

FCC Test Report

Report No.: RF111011C17U

FCC ID: H8N-WLU5153

Test Model: WLU5153-D81

Received Date: Jul. 24, 2013

Test Date: Jul. 26, 2013 ~ Feb. 16, 2016

Issued Date: Feb. 26, 2016

Applicant: ASKEY COMPUTER CORP.

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

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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	11
3.3 Duty Cycle of Test Signal	13
3.4 Description of Support Units	14
3.4.1 Configuration of System under Test	14
3.5 General Description of Applied Standards	15
4 Test Types and Results	16
4.1 Radiated Emission and Bandedge Measurement	16
4.1.1 Limits of Radiated Emission and Bandedge Measurement	16
4.1.2 Test Instruments	17
4.1.3 Test Procedures	19
4.1.4 Deviation from Test Standard	19
4.1.5 Test Set Up	20
4.1.6 EUT Operating Conditions	20
4.1.7 Test Results	21
4.2 Conducted Emission Measurement	55
4.2.1 Limits of Conducted Emission Measurement	55
4.2.2 Test Instruments	55
4.2.3 Test Procedures	56
4.2.4 Deviation from Test Standard	56
4.2.5 Test Setup	56
4.2.6 EUT Operating Conditions	56
4.2.7 Test Results	57
4.3 Transmit Power Measurement	59
4.3.1 Limits of Transmit Power Measurement	59
4.3.2 Test Setup	59
4.3.3 Test Instruments	59
4.3.4 Test Procedure	60
4.3.5 Deviation from Test Standard	60
4.3.6 EUT Operating Conditions	60
4.3.7 Test Result	61
4.4 Peak Power Spectral Density Measurement	69
4.4.1 Limits of Peak Power Spectral Density Measurement	69
4.4.2 Test Setup	69
4.4.3 Test Instruments	69
4.4.4 Test Procedures	70
4.4.5 Deviation from Test Standard	70
4.4.6 EUT Operating Conditions	70
4.4.7 Test Results	71
4.5 Frequency Stability	77
4.5.1 Limits of Frequency Stability Measurement	77
4.5.2 Test Setup	77
4.5.3 Test Instruments	77
4.5.4 Test Procedure	77
4.5.5 Deviation from Test Standard	77
4.5.6 EUT Operating Condition	77

4.5.7 Test Results	78
4.6 6dB Bandwidth Measurement.....	79
4.6.1 Limits of 6dB Bandwidth Measurement.....	79
4.6.2 Test Setup.....	79
4.6.3 Test Instruments	79
4.6.4 Test Procedure	79
4.6.5 Deviation from Test Standard	79
4.6.6 EUT Operating Condition	79
4.6.7 Test Results	80
5 Pictures of Test Arrangements.....	82
Appendix – Information on the Testing Laboratories	83



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Release Control Record

Issue No.	Description	Date Issued
RF111011C17U	Original release	Feb. 26, 2016

1 Certificate of Conformity

Product: Wireless Module

Brand: Panasonic

Test Model: WLU5153-D81

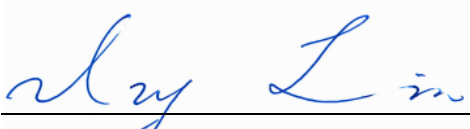
Sample Status: Engineering sample

Applicant: ASKEY COMPUTER CORP.

Test Date: Jul. 26, 2013 ~ Feb. 16, 2016

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 :  , **Date:** Feb. 26, 2016
Ivy Lin / Specialist

Approved by :  , **Date:** Feb. 26, 2016
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
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -16.10dB at 4.01308MHz.
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 17355.00MHz.
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	No antenna connector is used.

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	3.63 dB
	200MHz ~ 1000MHz	3.64 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	Wireless Module
Brand	Panasonic
Test Model	WLU5153-D81
Status of EUT	Engineering sample
Power Supply Rating	5Vdc from host equipment
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 300.0Mbps
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: 210.449mW 5260 ~ 5320MHz: 74.802mW 5500 ~ 5700MHz: 80.380mW 5745 ~ 5825MHz: 129.272mW
Antenna Type	Refer to Note
Antenna Connector	N/A
Accessory Device	N/A
Data Cable Supplied	N/A

Note:

1. This report represents Class II Permissive Change (C2PC) for Askey Computer Corp.'s Wireless Module for Single Modular Approval. This product was FCC Parts 15C and 15E certified for mobile operation by Curtis-Straus on August 29, 2013 under FCC ID: H8N-WLU5153. This included compliance with Transmit Power Control (TPC) and DFS requirements as a Client only without Radar Detection.
2. This C2PC report is issued as a supplementary report of the original report no.: RF111011C17N and RF111011C17N-1. The difference compared with the original report is updating standard to the latest version for U-NII band. All required tests of U-NII-1 and U-NII-3 have been re-tested.
3. This EUT incorporates a MIMO function. Physically, this EUT is provided with two complete transmitters and receivers.

Modulation Mode	TX Function
802.11a	2TX
802.11n (HT20)	2TX
802.11n (HT40)	2TX

4. The updated Part 15E grant will include the following additional footnote:

This device has shown compliance, in all grant-listed U-NII sub-bands, with the new rules for U-NII devices adopted under Docket No.13-49 and may be manufactured, imported, marketed and installed after the June 1, 2016 transition deadline.

5. Antenna information is listed as below.

Transmitter Circuit	Band	P/N	Antenna Type	Gain (dBi)					Antenna Connector
				2.4GHz	5.18 ~ 5.25 GHz	5.25 ~ 5.35 GHz	5.50 ~ 5.70 GHz	5.745 ~ 5.825 GHz	
Ant 1 (L)	Askey	08B1-1PV1000	PCB	1.87	3.06	3.17	3.09	2.20	NA
Ant 2 (R)	Askey	08B1-1PW1000	PCB	0.96	3.21	3.31	3.48	2.81	NA

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	132	5660 MHz
104	5520 MHz	136	5680 MHz
108	5540 MHz	140	5700 MHz
112	5560 MHz		
116	5580 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	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz		

2 channels are provided for 802.11n (HT40):

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

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: 1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.
2. "-" means no effect.

Radiated Emission Test (Above 1GHz):

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

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

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	7.2
	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	15.0
-	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	7.2
	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	15.0
-	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	7.2
	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	15.0
-	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	7.2
	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	15.0

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	40	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
	802.11a	5745-5825	149 to 165		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	40	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
	802.11a	5745-5825	149 to 165		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	7.2
	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	15.0
-	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	7.2
	802.11n (HT40)		54 to 62	54, 62	OFDM	BPSK	15.0
-	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	7.2
	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	BPSK	15.0
-	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	7.2
	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	15.0

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER (System)	TESTED BY
RE≥1G	26deg. C, 63%RH	120Vac, 60Hz	Tank Wu, Bayu Chen
RE<1G	25deg. C, 65%RH	120Vac, 60Hz	Bayu Chen
PLC	25deg. C, 65%RH	120Vac, 60Hz	Chris Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Cedric Wu

3.3 Duty Cycle of Test Signal

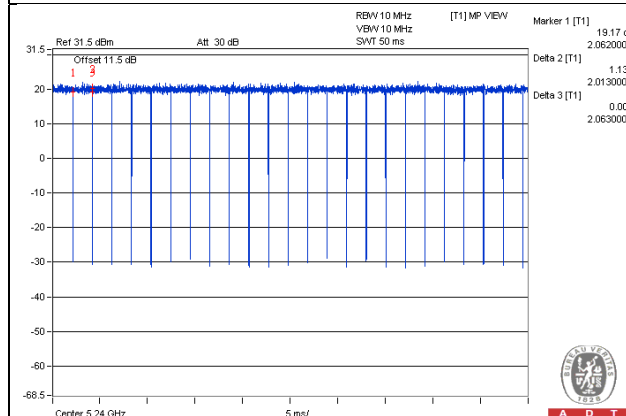
Duty cycle of test signal is < 98 %, duty factor is required

802.11a: Duty cycle = $2.013/2.063 = 0.976$, Duty factor = $10 * \log(1/0.976) = 0.11$

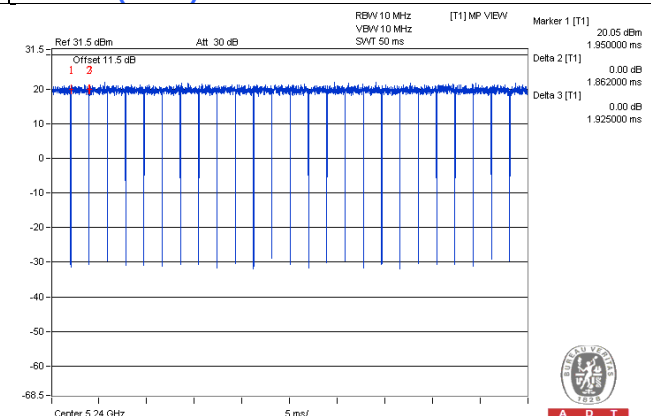
802.11n (HT20): Duty cycle = $1.862/1.925 = 0.967$, Duty factor = $10 * \log(1/0.967) = 0.14$

802.11n (HT40): Duty cycle = $0.917/0.964 = 0.951$, Duty factor = $10 * \log(1/0.951) = 0.22$

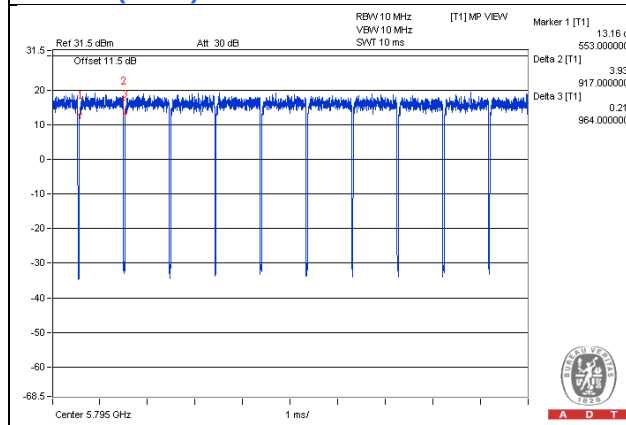
802.11a



802.11n (HT20)



802.11n (HT40)



3.4 Description of Support Units

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

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-

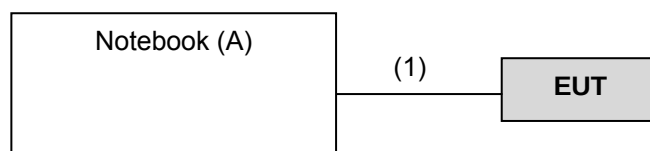
Note:

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB cable	1	0.1	N	0	Provided by manufacturer

Note: The core(s) is(are) originally attached to the cable(s).

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 Procedures New Rules v01r01

662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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 v01r01	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:

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

4.1.2 Test Instruments

Test Date: Jul. 26 ~ Aug. 07, 2013

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESI7	838496/016	Dec. 25, 2012	Dec. 24, 2013
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jan. 31, 2013	Jan. 30, 2014
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Mar. 20, 2013	Mar. 19, 2014
HORN Antenna SCHWARZBECK	9120D	209	Sep. 03, 2012	Sep. 02, 2013
HORN Antenna SCHWARZBECK	BBHA 9170	148	Jul. 15, 2013	Jul. 14, 2014
Preamplifier Agilent	8447D	2944A10633	Oct. 25, 2012	Oct. 24, 2013
Preamplifier Agilent	8449B	3008A01964	Oct. 25, 2012	Oct. 24, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250723/4	Aug. 28, 2012	Aug. 27, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 106	12738/6+309224/4	Aug. 28, 2012	Aug. 27, 2013
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	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. 25, 2012	Oct. 24, 2013
High Speed Peak Power Meter	ML2495A	0824012	Aug. 22, 2012	Aug. 21, 2013
Power Sensor	MA2411B	0738138	Aug. 23, 2012	Aug. 22, 2013

- 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 3.
3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
4. The FCC Site Registration No. is 988962.
5. The IC Site Registration No. is IC 7450F-3.



