FCC Test Report

Report No.:	RF161028D01A
FCC ID:	PY316200344
Test Model:	R6800
Series Model:	R6700v2, R6900v2
Received Date:	Oct. 28, 2016
Test Date:	Nov. 11, 2016 ~ Mar. 20, 2017
Issued Date:	May 10, 2017
Applicant:	NETGEAR INC.
Address:	350 East Plumeria Drive, San Jose, CA 95134, USA
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RF161028D01A	Original release.	May 10, 2017

1 Certificate of Conformity

Product:	AC1900 Smart WiFi Router / AC1750 Smart WiFi Router
Brand:	NETGEAR
Test Model:	R6800 (**Product:** AC1900 Smart WiFi Router)
Series Model:	R6700v2 (**Product:** AC1750 Smart WiFi Router) R6900v2 (**Product:** AC1900 Smart WiFi Router)
Sample Status:	Engineering sample
Applicant:	NETGEAR INC.
Test Date:	Nov. 11, 2016 ~ Mar. 20, 2017
Standard:	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 : Annie Chang , **Date:** May 10, 2017

Annie Chang / Senior Specialist

Approved by : Rex. Lai , **Date:** May 10, 2017

Rex Lai / Assistant 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 -10.11dB at 0.30625MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -0.26dB at 5470.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is R-SMA or I-PEX not a standard connector.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.77 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	2.38 dB
	30MHz ~ 1000MHz	5.54 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	4.77 dB
	6GHz ~ 18GHz	5.48 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	AC1900 Smart WiFi Router / AC1750 Smart WiFi Router
Brand	NETGEAR
Test Model	R6800 (**Product:** AC1900 Smart WiFi Router)
Series Model	R6700v2 (**Product:** AC1750 Smart WiFi Router) R6900v2 (**Product:** AC1900 Smart WiFi Router)
Model Difference	Refer to note as below
Status of EUT	Engineering sample
Power Supply Rating	12Vdc from adapter (refer to note as below) Power Cord: Non-shielded DC cable (1.8m)
Modulation Type	64QAM, 16QAM, QPSK, BPSK 256QAM for OFDM in 11ac mode only.
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 800Mbps 802.11ac: up to 1733Mbps
Operating Frequency	5260 ~ 5320MHz, 5500 ~ 5700MHz
Number of Channel	**5260 ~ 5320MHz:** 4 for 802.11a, 802.11n (20MHz) 2 for 802.11n (40MHz) 1 for 802.11ac (80MHz) **5500 ~ 5700MHz** 11 for 802.11a, 802.11n (20MHz) 5 for 802.11n (40MHz) 2 for 802.11ac (80MHz)
Output Power	**5260 ~ 5320MHz:** 247.872mW **5500 ~ 5700MHz:** 246.705mW
Antenna Type	Refer to note as below
Antenna Connector	Refer to note as below
Accessory Device	N/A
Data Cable Supplied	Non-shielded Ethernet cable (1.5m)

Note:

1. This report is issued as a supplementary report to BV CPS report no. RF161028D01-1. The difference compared with original report is adding U-NII-2A, U-NII-2C band, therefore the EUT is re-tested in this report.

2. This report is prepared for FCC class II permissive change.

3. The EUT incorporates a MIMO function. Physically, the EUT provides four completed transmitters and four receivers.

Modulation Mode	TX FUNCTION
802.11a	4TX
802.11n (20MHz)	4TX
802.11n (40MHz)	4TX
802.11ac (20MHz)	4TX
802.11ac (40MHz)	4TX
802.11ac (80MHz)	4TX

* The modulation and bandwidth are similar for 802.11n mode for 20MHz / 40MHz and 802.11ac mode for 20MHz / 40MHz, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

4. All models are listed as below.

Model		R6700v2	R6900v2	R6800	Remark
Product Name		AC1750 Smart WiFi Router	AC1900 Smart WiFi Router	AC1900 Smart WiFi Router	
HW	USB 2.0	NO	NO	YES	
	USB 3.0	YES	YES	YES	
	LED- USB LED	NO	NO	YES	PCBA Components is no difference. Only silkscreen on top housing is different.
	LED-Wireless Guest LED	YES	YES	NO	
SW	2.4G 256 QAM	Disable	Enable	Enable	

5. The EUT uses following adapter.

Adapter	1	2
Brand	NETGEAR	NETGEAR
Model	2ABL030F 1 NA	AD2067F10
P/N	332-10758-01	332-10797-01
AC Input Power	100-120V, 50/60Hz, 1.0A	100-120V, 50/60Hz, 1.0A
DC Output Power	12.0V, 2.5A	12.0V, 2.5A
Plug Type	US Plug	US Plug
Power Cord	Non-shielded DC cable (1.8m)	Non-shielded DC cable (1.8m)

After pre-tested, the **adapter 1** was the worst case for final test.

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

Frequency Band (MHz)	Chain No.	Antenna Type	Directional Gain (dBi)	Connector Type
5260-5320	Chain 0	Dipole	6.95	R-SMA
	Chain 1	Dipole		R-SMA
	Chain 2	Dipole		R-SMA
	Chain 3	PIFA		I-PEX
5500-5700	Chain 0	Dipole	7.14	R-SMA
	Chain 1	Dipole		R-SMA
	Chain 2	Dipole		R-SMA
	Chain 3	PIFA		I-PEX

The directional antenna gain information is declared by manufacturer and more detailed features description please refer to operation description of antenna specifications exhibit.

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

3.2 Description of Test Modes

FOR 5260 ~ 5320MHz

4 channels are provided for 802.11a, 802.11n (20MHz), 802.11ac (20MHz):

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

2 channels are provided for 802.11n (40MHz), 802.11ac (40MHz):

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (80MHz):

Channel	Frequency
58	5290MHz

FOR 5500 ~ 5700MHz

11 channels are provided for 802.11a, 802.11n (20MHz), 802.11ac (20MHz):

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz		

5 channels are provided for 802.11n (40MHz), 802.11ac (40MHz):

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz		

2 channels are provided for 802.11ac (80MHz):

Channel	Frequency	Channel	Frequency
106	5530MHz	122	5610 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 **RE<1G:** Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

NOTE: The EUT had been pre-tested on the positioned of each 2 axis. The worst case was found when positioned on **X-plane**.

Radiated Emission Test (Above 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

CDD Mode							
EUT Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
-	802.11ac (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
-	802.11ac (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
-	802.11ac (80MHz)		58	58	OFDM	BPSK	29.3
-	802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	BPSK	6
-	802.11ac (20MHz)		100 to 140	100, 116, 132, 140	OFDM	BPSK	6.5
-	802.11ac (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
-	802.11ac (80MHz)		106 to 122	106, 122	OFDM	BPSK	29.3

Radiated Emission Test (Below 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

CDD Mode							
EUT Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11a	5260-5320	52 to 64	52	OFDM	BPSK	6

Power Line Conducted Emission Test:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

CDD Mode							
EUT Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11a	5260-5320	52 to 64	52	OFDM	BPSK	6

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.
☒ The EUT was tested with CDD MODE & Beamforming_NSS1 MODE for Maximum Peak Output Power test. The worst case was found when the EUT was tested with CDD MODE. Therefore, other test items were tested with CDD MODE only.

CDD Mode							
EUT Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6
-	802.11ac (20MHz)		52 to 64	52, 60, 64	OFDM	BPSK	6.5
-	802.11ac (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
-	802.11ac (80MHz)		58	58	OFDM	BPSK	29.3
-	802.11a	5500-5700	100 to 140	100, 116, 132, 140	OFDM	BPSK	6
-	802.11ac (20MHz)		100 to 140	100, 116, 132, 140	OFDM	BPSK	6.5
-	802.11ac (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
-	802.11ac (80MHz)		106 to 122	106, 122	OFDM	BPSK	29.3
Beamforming_NSS1 Mode							
EUT Configure Mode	Mode	FREQ. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)
-	802.11ac (20MHz)	5260-5320	52 to 64	52, 60, 64	OFDM	BPSK	6.5
-	802.11ac (40MHz)		54 to 62	54, 62	OFDM	BPSK	13.5
-	802.11ac (80MHz)		58	58	OFDM	BPSK	29.3
-	802.11ac (20MHz)	5500-5700	100 to 140	100, 116, 132, 140	OFDM	BPSK	6.5
-	802.11ac (40MHz)		102 to 134	102, 110, 134	OFDM	BPSK	13.5
-	802.11ac (80MHz)		106 to 122	106, 122	OFDM	BPSK	29.3

Test Condition:

Applicable To	Environmental Conditions	Input Power	Tested By
RE≥1G	23deg. C, 75%RH	120Vac, 60Hz	Aaron You
RE<1G	22deg. C, 74%RH	120Vac, 60Hz	Aaron You
PLC	23deg. C, 77%RH	120Vac, 60Hz	Vhenson Huang
APCM	25deg. C, 76%RH	120Vac, 60Hz	Saxon Lee

3.3 Duty Cycle of Test Signal

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

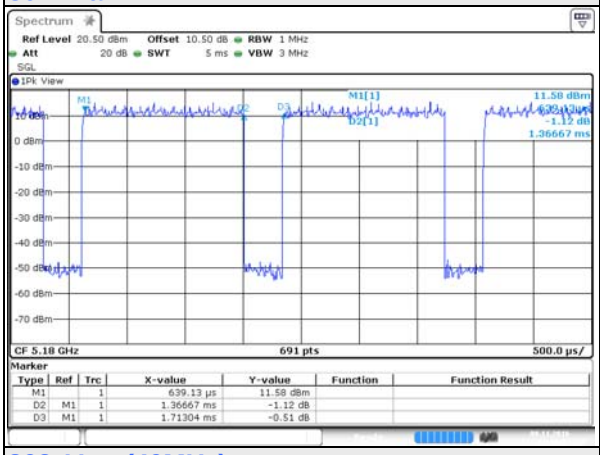
802.11a: Duty cycle = 1.366/1.713 = 0.797, Duty factor = 10 * log(1/0.797) = 0.98

802.11ac (20MHz): Duty cycle = 0.355/0.679 = 0.523, Duty factor = 10 * log(1/0.523) = 2.82

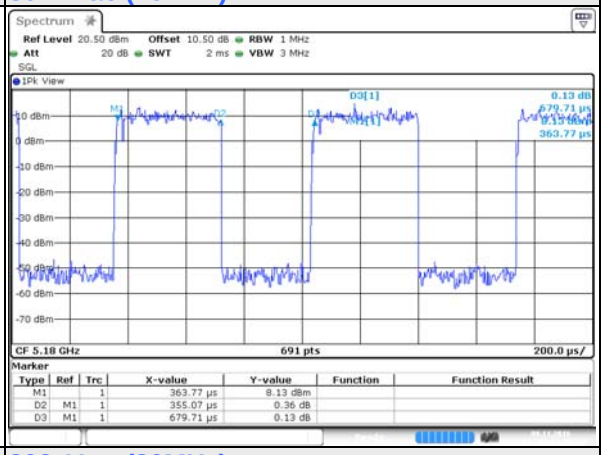
802.11ac (40MHz): Duty cycle = 0.195/0.514 = 0.379, Duty factor = 10 * log(1/0.379) = 4.21

802.11ac (80MHz): Duty cycle = 0.123/0.452 = 0.272, Duty factor = 10 * log(1/0.272) = 5.65

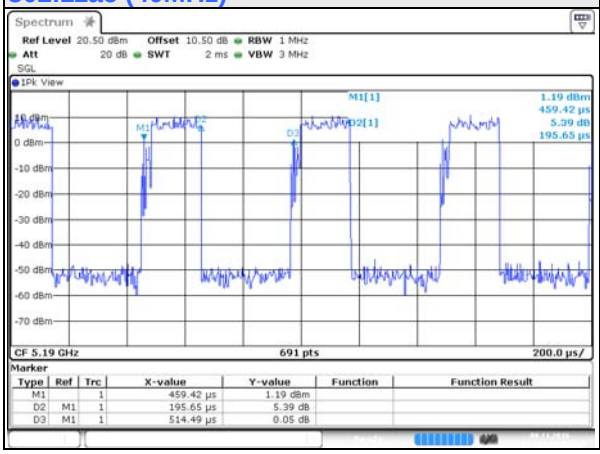
802.11a



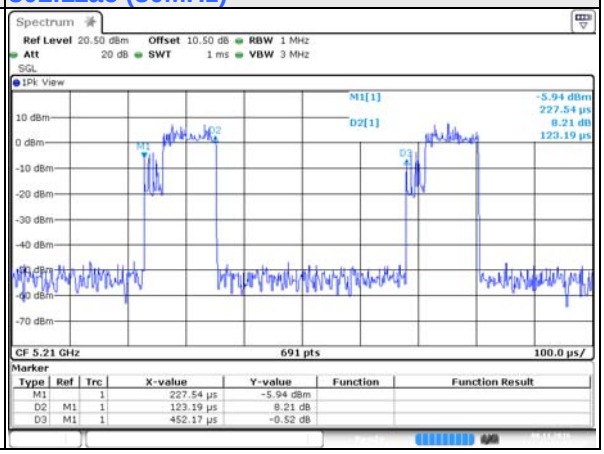
802.11ac (20MHz)



802.11ac (40MHz)



802.11ac (80MHz)



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.

