

FCC Test Report

Report No.: RF151110C01-1

FCC ID: XGK-C-ONE-E-ID

Test Model: C-One e-ID

Series Model: MR 2250, C-One e-ID NR, MR 2150 (refer to item 3.1 for more details)

Received Date: Nov. 10, 2015

Test Date: Nov. 18 ~ Dec. 04, 2015

Issued Date: Dec. 09, 2015

Applicant: Coppernic

Address: 185 avenue Archimede Aix en Provence France 13857

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

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan, R.O.C.

Test Location: No.19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)



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

Table of Contents

Release Control Record	4
1 Certificate of Conformity	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Modification Record	6
3 General Information	7
3.1 General Description of EUT	7
3.2 Description of Test Modes	9
3.2.1 Test Mode Applicability and Tested Channel Detail	10
3.3 Duty Cycle of Test Signal	12
3.4 Description of Support Units	13
3.4.1 Configuration of System under Test	13
3.5 General Description of Applied Standards	13
4 Test Types and Results	14
4.1 Radiated Emission and Bandedge Measurement	14
4.1.1 Limits of Radiated Emission and Bandedge Measurement	14
4.1.2 Test Instruments	15
4.1.3 Test Procedures	16
4.1.4 Deviation from Test Standard	16
4.1.5 Test Set Up	17
4.1.6 EUT Operating Conditions	17
4.1.7 Test Results	18
4.2 Conducted Emission Measurement	52
4.2.1 Limits of Conducted Emission Measurement	52
4.2.2 Test Instruments	52
4.2.3 Test Procedures	53
4.2.4 Deviation from Test Standard	53
4.2.5 Test Setup	53
4.2.6 EUT Operating Conditions	53
4.2.7 Test Results	54
4.3 Transmit Power Measurement	56
4.3.1 Limits of Transmit Power Measurement	56
4.3.2 Test Setup	56
4.3.3 Test Instruments	56
4.3.4 Test Procedure	56
4.3.5 Deviation from Test Standard	56
4.3.6 EUT Operating Conditions	56
4.3.7 Test Result	57
4.4 Peak Power Spectral Density Measurement	65
4.4.1 Limits of Peak Power Spectral Density Measurement	65
4.4.2 Test Setup	65
4.4.3 Test Instruments	65
4.4.4 Test Procedures	65
4.4.5 Deviation from Test Standard	66
4.4.6 EUT Operating Conditions	66
4.4.7 Test Results	67
4.5 Frequency Stability	71
4.5.1 Limits of Frequency Stability Measurement	71
4.5.2 Test Setup	71
4.5.3 Test Instruments	71
4.5.4 Test Procedure	71
4.5.5 Deviation from Test Standard	71
4.5.6 EUT Operating Condition	71

4.5.7 Test Results	72
4.6 6dB Bandwidth Measurment.....	73
4.6.1 Limits of 6dB Bandwidth Measurement.....	73
4.6.2 Test Setup.....	73
4.6.3 Test Instruments	73
4.6.4 Test Procedure	73
4.6.5 Deviation from Test Standard	73
4.6.6 EUT Operating Condition	73
4.6.7 Test Results	74
5 Pictures of Test Arrangements.....	75
Appendix – Information on the Testing Laboratories	76



A D T

Release Control Record

Issue No.	Description	Date Issued
RF151110C01-1	Original release	Dec. 09, 2015

1 Certificate of Conformity

Product: Mobile Terminal

Brand: COPPERNIC, Morpho (refer to item 3.1 for more details)

Test Model: C-One e-ID

Series Model: MR 2250, C-One e-ID NR, MR 2150 (refer to item 3.1 for more details)

Sample Status: Engineering sample

Applicant: Coppernic

Test Date: Nov. 18 ~ Dec. 04, 2015

Standards: 47 CFR FCC Part 15, Subpart E (Section 15.407)
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 : Celine Chou , **Date:** Dec. 09, 2015
Celine Chou / Specialist

Approved by : Ken Liu , **Date:** Dec. 09, 2015
Ken Liu / Senior Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.207 15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -4.43dB at 0.51312MHz.
15.407(b) (1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -0.1dB at 5350.00MHz.
15.407(a)(1/2 /3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
15.407(a)(1/2 /3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is IPEX not a standard connector.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expended Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.44 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.59 dB
	200MHz ~ 1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Mobile Terminal
Brand	COPPERNIC, Morpho (refer to note for more details)
Test Model	C-One e-ID
Series Model	MR 2250, C-One e-ID NR, MR 2150
Model Difference	Refer to note
Status of EUT	Engineering sample
Power Supply Rating	3.7Vdc (Battery) 5.35Vdc (Adapter)
Modulation Type	64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 72.2Mbps
Operating Frequency	5180 ~ 5240MHz, 5260 ~ 5320MHz, 5500 ~ 5700MHz & 5745 ~ 5825MHz
Number of Channel	5180 ~ 5240MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 5260 ~ 5320MHz: 4 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40) 5500 ~ 5700MHz: 8 for 802.11a, 802.11n (HT20) 3 for 802.11n (HT40) 5745 ~ 5825MHz: 5 for 802.11a, 802.11n (HT20) 2 for 802.11n (HT40)
Output Power	5180 ~ 5240MHz: 31.696mW 5260 ~ 5320MHz: 30.200mW 5500 ~ 5700MHz: 32.659mW 5745 ~ 5825MHz: 36.728mW
Antenna Type	PIFA antenna with 3.67dBi gain
Antenna Connector	IPEX
Accessory Device	Refer to note
Data Cable Supplied	Refer to note

Note:

1. The EUT provides 1 completed transmitter and 1 receiver.

Modulation Mode	TX Function
802.11a	1TX
802.11n (HT20)	1TX
802.11n (HT40)	1TX

2. All brands and models are listed as below. The model of the C-One e-ID was chosen for final test.

Brand	Model	Difference
COPPERNIC	C-One e-ID	1) With RF ID function (Model: C-One e-ID With RF ID function via software control) 2) The difference of brand and model between C-One e-ID and MR 2250 is for marketing
	C-One e-ID NR	1) Without RF ID function (disabled via software) 2) The difference of brand and model between C-One e-ID NR and MR 2150 is for marketing
Morpho	MR 2250	1) With RF ID function (With RF ID function via software control) 2) The difference of brand and model between C-One e-ID and MR 2250 is for marketing
	MR 2150	1) Without RF ID function (disabled via software) 2) The difference of brand and model between C-One e-ID NR and MR 2150 is for marketing

3. The EUT contains the following accessories.

No.	Product	Brand	Model	Description	Remark
1	Adapter	PHIHONG	PSAI10R-050Q	Input: 100-240Vac, 0.3A, 50-60Hz, 25-34VA Output: 5.35Vdc / 2.0A	Accessory
2	Battery 1	ETI CA Battery inc.	BP13-001080	Rating: 3.7Vdc Capacity, 3450mAh	Accessory
3	Battery 2		BP14-001160		Accessory
4	USB cable	-	-	1m shielded USB cable without core	Accessory

*Battery 1 & Battery 2 are electrically identical, different model names are for marketing purpose. Battery 1 was chosen for final test.

3.2 Description of Test Modes

For 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

For 5260 ~ 5320MHz

4 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency	Channel	Frequency
52	5260 MHz	60	5300 MHz
56	5280 MHz	64	5320 MHz

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

For 5500 ~ 5700MHz

8 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency	Channel	Frequency
100	5500 MHz	116	5580 MHz
104	5520 MHz	132	5660 MHz
108	5540 MHz	136	5680 MHz
112	5560 MHz	140	5700 MHz

3 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
102	5510 MHz	134	5670 MHz
110	5550 MHz		

For 5745 ~ 5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20):

Channel	Frequency	Channel	Frequency
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz		

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

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 3 axis. The worst case was found when positioned on **Y-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.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
-	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	13.5
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
-	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	13.5
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
-	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
-	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
-	802.11n (HT40)		151 to 159	151, 159	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.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36	OFDM	BPSK	6.0
-	802.11a	5260-5320	52 to 64		OFDM	BPSK	6.0
-	802.11a	5500-5700	100 to 140		OFDM	BPSK	6.0

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.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36	OFDM	BPSK	6.0
-	802.11a	5260-5320	52 to 64		OFDM	BPSK	6.0
-	802.11a	5500-5700	100 to 140		OFDM	BPSK	6.0

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.

EUT CONFIGURE MODE	MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0
-	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
-	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	13.5
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.0
-	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
-	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	13.5
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	BPSK	6.0
-	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	BPSK	6.5
-	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0
-	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5
-	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	13.5

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE _≥ 1G	25deg. C, 65%RH	120Vac, 60Hz	Chris Lin
RE _{<} 1G	25deg. C, 65%RH	120Vac, 60Hz	Chris Lin
PLC	25deg. C, 65%RH	120Vac, 60Hz	Chris Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Antony Lee

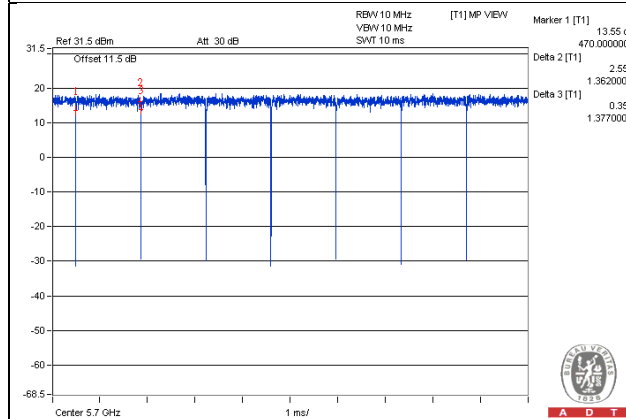
3.3 Duty Cycle of Test Signal

802.11a, 802.11n (HT20): Duty cycle of test signal is > 98%, duty factor is not required.

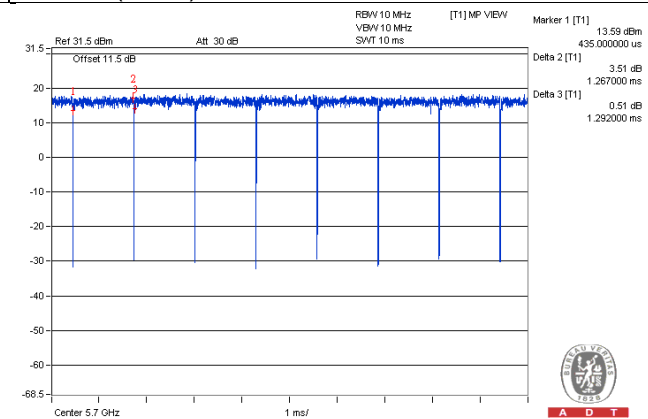
802.11n (HT40): Duty cycle of test signal is < 98 %, duty factor shall be considered.

