FCC Test Report

Report No.: RF150624E06-1

FCC ID: PY315300320

Test Model: WAC720

Received Date: June 24, 2015

Test Date: Aug. 06 to 12, 2015

Issued Date: Aug. 20, 2015

Applicant: NETGEAR, Inc.

Address: 350 East Plumeria Drive San Jose, CA 95134

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

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Test Location (2): No. 49, Ln. 206, Wende Rd., Shangshan Tsuen, Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan R.O.C.

Test Location (3): E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City, Taiwan R.O.C.

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Release Control Record

Issue No.	Description	Date Issued
RF150624E06-1	Original release.	Aug. 20, 2015

1 Certificate of Conformity

Product: ProSAFE Dual Band Wireless AC Access Point

Brand: NETGEAR

Test Model: WAC720

Sample Status: MASS-PRODUCTION

Applicant: NETGEAR, Inc.

Test Date: Aug. 06 to 12, 2015

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 : _____, **Date:** Aug. 20, 2015
Midoli Peng / Specialist

Approved by : _____, **Date:** Aug. 20, 2015
May Chen / 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 -8.45dB at 0.30625MHz.
15.407(b) (1/2/3/4/6)	Radiated Emissions & Band Edge Measurement	PASS	Meet the requirement of limit. Minimum passing margin is -0.2dB at 5707.00MHz, 5703.00MHz, 5150.00MHz, 5725.00MHz & 5715.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is R-SMA and i-pex(MHF) not a standard connector.

NOTE: The EUT was operating in 2400 ~ 2483.5MHz, 5150~5250MHz and 5725~5850MHz frequencies band. This report was recorded the RF parameters including 5150~5250MHz and 5725~5850MHz. For the 2400 ~ 2483.5MHz RF parameters was recorded in another test report.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expended Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.86 dB
Radiated Emissions up to 1 GHz	30MHz ~ 1GHz	5.43 dB
Radiated Emissions above 1 GHz	1GHz ~ 6GHz	3.65 dB
	6GHz ~ 18GHz	3.88 dB
	18GHz ~ 40GHz	4.11 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	ProSAFE Dual Band Wireless AC Access Point
Brand	NETGEAR
Test Model	WAC720
Status of EUT	MASS-PRODUCTION
Power Supply Rating	12Vdc from power adapter or 55Vdc from POE
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode
Modulation Technology	DSSS, OFDM
Transfer Rate	802.11b: up to 11Mbps 802.11a: up to 54Mbps 802.11n: up to 300Mbps 802.11ac: up to 866.7Mbps
Operating Frequency	**For 15.407** 5.18 ~ 5.24GHz, 5.745 ~ 5.825GHz
	For 15.247 2.412 ~ 2.462GHz
Number of Channel	**For 15.407** 9 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 4 for 802.11n (HT40), 802.11ac (VHT40) 2 for 802.11ac (VHT80)
	For 15.247 11 for 802.11b, 802.11g, 802.11n (HT20) 7 for 802.11n (HT40)
Output Power	**For 15.407(5.18 ~ 5.24GHz)** **CDD Mode:** 802.11a: 52.451mW 802.11ac (VHT20): 52.811mW 802.11ac (VHT40): 70.602mW 802.11ac (VHT80): 40.503mW **Beamforming Mode:** 802.11ac (VHT20): 35.465mW 802.11ac (VHT40): 41.183mW 802.11ac (VHT80): 40.503mW **For 15.407(5.745 ~ 5.825GHz)** **CDD Mode:** 802.11a: 184.065mW **Beamforming Mode:** 802.11ac (VHT20): 242.998mW 802.11ac (VHT40): 125.73mW 802.11ac (VHT80): 48.522mW
	For 15.247 **CDD Mode:** 802.11b: 354.601mW 802.11g: 346.294mW **Beamforming Mode:** 802.11n(HT20): 355.643mW 802.11n(HT40): 87.919mW

Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Adapter x 1
Data Cable Supplied	NA

Note:

1. 2.4GHz and 5GHz technology can transmit at same time.
2. The antennas provided to the EUT, please refer to the following table:

External Antenna

PCB Chain No.	Brand	Model	Antenna Gain (dBi) (Excelude cable loss)	Cable Loss (dB)	Net Gain (dBi)	Cable Length (mm)	Frequency range (GHz to GHz)	Antenna Type	Connecter Type
Chain (0) (Left)	Master Wave Tech.	98364PRSX004	0.8	0.8	0	180	2.4~2.4835	Dipole	R-SMA
			1.5	1.5	0		5.15~5.25		
			1.6	1.5	0.1		5.25~5.35		
			0.7	1.5	-0.8		5.47~5.725		
			0.5	1.5	-1		5.725~5.85		
Chain (1) (Right)	Master Wave Tech.	98364PRSX004	0.8	0.9	-0.1	190	2.4~2.4835	Dipole	R-SMA
			1.5	1.7	-0.3		5.15~5.25		
			1.6	1.7	-0.1		5.25~5.35		
			0.7	1.7	-1		5.47~5.725		
			0.5	1.7	-1		5.725~5.85		

Internal Antenna

PCB Chain No.	Brand	Model	Antenna Gain (dBi)	Frequency range (GHz to GHz)	Antenna Type	Connecter Type
Chain (0)	NA	NA	5	2.4~2.4835	PIFA	i-pex(MHF)
			6	5.15~5.25		
			6	5.25~5.35		
			6	5.47~5.725		
			6	5.725~5.85		
Chain (1)	NA	NA	5	2.4~2.4835	PIFA	i-pex(MHF)
			6	5.15~5.25		
			6	5.25~5.35		
			6	5.47~5.725		
			6	5.725~5.85		

