 2017	Feb. 01, 2018
	EMC104-SM-SM-2000	150318	Mar. 29, 2017	Mar. 28, 2018
	EMC104-SM-SM-5000	150323	Mar. 29, 2017	Mar. 28, 2018
Pre-Amplifier EMCI	EMC184045SE	980387	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	MF780208410	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP02	NA	NA
Spectrum Analyzer R&S	FSv40	100964	June 28, 2016	June 27, 2017
Spectrum Analyzer Agilent	E4446A	MY48250253	Dec. 21, 2016	Dec. 20, 2017
Power meter Anritsu	ML2495A	1014008	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. 4.
4. The FCC Site Registration No. is 292998
5. The CANADA Site Registration No. is 20331-2
6. Tested Date: May 12 to 25, 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:

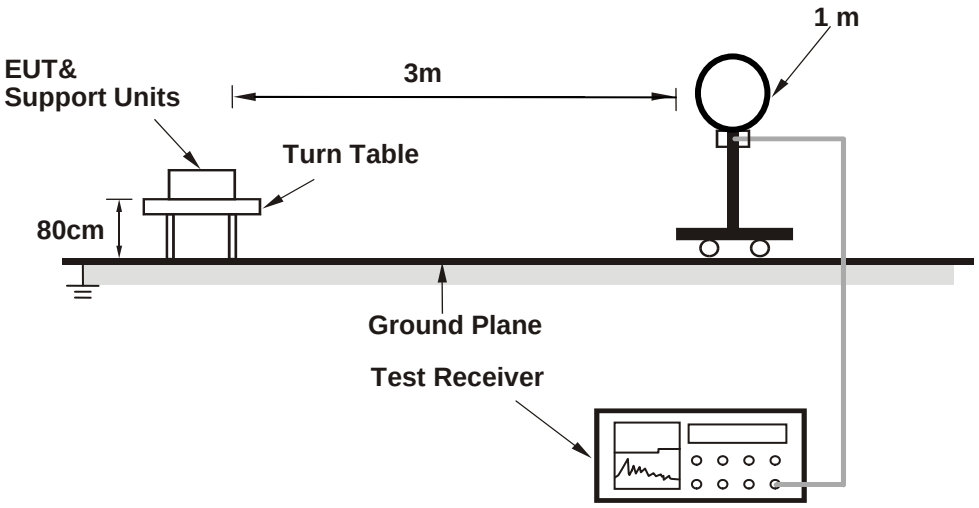
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Average detection (AV) at frequency above 1GHz. If duty cycle of test signal is < 98%, the duty factor need added to measured value.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

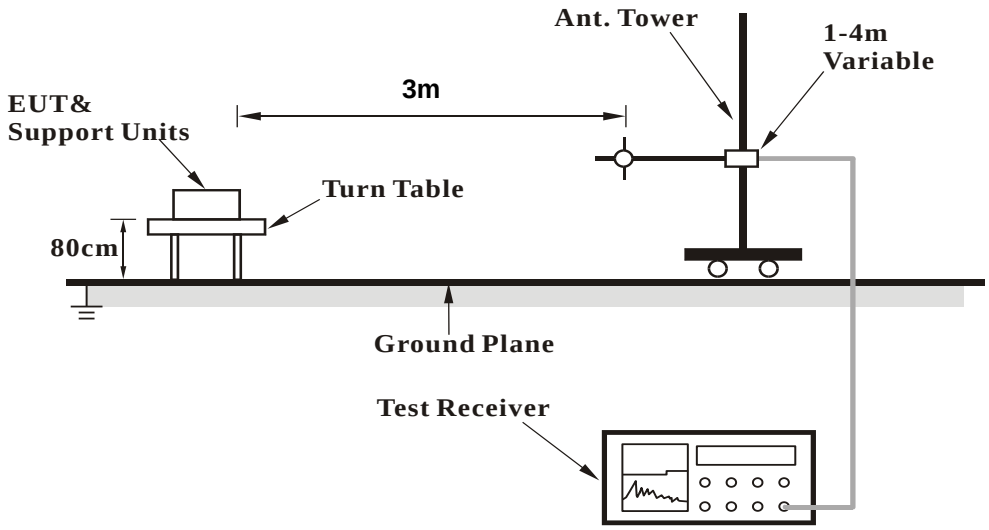
No deviation.

4.1.5 Test Setup

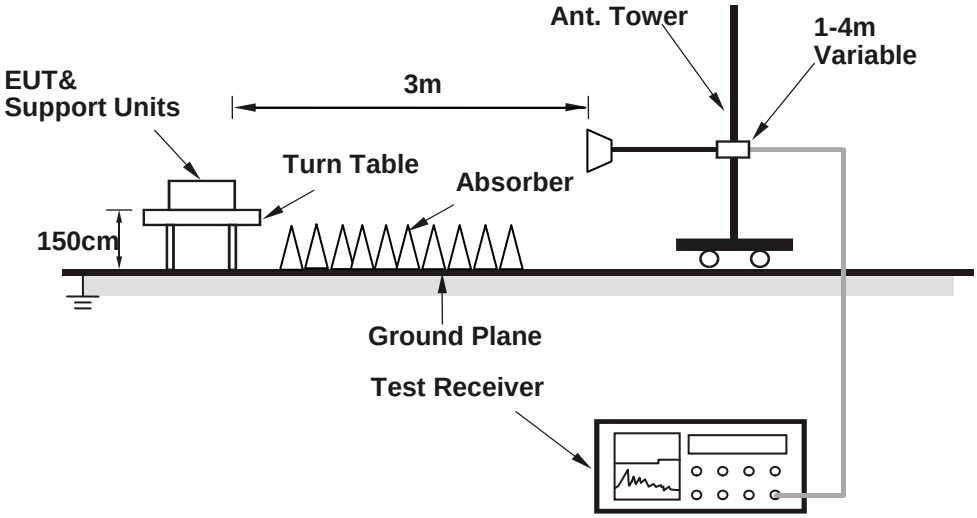
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

a. Connected the EUT with the Laptop which is placed on remote site.
b. Contorlling software (Mtool V2.0.0.7) 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	62.6 PK	74.0	-11.4	2.42 H	223	63.9	-1.3
2	2390.00	49.6 AV	54.0	-4.4	2.42 H	223	50.9	-1.3
3	*2412.00	111.4 PK			2.42 H	223	112.5	-1.1
4	*2412.00	109.1 AV			2.42 H	223	110.2	-1.1
5	2483.50	64.6 PK	74.0	-9.4	2.42 H	223	65.6	-1.0
6	2483.50	51.1 AV	54.0	-2.9	2.42 H	223	52.1	-1.0
7	4824.00	43.6 PK	74.0	-30.4	1.02 H	274	40.4	3.2
8	4824.00	38.5 AV	54.0	-15.5	1.02 H	274	35.3	3.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	2390.00	65.7 PK	74.0	-8.3	3.40 V	179	67.0	-1.3
2	2390.00	52.5 AV	54.0	-1.5	3.40 V	179	53.8	-1.3
3	*2412.00	114.8 PK			3.40 V	179	115.9	-1.1
4	*2412.00	112.5 AV			3.40 V	179	113.6	-1.1
5	2483.50	67.6 PK	74.0	-6.4	3.40 V	179	68.6	-1.0
6	2483.50	53.3 AV	54.0	-0.7	3.40 V	179	54.3	-1.0
7	4824.00	42.1 PK	74.0	-31.9	1.11 V	256	38.9	3.2
8	4824.00	37.1 AV	54.0	-16.9	1.11 V	256	33.9	3.2

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.3 PK	74.0	-13.7	2.36 H	233	61.6	-1.3
2	2390.00	47.2 AV	54.0	-6.8	2.36 H	233	48.5	-1.3
3	*2437.00	114.7 PK			2.36 H	233	115.9	-1.2
4	*2437.00	112.3 AV			2.36 H	233	113.5	-1.2
5	2483.50	65.9 PK	74.0	-8.1	2.36 H	233	66.9	-1.0
6	2483.50	53.5 AV	54.0	-0.5	2.36 H	233	54.5	-1.0
7	4874.00	45.1 PK	74.0	-28.9	1.00 H	258	41.8	3.3
8	4874.00	40.7 AV	54.0	-13.3	1.00 H	258	37.4	3.3
9	7311.00	44.1 PK	74.0	-29.9	1.50 H	335	34.3	9.8
10	7311.00	32.8 AV	54.0	-21.2	1.50 H	335	23.0	9.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.3 PK	74.0	-10.7	3.28 V	184	64.6	-1.3
2	2390.00	49.5 AV	54.0	-4.5	3.28 V	184	50.8	-1.3
3	*2437.00	118.0 PK			3.28 V	184	119.2	-1.2
4	*2437.00	115.5 AV			3.28 V	184	116.7	-1.2
5	2483.50	66.0 PK	74.0	-8.0	3.28 V	184	67.0	-1.0
6	2483.50	53.2 AV	54.0	-0.8	3.28 V	184	54.2	-1.0
7	4874.00	43.7 PK	74.0	-30.3	1.08 V	263	40.4	3.3
8	4874.00	39.4 AV	54.0	-14.6	1.08 V	263	36.1	3.3
9	7311.00	44.7 PK	74.0	-29.3	1.00 V	204	34.9	9.8
10	7311.00	35.0 AV	54.0	-19.0	1.00 V	204	25.2	9.8

REMARKS:

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

CHANNEL	TX Channel 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	110.8 PK			2.38 H	221	111.9	-1.1
2	*2462.00	108.7 AV			2.38 H	221	109.8	-1.1
3	2483.50	64.2 PK	74.0	-9.8	2.38 H	221	65.2	-1.0
4	2483.50	51.7 AV	54.0	-2.3	2.38 H	221	52.7	-1.0
5	4924.00	44.1 PK	74.0	-29.9	1.07 H	265	40.6	3.5
6	4924.00	38.9 AV	54.0	-15.1	1.07 H	265	35.4	3.5
7	7386.00	44.1 PK	74.0	-29.9	1.53 H	321	34.2	9.9
8	7386.00	33.0 AV	54.0	-21.0	1.53 H	321	23.1	9.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	114.7 PK			3.64 V	184	115.8	-1.1
2	*2462.00	112.2 AV			3.64 V	184	113.3	-1.1
3	2483.50	66.5 PK	74.0	-7.5	3.64 V	184	67.5	-1.0
4	**2483.50**	**53.9 AV**	**54.0**	**-0.1**	**3.64 V**	**184**	**54.9**	**-1.0**
5	4924.00	42.7 PK	74.0	-31.3	1.17 V	252	39.2	3.5
6	4924.00	37.6 AV	54.0	-16.4	1.17 V	252	34.1	3.5
7	7386.00	44.3 PK	74.0	-29.7	1.05 V	212	34.4	9.9
8	7386.00	33.5 AV	54.0	-20.5	1.05 V	212	23.6	9.9

REMARKS:

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

802.11g

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.8 PK	74.0	-4.2	2.41 H	207	71.1	-1.3
2	2390.00	49.5 AV	54.0	-4.5	2.41 H	207	50.8	-1.3
3	*2412.00	113.1 PK			2.41 H	207	114.2	-1.1
4	*2412.00	102.9 AV			2.41 H	207	104.0	-1.1
5	2483.50	64.7 PK	74.0	-9.3	2.41 H	207	65.7	-1.0
6	2483.50	51.2 AV	54.0	-2.8	2.41 H	207	52.2	-1.0
7	4824.00	49.6 PK	74.0	-24.4	1.04 H	275	46.4	3.2
8	4824.00	35.3 AV	54.0	-18.7	1.04 H	275	32.1	3.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	72.2 PK	74.0	-1.8	1.23 V	234	73.5	-1.3
2	2390.00	52.1 AV	54.0	-1.9	1.23 V	234	53.4	-1.3
3	*2412.00	117.0 PK			1.23 V	234	118.1	-1.1
4	*2412.00	106.3 AV			1.23 V	234	107.4	-1.1
5	2483.50	67.3 PK	74.0	-6.7	1.23 V	234	68.3	-1.0
6	2483.50	53.6 AV	54.0	-0.4	1.23 V	234	54.6	-1.0
7	4824.00	48.2 PK	74.0	-25.8	1.09 V	271	45.0	3.2
8	4824.00	34.1 AV	54.0	-19.9	1.09 V	271	30.9	3.2

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.0 PK	74.0	-12.0	2.42 H	216	63.3	-1.3
2	2390.00	47.1 AV	54.0	-6.9	2.42 H	216	48.4	-1.3
3	*2437.00	114.8 PK			2.42 H	216	116.0	-1.2
4	*2437.00	104.7 AV			2.42 H	216	105.9	-1.2
5	2483.50	66.4 PK	74.0	-7.6	2.42 H	216	67.4	-1.0
6	2483.50	51.3 AV	54.0	-2.7	2.42 H	216	52.3	-1.0
7	4874.00	50.1 PK	74.0	-23.9	1.09 H	270	46.8	3.3
8	4874.00	36.6 AV	54.0	-17.4	1.09 H	270	33.3	3.3
9	7311.00	45.7 PK	74.0	-28.3	1.53 H	315	35.9	9.8
10	7311.00	33.2 AV	54.0	-20.8	1.53 H	315	23.4	9.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.4 PK	74.0	-11.6	1.34 V	238	63.7	-1.3
2	2390.00	49.5 AV	54.0	-4.5	1.34 V	238	50.8	-1.3
3	*2437.00	118.6 PK			1.34 V	238	119.8	-1.2
4	*2437.00	108.0 AV			1.34 V	238	109.2	-1.2
5	2483.50	66.8 PK	74.0	-7.2	1.34 V	238	67.8	-1.0
6	**2483.50**	**53.9 AV**	**54.0**	**-0.1**	**1.34 V**	**238**	**54.9**	**-1.0**
7	4874.00	49.4 PK	74.0	-24.6	1.14 V	283	46.1	3.3
8	4874.00	35.3 AV	54.0	-18.7	1.14 V	283	32.0	3.3
9	7311.00	45.6 PK	74.0	-28.4	1.15 V	261	35.8	9.8
10	7311.00	33.3 AV	54.0	-20.7	1.15 V	261	23.5	9.8

REMARKS:

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

CHANNEL	TX Channel 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	112.3 PK			2.45 H	215	113.4	-1.1
2	*2462.00	102.3 AV			2.45 H	215	103.4	-1.1
3	2483.50	71.2 PK	74.0	-2.8	2.45 H	215	72.2	-1.0
4	2483.50	49.7 AV	54.0	-4.3	2.45 H	215	50.7	-1.0
5	4924.00	48.9 PK	74.0	-25.1	1.07 H	269	45.4	3.5
6	4924.00	34.4 AV	54.0	-19.6	1.07 H	269	30.9	3.5
7	7386.00	45.6 PK	74.0	-28.4	1.55 H	303	35.7	9.9
8	7386.00	33.2 AV	54.0	-20.8	1.55 H	303	23.3	9.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	116.2 PK			1.10 V	238	117.3	-1.1
2	*2462.00	105.7 AV			1.10 V	238	106.8	-1.1
3	2483.50	73.7 PK	74.0	-0.3	1.10 V	238	74.7	-1.0
4	2483.50	52.2 AV	54.0	-1.8	1.10 V	238	53.2	-1.0
5	4924.00	47.8 PK	74.0	-26.2	1.13 V	295	44.3	3.5
6	4924.00	33.5 AV	54.0	-20.5	1.13 V	295	30.0	3.5
7	7386.00	46.1 PK	74.0	-27.9	1.16 V	270	36.2	9.9
8	7386.00	33.7 AV	54.0	-20.3	1.16 V	270	23.8	9.9

REMARKS:

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

802.11n (HT20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.2 PK	74.0	-3.8	2.35 H	202	71.5	-1.3
2	2390.00	50.3 AV	54.0	-3.7	2.35 H	202	51.6	-1.3
3	*2412.00	112.7 PK			2.35 H	202	113.8	-1.1
4	*2412.00	102.4 AV			2.35 H	202	103.5	-1.1
5	4824.00	50.4 PK	74.0	-23.6	1.09 H	269	47.2	3.2
6	4824.00	35.8 AV	54.0	-18.2	1.09 H	269	32.6	3.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	73.5 PK	74.0	-0.5	1.06 V	237	74.8	-1.3
2	2390.00	53.4 AV	54.0	-0.6	1.06 V	237	54.7	-1.3
3	*2412.00	116.1 PK			1.06 V	237	117.2	-1.1
4	*2412.00	105.3 AV			1.06 V	237	106.4	-1.1
5	4824.00	48.1 PK	74.0	-25.9	1.08 V	257	44.9	3.2
6	4824.00	33.8 AV	54.0	-20.2	1.08 V	257	30.6	3.2

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	60.1 PK	74.0	-13.9	2.47 H	215	61.4	-1.3
2	2390.00	47.3 AV	54.0	-6.7	2.47 H	215	48.6	-1.3
3	*2437.00	114.3 PK			2.47 H	215	115.5	-1.2
4	*2437.00	104.4 AV			2.47 H	215	105.6	-1.2
5	2483.50	64.3 PK	74.0	-9.7	2.47 H	215	65.3	-1.0
6	2483.50	51.1 AV	54.0	-2.9	2.47 H	215	52.1	-1.0
7	4874.00	49.8 PK	74.0	-24.2	1.08 H	273	46.5	3.3
8	4874.00	36.5 AV	54.0	-17.5	1.08 H	273	33.2	3.3
9	7311.00	45.7 PK	74.0	-28.3	1.55 H	306	35.9	9.8
10	7311.00	33.5 AV	54.0	-20.5	1.55 H	306	23.7	9.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.4 PK	74.0	-11.6	1.08 V	235	63.7	-1.3
2	2390.00	49.5 AV	54.0	-4.5	1.08 V	235	50.8	-1.3
3	*2437.00	118.6 PK			1.08 V	235	119.8	-1.2
4	*2437.00	108.0 AV			1.08 V	235	109.2	-1.2
5	2483.50	66.8 PK	74.0	-7.2	1.08 V	235	67.8	-1.0
6	**2483.50**	**53.9 AV**	**54.0**	**-0.1**	**1.08 V**	**235**	**54.9**	**-1.0**
7	4874.00	49.2 PK	74.0	-24.8	1.20 V	275	45.9	3.3
8	4874.00	35.1 AV	54.0	-18.9	1.20 V	275	31.8	3.3
9	7311.00	45.2 PK	74.0	-28.8	1.18 V	263	35.4	9.8
10	7311.00	32.9 AV	54.0	-21.1	1.18 V	263	23.1	9.8

REMARKS:

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

CHANNEL	TX Channel 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	111.9 PK			2.43 H	219	113.0	-1.1
2	*2462.00	102.0 AV			2.43 H	219	103.1	-1.1
3	2483.50	70.6 PK	74.0	-3.4	2.43 H	219	71.6	-1.0
4	2483.50	49.8 AV	54.0	-4.2	2.43 H	219	50.8	-1.0
5	4924.00	48.8 PK	74.0	-25.2	1.03 H	260	45.3	3.5
6	4924.00	34.1 AV	54.0	-19.9	1.03 H	260	30.6	3.5
7	7386.00	46.3 PK	74.0	-27.7	1.54 H	308	36.4	9.9
8	7386.00	33.6 AV	54.0	-20.4	1.54 H	308	23.7	9.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	114.4 PK			1.03 V	236	115.5	-1.1
2	*2462.00	105.1 AV			1.03 V	236	106.2	-1.1
3	2483.50	73.5 PK	74.0	-0.5	1.03 V	236	74.5	-1.0
4	2483.50	52.4 AV	54.0	-1.6	1.03 V	236	53.4	-1.0
5	4924.00	47.6 PK	74.0	-26.4	1.10 V	311	44.1	3.5
6	4924.00	33.5 AV	54.0	-20.5	1.10 V	311	30.0	3.5
7	7386.00	46.3 PK	74.0	-27.7	1.11 V	261	36.4	9.9
8	7386.00	34.0 AV	54.0	-20.0	1.11 V	261	24.1	9.9

REMARKS:

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

802.11n (HT40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.5 PK	74.0	-6.5	2.37 H	210	68.8	-1.3
2	2390.00	50.5 AV	54.0	-3.5	2.37 H	210	51.8	-1.3
3	*2422.00	108.8 PK			2.37 H	210	110.1	-1.3
4	*2422.00	98.6 AV			2.37 H	210	99.9	-1.3
5	4844.00	48.4 PK	74.0	-25.6	1.07 H	249	45.1	3.3
6	4844.00	33.6 AV	54.0	-20.4	1.07 H	249	30.3	3.3
7	7266.00	46.2 PK	74.0	-27.8	1.50 H	306	36.4	9.8
8	7266.00	33.5 AV	54.0	-20.5	1.50 H	306	23.7	9.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.3 PK	74.0	-3.7	1.09 V	235	71.6	-1.3
2	2390.00	53.8 AV	54.0	-0.2	1.09 V	235	55.1	-1.3
3	*2422.00	111.3 PK			1.09 V	235	112.6	-1.3
4	*2422.00	101.7 AV			1.09 V	235	103.0	-1.3
5	4844.00	47.8 PK	74.0	-26.2	1.07 V	320	44.5	3.3
6	4844.00	33.5 AV	54.0	-20.5	1.07 V	320	30.2	3.3
7	7266.00	46.5 PK	74.0	-27.5	1.16 V	276	36.7	9.8
8	7266.00	34.1 AV	54.0	-19.9	1.16 V	276	24.3	9.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	62.6 PK	74.0	-11.4	2.32 H	214	63.9	-1.3
2	2390.00	47.5 AV	54.0	-6.5	2.32 H	214	48.8	-1.3
3	*2437.00	110.3 PK			2.32 H	214	111.5	-1.2
4	*2437.00	99.5 AV			2.32 H	214	100.7	-1.2
5	2483.50	68.1 PK	74.0	-5.9	2.32 H	214	69.1	-1.0
6	2483.50	50.9 AV	54.0	-3.1	2.32 H	214	51.9	-1.0
7	4874.00	48.5 PK	74.0	-25.5	1.08 H	268	45.2	3.3
8	4874.00	33.7 AV	54.0	-20.3	1.08 H	268	30.4	3.3
9	7311.00	46.6 PK	74.0	-27.4	1.50 H	302	36.8	9.8
10	7311.00	34.1 AV	54.0	-19.9	1.50 H	302	24.3	9.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.0 PK	74.0	-9.0	1.06 V	237	66.3	-1.3
2	2390.00	50.4 AV	54.0	-3.6	1.06 V	237	51.7	-1.3
3	*2437.00	112.9 PK			1.06 V	237	114.1	-1.2
4	*2437.00	102.6 AV			1.06 V	237	103.8	-1.2
5	2483.50	70.9 PK	74.0	-3.1	1.06 V	237	71.9	-1.0
6	2483.50	53.8 AV	54.0	-0.2	1.06 V	237	54.8	-1.0
7	4874.00	48.0 PK	74.0	-26.0	1.01 V	325	44.7	3.3
8	4874.00	33.4 AV	54.0	-20.6	1.01 V	325	30.1	3.3
9	7311.00	46.4 PK	74.0	-27.6	1.11 V	281	36.6	9.8
10	7311.00	33.7 AV	54.0	-20.3	1.11 V	281	23.9	9.8

REMARKS:

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

CHANNEL	TX Channel 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	107.5 PK			2.35 H	204	108.6	-1.1
2	*2452.00	97.4 AV			2.35 H	204	98.5	-1.1
3	2483.50	65.6 PK	74.0	-8.4	2.35 H	204	66.6	-1.0
4	2483.50	50.1 AV	54.0	-3.9	2.35 H	204	51.1	-1.0
5	4904.00	47.4 PK	74.0	-26.6	1.10 H	269	43.9	3.5
6	4904.00	32.4 AV	54.0	-21.6	1.10 H	269	28.9	3.5
7	7356.00	47.1 PK	74.0	-26.9	1.49 H	300	37.2	9.9
8	7356.00	34.6 AV	54.0	-19.4	1.49 H	300	24.7	9.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	110.1 PK			1.00 V	234	111.2	-1.1
2	*2452.00	99.6 AV			1.00 V	234	100.7	-1.1
3	2483.50	67.2 PK	74.0	-6.8	1.00 V	234	68.2	-1.0
4	2483.50	53.7 AV	54.0	-0.3	1.00 V	234	54.7	-1.0
5	4904.00	45.4 PK	74.0	-28.6	1.02 V	334	41.9	3.5
6	4904.00	31.2 AV	54.0	-22.8	1.02 V	334	27.7	3.5
7	7356.00	46.7 PK	74.0	-27.3	1.17 V	279	36.8	9.9
8	7356.00	34.1 AV	54.0	-19.9	1.17 V	279	24.2	9.9

REMARKS:

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

Below 1GHz Data:

802.11n (HT20)

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	51.44	35.3 QP	40.0	-4.7	2.00 H	271	43.4	-8.1
2	110.78	37.7 QP	43.5	-5.8	3.00 H	94	48.6	-10.9
3	162.62	37.7 QP	43.5	-5.8	2.00 H	60	45.6	-7.9
4	206.71	36.4 QP	43.5	-7.1	1.00 H	111	47.9	-11.5
5	377.04	41.5 QP	46.0	-4.5	2.00 H	350	47.2	-5.7
6	676.50	37.8 QP	46.0	-8.2	2.00 H	279	37.3	0.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	38.00	39.2 QP	40.0	-0.8	1.00 V	168	47.5	-8.3
2	110.44	34.6 QP	43.5	-8.9	1.00 V	360	45.6	-11.0
3	131.24	35.5 QP	43.5	-8.0	1.00 V	115	44.7	-9.2
4	180.54	34.4 QP	43.5	-9.1	1.00 V	360	44.0	-9.6
5	315.30	33.7 QP	46.0	-12.3	2.00 V	0	40.9	-7.2
6	542.09	35.4 QP	46.0	-10.6	1.00 V	215	37.5	-2.1

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

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
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: May 25, 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.

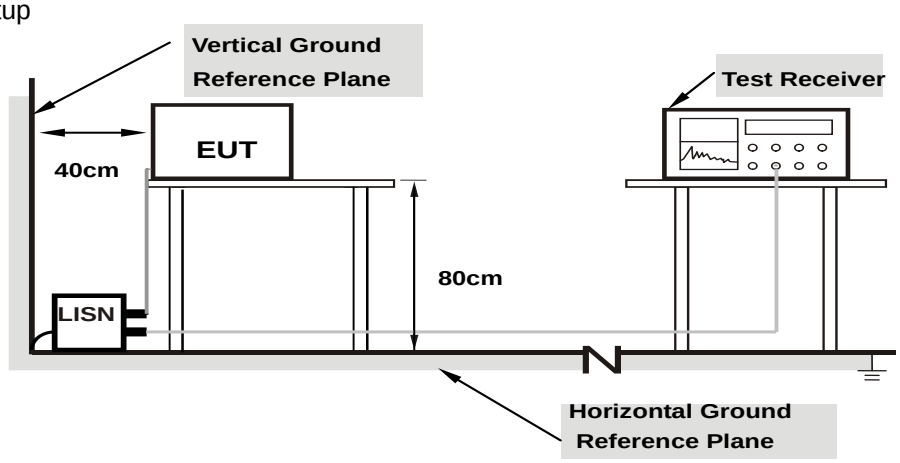
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

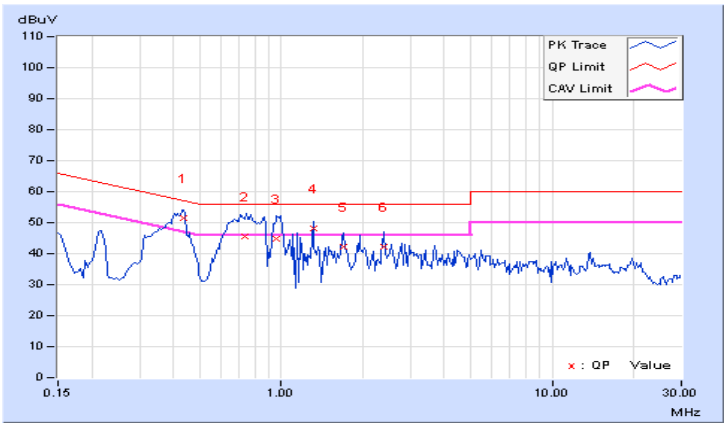
4.2.7 Test Results

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	0.43762	10.22	41.21	36.08	51.43	46.30	57.11	47.11	-5.68	-0.81
2	0.73547	10.24	35.16	24.16	45.40	34.40	56.00	46.00	-10.60	-11.60
3	0.95859	10.26	34.56	21.53	44.82	31.79	56.00	46.00	-11.18	-14.21
4	1.31250	10.25	38.08	29.06	48.33	39.31	56.00	46.00	-7.67	-6.69
5	1.69922	10.25	31.91	21.36	42.16	31.61	56.00	46.00	-13.84	-14.39
6	2.40234	10.24	31.87	22.46	42.11	32.70	56.00	46.00	-13.89	-13.30

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.

