FCC Test Report (WLAN)

Report No.:	RF180625E05C
FCC ID:	2ABTEG1500
Test Model:	Fios-G1500
Received Date:	Sep. 18, 2018
Test Date:	Oct. 16 to 17, 2018
Issued Date:	Nov. 06, 2018
Applicant:	Verizon Online LLC
Address:	1300 I Street NW, Room 400W, Washington, District of Columbia, 20005 United State
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
FCC Registration / Designation Number:	723255 / TW2022

Testing Laboratory
2022

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Release Control Record

Issue No.	Description	Date Issued
RF180625E05C	Original release.	Nov. 06, 2018

1 Certificate of Conformity

Product:	Fios-G1500
Brand:	Verizon
Test Model:	Fios-G1500
Sample Status:	ENGINEERING SAMPLE
Applicant:	Verizon Online LLC
Test Date:	Oct. 16 to 17, 2018
Standards:	47 CFR FCC Part 15, Subpart C (Section 15.247) ANSI C63.10: 2013

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

Prepared by : Phoenix Huang , **Date:** Nov. 06, 2018

Phoenix Huang / Specialist

Approved by : , **Date:** Nov. 06, 2018

Max Chen / Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart C (Section 15.247)			
FCC Clause	Test Item	Result	Remarks
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -0.1dB at 2390.00MHz.
15.247(b)	Conducted power	PASS	Meet the requirement of limit.

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) (±)
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.53 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	5.08 dB
	6GHz ~ 18GHz	4.98 dB
	18GHz ~ 40GHz	5.19 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT (WLAN)

Product	Fios-G1500
Brand	Verizon
Test Model	Fios-G1500
Status of EUT	ENGINEERING SAMPLE
Power Supply Rating	12Vdc from power adapter
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT (20/40) mode in 2.4GHz
Modulation Technology	DSSS,OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a/g: up to 54Mbps 802.11n: up to 600Mbps 802.11ac: up to 1733.3Mbps
Operating Frequency	**2.4GHz:** 2.412 ~ 2.462GHz **5GHz:** 5.18GHz ~ 5.24GHz, 5.745GHz ~ 5.825GHz
Number of Channel	**2.4GHz:** 802.11b, 802.11g, 802.11n (HT20), VHT20: 11 802.11n (HT40), VHT40: 7 **5GHz:** 802.11a, 802.11n (HT20), 802.11ac (VHT20): 9 802.11n (HT40), 802.11ac (VHT40): 4 802.11ac (VHT80): 2
Output Power	**2.4GHz:** 914.824mW **5GHz:** **CDD Mode:** **5.18 ~ 5.24GHz:** 513.781mW **5.745 ~ 5.825GHz:** 432.495mW **Beamforming Mode:** **5.18 ~ 5.24GHz:** 507.079mW **5.745 ~ 5.825GHz:** 432.495mW **SDM Mode:** **5.18 ~ 5.24GHz:** 513.781mW **5.745 ~ 5.825GHz:** 432.495mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x1
Data Cable Supplied	NA

Note:

1. This report is prepared for FCC class II change. The difference compared with the Report No.: RF180625E05 as the following:
   - ◆ Add second source components including resistors, inductors, capacitors, connectors, transistors, diodes and DDR3, these changed components are a part of RF transmitter circuit.
2. According to above condition, only Radiated Emissions and Conducted power test items need to be performed. And all data weres verified to meet the requirements.
3. There are WLAN and Z-Wave technology used for the EUT. The EUT has below radios as following table:

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

4. Simultaneously transmission condition.

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

5. The USB port of the EUT, it can't connect a WiFi/WWAN dongle and transmit simultaneously.
6. The EUT must be supplied with a power adapter as following table:

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

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

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

8. The EUT incorporates a MIMO function:

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

Note:
1. All of modulation mode support beamforming function except 2.4GHz & 802.11a modulation mode.
2. The modulation and bandwidth are similar for 802.11n mode for 20MHz (40MHz) and 802.11ac mode for 20MHz (40MHz), therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

9. 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	APCM	
-	√	√	√	-

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

APCM: Antenna Port Conducted Measurement

Radiated Emission Test (Above 1GHz):

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

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

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

Radiated Emission Test (Below 1GHz):

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

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

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

Antenna Port Conducted Measurement:

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

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

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

Test Condition:

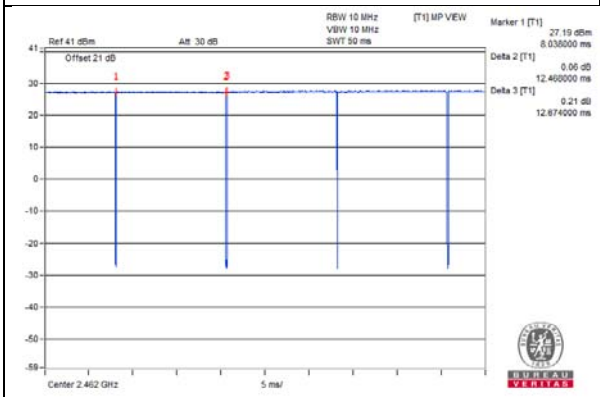
APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	23deg. C, 67%RH	120Vac, 60Hz	Rey Chen
RE<1G	21deg. C, 67%RH	120Vac, 60Hz	Frank Chuang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

3.3 Duty Cycle of Test Signal

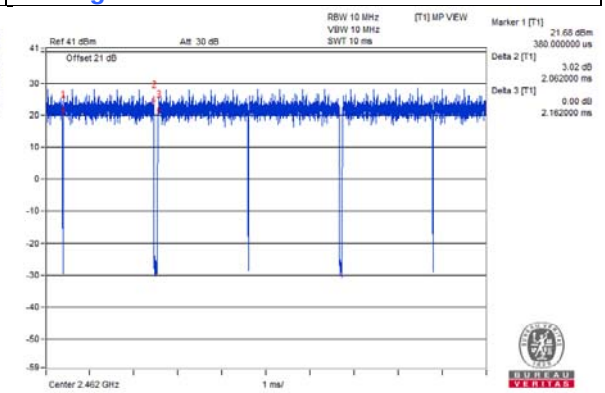
If duty cycle of test signal is ≥ 98 %, duty factor is not required.
If duty cycle of test signal is < 98%, duty factor shall be considered.