3. The EUT must be supplied with POE or a power adapter and following two different models could be chosen as following table:

Adapter				
No	Brand Name	Model No.	P/N	Spec.
1	NETGEAR	2ABL030F 1	332-10758-01	Input: 100-120V, 1.0A, 50/60Hz Output: 12V, 2.5A DC output cable: 1.8m, unshielded
2	NETGEAR	ADS-40FPA-12	332-10759-01	Input: 100-120V, 1.0A, 60Hz Output: 12V, 2.5A DC output cable: 1.8m, unshielded
POE (test only, not for sale)				
No	Brand Name	Model No.		Spec.
1	Microsemi Corp.	PD-9001GR/AC		Input: 100-240V, 0.8A, 50/60Hz Output: 55V, 0.6A
Note: From the above adapters & POE, the radiated emission worse case was found in adapter 2. Therefore only the test data of the mode was recorded in this report.				

4. The EUT incorporates a MIMO function with beamforming.(Except for 802.11a/b/g)

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

5. The emission of the simultaneous operation (2.4GHz & 5GHz) has been evaluated and no non-compliance was found.

6. 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 5180 ~ 5240MHz

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

FOR 5745 ~ 5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
1	√	√	-	-	With adapter 2 + External antenna
2	√	√	√	√	With adapter 2 + Internal antenna
3	-	-	√	-	With adapter 1 + Internal antenna
4	-	-	√	-	With POE + Internal antenna

Where **RE≥1G:** Radiated Emission above 1GHz **RE<1G:** Radiated Emission below 1GHz
PLC: Power Line Conducted Emission **APCM:** Antenna Port Conducted Measurement

NOTE: 1.The EUT had been pre-tested on the positioned of each 2 axis. The worst case was found when positioned on **X-plane (below 1GHz) & Y-plane (above 1GHz).**
2."-"means no effect.

Radiated Emission Test (Above 1GHz):

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

CDD Mode						
MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11ac (VHT80)		42	42	OFDM	BPSK	29.3
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
Beamforming Mode						
MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11ac (VHT20)	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	13.5
802.11ac (VHT80)		155	155	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.

Beamforming Mode						
MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11ac (VHT20)	5180-5240 5745-5825	36 to 48 149 to 165	157	OFDM	BPSK	6.5

Power Line Conducted Emission Test:

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

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

Beamforming Mode						
MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11ac (VHT20)	5180-5240 5745-5825	36 to 48 149 to 165	157	OFDM	BPSK	6.5

Antenna Port Conducted Measurement:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.

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

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

CDD Mode						
For Transmit Power / Power Spectral Density Measurement						
MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6
802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11ac (VHT80)		42	42	OFDM	BPSK	29.3
For Transmit Power / Power Spectral Density / 6dB Bandwidth Measurement						
802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6
Beamforming Mode						
For Transmit Power Measurement						
MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11ac (VHT20)	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.5
802.11ac (VHT40)		38 to 46	38, 46	OFDM	BPSK	13.5
802.11ac (VHT80)		42	42	OFDM	BPSK	29.3
Beamforming Mode						
For Transmit Power / Power Spectral Density / 6dB Bandwidth Measurement						
MODE	FREQ. BAND (MHz)	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	DATA RATE (Mbps)
802.11ac (VHT20)	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.5
802.11ac (VHT40)		151 to 159	151, 159	OFDM	BPSK	13.5
802.11ac (VHT80)		155	155	OFDM	BPSK	29.3

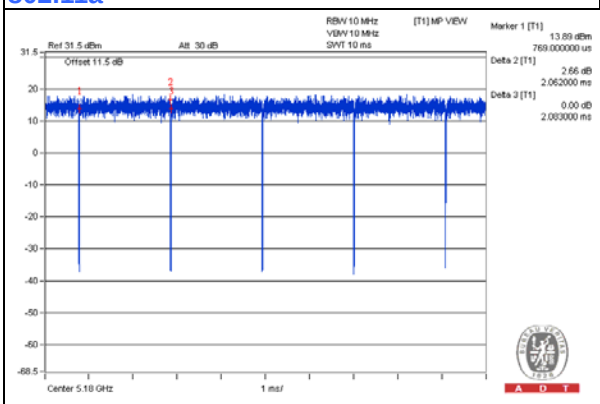
Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	22deg. C, 68%RH	120Vac, 60Hz	Andy Ho
RE<1G	23deg. C,66%RH	120Vac, 60Hz	Robert Cheng
PLC	28deg. C, 59%RH	120Vac, 60Hz	Wythe Lin
APCM	25deg. C, 60%RH	120Vac, 60Hz	Anderson Chen

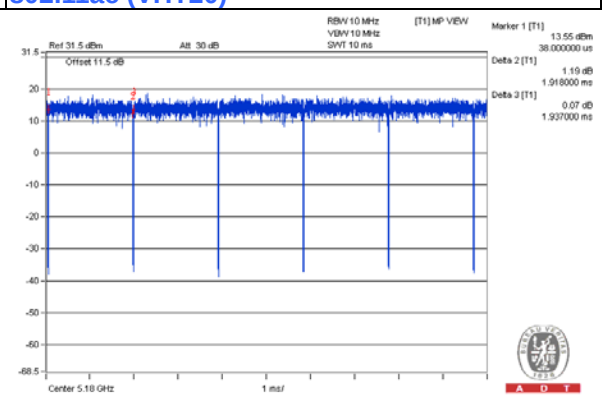
3.3 Duty Cycle of Test Signal

If duty cycle of test signal is ≥ 98 %, duty factor is not required.
If duty cycle of test signal is < 98%, duty factor shall be considered.
802.11a: Duty cycle = 2.062 ms/2.083 ms = 0.99
802.11ac (VHT20): Duty cycle = 1.981 ms/1.937 ms = 0.99
802.11ac (VHT40): Duty cycle = 0.942 ms/0.974 ms = 0.967, Duty factor = 10 * log(1/0.967) = 0.15
802.11ac (VHT80): Duty cycle = 0.458 ms/0.487 ms = 0.94, Duty factor = 10 * log(1/0.94) = 0.27