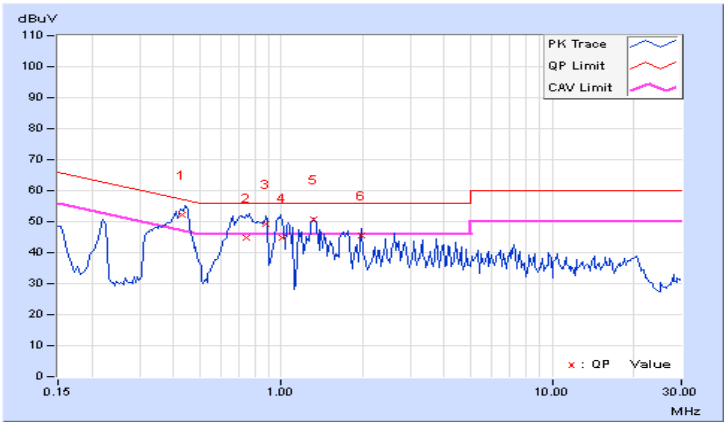


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

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	**0.43009**	**10.21**	**41.94**	**36.82**	**52.15**	**47.03**	**57.25**	**47.25**	**-5.10**	**-0.22**
2	0.74728	10.22	34.41	25.20	44.63	35.42	56.00	46.00	-11.37	-10.58
3	0.88047	10.23	39.07	29.95	49.30	40.18	56.00	46.00	-6.70	-5.82
4	1.00703	10.23	34.65	23.80	44.88	34.03	56.00	46.00	-11.12	-11.97
5	1.32031	10.25	40.53	30.55	50.78	40.80	56.00	46.00	-5.22	-5.20
6	1.97266	10.28	35.33	26.07	45.61	36.35	56.00	46.00	-10.39	-9.65

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.

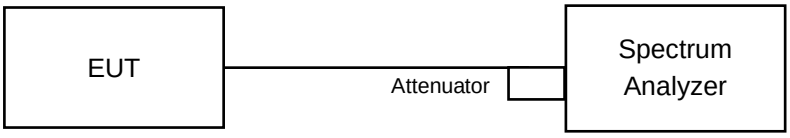


4.3 6dB Bandwidth Measurement

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 from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	8.14	0.5	PASS
6	2437	8.13	0.5	PASS
11	2462	8.12	0.5	PASS

802.11g

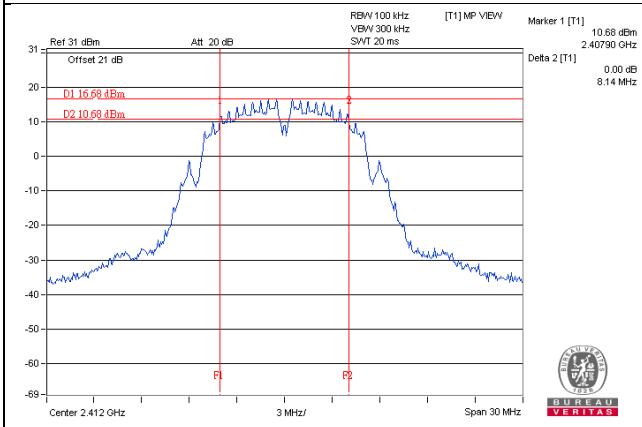
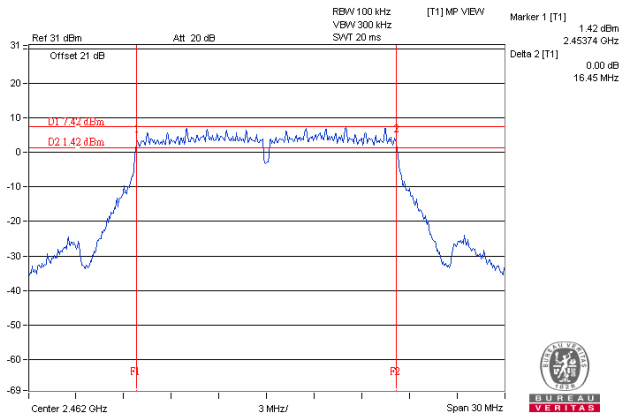
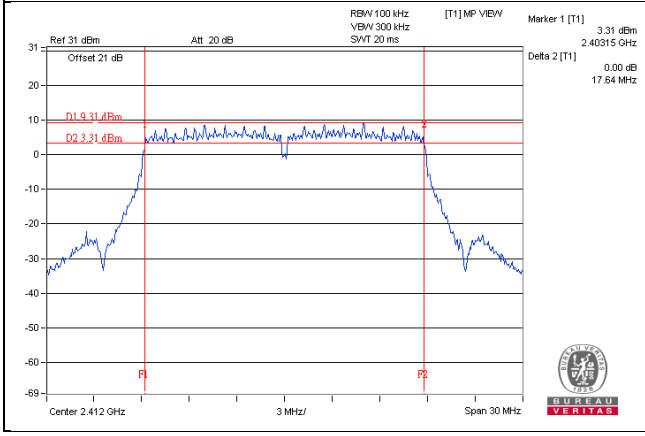
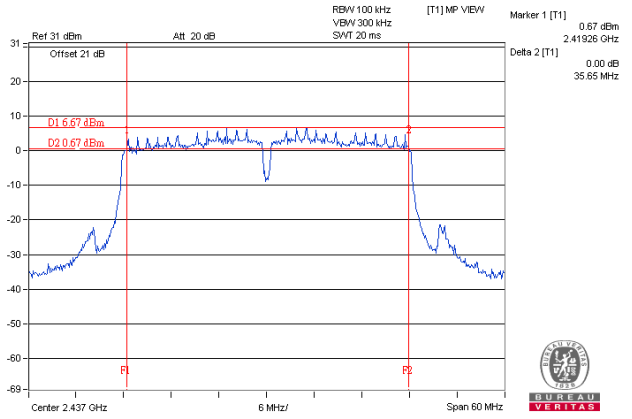
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	16.46	16.48	0.5	PASS
6	2437	16.46	16.48	0.5	PASS
11	2462	16.49	16.45	0.5	PASS

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
1	2412	17.64	17.64	0.5	PASS
6	2437	17.65	17.68	0.5	PASS
11	2462	17.68	17.69	0.5	PASS

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
3	2422	35.76	35.85	0.5	PASS
6	2437	35.65	35.90	0.5	PASS
9	2452	35.72	35.91	0.5	PASS

Spectrum Plot of Worst Value	
802.11b / CH11	**802.11g / Chain 1 : CH11**
	
802.11n (HT20) / Chain 1 : CH1	**802.11n (HT40) / Chain 0 : CH6**
	

4.4 Conducted Output Power Measurement

4.4.1 Limits of Conducted Output Power Measurement

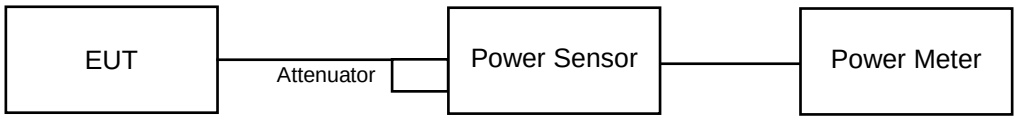
For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

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

FOR AVERAGE POWER

802.11b

Chan.	Freq. (MHz)	Average Power (dBm)	Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	25.12	325.087	25.12	30	Pass
6	2437	27.30	537.032	27.30	30	Pass
11	2462	24.18	261.818	24.18	30	Pass

802.11g

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	21.77	20.92	273.909	24.38	30	Pass
6	2437	23.21	22.86	402.608	26.05	30	Pass
11	2462	19.65	19.15	174.481	22.42	30	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
1	2412	21.42	21.05	266.026	24.25	30	Pass
6	2437	23.32	23.02	415.23	26.18	30	Pass
11	2462	19.36	19.22	169.858	22.30	30	Pass

802.11n (HT40)

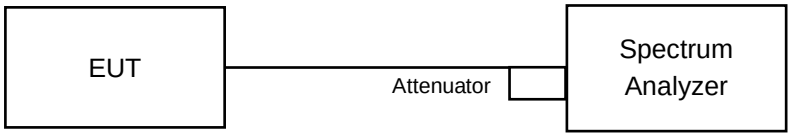
Chan.	Freq. (MHz)	Average Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
3	2422	20.04	19.38	187.621	22.73	30	Pass
6	2437	20.44	20.14	213.938	23.30	30	Pass
9	2452	16.85	16.81	96.39	19.84	30	Pass

4.5 Power Spectral Density Measurement

4.5.1 Limits of Power Spectral Density Measurement

The Maximum of Power Spectral Density Measurement is 8dBm.

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

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-3.87	8	Pass
6	2437	-2.23	8	Pass
11	2462	-4.18	8	Pass

802.11g

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-10.49	3.01	-7.48	8.00	Pass
	6	2437	-8.80	3.01	-5.79	8.00	Pass
	11	2462	-13.68	3.01	-10.67	8.00	Pass
1	1	2412	-12.17	3.01	-9.16	8.00	Pass
	6	2437	-9.76	3.01	-6.75	8.00	Pass
	11	2462	-12.91	3.01	-9.90	8.00	Pass

Note: Directional gain = 2dBi + 10log(2) = 5.01dBi < 6dBi , so the power density limit shall not be reduced.