802.11n (HT40): Duty cycle = $0.635/0.653 = 0.972$, Duty factor = $10 * \log(1/0.972) = 0.12$

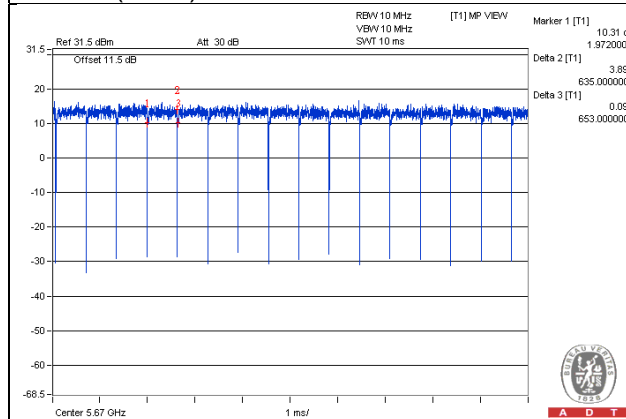
802.11a



802.11n (HT20)



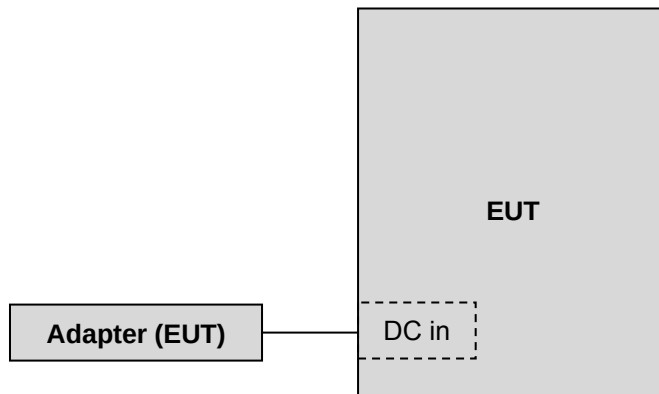
802.11n (HT40)



3.4 Description of Support Units

The EUT has been tested as an independent unit.

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 E (15.407)

789033 D02 General UNII Test Procedure New Rules v01

ANSI C63.10-2013

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

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table.

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.

LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS

APPLICABLE TO	LIMIT	
789033 D02 General UNII Test Procedures New Rules v01	FIELD STRENGTH AT 3m	
	PK:74 (dBuV/m)	AV:54 (dBuV/m)
APPLICABLE TO	EIRP LIMIT	EQUIVALENT FIELD STRENGTH AT 3m
15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBuV/m)
15.407(b)(2)		
15.407(b)(3)		
15.407(b)(4)	PK:-27 (dBm/MHz) ^{*1} PK:-17 (dBm/MHz) ^{*2}	PK: 68.2(dBuV/m) ^{*1} PK:78.2 (dBuV/m) ^{*2}

Note: ^{*1} beyond 10MHz of the band edge ^{*2} within 10 MHz of band edge

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

$$E = \frac{1000000 \sqrt{30P}}{3} \mu\text{V/m, where } P \text{ is the eirp (Watts).}$$

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Oct. 12, 2015	Oct. 11, 2016
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Jul. 08, 2015	Jul. 07, 2016
BILOG Antenna SCHWARZBECK	VULB9168	9168-155	Feb. 06, 2015	Feb. 05, 2016
HORN Antenna SCHWARZBECK	BBHA 9120D	9120D-1170	Feb. 05, 2015	Feb. 04, 2016
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Feb. 09, 2015	Feb. 08, 2016
Preamplifier Agilent	8449B	3008A01960	Aug. 09, 2015	Aug. 08, 2016
Preamplifier Agilent	8447D	2944A10631	Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-02(295012+309220)	Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH4-03(250724)	Aug. 09, 2015	Aug. 08, 2016
Software BV ADT	ADT_Radiated_V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	010303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021703	NA	NA
Turn Table BV ADT	TT100	TT93021703	NA	NA
Turn Table Controller BV ADT	SC100.	SC93021703	NA	NA
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 18, 2015	Oct. 17, 2016
High Speed Peak Power Meter	ML2495A	0824011	Jul. 09, 2015	Jul. 08, 2016
Power Sensor	MA2411B	0738171	Jul. 09, 2015	Jul. 08, 2016
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 08, 2015	Jun. 07, 2016

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 4.
3. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 460141.
5. The IC Site Registration No. is IC7450F-4.

4.1.3 Test Procedures

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

Note:

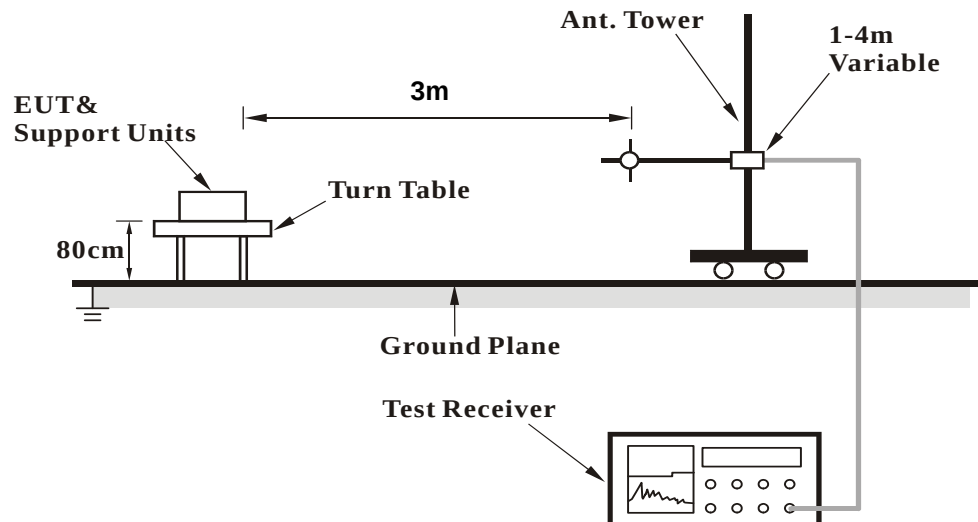
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

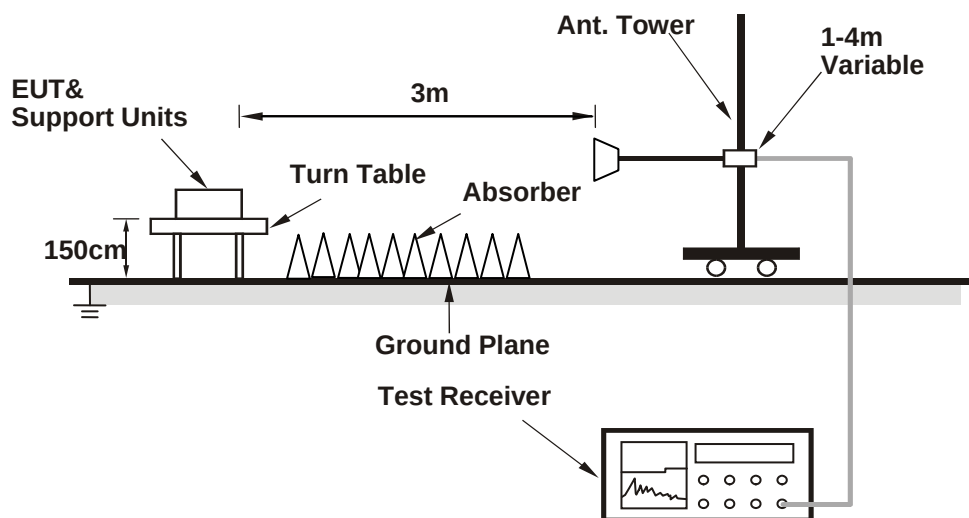
No deviation.

4.1.5 Test Set Up

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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

4.1.6 EUT Operating Conditions

- The EUT powered by adapter and under charging mode.
- Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz Worst-case Data:

802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	5150.00	57.9 PK	74.0	-16.1	1.65 H	220	52.10	5.80
2	5150.00	45.5 AV	54.0	-8.5	1.65 H	220	39.70	5.80
3	*5180.00	101.4 PK			1.62 H	216	61.50	39.90
4	*5180.00	90.2 AV			1.62 H	216	50.30	39.90
5	#10360.00	59.4 PK	74.0	-14.6	1.36 H	97	42.60	16.80
6	#10360.00	45.2 AV	54.0	-8.8	1.36 H	97	28.40	16.80
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	5150.00	59.4 PK	74.0	-14.6	1.55 V	340	53.60	5.80
2	5150.00	47.0 AV	54.0	-7.0	1.55 V	340	41.20	5.80
3	*5180.00	105.1 PK			1.53 V	337	65.20	39.90
4	*5180.00	94.7 AV			1.53 V	337	54.80	39.90
5	#10360.00	60.4 PK	74.0	-13.6	1.47 V	87	43.60	16.80
6	#10360.00	46.5 AV	54.0	-7.5	1.47 V	87	29.70	16.80

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 40	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5200.00	100.3 PK			1.62 H	222	60.40	39.90
2	*5200.00	90.5 AV			1.62 H	222	50.60	39.90
3	#10400.00	59.2 PK	74.0	-14.8	1.38 H	57	41.90	17.30
4	#10400.00	45.1 AV	54.0	-8.9	1.38 H	57	27.80	17.30
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	*5200.00	104.6 PK			1.34 V	143	64.70	39.90
2	*5200.00	93.8 AV			1.34 V	143	53.90	39.90
3	#10400.00	60.5 PK	74.0	-13.5	1.06 V	31	43.20	17.30
4	#10400.00	47.0 AV	54.0	-7.0	1.06 V	31	29.70	17.30

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 48	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5240.00	102.2 PK			1.49 H	223	63.00	39.20
2	*5240.00	91.4 AV			1.49 H	223	52.20	39.20
3	5350.00	57.4 PK	74.0	-16.6	1.52 H	225	52.00	5.40
4	5350.00	47.3 AV	54.0	-6.7	1.52 H	225	41.90	5.40
5	#10480.00	59.2 PK	74.0	-14.8	1.14 H	57	41.90	17.30
6	#10480.00	45.2 AV	54.0	-8.8	1.14 H	57	27.90	17.30
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	*5240.00	104.6 PK			1.61 V	74	64.70	39.90
2	*5240.00	94.2 AV			1.61 V	74	54.30	39.90
3	5350.00	58.7 PK	74.0	-15.3	1.65 V	76	52.60	6.10
4	5350.00	46.6 AV	54.0	-7.4	1.65 V	76	40.50	6.10
5	#10480.00	60.0 PK	74.0	-14.0	1.07 V	41	42.70	17.30
6	#10480.00	47.0 AV	54.0	-7.0	1.07 V	41	29.70	17.30

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 52	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	5150.00	57.1 PK	74.0	-16.9	1.38 H	230	51.30	5.80
2	5150.00	46.2 AV	54.0	-7.8	1.38 H	230	40.40	5.80
3	*5260.00	102.2 PK			1.35 H	223	62.40	39.80
4	*5260.00	91.4 AV			1.35 H	223	51.60	39.80
5	#10520.00	58.5 PK	74.0	-15.5	1.23 H	64	41.30	17.20
6	#10520.00	44.7 AV	54.0	-9.3	1.23 H	64	27.50	17.20
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	5150.00	58.8 PK	74.0	-15.2	1.60 V	75	53.00	5.80
2	5150.00	46.0 AV	54.0	-8.0	1.60 V	75	40.20	5.80
3	*5260.00	104.4 PK			1.58 V	73	64.60	39.80
4	*5260.00	94.1 AV			1.58 V	73	54.30	39.80
5	#10520.00	59.9 PK	74.0	-14.1	1.47 V	87	42.70	17.20
6	#10520.00	46.7 AV	54.0	-7.3	1.47 V	87	29.50	17.20