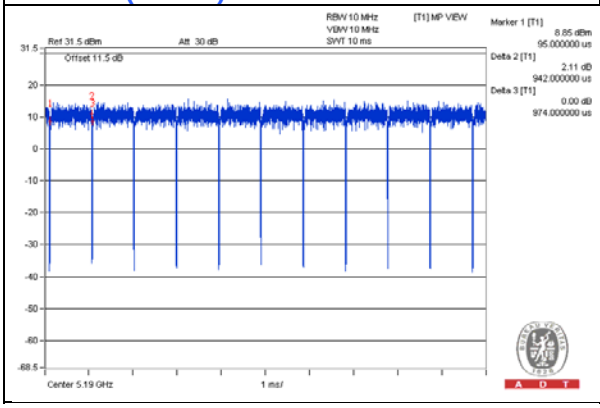
802.11a



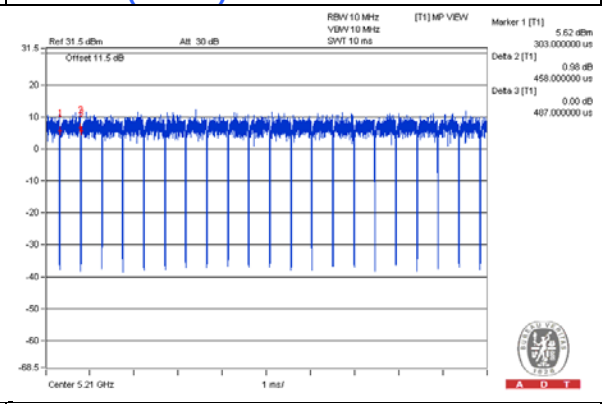
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



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.

With adapter test Mode

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	NOTEBOOK COMPUTER	DELL	PP32LA	DSLB32S	FCC DoC	Provided by Lab

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC	1	1.8	No	0	Supplied by Client
2.	RJ-45	1	10	No	0	Provided by Lab
3.	RJ-45 to RS232	1	1	No	0	Provided by Lab

With POE test Mode

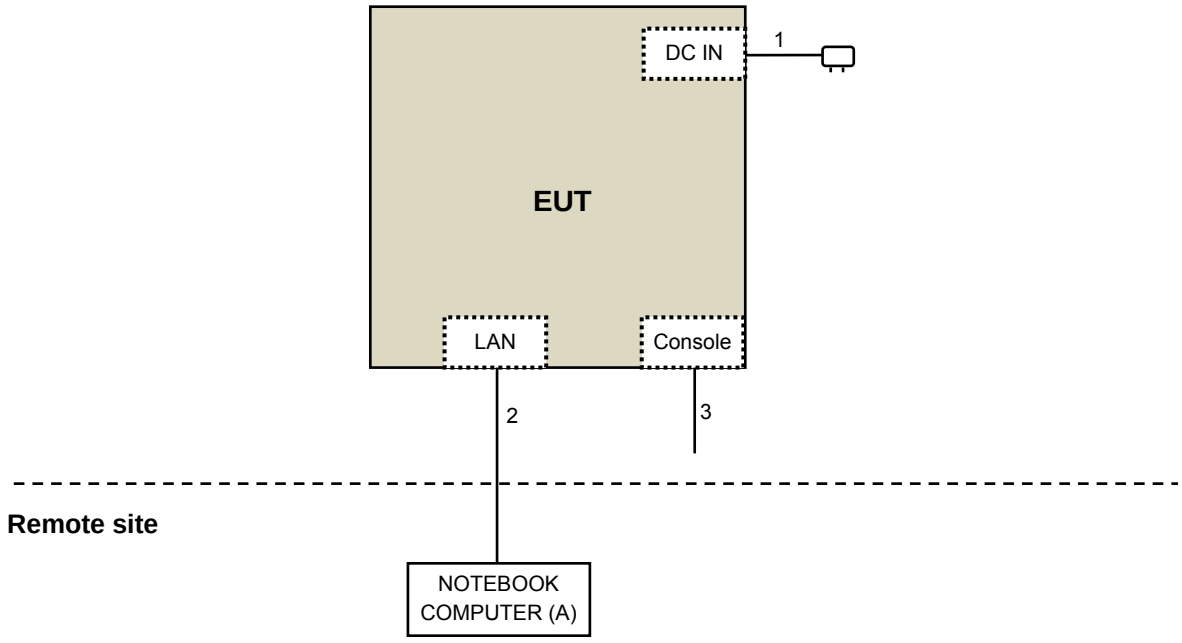
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A	NOTEBOOK COMPUTER	DELL	PP32LA	DSLB32S	FCC DoC	Provided by Lab
B	POE	Microsemi Corp.	PD-9001GR/AC	NA	NA	Supplied by Client