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

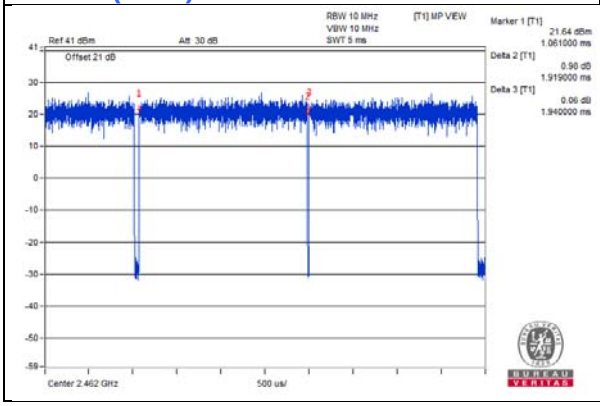
802.11b



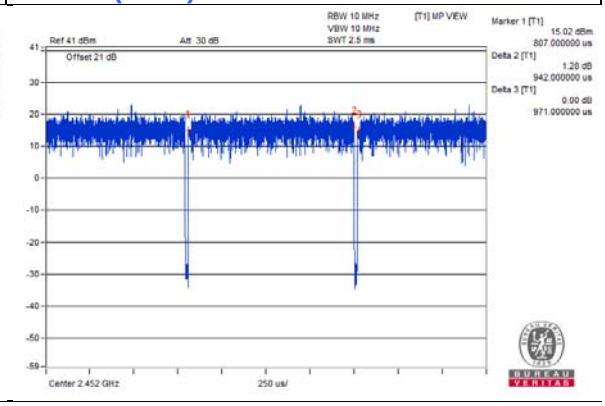
802.11g



802.11n (HT20)



802.11n (HT40)



3.4 Description of Support Units

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

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

Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Cable	1	0.1	Yes	0	Provided by Lab
2.	USB Cable	1	0.1	Yes	0	Provided by Lab
3.	RJ-45 Cable	1	10	No	0	Provided by Lab
4.	RJ-45 Cable	1	10	No	0	Provided by Lab
5.	Coaxial Cable	1	10	Yes	0	Provided by Lab
6.	DC Cable	1	1.5	No	0	Supplied by client

3.4.1 Configuration of System under Test

3.5 General Description of Applied Standards

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

FCC Part 15, Subpart C (15.247)
KDB 558074 D01 15.247 Meas Guidance v05
KDB 662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

Note:

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

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	July 12, 2018	July 11, 2019
Pre-Amplifier EMCI	EMC001340	980142	Feb. 09, 2018	Feb. 08, 2019
Loop Antenna(*) Electro-Metrics	EM-6879	264	Dec. 16, 2016	Dec. 15, 2018
RF Cable	NA	LOOPCAB-001	Jan. 15, 2018	Jan. 14, 2019
RF Cable	NA	LOOPCAB-002	Jan. 15, 2018	Jan. 14, 2019
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	May 05, 2018	May 04, 2019
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 29, 2017	Nov. 28, 2018
RF Cable	8D	966-3-1	Mar. 20, 2018	Mar. 19, 2019
RF Cable	8D	966-3-2	Mar. 20, 2018	Mar. 19, 2019
RF Cable	8D	966-3-3	Mar. 20, 2018	Mar. 19, 2019
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Sep. 27, 2018	Sep. 26, 2019
Horn_Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Dec. 12, 2017	Dec. 11, 2018
Pre-Amplifier EMCI	EMC12630SE	980384	Jan. 29, 2018	Jan. 28, 2019
RF Cable	EMC104-SM-SM-1200	160922	Jan. 29, 2018	Jan. 28, 2019
RF Cable	EMC104-SM-SM-2000	150317	Jan. 29, 2018	Jan. 28, 2019
RF Cable	EMC104-SM-SM-5000	150322	Jan. 29, 2018	Jan. 28, 2019
Spectrum Analyzer Keysight	N9030A	MY54490679	July 23, 2018	July 22, 2019
Pre-Amplifier EMCI	EMC184045SE	980386	Jan. 29, 2018	Jan. 28, 2019
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Dec. 14, 2017	Dec. 13, 2018
RF Cable	EMC102-KM-KM-1200	160924	Jan. 29, 2018	Jan. 28, 2019
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Spectrum Analyzer R&S	FSV40	100964	June 20, 2018	June 19, 2019
Power meter Anritsu	ML2495A	1014008	May 09, 2018	May 08, 2019
Power sensor Anritsu	MA2411B	0917122	May 09, 2018	May 08, 2019

Note:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. *The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in 966 Chamber No. 3.
4. The CANADA Site Registration No. is 20331-1
5. Loop antenna was used for all emissions below 30 MHz.
6. Tested Date: Oct. 16 to 17, 2018

4.1.3 Test Procedures

For Radiated emission below 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

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

For Radiated emission above 30MHz

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

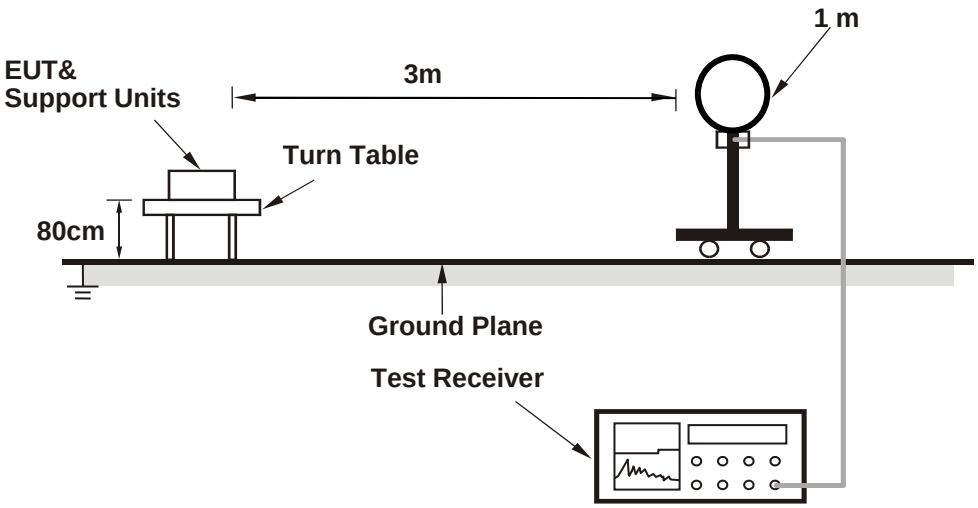
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