802.11n (HT20)

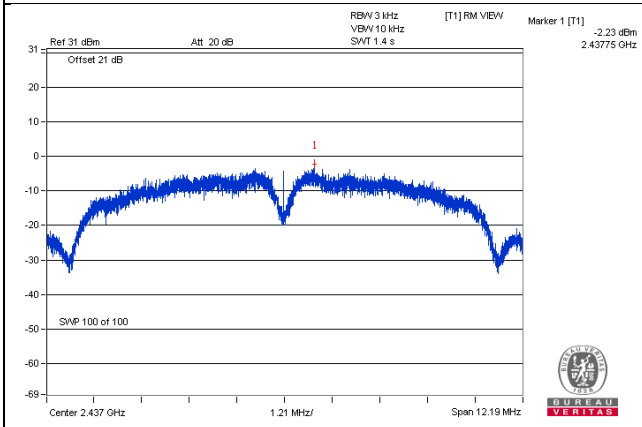
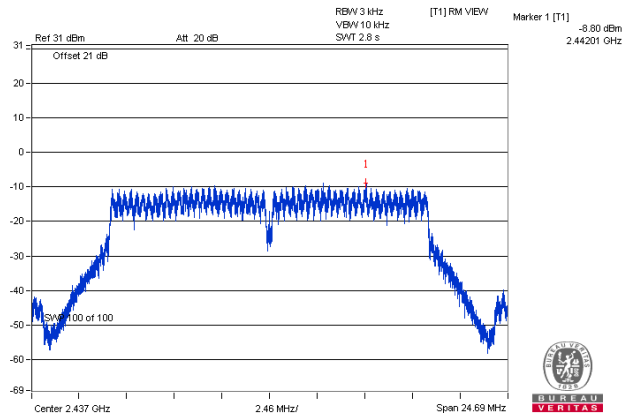
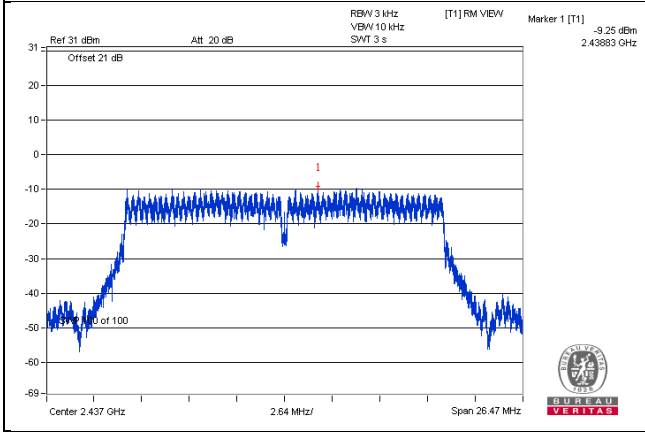
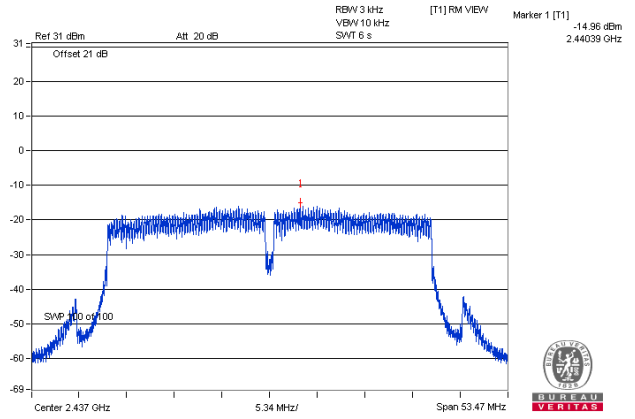
TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	1	2412	-11.82	3.01	-8.81	8.00	Pass
	6	2437	-9.25	3.01	-6.24	8.00	Pass
	11	2462	-12.91	3.01	-9.90	8.00	Pass
1	1	2412	-11.90	3.01	-8.89	8.00	Pass
	6	2437	-10.04	3.01	-7.03	8.00	Pass
	11	2462	-13.33	3.01	-10.32	8.00	Pass

Note: Directional gain = 2dBi + 10log(2) = 5.01dBi < 6dBi , so the power density limit shall not be reduced.

802.11n (HT40)

TX chain	Channel	Freq. (MHz)	PSD (dBm/3kHz)	10 log (N=2) dB	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
0	3	2422	-16.45	3.01	-13.44	8.00	Pass
	6	2437	-14.96	3.01	-11.95	8.00	Pass
	9	2452	-19.54	3.01	-16.53	8.00	Pass
1	3	2422	-15.25	3.01	-12.24	8.00	Pass
	6	2437	-15.09	3.01	-12.08	8.00	Pass
	9	2452	-18.21	3.01	-15.20	8.00	Pass

Note: Directional gain = 2dBi + 10log(2) = 5.01dBi < 6dBi , so the power density limit shall not be reduced.

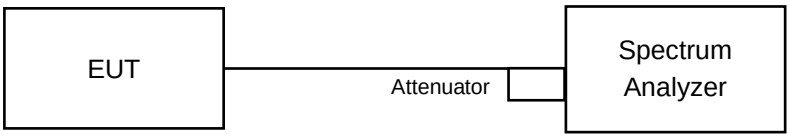
Spectrum Plot of Worst Value	
802.11b / CH6	**802.11g / Chain 0 : CH6**
	
802.11n (HT20) / Chain 0 : CH6	**802.11n (HT40) / Chain 0 : CH6**
	

4.6 Conducted Out of Band Emission Measurement

4.6.1 Limits of Conducted Out of Band Emission Measurement

Below 30dBc 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

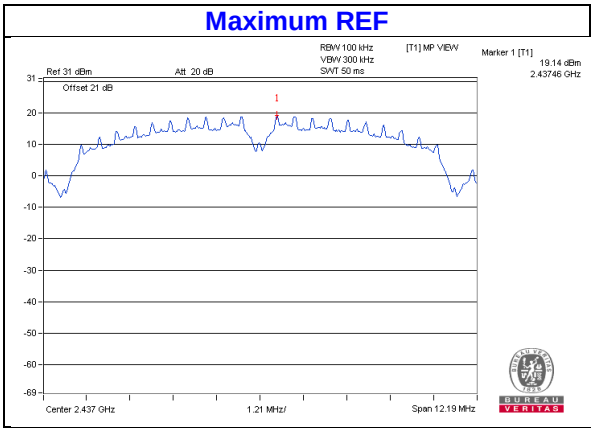
Same as Item 4.3.6

4.6.7 Test Results

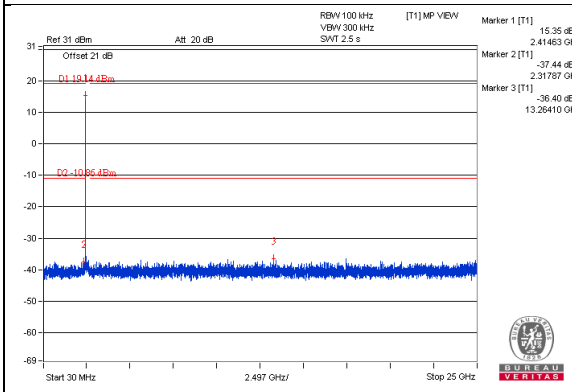
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 30dBc offset below D1. It shows compliance with the requirement.