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

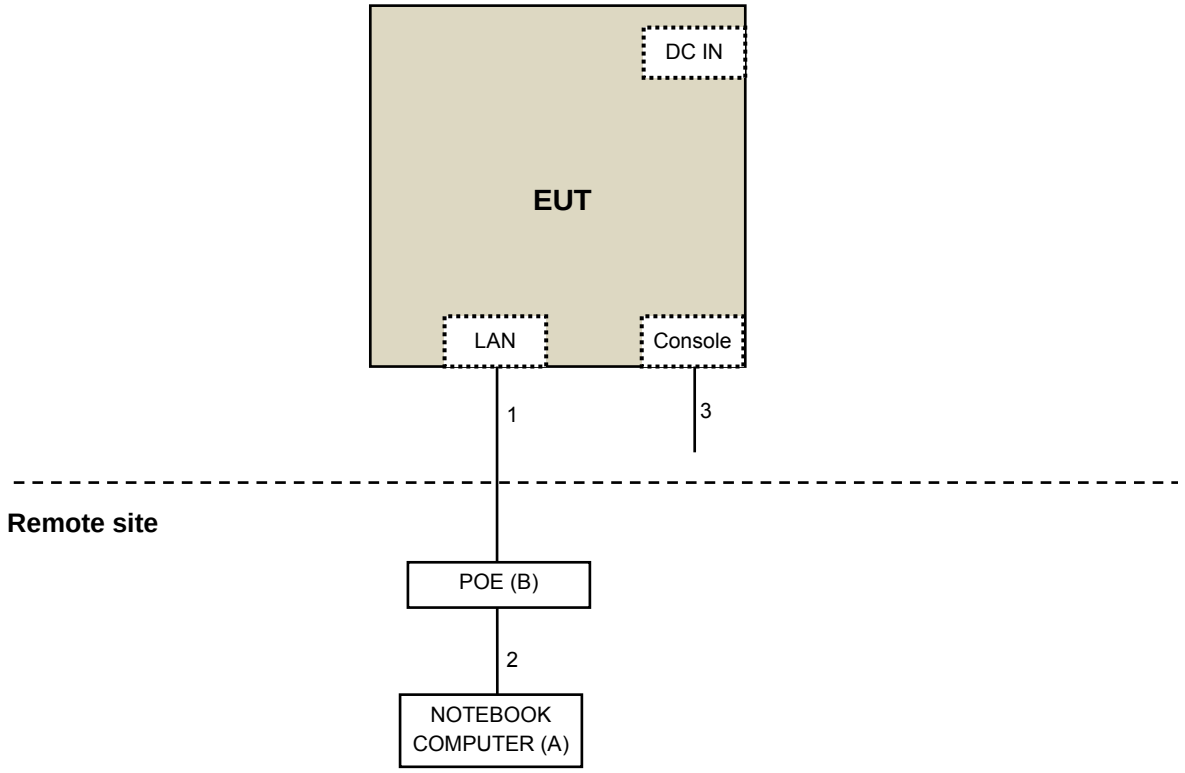
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ-45	1	10	No	0	Supplied by Client
2.	RJ-45	1	3	No	0	Provided by Lab
3.	RJ-45 to RS232	1	1	No	0	Provided by Lab

3.4.1 Configuration of System under Test

With adapter test Mode



With POE test mode



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)
789033 D02 General UNII Test Procedure New Rules v01
662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2013

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

NOTE: The EUT has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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 v01	FIELD STRENGTH AT 3m	
	PK:74 (dBμV/m)	AV:54 (dBμV/m)
APPLICABLE TO	**EIRP LIMIT**	**EQUIVALENT FIELD STRENGTH AT 3m**
15.407(b)(1)	PK:-27 (dBm/MHz)	PK:68.2(dBμV/m)
15.407(b)(2)		
15.407(b)(3)		
15.407(b)(4)	PK:-27 (dBm/MHz) *1 PK:-17 (dBm/MHz) *2	PK: 68.2(dBμV/m) *1 PK:78.2 (dBμV/m) *2

NOTE: *1 beyond 10MHz of the band edge *2 within 10 MHz of band edge

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

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

4.1.2 Test Instruments

For below 1GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 12, 2014	Dec. 11, 2015
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-04	Nov. 12, 2014	Nov. 11, 2015
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Feb. 09, 2015	Feb. 08, 2016
RF Cable	8D-FB	CHHCAB-001-1 CHHCAB-001-2	Oct. 05, 2014	Oct. 04, 2015
	RF-141	CHHCAB-004	Oct. 05, 2014	Oct. 04, 2015
Software	ADT_Radiated_V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. H.
3. The FCC Site Registration No. is 797305.
4. The CANADA Site Registration No. is IC 7450H-3.
5. Tested Date: Aug. 10, 2015

For above 1GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY51210202	Dec. 12, 2014	Dec. 11, 2015
Horn_Antenna AISI	AIH.8018	000032009111 0	Feb. 09, 2015	Feb. 08, 2016
Pre-Amplifier Agilent	8449B	3008A02578	June 23, 2015	June 22, 2016
RF Cable	NA	131205 131216 131217 SNMY23684/ 4	Jan. 16, 2015	Jan. 15, 2016
Spectrum Analyzer R&S	FSV40	100964	June 26, 2015	June 25, 2016
Pre-Amplifier SPACEK LABS	SLKKa-48-6	9K16	Dec. 12, 2014	Dec. 11, 2015
Horn_Antenna SCHWARZBECK	BBHA 9170	9170-424	Feb. 05, 2015	Feb. 04, 2016
RF Cable	NA	329751/4 RF104-204	Dec. 11, 2014	Dec. 10, 2015
Software	ADT_Radiated _V8.7.07	NA	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA
Temperature & Humidity Chamber GIANTFORCE	GTH-150-40-S P-AR	MAA0812-00 8	Jan. 12, 2015	Jan. 11, 2016
SPECTRUM ANALYZER R&S	FSV 40	100964	June 26, 2015	June 25, 2016
Power Meter Anritsu	ML2495A	1014008	Apr. 28, 2015	Apr. 27, 2016
Power Sensor Anritsu	MA2411B	0917122	Apr. 28, 2015	Apr. 27, 2016