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 60	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5300.00	101.3 PK			1.00 H	185	61.50	39.80
2	*5300.00	91.0 AV			1.00 H	185	51.20	39.80
3	10600.00	59.0 PK	74.0	-15.0	1.08 H	49	41.60	17.40
4	10600.00	44.6 AV	54.0	-9.4	1.08 H	49	27.20	17.40
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	*5300.00	104.8 PK			1.50 V	75	65.00	39.80
2	*5300.00	93.9 AV			1.50 V	75	54.10	39.80
3	10600.00	60.0 PK	74.0	-14.0	1.52 V	47	42.60	17.40
4	10600.00	45.8 AV	54.0	-8.2	1.52 V	47	28.40	17.40

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 64	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5320.00	102.8 PK			1.49 H	222	62.80	40.00
2	*5320.00	92.1 AV			1.49 H	222	52.10	40.00
3	5350.00	47.6 PK	74.0	-26.4	1.51 H	225	41.50	6.10
4	5350.00	44.8 AV	54.0	-9.2	1.51 H	225	38.70	6.10
5	10640.00	58.9 PK	74.0	-15.1	1.20 H	85	41.60	17.30
6	10640.00	44.7 AV	54.0	-9.3	1.20 H	85	27.40	17.30
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	*5320.00	104.3 PK			1.59 V	73	64.30	40.00
2	*5320.00	94.2 AV			1.59 V	73	54.20	40.00
3	5350.00	66.9 PK	74.0	-7.1	1.61 V	75	60.80	6.10
4	5350.00	50.6 AV	54.0	-3.4	1.61 V	75	44.50	6.10
5	10640.00	59.9 PK	74.0	-14.1	1.55 V	203	42.60	17.30
6	10640.00	45.7 AV	54.0	-8.3	1.55 V	203	28.40	17.30

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 100	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	5460.00	56.5 PK	74.0	-17.5	2.30 H	90	50.10	6.40
2	5460.00	43.8 AV	54.0	-10.2	2.30 H	90	37.40	6.40
3	#5470.00	58.1 PK	74.0	-15.9	2.30 H	90	51.60	6.50
4	#5470.00	44.9 AV	54.0	-9.1	2.30 H	90	38.40	6.50
5	*5500.00	101.5 PK			2.26 H	87	61.00	40.50
6	*5500.00	88.9 AV			2.26 H	87	48.40	40.50
7	11000.00	59.4 PK	74.0	-14.6	1.26 H	87	41.30	18.10
8	11000.00	45.6 AV	54.0	-8.4	1.26 H	87	27.50	18.10
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	5460.00	56.9 PK	74.0	-17.1	1.72 V	153	50.50	6.40
2	5460.00	44.8 AV	54.0	-9.2	1.72 V	153	38.40	6.40
3	#5470.00	58.8 PK	74.0	-15.2	1.72 V	153	52.30	6.50
4	#5470.00	46.6 AV	54.0	-7.4	1.72 V	153	40.10	6.50
5	*5500.00	103.5 PK			1.70 V	150	63.00	40.50
6	*5500.00	93.3 AV			1.70 V	150	52.80	40.50
7	11000.00	60.4 PK	74.0	-13.6	1.26 V	85	42.30	18.10
8	11000.00	46.5 AV	54.0	-7.5	1.26 V	85	28.40	18.10

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 116	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5580.00	101.0 PK			2.04 H	81	60.70	40.30
2	*5580.00	90.1 AV			2.04 H	81	49.80	40.30
3	11160.00	60.2 PK	74.0	-13.8	1.26 H	87	41.60	18.60
4	11160.00	46.0 AV	54.0	-8.0	1.26 H	87	27.40	18.60
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	*5580.00	103.5 PK			2.71 V	106	63.20	40.30
2	*5580.00	92.0 AV			2.71 V	106	51.70	40.30
3	11160.00	61.2 PK	74.0	-12.8	1.32 V	64	42.60	18.60
4	11160.00	47.3 AV	54.0	-6.7	1.32 V	64	28.70	18.60

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 140	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5700.00	100.3 PK			2.27 H	85	59.60	40.70
2	*5700.00	90.4 AV			2.27 H	85	49.70	40.70
3	#5725.00	57.9 PK	74.0	-16.1	2.30 H	90	51.20	6.70
4	#5725.00	45.4 AV	54.0	-8.6	2.30 H	90	38.70	6.70
5	11400.00	59.8 PK	74.0	-14.2	1.28 H	74	41.50	18.30
6	11400.00	45.4 AV	54.0	-8.6	1.28 H	74	27.10	18.30
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	*5700.00	102.2 PK			2.26 V	100	61.50	40.70
2	*5700.00	90.4 AV			2.26 V	100	49.70	40.70
3	#5725.00	59.3 PK	74.0	-14.7	2.30 V	105	52.60	6.70
4	#5725.00	47.3 AV	54.0	-6.7	2.30 V	105	40.60	6.70
5	11400.00	60.9 PK	74.0	-13.1	1.32 V	64	42.60	18.30
6	11400.00	47.9 AV	54.0	-6.1	1.32 V	64	29.60	18.30

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 149	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	#5714.00	56.6 PK	74.0	-17.4	1.02 H	85	50.00	6.60
2	#5714.00	44.4 AV	54.0	-9.6	1.02 H	85	37.80	6.60
3	#5722.00	58.3 PK	78.2	-19.9	1.02 H	85	51.60	6.70
4	#5725.00	50.3 PK	78.2	-27.9	1.02 H	85	43.60	6.70
5	*5745.00	100.1 PK			1.00 H	81	59.10	41.00
6	*5745.00	89.5 AV			1.00 H	81	48.50	41.00
7	11490.00	59.8 PK	74.0	-14.2	1.23 H	64	41.50	18.30
8	11490.00	45.7 AV	54.0	-8.3	1.23 H	64	27.40	18.30
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	#5714.00	58.2 PK	74.0	-15.8	1.02 V	96	51.60	6.60
2	#5714.00	45.3 AV	54.0	-8.7	1.02 V	96	38.70	6.60
3	#5722.00	60.3 PK	78.2	-17.9	1.02 V	96	53.60	6.70
4	#5725.00	55.7 PK	78.2	-22.5	1.02 V	96	49.00	6.70
5	*5745.00	102.6 PK			1.00 V	94	61.60	41.00
6	*5745.00	90.0 AV			1.00 V	94	49.00	41.00
7	11490.00	60.9 PK	74.0	-13.1	1.35 V	87	42.60	18.30
8	11490.00	46.8 AV	54.0	-7.2	1.35 V	87	28.50	18.30

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5785.00	100.4 PK			2.17 H	86	59.40	41.00
2	*5785.00	90.1 AV			2.17 H	86	49.10	41.00
3	11570.00	59.8 PK	74.0	-14.2	1.32 H	64	41.50	18.30
4	11570.00	45.8 AV	54.0	-8.2	1.32 H	64	27.50	18.30
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	*5785.00	102.1 PK			1.25 V	90	61.10	41.00
2	*5785.00	91.3 AV			1.25 V	90	50.30	41.00
3	11570.00	60.9 PK	74.0	-13.1	1.32 V	69	42.60	18.30
4	11570.00	46.8 AV	54.0	-7.2	1.32 V	69	28.50	18.30

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 165	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5825.00	100.2 PK			1.31 H	83	59.00	41.20
2	*5825.00	88.0 AV			1.31 H	83	46.80	41.20
3	#5850.00	49.9 PK	78.2	-28.3	1.35 H	85	42.60	7.30
4	#5853.00	60.9 PK	78.2	-17.3	1.35 H	85	53.60	7.30
5	#5861.00	59.9 PK	74.0	-14.1	1.35 H	85	52.60	7.30
6	#5861.00	44.7 AV	54.0	-9.3	1.35 H	85	37.40	7.30
7	11650.00	59.5 PK	74.0	-14.5	1.23 H	64	41.50	18.00
8	11650.00	45.4 AV	54.0	-8.6	1.23 H	64	27.40	18.00
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	*5825.00	103.3 PK			1.00 V	92	62.10	41.20
2	*5825.00	93.5 AV			1.00 V	92	52.30	41.20
3	#5850.00	55.7 PK	78.2	-22.5	1.01 V	95	48.40	7.30
4	#5853.00	60.9 PK	78.2	-17.3	1.01 V	95	53.60	7.30
5	#5861.00	59.6 PK	74.0	-14.4	1.01 V	95	52.30	7.30
6	#5861.00	45.8 AV	54.0	-8.2	1.01 V	95	38.50	7.30
7	11650.00	60.6 PK	74.0	-13.4	1.36 V	97	42.60	18.00
8	11650.00	46.4 AV	54.0	-7.6	1.36 V	97	28.40	18.00

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (HT20)

CHANNEL	TX Channel 36	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	5150.00	57.3 PK	74.0	-16.7	1.02 H	220	51.50	5.80
2	5150.00	44.5 AV	54.0	-9.5	1.02 H	220	38.70	5.80
3	*5180.00	100.0 PK			1.00 H	219	60.10	39.90
4	*5180.00	90.1 AV			1.00 H	219	50.20	39.90
5	#10360.00	58.4 PK	74.0	-15.6	1.17 H	89	41.60	16.80
6	#10360.00	44.6 AV	54.0	-9.4	1.17 H	89	27.80	16.80
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	5150.00	58.4 PK	74.0	-15.6	1.10 V	150	52.60	5.80
2	5150.00	46.1 AV	54.0	-7.9	1.10 V	150	40.30	5.80
3	*5180.00	104.6 PK			1.06 V	142	64.70	39.90
4	*5180.00	93.5 AV			1.06 V	142	53.60	39.90
5	#10360.00	59.4 PK	74.0	-14.6	1.27 V	48	42.60	16.80
6	#10360.00	45.2 AV	54.0	-8.8	1.27 V	48	28.40	16.80

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 40	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5200.00	100.9 PK			1.58 H	220	61.00	39.90
2	*5200.00	89.8 AV			1.58 H	220	49.90	39.90
3	#10400.00	58.8 PK	74.0	-15.2	1.16 H	31	41.50	17.30
4	#10400.00	45.7 AV	54.0	-8.3	1.16 H	31	28.40	17.30
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	*5200.00	104.9 PK			1.05 V	145	65.00	39.90
2	*5200.00	94.0 AV			1.05 V	145	54.10	39.90
3	#10400.00	58.8 PK	74.0	-15.2	1.06 V	31	41.50	17.30
4	#10400.00	46.8 AV	54.0	-7.2	1.06 V	31	29.50	17.30

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 48	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5240.00	100.0 PK			1.50 H	222	60.10	39.90
2	*5240.00	90.0 AV			1.50 H	222	50.10	39.90
3	5350.00	57.3 PK	74.0	-16.7	1.55 H	230	51.20	6.10
4	5350.00	44.8 AV	54.0	-9.2	1.55 H	230	38.70	6.10
5	#10480.00	59.0 PK	74.0	-15.0	1.17 H	48	41.70	17.30
6	#10480.00	45.2 AV	54.0	-8.8	1.17 H	48	27.90	17.30
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	*5240.00	105.3 PK			1.91 V	77	65.40	39.90
2	*5240.00	95.4 AV			1.91 V	77	55.50	39.90
3	5350.00	58.7 PK	74.0	-15.3	1.93 V	80	52.60	6.10
4	5350.00	46.2 AV	54.0	-7.8	1.93 V	80	40.10	6.10
5	#10480.00	60.0 PK	74.0	-14.0	1.32 V	69	42.70	17.30
6	#10480.00	45.7 AV	54.0	-8.3	1.32 V	69	28.40	17.30