802.11b

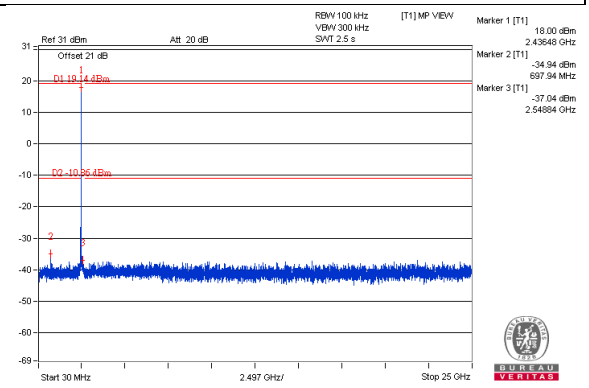
Maximum REF



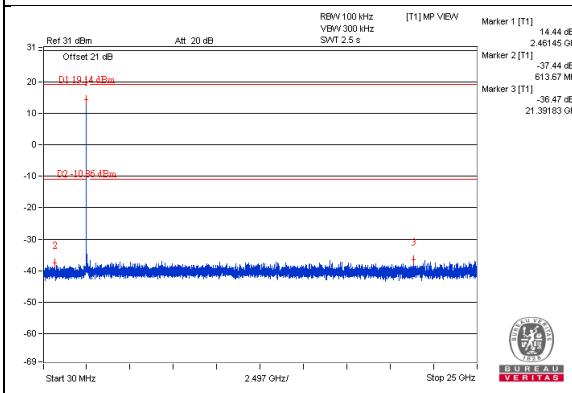
CH 1



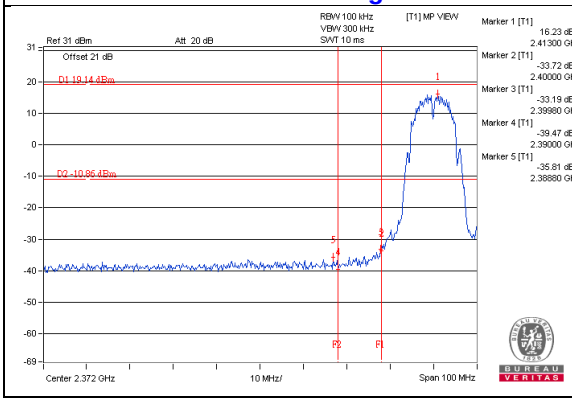
CH 6



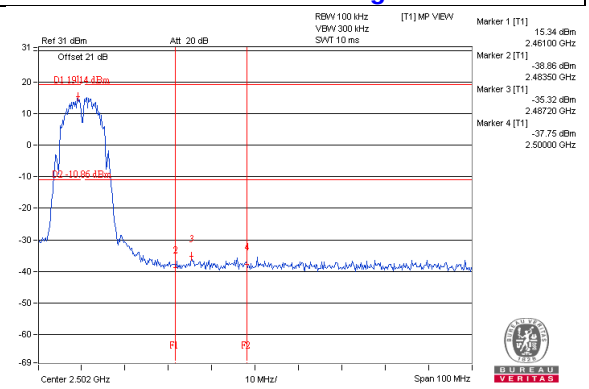
CH 11



CH 1 Band edge

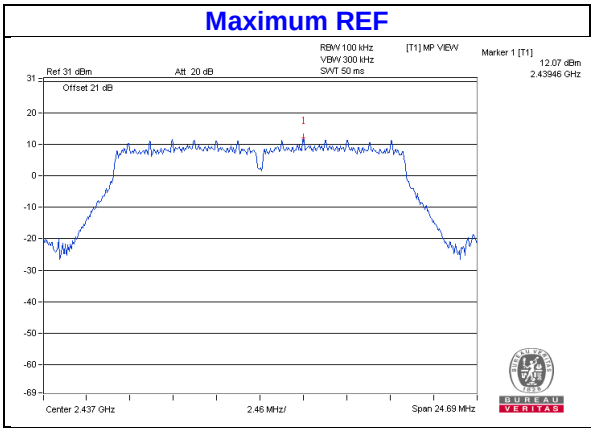


CH 11 Band edge

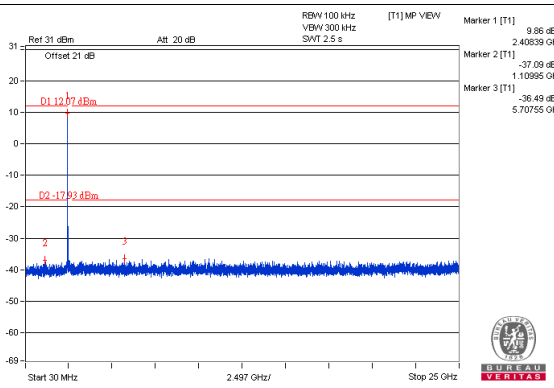


802.11g - CHAIN 0

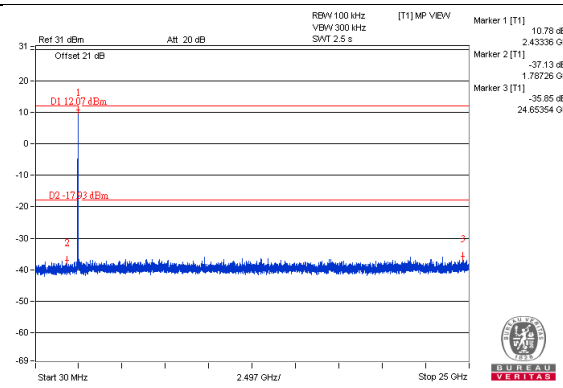
Maximum REF



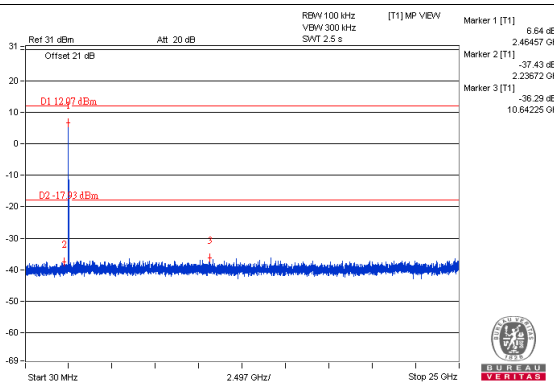
CH 1



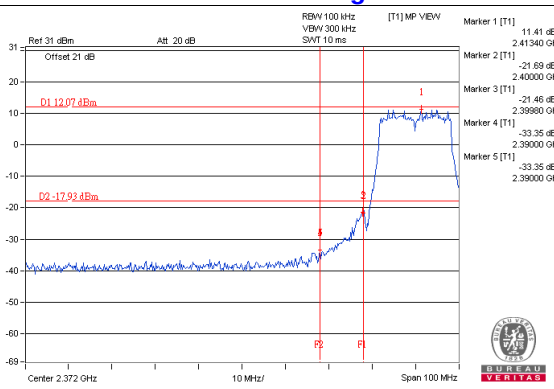
CH 6



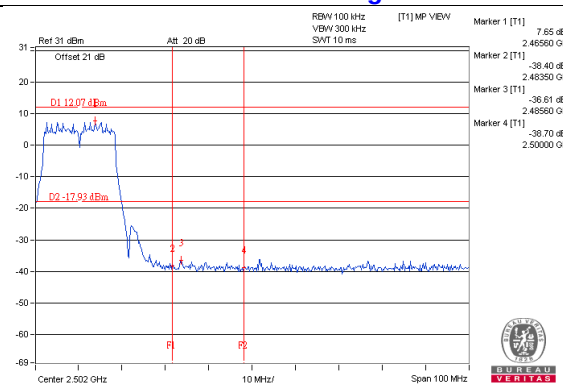
CH 11



CH 1 Band edge

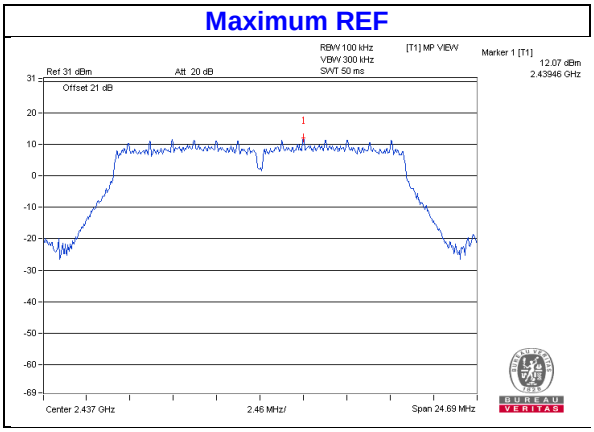


CH 11 Band edge

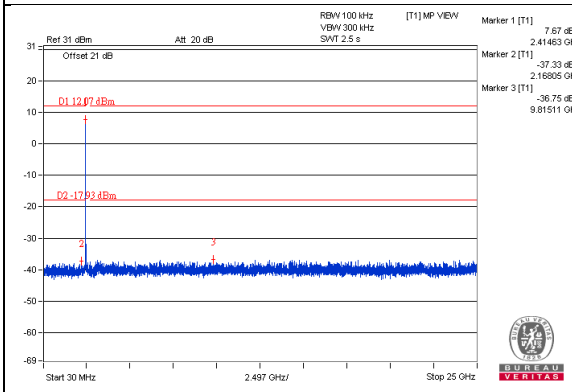


CHAIN 1

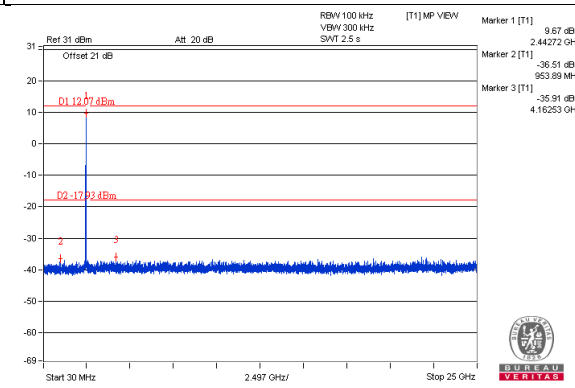
Maximum REF



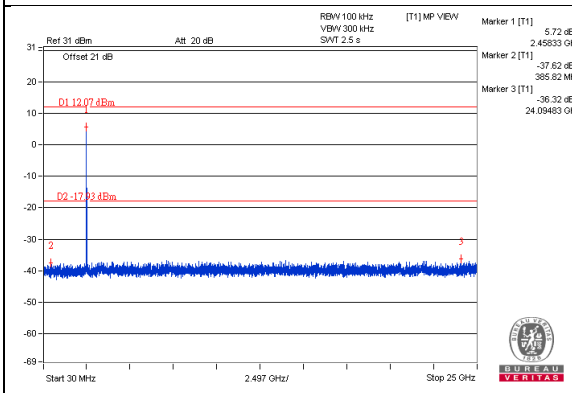
CH 1



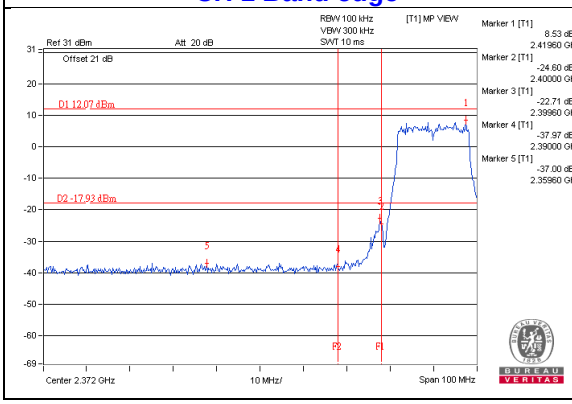