For Conducted Emission Test:

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	USB 3.0 Flash Drive	HP	v250w	N/A	FCC DoC Approved	Provided by Lab
B.	USB 3.0 Flash Drive	Transcend	16GB	N/A	N/A	Provided by Lab
C.	Notebook PC	DELL	P41G	FT4W952	FCC DoC Approved	Provided by Lab
D.	Notebook PC	DELL	P41G	GT4W952	FCC DoC Approved	Provided by Lab
	Notebook PC	DELL	P41G	HT4W952	FCC DoC Approved	Provided by Lab
	Notebook PC	ASUS	PU401L	E9NXBC002007372	FCC DoC Approved	Provided by Lab
	Notebook PC	ASUS	PU401L	ECNXBC012528528	FCC DoC Approved	Provided by Lab
E.	Notebook PC	DELL	XPS 13-9350	0V5D5A01	FCC DoC Approved	Provided by Lab
F.	Notebook PC	SONY	SVS151A12P	275548477001024	FCC DoC Approved	Provided by Lab

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Items C~F acted as communication partners to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC cable	1	1.8	N	0	Supplied by client
2.	LAN cable	1	10	N	0	Provided by Lab
3.	LAN cable	4	10	N	0	Provided by Lab

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

For Radiated Emission Test:

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	USB 3.0 Hard Disk	WD	WDBACY5000ABL-PESN	WX11E91JE773	FCC DoC Approved	Provided by Lab
B.	USB 3.0 Hard Disk	WD	WDBACY5000ABL-PESN	WX81E81YSM98	FCC DoC Approved	Provided by Lab
C.	Load	N/A	N/A	N/A	N/A	Provided by Lab
D.	Notebook PC	DELL	PP27L	8SNZ12S	FCC DoC Approved	Provided by Lab
E.	Notebook PC	DELL	E6530	9331GV1	FCC DoC Approved	Provided by Lab

Note:

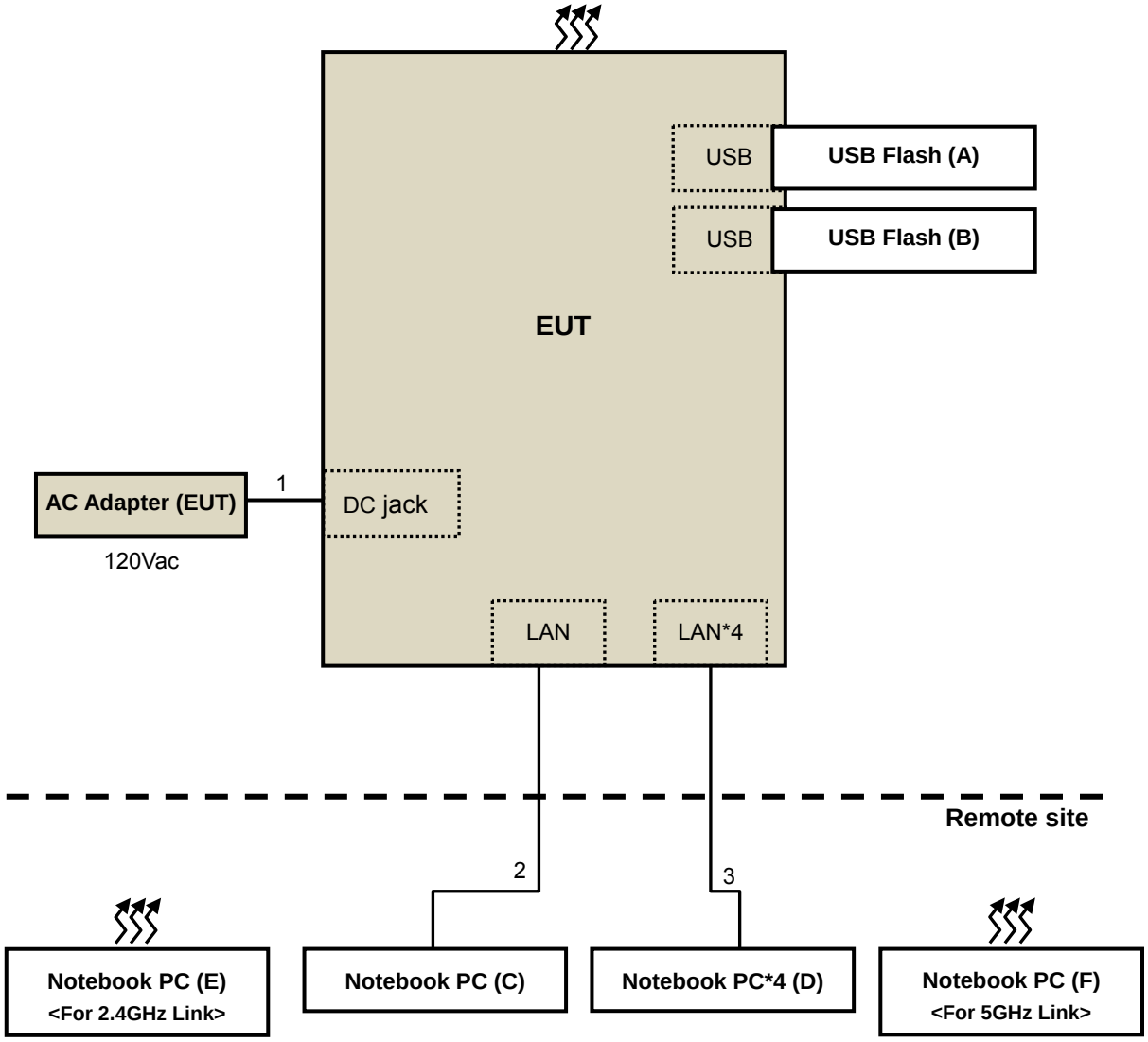
1. All power cords of the above support units are non-shielded (1.8m).
2. Items D~E acted as communication partners to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB cable	1	0.5	Y	0	Provided by Lab
2.	USB cable	1	0.5	Y	0	Provided by Lab
3.	LAN cable	3	1.8	N	0	Provided by Lab
4.	DC cable	1	1.8	N	0	Supplied by client
5.	LAN cable	1	10	N	0	Provided by Lab
6.	LAN cable	1	10	N	0	Provided by Lab

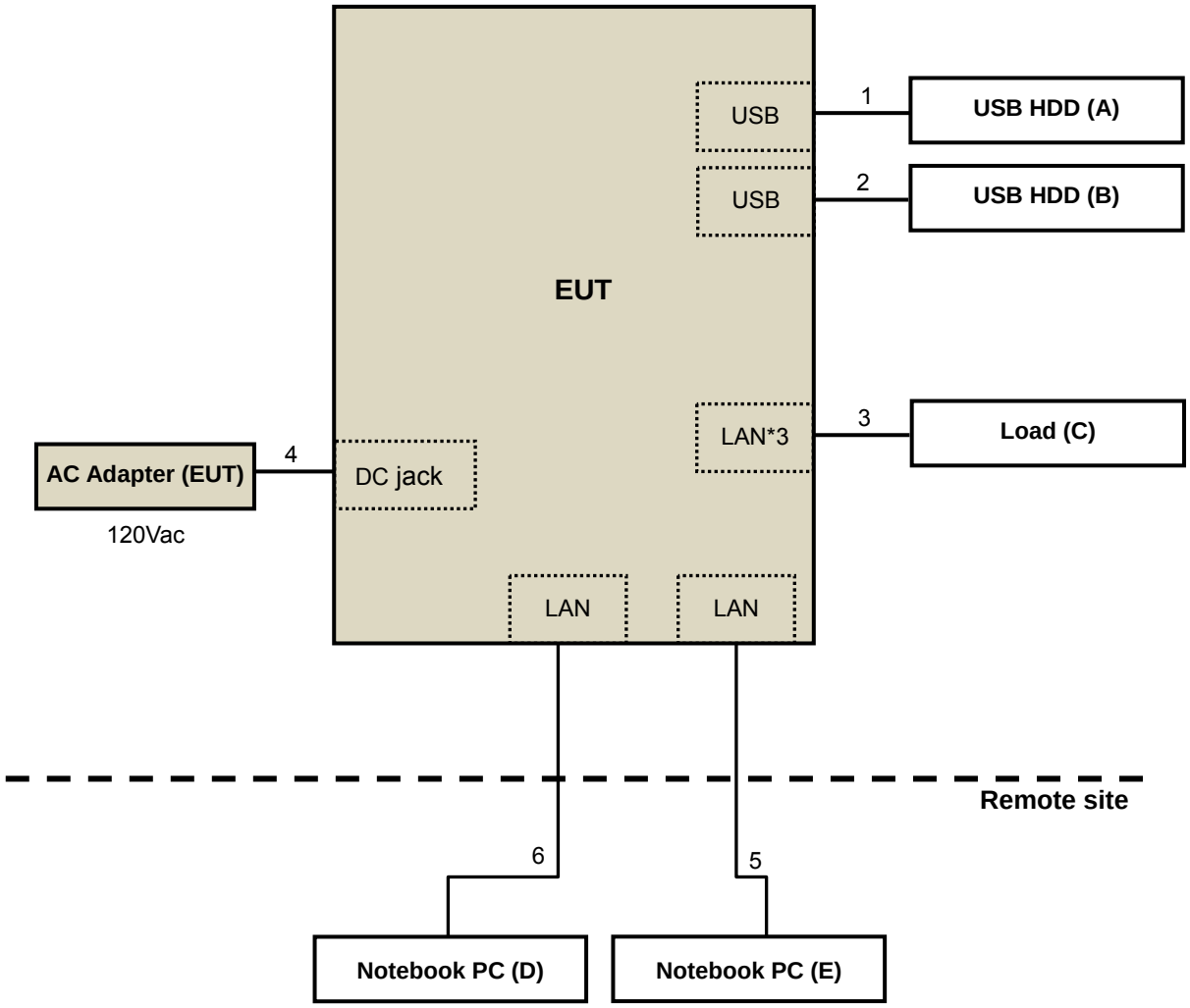
Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test

For Conducted Emission Test:



For Radiated Emission Test:



3.5 General Description of Applied Standard

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)
KDB 789033 D02 General UNII Test Procedure New Rules v01r04
KDB 662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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 Procedure New Rules v01r03			Field Strength at 3m	
			PK:74 (dBμV/m)	AV:54 (dBμV/m)
Frequency Band	Applicable To		EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)		PK:-27 (dBm/MHz)	PK:68.2(dBμV/m)
5250~5350 MHz	15.407(b)(2)			
5470~5725 MHz	15.407(b)(3)			
5725~5850 MHz	☐	15.407(b)(4)(i)	PK:-27 (dBm/MHz) [*1] PK:10 (dBm/MHz) [*2] PK:15.6 (dBm/MHz) [*3] PK:27 (dBm/MHz) [*4]	PK: 68.2(dBμV/m) [*1] PK:105.2 (dBμV/m) [*2] PK: 110.8(dBμV/m) [*3] PK:122.2 (dBμV/m) [*4]
	☒	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	

[*1] beyond 75 MHz or more above of the band edge.

[*2] below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.

[*3] below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.

[*4] from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Note:

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

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

4.1.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
HP Preamplifier	8447D	2432A03504	Feb. 26, 2016	Feb. 25, 2017
			Feb. 21, 2017	Feb. 20, 2018
HP Preamplifier	8449B	3008A01201	Feb. 26, 2016	Feb. 25, 2017
			Feb. 22, 2017	Feb. 21, 2018
MITEQ Preamplifier	AMF-6F-260400-33-8P	892164	Mar. 01, 2016	Feb. 28, 2017
			Feb. 21, 2017	Feb. 20, 2018
Agilent TEST RECEIVER	N9038A	MY51210129	Feb. 02, 2016	Feb. 01, 2017
			Feb. 08, 2017	Feb. 07, 2018
Schwarzbeck Antenna	VULB 9168	139	Jan. 04, 2016	Jan. 03, 2017
			Dec. 13, 2016	Dec. 12, 2017
Schwarzbeck Antenna	VHBA 9123	480	May 29, 2015	May 28, 2017
Schwarzbeck Horn Antenna	BBHA-9170	212	Jan. 08, 2016	Jan. 07, 2017
			Dec. 30, 2016	Dec. 29, 2017
Schwarzbeck Horn Antenna	BBHA 9120-D1	D130	Jan. 21, 2016	Jan. 20, 2017
			Dec. 27, 2016	Dec. 26, 2017
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	Radiated_V7.6.15.9.5	NA	NA	NA
SUHNER RF cable With 4dB PAD	SF104	CABLE-CH6	Aug. 15, 2016	Aug. 14, 2017
SUHNER RF cable With 3dB PAD	SF102	Cable-CH8-3.6m	Aug. 15, 2016	Aug. 14, 2017
KEYSIGHT MIMO Powermeasurement Test set	U2021XA	U2021XA-001	May 25, 2016	May 24, 2017
KEYSIGHT Spectrum Analyzer	N9030A	MY54490260	Jul. 26, 2016	Jul. 25, 2017
Loop Antenna EMCI	LPA600	270	Aug. 20, 2015	Aug. 19, 2017
EMCO Horn Antenna	3115	00028257	Jan. 19, 2016	Jan. 18, 2017
			Dec. 15, 2016	Dec. 14, 2017
Highpass filter Wainwright Instruments	WHK 3.1/18G-10SS	SN 8	NA	NA
ROHDE & SCHWARZ Spectrum Analyzer	FSV40	101042	Sep. 30, 2016	Sep. 29, 2017
Anritsu Power Sensor	MA2411B	0738404	Apr. 28, 2016	Apr. 27, 2017
Anritsu Power Meter	ML2495A	0842014	Apr. 28, 2016	Apr. 27, 2017
Temperature & Humidity Chamber	MHU-225AU	920409	May 25, 2016	May 24, 2017
DIGITAL POWER METER IDRC	CP-240	240515	Sep. 9, 2016	Sep. 8, 2017
AC Power Source ExTech	CFW-105	E000603	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12/24 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Chamber No. 6.
4. The Industry Canada Reference No. IC 7450E-6.
5. The FCC Site Registration No. is TW2021.
6. Tested Date: Nov. 11, 2016 & Mar. 7 ~ 20, 2017

4.1.3 Test Procedure

For Radiated emission below 30MHz

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

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

c. Both X and Y axes of the antenna are set to make the measurement.