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	5150.00	57.0 PK	74.0	-17.0	1.50 H	230	52.00	5.00
2	5150.00	44.5 AV	54.0	-9.5	1.50 H	230	39.50	5.00
3	*5260.00	103.1 PK			1.45 H	222	63.90	39.20
4	*5260.00	91.0 AV			1.45 H	222	51.80	39.20
5	#10520.00	58.8 PK	74.0	-15.2	1.17 H	48	41.50	17.30
6	#10520.00	44.6 AV	54.0	-9.4	1.17 H	48	27.30	17.30
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	5150.00	58.4 PK	74.0	-15.6	1.65 V	76	53.40	5.00
2	5150.00	45.9 AV	54.0	-8.1	1.65 V	76	40.90	5.00
3	*5260.00	105.5 PK			1.61 V	74	66.30	39.20
4	*5260.00	94.5 AV			1.61 V	74	55.30	39.20
5	#10520.00	59.8 PK	74.0	-14.2	1.25 V	87	42.50	17.30
6	#10520.00	46.8 AV	54.0	-7.2	1.25 V	87	29.50	17.30

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 60	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5300.00	103.4 PK			1.74 H	206	63.60	39.80
2	*5300.00	93.4 AV			1.74 H	206	53.60	39.80
3	10600.00	58.6 PK	74.0	-15.4	1.07 H	41	41.20	17.40
4	10600.00	44.8 AV	54.0	-9.2	1.07 H	41	27.40	17.40
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	*5300.00	105.9 PK			1.24 V	152	66.60	39.30
2	*5300.00	96.6 AV			1.24 V	152	57.30	39.30
3	10600.00	60.2 PK	74.0	-13.8	1.32 V	68	42.40	17.80
4	10600.00	46.4 AV	54.0	-7.6	1.32 V	68	28.60	17.80

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	*5320.00	104.7 PK			1.48 H	222	65.30	39.40
2	*5320.00	93.7 AV			1.48 H	222	54.30	39.40
3	5350.00	56.9 PK	74.0	-17.1	1.50 H	230	51.50	5.40
4	5350.00	44.1 AV	54.0	-9.9	1.50 H	230	38.70	5.40
5	10640.00	59.0 PK	74.0	-15.0	1.07 H	45	41.50	17.50
6	10640.00	45.9 AV	54.0	-8.1	1.07 H	45	28.40	17.50
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	*5320.00	105.1 PK			1.31 V	105	65.70	39.40
2	*5320.00	94.4 AV			1.31 V	105	55.00	39.40
3	5350.00	66.6 PK	74.0	-7.4	1.35 V	110	61.20	5.40
4	5350.00	49.9 AV	54.0	-4.1	1.35 V	110	44.50	5.40
5	#10460.00	59.8 PK	74.0	-14.2	1.27 V	48	42.60	17.20
6	#10460.00	45.9 AV	54.0	-8.1	1.27 V	48	28.70	17.20

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 100	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	5460.00	55.8 PK	74.0	-18.2	2.00 H	85	50.20	5.60
2	5460.00	43.0 AV	54.0	-11.0	2.00 H	85	37.40	5.60
3	#5470.00	56.9 PK	74.0	-17.1	2.00 H	85	51.20	5.70
4	#5470.00	44.1 AV	54.0	-9.9	2.00 H	85	38.40	5.70
5	*5500.00	99.5 PK			1.96 H	82	59.80	39.70
6	*5500.00	89.1 AV			1.96 H	82	49.40	39.70
7	11000.00	60.0 PK	74.0	-14.0	1.32 H	68	41.50	18.50
8	11000.00	45.6 AV	54.0	-8.4	1.32 H	68	27.10	18.50
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	5460.00	56.9 PK	74.0	-17.1	1.20 V	85	51.30	5.60
2	5460.00	44.3 AV	54.0	-9.7	1.20 V	85	38.70	5.60
3	#5470.00	58.3 PK	74.0	-15.7	1.20 V	85	52.60	5.70
4	#5470.00	45.8 AV	54.0	-8.2	1.20 V	85	40.10	5.70
5	*5500.00	101.3 PK			1.16 V	84	61.60	39.70
6	*5500.00	90.3 AV			1.16 V	84	50.60	39.70
7	11000.00	61.1 PK	74.0	-12.9	1.18 V	57	42.60	18.50
8	11000.00	47.5 AV	54.0	-6.5	1.18 V	57	29.00	18.50

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 116	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5580.00	99.7 PK			1.22 H	88	60.00	39.70
2	*5580.00	89.1 AV			1.22 H	88	49.40	39.70
3	11160.00	59.0 PK	74.0	-15.0	1.07 H	84	41.00	18.00
4	11160.00	45.4 AV	54.0	-8.6	1.07 H	84	27.40	18.00
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	*5580.00	101.5 PK			1.30 V	83	61.80	39.70
2	*5580.00	90.9 AV			1.30 V	83	51.20	39.70
3	11160.00	60.6 PK	74.0	-13.4	1.28 V	54	42.60	18.00
4	11160.00	46.6 AV	54.0	-7.4	1.28 V	54	28.60	18.00

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	*5700.00	99.8 PK			2.26 H	85	59.70	40.10
2	*5700.00	89.2 AV			2.26 H	85	49.10	40.10
3	#5725.00	57.4 PK	74.0	-16.6	2.30 H	90	51.30	6.10
4	#5725.00	44.0 AV	54.0	-10.0	2.30 H	90	37.90	6.10
5	11400.00	59.7 PK	74.0	-14.3	1.36 H	85	41.50	18.20
6	11400.00	45.3 AV	54.0	-8.7	1.36 H	85	27.10	18.20
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	*5700.00	101.2 PK			2.76 V	107	61.10	40.10
2	*5700.00	91.8 AV			2.76 V	107	51.70	40.10
3	#5725.00	58.7 PK	74.0	-15.3	2.80 V	110	52.60	6.10
4	#5725.00	46.2 AV	54.0	-7.8	2.80 V	110	40.10	6.10
5	11400.00	60.8 PK	74.0	-13.2	1.32 V	64	42.60	18.20
6	11400.00	46.4 AV	54.0	-7.6	1.32 V	64	28.20	18.20

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 149	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	#5714.00	58.6 PK	74.0	-15.4	2.30 H	90	52.60	6.00
2	#5714.00	44.4 AV	54.0	-9.6	2.30 H	90	38.40	6.00
3	#5722.00	57.4 PK	78.2	-20.8	2.30 H	90	51.30	6.10
4	#5725.00	49.4 PK	78.2	-28.8	2.30 H	90	43.30	6.10
5	*5745.00	96.8 PK			2.26 H	85	56.50	40.30
6	*5745.00	84.1 AV			2.26 H	85	43.80	40.30
7	11490.00	59.1 PK	74.0	-14.9	1.32 H	68	41.50	17.60
8	11490.00	44.7 AV	54.0	-9.3	1.32 H	68	27.10	17.60
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	#5714.00	58.6 PK	74.0	-15.4	2.25 V	105	52.60	6.00
2	#5714.00	46.3 AV	54.0	-7.7	2.25 V	105	40.30	6.00
3	#5722.00	59.7 PK	78.2	-18.5	2.25 V	105	53.60	6.10
4	#5725.00	54.7 PK	78.2	-23.5	2.25 V	105	48.60	6.10
5	*5745.00	101.7 PK			2.21 V	104	61.40	40.30
6	*5745.00	90.2 AV			2.21 V	104	49.90	40.30
7	11490.00	60.2 PK	74.0	-13.8	1.32 V	64	42.60	17.60
8	11490.00	46.0 AV	54.0	-8.0	1.32 V	64	28.40	17.60

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 157	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5785.00	96.6 PK			2.41 H	86	56.30	40.30
2	*5785.00	85.8 AV			2.41 H	86	45.50	40.30
3	11570.00	58.7 PK	74.0	-15.3	1.31 H	78	41.20	17.50
4	11570.00	44.6 AV	54.0	-9.4	1.31 H	78	27.10	17.50
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	*5785.00	101.8 PK			1.53 V	87	61.50	40.30
2	*5785.00	88.7 AV			1.53 V	87	48.40	40.30
3	11570.00	60.1 PK	74.0	-13.9	1.32 V	68	42.60	17.50
4	11570.00	46.1 AV	54.0	-7.9	1.32 V	68	28.60	17.50

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	*5825.00	97.6 PK			1.55 H	204	57.20	40.40
2	*5825.00	86.6 AV			1.55 H	204	46.20	40.40
3	#5850.00	50.6 PK	78.2	-27.6	1.60 H	210	44.20	6.40
4	#5853.00	57.7 PK	78.2	-20.5	1.60 H	210	51.30	6.40
5	#5861.00	57.4 PK	74.0	-16.6	1.60 H	210	51.00	6.40
6	#5861.00	44.3 AV	54.0	-9.7	1.60 H	210	37.90	6.40
7	11650.00	58.8 PK	74.0	-15.2	1.32 H	68	41.50	17.30
8	11650.00	44.4 AV	54.0	-9.6	1.32 H	68	27.10	17.30
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	*5825.00	102.7 PK			1.00 V	86	62.30	40.40
2	*5825.00	92.0 AV			1.00 V	86	51.60	40.40
3	#5850.00	54.9 PK	78.2	-23.3	1.01 V	90	48.50	6.40
4	#5853.00	59.7 PK	78.2	-18.5	1.01 V	90	53.30	6.40
5	#5861.00	59.0 PK	74.0	-15.0	1.01 V	90	52.60	6.40
6	#5861.00	46.9 AV	54.0	-7.1	1.01 V	90	40.50	6.40
7	11650.00	60.1 PK	74.0	-13.9	1.32 V	69	42.80	17.30
8	11650.00	45.4 AV	54.0	-8.6	1.32 V	69	28.10	17.30

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

802.11n (HT40)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	5150.00	64.2 PK	74.0	-9.8	1.00 H	100	59.20	5.00
2	5150.00	48.6 AV	54.0	-5.4	1.00 H	100	43.60	5.00
3	*5190.00	95.0 PK			1.00 H	100	55.90	39.10
4	*5190.00	84.5 AV			1.00 H	100	45.40	39.10
5	#10380.00	57.9 PK	74.0	-16.1	1.00 H	99	40.70	17.20
6	#10380.00	43.9 AV	54.0	-10.1	1.00 H	99	26.70	17.20
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	5150.00	69.1 PK	74.0	-4.9	1.04 V	67	64.10	5.00
2	5150.00	53.8 AV	54.0	-0.2	1.04 V	67	48.80	5.00
3	*5190.00	101.0 PK			1.05 V	66	61.90	39.10
4	*5190.00	90.1 AV			1.05 V	66	51.00	39.10
5	#10380.00	59.1 PK	74.0	-14.9	1.21 V	83	41.90	17.20
6	#10380.00	45.1 AV	54.0	-8.9	1.21 V	83	27.90	17.20