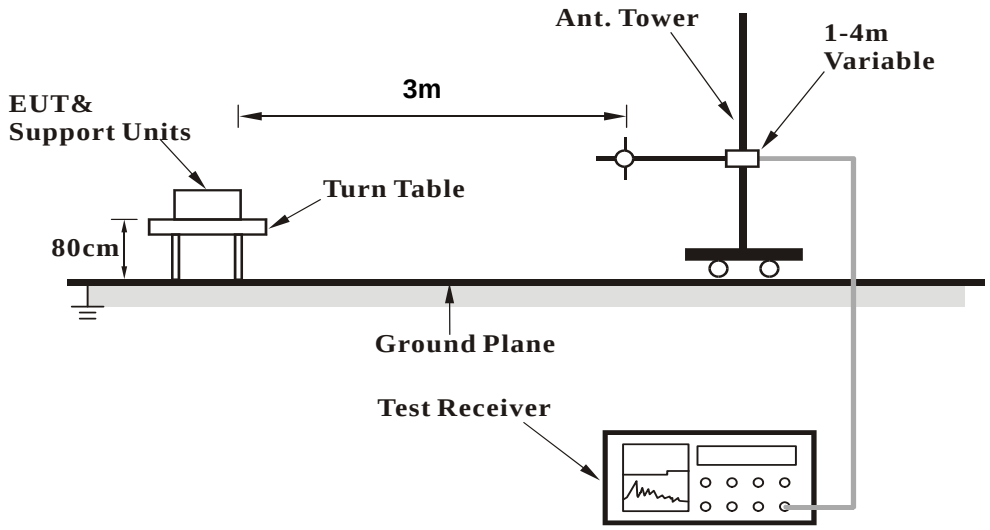
No deviation.

4.1.5 Test Setup

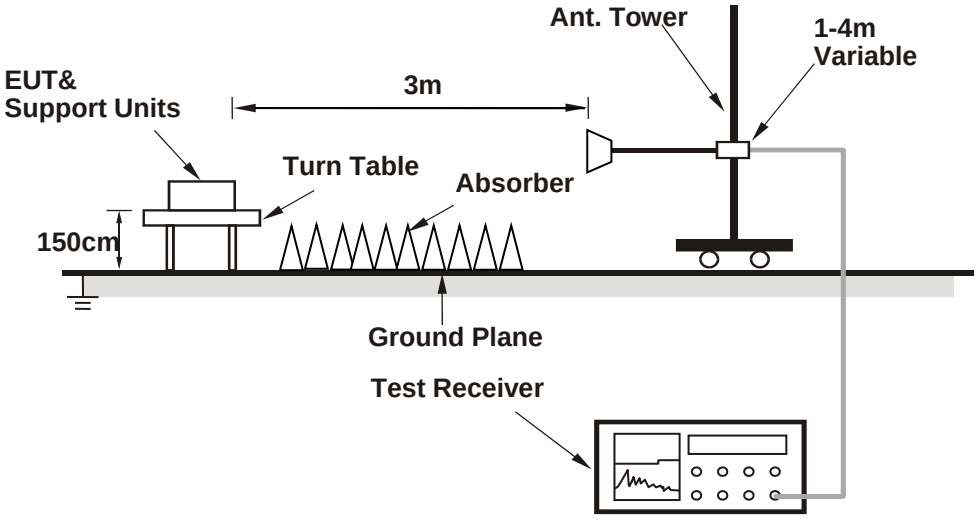
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

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

4.1.7 Test Results

Above 1GHz Data:

802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	57.9 PK	74.0	-16.1	1.33 H	49	60.6	-2.7
2	2390.00	49.7 AV	54.0	-4.3	1.33 H	49	52.4	-2.7
3	*2412.00	111.3 PK			1.33 H	49	114.0	-2.7
4	*2412.00	109.0 AV			1.33 H	49	111.7	-2.7
5	4824.00	44.0 PK	74.0	-30.0	2.23 H	145	42.4	1.6
6	4824.00	39.9 AV	54.0	-14.1	2.23 H	145	38.3	1.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	63.2 PK	74.0	-10.8	1.84 V	219	65.9	-2.7
2	2390.00	53.1 AV	54.0	-0.9	1.84 V	219	55.8	-2.7
3	*2412.00	114.3 PK			1.84 V	219	117.0	-2.7
4	*2412.00	111.9 AV			1.84 V	219	114.6	-2.7
5	4824.00	38.3 PK	74.0	-35.7	1.31 V	227	36.7	1.6
6	4824.00	30.5 AV	54.0	-23.5	1.31 V	227	28.9	1.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	55.9 PK	74.0	-18.1	1.28 H	63	58.6	-2.7
2	2390.00	43.5 AV	54.0	-10.5	1.28 H	63	46.2	-2.7
3	*2437.00	115.0 PK			1.28 H	63	118.0	-3.0
4	*2437.00	112.9 AV			1.28 H	63	115.9	-3.0
5	2483.50	56.8 PK	74.0	-17.2	1.28 H	63	59.8	-3.0
6	2483.50	44.9 AV	54.0	-9.1	1.28 H	63	47.9	-3.0
7	4874.00	43.7 PK	74.0	-30.3	2.23 H	163	42.1	1.6
8	4874.00	39.6 AV	54.0	-14.4	2.23 H	163	38.0	1.6
9	7311.00	48.2 PK	74.0	-25.8	1.43 H	318	40.5	7.7
10	7311.00	41.9 AV	54.0	-12.1	1.43 H	318	34.2	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	56.9 PK	74.0	-17.1	1.82 V	211	59.6	-2.7
2	2390.00	45.3 AV	54.0	-8.7	1.82 V	211	48.0	-2.7
3	*2437.00	116.2 PK			1.82 V	211	119.2	-3.0
4	*2437.00	114.2 AV			1.82 V	211	117.2	-3.0
5	2483.50	57.3 PK	74.0	-16.7	1.82 V	211	60.3	-3.0
6	2483.50	44.2 AV	54.0	-9.8	1.82 V	211	47.2	-3.0
7	4874.00	38.6 PK	74.0	-35.4	1.31 V	228	37.0	1.6
8	4874.00	30.8 AV	54.0	-23.2	1.31 V	228	29.2	1.6
9	7311.00	43.7 PK	74.0	-30.3	1.98 V	123	36.0	7.7
10	7311.00	34.5 AV	54.0	-19.5	1.98 V	123	26.8	7.7