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

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

NOTE:

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

For Radiated emission above 30MHz

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

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

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

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

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

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

Note:

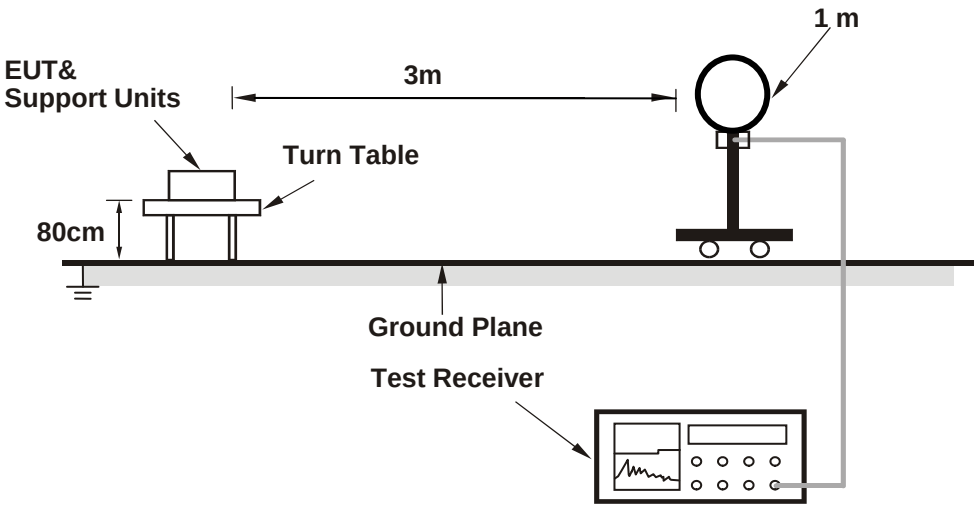
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

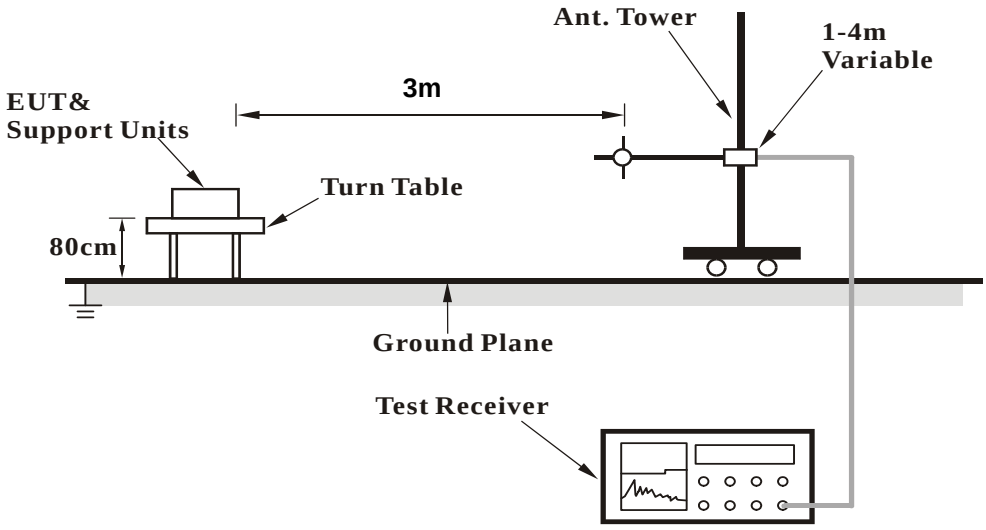
No deviation.

4.1.5 Test Setup

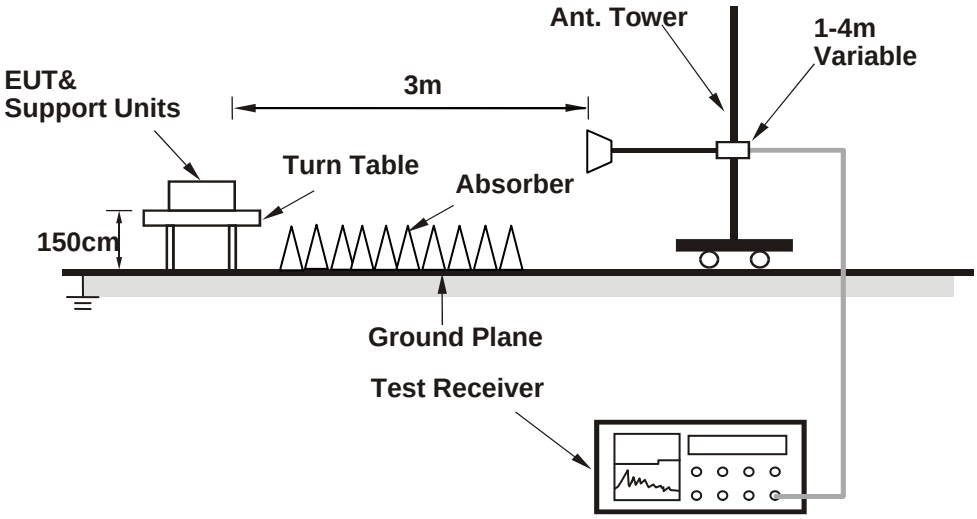
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Condition

a. Connected the EUT with AC adapter placed on testing table.
b. The EUT perform R/W function with USB HDD from AE notebooks via LAN cables.
c. Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

CDD MODE

Above 1GHz Data:

802.11a

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	60.03 PK	74.00	-13.97	2.21 H	261	52.23	7.80
2	5150.00	46.20 AV	54.00	-7.80	2.21 H	261	38.40	7.80
3	*5260.00	114.07 PK			2.21 H	261	105.83	8.24
4	*5260.00	104.22 AV			2.21 H	261	95.98	8.24
5	#10520.00	57.73 PK	74.00	-16.27	1.05 H	144	38.63	19.10
6	#10520.00	45.14 AV	54.00	-8.86	1.05 H	144	26.04	19.10
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	5150.00	61.80 PK	74.00	-12.20	2.92 V	321	54.00	7.80
2	5150.00	47.70 AV	54.00	-6.30	2.92 V	321	39.90	7.80
3	*5260.00	118.52 PK			3.30 V	160	110.28	8.24
4	*5260.00	108.51 AV			3.30 V	160	100.27	8.24
5	#10520.00	58.36 PK	74.00	-15.64	1.46 V	226	39.26	19.10
6	#10520.00	45.98 AV	54.00	-8.02	1.46 V	226	26.88	19.10

REMARKS:

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

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	114.37 PK			2.18 H	257	106.00	8.37
2	*5300.00	104.52 AV			2.18 H	257	96.15	8.37
3	10600.00	58.82 PK	74.00	-15.18	1.00 H	143	39.47	19.35
4	10600.00	45.74 AV	54.00	-8.26	1.00 H	143	26.39	19.35
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	117.91 PK			1.22 V	199	109.54	8.37
2	*5300.00	107.54 AV			1.22 V	199	99.17	8.37
3	10600.00	59.20 PK	74.00	-14.80	1.63 V	145	39.85	19.35
4	10600.00	45.86 AV	54.00	-8.14	1.63 V	145	26.51	19.35

REMARKS:

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

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	116.43 PK			2.17 H	263	107.97	8.46
2	*5320.00	106.55 AV			2.17 H	263	98.09	8.46
3	5350.00	69.47 PK	74.00	-4.53	2.17 H	263	60.89	8.58
4	5350.00	50.63 AV	54.00	-3.37	2.17 H	263	42.05	8.58
5	10640.00	58.86 PK	74.00	-15.14	1.01 H	152	39.45	19.41
6	10640.00	45.85 AV	54.00	-8.15	1.01 H	152	26.44	19.41
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	119.00 PK			1.23 V	200	110.54	8.46
2	*5320.00	108.79 AV			1.23 V	200	100.33	8.46
3	5350.00	73.68 PK	74.00	-0.32	1.23 V	200	65.10	8.58
4	5350.00	53.07 AV	54.00	-0.93	1.23 V	200	44.49	8.58
5	10640.00	59.06 PK	74.00	-14.94	1.88 V	214	39.65	19.41
6	10640.00	46.23 AV	54.00	-7.77	1.88 V	214	26.82	19.41

REMARKS:

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

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	62.83 PK	74.00	-11.17	2.46 H	296	53.74	9.09
2	5460.00	47.86 AV	54.00	-6.14	2.46 H	296	38.77	9.09
3	#5470.00	66.07 PK	68.20	-2.13	2.46 H	296	56.93	9.14
4	*5500.00	114.45 PK			2.46 H	296	105.16	9.29
5	*5500.00	104.22 AV			2.46 H	296	94.93	9.29
6	11000.00	58.86 PK	74.00	-15.14	1.10 H	138	38.12	20.74
7	11000.00	45.90 AV	54.00	-8.10	1.10 H	138	25.16	20.74
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	67.64 PK	74.00	-6.36	2.72 V	195	58.55	9.09
2	5460.00	48.01 AV	54.00	-5.99	2.72 V	195	38.92	9.09
3	#5470.00	67.93 PK	68.20	-0.27	2.72 V	195	58.79	9.14
4	*5500.00	119.81 PK			2.72 V	195	110.52	9.29
5	*5500.00	109.60 AV			2.72 V	195	100.31	9.29
6	11000.00	59.20 PK	74.00	-14.80	1.63 V	238	38.46	20.74
7	11000.00	47.08 AV	54.00	-6.92	1.63 V	238	26.34	20.74

REMARKS:

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

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	116.04 PK			2.39 H	291	106.71	9.33
2	*5580.00	106.38 AV			2.39 H	291	97.05	9.33
3	11160.00	59.21 PK	74.00	-14.79	1.12 H	141	38.94	20.27
4	11160.00	45.99 AV	54.00	-8.01	1.12 H	141	25.72	20.27
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	120.39 PK			2.71 V	198	110.84	9.55
2	*5580.00	108.87 AV			2.71 V	198	99.32	9.55
3	11160.00	60.33 PK	74.00	-13.67	1.58 V	234	39.64	20.69
4	11160.00	47.23 AV	54.00	-6.77	1.58 V	234	26.54	20.69

REMARKS:

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

CHANNEL	TX Channel 132	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*5660.00	115.33 PK			2.48 H	301	105.97	9.36
2	*5660.00	105.25 AV			2.48 H	301	95.89	9.36
3	11320.00	59.62 PK	74.00	-14.38	1.02 H	140	39.53	20.09
4	11320.00	46.07 AV	54.00	-7.93	1.02 H	140	25.98	20.09
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	*5660.00	119.25 PK			2.72 V	234	109.89	9.36
2	*5660.00	108.15 AV			2.72 V	234	98.79	9.36
3	11320.00	59.74 PK	74.00	-14.26	1.69 V	21	39.65	20.09
4	11320.00	46.62 AV	54.00	-7.38	1.69 V	21	26.53	20.09

REMARKS:

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

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	112.83 PK			2.50 H	296	103.46	9.37
2	*5700.00	102.65 AV			2.50 H	296	93.28	9.37
3	#5725.00	63.72 PK	68.20	-4.48	2.50 H	296	54.34	9.38
4	11400.00	58.84 PK	74.00	-15.16	1.15 H	125	38.69	20.15
5	11400.00	45.64 AV	54.00	-8.36	1.15 H	125	25.49	20.15
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	116.86 PK			2.49 V	312	107.49	9.37
2	*5700.00	106.33 AV			2.49 V	312	96.96	9.37
3	#5725.00	67.91 PK	68.20	-0.29	2.49 V	312	58.53	9.38
4	11400.00	59.77 PK	74.00	-14.23	1.74 V	164	39.62	20.15
5	11400.00	46.66 AV	54.00	-7.34	1.74 V	164	26.51	20.15