CH 6



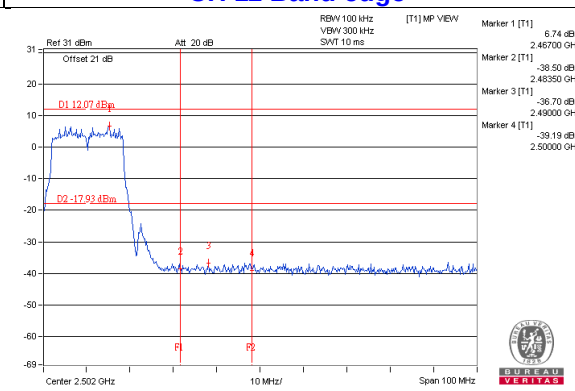
CH 11



CH 1 Band edge

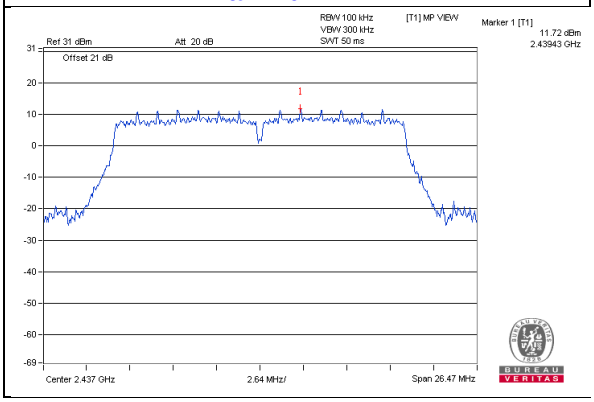


CH 11 Band edge

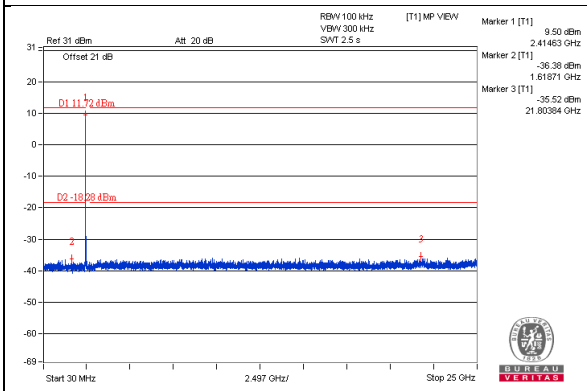


802.11n (HT20) - CHAIN 0

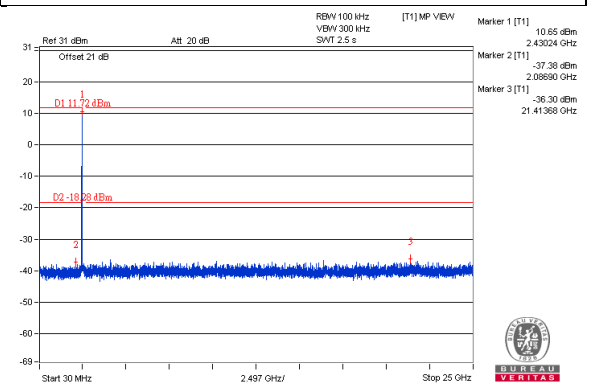
Maximum REF



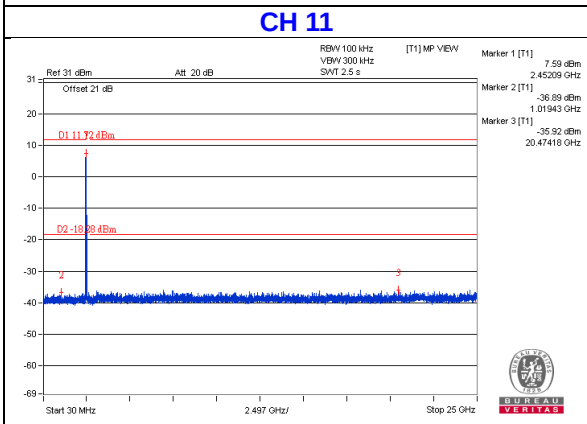
CH 1



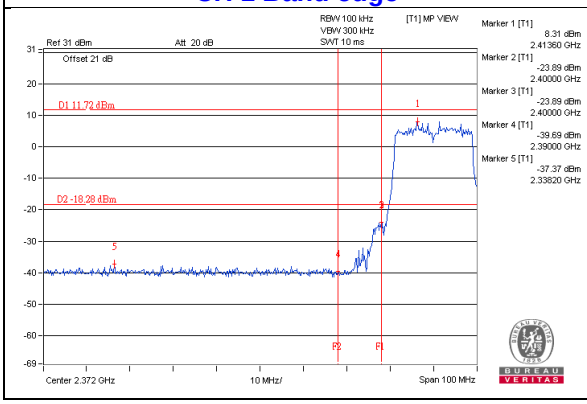
CH 6



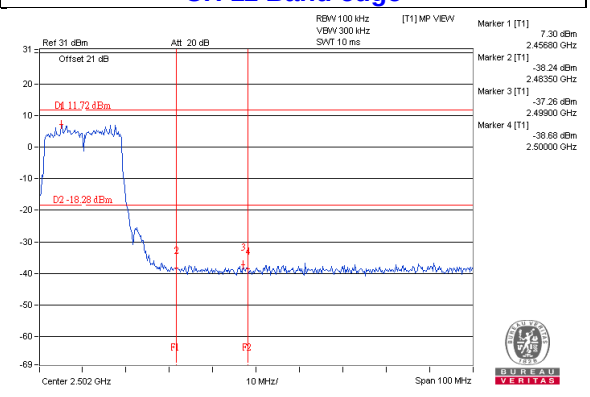
CH 11



CH 1 Band edge

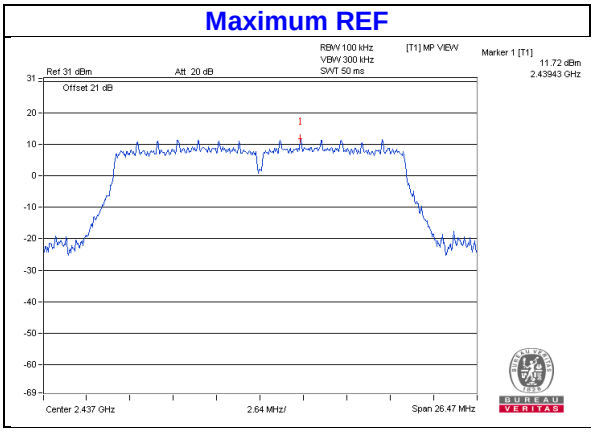


CH 11 Band edge

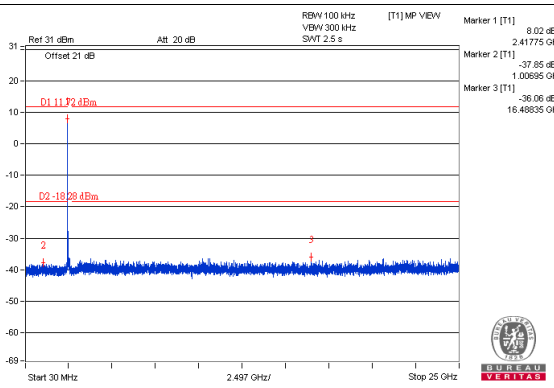


CHAIN 1

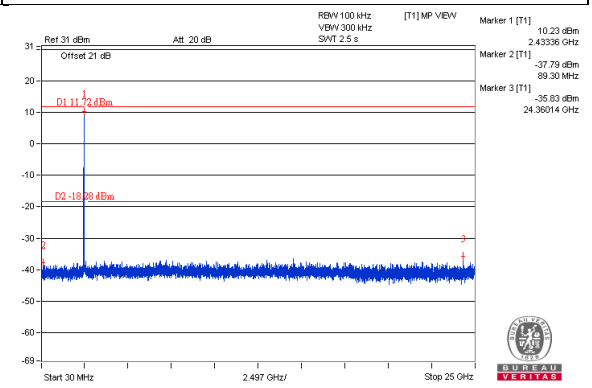
Maximum REF



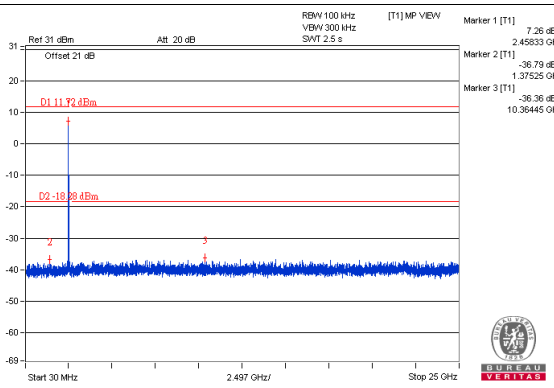
CH 1



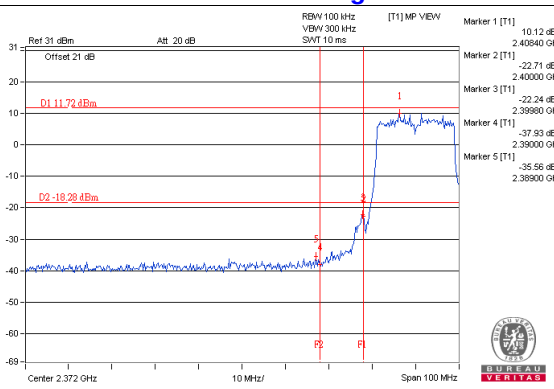
CH 6



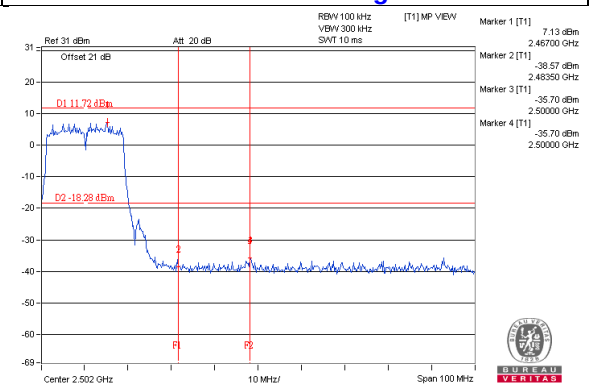
CH 11



CH 1 Band edge

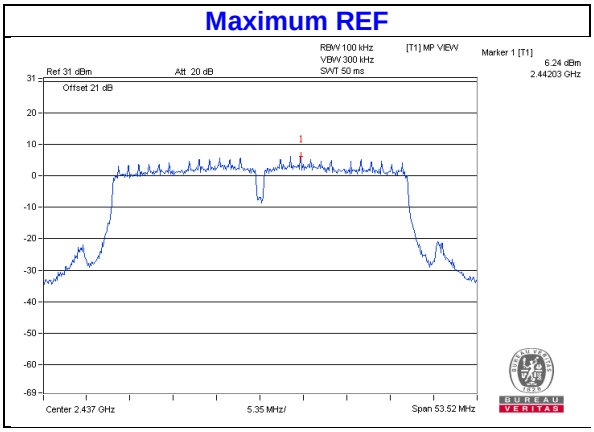


CH 11 Band edge