REMARKS:

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

CHANNEL	TX Channel 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	115.3 PK			1.52 H	35	118.3	-3.0
2	*2462.00	112.8 AV			1.52 H	35	115.8	-3.0
3	2483.50	56.0 PK	74.0	-18.0	1.52 H	35	59.0	-3.0
4	2483.50	42.9 AV	54.0	-11.1	1.52 H	35	45.9	-3.0
5	4924.00	44.1 PK	74.0	-29.9	2.27 H	153	42.4	1.7
6	4924.00	39.8 AV	54.0	-14.2	2.27 H	153	38.1	1.7
7	7386.00	47.5 PK	74.0	-26.5	1.47 H	315	39.6	7.9
8	7386.00	41.5 AV	54.0	-12.5	1.47 H	315	33.6	7.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	116.8 PK			1.85 V	225	119.8	-3.0
2	*2462.00	114.5 AV			1.85 V	225	117.5	-3.0
3	2483.50	61.2 PK	74.0	-12.8	1.85 V	225	64.2	-3.0
4	2483.50	50.6 AV	54.0	-3.4	1.85 V	225	53.6	-3.0
5	4924.00	38.3 PK	74.0	-35.7	1.37 V	217	36.6	1.7
6	4924.00	30.8 AV	54.0	-23.2	1.37 V	217	29.1	1.7
7	7386.00	44.9 PK	74.0	-29.1	2.01 V	115	37.0	7.9
8	7386.00	35.4 AV	54.0	-18.6	2.01 V	115	27.5	7.9

REMARKS:

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

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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	69.2 PK	74.0	-4.8	1.76 H	101	71.9	-2.7
2	2390.00	52.3 AV	54.0	-1.7	1.76 H	101	55.0	-2.7
3	*2412.00	113.9 PK			1.76 H	101	116.6	-2.7
4	*2412.00	102.4 AV			1.76 H	101	105.1	-2.7
5	4824.00	43.3 PK	74.0	-30.7	1.97 H	251	41.7	1.6
6	4824.00	39.0 AV	54.0	-15.0	1.97 H	251	37.4	1.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.4 PK	74.0	-3.6	1.82 V	203	73.1	-2.7
2	2390.00	53.0 AV	54.0	-1.0	1.82 V	203	55.7	-2.7
3	*2412.00	114.7 PK			1.82 V	203	117.4	-2.7
4	*2412.00	105.2 AV			1.82 V	203	107.9	-2.7
5	4824.00	38.8 PK	74.0	-35.2	1.41 V	227	37.2	1.6
6	4824.00	31.4 AV	54.0	-22.6	1.41 V	227	29.8	1.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.5 PK	74.0	-4.5	1.94 H	82	72.2	-2.7
2	2390.00	52.6 AV	54.0	-1.4	1.94 H	82	55.3	-2.7
3	*2417.00	115.2 PK			1.94 H	82	118.0	-2.8
4	*2417.00	104.2 AV			1.94 H	82	107.0	-2.8
5	4834.00	43.5 PK	74.0	-30.5	1.97 H	237	41.9	1.6
6	4834.00	39.5 AV	54.0	-14.5	1.97 H	237	37.9	1.6
7	7251.00	48.3 PK	74.0	-25.7	1.34 H	322	40.5	7.8
8	7251.00	42.7 AV	54.0	-11.3	1.34 H	322	34.9	7.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	72.2 PK	74.0	-1.8	1.84 V	209	74.9	-2.7
2	**2390.00**	**53.9 AV**	**54.0**	**-0.1**	**1.84 V**	**209**	**56.6**	**-2.7**
3	*2417.00	116.1 PK			1.84 V	209	118.9	-2.8
4	*2417.00	106.2 AV			1.84 V	209	109.0	-2.8
5	4834.00	39.6 PK	74.0	-34.4	1.42 V	246	38.0	1.6
6	4834.00	32.4 AV	54.0	-21.6	1.42 V	246	30.8	1.6
7	7251.00	43.8 PK	74.0	-30.2	1.94 V	133	36.0	7.8
8	7251.00	36.2 AV	54.0	-17.8	1.94 V	133	28.4	7.8

REMARKS:

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

CHANNEL	TX Channel 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	60.5 PK	74.0	-13.5	1.69 H	90	63.2	-2.7
2	2390.00	48.1 AV	54.0	-5.9	1.69 H	90	50.8	-2.7
3	*2437.00	117.5 PK			1.69 H	90	120.5	-3.0
4	*2437.00	107.3 AV			1.69 H	90	110.3	-3.0
5	2483.50	59.9 PK	74.0	-14.1	1.69 H	90	62.9	-3.0
6	2483.50	46.7 AV	54.0	-7.3	1.69 H	90	49.7	-3.0
7	4874.00	44.2 PK	74.0	-29.8	1.97 H	256	42.6	1.6
8	4874.00	40.0 AV	54.0	-14.0	1.97 H	256	38.4	1.6
9	7311.00	48.2 PK	74.0	-25.8	1.35 H	309	40.5	7.7
10	7311.00	41.9 AV	54.0	-12.1	1.35 H	309	34.2	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	61.9 PK	74.0	-12.1	1.78 V	227	64.6	-2.7
2	2390.00	48.8 AV	54.0	-5.2	1.78 V	227	51.5	-2.7
3	*2437.00	117.6 PK			1.78 V	227	120.6	-3.0
4	*2437.00	109.0 AV			1.78 V	227	112.0	-3.0
5	2483.50	60.7 PK	74.0	-13.3	1.78 V	227	63.7	-3.0
6	2483.50	47.4 AV	54.0	-6.6	1.78 V	227	50.4	-3.0
7	4874.00	39.2 PK	74.0	-34.8	1.44 V	244	37.6	1.6
8	4874.00	31.3 AV	54.0	-22.7	1.44 V	244	29.7	1.6
9	7311.00	44.4 PK	74.0	-29.6	1.94 V	147	36.7	7.7
10	7311.00	35.0 AV	54.0	-19.0	1.94 V	147	27.3	7.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	113.8 PK			1.89 H	109	116.8	-3.0
2	*2457.00	103.4 AV			1.89 H	109	106.4	-3.0
3	2483.50	69.5 PK	74.0	-4.5	1.89 H	109	72.5	-3.0
4	2483.50	51.8 AV	54.0	-2.2	1.89 H	109	54.8	-3.0
5	4914.00	44.8 PK	74.0	-29.2	2.03 H	238	43.1	1.7
6	4914.00	40.8 AV	54.0	-13.2	2.03 H	238	39.1	1.7
7	7371.00	49.0 PK	74.0	-25.0	1.27 H	312	41.2	7.8
8	7371.00	43.0 AV	54.0	-11.0	1.27 H	312	35.2	7.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	116.2 PK			1.80 V	217	119.2	-3.0
2	*2457.00	106.2 AV			1.80 V	217	109.2	-3.0
3	2483.50	70.5 PK	74.0	-3.5	1.80 V	217	73.5	-3.0
4	2483.50	53.1 AV	54.0	-0.9	1.80 V	217	56.1	-3.0
5	4914.00	39.4 PK	74.0	-34.6	1.45 V	220	37.7	1.7
6	4914.00	32.5 AV	54.0	-21.5	1.45 V	220	30.8	1.7
7	7371.00	45.2 PK	74.0	-28.8	1.92 V	135	37.4	7.8
8	7371.00	35.9 AV	54.0	-18.1	1.92 V	135	28.1	7.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.2 PK			1.77 H	90	116.2	-3.0
2	*2462.00	102.5 AV			1.77 H	90	105.5	-3.0
3	2483.50	69.4 PK	74.0	-4.6	1.77 H	90	72.4	-3.0
4	2483.50	51.4 AV	54.0	-2.6	1.77 H	90	54.4	-3.0
5	4924.00	43.5 PK	74.0	-30.5	2.01 H	257	41.8	1.7
6	4924.00	39.1 AV	54.0	-14.9	2.01 H	257	37.4	1.7
7	7386.00	48.4 PK	74.0	-25.6	1.27 H	323	40.5	7.9
8	7386.00	42.0 AV	54.0	-12.0	1.27 H	323	34.1	7.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	115.3 PK			1.78 V	212	118.3	-3.0
2	*2462.00	105.7 AV			1.78 V	212	108.7	-3.0
3	2483.50	70.8 PK	74.0	-3.2	1.78 V	212	73.8	-3.0
4	2483.50	52.6 AV	54.0	-1.4	1.78 V	212	55.6	-3.0
5	4924.00	39.2 PK	74.0	-34.8	1.36 V	235	37.5	1.7
6	4924.00	31.1 AV	54.0	-22.9	1.36 V	235	29.4	1.7
7	7386.00	44.2 PK	74.0	-29.8	1.98 V	143	36.3	7.9
8	7386.00	35.0 AV	54.0	-19.0	1.98 V	143	27.1	7.9

REMARKS:

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

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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	67.2 PK	74.0	-6.8	1.77 H	112	69.9	-2.7
2	2390.00	52.4 AV	54.0	-1.6	1.77 H	112	55.1	-2.7
3	*2412.00	113.7 PK			1.77 H	112	116.4	-2.7
4	*2412.00	103.2 AV			1.77 H	112	105.9	-2.7
5	4824.00	43.6 PK	74.0	-30.4	1.91 H	261	42.0	1.6
6	4824.00	39.7 AV	54.0	-14.3	1.91 H	261	38.1	1.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.7 PK	74.0	-5.3	1.78 V	219	71.4	-2.7
2	2390.00	53.0 AV	54.0	-1.0	1.78 V	219	55.7	-2.7
3	*2412.00	115.1 PK			1.78 V	219	117.8	-2.7
4	*2412.00	105.6 AV			1.78 V	219	108.3	-2.7
5	4824.00	38.9 PK	74.0	-35.1	1.41 V	214	37.3	1.6
6	4824.00	31.0 AV	54.0	-23.0	1.41 V	214	29.4	1.6