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. G.
3. The FCC Site Registration No. is 966073.
4. The VCCI Site Registration No. is G-137.
5. The CANADA Site Registration No. is IC 7450H-2.
6. Tested Date: Aug. 07 to 12, 2015

4.1.3 Test Procedure

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

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

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

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

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

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

Note:

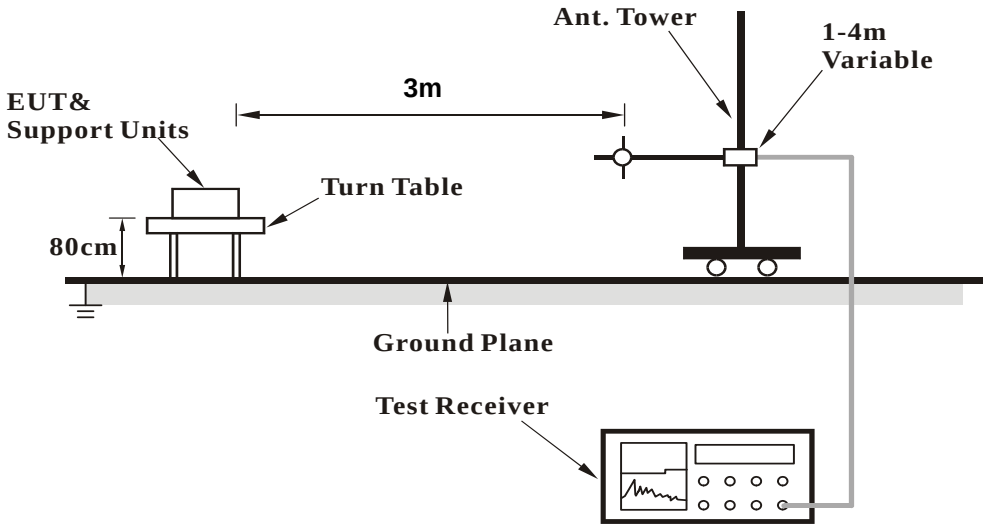
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

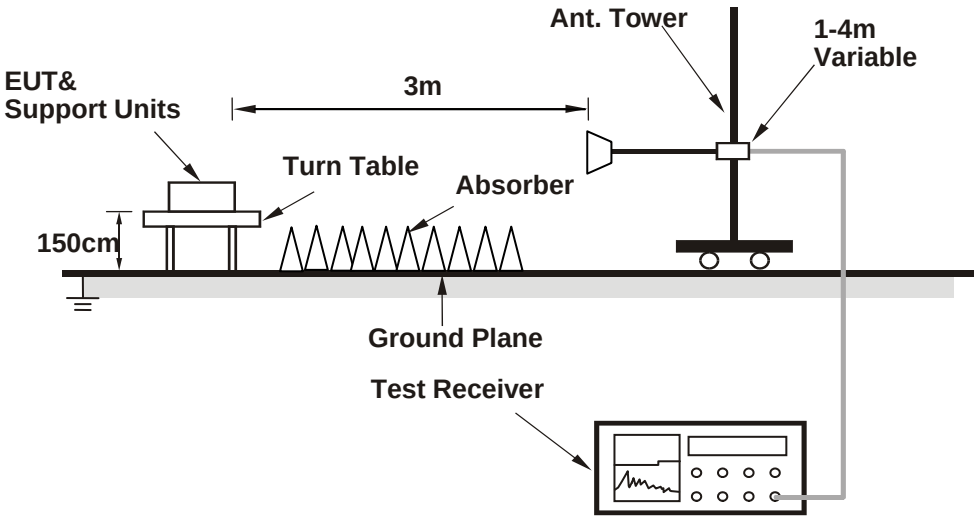
No deviation.

4.1.5 Test Setup

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



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

4.1.6 EUT Operating Condition

1. Connect the EUT with the support unit A (NOTEBOOK COMPUTER) which is placed on remote site.
2. Controlling software (Mtool.exe (V1.0.0.10)) has been activated to set the EUT on specific status.

4.1.7 Test Results (Mode 1)

Above 1GHz Data

CDD Mode

802.11a

CHANNEL	TX Channel 36	**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	5098.00	51.9 PK	74.0	-22.1	1.32 H	281	42.03	9.87
2	5098.00	41.4 AV	54.0	-12.6	1.32 H	281	31.53	9.87
3	*5180.00	100.0 PK			1.47 H	63	89.70	10.30
4	*5180.00	90.3 AV			1.47 H	63	80.00	10.30
5	#10360.00	54.4 PK	74.0	-19.6	1.39 H	352	37.70	16.70
6	#10360.00	39.8 AV	54.0	-14.2	1.39 H	352	23.10	16.70
7	15540.00	55.0 PK	74.0	-19.0	1.50 H	229	33.44	21.56
8	15540.00	40.5 AV	54.0	-13.5	1.50 H	229	18.94	21.56
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	5098.00	59.6 PK	74.0	-14.4	1.45 V	176	49.73	9.87
2	5098.00	48.8 AV	54.0	-5.2	1.45 V	176	38.93	9.87
3	*5180.00	107.6 PK			1.50 V	338	97.30	10.30
4	*5180.00	98.0 AV			1.50 V	338	87.70	10.30
5	#10360.00	56.5 PK	74.0	-17.5	1.36 V	41	39.80	16.70
6	#10360.00	41.4 AV	54.0	-12.6	1.36 V	41	24.70	16.70
7	15540.00	54.0 PK	74.0	-20.0	1.45 V	227	32.44	21.56
8	15540.00	39.7 AV	54.0	-14.3	1.45 V	227	18.14	21.56