REMARKS:

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

802.11ac (20MHz)

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	60.04 PK	74.00	-13.96	2.08 H	258	52.24	7.80
2	5150.00	45.87 AV	54.00	-8.13	2.08 H	258	38.07	7.80
3	*5260.00	114.88 PK			2.08 H	258	106.64	8.24
4	*5260.00	104.99 AV			2.08 H	258	96.75	8.24
5	#10520.00	57.94 PK	74.00	-16.06	1.02 H	148	38.84	19.10
6	#10520.00	44.96 AV	54.00	-9.04	1.02 H	148	25.86	19.10
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	5150.00	62.35 PK	74.00	-11.65	2.99 V	282	54.55	7.80
2	5150.00	47.42 AV	54.00	-6.58	2.99 V	282	39.62	7.80
3	*5260.00	118.23 PK			2.99 V	282	109.99	8.24
4	*5260.00	106.40 AV			2.99 V	282	98.16	8.24
5	#10520.00	58.43 PK	74.00	-15.57	1.96 V	164	39.33	19.10
6	#10520.00	45.64 AV	54.00	-8.36	1.96 V	164	26.54	19.10

REMARKS:

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

CHANNEL	TX Channel 60	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	115.90 PK			2.11 H	260	107.53	8.37
2	*5300.00	105.81 AV			2.11 H	260	97.44	8.37
3	10600.00	58.57 PK	74.00	-15.43	1.10 H	143	39.22	19.35
4	10600.00	45.76 AV	54.00	-8.24	1.10 H	143	26.41	19.35
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	118.53 PK			2.08 V	46	110.16	8.37
2	*5300.00	108.26 AV			2.08 V	46	99.89	8.37
3	10600.00	59.21 PK	74.00	-14.79	1.87 V	188	39.86	19.35
4	10600.00	45.86 AV	54.00	-8.14	1.87 V	188	26.51	19.35

REMARKS:

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

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	115.39 PK			1.99 H	263	106.93	8.46
2	*5320.00	105.23 AV			1.99 H	263	96.77	8.46
3	5350.00	67.04 PK	74.00	-6.96	1.99 H	263	58.46	8.58
4	5350.00	48.52 AV	54.00	-5.48	1.99 H	263	39.94	8.58
5	10640.00	58.96 PK	74.00	-15.04	1.00 H	129	39.55	19.41
6	10640.00	45.89 AV	54.00	-8.11	1.00 H	129	26.48	19.41
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	117.79 PK			2.17 V	42	109.33	8.46
2	*5320.00	106.60 AV			2.17 V	42	98.14	8.46
3	5350.00	70.74 PK	74.00	-3.26	2.17 V	42	62.16	8.58
4	5350.00	51.10 AV	54.00	-2.90	2.17 V	42	42.52	8.58
5	10640.00	59.29 PK	74.00	-14.71	1.18 V	174	39.88	19.41
6	10640.00	46.25 AV	54.00	-7.75	1.18 V	174	26.84	19.41

REMARKS:

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

CHANNEL	TX Channel 100	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	62.41 PK	74.00	-11.59	2.57 H	257	53.32	9.09
2	5460.00	47.42 AV	54.00	-6.58	2.57 H	257	38.33	9.09
3	#5470.00	63.28 PK	68.20	-4.92	2.57 H	257	54.14	9.14
4	*5500.00	111.13 PK			2.57 H	257	101.84	9.29
5	*5500.00	98.72 AV			2.57 H	257	89.43	9.29
6	11000.00	58.71 PK	74.00	-15.29	1.00 H	137	37.97	20.74
7	11000.00	45.40 AV	54.00	-8.60	1.00 H	137	24.66	20.74
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	63.03 PK	74.00	-10.97	2.31 V	28	53.94	9.09
2	5460.00	49.64 AV	54.00	-4.36	2.31 V	28	40.55	9.09
3	#5470.00	67.92 PK	68.20	-0.28	2.31 V	28	58.78	9.14
4	*5500.00	116.77 PK			2.31 V	28	107.48	9.29
5	*5500.00	106.23 AV			2.31 V	28	96.94	9.29
6	11000.00	60.39 PK	74.00	-13.61	1.37 V	239	39.65	20.74
7	11000.00	46.90 AV	54.00	-7.10	1.37 V	239	26.16	20.74

REMARKS:

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

CHANNEL	TX Channel 116	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	114.77 PK			2.55 H	261	105.44	9.33
2	*5580.00	104.13 AV			2.55 H	261	94.80	9.33
3	11160.00	59.49 PK	74.00	-14.51	1.03 H	129	39.22	20.27
4	11160.00	46.35 AV	54.00	-7.65	1.03 H	129	26.08	20.27
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	119.92 PK			2.26 V	49	110.59	9.33
2	*5580.00	107.18 AV			2.26 V	49	97.85	9.33
3	11160.00	59.91 PK	74.00	-14.09	2.03 V	198	39.64	20.27
4	11160.00	46.62 AV	54.00	-7.38	2.03 V	198	26.35	20.27

REMARKS:

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

CHANNEL	TX Channel 132	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*5660.00	114.17 PK			2.49 H	260	104.81	9.36
2	*5660.00	102.44 AV			2.49 H	260	93.08	9.36
3	11320.00	59.40 PK	74.00	-14.60	1.04 H	121	39.31	20.09
4	11320.00	45.89 AV	54.00	-8.11	1.04 H	121	25.80	20.09
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	*5660.00	119.37 PK			2.08 V	52	110.01	9.36
2	*5660.00	108.99 AV			2.08 V	52	99.63	9.36
3	11320.00	59.75 PK	74.00	-14.25	1.29 V	152	39.66	20.09
4	11320.00	46.50 AV	54.00	-7.50	1.29 V	152	26.41	20.09

REMARKS:

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

CHANNEL	TX Channel 140	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	110.45 PK			2.56 H	258	101.08	9.37
2	*5700.00	98.50 AV			2.56 H	258	89.13	9.37
3	#5725.00	64.14 PK	68.20	-4.06	2.56 H	258	54.76	9.38
4	11400.00	58.65 PK	74.00	-15.35	1.03 H	130	38.50	20.15
5	11400.00	45.64 AV	54.00	-8.36	1.03 H	130	25.49	20.15
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	115.06 PK			2.42 V	81	105.69	9.37
2	*5700.00	103.50 AV			2.42 V	81	94.13	9.37
3	#5725.00	67.89 PK	68.20	-0.31	2.42 V	81	58.51	9.38
4	11400.00	59.77 PK	74.00	-14.23	1.29 V	336	39.62	20.15
5	11400.00	46.30 AV	54.00	-7.70	1.29 V	336	26.15	20.15

REMARKS:

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

802.11ac (40MHz)

CHANNEL	TX Channel 54	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	59.78 PK	74.00	-14.22	2.11 H	259	51.98	7.80
2	5150.00	45.86 AV	54.00	-8.14	2.11 H	259	38.06	7.80
3	*5270.00	113.29 PK			2.11 H	259	105.02	8.27
4	*5270.00	103.14 AV			2.11 H	259	94.87	8.27
5	#10540.00	57.96 PK	74.00	-16.04	1.04 H	150	38.80	19.16
6	#10540.00	44.82 AV	54.00	-9.18	1.04 H	150	25.66	19.16
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	61.42 PK	74.00	-12.58	2.22 V	5	53.62	7.80
2	5150.00	46.59 AV	54.00	-7.41	2.22 V	5	38.79	7.80
3	*5270.00	116.58 PK			2.22 V	5	108.31	8.27
4	*5270.00	105.03 AV			2.22 V	5	96.76	8.27
5	#10540.00	58.81 PK	74.00	-15.19	2.01 V	196	39.65	19.16
6	#10540.00	46.00 AV	54.00	-8.00	2.01 V	196	26.84	19.16

REMARKS:

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

CHANNEL	TX Channel 62	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	112.29 PK			2.07 H	266	103.87	8.42
2	*5310.00	102.23 AV			2.07 H	266	93.81	8.42
3	5350.00	70.18 PK	74.00	-3.82	2.07 H	266	61.60	8.58
4	5350.00	46.02 AV	54.00	-7.98	2.07 H	266	37.44	8.58
5	10620.00	58.45 PK	74.00	-15.55	1.00 H	144	39.07	19.38
6	10620.00	45.23 AV	54.00	-8.77	1.00 H	144	25.85	19.38
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	114.52 PK			2.12 V	8	106.10	8.42
2	*5310.00	102.50 AV			2.12 V	8	94.08	8.42
3	5350.00	73.71 PK	74.00	-0.29	2.12 V	8	65.13	8.58
4	5350.00	49.14 AV	54.00	-4.86	2.12 V	8	40.56	8.58
5	10620.00	59.02 PK	74.00	-14.98	2.30 V	174	39.64	19.38
6	10620.00	46.22 AV	54.00	-7.78	2.30 V	174	26.84	19.38

REMARKS:

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

CHANNEL	TX Channel 102	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	62.15 PK	74.00	-11.85	2.57 H	261	53.06	9.09
2	5460.00	47.26 AV	54.00	-6.74	2.57 H	261	38.17	9.09
3	#5470.00	63.28 PK	68.20	-4.92	2.57 H	261	54.14	9.14
4	*5510.00	108.91 PK			2.57 H	261	99.61	9.30
5	*5510.00	96.59 AV			2.57 H	261	87.29	9.30
6	11020.00	58.64 PK	74.00	-15.36	1.11 H	116	37.94	20.70
7	11020.00	45.47 AV	54.00	-8.53	1.11 H	116	24.77	20.70
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	65.43 PK	74.00	-8.57	2.05 V	348	56.34	9.09
2	5460.00	48.72 AV	54.00	-5.28	2.05 V	348	39.63	9.09
3	#5470.00	67.86 PK	68.20	-0.34	2.05 V	348	58.72	9.14
4	*5510.00	115.78 PK			2.05 V	348	106.48	9.30
5	*5510.00	105.94 AV			2.05 V	348	96.64	9.30
6	11020.00	59.48 PK	74.00	-14.52	1.88 V	114	38.78	20.70
7	11020.00	46.11 AV	54.00	-7.89	1.88 V	114	25.41	20.70

REMARKS:

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

CHANNEL	TX Channel 110	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	63.29 PK	74.00	-10.71	2.60 H	254	54.20	9.09
2	5460.00	47.88 AV	54.00	-6.12	2.60 H	254	38.79	9.09
3	#5470.00	64.18 PK	68.20	-4.02	2.60 H	254	55.04	9.14
4	*5550.00	113.41 PK			2.60 H	254	104.09	9.32
5	*5550.00	100.52 AV			2.60 H	254	91.20	9.32
6	11100.00	59.66 PK	74.00	-14.34	1.06 H	113	39.16	20.50
7	11100.00	46.54 AV	54.00	-7.46	1.06 H	113	26.04	20.50
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	66.94 PK	74.00	-7.06	2.03 V	348	57.85	9.09
2	5460.00	48.97 AV	54.00	-5.03	2.03 V	348	39.88	9.09
3	#5470.00	67.93 PK	68.20	-0.27	2.03 V	348	58.79	9.14
4	*5550.00	118.82 PK			2.03 V	348	109.50	9.32
5	*5550.00	108.17 AV			2.03 V	348	98.85	9.32
6	11100.00	60.37 PK	74.00	-13.63	1.62 V	209	39.87	20.50
7	11100.00	46.65 AV	54.00	-7.35	1.62 V	209	26.15	20.50

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

CHANNEL	TX Channel 134	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	108.32 PK			2.51 H	255	98.95	9.37
2	*5670.00	96.47 AV			2.51 H	255	87.10	9.37
3	#5725.00	64.16 PK	68.20	-4.04	2.51 H	255	54.78	9.38
4	11340.00	58.90 PK	74.00	-15.10	1.00 H	129	38.79	20.11
5	11340.00	45.74 AV	54.00	-8.26	1.00 H	129	25.63	20.11
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	114.40 PK			2.10 V	350	105.03	9.37
2	*5670.00	104.38 AV			2.10 V	350	95.01	9.37
3	#5725.00	67.90 PK	68.20	-0.30	2.10 V	350	58.52	9.38
4	11340.00	58.80 PK	74.00	-15.20	1.33 V	251	38.69	20.11
5	11340.00	45.59 AV	54.00	-8.41	1.33 V	251	25.48	20.11

REMARKS:

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

802.11ac (80MHz)