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.0 PK	74.0	-5.0	1.83 H	110	71.7	-2.7
2	2390.00	50.9 AV	54.0	-3.1	1.83 H	110	53.6	-2.7
3	*2417.00	113.6 PK			1.83 H	110	116.4	-2.8
4	*2417.00	103.5 AV			1.83 H	110	106.3	-2.8
5	4834.00	44.0 PK	74.0	-30.0	2.01 H	251	42.4	1.6
6	4834.00	39.7 AV	54.0	-14.3	2.01 H	251	38.1	1.6
7	7251.00	47.6 PK	74.0	-26.4	1.30 H	313	39.8	7.8
8	7251.00	42.9 AV	54.0	-11.1	1.30 H	313	35.1	7.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.7 PK	74.0	-4.3	1.82 V	216	72.4	-2.7
2	2390.00	52.9 AV	54.0	-1.1	1.82 V	216	55.6	-2.7
3	*2417.00	115.9 PK			1.82 V	216	118.7	-2.8
4	*2417.00	106.0 AV			1.82 V	216	108.8	-2.8
5	4834.00	39.2 PK	74.0	-34.8	1.41 V	232	37.6	1.6
6	4834.00	31.9 AV	54.0	-22.1	1.41 V	232	30.3	1.6
7	7251.00	43.7 PK	74.0	-30.3	1.93 V	138	35.9	7.8
8	7251.00	36.7 AV	54.0	-17.3	1.93 V	138	28.9	7.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	59.2 PK	74.0	-14.8	1.82 H	76	61.9	-2.7
2	2390.00	47.1 AV	54.0	-6.9	1.82 H	76	49.8	-2.7
3	*2437.00	117.2 PK			1.82 H	76	120.2	-3.0
4	*2437.00	106.9 AV			1.82 H	76	109.9	-3.0
5	2483.50	60.3 PK	74.0	-13.7	1.82 H	76	63.3	-3.0
6	2483.50	47.9 AV	54.0	-6.1	1.82 H	76	50.9	-3.0
7	4874.00	44.5 PK	74.0	-29.5	1.97 H	240	42.9	1.6
8	4874.00	40.0 AV	54.0	-14.0	1.97 H	240	38.4	1.6
9	7311.00	47.8 PK	74.0	-26.2	1.33 H	328	40.1	7.7
10	7311.00	41.6 AV	54.0	-12.4	1.33 H	328	33.9	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	60.3 PK	74.0	-13.7	1.83 V	216	63.0	-2.7
2	2390.00	48.4 AV	54.0	-5.6	1.83 V	216	51.1	-2.7
3	*2437.00	118.9 PK			1.83 V	216	121.9	-3.0
4	*2437.00	109.4 AV			1.83 V	216	112.4	-3.0
5	2483.50	61.3 PK	74.0	-12.7	1.83 V	216	64.3	-3.0
6	2483.50	48.7 AV	54.0	-5.3	1.83 V	216	51.7	-3.0
7	4874.00	39.7 PK	74.0	-34.3	1.38 V	212	38.1	1.6
8	4874.00	31.5 AV	54.0	-22.5	1.38 V	212	29.9	1.6
9	7311.00	44.2 PK	74.0	-29.8	1.97 V	152	36.5	7.7
10	7311.00	35.2 AV	54.0	-18.8	1.97 V	152	27.5	7.7

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	113.8 PK			1.81 H	70	116.8	-3.0
2	*2457.00	103.5 AV			1.81 H	70	106.5	-3.0
3	2483.50	70.2 PK	74.0	-3.8	1.81 H	70	73.2	-3.0
4	2483.50	51.8 AV	54.0	-2.2	1.81 H	70	54.8	-3.0
5	4914.00	44.0 PK	74.0	-30.0	1.99 H	242	42.3	1.7
6	4914.00	39.9 AV	54.0	-14.1	1.99 H	242	38.2	1.7
7	7371.00	47.9 PK	74.0	-26.1	1.30 H	313	40.1	7.8
8	7371.00	42.5 AV	54.0	-11.5	1.30 H	313	34.7	7.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2457.00	115.8 PK			1.79 V	206	118.8	-3.0
2	*2457.00	105.7 AV			1.79 V	206	108.7	-3.0
3	2483.50	70.2 PK	74.0	-3.8	1.79 V	206	73.2	-3.0
4	2483.50	53.0 AV	54.0	-1.0	1.79 V	206	56.0	-3.0
5	4914.00	39.2 PK	74.0	-34.8	1.39 V	234	37.5	1.7
6	4914.00	31.7 AV	54.0	-22.3	1.39 V	234	30.0	1.7
7	7371.00	45.6 PK	74.0	-28.4	1.98 V	125	37.8	7.8
8	7371.00	36.3 AV	54.0	-17.7	1.98 V	125	28.5	7.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	113.9 PK			1.77 H	93	116.9	-3.0
2	*2462.00	102.9 AV			1.77 H	93	105.9	-3.0
3	2483.50	65.9 PK	74.0	-8.1	1.77 H	93	68.9	-3.0
4	2483.50	51.8 AV	54.0	-2.2	1.77 H	93	54.8	-3.0
5	4924.00	43.9 PK	74.0	-30.1	1.93 H	246	42.2	1.7
6	4924.00	40.0 AV	54.0	-14.0	1.93 H	246	38.3	1.7
7	7386.00	47.7 PK	74.0	-26.3	1.29 H	335	39.8	7.9
8	7386.00	41.5 AV	54.0	-12.5	1.29 H	335	33.6	7.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	114.1 PK			1.79 V	209	117.1	-3.0
2	*2462.00	104.7 AV			1.79 V	209	107.7	-3.0
3	2483.50	67.4 PK	74.0	-6.6	1.79 V	209	70.4	-3.0
4	2483.50	53.3 AV	54.0	-0.7	1.79 V	209	56.3	-3.0
5	4924.00	39.2 PK	74.0	-34.8	1.44 V	220	37.5	1.7
6	4924.00	31.0 AV	54.0	-23.0	1.44 V	220	29.3	1.7
7	7386.00	44.5 PK	74.0	-29.5	1.95 V	138	36.6	7.9
8	7386.00	35.6 AV	54.0	-18.4	1.95 V	138	27.7	7.9

REMARKS:

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

802.11n (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	68.1 PK	74.0	-5.9	1.85 H	84	70.8	-2.7
2	2390.00	51.8 AV	54.0	-2.2	1.85 H	84	54.5	-2.7
3	*2422.00	109.4 PK			1.85 H	84	112.3	-2.9
4	*2422.00	95.7 AV			1.85 H	84	98.6	-2.9
5	4844.00	43.8 PK	74.0	-30.2	1.95 H	248	42.2	1.6
6	4844.00	40.3 AV	54.0	-13.7	1.95 H	248	38.7	1.6
7	7266.00	48.9 PK	74.0	-25.1	1.34 H	325	41.1	7.8
8	7266.00	42.6 AV	54.0	-11.4	1.34 H	325	34.8	7.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	69.8 PK	74.0	-4.2	1.79 V	204	72.5	-2.7
2	2390.00	52.9 AV	54.0	-1.1	1.79 V	204	55.6	-2.7
3	*2422.00	110.2 PK			1.79 V	204	113.1	-2.9
4	*2422.00	97.8 AV			1.79 V	204	100.7	-2.9
5	4844.00	38.2 PK	74.0	-35.8	1.47 V	213	36.6	1.6
6	4844.00	30.4 AV	54.0	-23.6	1.47 V	213	28.8	1.6
7	7266.00	44.5 PK	74.0	-29.5	3.01 V	138	36.7	7.8
8	7266.00	35.3 AV	54.0	-18.7	3.01 V	138	27.5	7.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	68.5 PK	74.0	-5.5	1.81 H	105	71.2	-2.7
2	2390.00	51.8 AV	54.0	-2.2	1.81 H	105	54.5	-2.7
3	*2427.00	109.3 PK			1.81 H	105	112.2	-2.9
4	*2427.00	96.1 AV			1.81 H	105	99.0	-2.9
5	4854.00	44.1 PK	74.0	-29.9	1.99 H	264	42.5	1.6
6	4854.00	40.0 AV	54.0	-14.0	1.99 H	264	38.4	1.6
7	7281.00	48.4 PK	74.0	-25.6	1.39 H	328	40.5	7.9
8	7281.00	42.4 AV	54.0	-11.6	1.39 H	328	34.5	7.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.1 PK	74.0	-3.9	1.93 V	221	72.8	-2.7
2	2390.00	53.4 AV	54.0	-0.6	1.93 V	221	56.1	-2.7
3	*2427.00	110.9 PK			1.93 V	221	113.8	-2.9
4	*2427.00	98.6 AV			1.93 V	221	101.5	-2.9
5	4854.00	39.6 PK	74.0	-34.4	1.43 V	226	38.0	1.6
6	4854.00	31.5 AV	54.0	-22.5	1.43 V	226	29.9	1.6
7	7281.00	44.9 PK	74.0	-29.1	2.97 V	137	37.0	7.9
8	7281.00	35.5 AV	54.0	-18.5	2.97 V	137	27.6	7.9