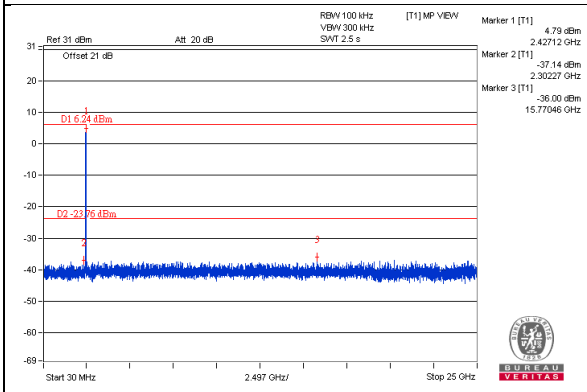


802.11n (HT40) - Chain 0

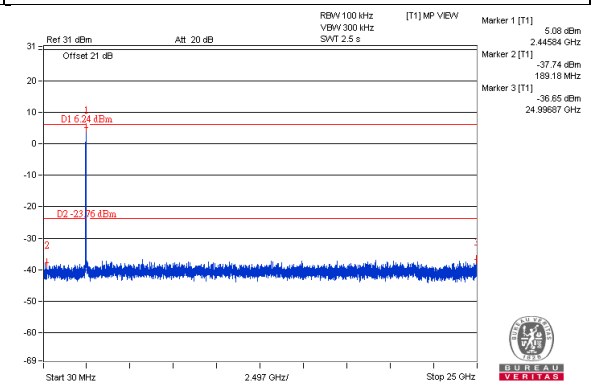
Maximum REF



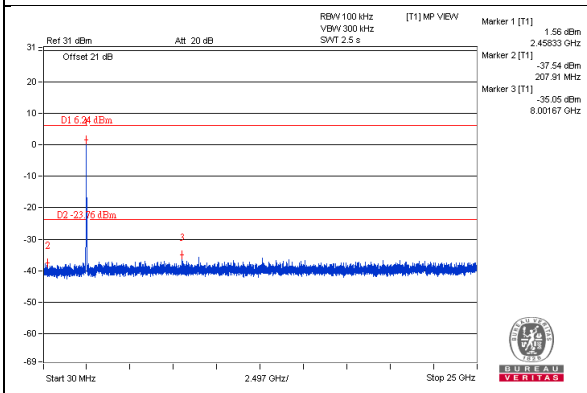
CH 3



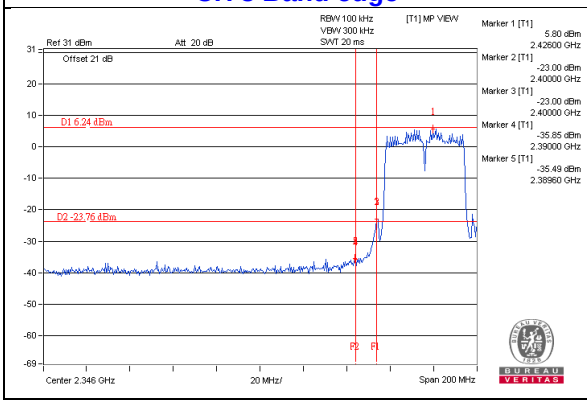
CH 6



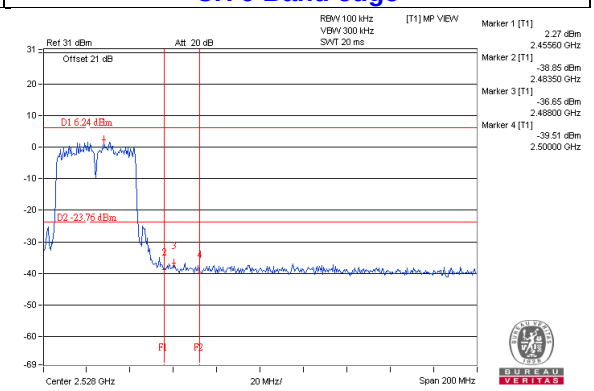
CH 9



CH 3 Band edge

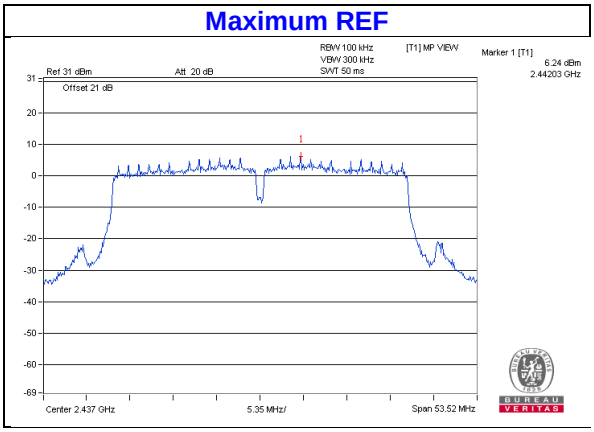


CH 9 Band edge

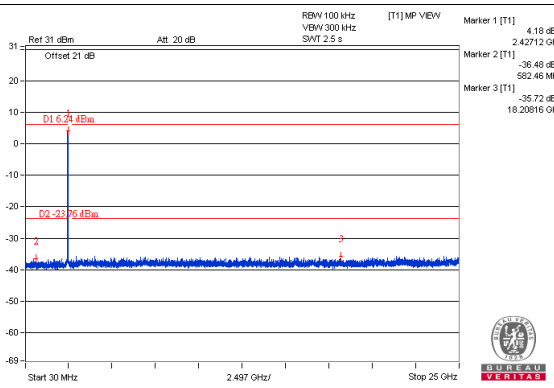


CHAIN 1

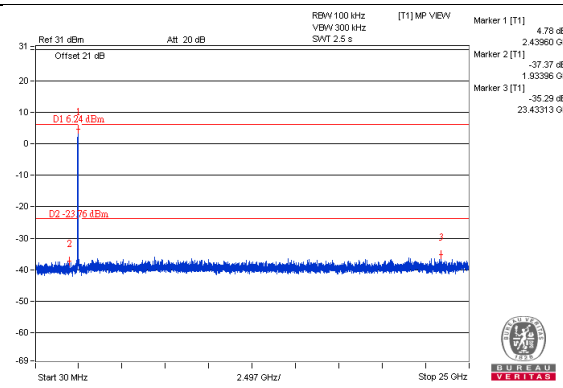
Maximum REF



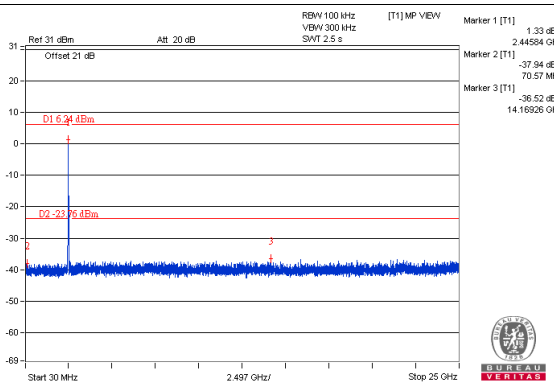
CH 3



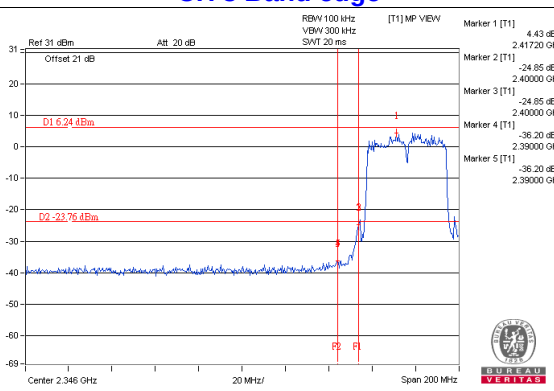
CH 6



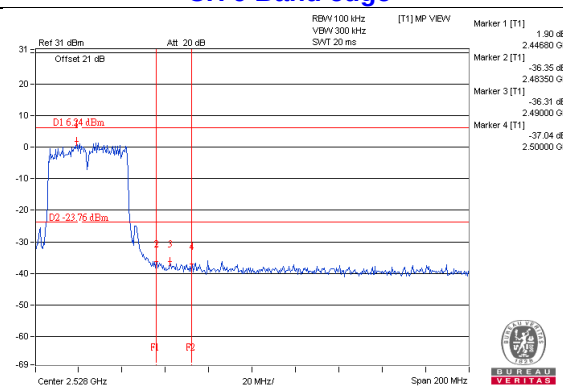
CH 9



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 accredited and approved according to ISO/IEC 17025.

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

Linko EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

--- END ---