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 46	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5230.00	96.3 PK			1.00 H	100	57.10	39.20
2	*5230.00	85.4 AV			1.00 H	100	46.20	39.20
3	5350.00	57.7 PK	74.0	-16.3	1.00 H	97	52.30	5.40
4	5350.00	45.4 AV	54.0	-8.6	1.00 H	97	40.00	5.40
5	#10460.00	58.9 PK	74.0	-15.1	1.00 H	47	41.70	17.20
6	#10460.00	44.9 AV	54.0	-9.1	1.00 H	47	27.70	17.20
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	*5230.00	102.0 PK			1.04 V	69	62.80	39.20
2	*5230.00	91.3 AV			1.04 V	69	52.10	39.20
3	5350.00	59.2 PK	74.0	-14.8	1.03 V	68	53.80	5.40
4	5350.00	46.8 AV	54.0	-7.2	1.03 V	68	41.40	5.40
5	#10460.00	59.8 PK	74.0	-14.2	1.31 V	65	42.60	17.20
6	#10460.00	45.4 AV	54.0	-8.6	1.31 V	65	28.20	17.20

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 54	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	5150.00	57.3 PK	74.0	-16.7	1.84 H	356	52.30	5.00
2	5150.00	44.9 AV	54.0	-9.1	1.84 H	356	39.90	5.00
3	*5270.00	97.1 PK			1.85 H	358	57.90	39.20
4	*5270.00	86.4 AV			1.85 H	358	47.20	39.20
5	#10540.00	58.0 PK	74.0	-16.0	1.00 H	60	40.50	17.50
6	#10540.00	44.0 AV	54.0	-10.0	1.00 H	60	26.50	17.50
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	5150.00	59.2 PK	74.0	-14.8	1.07 V	76	54.20	5.00
2	5150.00	46.1 AV	54.0	-7.9	1.07 V	76	41.10	5.00
3	*5270.00	100.8 PK			1.10 V	73	61.60	39.20
4	*5270.00	90.1 AV			1.10 V	73	50.90	39.20
5	#10540.00	59.4 PK	74.0	-14.6	1.23 V	81	41.90	17.50
6	#10540.00	46.0 AV	54.0	-8.0	1.23 V	81	28.50	17.50

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	*5310.00	96.9 PK			1.75 H	356	57.60	39.30
2	*5310.00	86.7 AV			1.75 H	356	47.40	39.30
3	5350.00	69.4 PK	74.0	-4.6	1.70 H	358	64.00	5.40
4	5350.00	49.8 AV	54.0	-4.2	1.70 H	358	44.40	5.40
5	10620.00	58.5 PK	74.0	-15.5	1.00 H	88	40.80	17.70
6	10620.00	44.3 AV	54.0	-9.7	1.00 H	88	26.60	17.70
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	*5310.00	101.5 PK			1.08 V	76	62.20	39.30
2	*5310.00	91.0 AV			1.08 V	76	51.70	39.30
3	5350.00	73.0 PK	74.0	-1.0	1.02 V	79	67.60	5.40
4	5350.00	53.9 AV	54.0	-0.1	1.02 V	79	48.50	5.40
5	10620.00	59.6 PK	74.0	-14.4	1.21 V	47	41.90	17.70
6	10620.00	45.1 AV	54.0	-8.9	1.21 V	47	27.40	17.70

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * " : Fundamental frequency.

CHANNEL	TX Channel 102	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	5460.00	59.3 PK	74.0	-14.7	1.00 H	135	53.70	5.60
2	5460.00	44.2 AV	54.0	-9.8	1.00 H	135	38.60	5.60
3	#5470.00	68.8 PK	74.0	-5.2	1.00 H	135	63.10	5.70
4	#5470.00	51.2 AV	54.0	-2.8	1.00 H	135	45.50	5.70
5	*5510.00	95.4 PK			1.00 H	140	55.70	39.70
6	*5510.00	84.6 AV			1.00 H	140	44.90	39.70
7	11020.00	59.2 PK	74.0	-14.8	1.00 H	84	40.70	18.50
8	11020.00	45.3 AV	54.0	-8.7	1.00 H	84	26.80	18.50
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	5460.00	60.1 PK	74.0	-13.9	1.00 V	3	54.50	5.60
2	5460.00	44.9 AV	54.0	-9.1	1.00 V	3	39.30	5.60
3	#5470.00	69.8 PK	74.0	-4.2	1.00 V	3	64.10	5.70
4	#5470.00	52.7 AV	54.0	-1.3	1.00 V	3	47.00	5.70
5	*5510.00	99.6 PK			1.06 V	4	59.90	39.70
6	*5510.00	88.5 AV			1.06 V	4	48.80	39.70
7	11020.00	59.8 PK	74.0	-14.2	1.23 V	53	41.30	18.50
8	11020.00	46.3 AV	54.0	-7.7	1.23 V	53	27.80	18.50

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 110	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5550.00	97.0 PK			1.76 H	1	57.20	39.80
2	*5550.00	86.7 AV			1.76 H	1	46.90	39.80
3	11100.00	58.7 PK	74.0	-15.3	1.00 H	84	40.30	18.40
4	11100.00	45.3 AV	54.0	-8.7	1.00 H	84	26.90	18.40
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	*5550.00	99.8 PK			1.05 V	5	60.00	39.80
2	*5550.00	88.9 AV			1.05 V	5	49.10	39.80
3	11100.00	60.0 PK	74.0	-14.0	1.24 V	66	41.60	18.40
4	11100.00	46.0 AV	54.0	-8.0	1.24 V	66	27.60	18.40

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.

CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		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	*5670.00	95.4 PK			1.70 H	359	55.30	40.10
2	*5670.00	84.7 AV			1.70 H	359	44.60	40.10
3	#5725.00	58.3 PK	74.0	-15.7	1.70 H	10	52.20	6.10
4	#5725.00	45.6 AV	54.0	-8.4	1.70 H	10	39.50	6.10
5	11340.00	58.9 PK	74.0	-15.1	1.00 H	80	40.30	18.60
6	11340.00	45.1 AV	54.0	-8.9	1.00 H	80	26.50	18.60
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	*5670.00	98.3 PK			1.04 V	20	58.20	40.10
2	*5670.00	87.7 AV			1.04 V	20	47.60	40.10
3	#5725.00	60.0 PK	74.0	-14.0	1.07 V	19	53.90	6.10
4	#5725.00	47.5 AV	54.0	-6.5	1.07 V	19	41.40	6.10
5	11340.00	60.5 PK	74.0	-13.5	1.36 V	62	41.90	18.60
6	11340.00	46.3 AV	54.0	-7.7	1.36 V	62	27.70	18.60

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 151	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	#5714.90	63.7 PK	74.0	-10.3	1.79 H	2	57.70	6.00
2	#5714.90	46.8 AV	54.0	-7.2	1.79 H	2	40.80	6.00
3	#5722.90	66.0 PK	78.2	-12.2	1.79 H	2	59.90	6.10
4	#5725.00	56.7 PK	78.2	-21.5	1.79 H	2	50.60	6.10
5	*5755.00	94.6 PK			1.79 H	5	54.30	40.30
6	*5755.00	84.3 AV			1.79 H	5	44.00	40.30
7	11510.00	59.0 PK	74.0	-15.0	1.00 H	67	41.60	17.40
8	11510.00	44.4 AV	54.0	-9.6	1.00 H	67	27.00	17.40
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	#5714.90	67.7 PK	74.0	-6.3	1.03 V	14	61.70	6.00
2	#5714.90	49.9 AV	54.0	-4.1	1.03 V	14	43.90	6.00
3	#5722.90	70.6 PK	78.2	-7.6	1.03 V	14	64.50	6.10
4	#5725.00	60.3 PK	78.2	-17.9	1.03 V	14	54.20	6.10
5	*5755.00	97.9 PK			1.01 V	18	57.60	40.30
6	*5755.00	87.1 AV			1.01 V	18	46.80	40.30
7	11510.00	59.6 PK	74.0	-14.4	1.31 V	87	42.20	17.40
8	11510.00	46.4 AV	54.0	-7.6	1.31 V	87	29.00	17.40

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 159	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	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	*5795.00	95.4 PK			2.04 H	4	55.10	40.30
2	*5795.00	84.5 AV			2.04 H	4	44.20	40.30
3	#5850.00	49.0 PK	78.2	-29.2	2.04 H	3	42.60	6.40
4	#5852.10	56.9 PK	78.2	-21.3	2.04 H	3	50.50	6.40
5	#5860.10	63.2 PK	74.0	-10.8	2.04 H	3	56.80	6.40
6	#5860.10	46.4 AV	54.0	-7.6	2.04 H	3	40.00	6.40
7	11590.00	58.6 PK	74.0	-15.4	1.00 H	61	41.30	17.30
8	11590.00	43.9 AV	54.0	-10.1	1.00 H	61	26.60	17.30
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	*5795.00	98.0 PK			1.07 V	18	57.70	40.30
2	*5795.00	87.3 AV			1.07 V	18	47.00	40.30
3	#5850.00	49.7 PK	78.2	-28.5	1.05 V	11	43.30	6.40
4	#5852.10	57.2 PK	78.2	-21.0	1.05 V	11	50.80	6.40
5	#5860.10	66.5 PK	74.0	-7.5	1.05 V	11	60.10	6.40
6	#5860.10	48.4 AV	54.0	-5.6	1.05 V	11	42.00	6.40
7	11590.00	59.8 PK	74.0	-14.2	1.34 V	96	42.50	17.30
8	11590.00	45.3 AV	54.0	-8.7	1.34 V	96	28.00	17.30

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

Below 1GHz Worst-case Data: 802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	30MHz ~ 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	82.29	25.1 QP	40.0	-14.9	2.00 H	168	43.60	-18.50
2	181.25	30.5 QP	43.5	-13.0	1.26 H	259	45.80	-15.30
3	284.09	29.7 QP	46.0	-16.3	1.00 H	113	42.80	-13.10
4	371.41	31.0 QP	46.0	-15.0	1.00 H	6	42.50	-11.50
5	590.68	26.5 QP	46.0	-19.5	1.51 H	314	33.90	-7.40
6	936.07	32.2 QP	46.0	-13.8	1.26 H	176	33.20	-1.00
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	41.54	35.2 QP	40.0	-4.8	2.00 V	106	49.50	-14.30
2	159.91	29.9 QP	43.5	-13.6	1.00 V	299	43.50	-13.60
3	373.35	29.0 QP	46.0	-17.0	1.24 V	2	40.50	-11.50
4	528.58	23.7 QP	46.0	-22.3	1.00 V	8	32.50	-8.80
5	786.66	27.1 QP	46.0	-18.9	1.50 V	7	30.20	-3.10
6	938.01	35.4 QP	46.0	-10.6	1.00 V	210	36.40	-1.00

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)
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.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 16, 2015	Nov. 15, 2016
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Dec. 26, 2014	Dec. 25, 2015
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Feb. 26, 2015	Feb. 25, 2016
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 24, 2015	Jul. 23, 2016
Software ADT	BV ADT_Conc_ V7.3.7.3	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Shielded Room 1.