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Test Date: Jan. 29 ~ Feb. 16, 2016

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCS30	100289	Dec. 23, 2015	Dec. 22, 2016
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Mar. 30, 2015	Mar. 29, 2016
BILOG Antenna SCHWARZBECK	VULB9168	9168-148	Jan. 18, 2016	Jan. 17, 2017
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Jan. 08, 2016	Jan. 07, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Jan. 18, 2016	Jan. 17, 2017
Preamplifier Agilent	8449B	3008A01911	Aug. 09, 2015	Aug. 08, 2016
Preamplifier Agilent	8447D	2944A10638	Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-02(309222 +248780)	Aug. 09, 2015	Aug. 08, 2016
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-03(274092)	Aug. 09, 2015	Aug. 08, 2016
RF signal cable Woken	8D-FB	Cable-CH9-01	Aug. 11, 2015	Aug. 10, 2016
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower & Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	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 9.
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 215374.
5. The IC Site Registration No. is IC 7450F-9.

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:

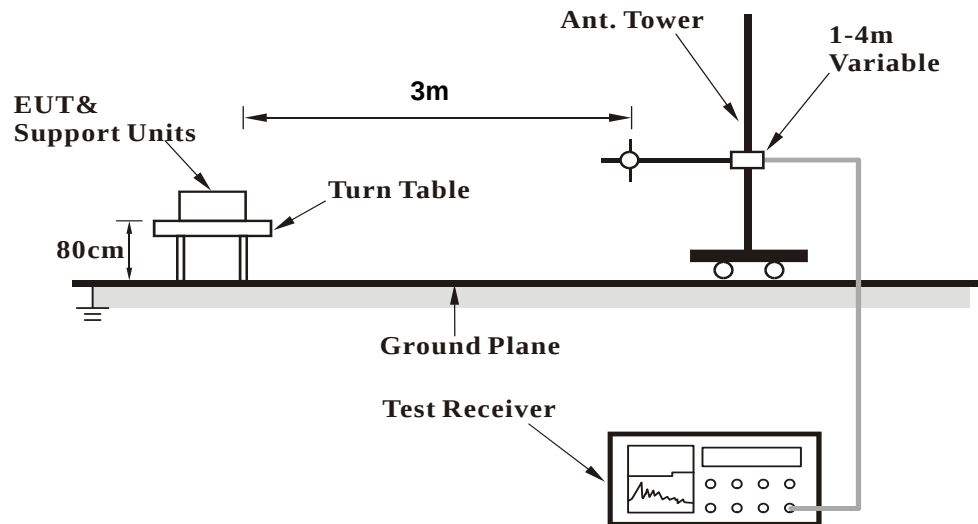
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
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

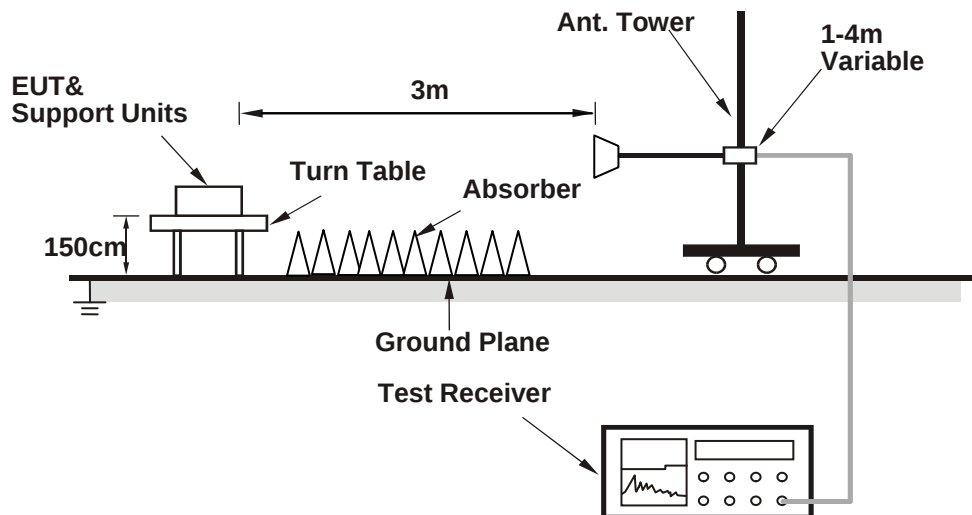
No deviation.

4.1.5 Test Set Up

<Frequency Range 30MHz ~ 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

- Connected the EUT with notebook via a USB cable and placed them on the testing table.
- The notebook system ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
- The necessary accessories enable the system in full functions.

4.1.7 Test Results

Above 1GHz 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	72.5 PK	74.0	-1.5	1.11 H	259	67.90	4.60
2	5150.00	52.7 AV	54.0	-1.3	1.11 H	259	48.10	4.60
3	*5180.00	110.3 PK			1.16 H	254	68.10	42.20
4	*5180.00	100.2 AV			1.16 H	254	58.00	42.20
5	#10360.00	59.2 PK	74.0	-14.8	1.29 H	122	43.40	15.80
6	#10360.00	45.4 AV	54.0	-8.6	1.29 H	122	29.60	15.80
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	69.5 PK	74.0	-4.5	4.00 V	144	64.90	4.60
2	5150.00	49.8 AV	54.0	-4.2	4.00 V	144	45.20	4.60
3	*5180.00	106.3 PK			3.99 V	68	64.10	42.20
4	*5180.00	95.9 AV			3.99 V	68	53.70	42.20
5	#10360.00	59.7 PK	74.0	-14.3	1.03 V	16	43.90	15.80
6	#10360.00	46.5 AV	54.0	-7.5	1.03 V	16	30.70	15.80

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 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	72.9 PK	74.0	-1.1	4.00 H	128	68.30	4.60
2	5150.00	51.4 AV	54.0	-2.6	4.00 H	128	46.80	4.60
3	*5200.00	113.3 PK			1.21 H	253	71.10	42.20
4	*5200.00	102.4 AV			1.21 H	253	60.20	42.20
5	#10400.00	60.8 PK	74.0	-13.2	1.43 H	348	44.90	15.90
6	#10400.00	47.2 AV	54.0	-6.8	1.43 H	348	31.30	15.90
7	15600.00	63.1 PK	74.0	-10.9	2.59 H	21	47.30	15.80
8	15600.00	50.3 AV	54.0	-3.7	2.59 H	21	34.50	15.80

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	68.4 PK	74.0	-5.6	4.00 V	65	63.80	4.60
2	5150.00	48.6 AV	54.0	-5.4	4.00 V	65	44.00	4.60
3	*5200.00	111.0 PK			3.90 V	146	68.80	42.20
4	*5200.00	100.4 AV			3.90 V	146	58.20	42.20
5	#10400.00	62.8 PK	74.0	-11.2	1.65 V	214	46.90	15.90
6	#10400.00	49.7 AV	54.0	-4.3	1.65 V	214	33.80	15.90
7	15600.00	67.0 PK	74.0	-7.0	1.41 V	264	51.20	15.80
8	15600.00	52.5 AV	54.0	-1.5	1.41 V	264	36.70	15.80

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 48	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	*5240.00	114.4 PK			1.30 H	218	72.10	42.30
2	*5240.00	103.6 AV			1.30 H	218	61.30	42.30
3	5350.00	60.2 PK	74.0	-13.8	1.26 H	271	55.40	4.80
4	5350.00	47.0 AV	54.0	-7.0	1.26 H	271	42.20	4.80
5	#10480.00	64.2 PK	74.0	-9.8	1.61 H	2	48.00	16.20
6	#10480.00	50.6 AV	54.0	-3.4	1.61 H	2	34.40	16.20
7	15720.00	62.3 PK	74.0	-11.7	3.39 H	34	46.80	15.50
8	15720.00	48.5 AV	54.0	-5.5	3.39 H	34	33.00	15.50
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	*5240.00	109.3 PK			3.84 V	70	67.00	42.30
2	*5240.00	98.0 AV			3.84 V	70	55.70	42.30
3	5350.00	59.7 PK	74.0	-14.3	3.99 V	41	54.90	4.80
4	5350.00	46.7 AV	54.0	-7.3	3.99 V	41	41.90	4.80
5	#10480.00	64.5 PK	74.0	-9.5	1.24 V	285	48.30	16.20
6	#10480.00	49.6 AV	54.0	-4.4	1.24 V	285	33.40	16.20
7	15720.00	66.6 PK	74.0	-7.4	1.37 V	260	51.10	15.50
8	15720.00	52.1 AV	54.0	-1.9	1.37 V	260	36.60	15.50

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 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	54.6 PK	74.0	-19.4	1.06 H	214	51.50	3.10
2	5150.00	43.6 AV	54.0	-10.4	1.06 H	214	40.50	3.10
3	*5260.00	114.0 PK			1.15 H	299	76.10	37.90
4	*5260.00	102.8 AV			1.15 H	299	64.90	37.90
5	#10520.00	62.1 PK	74.0	-11.9	1.53 H	195	47.80	14.30
6	#10520.00	48.9 AV	54.0	-5.1	1.53 H	195	34.60	14.30
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	55.1 PK	74.0	-18.9	1.00 V	253	52.00	3.10
2	5150.00	43.4 AV	54.0	-10.6	1.00 V	253	40.30	3.10
3	*5260.00	109.7 PK			1.00 V	254	71.80	37.90
4	*5260.00	98.6 AV			1.00 V	254	60.70	37.90
5	#10520.00	61.4 PK	74.0	-12.6	1.09 V	220	47.10	14.30
6	#10520.00	45.8 AV	54.0	-8.2	1.09 V	220	31.50	14.30

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 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	*5300.00	111.8 PK			1.00 H	39	73.90	37.90
2	*5300.00	101.2 AV			1.00 H	39	63.30	37.90
3	10600.00	63.3 PK	74.0	-10.7	1.04 H	178	48.90	14.40
4	10600.00	49.0 AV	54.0	-5.0	1.04 H	178	34.60	14.40
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	108.8 PK			1.00 V	253	70.90	37.90
2	*5300.00	97.7 AV			1.00 V	253	59.80	37.90
3	10600.00	60.9 PK	74.0	-13.1	1.88 V	121	46.50	14.40
4	10600.00	45.9 AV	54.0	-8.1	1.88 V	121	31.50	14.40

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 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	111.6 PK			1.00 H	298	73.60	38.00
2	*5320.00	101.5 AV			1.00 H	298	63.50	38.00
3	5350.00	72.3 PK	74.0	-1.7	1.00 H	298	68.80	3.50
4	5350.00	51.7 AV	54.0	-2.3	1.00 H	298	48.20	3.50
5	10640.00	63.3 PK	74.0	-10.7	1.06 H	55	48.70	14.60
6	10640.00	48.7 AV	54.0	-5.3	1.06 H	55	34.10	14.60
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	*5320.00	108.1 PK			1.00 V	261	70.10	38.00
2	*5320.00	97.4 AV			1.00 V	261	59.40	38.00
3	5350.00	67.8 PK	74.0	-6.2	1.00 V	262	64.30	3.50
4	5350.00	47.9 AV	54.0	-6.1	1.00 V	262	44.40	3.50
5	10640.00	60.7 PK	74.0	-13.3	1.22 V	201	46.10	14.60
6	10640.00	46.6 AV	54.0	-7.4	1.22 V	201	32.00	14.60

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 100	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	5460.00	59.6 PK	74.0	-14.4	1.00 H	296	56.00	3.60
2	5460.00	43.7 AV	54.0	-10.3	1.00 H	296	40.10	3.60
3	#5470.00	73.0 PK	74.0	-1.0	1.00 H	296	69.40	3.60
4	#5470.00	48.3 AV	54.0	-5.7	1.00 H	296	44.70	3.60
5	*5500.00	110.4 PK			1.21 H	32	72.10	38.30
6	*5500.00	100.5 AV			1.21 H	32	62.20	38.30
7	11000.00	64.0 PK	74.0	-10.0	1.02 H	236	48.60	15.40
8	11000.00	48.9 AV	54.0	-5.1	1.02 H	236	33.50	15.40
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	5460.00	55.8 PK	74.0	-18.2	1.02 V	182	52.20	3.60
2	5460.00	42.6 AV	54.0	-11.4	1.02 V	182	39.00	3.60
3	#5470.00	64.4 PK	74.0	-9.6	1.02 V	185	60.80	3.60
4	#5470.00	46.2 AV	54.0	-7.8	1.02 V	185	42.60	3.60
5	*5500.00	105.1 PK			1.12 V	187	66.80	38.30
6	*5500.00	94.8 AV			1.12 V	187	56.50	38.30
7	11000.00	58.6 PK	74.0	-15.4	1.54 V	169	43.20	15.40
8	11000.00	46.4 AV	54.0	-7.6	1.54 V	169	31.00	15.40