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 40	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	5118.00	50.2 PK	74.0	-23.8	1.37 H	268	40.22	9.98
2	5118.00	41.3 AV	54.0	-12.7	1.37 H	268	31.32	9.98
3	*5200.00	100.4 PK			1.42 H	71	90.00	10.40
4	*5200.00	90.4 AV			1.42 H	71	80.00	10.40
5	#10400.00	54.9 PK	74.0	-19.1	1.44 H	360	37.99	16.91
6	#10400.00	40.2 AV	54.0	-13.8	1.44 H	360	23.29	16.91
7	15600.00	55.3 PK	74.0	-18.7	1.51 H	218	33.56	21.74
8	15600.00	40.9 AV	54.0	-13.1	1.51 H	218	19.16	21.74
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	5118.00	58.4 PK	74.0	-15.6	1.76 V	358	48.42	9.98
2	5118.00	48.6 AV	54.0	-5.4	1.76 V	358	38.62	9.98
3	*5200.00	108.2 PK			1.53 V	339	97.80	10.40
4	*5200.00	98.5 AV			1.53 V	339	88.10	10.40
5	#10400.00	56.7 PK	74.0	-17.3	1.40 V	39	39.79	16.91
6	#10400.00	41.5 AV	54.0	-12.5	1.40 V	39	24.59	16.91
7	15600.00	54.3 PK	74.0	-19.7	1.45 V	241	32.56	21.74
8	15600.00	39.9 AV	54.0	-14.1	1.45 V	241	18.16	21.74

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 48	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	5079.00	52.8 PK	74.0	-21.2	1.54 H	256	42.99	9.81
2	5079.00	42.2 AV	54.0	-11.8	1.54 H	256	32.39	9.81
3	*5240.00	98.9 PK			1.47 H	71	88.41	10.49
4	*5240.00	89.2 AV			1.47 H	71	78.71	10.49
5	5350.00	51.0 PK	74.0	-23.0	1.47 H	71	40.23	10.77
6	5350.00	39.5 AV	54.0	-14.5	1.47 H	71	28.73	10.77
7	#10480.00	54.6 PK	74.0	-19.4	1.44 H	350	38.11	16.49
8	#10480.00	40.1 AV	54.0	-13.9	1.44 H	350	23.61	16.49
9	15720.00	55.0 PK	74.0	-19.0	1.47 H	205	32.84	22.16
10	15720.00	40.7 AV	54.0	-13.3	1.47 H	205	18.54	22.16
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	5079.00	53.4 PK	74.0	-20.6	1.77 V	339	43.59	9.81
2	5079.00	43.4 AV	54.0	-10.6	1.77 V	339	33.59	9.81
3	*5240.00	106.7 PK			1.76 V	341	96.21	10.49
4	*5240.00	97.4 AV			1.76 V	341	86.91	10.49
5	5350.00	52.2 PK	74.0	-21.8	1.76 V	341	41.43	10.77
6	5350.00	40.2 AV	54.0	-13.8	1.76 V	341	29.43	10.77
7	#10480.00	56.3 PK	74.0	-17.7	1.41 V	54	39.81	16.49
8	#10480.00	41.3 AV	54.0	-12.7	1.41 V	54	24.81	16.49
9	15720.00	54.8 PK	74.0	-19.2	1.39 V	231	32.64	22.16
10	15720.00	40.2 AV	54.0	-13.8	1.39 V	231	18.04	22.16

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.

CDD Mode

802.11a

CHANNEL	TX Channel 149	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	#5663.00	54.4 PK	74.0	-19.6	1.56 H	271	44.87	9.53
2	#5663.00	44.3 AV	54.0	-9.7	1.56 H	271	34.77	9.53
3	#5725.00	68.7 PK	78.2	-9.5	1.51 H	69	59.00	9.70
4	*5745.00	101.4 PK			1.51 H	69	91.64	9.76
5	*5745.00	91.7 AV			1.51 H	69	81.94	9.76
6	#5904.00	56.9 PK	74.0	-17.1	1.65 H	221	46.92	9.98
7	#5904.00	48.2 AV	54.0	-5.8	1.65 H	221	38.22	9.98
8	11490.00	54.6 PK	74.0	-19.4	1.47 H	354	39.74	14.86
9	11490.00	40.1 AV	54.0	-13.9	1.47 H	354	25.24	14.86
10	#17235.00	54.6 PK	74.0	-19.4	1.44 H	216	31.37	23.23
11	#17235.00	40.6 AV	54.0	-13.4	1.44 H	216	17.37	23.23
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	#5663.00	59.5 PK	74.0	-14.5	1.85 V	236	49.97	9.53
2	#5663.00	49.5 AV	54.0	-4.5	1.85 V	236	39.97	9.53
3	#5725.00	74.3 PK	78.2	-3.9	2.18 V	190	64.60	9.70
4	*5745.00	109.3 PK			2.18 V	190	99.54	9.76
5	*5745.00	100.0 AV			2.18 V	190	90.24	9.76
6	#5904.00	62.2 PK	74.0	-11.8	1.88 V	216	52.22	9.98
7	#5904.00	52.8 AV	54.0	-1.2	1.88 V	216	42.82	9.98
8	11490.00	57.0 PK	74.0	-17.0	1.47 V	39	42.14	14.86
9	11490.00	41.7 AV	54.0	-12.3	1.47 V	39	26.84	14.86
10	#17235.00	55.0 PK	74.0	-19.0	1.44 V	222	31.77	23.23
11	#17235.00	40.5 AV	54.0	-13.5	1.44 V	222	17.27	23.23