REMARKS:

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

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	68.7 PK	74.0	-5.3	1.77 H	86	71.4	-2.7
2	2390.00	52.4 AV	54.0	-1.6	1.77 H	86	55.1	-2.7
3	*2437.00	111.0 PK			1.77 H	86	114.0	-3.0
4	*2437.00	98.3 AV			1.77 H	86	101.3	-3.0
5	2483.50	66.9 PK	74.0	-7.1	1.77 H	86	69.9	-3.0
6	2483.50	49.0 AV	54.0	-5.0	1.77 H	86	52.0	-3.0
7	4874.00	43.2 PK	74.0	-30.8	1.91 H	260	41.6	1.6
8	4874.00	39.4 AV	54.0	-14.6	1.91 H	260	37.8	1.6
9	7311.00	48.3 PK	74.0	-25.7	1.39 H	316	40.6	7.7
10	7311.00	42.0 AV	54.0	-12.0	1.39 H	316	34.3	7.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.0 PK	74.0	-4.0	1.46 V	222	72.7	-2.7
2	2390.00	53.5 AV	54.0	-0.5	1.46 V	222	56.2	-2.7
3	*2437.00	111.8 PK			1.46 V	222	114.8	-3.0
4	*2437.00	100.8 AV			1.46 V	222	103.8	-3.0
5	2483.50	67.5 PK	74.0	-6.5	1.46 V	222	70.5	-3.0
6	2483.50	49.8 AV	54.0	-4.2	1.46 V	222	52.8	-3.0
7	4874.00	38.7 PK	74.0	-35.3	1.45 V	203	37.1	1.6
8	4874.00	30.5 AV	54.0	-23.5	1.45 V	203	28.9	1.6
9	7311.00	43.9 PK	74.0	-30.1	3.04 V	134	36.2	7.7
10	7311.00	35.0 AV	54.0	-19.0	3.04 V	134	27.3	7.7

REMARKS:

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

CHANNEL	TX Channel 8	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	*2447.00	109.8 PK			1.74 H	108	112.8	-3.0
2	*2447.00	97.4 AV			1.74 H	108	100.4	-3.0
3	2483.50	71.5 PK	74.0	-2.5	1.74 H	108	74.5	-3.0
4	2483.50	52.8 AV	54.0	-1.2	1.74 H	108	55.8	-3.0
5	4894.00	44.2 PK	74.0	-29.8	1.96 H	259	42.5	1.7
6	4894.00	40.4 AV	54.0	-13.6	1.96 H	259	38.7	1.7
7	7341.00	48.7 PK	74.0	-25.3	1.30 H	340	40.8	7.9
8	7341.00	42.2 AV	54.0	-11.8	1.30 H	340	34.3	7.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2447.00	110.8 PK			2.03 V	234	113.8	-3.0
2	*2447.00	99.5 AV			2.03 V	234	102.5	-3.0
3	2483.50	72.0 PK	74.0	-2.0	2.03 V	234	75.0	-3.0
4	2483.50	53.2 AV	54.0	-0.8	2.03 V	234	56.2	-3.0
5	4894.00	39.3 PK	74.0	-34.7	1.44 V	203	37.6	1.7
6	4894.00	31.5 AV	54.0	-22.5	1.44 V	203	29.8	1.7
7	7341.00	43.0 PK	74.0	-31.0	3.01 V	147	35.1	7.9
8	7341.00	34.4 AV	54.0	-19.6	3.01 V	147	26.5	7.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	109.3 PK			1.85 H	101	112.3	-3.0
2	*2452.00	96.5 AV			1.85 H	101	99.5	-3.0
3	2483.50	70.4 PK	74.0	-3.6	1.85 H	101	73.4	-3.0
4	2483.50	52.4 AV	54.0	-1.6	1.85 H	101	55.4	-3.0
5	4904.00	44.2 PK	74.0	-29.8	1.93 H	244	42.5	1.7
6	4904.00	40.0 AV	54.0	-14.0	1.93 H	244	38.3	1.7
7	7356.00	48.2 PK	74.0	-25.8	1.34 H	339	40.3	7.9
8	7356.00	42.0 AV	54.0	-12.0	1.34 H	339	34.1	7.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2452.00	110.6 PK			2.02 V	223	113.6	-3.0
2	*2452.00	99.0 AV			2.02 V	223	102.0	-3.0
3	2483.50	71.6 PK	74.0	-2.4	2.02 V	223	74.6	-3.0
4	2483.50	53.1 AV	54.0	-0.9	2.02 V	223	56.1	-3.0
5	4904.00	38.4 PK	74.0	-35.6	1.46 V	199	36.7	1.7
6	4904.00	30.3 AV	54.0	-23.7	1.46 V	199	28.6	1.7
7	7356.00	44.7 PK	74.0	-29.3	3.01 V	130	36.8	7.9
8	7356.00	35.1 AV	54.0	-18.9	3.01 V	130	27.2	7.9