CHANNEL	TX Channel 58	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	60.82 PK	74.00	-13.18	2.09 H	251	53.02	7.80
2	5150.00	45.56 AV	54.00	-8.44	2.09 H	251	37.76	7.80
3	*5290.00	108.55 PK			2.09 H	251	100.21	8.34
4	*5290.00	98.27 AV			2.09 H	251	89.93	8.34
5	5350.00	69.52 PK	74.00	-4.48	2.09 H	251	60.94	8.58
6	5350.00	46.58 AV	54.00	-7.42	2.09 H	251	38.00	8.58
7	#10580.00	57.96 PK	74.00	-16.04	1.00 H	148	38.68	19.28
8	#10580.00	44.83 AV	54.00	-9.17	1.00 H	148	25.55	19.28
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	63.34 PK	74.00	-10.66	2.12 V	7	55.54	7.80
2	5150.00	46.57 AV	54.00	-7.43	2.12 V	7	38.77	7.80
3	*5290.00	110.90 PK			2.12 V	7	102.56	8.34
4	*5290.00	100.90 AV			2.12 V	7	92.56	8.34
5	5350.00	73.71 PK	74.00	-0.29	2.12 V	7	65.13	8.58
6	5350.00	48.48 AV	54.00	-5.52	2.12 V	7	39.90	8.58
7	#10580.00	58.92 PK	74.00	-15.08	2.31 V	184	39.64	19.28
8	#10580.00	45.86 AV	54.00	-8.14	2.31 V	184	26.58	19.28

REMARKS:

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

CHANNEL	TX Channel 106	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	63.64 PK	74.00	-10.36	2.54 H	259	54.55	9.09
2	5460.00	47.08 AV	54.00	-6.92	2.54 H	259	37.99	9.09
3	#5470.00	64.22 PK	68.20	-3.98	2.54 H	259	55.08	9.14
4	*5530.00	104.12 PK			2.54 H	259	94.81	9.31
5	*5530.00	92.04 AV			2.54 H	259	82.73	9.31
6	11060.00	58.74 PK	74.00	-15.26	1.02 H	134	38.14	20.60
7	11060.00	45.66 AV	54.00	-8.34	1.02 H	134	25.06	20.60
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	5460.00	67.73 PK	74.00	-6.27	2.03 V	348	58.64	9.09
2	5460.00	48.72 AV	54.00	-5.28	2.03 V	348	39.63	9.09
3	**#5470.00**	**67.94 PK**	**68.20**	**-0.26**	**2.03 V**	**348**	**58.80**	**9.14**
4	*5530.00	110.86 PK			2.03 V	348	101.55	9.31
5	*5530.00	99.35 AV			2.03 V	348	90.04	9.31
6	11060.00	59.06 PK	74.00	-14.94	1.88 V	207	38.46	20.60
7	11060.00	45.99 AV	54.00	-8.01	1.88 V	207	25.39	20.60

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

CHANNEL	TX Channel 122	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

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	*5610.00	106.82 PK			2.56 H	258	97.48	9.34
2	*5610.00	95.31 AV			2.56 H	258	85.97	9.34
3	#5725.00	65.21 PK	68.20	-2.99	2.56 H	258	55.83	9.38
4	11220.00	59.07 PK	74.00	-14.93	1.06 H	132	38.95	20.12
5	11220.00	45.99 AV	54.00	-8.01	1.06 H	132	25.87	20.12
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	*5610.00	112.75 PK			2.15 V	20	103.41	9.34
2	*5610.00	101.92 AV			2.15 V	20	92.58	9.34
3	#5725.00	67.93 PK	68.20	-0.27	2.15 V	20	58.55	9.38
4	11220.00	59.64 PK	74.00	-14.36	1.66 V	294	39.52	20.12
5	11220.00	46.53 AV	54.00	-7.47	1.66 V	294	26.41	20.12

REMARKS:

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

Below 1GHz Data:

802.11a

CHANNEL	TX Channel 52	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	67.93	20.9 QP	40.0	-19.1	4.00 H	206	32.0	-11.1
2	156.44	25.6 QP	43.5	-17.9	4.00 H	98	34.8	-9.2
3	281.33	23.9 QP	46.0	-22.1	3.24 H	200	31.9	-8.0
4	500.01	29.7 QP	46.0	-16.3	1.85 H	195	33.2	-3.5
5	871.14	32.8 QP	46.0	-13.3	1.03 H	351	30.1	2.7
6	996.94	33.7 QP	54.0	-20.3	1.00 H	174	28.8	5.0
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	60.55	31.6 QP	40.0	-8.4	1.52 V	222	41.6	-10.0
2	98.82	31.6 QP	43.5	-11.9	1.05 V	202	45.9	-14.3
3	162.84	30.3 QP	43.5	-13.2	1.00 V	84	39.6	-9.2
4	447.39	27.8 QP	46.0	-18.2	2.13 V	205	32.3	-4.6
5	500.01	33.9 QP	46.0	-12.1	2.89 V	233	37.4	-3.5
6	947.62	32.4 QP	46.0	-13.6	2.04 V	2	28.2	4.2

REMARKS:

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
ROHDE & SCHWARZ TEST RECEIVER	ESCS 30	100276	Apr. 12, 2016	Apr. 11, 2017
ROHDE & SCHWARZ Artificial Mains Network (for EUT)	ENV216	101197	May 04, 2016	May 03, 2017
LISN With Adapter (for EUT)	AD10	C10Ada-002	May 04, 2016	May 03, 2017
ROHDE & SCHWARZ Artificial Mains Network (for peripherals)	ESH3-Z5	100218	Nov. 25, 2015	Nov. 24, 2016
SCHWARZBECK Artificial Mains Network (For EUT)	NNLK8129	8129229	May 04, 2016	May 03, 2017
Software	Cond_V7.3.7.4	NA	NA	NA
RF cable (JYEBAO) With 10dB PAD	5D-FB	Cable-C10.01	Feb. 15, 2016	Feb. 14, 2017
SUHNER Terminator (For ROHDE & SCHWARZ LISN)	65BNC-5001	E1-011484	May 12, 2016	May 11, 2017
ROHDE & SCHWARZ Artificial Mains Network (For TV EUT)	ESH3-Z5	100220	Nov. 08, 2016	Nov. 07, 2017
LISN With Adapter (for TV EUT)	100220	N/A	Nov. 08, 2016	Nov. 07, 2017

Notes: 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 Shielded Room No. 10.
3. The VCCI Site Registration No. C-1852.
4. Tested Date: Nov. 18, 2016

4.2.3 Test Procedure

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

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

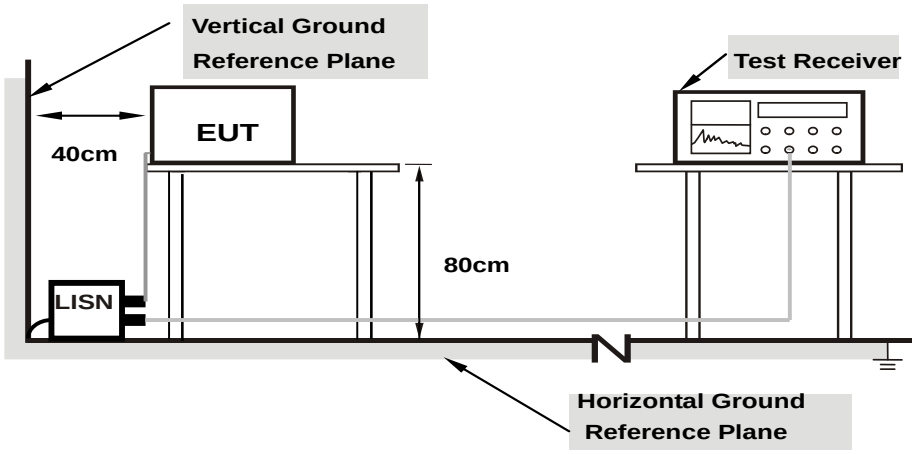
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

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 Condition

Same as 4.1.6.

4.2.7 Test Results

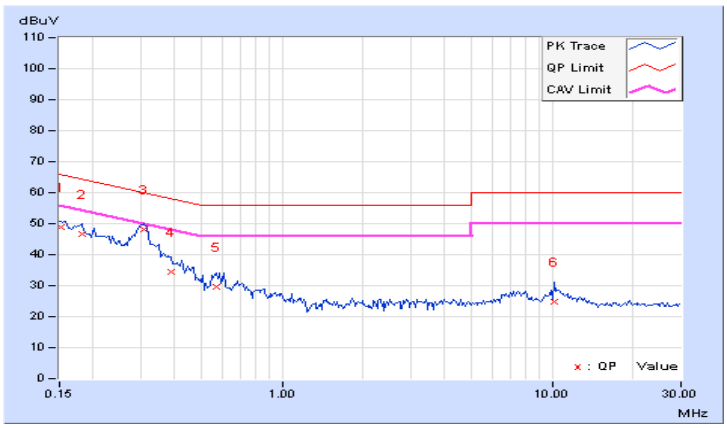
CDD MODE

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

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15182	9.70	39.04	28.20	48.74	37.90	65.90	55.90	-17.16	-18.00
2	0.18125	9.70	37.03	26.96	46.73	36.66	64.43	54.43	-17.70	-17.77
3	**0.30625**	**9.72**	**38.56**	**30.24**	**48.28**	**39.96**	**60.07**	**50.07**	**-11.79**	**-10.11**
4	0.38828	9.73	24.54	14.24	34.27	23.97	58.10	48.10	-23.83	-24.13
5	0.56797	9.76	19.78	12.75	29.54	22.51	56.00	46.00	-26.46	-23.49
6	10.23438	10.14	14.65	9.32	24.79	19.46	60.00	50.00	-35.21	-30.54

REMARKS:

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

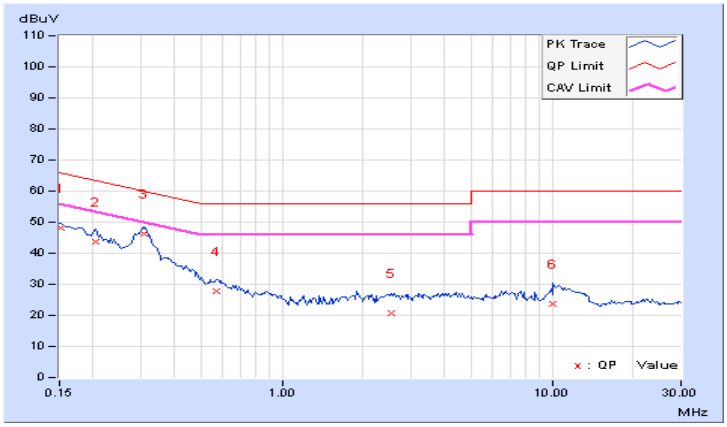


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15255	9.70	38.34	30.22	48.04	39.92	65.86	55.86	-17.82	-15.94
2	0.20469	9.69	33.97	22.30	43.66	31.99	63.42	53.42	-19.76	-21.43
3	0.30625	9.71	36.76	27.67	46.47	37.38	60.07	50.07	-13.60	-12.69
4	0.56797	9.75	17.99	10.64	27.74	20.39	56.00	46.00	-28.26	-25.61
5	2.54688	9.96	10.93	3.63	20.89	13.59	56.00	46.00	-35.11	-32.41
6	10.05704	10.19	13.59	8.53	23.78	18.72	60.00	50.00	-36.22	-31.28

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 Measurment

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,

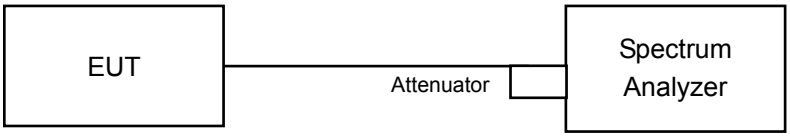
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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 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

For 802.11a, 802.11ac (20MHz), 802.11ac (40MHz)

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 802.11ac (80MHz)

1) Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
2) Set sweep trigger to “free run”.
3) Set RBW = 1 MHz.
4) Set VBW ≥ 3 MHz
5) Number of points in sweep ≥ 2 Span / RBW.
6) Sweep time ≤ (number of points in sweep) * T
7) Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
8) Detector = RMS.
9) Trace mode = max hold.
10) Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.