3. The VCCI Site Registration No. is C-2040.

4.2.3 Test Procedures

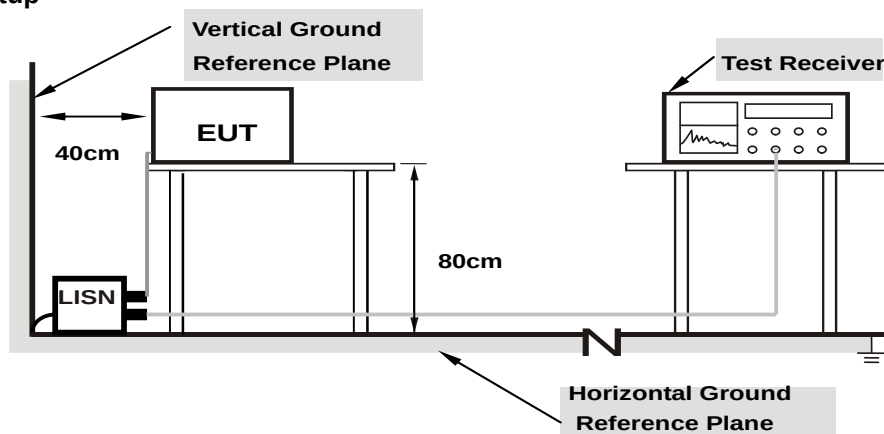
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

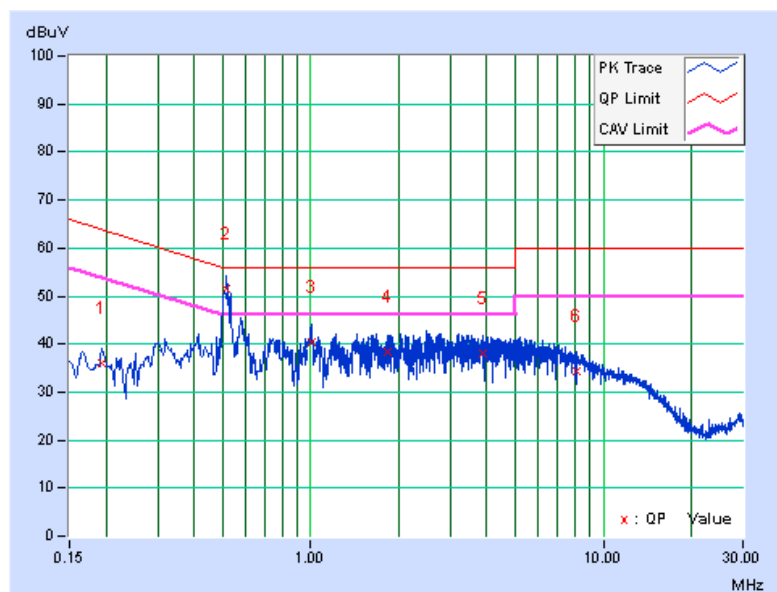
4.2.7 Test Results

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

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19305	9.92	26.13	17.37	36.05	27.29	63.90	53.90	-27.86	-26.62
2	0.51312	9.92	41.65	30.92	51.57	40.84	56.00	46.00	-4.43	-5.16
3	1.00629	10.03	30.36	18.77	40.39	28.80	56.00	46.00	-15.61	-17.20
4	1.82739	10.09	28.22	17.48	38.31	27.57	56.00	46.00	-17.69	-18.43
5	3.85668	10.18	27.72	17.21	37.90	27.39	56.00	46.00	-18.10	-18.61
6	8.11834	10.43	23.88	12.28	34.31	22.71	60.00	50.00	-25.69	-27.29

Remarks:

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

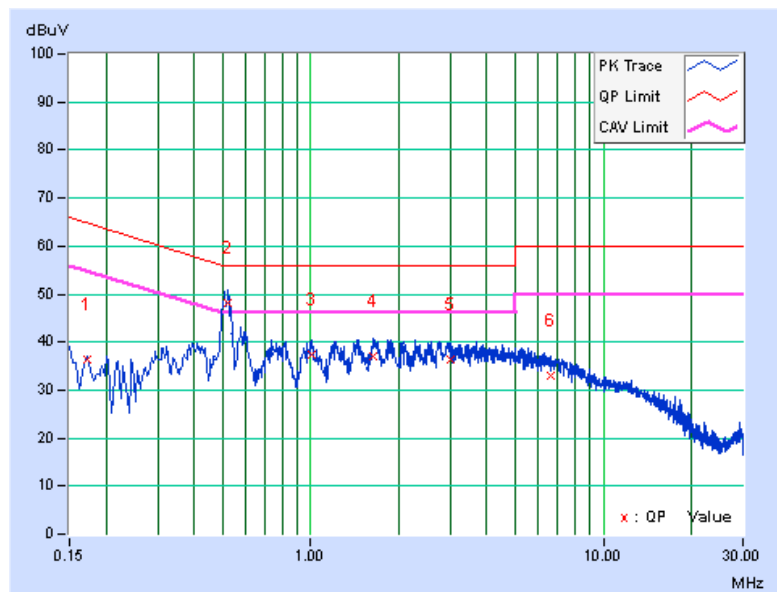


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
-------	-------------	-------------------	--------------------------------

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17328	9.96	26.42	21.70	36.38	31.66	64.80	54.80	-28.43	-23.15
2	0.52130	10.00	38.28	30.77	48.28	40.77	56.00	46.00	-7.72	-5.23
3	1.01020	10.03	27.25	19.62	37.28	29.65	56.00	46.00	-18.72	-16.35
4	1.64362	10.07	26.99	19.00	37.06	29.07	56.00	46.00	-18.94	-16.93
5	3.01212	10.21	26.22	18.17	36.43	28.38	56.00	46.00	-19.57	-17.62
6	6.58195	10.44	22.70	15.07	33.14	25.51	60.00	50.00	-26.86	-24.49

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 Transmit Power Measurement

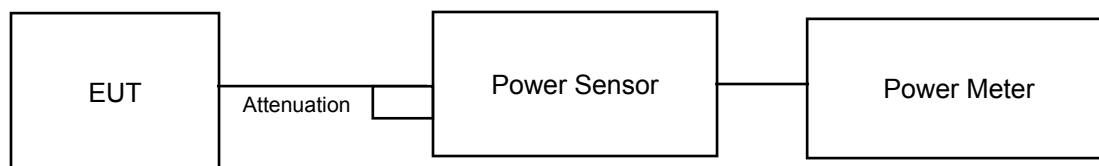
4.3.1 Limits of Transmit Power Measurement

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p $\leq$ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
		Indoor Access Point	1 Watt (30 dBm)
	√	Mobile and Portable client device	250mW (24 dBm)
U-NII-2A	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C	√		250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

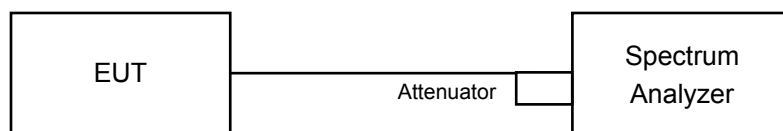
*B is the 26 dB emission bandwidth in megahertz

4.3.2 Test Setup

For Power Output Measurement



For 26dB and Occupied Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

Method PM is 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.

4.3.5 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

Power Output:

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	31.696	15.01	24.00	Pass
40	5200	28.314	14.52	24.00	Pass
48	5240	23.714	13.75	24.00	Pass
52	5260	23.878	13.78	24.00	Pass
60	5300	30.200	14.80	24.00	Pass
64	5320	28.119	14.49	24.00	Pass
100	5500	29.242	14.66	24.00	Pass
116	5580	32.434	15.11	24.00	Pass
140	5700	28.907	14.61	24.00	Pass
149	5745	26.182	14.18	30.00	Pass
157	5785	36.728	15.65	30.00	Pass
165	5825	26.669	14.26	30.00	Pass

Note:

For U-NII-2A, U-NII-2C Band:

1. $11\text{dBm} + 10\log (32.52) = 26.12 > 24\text{dBm}$
2. $11\text{dBm} + 10\log (31.67) = 26.01 > 24\text{dBm}$
3. $11\text{dBm} + 10\log (31.70) = 26.01 > 24\text{dBm}$
4. $11\text{dBm} + 10\log (31.77) = 26.02 > 24\text{dBm}$
5. $11\text{dBm} + 10\log (37.41) = 26.73 > 24\text{dBm}$
6. $11\text{dBm} + 10\log (41.89) = 27.22 > 24\text{dBm}$

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	28.249	14.51	24.00	Pass
40	5200	28.510	14.55	24.00	Pass
48	5240	27.102	14.33	24.00	Pass
52	5260	23.442	13.70	24.00	Pass
60	5300	29.444	14.69	24.00	Pass
64	5320	28.973	14.62	24.00	Pass
100	5500	27.353	14.37	24.00	Pass
116	5580	32.659	15.14	24.00	Pass
140	5700	28.907	14.61	24.00	Pass
149	5745	27.290	14.36	30.00	Pass
157	5785	36.141	15.58	30.00	Pass
165	5825	28.576	14.56	30.00	Pass

Note:

For U-NII-2A, U-NII-2C Band:

1. $11\text{dBm} + 10\log (33.17) = 26.21 > 24\text{dBm}$
2. $11\text{dBm} + 10\log (36.25) = 26.59 > 24\text{dBm}$
3. $11\text{dBm} + 10\log (33.64) = 26.27 > 24\text{dBm}$
4. $11\text{dBm} + 10\log (33.58) = 26.26 > 24\text{dBm}$
5. $11\text{dBm} + 10\log (43.33) = 27.37 > 24\text{dBm}$
6. $11\text{dBm} + 10\log (43.27) = 27.36 > 24\text{dBm}$

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	28.054	14.48	24.00	Pass
46	5230	28.249	14.51	24.00	Pass
54	5270	11.194	10.49	24.00	Pass
62	5310	15.453	11.89	24.00	Pass
102	5510	30.549	14.85	24.00	Pass
110	5550	29.309	14.67	24.00	Pass
134	5670	26.424	14.22	24.00	Pass
151	5755	31.333	14.96	30.00	Pass
159	5795	30.549	14.85	30.00	Pass

Note:

For U-NII-2A, U-NII-2C Band:

1. $11\text{dBm} + 10\log (46.77) = 27.70 > 24\text{dBm}$
2. $11\text{dBm} + 10\log (56.05) = 28.49 > 24\text{dBm}$
3. $11\text{dBm} + 10\log (70.83) = 29.50 > 24\text{dBm}$
4. $11\text{dBm} + 10\log (79.18) = 29.99 > 24\text{dBm}$
5. $11\text{dBm} + 10\log (92.85) = 30.68 > 24\text{dBm}$

26dB Bandwidth:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	Pass / Fail
36	5180	35.43	Pass
40	5200	34.97	Pass
48	5240	31.78	Pass
52	5260	32.52	Pass
60	5300	31.67	Pass
64	5320	31.70	Pass
100	5500	31.77	Pass
116	5580	37.41	Pass
140	5700	41.89	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	Pass / Fail
36	5180	37.64	Pass
40	5200	37.30	Pass
48	5240	35.81	Pass
52	5260	33.17	Pass
60	5300	36.25	Pass
64	5320	33.64	Pass
100	5500	33.58	Pass
116	5580	43.33	Pass
140	5700	43.27	Pass