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 116	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	*5580.00	111.5 PK			1.18 H	28	73.10	38.40
2	*5580.00	101.2 AV			1.18 H	28	62.80	38.40
3	11160.00	65.1 PK	74.0	-8.9	1.65 H	81	49.60	15.50
4	11160.00	49.1 AV	54.0	-4.9	1.65 H	81	33.60	15.50
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	*5580.00	107.0 PK			2.06 V	262	68.60	38.40
2	*5580.00	96.3 AV			2.06 V	262	57.90	38.40
3	11160.00	61.2 PK	74.0	-12.8	1.01 V	129	45.70	15.50
4	11160.00	47.0 AV	54.0	-7.0	1.01 V	129	31.50	15.50

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 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	109.2 PK			1.00 H	195	70.60	38.60
2	*5700.00	99.4 AV			1.00 H	195	60.80	38.60
3	#5725.00	68.5 PK	74.0	-5.5	1.00 H	10	64.50	4.00
4	#5725.00	52.7 AV	54.0	-1.3	1.00 H	10	48.70	4.00
5	11400.00	64.0 PK	74.0	-10.0	1.01 H	112	48.70	15.30
6	11400.00	49.9 AV	54.0	-4.1	1.01 H	112	34.60	15.30
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	105.4 PK			1.00 V	253	66.80	38.60
2	*5700.00	95.1 AV			1.00 V	253	56.50	38.60
3	#5725.00	64.6 PK	74.0	-9.4	1.00 V	154	60.60	4.00
4	#5725.00	48.3 AV	54.0	-5.7	1.00 V	154	44.30	4.00
5	11400.00	61.5 PK	74.0	-12.5	1.24 V	188	46.20	15.30
6	11400.00	46.9 AV	54.0	-7.1	1.24 V	188	31.60	15.30

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 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	#5714.90	69.8 PK	74.0	-4.2	3.99 H	301	64.80	5.00
2	#5714.90	48.2 AV	54.0	-5.8	3.99 H	301	43.20	5.00
3	#5722.90	76.7 PK	78.2	-1.5	3.95 H	301	71.70	5.00
4	#5725.00	64.0 PK	78.2	-14.2	3.96 H	301	59.00	5.00
5	*5745.00	105.6 PK			1.28 H	235	62.80	42.80
6	*5745.00	95.8 AV			1.28 H	235	53.00	42.80
7	11490.00	60.0 PK	74.0	-14.0	1.31 H	114	44.20	15.80
8	11490.00	46.8 AV	54.0	-7.2	1.31 H	114	31.00	15.80
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	#5714.90	59.7 PK	74.0	-14.3	2.18 V	189	54.70	5.00
2	#5714.90	45.9 AV	54.0	-8.1	2.18 V	189	40.90	5.00
3	#5722.90	66.0 PK	78.2	-12.2	1.74 V	251	61.00	5.00
4	#5725.00	55.0 PK	78.2	-23.2	2.61 V	184	50.00	5.00
5	*5745.00	98.5 PK			2.43 V	231	55.70	42.80
6	*5745.00	88.8 AV			2.43 V	231	46.00	42.80
7	11490.00	60.9 PK	74.0	-13.1	1.64 V	52	45.10	15.80
8	11490.00	46.7 AV	54.0	-7.3	1.64 V	52	30.90	15.80

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 157	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	*5785.00	112.8 PK			2.32 H	272	70.00	42.80
2	*5785.00	102.5 AV			2.32 H	272	59.70	42.80
3	11570.00	63.5 PK	74.0	-10.5	1.33 H	341	48.00	15.50
4	11570.00	50.6 AV	54.0	-3.4	1.33 H	341	35.10	15.50
5	#17355.00	65.5 PK	74.0	-8.5	1.00 H	241	43.30	22.20
6	#17355.00	52.2 AV	54.0	-1.8	1.00 H	241	30.00	22.20
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	*5785.00	98.6 PK			2.33 V	218	55.80	42.80
2	*5785.00	89.8 AV			2.33 V	218	47.00	42.80
3	11570.00	63.5 PK	74.0	-10.5	1.20 V	16	48.00	15.50
4	11570.00	51.1 AV	54.0	-2.9	1.20 V	16	35.60	15.50
5	#17355.00	69.4 PK	74.0	-4.6	1.25 V	246	47.20	22.20
6	#17355.00	53.7 AV	54.0	-0.3	1.25 V	246	31.50	22.20

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 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	111.2 PK			2.67 H	273	68.40	42.80
2	*5825.00	100.8 AV			2.67 H	273	58.00	42.80
3	#5850.00	62.4 PK	78.2	-15.8	2.51 H	291	57.30	5.10
4	#5852.10	75.7 PK	78.2	-2.5	1.25 H	257	70.60	5.10
5	#5860.10	72.4 PK	74.0	-1.6	1.24 H	295	67.30	5.10
6	#5860.10	51.1 AV	54.0	-2.9	1.24 H	295	46.00	5.10
7	11650.00	63.5 PK	74.0	-10.5	1.00 H	351	47.70	15.80
8	11650.00	49.7 AV	54.0	-4.3	1.00 H	351	33.90	15.80
9	#17475.00	66.7 PK	74.0	-7.3	1.12 H	259	44.30	22.40
10	#17475.00	53.2 AV	54.0	-0.8	1.12 H	259	30.80	22.40

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	*5825.00	99.4 PK			1.00 V	74	56.60	42.80
2	*5825.00	89.1 AV			1.00 V	74	46.30	42.80
3	#5850.00	51.2 PK	78.2	-27.0	1.07 V	80	46.10	5.10
4	#5852.10	65.4 PK	78.2	-12.8	1.20 V	135	60.30	5.10
5	#5860.10	61.9 PK	74.0	-12.1	1.00 V	68	56.80	5.10
6	#5860.10	47.1 AV	54.0	-6.9	1.00 V	68	42.00	5.10
7	11650.00	64.2 PK	74.0	-9.8	1.23 V	38	48.40	15.80
8	11650.00	50.1 AV	54.0	-3.9	1.23 V	38	34.30	15.80
9	#17475.00	67.2 PK	74.0	-6.8	1.28 V	248	44.80	22.40
10	#17475.00	53.7 AV	54.0	-0.3	1.28 V	248	31.30	22.40

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.

802.11n (HT20)

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	70.8 PK	74.0	-3.2	1.28 H	216	66.20	4.60
2	5150.00	52.9 AV	54.0	-1.1	1.28 H	216	48.30	4.60
3	*5180.00	110.2 PK			1.10 H	240	68.00	42.20
4	*5180.00	99.6 AV			1.10 H	240	57.40	42.20
5	#10360.00	60.9 PK	74.0	-13.1	1.41 H	165	45.10	15.80
6	#10360.00	47.7 AV	54.0	-6.3	1.41 H	165	31.90	15.80
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	66.2 PK	74.0	-7.8	1.00 V	87	61.60	4.60
2	5150.00	49.8 AV	54.0	-4.2	1.00 V	87	45.20	4.60
3	*5180.00	106.5 PK			3.96 V	91	64.30	42.20
4	*5180.00	95.6 AV			3.96 V	91	53.40	42.20
5	#10360.00	60.0 PK	74.0	-14.0	2.21 V	308	44.20	15.80
6	#10360.00	46.4 AV	54.0	-7.6	2.21 V	308	30.60	15.80

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 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	72.7 PK	74.0	-1.3	1.00 H	257	68.10	4.60
2	5150.00	52.9 AV	54.0	-1.1	1.00 H	257	48.30	4.60
3	*5200.00	112.6 PK			1.16 H	255	70.40	42.20
4	*5200.00	102.3 AV			1.16 H	255	60.10	42.20
5	#10400.00	60.2 PK	74.0	-13.8	2.16 H	258	44.30	15.90
6	#10400.00	46.9 AV	54.0	-7.1	2.16 H	258	31.00	15.90
7	15600.00	64.8 PK	74.0	-9.2	3.95 H	54	49.00	15.80
8	15600.00	51.1 AV	54.0	-2.9	3.95 H	54	35.30	15.80

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	67.3 PK	74.0	-6.7	1.42 V	80	62.70	4.60
2	5150.00	50.0 AV	54.0	-4.0	1.42 V	80	45.40	4.60
3	*5200.00	108.3 PK			1.26 V	83	66.10	42.20
4	*5200.00	97.8 AV			1.26 V	83	55.60	42.20
5	#10400.00	64.0 PK	74.0	-10.0	1.00 V	121	48.10	15.90
6	#10400.00	49.7 AV	54.0	-4.3	1.00 V	121	33.80	15.90
7	15600.00	68.9 PK	74.0	-5.1	1.12 V	259	53.10	15.80
8	15600.00	53.0 AV	54.0	-1.0	1.12 V	259	37.20	15.80

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 48	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	60.5 PK	74.0	-13.5	1.21 H	184	55.90	4.60
2	5150.00	47.3 AV	54.0	-6.7	1.21 H	184	42.70	4.60
3	*5240.00	114.4 PK			1.15 H	210	72.10	42.30
4	*5240.00	103.7 AV			1.15 H	210	61.40	42.30
5	#10480.00	63.9 PK	74.0	-10.1	1.10 H	253	47.70	16.20
6	#10480.00	49.8 AV	54.0	-4.2	1.10 H	253	33.60	16.20
7	15720.00	64.3 PK	74.0	-9.7	1.30 H	265	48.80	15.50
8	15720.00	50.0 AV	54.0	-4.0	1.30 H	265	34.50	15.50

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	59.6 PK	74.0	-14.4	1.18 V	101	55.00	4.60
2	5150.00	47.2 AV	54.0	-6.8	1.18 V	101	42.60	4.60
3	*5240.00	106.6 PK			1.23 V	85	64.30	42.30
4	*5240.00	95.6 AV			1.23 V	85	53.30	42.30
5	#10480.00	64.9 PK	74.0	-9.1	1.20 V	273	48.70	16.20
6	#10480.00	51.8 AV	54.0	-2.2	1.20 V	273	35.60	16.20
7	15720.00	65.7 PK	74.0	-8.3	1.17 V	261	50.20	15.50
8	15720.00	53.1 AV	54.0	-0.9	1.17 V	261	37.60	15.50

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 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	51.3 PK	74.0	-22.7	1.26 H	254	48.20	3.10
2	5150.00	42.3 AV	54.0	-11.7	1.26 H	254	39.20	3.10
3	*5260.00	112.2 PK			1.15 H	301	74.30	37.90
4	*5260.00	101.0 AV			1.15 H	301	63.10	37.90
5	#10520.00	59.9 PK	74.0	-14.1	1.03 H	225	45.60	14.30
6	#10520.00	48.9 AV	54.0	-5.1	1.03 H	225	34.60	14.30
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	49.9 PK	74.0	-24.1	1.03 V	250	46.80	3.10
2	5150.00	40.8 AV	54.0	-13.2	1.03 V	250	37.70	3.10
3	*5260.00	107.9 PK			1.00 V	255	70.00	37.90
4	*5260.00	97.8 AV			1.00 V	255	59.90	37.90
5	#10520.00	58.0 PK	74.0	-16.0	1.44 V	169	43.70	14.30
6	#10520.00	47.0 AV	54.0	-7.0	1.44 V	169	32.70	14.30

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 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	*5300.00	110.7 PK			1.00 H	40	72.80	37.90
2	*5300.00	100.1 AV			1.00 H	40	62.20	37.90
3	10600.00	64.5 PK	74.0	-9.5	1.02 H	299	50.10	14.40
4	10600.00	49.1 AV	54.0	-4.9	1.02 H	299	34.70	14.40
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	107.8 PK			1.77 V	230	69.90	37.90
2	*5300.00	106.7 AV			1.77 V	230	68.80	37.90
3	10600.00	58.9 PK	74.0	-15.1	1.42 V	207	44.50	14.40
4	10600.00	46.6 AV	54.0	-7.4	1.42 V	207	32.20	14.40