REMARKS:

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

Below 1GHz Data:

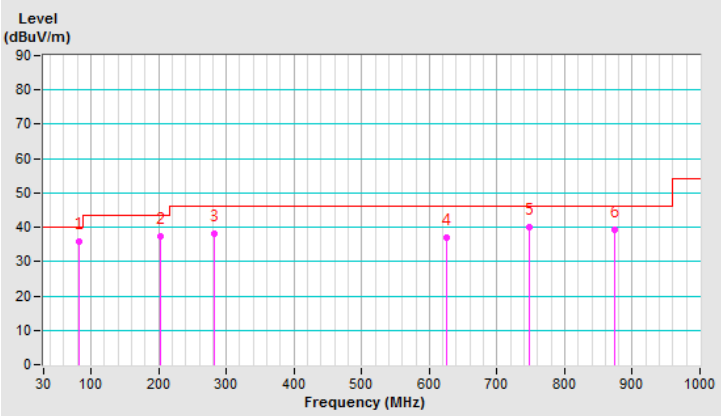
802.11b

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	**FREQ. (MHz)**	**EMISSION LEVEL (dBuV/m)**	**LIMIT (dBuV/m)**	**MARGIN (dB)**	**ANTENNA HEIGHT (m)**	**TABLE ANGLE (Degree)**	**RAW VALUE (dBuV)**	**CORRECTION FACTOR (dB/m)**
1	82.84	35.8 QP	40.0	-4.2	1.50 H	5	49.0	-13.2
2	201.89	37.5 QP	43.5	-6.0	1.00 H	145	48.4	-10.9
3	282.21	38.0 QP	46.0	-8.0	1.50 H	222	45.6	-7.6
4	625.45	36.9 QP	46.0	-9.1	1.50 H	171	36.0	0.9
5	747.65	40.0 QP	46.0	-6.0	1.50 H	124	36.8	3.2
6	873.52	39.2 QP	46.0	-6.8	1.50 H	167	34.7	4.5

REMARKS:

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

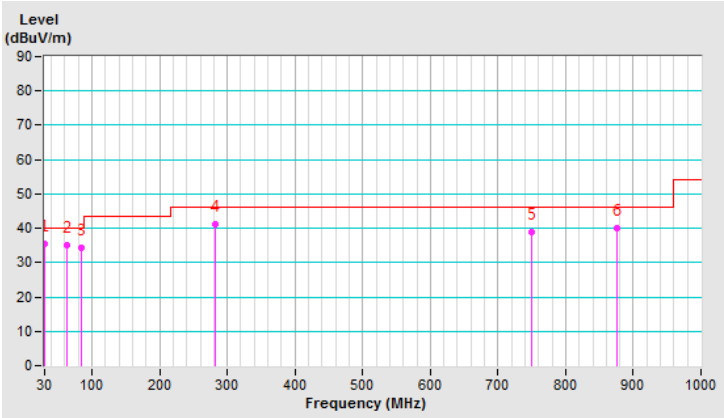


CHANNEL	TX Channel 11	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.91	35.6 QP	40.0	-4.4	1.00 V	358	44.6	-9.0
2	63.23	35.1 QP	40.0	-4.9	1.50 V	97	44.1	-9.0
3	83.93	34.4 QP	40.0	-5.6	1.50 V	177	47.8	-13.4
4	282.49	41.2 QP	46.0	-4.8	1.00 V	315	48.8	-7.6
5	749.94	39.0 QP	46.0	-7.0	2.00 V	176	35.7	3.3
6	874.97	40.1 QP	46.0	-5.9	1.50 V	177	35.6	4.5

REMARKS:

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



4.2 Conducted Output Power Measurement

4.2.1 Limits of Conducted Output Power Measurement

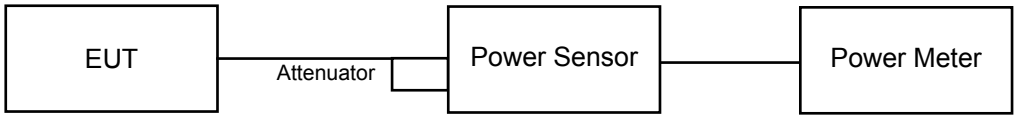
For systems using digital modulation in the 2400–2483.5 MHz bands: 1 Watt (30dBm)

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.

4.2.2 Test Setup



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedures

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

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Conditions

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.

4.2.7 Test Results

802.11b

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
1	2412	24.23	24.46	25.05	863.994	29.37	30.00	Pass
6	2437	24.19	24.38	24.26	803.265	29.05	30.00	Pass
11	2462	25.11	25.01	24.37	914.824	29.61	30.00	Pass

802.11g

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
1	2412	20.06	20.00	20.01	301.622	24.79	30.00	Pass
2	2417	21.01	21.00	21.02	378.55	25.78	30.00	Pass
6	2437	24.09	24.32	25.00	843.072	29.26	30.00	Pass
10	2457	21.02	21.00	21.03	379.132	25.79	30.00	Pass
11	2462	20.04	20.00	20.03	301.618	24.79	30.00	Pass

802.11n (HT20)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
1	2412	19.45	19.16	19.37	257.016	24.10	30.00	Pass
2	2417	20.41	20.11	20.46	323.639	25.10	30.00	Pass
6	2437	24.26	24.15	24.35	798.972	29.03	30.00	Pass
10	2457	21.05	20.41	21.03	364.016	25.61	30.00	Pass
11	2462	20.04	19.51	20.06	291.647	24.65	30.00	Pass

802.11n (HT40)

Chan.	Chan. Freq. (MHz)	Average Power (dBm)			Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2				
3	2422	19.21	19.02	19.07	243.891	23.87	30.00	Pass
4	2427	20.47	19.17	19.53	283.776	24.53	30.00	Pass
6	2437	21.19	21.29	21.55	408.997	26.12	30.00	Pass
8	2447	19.51	19.11	19.43	258.501	24.12	30.00	Pass
9	2452	18.25	18.02	18.11	194.935	22.90	30.00	Pass

5 Pictures of Test Arrangements

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

Appendix – Information on the Testing Laboratories

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

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

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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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