For 26dB Occupied Bandwidth

1) Set RBW = approximately 1% of the emission bandwidth.
2) Set the VBW > RBW.
3) Detector = Peak.
4) Trace mode = max hold.
5) Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Condition

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

4.3.7 Test Result

CDD Mode

Power Output:

802.11a

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	18.18	17.88	17.70	17.86	247.12	23.93	24	PASS
60	5300	18.17	17.85	17.66	17.87	246.149	23.91	24	PASS
64	5320	18.21	17.89	17.68	17.89	**247.872**	23.94	24	PASS
100	5500	18.11	17.88	17.72	17.83	245.92	23.91	24	PASS
116	5580	17.99	17.88	17.75	17.84	244.707	23.89	24	PASS
132	5660	18.00	17.93	17.74	17.85	245.566	23.90	24	PASS
140	5700	18.03	17.94	17.75	17.88	**246.705**	23.92	24	PASS

NOTE:

Chain 0:
1. 11dBm + 10log (20.14) = 24.04 > 24dBm
2. 11dBm + 10log (20.19) = 24.05 > 24dBm
3. 11dBm + 10log (20.24) = 24.06 > 24dBm
4. 11dBm + 10log (20.25) = 24.06 > 24dBm
5. 11dBm + 10log (20.19) = 24.05 > 24dBm
6. 11dBm + 10log (20.27) = 24.07 > 24dBm
7. 11dBm + 10log (20.21) = 24.06 > 24dBm

Chain 1:
1. 11dBm + 10log (20.25) = 24.06 > 24dBm
2. 11dBm + 10log (20.26) = 24.07 > 24dBm
3. 11dBm + 10log (20.20) = 24.05 > 24dBm
4. 11dBm + 10log (20.25) = 24.06 > 24dBm
5. 11dBm + 10log (20.16) = 24.04 > 24dBm
6. 11dBm + 10log (20.29) = 24.07 > 24dBm
7. 11dBm + 10log (20.23) = 24.06 > 24dBm

Chain 2:
1. 11dBm + 10log (20.28) = 24.07 > 24dBm
2. 11dBm + 10log (20.24) = 24.06 > 24dBm
3. 11dBm + 10log (20.28) = 24.07 > 24dBm
4. 11dBm + 10log (20.05) = 24.02 > 24dBm
5. 11dBm + 10log (20.24) = 24.06 > 24dBm
6. 11dBm + 10log (20.31) = 24.08 > 24dBm
7. 11dBm + 10log (20.22) = 24.06 > 24dBm

Chain 3:
1. 11dBm + 10log (20.24) = 24.06 > 24dBm
2. 11dBm + 10log (20.22) = 24.06 > 24dBm
3. 11dBm + 10log (20.18) = 24.05 > 24dBm
4. 11dBm + 10log (20.37) = 24.09 > 24dBm
5. 11dBm + 10log (20.28) = 24.07 > 24dBm
6. 11dBm + 10log (20.39) = 24.09 > 24dBm
7. 11dBm + 10log (20.21) = 24.06 > 24dBm

802.11ac (20MHz)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	18.12	17.90	17.72	17.84	246.493	23.92	24	PASS
60	5300	18.25	18.03	17.74	17.44	245.259	23.90	24	PASS
64	5320	18.12	17.90	17.63	17.84	245.28	23.90	24	PASS
100	5500	18.03	17.98	17.72	17.76	245.199	23.90	24	PASS
116	5580	18.06	17.88	17.69	17.84	244.912	23.89	24	PASS
132	5660	18.14	17.94	17.73	17.76	246.39	23.92	24	PASS
140	5700	18.09	17.83	17.74	17.79	244.637	23.89	24	PASS

NOTE:

Chain 0:
1. 11dBm + 10log (20.50) = 24.12 > 24dBm
2. 11dBm + 10log (20.54) = 24.13 > 24dBm
3. 11dBm + 10log (20.60) = 24.14 > 24dBm
4. 11dBm + 10log (20.59) = 24.14 > 24dBm
5. 11dBm + 10log (20.61) = 24.14 > 24dBm
6. 11dBm + 10log (20.56) = 24.13 > 24dBm
7. 11dBm + 10log (20.59) = 24.14 > 24dBm

Chain 1:
1. 11dBm + 10log (20.56) = 24.13 > 24dBm
2. 11dBm + 10log (20.55) = 24.13 > 24dBm
3. 11dBm + 10log (20.59) = 24.14 > 24dBm
4. 11dBm + 10log (20.57) = 24.13 > 24dBm
5. 11dBm + 10log (20.60) = 24.14 > 24dBm
6. 11dBm + 10log (20.62) = 24.14 > 24dBm
7. 11dBm + 10log (20.56) = 24.13 > 24dBm

Chain 2:
1. 11dBm + 10log (20.63) = 24.14 > 24dBm
2. 11dBm + 10log (20.64) = 24.15 > 24dBm
3. 11dBm + 10log (20.59) = 24.14 > 24dBm
4. 11dBm + 10log (20.57) = 24.13 > 24dBm
5. 11dBm + 10log (20.58) = 24.13 > 24dBm
6. 11dBm + 10log (20.60) = 24.14 > 24dBm
7. 11dBm + 10log (20.58) = 24.13 > 24dBm

Chain 3:
1. 11dBm + 10log (20.57) = 24.13 > 24dBm
2. 11dBm + 10log (20.57) = 24.13 > 24dBm
3. 11dBm + 10log (20.57) = 24.13 > 24dBm
4. 11dBm + 10log (20.57) = 24.13 > 24dBm
5. 11dBm + 10log (20.64) = 24.15 > 24dBm
6. 11dBm + 10log (20.61) = 24.14 > 24dBm
7. 11dBm + 10log (20.61) = 24.14 > 24dBm

802.11ac (40MHz)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	18.11	17.90	17.74	17.73	245.096	23.89	24	PASS
62	5310	18.06	17.88	17.71	17.79	244.486	23.88	24	PASS
102	5510	18.06	17.87	17.78	17.83	245.861	23.91	24	PASS
110	5550	18.01	17.90	17.75	17.82	245.001	23.89	24	PASS
134	5670	18.05	17.89	17.76	17.81	245.443	23.90	24	PASS

NOTE:

Chain 0:
1. 11dBm + 10log (40.72) = 27.10 > 24dBm
2. 11dBm + 10log (40.92) = 27.12 > 24dBm
3. 11dBm + 10log (40.80) = 27.11 > 24dBm
4. 11dBm + 10log (41.02) = 27.13 > 24dBm
5. 11dBm + 10log (40.82) = 27.11 > 24dBm

Chain 1:
1. 11dBm + 10log (40.97) = 27.12 > 24dBm
2. 11dBm + 10log (40.94) = 27.12 > 24dBm
3. 11dBm + 10log (40.76) = 27.10 > 24dBm
4. 11dBm + 10log (40.50) = 27.07 > 24dBm
5. 11dBm + 10log (40.78) = 27.10 > 24dBm

Chain 2:
1. 11dBm + 10log (40.68) = 27.09 > 24dBm
2. 11dBm + 10log (40.79) = 27.11 > 24dBm
3. 11dBm + 10log (40.67) = 27.09 > 24dBm
4. 11dBm + 10log (40.69) = 27.09 > 24dBm
5. 11dBm + 10log (40.70) = 27.10 > 24dBm

Chain 3:
1. 11dBm + 10log (40.73) = 27.10 > 24dBm
2. 11dBm + 10log (40.89) = 27.12 > 24dBm
3. 11dBm + 10log (40.71) = 27.10 > 24dBm
4. 11dBm + 10log (40.82) = 27.11 > 24dBm
5. 11dBm + 10log (40.77) = 27.10 > 24dBm

802.11ac (80MHz)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	18.14	17.87	17.72	17.83	246.228	23.91	24	PASS
106	5530	18.07	17.86	17.75	17.83	245.455	23.90	24	PASS
122	5610	18.07	17.87	17.80	17.82	246.146	23.91	24	PASS

NOTE:

Chain 0:
1. 11dBm + 10log (81.94) = 30.13 > 24dBm
2. 11dBm + 10log (81.44) = 30.11 > 24dBm
3. 11dBm + 10log (81.63) = 30.12 > 24dBm

Chain 1:
1. 11dBm + 10log (81.60) = 30.12 > 24dBm
2. 11dBm + 10log (81.61) = 30.12 > 24dBm
3. 11dBm + 10log (81.82) = 30.13 > 24dBm

Chain 2:
1. 11dBm + 10log (81.55) = 30.11 > 24dBm
2. 11dBm + 10log (81.64) = 30.12 > 24dBm
3. 11dBm + 10log (81.80) = 30.13 > 24dBm

Chain 3:
1. 11dBm + 10log (81.85) = 30.13 > 24dBm
2. 11dBm + 10log (81.47) = 30.11 > 24dBm
3. 11dBm + 10log (81.67) = 30.12 > 24dBm

26dB BANDWIDTH:

802.11a

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)				Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
52	5260	20.14	20.25	20.28	20.24	Pass
60	5300	20.19	20.26	20.24	20.22	Pass
64	5320	20.24	20.20	20.28	20.18	Pass
100	5500	20.25	20.25	20.05	20.37	Pass
116	5580	20.19	20.16	20.24	20.28	Pass
132	5660	20.27	20.29	20.31	20.39	Pass
140	5700	20.21	20.23	20.22	20.21	Pass

802.11ac (20MHz)

Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)				Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
52	5260	20.50	20.56	20.63	20.57	Pass
60	5300	20.54	20.55	20.64	20.57	Pass
64	5320	20.60	20.59	20.59	20.57	Pass
100	5500	20.59	20.57	20.57	20.57	Pass
116	5580	20.61	20.60	20.58	20.64	Pass
132	5660	20.56	20.62	20.60	20.61	Pass
140	5700	20.59	20.56	20.58	20.61	Pass

802.11ac (40MHz)

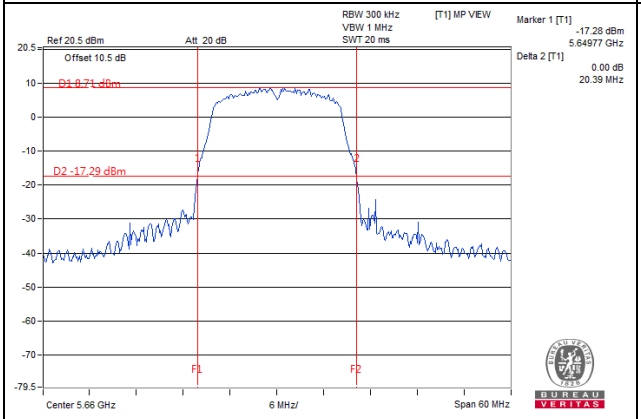
Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)				Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
54	5270	40.72	40.97	40.68	40.73	Pass
62	5310	40.92	40.94	40.79	40.89	Pass
102	5510	40.80	40.76	40.67	40.71	Pass
110	5550	41.02	40.50	40.69	40.82	Pass
134	5670	40.82	40.78	40.70	40.77	Pass

802.11ac (80MHz)

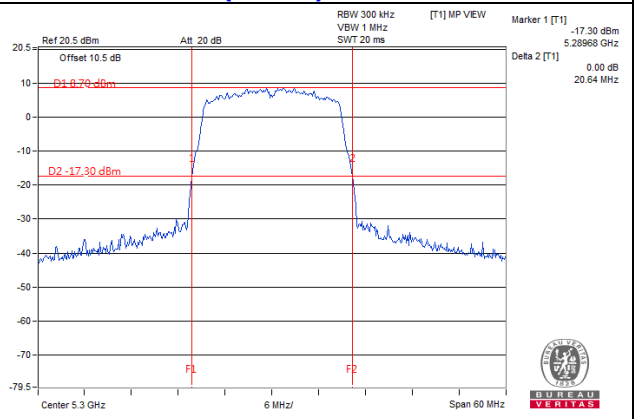
Channel	Channel Frequency (MHz)	26dBc Bandwidth (MHz)				Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
58	5290	81.94	81.60	81.55	81.85	Pass
106	5530	81.44	81.61	81.64	81.47	Pass
122	5610	81.63	81.82	81.80	81.67	Pass

Spectrum Plot of Worst Value

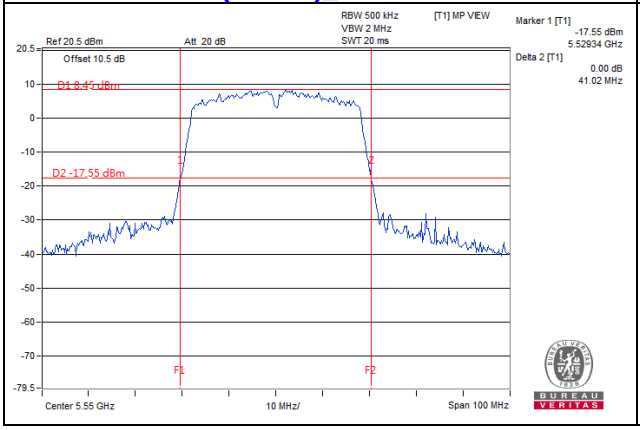
802.11a_Chain 3 / CH132



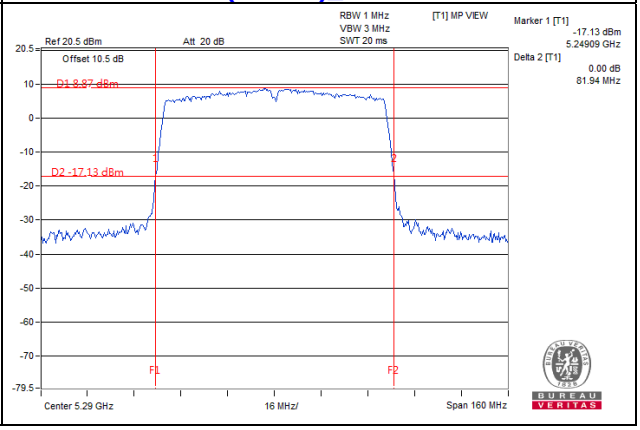
802.11ac (20MHz)_Chain 2 / CH60



802.11ac (40MHz)_Chain 0 / CH110



802.11ac (80MHz)_Chain 0 / CH58



EUT MAXIMUM CONDUCTED POWER

802.11a

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (dBm)
5250~5350	247.872	23.94
5470~5725	246.705	23.92