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 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	111.1 PK			1.00 H	38	73.10	38.00
2	*5320.00	100.9 AV			1.00 H	38	62.90	38.00
3	5350.00	72.2 PK	74.0	-1.8	1.00 H	352	68.70	3.50
4	5350.00	51.0 AV	54.0	-3.0	1.00 H	352	47.50	3.50
5	10640.00	63.7 PK	74.0	-10.3	1.84 H	145	49.10	14.60
6	10640.00	48.6 AV	54.0	-5.4	1.84 H	145	34.00	14.60
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	*5320.00	107.6 PK			1.00 V	58	69.60	38.00
2	*5320.00	96.9 AV			1.00 V	58	58.90	38.00
3	5350.00	67.4 PK	74.0	-6.6	1.00 V	152	63.90	3.50
4	5350.00	47.7 AV	54.0	-6.3	1.00 V	152	44.20	3.50
5	10640.00	61.0 PK	74.0	-13.0	1.57 V	341	46.40	14.60
6	10640.00	46.4 AV	54.0	-7.6	1.57 V	341	31.80	14.60

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 100	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	5460.00	59.6 PK	74.0	-14.4	1.00 H	26	56.00	3.60
2	5460.00	43.9 AV	54.0	-10.1	1.00 H	26	40.30	3.60
3	#5470.00	73.0 PK	74.0	-1.0	1.00 H	26	69.40	3.60
4	#5470.00	49.9 AV	54.0	-4.1	1.00 H	26	46.30	3.60
5	*5500.00	110.3 PK			1.34 H	296	72.00	38.30
6	*5500.00	99.8 AV			1.34 H	296	61.50	38.30
7	11000.00	64.0 PK	74.0	-10.0	1.06 H	287	48.60	15.40
8	11000.00	49.9 AV	54.0	-4.1	1.06 H	287	34.50	15.40
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	5460.00	55.7 PK	74.0	-18.3	1.03 V	147	52.10	3.60
2	5460.00	42.1 AV	54.0	-11.9	1.03 V	147	38.50	3.60
3	#5470.00	63.7 PK	74.0	-10.3	1.03 V	147	60.10	3.60
4	#5470.00	45.4 AV	54.0	-8.6	1.03 V	147	41.80	3.60
5	*5500.00	105.0 PK			1.21 V	189	66.70	38.30
6	*5500.00	94.0 AV			1.21 V	189	55.70	38.30
7	11000.00	58.6 PK	74.0	-15.4	1.69 V	229	43.20	15.40
8	11000.00	47.6 AV	54.0	-6.4	1.69 V	229	32.20	15.40

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 116	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	*5580.00	110.4 PK			1.10 H	45	72.00	38.40
2	*5580.00	99.9 AV			1.10 H	45	61.50	38.40
3	11160.00	65.7 PK	74.0	-8.3	1.63 H	274	50.20	15.50
4	11160.00	48.0 AV	54.0	-6.0	1.63 H	274	32.50	15.50
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	*5580.00	106.1 PK			2.04 V	264	67.70	38.40
2	*5580.00	94.8 AV			2.04 V	264	56.40	38.40
3	11160.00	61.0 PK	74.0	-13.0	1.52 V	164	45.50	15.50
4	11160.00	46.3 AV	54.0	-7.7	1.52 V	164	30.80	15.50

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 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	108.6 PK			1.00 H	198	70.00	38.60
2	*5700.00	98.8 AV			1.00 H	198	60.20	38.60
3	#5725.00	68.4 PK	74.0	-5.6	1.00 H	14	64.40	4.00
4	#5725.00	52.7 AV	54.0	-1.3	1.00 H	14	48.70	4.00
5	11400.00	62.5 PK	74.0	-11.5	1.94 H	241	47.20	15.30
6	11400.00	48.9 AV	54.0	-5.1	1.94 H	241	33.60	15.30
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	104.9 PK			1.00 V	257	66.30	38.60
2	*5700.00	94.6 AV			1.00 V	257	56.00	38.60
3	#5725.00	64.1 PK	74.0	-9.9	1.00 V	165	60.10	4.00
4	#5725.00	48.0 AV	54.0	-6.0	1.00 V	165	44.00	4.00
5	11400.00	59.2 PK	74.0	-14.8	1.95 V	354	43.90	15.30
6	11400.00	45.5 AV	54.0	-8.5	1.95 V	354	30.20	15.30

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 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	#5714.90	61.5 PK	74.0	-12.5	1.00 H	243	56.50	5.00
2	#5714.90	47.3 AV	54.0	-6.7	1.00 H	243	42.30	5.00
3	#5722.90	77.3 PK	78.2	-0.9	1.10 H	282	72.30	5.00
4	#5725.00	56.3 PK	78.2	-21.9	1.13 H	261	51.30	5.00
5	*5745.00	104.0 PK			1.00 H	280	61.20	42.80
6	*5745.00	94.5 AV			1.00 H	280	51.70	42.80
7	11490.00	60.8 PK	74.0	-13.2	1.32 H	51	45.00	15.80
8	11490.00	47.6 AV	54.0	-6.4	1.32 H	51	31.80	15.80
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	#5714.90	58.8 PK	74.0	-15.2	1.20 V	112	53.80	5.00
2	#5714.90	46.3 AV	54.0	-7.7	1.20 V	112	41.30	5.00
3	#5722.90	65.7 PK	78.2	-12.5	1.08 V	53	60.70	5.00
4	#5725.00	48.8 PK	78.2	-29.4	1.13 V	246	43.80	5.00
5	*5745.00	93.0 PK			1.00 V	75	50.20	42.80
6	*5745.00	83.8 AV			1.00 V	75	41.00	42.80
7	11490.00	60.4 PK	74.0	-13.6	1.52 V	346	44.60	15.80
8	11490.00	47.2 AV	54.0	-6.8	1.52 V	346	31.40	15.80

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 157	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	*5785.00	112.4 PK			1.00 H	287	69.60	42.80
2	*5785.00	101.8 AV			1.00 H	287	59.00	42.80
3	11570.00	63.1 PK	74.0	-10.9	1.35 H	332	47.60	15.50
4	11570.00	50.1 AV	54.0	-3.9	1.35 H	332	34.60	15.50
5	#17355.00	66.0 PK	74.0	-8.0	1.07 H	243	43.80	22.20
6	#17355.00	52.9 AV	54.0	-1.1	1.07 H	243	30.70	22.20
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	*5785.00	101.0 PK			1.10 V	76	58.20	42.80
2	*5785.00	90.5 AV			1.10 V	76	47.70	42.80
3	11570.00	63.7 PK	74.0	-10.3	1.00 V	4	48.20	15.50
4	11570.00	50.5 AV	54.0	-3.5	1.00 V	4	35.00	15.50
5	#17355.00	70.6 PK	74.0	-3.4	1.14 V	260	48.40	22.20
6	#17355.00	53.9 AV	54.0	-0.1	1.14 V	260	31.70	22.20

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 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	109.3 PK			1.18 H	238	66.50	42.80
2	*5825.00	99.1 AV			1.18 H	238	56.30	42.80
3	#5850.00	55.3 PK	78.2	-22.9	1.00 H	223	50.20	5.10
4	#5852.10	75.8 PK	78.2	-2.4	1.28 H	216	70.70	5.10
5	#5860.10	73.0 PK	74.0	-1.0	1.16 H	234	67.90	5.10
6	#5860.10	50.3 AV	54.0	-3.7	1.16 H	234	45.20	5.10
7	11650.00	61.2 PK	74.0	-12.8	1.18 H	351	45.40	15.80
8	11650.00	48.6 AV	54.0	-5.4	1.18 H	351	32.80	15.80
9	#17475.00	65.7 PK	74.0	-8.3	1.11 H	281	43.30	22.40
10	#17475.00	52.6 AV	54.0	-1.4	1.11 H	281	30.20	22.40
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	*5825.00	99.1 PK			1.11 V	76	56.30	42.80
2	*5825.00	89.2 AV			1.11 V	76	46.40	42.80
3	#5850.00	48.8 PK	78.2	-29.4	1.00 V	89	43.70	5.10
4	#5852.10	64.7 PK	78.2	-13.5	1.24 V	130	59.60	5.10
5	#5860.10	59.4 PK	74.0	-14.6	1.00 V	62	54.30	5.10
6	#5860.10	47.4 AV	54.0	-6.6	1.00 V	62	42.30	5.10
7	11650.00	60.8 PK	74.0	-13.2	1.35 V	215	45.00	15.80
8	11650.00	48.1 AV	54.0	-5.9	1.35 V	215	32.30	15.80
9	#17475.00	66.5 PK	74.0	-7.5	1.23 V	243	44.10	22.40
10	#17475.00	53.2 AV	54.0	-0.8	1.23 V	243	30.80	22.40

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.

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	71.7 PK	74.0	-2.3	1.14 H	101	67.10	4.60
2	5150.00	53.4 AV	54.0	-0.6	1.14 H	101	48.80	4.60
3	*5190.00	102.4 PK			1.17 H	102	60.20	42.20
4	*5190.00	93.2 AV			1.17 H	102	51.00	42.20
5	#10380.00	61.6 PK	74.0	-12.4	1.00 H	318	45.70	15.90
6	#10380.00	48.3 AV	54.0	-5.7	1.00 H	318	32.40	15.90
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	60.7 PK	74.0	-13.3	2.22 V	108	56.10	4.60
2	5150.00	47.4 AV	54.0	-6.6	2.22 V	108	42.80	4.60
3	*5190.00	94.5 PK			2.51 V	113	52.30	42.20
4	*5190.00	86.0 AV			2.51 V	113	43.80	42.20
5	#10380.00	61.9 PK	74.0	-12.1	1.04 V	219	46.00	15.90
6	#10380.00	48.5 AV	54.0	-5.5	1.04 V	219	32.60	15.90

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 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	72.7 PK	74.0	-1.3	1.13 H	99	68.10	4.60
2	5150.00	53.5 AV	54.0	-0.5	1.13 H	99	48.90	4.60
3	*5230.00	112.3 PK			1.13 H	100	70.00	42.30
4	*5230.00	102.5 AV			1.13 H	100	60.20	42.30
5	#10460.00	61.9 PK	74.0	-12.1	1.64 H	349	46.00	15.90
6	#10460.00	48.4 AV	54.0	-5.6	1.64 H	349	32.50	15.90
7	15690.00	61.9 PK	74.0	-12.1	1.08 H	241	46.30	15.60
8	15690.00	49.4 AV	54.0	-4.6	1.08 H	241	33.80	15.60
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	5150.00	61.9 PK	74.0	-12.1	2.41 V	88	57.30	4.60
2	5150.00	47.7 AV	54.0	-6.3	2.41 V	88	43.10	4.60
3	*5230.00	105.4 PK			2.61 V	109	63.10	42.30
4	*5230.00	95.2 AV			2.61 V	109	52.90	42.30
5	#10460.00	62.7 PK	74.0	-11.3	1.21 V	288	46.80	15.90
6	#10460.00	49.4 AV	54.0	-4.6	1.21 V	288	33.50	15.90
7	15690.00	64.9 PK	74.0	-9.1	1.17 V	257	49.30	15.60
8	15690.00	51.9 AV	54.0	-2.1	1.17 V	257	36.30	15.60

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 54	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	57.7 PK	74.0	-16.3	1.00 H	141	54.60	3.10
2	5150.00	40.8 AV	54.0	-13.2	1.00 H	141	37.70	3.10
3	*5270.00	107.4 PK			1.14 H	38	69.50	37.90
4	*5270.00	97.1 AV			1.14 H	38	59.20	37.90
5	#10540.00	63.1 PK	74.0	-10.9	1.01 H	115	48.70	14.40
6	#10540.00	47.9 AV	54.0	-6.1	1.01 H	115	33.50	14.40
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	5150.00	56.3 PK	74.0	-17.7	1.13 V	257	53.20	3.10
2	5150.00	39.6 AV	54.0	-14.4	1.13 V	257	36.50	3.10
3	*5270.00	104.5 PK			1.00 V	252	66.60	37.90
4	*5270.00	93.5 AV			1.00 V	252	55.60	37.90
5	#10460.00	60.5 PK	74.0	-13.5	1.96 V	25	46.20	14.30
6	#10460.00	44.5 AV	54.0	-9.5	1.96 V	25	30.20	14.30