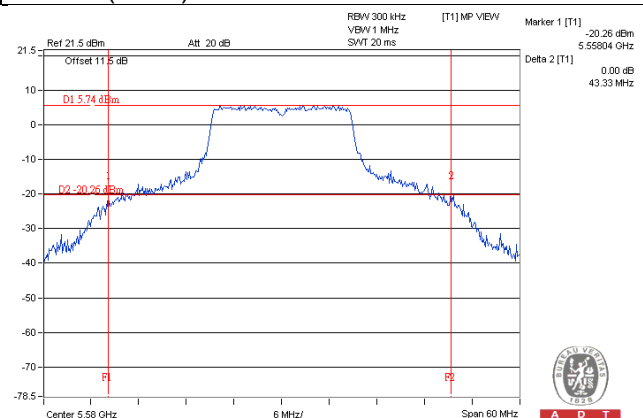
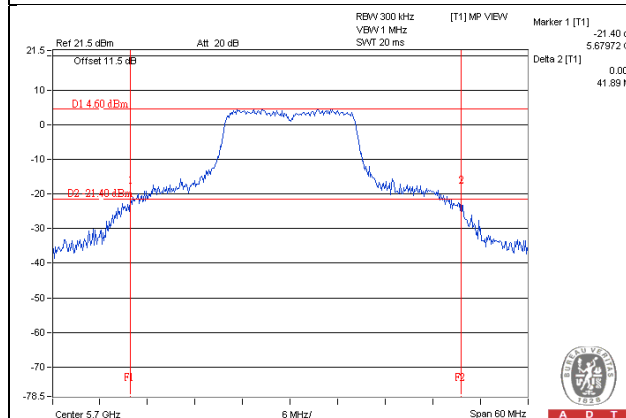
802.11n (HT40)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)	Pass / Fail
38	5190	76.46	Pass
46	5230	75.64	Pass
54	5270	46.77	Pass
62	5310	56.05	Pass
102	5510	70.83	Pass
110	5550	79.18	Pass
134	5670	92.85	Pass

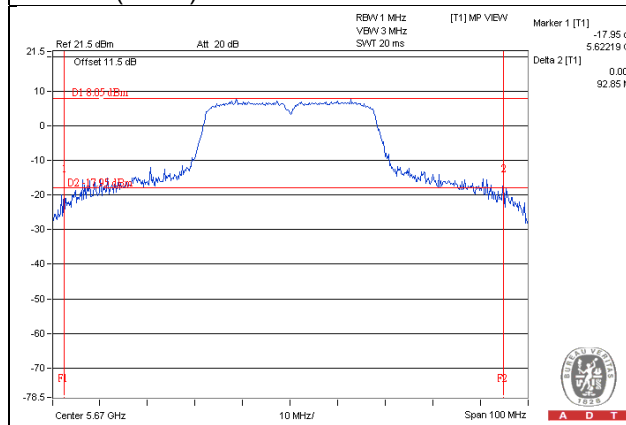
Spectrum Plot of Worst Value

802.11a

802.11n (HT20)



802.11n (HT40)



Occupied Bandwidth:

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	19.80
40	5200	19.68
48	5240	18.48
52	5260	18.48
60	5300	18.72
64	5320	17.88
100	5500	17.88
116	5580	18.60
140	5700	18.72
149	5745	18.52
157	5785	24.24
165	5825	19.08

802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	20.28
40	5200	20.28
48	5240	20.52
52	5260	19.20
60	5300	19.56
64	5320	18.72
100	5500	18.60
116	5580	19.56
140	5700	19.68
149	5745	19.32
157	5785	25.92
165	5825	19.80

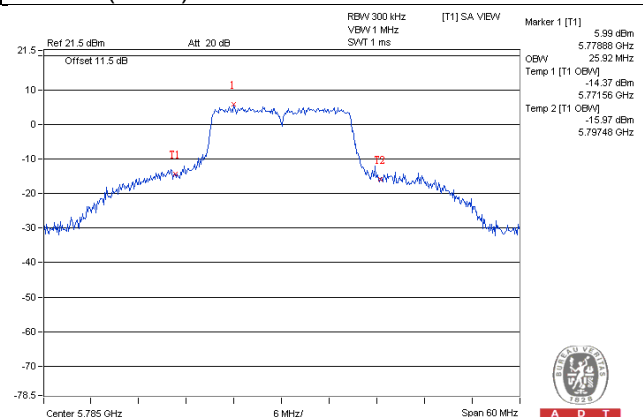
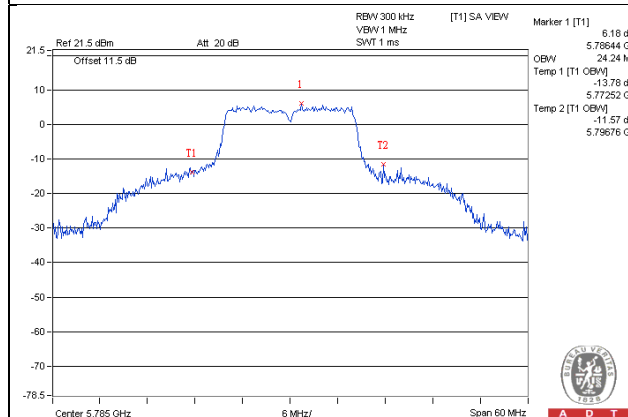
802.11n (HT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
38	5190	37.92
46	5230	38.28
54	5270	36.72
62	5310	36.72
102	5510	36.96
110	5550	37.20
134	5670	37.44
151	5755	37.68
159	5795	37.80

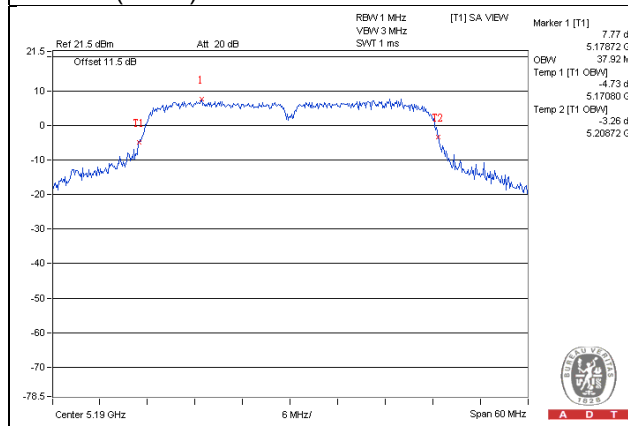
Spectrum Plot of Worst Value

802.11a

802.11n (HT20)



802.11n (HT40)



EUT MAXIMUM CONDUCTED POWER

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	30.200	14.80
5470~5725	32.434	15.11

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	29.444	14.69
5470~5725	32.659	15.14

Note: Manufacturer provides Transmit Power Control description to meet this requirement.

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	15.453	11.89
5470~5725	30.549	14.85

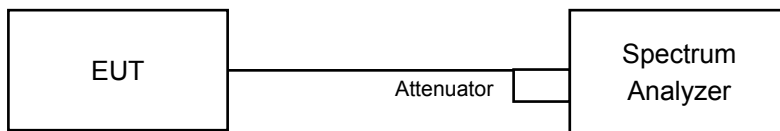
Note: Manufacturer provides Transmit Power Control description to meet this requirement.

4.4 Peak Power Spectral Density Measurement

4.4.1 Limits of Peak Power Spectral Density Measurement

Operation Band	EUT Category		LIMIT
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
		Indoor Access Point	
	√	Mobile and Portable client device	11dBm/ MHz
U-NII-2A	√		11dBm/ MHz
U-NII-2C	√		11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz

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

For U-NII-1, U-NII-2A, U-NII-2C band:

For duty cycle $\geq 98\%$

Using method SA-1

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
- Sweep time = auto, trigger set to "free run".
- Trace average at least 100 traces in power averaging mode.
- Record the max value

For duty cycle $< 98\%$

Using method SA-2

- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz, Set VBW ≥ 3 MHz, Detector = RMS
- Sweep time = auto, trigger set to "free run".
- Trace average at least 100 traces in power averaging mode.
- Record the max value and add $10 \log (1/\text{duty cycle})$

For U-NII-3 band:

For duty cycle $\geq 98\%$

- a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
- b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
- c. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
- d. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500 \text{ kHz}/300\text{kHz})$
- e. Sweep time = auto, trigger set to "free run".
- f. Trace average at least 100 traces in power averaging mode.
- g. Record the max value

For duty cycle $< 98\%$

- a. Set span to encompass the entire emission bandwidth (EBW) of the signal.
- b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
- c. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
- d. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where $BWCF = 10\log(500 \text{ kHz}/300\text{kHz})$
- e. Sweep time = auto, trigger set to "free run".
- f. Trace average at least 100 traces in power averaging mode.
- g. Record the max value and add $10 \log (1/\text{duty cycle})$

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 U-NII-1, U-NII-2A, U-NII-2C Band

802.11a

Chan.	Freq. (MHz)	PSD (dBm)	Max. Limit (dBm)	Pass / Fail
36	5180	0.54	11.00	Pass
40	5200	0.64	11.00	Pass
48	5240	-0.13	11.00	Pass
52	5260	-0.14	11.00	Pass
60	5300	0.08	11.00	Pass
64	5320	-0.05	11.00	Pass
100	5500	1.00	11.00	Pass
116	5580	1.56	11.00	Pass
140	5700	0.01	11.00	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm)	Max. Limit (dBm)	Pass / Fail
36	5180	0.34	11.00	Pass
40	5200	0.43	11.00	Pass
48	5240	0.35	11.00	Pass
52	5260	-0.41	11.00	Pass
60	5300	-0.17	11.00	Pass
64	5320	-0.38	11.00	Pass
100	5500	0.75	11.00	Pass
116	5580	1.30	11.00	Pass
140	5700	-0.21	11.00	Pass

802.11n (HT40)

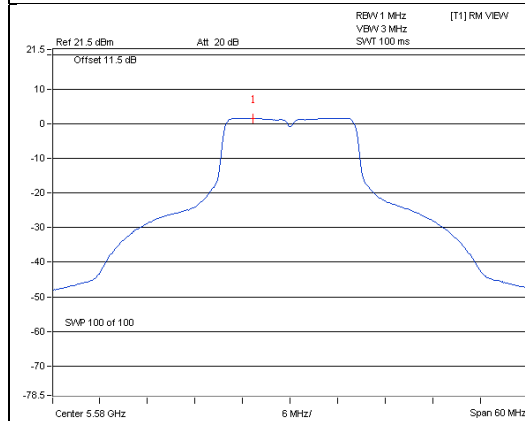
Chan.	Freq. (MHz)	PSD w/o duty factor (dBm)	Duty factor	PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
38	5190	-2.48	0.12	-2.36	11.00	Pass
46	5230	-2.42	0.12	-2.30	11.00	Pass
54	5270	-6.26	0.12	-6.14	11.00	Pass
62	5310	-5.09	0.12	-4.97	11.00	Pass
102	5510	-3.17	0.12	-3.05	11.00	Pass
110	5550	-2.38	0.12	-2.26	11.00	Pass
134	5670	-3.12	0.12	-3.00	11.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

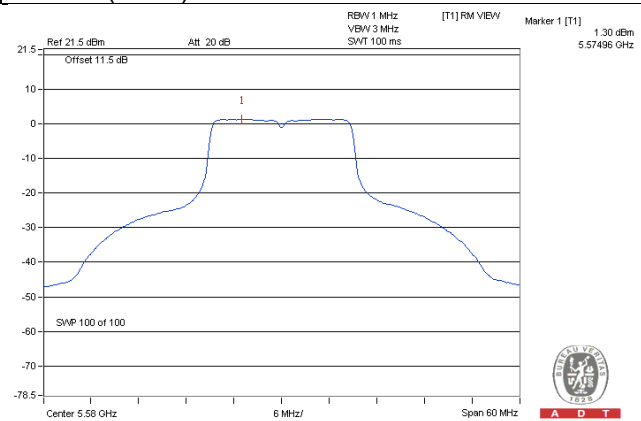
Spectrum Plot of Worst Value

802.11a

802.11n (HT20)