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

802.11ac (20MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (dBm)
5250~5350	246.493	23.92
5470~5725	246.390	23.92

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

802.11ac (40MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (dBm)
5250~5350	245.096	23.89
5470~5725	245.861	23.91

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

802.11ac (80MHz)

FREQUENCY BAND (MHz)	MAX. POWER	
	OUTPUT POWER (mW)	OUTPUT POWER (dBm)
5250~5350	246.228	23.91
5470~5725	246.146	23.91

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

Beamforming_NSS1 Mode

Power Output:

802.11ac (20MHz)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
52	5260	16.76	16.59	16.44	16.53	182.061	22.60	23.05	PASS
60	5300	16.82	16.59	16.48	16.54	183.233	22.63	23.05	PASS
64	5320	16.77	16.63	16.42	16.55	182.599	22.61	23.05	PASS
100	5500	16.72	16.69	16.48	16.51	182.889	22.62	22.86	PASS
116	5580	16.79	16.61	16.49	16.56	183.423	22.63	22.86	PASS
132	5660	16.79	16.62	16.49	16.47	182.6	22.62	22.86	PASS
140	5700	16.67	16.58	16.60	16.54	182.742	22.62	22.86	PASS

NOTE:
5.26-5.32GHz Directional Gain= 6.95dBi > 6dBi, so the limit shall be reduced to 24-(6.95-6)= 23.05dBm.
5.5-5.7GHz Directional Gain= 7.14dBi > 6dBi, so the limit shall be reduced to 24-(7.14-6)= 22.86dBm

Chain 0:
1. 11dBm + 10log (20.50) = 24.12 > 24dBm
2. 11dBm + 10log (20.54) = 24.13 > 24dBm
3. 11dBm + 10log (20.60) = 24.14 > 24dBm
4. 11dBm + 10log (20.59) = 24.14 > 24dBm
5. 11dBm + 10log (20.61) = 24.14 > 24dBm
6. 11dBm + 10log (20.56) = 24.13 > 24dBm
7. 11dBm + 10log (20.59) = 24.14 > 24dBm

Chain 1:
1. 11dBm + 10log (20.56) = 24.13 > 24dBm
2. 11dBm + 10log (20.55) = 24.13 > 24dBm
3. 11dBm + 10log (20.59) = 24.14 > 24dBm
4. 11dBm + 10log (20.57) = 24.13 > 24dBm
5. 11dBm + 10log (20.60) = 24.14 > 24dBm
6. 11dBm + 10log (20.62) = 24.14 > 24dBm
7. 11dBm + 10log (20.56) = 24.13 > 24dBm

Chain 2:
1. 11dBm + 10log (20.63) = 24.14 > 24dBm
2. 11dBm + 10log (20.64) = 24.15 > 24dBm
3. 11dBm + 10log (20.59) = 24.14 > 24dBm
4. 11dBm + 10log (20.57) = 24.13 > 24dBm
5. 11dBm + 10log (20.58) = 24.13 > 24dBm
6. 11dBm + 10log (20.60) = 24.14 > 24dBm
7. 11dBm + 10log (20.58) = 24.13 > 24dBm

Chain 3:
1. 11dBm + 10log (20.57) = 24.13 > 24dBm
2. 11dBm + 10log (20.57) = 24.13 > 24dBm
3. 11dBm + 10log (20.57) = 24.13 > 24dBm
4. 11dBm + 10log (20.57) = 24.13 > 24dBm
5. 11dBm + 10log (20.64) = 24.15 > 24dBm
6. 11dBm + 10log (20.61) = 24.14 > 24dBm
7. 11dBm + 10log (20.61) = 24.14 > 24dBm

802.11ac (40MHz)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
54	5270	16.78	16.56	16.55	16.51	182.890	22.62	23.05	PASS
62	5310	16.70	16.59	16.58	16.50	182.545	22.61	23.05	PASS
102	5510	16.77	16.58	16.45	16.53	182.168	22.60	22.86	PASS
110	5550	16.68	16.58	16.46	16.51	181.088	22.58	22.86	PASS
134	5670	16.75	16.58	16.54	16.50	182.564	22.61	22.86	PASS

NOTE:
5.26-5.32GHz Directional Gain= 6.95dBi > 6dBi, so the limit shall be reduced to 24-(6.95-6)= 23.05dBm.
5.5-5.7GHz Directional Gain= 7.14dBi > 6dBi, so the limit shall be reduced to 24-(7.14-6)= 22.86dBm

Chain 0:
1. 11dBm + 10log (40.72) = 27.10 > 24dBm
2. 11dBm + 10log (40.92) = 27.12 > 24dBm
3. 11dBm + 10log (40.80) = 27.11 > 24dBm
4. 11dBm + 10log (41.02) = 27.13 > 24dBm
5. 11dBm + 10log (40.82) = 27.11 > 24dBm

Chain 1:
1. 11dBm + 10log (40.97) = 27.12 > 24dBm
2. 11dBm + 10log (40.94) = 27.12 > 24dBm
3. 11dBm + 10log (40.76) = 27.10 > 24dBm
4. 11dBm + 10log (40.50) = 27.07 > 24dBm
5. 11dBm + 10log (40.78) = 27.10 > 24dBm

Chain 2:
1. 11dBm + 10log (40.68) = 27.09 > 24dBm
2. 11dBm + 10log (40.79) = 27.11 > 24dBm
3. 11dBm + 10log (40.67) = 27.09 > 24dBm
4. 11dBm + 10log (40.69) = 27.09 > 24dBm
5. 11dBm + 10log (40.70) = 27.10 > 24dBm

Chain 3:
1. 11dBm + 10log (40.73) = 27.10 > 24dBm
2. 11dBm + 10log (40.89) = 27.12 > 24dBm
3. 11dBm + 10log (40.71) = 27.10 > 24dBm
4. 11dBm + 10log (40.82) = 27.11 > 24dBm
5. 11dBm + 10log (40.77) = 27.10 > 24dBm

802.11ac (80MHz)

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
58	5290	16.79	16.54	16.45	16.51	181.763	22.60	23.05	PASS
106	5530	16.74	16.57	16.52	16.56	182.765	22.62	22.86	PASS
122	5610	16.73	16.55	16.48	16.53	181.725	22.59	22.86	PASS

NOTE:
5.26-5.32GHz Directional Gain= 6.95dBi > 6dBi, so the limit shall be reduced to 24-(6.95-6)= 23.05dBm.
5.5-5.7GHz Directional Gain= 7.14dBi > 6dBi, so the limit shall be reduced to 24-(7.14-6)= 22.86dBm

Chain 0:
1. 11dBm + 10log (81.94) = 30.13 > 24dBm
2. 11dBm + 10log (81.44) = 30.11 > 24dBm
3. 11dBm + 10log (81.63) = 30.12 > 24dBm

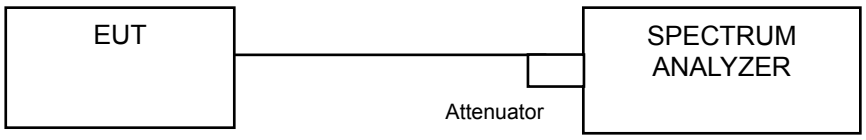
Chain 1:
1. 11dBm + 10log (81.60) = 30.12 > 24dBm
2. 11dBm + 10log (81.61) = 30.12 > 24dBm
3. 11dBm + 10log (81.82) = 30.13 > 24dBm

Chain 2:
1. 11dBm + 10log (81.55) = 30.11 > 24dBm
2. 11dBm + 10log (81.64) = 30.12 > 24dBm
3. 11dBm + 10log (81.80) = 30.13 > 24dBm

Chain 3:
1. 11dBm + 10log (81.85) = 30.13 > 24dBm
2. 11dBm + 10log (81.47) = 30.11 > 24dBm
3. 11dBm + 10log (81.67) = 30.12 > 24dBm

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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 SAMPLE. 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.

4.4.4 Test Results

CDD Mode

802.11a

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)				Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
52	5260	16.68	16.68	16.68	16.68	Pass
60	5300	16.68	16.68	16.68	16.68	Pass
64	5320	16.68	16.68	16.68	16.68	Pass
100	5500	16.68	16.68	16.68	16.68	Pass
116	5580	16.68	16.68	16.68	16.80	Pass
132	5660	16.68	16.68	16.80	16.68	Pass
140	5700	16.68	16.68	16.68	16.80	Pass

802.11ac (20MHz)

Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)				Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
52	5260	17.76	17.64	17.64	17.64	Pass
60	5300	17.64	17.64	17.64	17.76	Pass
64	5320	17.76	17.76	17.64	17.64	Pass
100	5500	17.64	17.64	17.64	17.64	Pass
116	5580	17.76	17.64	17.64	17.64	Pass
132	5660	17.64	17.64	17.64	17.64	Pass
140	5700	17.64	17.64	17.64	17.64	Pass

802.11ac (40MHz)

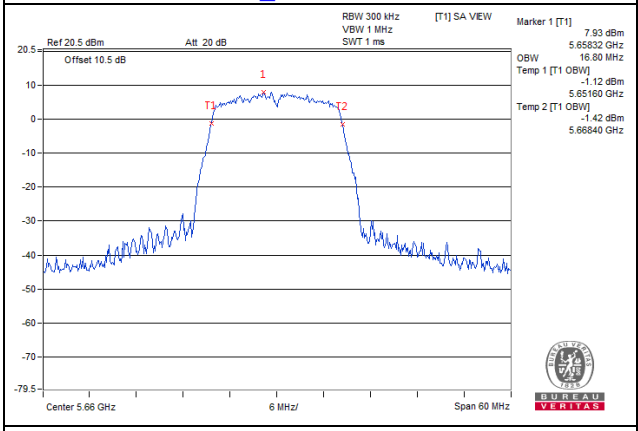
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)				Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
54	5270	36.00	36.00	36.20	36.20	Pass
62	5310	36.00	36.00	36.00	36.00	Pass
102	5510	36.20	36.20	36.00	36.00	Pass
110	5550	36.20	36.20	36.20	36.20	Pass
134	5670	36.20	36.20	36.00	36.20	Pass

802.11ac (80MHz)

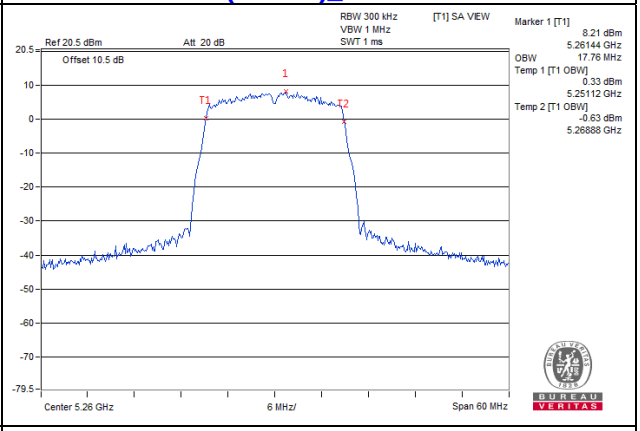
Channel	Channel Frequency (MHz)	Occupied Bandwidth (MHz)				Pass/Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
42	5210	75.60	75.84	75.84	75.60	Pass
58	5290	75.60	75.36	75.60	75.60	Pass
106	5530	75.36	75.60	75.60	75.84	Pass

Spectrum Plot Of Worst Value

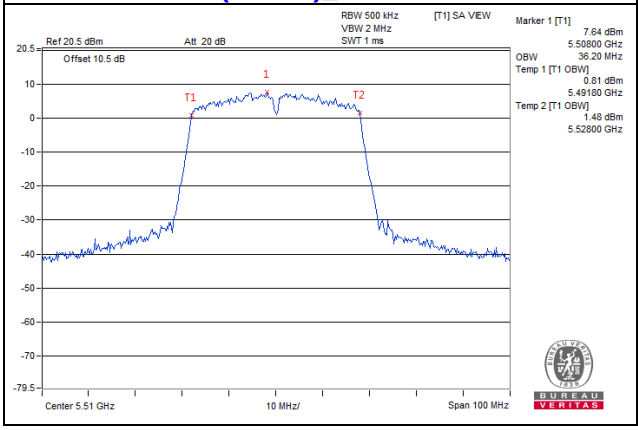
802.11a_Chain 2 / CH132



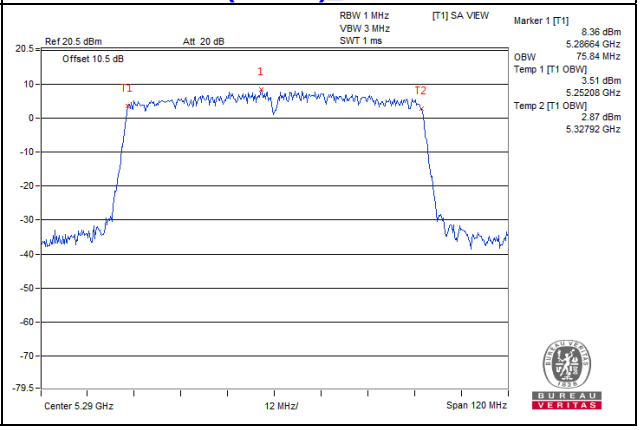
802.11ac (20MHz)_Chain 0 / CH52



802.11ac (40MHz)_Chain 0 / CH102



802.11ac (80MHz)_Chain 1 / CH42

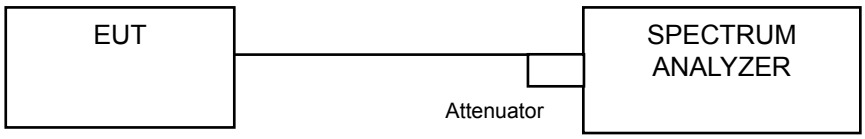


4.5 Peak Power Spectral Density Measurement

4.5.1 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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

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

Using method SA-1

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6.