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 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	104.7 PK			1.26 H	299	66.80	37.90
2	*5310.00	94.5 AV			1.26 H	299	56.60	37.90
3	5350.00	69.7 PK	74.0	-4.3	1.00 H	32	66.20	3.50
4	5350.00	52.7 AV	54.0	-1.3	1.00 H	32	49.20	3.50
5	10620.00	62.2 PK	74.0	-11.8	1.54 H	124	47.70	14.50
6	10620.00	48.0 AV	54.0	-6.0	1.54 H	124	33.50	14.50
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	*5310.00	101.2 PK			1.00 V	254	63.30	37.90
2	*5310.00	91.1 AV			1.00 V	254	53.20	37.90
3	5350.00	66.7 PK	74.0	-7.3	1.00 V	253	63.20	3.50
4	5350.00	50.9 AV	54.0	-3.1	1.00 V	253	47.40	3.50
5	10620.00	59.0 PK	74.0	-15.0	1.01 V	147	44.50	14.50
6	10620.00	45.7 AV	54.0	-8.3	1.01 V	147	31.20	14.50

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 102	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	5460.00	62.2 PK	74.0	-11.8	1.00 H	7	57.70	4.50
2	5460.00	45.3 AV	54.0	-8.7	1.00 H	7	40.80	4.50
3	#5470.00	70.1 PK	74.0	-3.9	1.00 H	7	65.70	4.40
4	#5470.00	52.9 AV	54.0	-1.1	1.00 H	7	48.50	4.40
5	*5510.00	102.5 PK			1.13 H	10	64.20	38.30
6	*5510.00	92.6 AV			1.13 H	10	54.30	38.30
7	11020.00	64.7 PK	74.0	-9.3	1.01 H	141	48.70	16.00
8	11020.00	49.5 AV	54.0	-4.5	1.01 H	141	33.50	16.00
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	5460.00	55.6 PK	74.0	-18.4	1.01 V	137	51.10	4.50
2	5460.00	42.8 AV	54.0	-11.2	1.01 V	137	38.30	4.50
3	#5470.00	61.2 PK	74.0	-12.8	1.01 V	137	56.80	4.40
4	#5470.00	45.9 AV	54.0	-8.1	1.01 V	137	41.50	4.40
5	*5510.00	95.9 PK			1.20 V	301	57.60	38.30
6	*5510.00	86.1 AV			1.20 V	301	47.80	38.30
7	11020.00	62.2 PK	74.0	-11.8	1.07 V	149	46.20	16.00
8	11020.00	46.5 AV	54.0	-7.5	1.07 V	149	30.50	16.00

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.

CHANNEL	TX Channel 110	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	5460.00	69.3 PK	74.0	-4.7	1.00 H	9	64.80	4.50
2	5460.00	46.8 AV	54.0	-7.2	1.00 H	9	42.30	4.50
3	#5470.00	70.2 PK	74.0	-3.8	1.00 H	9	65.80	4.40
4	#5470.00	50.5 AV	54.0	-3.5	1.00 H	9	46.10	4.40
5	*5550.00	108.2 PK			1.00 H	11	69.80	38.40
6	*5550.00	98.0 AV			1.00 H	11	59.60	38.40
7	11100.00	64.6 PK	74.0	-9.4	1.47 H	21	48.60	16.00
8	11100.00	48.7 AV	54.0	-5.3	1.47 H	21	32.70	16.00
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	5460.00	60.0 PK	74.0	-14.0	1.00 V	170	55.50	4.50
2	5460.00	41.5 AV	54.0	-12.5	1.00 V	170	37.00	4.50
3	#5470.00	62.4 PK	74.0	-11.6	1.00 V	170	58.00	4.40
4	#5470.00	44.3 AV	54.0	-9.7	1.00 V	170	39.90	4.40
5	*5550.00	102.5 PK			1.87 V	322	64.10	38.40
6	*5550.00	92.1 AV			1.87 V	322	53.70	38.40
7	11100.00	61.2 PK	74.0	-12.8	1.04 V	154	45.20	16.00
8	11100.00	47.5 AV	54.0	-6.5	1.04 V	154	31.50	16.00

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.

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	108.0 PK			1.08 H	15	69.40	38.60
2	*5670.00	97.7 AV			1.08 H	15	59.10	38.60
3	#5725.00	68.7 PK	74.0	-5.3	1.53 H	55	63.90	4.80
4	#5725.00	52.0 AV	54.0	-2.0	1.53 H	55	47.20	4.80
5	11340.00	64.5 PK	74.0	-9.5	1.62 H	248	48.70	15.80
6	11340.00	48.2 AV	54.0	-5.8	1.62 H	248	32.40	15.80
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	*5670.00	101.2 PK			1.00 V	323	62.60	38.60
2	*5670.00	90.8 AV			1.00 V	323	52.20	38.60
3	#5725.00	60.3 PK	74.0	-13.7	1.64 V	321	55.50	4.80
4	#5725.00	46.3 AV	54.0	-7.7	1.64 V	321	41.50	4.80
5	11340.00	59.4 PK	74.0	-14.6	1.09 V	54	43.60	15.80
6	11340.00	46.3 AV	54.0	-7.7	1.09 V	54	30.50	15.80

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 151	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	#5714.90	72.8 PK	74.0	-1.2	1.10 H	266	67.80	5.00
2	#5714.90	53.5 AV	54.0	-0.5	1.10 H	266	48.50	5.00
3	#5722.90	76.3 PK	78.2	-1.9	1.10 H	116	71.30	5.00
4	#5725.00	59.4 PK	78.2	-18.8	1.13 H	241	54.40	5.00
5	*5755.00	100.9 PK			1.16 H	265	58.10	42.80
6	*5755.00	90.6 AV			1.16 H	265	47.80	42.80
7	11510.00	60.6 PK	74.0	-13.4	1.00 H	82	45.00	15.60
8	11510.00	47.2 AV	54.0	-6.8	1.00 H	82	31.60	15.60
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	#5714.90	62.2 PK	74.0	-11.8	1.00 V	124	57.20	5.00
2	#5714.90	47.3 AV	54.0	-6.7	1.00 V	124	42.30	5.00
3	#5722.90	66.6 PK	78.2	-11.6	1.28 V	200	61.60	5.00
4	#5725.00	50.6 PK	78.2	-27.6	1.11 V	98	45.60	5.00
5	*5755.00	90.2 PK			1.17 V	135	47.40	42.80
6	*5755.00	79.7 AV			1.17 V	135	36.90	42.80
7	11510.00	60.2 PK	74.0	-13.8	1.53 V	246	44.60	15.60
8	11510.00	46.9 AV	54.0	-7.1	1.53 V	246	31.30	15.60

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 159	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	*5795.00	108.4 PK			1.00 H	86	65.60	42.80
2	*5795.00	98.9 AV			1.00 H	86	56.10	42.80
3	#5850.00	58.2 PK	78.2	-20.0	1.42 H	120	53.10	5.10
4	#5852.10	74.0 PK	78.2	-4.2	1.10 H	282	68.90	5.10
5	#5860.10	72.7 PK	74.0	-1.3	1.00 H	260	67.60	5.10
6	#5860.10	53.1 AV	54.0	-0.9	1.00 H	260	48.00	5.10
7	11590.00	60.3 PK	74.0	-13.7	1.25 H	231	44.80	15.50
8	11590.00	46.8 AV	54.0	-7.2	1.25 H	231	31.30	15.50
9	#17385.00	67.0 PK	74.0	-7.0	1.03 H	254	44.80	22.20
10	#17385.00	52.2 AV	54.0	-1.8	1.03 H	254	30.00	22.20
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	*5795.00	99.3 PK			1.08 V	126	56.50	42.80
2	*5795.00	89.0 AV			1.08 V	126	46.20	42.80
3	#5850.00	51.1 PK	78.2	-27.1	1.20 V	181	46.00	5.10
4	#5852.10	65.1 PK	78.2	-13.1	1.12 V	181	60.00	5.10
5	#5860.10	62.4 PK	74.0	-11.6	1.00 V	112	57.30	5.10
6	#5860.10	47.7 AV	54.0	-6.3	1.00 V	112	42.60	5.10
7	11510.00	61.3 PK	74.0	-12.7	1.00 V	13	45.70	15.60
8	11510.00	48.2 AV	54.0	-5.8	1.00 V	13	32.60	15.60
9	#17385.00	67.6 PK	74.0	-6.4	1.12 V	242	45.40	22.20
10	#17385.00	53.1 AV	54.0	-0.9	1.12 V	242	30.90	22.20

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.

Below 1GHz worst-case data:

802.11a

CHANNEL	TX Channel 40	DETECTOR	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz	FUNCTION	

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	31.94	29.3 QP	40.0	-10.7	1.99 H	10	45.20	-15.90
2	49.40	26.9 QP	40.0	-13.1	1.99 H	231	40.70	-13.80
3	169.68	30.7 QP	43.5	-12.8	1.24 H	5	44.70	-14.00
4	635.28	35.5 QP	46.0	-10.5	1.99 H	269	41.20	-5.70
5	798.24	36.7 QP	46.0	-9.3	1.00 H	178	39.40	-2.70
6	949.56	37.6 QP	46.0	-8.4	1.00 H	8	37.50	0.10
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	30.23	37.1 QP	40.0	-2.9	1.00 V	49	52.70	-15.60
2	51.04	36.1 QP	40.0	-3.9	1.00 V	319	50.10	-14.00
3	198.78	31.1 QP	43.5	-12.4	1.00 V	188	47.80	-16.70
4	499.48	35.5 QP	46.0	-10.5	1.00 V	5	44.00	-8.50
5	522.76	36.7 QP	46.0	-9.3	1.00 V	183	44.90	-8.20
6	947.62	37.6 QP	46.0	-8.4	1.00 V	85	37.60	0.00

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

Test date: Feb. 03, 2016

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, 2015	Dec. 25, 2016
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

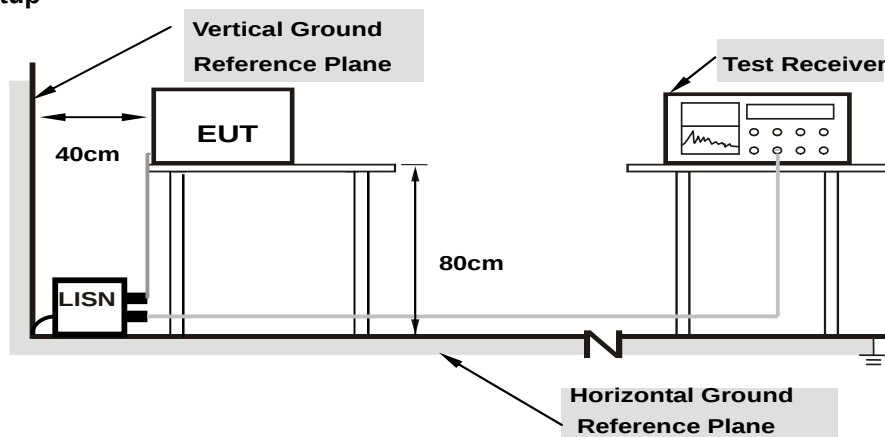
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

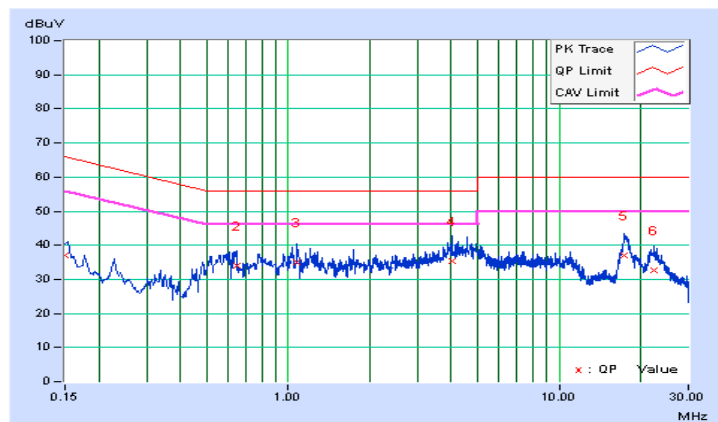
4.2.7 Test Results

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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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	0.15000	10.01	27.07	23.25	37.08	33.26	66.00	56.00	-28.92	-22.74
2	0.64266	10.19	23.69	7.33	33.88	17.52	56.00	46.00	-22.12	-28.48
3	1.07667	10.29	24.79	13.19	35.08	23.48	56.00	46.00	-20.92	-22.52
4	4.01308	10.43	24.80	19.47	35.23	29.90	56.00	46.00	-20.77	-16.10
5	17.31881	11.04	26.12	20.55	37.16	31.59	60.00	50.00	-22.84	-18.41
6	22.49174	11.22	21.56	13.66	32.78	24.88	60.00	50.00	-27.22	-25.12