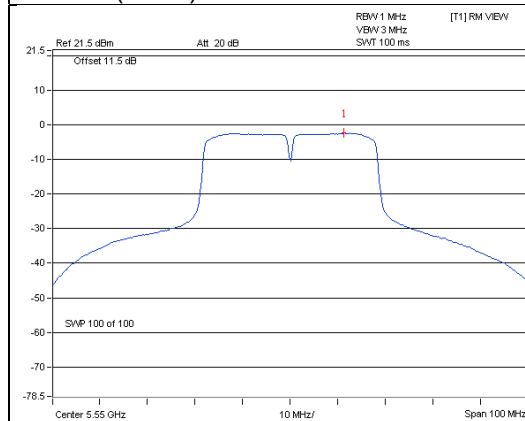


A D T



A D T

802.11n (HT40)



A D T

For U-NII-3 Band

802.11a

Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
149	5745	-8.69	-6.47	30.00	Pass
157	5785	-6.97	-4.75	30.00	Pass
165	5825	-8.54	-6.32	30.00	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
149	5745	-9.09	-6.87	30.00	Pass
157	5785	-7.12	-4.90	30.00	Pass
165	5825	-8.73	-6.51	30.00	Pass

802.11n (HT40)

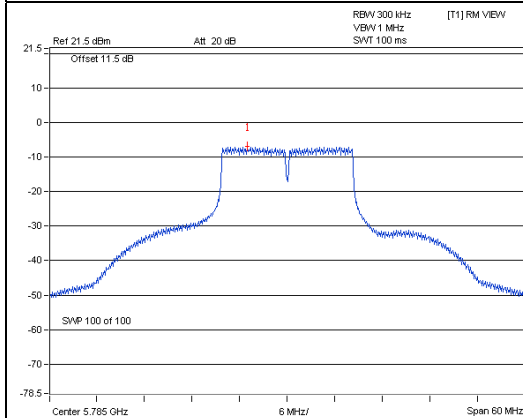
Chan.	Freq. (MHz)	PSD (dBm/300k Hz)	PSD (dBm/500k Hz)	Duty factor	Total PSD (dBm/500k Hz)	Limit (dBm/500k Hz)	Pass / Fail
151	5755	-11.54	-9.32	0.12	-9.20	30.00	Pass
159	5795	-11.27	-9.05	0.12	-8.93	30.00	Pass

Note: Refer to section 3.3 for duty cycle spectrum plot.

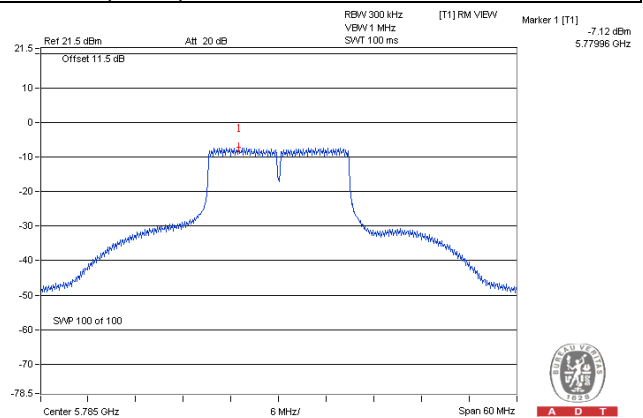
Spectrum Plot of Worst Value

802.11a

802.11n (HT20)

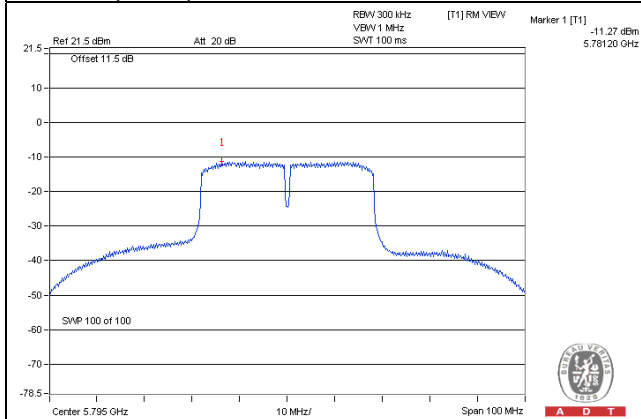


A D T



A D T

802.11n (HT40)



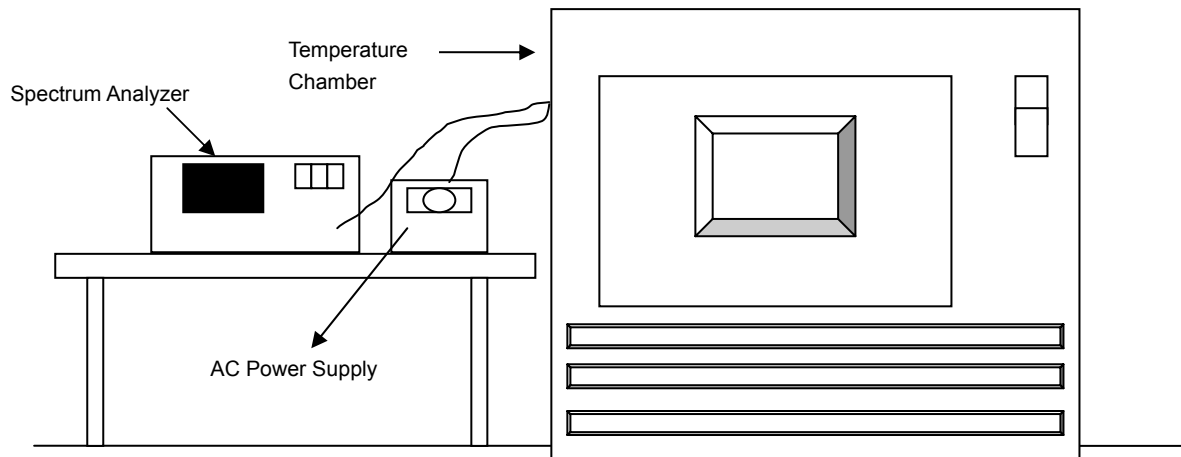
A D T

4.5 Frequency Stability

4.5.1 Limits of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation

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

- The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
- Turn the EUT on and couple its output to a spectrum analyzer.
- Turn the EUT off and set the chamber to the highest temperature specified.
- Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
- Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
- The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.5.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5180.0114	0.00022	5180.0157	0.00030	5180.0148	0.00029	5180.0115	0.00022
40	120	5179.9949	-0.00010	5179.9982	-0.00003	5179.9984	-0.00003	5179.9978	-0.00004
30	120	5179.9902	-0.00019	5179.9898	-0.00020	5179.992	-0.00015	5179.9883	-0.00023
20	120	5179.9745	-0.00049	5179.9764	-0.00046	5179.974	-0.00050	5179.9738	-0.00051
10	120	5180.0038	0.00007	5180.0043	0.00008	5180.002	0.00004	5180.0046	0.00009
0	120	5180.0103	0.00020	5180.0081	0.00016	5180.0064	0.00012	5180.0105	0.00020
-10	120	5179.9927	-0.00014	5179.9919	-0.00016	5179.9922	-0.00015	5179.993	-0.00014
-20	120	5179.9917	-0.00016	5179.9903	-0.00019	5179.9909	-0.00018	5179.9918	-0.00016
-30	120	5180.0234	0.00045	5180.0241	0.00047	5180.0212	0.00041	5180.0208	0.00040

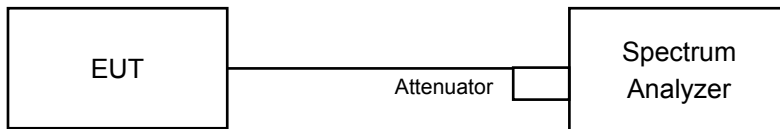
Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5179.9746	-0.00049	5179.9757	-0.00047	5179.9742	-0.00050	5179.9732	-0.00052
	120	5179.9745	-0.00049	5179.9764	-0.00046	5179.974	-0.00050	5179.9738	-0.00051
	102	5179.9742	-0.00050	5179.9774	-0.00044	5179.9739	-0.00050	5179.9745	-0.00049

4.6 6dB Bandwidth Measurement

4.6.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

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

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.42	0.5	Pass
157	5785	16.44	0.5	Pass
165	5825	16.49	0.5	Pass

802.11n (HT20)

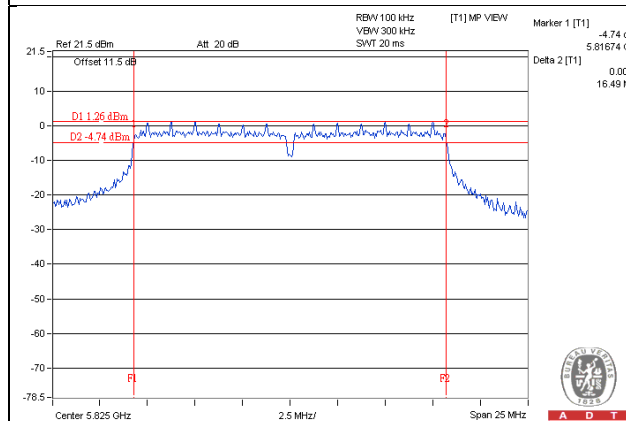
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.66	0.5	Pass
157	5785	17.66	0.5	Pass
165	5825	17.67	0.5	Pass

802.11n (HT40)

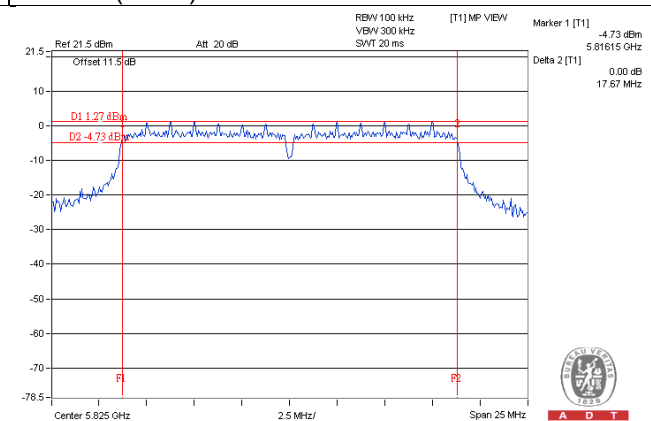
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	35.36	0.5	Pass
159	5795	35.34	0.5	Pass

Spectrum Plot of Worst Value

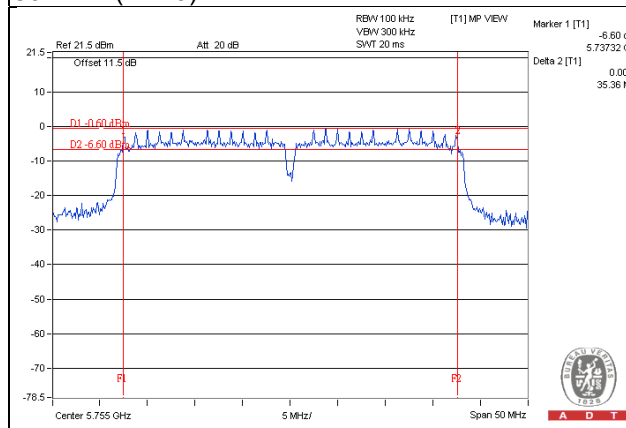
802.11a



802.11n (HT20)



802.11n (HT40)



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 ---