4.5.7 Test Results

CDD Mode

802.11a

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD w/o Duty Factor (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3					
52	5260	2.62	2.34	2.16	2.39	8.41	0.98	9.39	10.05	Pass
60	5300	2.04	2.52	2.11	2.09	8.22	0.98	9.20	10.05	Pass
64	5320	2.26	2.58	2.13	2.21	8.32	0.98	9.30	10.05	Pass
100	5500	2.10	2.65	1.72	2.40	8.26	0.98	9.24	9.86	Pass
120	5600	1.34	1.80	1.43	1.71	7.60	0.98	8.58	9.86	Pass
132	5660	1.86	1.37	1.70	1.80	7.71	0.98	8.69	9.86	Pass
140	5700	1.62	1.45	1.91	1.12	7.56	0.98	8.54	9.86	Pass

Note:
1. Method a) 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.
2. Refer to section 3.3 for duty cycle spectrum plot.
3. 5.26-5.32GHz Directional Gain= 6.95dBi > 6dBi, so the limit shall be reduced to 11-(6.95-6)= 10.05dBm. 5.5-5.7GHz Directional Gain= 7.14dBi > 6dBi, so the limit shall be reduced to 11-(7.14-6)= 9.86dBm.

802.11ac (20MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD w/o Duty Factor (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3					
52	5260	0.65	0.55	0.49	0.47	6.56	2.82	9.38	10.05	Pass
60	5300	0.17	0.23	0.23	0.58	6.32	2.82	9.14	10.05	Pass
64	5320	0.27	0.17	0.38	0.59	6.37	2.82	9.19	10.05	Pass
100	5500	0.66	0.96	0.81	0.72	6.80	2.82	9.62	9.86	Pass
120	5600	0.68	0.66	0.64	0.72	6.69	2.82	9.51	9.86	Pass
132	5660	0.82	0.72	0.67	0.30	6.65	2.82	9.47	9.86	Pass
140	5700	0.23	0.68	0.56	0.42	6.49	2.82	9.31	9.86	Pass

Note:
1. Method a) 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.
2. Refer to section 3.3 for duty cycle spectrum plot.
3. 5.26-5.32GHz Directional Gain= 6.95dBi > 6dBi, so the limit shall be reduced to 11-(6.95-6)= 10.05dBm. 5.5-5.7GHz Directional Gain= 7.14dBi > 6dBi, so the limit shall be reduced to 11-(7.14-6)= 9.86dBm.

802.11ac (40MHz)

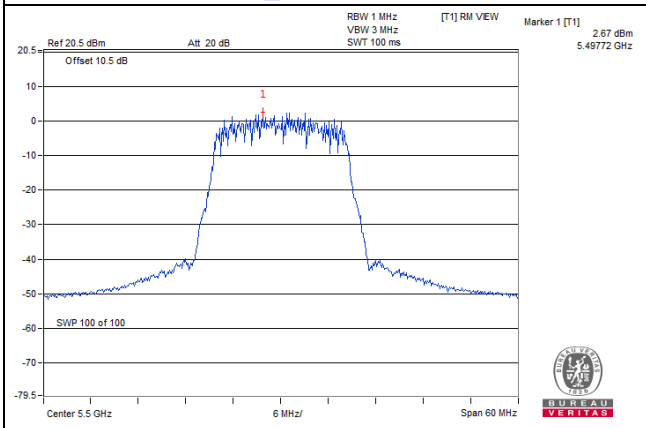
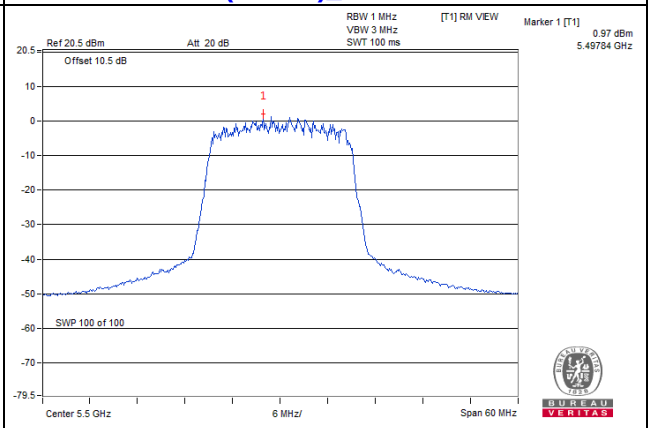
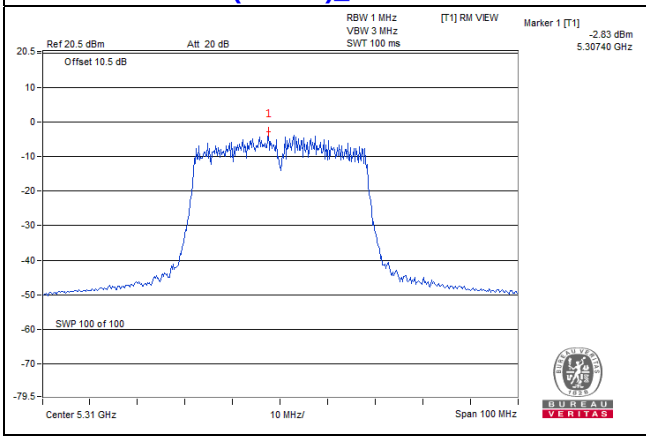
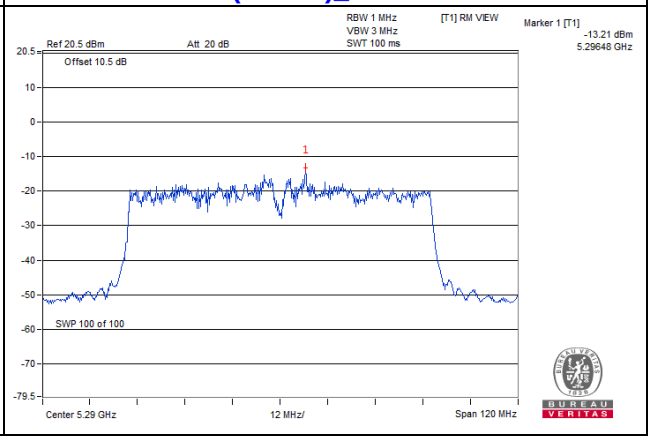
Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD w/o Duty Factor (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3					
54	5270	-3.08	-3.07	-2.96	-3.16	2.96	4.21	7.17	10.05	Pass
62	5310	-2.84	-3.13	-3.12	-3.08	2.98	4.21	7.19	10.05	Pass
102	5510	-3.90	-2.97	-3.21	-3.55	2.63	4.21	6.84	9.86	Pass
118	5590	-3.89	-3.84	-3.57	-3.63	2.29	4.21	6.50	9.86	Pass
134	5670	-3.58	-3.87	-3.95	-3.42	2.32	4.21	6.53	9.86	Pass

Note:
1. Method a) 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.
2. Refer to section 3.3 for duty cycle spectrum plot.
3. 5.26-5.32GHz Directional Gain= 6.95dBi > 6dBi, so the limit shall be reduced to 11-(6.95-6)= 10.05dBm.
   5.5-5.7GHz Directional Gain= 7.14dBi > 6dBi, so the limit shall be reduced to 11-(7.14-6)= 9.86dBm.

802.11ac (80MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)				Total PSD w/o Duty Factor (dBm/MHz)	Duty Factor	Total Power Density (dBm/MHz)	MAX. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3					
58	5290	-14.14	-13.54	-13.22	-13.76	-7.63	5.65	-1.98	10.05	Pass
106	5530	-16.09	-15.70	-16.05	-16.28	-10.00	5.65	-4.35	9.86	Pass
122	5610	-16.52	-16.61	-15.48	-16.51	-10.23	5.65	-4.58	9.86	Pass

Note:
1. Method a) 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.
2. Refer to section 3.3 for duty cycle spectrum plot.
3. 5.26-5.32GHz Directional Gain= 6.95dBi > 6dBi, so the limit shall be reduced to 11-(6.95-6)= 10.05dBm.
   5.5-5.7GHz Directional Gain= 7.14dBi > 6dBi, so the limit shall be reduced to 11-(7.14-6)= 9.86dBm.

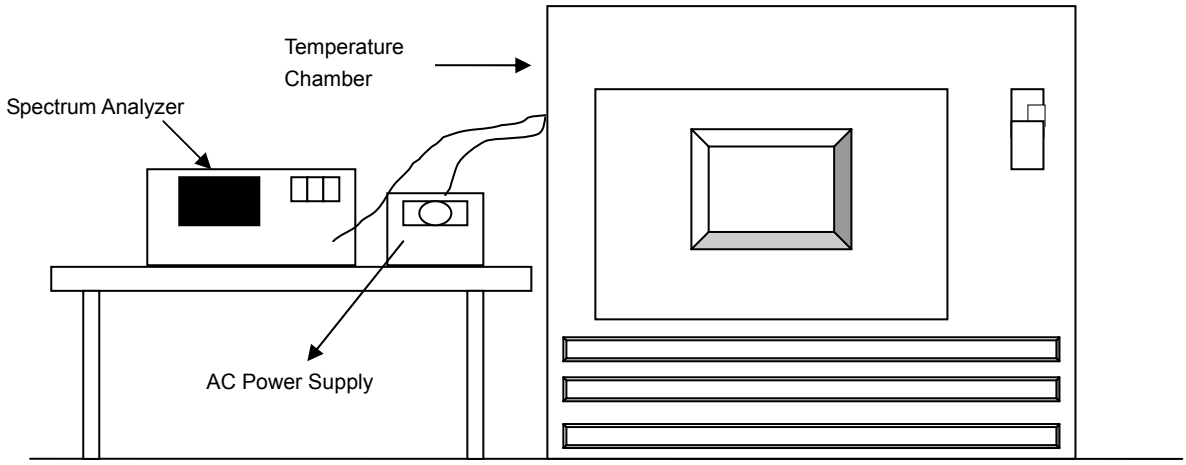
Spectrum Plot of Worst Value	
802.11a_Chain 1 / CH100	**802.11ac (20MHz)_Chain 1 / CH100**
	
802.11ac (40MHz)_Chain 0 / CH62	**802.11ac (80MHz)_Chain 2 / CH58**
	

4.6 Frequency Stability Measurement

4.6.1 Limits of Frequency Stability Measurement

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

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

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. 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.
e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
f. 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.
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4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

CDD Mode

Frequency Stability Versus Temp.									
Operating Frequency: 5260 MHz									
TEMP. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail	Measured Frequency (MHz)	Pass/Fail
50	120	5260.04297	Pass	5260.04287	Pass	5260.043283	Pass	5260.043017	Pass
40	120	5260.043702	Pass	5260.043594	Pass	5260.043622	Pass	5260.043967	Pass
30	120	5260.042044	Pass	5260.042194	Pass	5260.042250	Pass	5260.04205	Pass
20	120	5260.043287	Pass	5260.04334	Pass	5260.043243	Pass	5260.04337	Pass
10	120	5260.043399	Pass	5260.043031	Pass	5260.043323	Pass	5260.04363	Pass
0	120	5260.042669	Pass	5260.042491	Pass	5260.042644	Pass	5260.042768	Pass
-10	120	5260.042904	Pass	5260.042928	Pass	5260.043255	Pass	5260.043081	Pass
-20	120	5260.043163	Pass	5260.043282	Pass	5260.043270	Pass	5260.04356	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 5260 MHz									
TEMP. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency(MHz)	Pass/Fail	Measured Frequency(MHz)	Pass/Fail	Measured Frequency(MHz)	Pass/Fail	Measured Frequency(MHz)	Pass/Fail
20	138	5260.042543	Pass	5260.042471	Pass	5260.042640	Pass	5260.042603	Pass
	120	5260.043287	Pass	5260.04334	Pass	5260.043243	Pass	5260.04337	Pass
	102	5260.043243	Pass	5260.043103	Pass	5260.043014	Pass	5260.04295	Pass

5 Pictures of Test Arrangements

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

Appendix – Information on the Testing Laboratories

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

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

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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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