REMARKS:

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

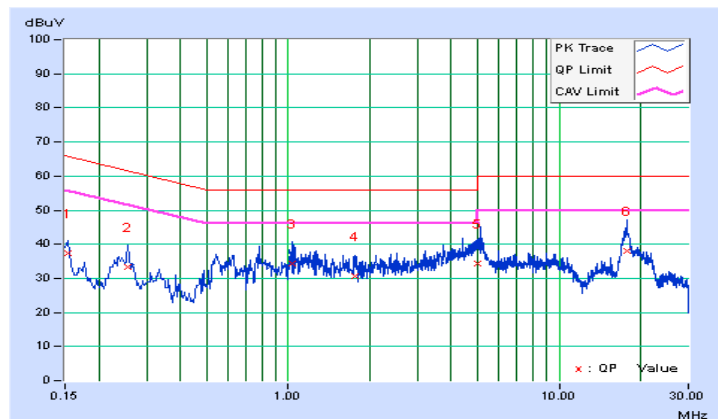


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	10.01	27.31	24.66	37.32	34.67	65.79	55.79	-28.47	-21.12
2	0.25557	10.07	23.17	15.99	33.24	26.06	61.57	51.57	-28.33	-25.51
3	1.02975	10.23	24.04	9.61	34.27	19.84	56.00	46.00	-21.73	-26.16
4	1.77265	10.27	20.37	11.48	30.64	21.75	56.00	46.00	-25.36	-24.25
5	5.00000	10.48	23.78	17.90	34.26	28.38	56.00	46.00	-21.74	-17.62
6	17.85839	10.91	27.28	21.94	38.19	32.85	60.00	50.00	-21.81	-17.15

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 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

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

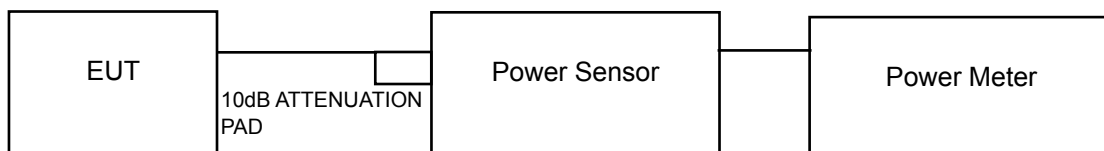
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

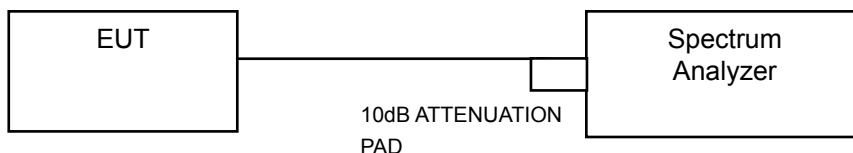
For power measurements on all other devices: Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

4.3.2 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

For Average Power Measurement

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.

For Occupied Bandwidth

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to AVERAGE. The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5 %of the total mean power of a given emission.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

POWER OUTPUT:

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	14.98	16.06	71.842	18.56	24	Pass
40	5200	18.71	19.72	168.058	22.25	24	Pass
48	5240	15.86	16.95	88.093	19.45	24	Pass
52	5260	14.82	16.48	74.802	18.82	24	Pass
60	5300	14.70	15.65	66.240	18.29	24	Pass
64	5320	13.63	15.10	55.426	17.52	24	Pass
100	5500	14.68	15.28	63.105	18.08	24	Pass
116	5580	15.65	16.40	80.380	19.13	24	Pass
140	5700	14.68	15.34	63.574	18.11	24	Pass
149	5745	12.74	13.37	40.520	16.08	30	Pass
157	5785	17.52	18.62	129.272	21.12	30	Pass
165	5825	16.87	17.72	107.797	20.33	30	Pass

NOTE:

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

Chain 0

1. $11\text{dBm} + 10\log(34.95) = 26.43\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(35.57) = 26.51\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(30.66) = 25.87\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(35.93) = 26.55\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(36.90) = 26.67\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(36.55) = 26.63\text{ dBm} > 24\text{dBm}$.

Chain 1

1. $11\text{dBm} + 10\log(36.57) = 26.63\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(33.52) = 26.25\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(30.82) = 25.89\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(33.09) = 26.20\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(36.58) = 26.63\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(41.53) = 27.18\text{ dBm} > 24\text{dBm}$.

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
36	5180	15.16	16.19	74.401	18.72	24	Pass
40	5200	19.83	20.58	210.449	23.23	24	Pass
48	5240	15.96	17.31	93.273	19.70	24	Pass
52	5260	13.81	15.30	57.928	17.71	24	Pass
60	5300	13.69	14.93	54.505	17.44	24	Pass
64	5320	13.50	14.92	53.433	17.36	24	Pass
100	5500	14.95	15.33	65.380	18.23	24	Pass
116	5580	15.35	15.41	69.031	18.47	24	Pass
140	5700	14.65	15.19	62.211	18.02	24	Pass
149	5745	10.04	10.30	20.808	13.18	30	Pass
157	5785	17.50	18.13	121.247	20.84	30	Pass
165	5825	16.18	17.01	91.729	19.63	30	Pass

NOTE:

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

Chain 0

1. $11\text{dBm} + 10\log(31.35) = 25.96\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(30.65) = 25.86\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(29.27) = 25.66\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(33.89) = 26.30\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(36.21) = 26.59\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(39.63) = 26.98\text{ dBm} > 24\text{dBm}$.

Chain 1

1. $11\text{dBm} + 10\log(35.40) = 26.49\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(32.12) = 26.07\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(32.44) = 26.11\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(35.20) = 26.47\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(35.73) = 26.53\text{ dBm} > 24\text{dBm}$.
6. $11\text{dBm} + 10\log(38.43) = 26.85\text{ dBm} > 24\text{dBm}$.

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
38	5190	9.09	10.47	19.253	12.84	24	Pass
46	5230	16.38	17.71	102.471	20.11	24	Pass
54	5270	13.28	14.12	47.104	16.91	24	Pass
62	5310	9.39	10.81	20.740	13.35	24	Pass
102	5510	9.51	10.10	19.166	13.01	24	Pass
110	5550	14.37	14.91	58.327	17.84	24	Pass
134	5670	14.10	14.61	54.611	17.55	24	Pass
151	5755	9.32	9.63	17.734	12.49	30	Pass
159	5795	17.06	18.10	115.381	20.62	30	Pass

NOTE:

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

Chain 0

1. $11\text{dBm} + 10\log(62.48) = 28.96\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(50.16) = 28.00\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(48.90) = 27.89\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(70.01) = 29.45\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(80.03) = 30.03\text{ dBm} > 24\text{dBm}$.

Chain 1

1. $11\text{dBm} + 10\log(64.68) = 29.11\text{ dBm} > 24\text{dBm}$.
2. $11\text{dBm} + 10\log(48.83) = 27.89\text{ dBm} > 24\text{dBm}$.
3. $11\text{dBm} + 10\log(50.19) = 28.01\text{ dBm} > 24\text{dBm}$.
4. $11\text{dBm} + 10\log(66.02) = 29.20\text{ dBm} > 24\text{dBm}$.
5. $11\text{dBm} + 10\log(74.73) = 29.73\text{ dBm} > 24\text{dBm}$.

26dB BANDWIDTH:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
36	5180	34.61	36.09	Pass
40	5200	44.82	41.97	Pass
48	5240	36.90	37.63	Pass
52	5260	34.95	36.57	Pass
60	5300	35.57	33.52	Pass
64	5320	30.66	30.82	Pass
100	5500	35.93	33.09	Pass
116	5580	36.90	36.58	Pass
140	5700	36.55	41.53	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
36	5180	37.59	38.10	Pass
40	5200	45.53	48.20	Pass
48	5240	39.61	38.16	Pass
52	5260	31.35	35.40	Pass
60	5300	30.65	32.12	Pass
64	5320	29.27	32.44	Pass
100	5500	33.89	35.20	Pass
116	5580	36.21	35.73	Pass
140	5700	39.63	38.43	Pass

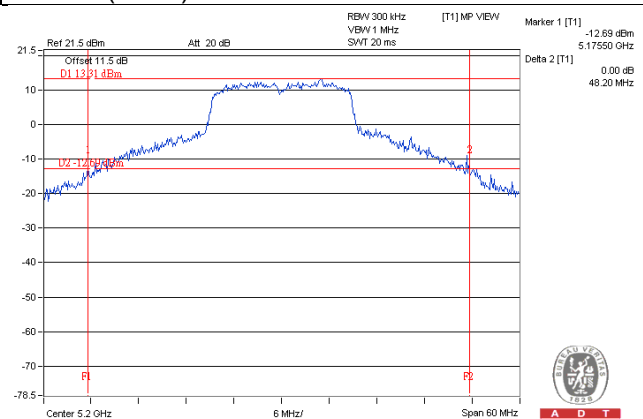
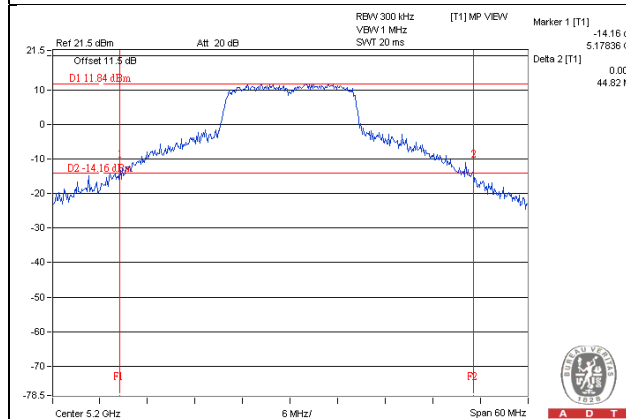
802.11n (HT40)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)		Pass / Fail
		Chain 0	Chain 1	
38	5190	47.76	48.82	Pass
46	5230	87.26	93.22	Pass
54	5270	62.48	64.68	Pass
62	5310	50.16	48.83	Pass
102	5510	48.90	50.19	Pass
110	5550	70.01	66.02	Pass
134	5670	80.03	74.73	Pass

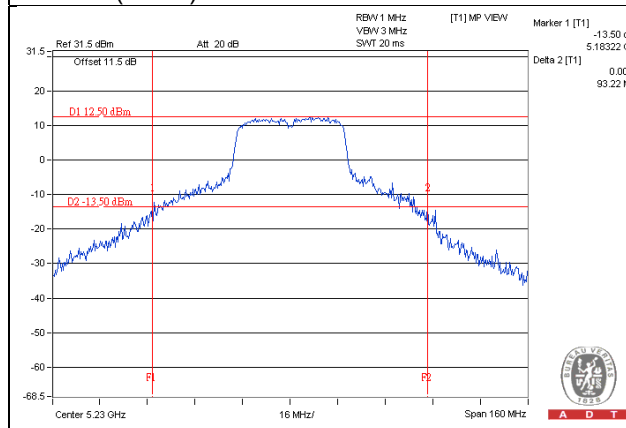
Spectrum Plot of Worst Value

802.11a

802.11n (HT20)



802.11n (HT40)



OCCUPIED BANDWIDTH:

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	17.28	18.00
40	5200	27.72	25.92
48	5240	19.20	20.04
52	5260	17.40	17.52
60	5300	17.64	17.28
64	5320	17.16	17.04
100	5500	17.28	17.28
116	5580	17.64	17.88
140	5700	17.52	17.88
149	5745	16.92	16.80
157	5785	20.76	23.04
165	5825	21.24	22.56