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 157	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	#5705.00	58.2 PK	74.0	-15.8	1.72 H	143	48.55	9.65
2	#5705.00	49.9 AV	54.0	-4.1	1.72 H	143	40.25	9.65
3	*5785.00	106.5 PK			1.49 H	61	96.65	9.85
4	*5785.00	96.7 AV			1.49 H	61	86.85	9.85
5	#5850.00	59.0 PK	78.2	-19.2	1.49 H	61	49.08	9.92
6	#5867.00	60.7 PK	68.2	-7.5	2.20 H	174	50.77	9.93
7	11570.00	54.5 PK	74.0	-19.5	1.51 H	343	39.30	15.20
8	11570.00	39.9 AV	54.0	-14.1	1.51 H	343	24.70	15.20
9	#17355.00	54.9 PK	74.0	-19.1	1.46 H	220	31.34	23.56
10	#17355.00	40.7 AV	54.0	-13.3	1.46 H	220	17.14	23.56
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	#5705.00	62.4 PK	74.0	-11.6	2.28 V	190	52.75	9.65
2	#5705.00	53.4 AV	54.0	-0.6	2.28 V	190	43.75	9.65
3	*5785.00	114.1 PK			1.89 V	214	104.25	9.85
4	*5785.00	104.8 AV			1.89 V	214	94.95	9.85
5	#5850.00	64.1 PK	78.2	-14.1	1.89 V	214	54.18	9.92
6	#5867.00	64.5 PK	68.2	-3.7	2.34 V	132	54.57	9.93
7	11570.00	56.7 PK	74.0	-17.3	1.53 V	26	41.50	15.20
8	11570.00	41.3 AV	54.0	-12.7	1.53 V	26	26.10	15.20
9	#17355.00	54.6 PK	74.0	-19.4	1.39 V	238	31.04	23.56
10	#17355.00	40.2 AV	54.0	-13.8	1.39 V	238	16.64	23.56

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 165	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	#5707.00	53.3 PK	74.0	-20.7	1.68 H	119	43.64	9.66
2	#5707.00	44.0 AV	54.0	-10.0	1.68 H	119	34.34	9.66
3	*5825.00	104.2 PK			1.43 H	63	94.29	9.91
4	*5825.00	93.9 AV			1.43 H	63	83.99	9.91
5	#5850.00	63.8 PK	78.2	-14.4	1.43 H	63	53.88	9.92
6	#5906.00	57.4 PK	74.0	-16.6	1.65 H	221	47.42	9.98
7	#5906.00	48.9 AV	54.0	-5.1	1.65 H	221	38.92	9.98
8	11650.00	54.9 PK	74.0	-19.1	1.47 H	341	39.50	15.40
9	11650.00	40.2 AV	54.0	-13.8	1.47 H	341	24.80	15.40
10	#17475.00	55.0 PK	74.0	-19.0	1.51 H	219	30.91	24.09
11	#17475.00	40.6 AV	54.0	-13.4	1.51 H	219	16.51	24.09
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	#5707.00	57.9 PK	74.0	-16.1	2.13 V	180	48.24	9.66
2	#5707.00	47.2 AV	54.0	-6.8	2.13 V	180	37.54	9.66
3	*5825.00	112.1 PK			1.91 V	215	102.19	9.91
4	*5825.00	102.3 AV			1.91 V	215	92.39	9.91
5	#5850.00	68.3 PK	78.2	-9.9	1.91 V	215	58.38	9.92
6	#5906.00	62.5 PK	74.0	-11.5	1.79 V	216	52.52	9.98
7	#5906.00	53.4 AV	54.0	-0.6	1.79 V	216	43.42	9.98
8	11650.00	56.1 PK	74.0	-17.9	1.51 V	36	40.70	15.40
9	11650.00	40.9 AV	54.0	-13.1	1.51 V	36	25.50	15.40
10	#17475.00	54.7 PK	74.0	-19.3	1.40 V	238	30.61	24.09
11	#17475.00	40.1 AV	54.0	-13.9	1.40 V	238	16.01	24.09

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.
6. " # ": The radiated frequency is out of the restricted band.

CDD Mode

802.11ac (VHT20)

CHANNEL	TX Channel 36	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	5102.00	56.2 PK	74.0	-17.8	1.42 H	231	46.31	9.89
2	5102.00	45.9 AV	54.0	-8.1	1.42 H	231	36.01	9.89
3	5150.00	66.6 PK	74.0	-7.4	1.38 H	49	56.47	10.13
4	5150.00	46.3 AV	54.0	-7.7	1.38 H	49	36.17	10.13
5	*5180.00	104.5 PK			1.38 H	49	94.20	10.30
6	*5180.00	92.8 AV			1.38 H	49	82.50	10.30
7	#10360.00	55.2 PK	74.0	-18.8	1.48 H	337	38.50	16.70
8	#10360.00	40.3 AV	54.0	-13.7	1.48 H	337	23.60	16.70
9	15540.00	54.4 PK	74.0	-19.6	1.53 H	234	32.84	21.56
10	15540.00	40.1 AV	54.0	-13.9	1.53 H	234	18.54	21.56
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	5102.00	59.5 PK	74.0	-14.5	1.60 V	343	49.61	9.89
2	5102.00	47.4 AV	54.0	-6.6	1.60 V	343	37.51	9.89
3	5150.00	69.7 PK	74.0	-4.3	1.77 V	346	59.57	10.13
4	5150.00	48.1 AV	54.0	-5.9	1.77 V	346	37.97	10.13
5	*5180.00	109.0 PK			1.77 V	346	98.70	10.30
6	*5180.00	97.6 AV			1.77 V	346	87.30	10.30
7	#10360.00	55.6 PK	74.0	-18.4	1.53 V	21	38.90	16.70
8	#10360.00	40.6 AV	54.0	-13.4	1.53 V	21	23.90	16.70
9	15540.00	54.6 PK	74.0	-19.4	1.40 V	232	33.04	21.56
10	15540.00	39.8 AV	54.0	-14.2	1.40 V	232	18.24	21.56