802.11n (HT20)

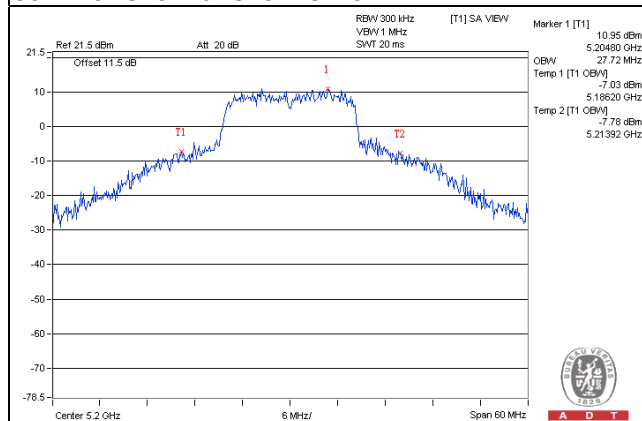
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
36	5180	18.24	18.48
40	5200	27.12	29.64
48	5240	19.32	19.08
52	5260	18.12	18.24
60	5300	18.24	18.12
64	5320	18.00	18.12
100	5500	18.36	18.24
116	5580	18.36	18.36
140	5700	18.36	18.36
149	5745	17.88	17.88
157	5785	21.96	21.60
165	5825	18.24	18.96

802.11n (HT40)

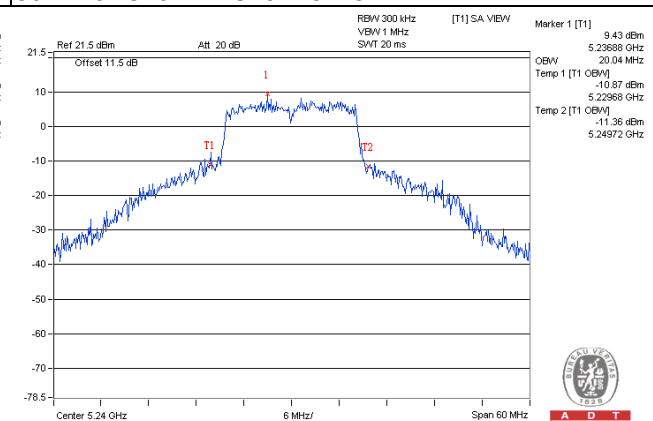
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)	
		Chain 0	Chain 1
38	5190	36.60	36.60
46	5230	37.44	38.28
54	5270	37.00	37.20
62	5310	36.60	36.80
102	5510	36.80	36.80
110	5550	37.00	37.20
134	5670	37.60	37.20
151	5755	36.72	36.72
159	5795	37.44	37.44

Spectrum Plot of Worst Value

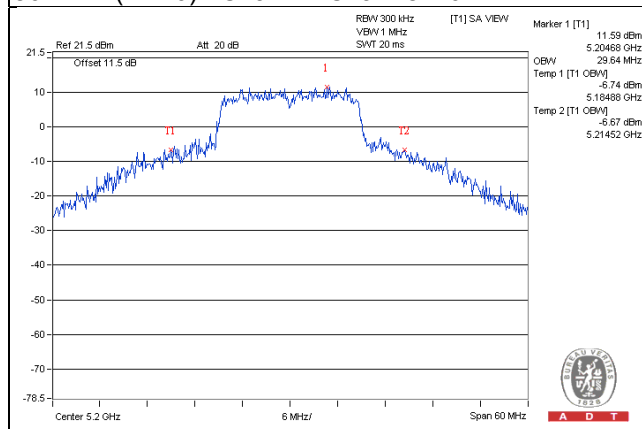
802.11a/ Chain 0/ Channel 40



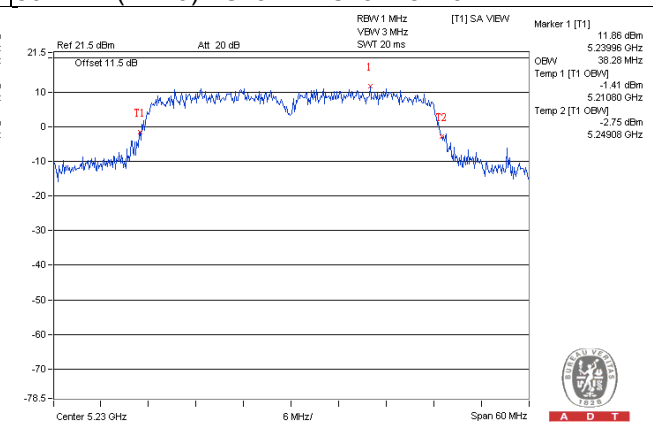
802.11a/ Chain 1/ Channel 48



802.11n (HT20) / Chain 1/ Channel 40



802.11n (HT40) / Chain 1/ Channel 46



EUT MAXIMUM CONDUCTED POWER

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	74.802	18.82
5470~5725	80.380	19.13

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	57.928	17.71
5470~5725	69.031	18.47

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	47.104	16.91
5470~5725	58.327	17.84

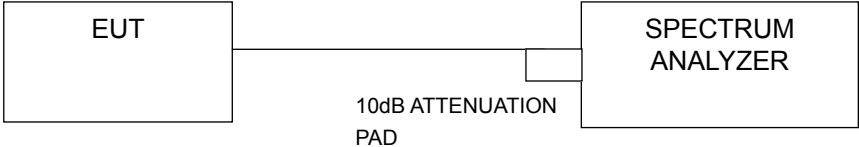
NOTE: Manufacturer provides Transmit Power Control description to meet this requirement.

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:

Using method SA-2

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

For U-NII-3 band:

- 1) Set span to encompass the entire emission bandwidth (EBW) of the signal.
- 2) Set RBW = 300 kHz, Set VBW $\geq$ 1 MHz, Detector = RMS
- 3) Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
- 4) 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 $BWCF = 10\log(500 \text{ kHz}/300\text{kHz})$
- 5) Sweep time = auto, trigger set to "free run".
- 6) Trace average at least 100 traces in power averaging mode.
- 7) Record the max value and add 10 log (1/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)		Total PSD w/o duty factor (dBm)	Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
36	5180	1.61	2.59	5.13	0.11	5.24	10.85	Pass
40	5200	6.74	6.40	9.58	0.11	9.69	10.85	Pass
48	5240	3.30	3.97	6.65	0.11	6.76	10.85	Pass
52	5260	-1.88	3.52	4.62	0.11	4.73	10.75	Pass
60	5300	-2.10	2.60	3.87	0.11	3.98	10.75	Pass
64	5320	-4.08	2.84	3.64	0.11	3.75	10.75	Pass
100	5500	1.68	3.59	5.75	0.11	5.86	10.70	Pass
116	5580	1.66	4.33	6.21	0.11	6.32	10.70	Pass
140	5700	2.51	4.33	6.52	0.11	6.63	10.70	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- U-NII-1:** Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.15\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.15 - 6) = 10.85\text{dBm}$.

U-NII-2A: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.25\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.25 - 6) = 10.75\text{dBm}$.

U-NII-2C: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.30\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.30 - 6) = 10.70\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm)		Total PSD w/o duty factor (dBm)	Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
36	5180	1.46	1.95	4.73	0.14	4.87	10.85	Pass
40	5200	6.57	7.13	9.88	0.14	10.02	10.85	Pass
48	5240	2.70	3.65	6.22	0.14	6.36	10.85	Pass
52	5260	-2.94	2.13	3.31	0.14	3.45	10.75	Pass
60	5300	-3.43	2.26	3.30	0.14	3.44	10.75	Pass
64	5320	-4.09	2.31	3.21	0.14	3.35	10.75	Pass
100	5500	1.15	3.37	5.41	0.14	5.55	10.70	Pass
116	5580	0.86	4.28	5.91	0.14	6.05	10.70	Pass
140	5700	2.09	4.01	6.17	0.14	6.31	10.70	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- U-NII-1:** Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.15\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.15 - 6) = 10.85\text{dBm}$.

U-NII-2A: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.25\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.25 - 6) = 10.75\text{dBm}$.

U-NII-2C: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.30\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.30 - 6) = 10.70\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Chan.	Freq. (MHz)	PSD (dBm)		Total PSD w/o duty factor (dBm)	Duty factor	Total PSD with duty factor (dBm)	Max. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1					
38	5190	-7.42	-6.53	-3.94	0.22	-3.72	10.85	Pass
46	5230	-0.11	1.26	3.64	0.22	3.86	10.85	Pass
54	5270	-6.31	-1.69	-0.40	0.22	-0.18	10.75	Pass
62	5310	-10.66	-4.46	-3.53	0.22	-3.31	10.75	Pass
102	5510	-7.45	-5.10	-3.11	0.22	-2.89	10.70	Pass
110	5550	-2.88	-0.07	1.76	0.22	1.98	10.70	Pass
134	5670	-1.49	0.91	2.88	0.22	3.10	10.70	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- U-NII-1:** Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.15\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.15 - 6) = 10.85\text{dBm}$.

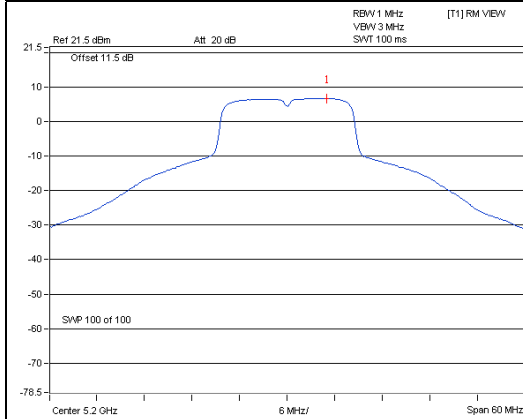
U-NII-2A: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.25\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.25 - 6) = 10.75\text{dBm}$.

U-NII-2C: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 6.30\text{dBi} > 6\text{dBi}$, so the power density limit shall be reduced to $11 - (6.30 - 6) = 10.70\text{dBm}$.
- Refer to section 3.3 for duty cycle spectrum plot.

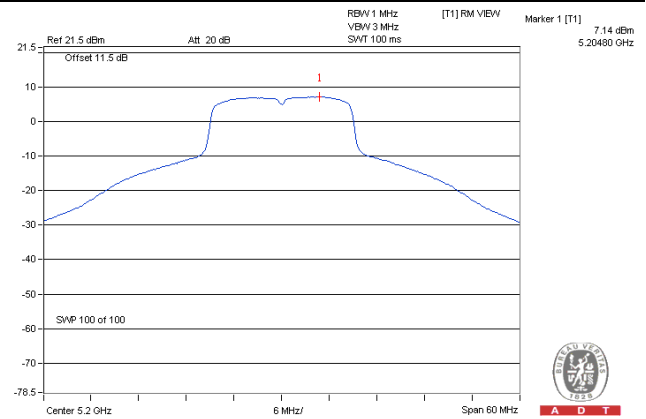
Spectrum Plot of Worst Value

802.11a / Ch 40 / Chain 0

802.11n (HT20) / Ch 40 / Chain 1

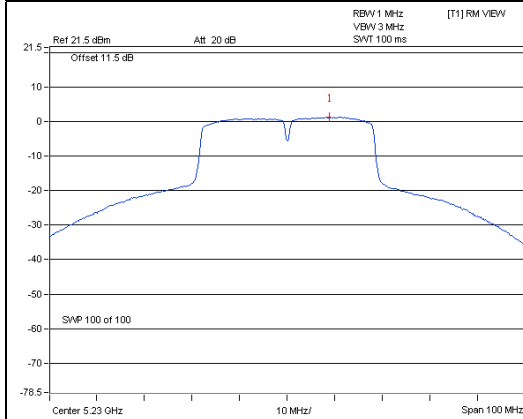


A D T



A D T

802.11n (HT40) / Ch 46 / Chain 1



A D T

For U-NII-3 Band

802.11a

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	149	5745	-9.33	-7.11	3.01	0.11	-3.99	30.00	Pass
	157	5785	-4.36	-2.14	3.01	0.11	0.98	30.00	Pass
	165	5825	-4.99	-2.77	3.01	0.11	0.35	30.00	Pass
1	149	5745	-7.43	-5.21	3.01	0.11	-2.09	30.00	Pass
	157	5785	-3.07	-0.85	3.01	0.11	2.27	30.00	Pass
	165	5825	-3.53	-1.31	3.01	0.11	1.81	30.00	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 5.53 < 6\text{dBi}$, so the limit no need to reduced.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	149	5745	-12.92	-10.70	3.01	0.14	-7.55	30.00	Pass
	157	5785	-4.59	-2.37	3.01	0.14	0.78	30.00	Pass
	165	5825	-5.74	-3.52	3.01	0.14	-0.37	30.00	Pass
1	149	5745	-11.95	-9.73	3.01	0.14	-6.58	30.00	Pass
	157	5785	-3.44	-1.22	3.01	0.14	1.93	30.00	Pass
	165	5825	-5.06	-2.84	3.01	0.14	0.31	30.00	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 5.53 < 6\text{dBi}$, so the limit no need to reduced.
- Refer to section 3.3 for duty cycle spectrum plot.

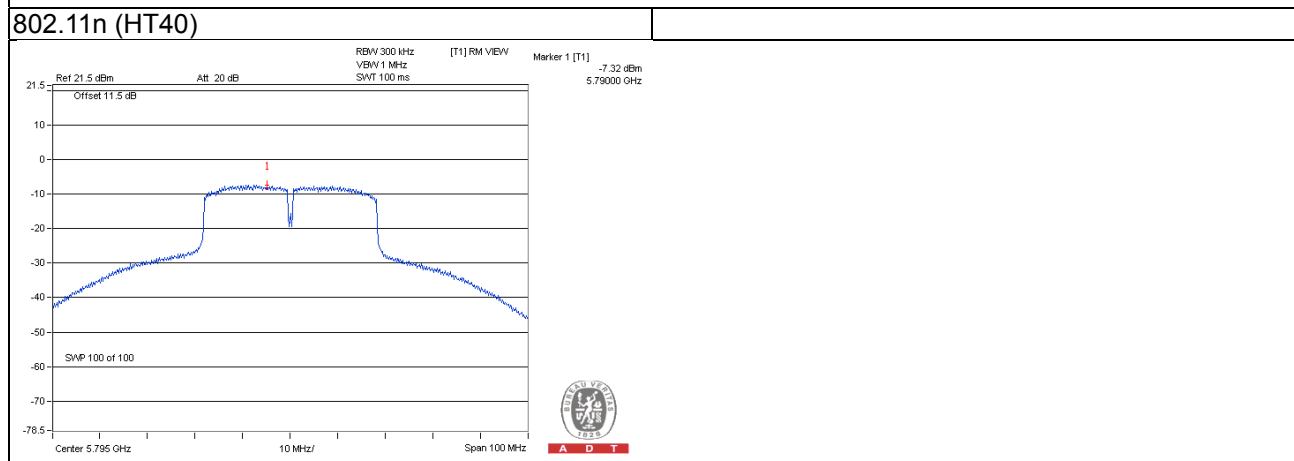
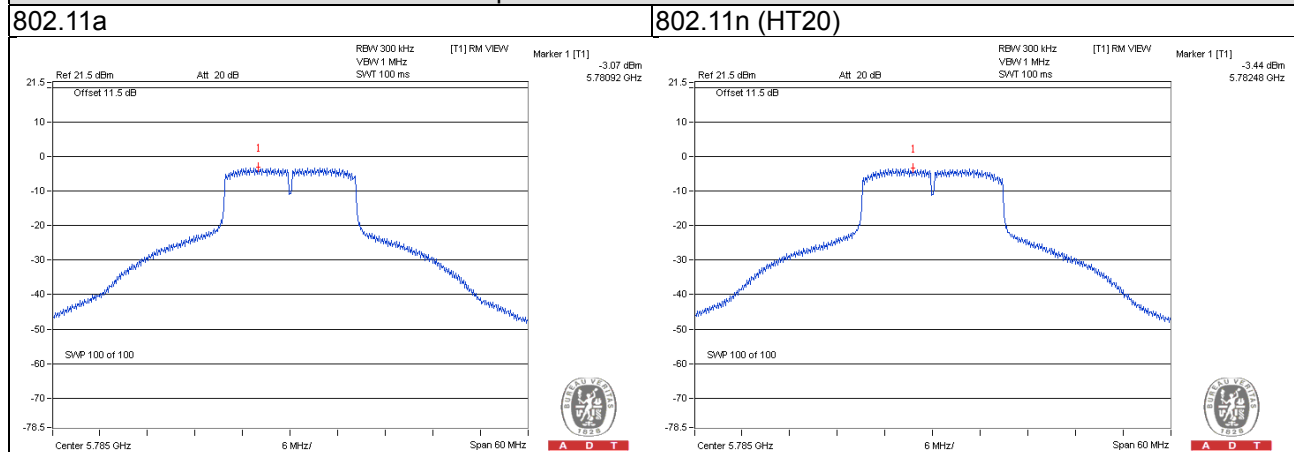
802.11n (HT40)

TX chain	Chan.	Freq. (MHz)	PSD (dBm/300 kHz)	PSD (dBm/500 kHz)	10 log (N=2) dB	Duty factor	Total PSD (dBm/500 kHz)	Limit (dBm/500 kHz)	Pass / Fail
0	151	5755	-16.87	-14.65	3.01	0.22	-11.42	30.00	Pass
	159	5795	-7.77	-5.55	3.01	0.22	-2.32	30.00	Pass
1	151	5755	-16.24	-14.02	3.01	0.22	-10.79	30.00	Pass
	159	5795	-7.32	-5.10	3.01	0.22	-1.87	30.00	Pass

Note:

- Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] = 5.53 < 6\text{dBi}$, so the limit no need to reduced.
- Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

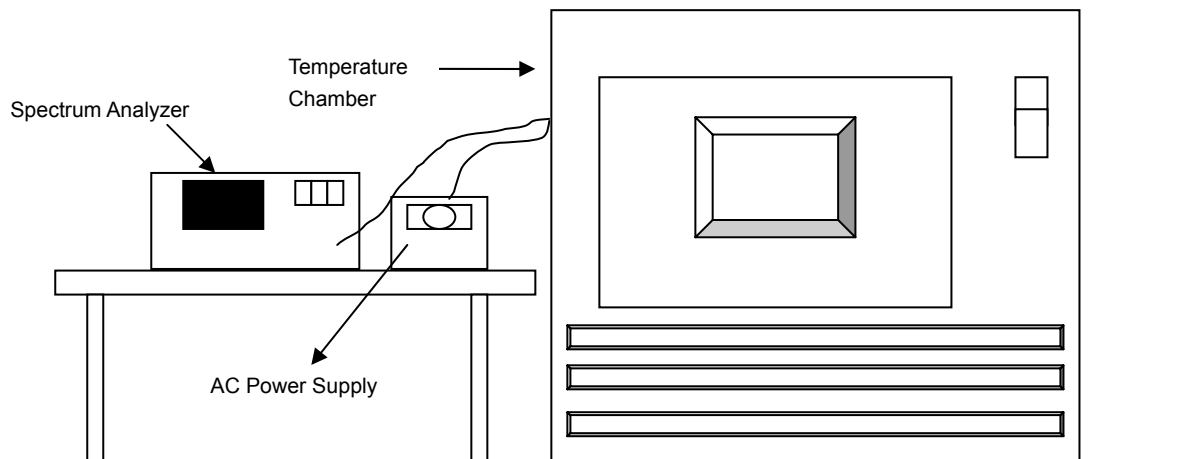


4.5 Frequency Stability

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. ()	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	5179.9983	-0.00003	5179.997	-0.00006	5179.9984	-0.00003	5180.0007	0.00001
40	120	5180.0073	0.00014	5180.0107	0.00021	5180.0078	0.00015	5180.0097	0.00019
30	120	5180.0082	0.00016	5180.0078	0.00015	5180.0084	0.00016	5180.0091	0.00018
20	120	5179.9895	-0.00020	5179.9901	-0.00019	5179.9912	-0.00017	5179.9916	-0.00016
10	120	5179.9825	-0.00034	5179.9814	-0.00036	5179.9797	-0.00039	5179.9827	-0.00033
0	120	5180.0274	0.00053	5180.027	0.00052	5180.0272	0.00053	5180.024	0.00046
-10	120	5180.0162	0.00031	5180.0192	0.00037	5180.0172	0.00033	5180.0191	0.00037
-20	120	5179.9942	-0.00011	5179.9938	-0.00012	5179.9964	-0.00007	5179.9973	-0.00005
-30	120	5180.0224	0.00043	5180.0205	0.00040	5180.021	0.00041	5180.018	0.00035

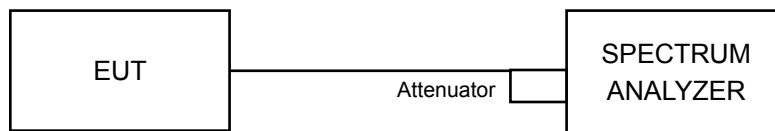
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. ()	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5179.9896	-0.00020	5179.9906	-0.00018	5179.9919	-0.00016	5179.9919	-0.00016
	120	5179.9895	-0.00020	5179.9901	-0.00019	5179.9912	-0.00017	5179.9916	-0.00016
	102	5179.9897	-0.00020	5179.9892	-0.00021	5179.9906	-0.00018	5179.9918	-0.00016

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
		Chain 0	Chain 1		
149	5745	16.33	16.34	0.5	Pass
157	5785	16.08	15.92	0.5	Pass
165	5825	16.37	15.75	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
149	5745	17.22	17.08	0.5	Pass
157	5785	16.85	15.46	0.5	Pass
165	5825	16.55	16.97	0.5	Pass

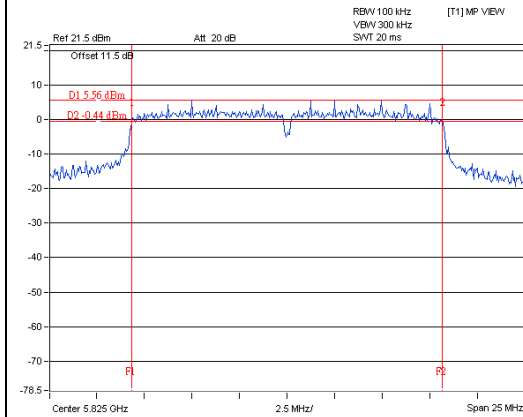
802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
151	5755	35.76	35.30	0.5	Pass
159	5795	35.26	35.20	0.5	Pass

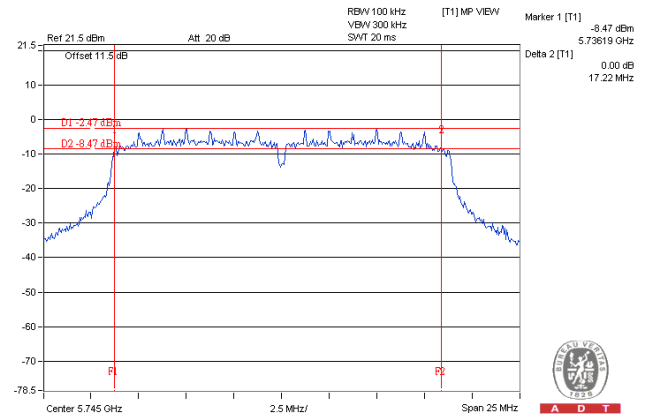
Spectrum Plot of Worst Value

802.11a

802.11n (HT20)



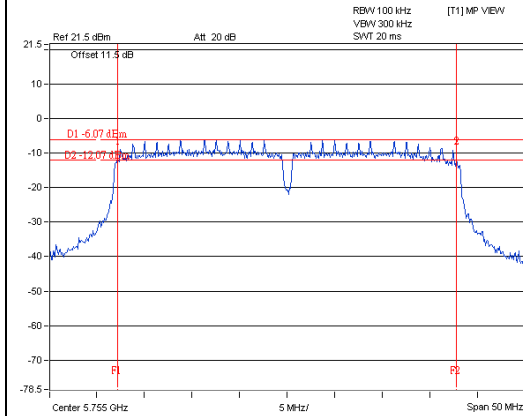
A D T



A D T

802.11n (HT40)

802.11ac (VHT80)



A D T

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

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Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety

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.

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