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 40	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	5122.00	54.3 PK	74.0	-19.7	1.46 H	146	44.31	9.99
2	5122.00	45.1 AV	54.0	-8.9	1.46 H	146	35.11	9.99
3	*5200.00	98.2 PK			1.37 H	52	87.80	10.40
4	*5200.00	88.5 AV			1.37 H	52	78.10	10.40
5	5358.00	54.6 PK	74.0	-19.4	1.56 H	281	43.81	10.79
6	5358.00	45.5 AV	54.0	-8.5	1.56 H	281	34.71	10.79
7	#10400.00	55.3 PK	74.0	-18.7	1.47 H	329	38.39	16.91
8	#10400.00	40.2 AV	54.0	-13.8	1.47 H	329	23.29	16.91
9	15600.00	53.8 PK	74.0	-20.2	1.48 H	221	32.06	21.74
10	15600.00	39.6 AV	54.0	-14.4	1.48 H	221	17.86	21.74
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	5122.00	57.6 PK	74.0	-16.4	1.57 V	344	47.61	9.99
2	5122.00	47.2 AV	54.0	-6.8	1.57 V	344	37.21	9.99
3	*5200.00	106.1 PK			1.74 V	357	95.70	10.40
4	*5200.00	96.6 AV			1.74 V	357	86.20	10.40
5	5358.00	57.6 PK	74.0	-16.4	2.52 V	172	46.81	10.79
6	5358.00	47.7 AV	54.0	-6.3	2.52 V	172	36.91	10.79
7	#10400.00	55.3 PK	74.0	-18.7	1.56 V	34	38.39	16.91
8	#10400.00	40.6 AV	54.0	-13.4	1.56 V	34	23.69	16.91
9	15600.00	54.9 PK	74.0	-19.1	1.38 V	245	33.16	21.74
10	15600.00	40.0 AV	54.0	-14.0	1.38 V	245	18.26	21.74

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 48	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	5079.00	52.2 PK	74.0	-21.8	1.58 H	214	42.39	9.81
2	5079.00	40.1 AV	54.0	-13.9	1.58 H	214	30.29	9.81
3	*5240.00	98.3 PK			1.32 H	49	87.81	10.49
4	*5240.00	87.9 AV			1.32 H	49	77.41	10.49
5	5401.00	52.4 PK	74.0	-21.6	2.05 H	181	41.48	10.92
6	5401.00	43.7 AV	54.0	-10.3	2.05 H	181	32.78	10.92
7	#10480.00	55.2 PK	74.0	-18.8	1.50 H	320	38.71	16.49
8	#10480.00	40.3 AV	54.0	-13.7	1.50 H	320	23.81	16.49
9	15720.00	53.7 PK	74.0	-20.3	1.44 H	235	31.54	22.16
10	15720.00	39.4 AV	54.0	-14.6	1.44 H	235	17.24	22.16
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	5079.00	54.2 PK	74.0	-19.8	1.61 V	12	44.39	9.81
2	5079.00	42.2 AV	54.0	-11.8	1.61 V	12	32.39	9.81
3	*5240.00	106.0 PK			1.52 V	357	95.51	10.49
4	*5240.00	96.0 AV			1.52 V	357	85.51	10.49
5	5401.00	56.0 PK	74.0	-18.0	2.53 V	214	45.08	10.92
6	5401.00	46.0 AV	54.0	-8.0	2.53 V	214	35.08	10.92
7	#10480.00	55.6 PK	74.0	-18.4	1.56 V	44	39.11	16.49
8	#10480.00	40.8 AV	54.0	-13.2	1.56 V	44	24.31	16.49
9	15720.00	54.8 PK	74.0	-19.2	1.39 V	258	32.64	22.16
10	15720.00	39.7 AV	54.0	-14.3	1.39 V	258	17.54	22.16

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.

Beamforming Mode

802.11ac (VHT20)

CHANNEL	TX Channel 149	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	#5666.00	55.6 PK	74.0	-18.4	1.55 H	281	46.05	9.55
2	#5666.00	44.8 AV	54.0	-9.2	1.55 H	281	35.25	9.55
3	#5725.00	69.1 PK	78.2	-9.1	1.28 H	34	59.40	9.70
4	*5745.00	99.3 PK			1.28 H	34	89.54	9.76
5	*5745.00	90.1 AV			1.28 H	34	80.34	9.76
6	#5906.00	57.4 PK	74.0	-16.6	1.58 H	219	47.42	9.98
7	#5906.00	48.3 AV	54.0	-5.7	1.58 H	219	38.32	9.98
8	11490.00	54.9 PK	74.0	-19.1	1.46 H	334	40.04	14.86
9	11490.00	40.0 AV	54.0	-14.0	1.46 H	334	25.14	14.86
10	#17235.00	54.1 PK	74.0	-19.9	1.42 H	249	30.87	23.23
11	#17235.00	39.6 AV	54.0	-14.4	1.42 H	249	16.37	23.23
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	#5666.00	57.4 PK	74.0	-16.6	2.10 V	185	47.85	9.55
2	#5666.00	48.2 AV	54.0	-5.8	2.10 V	185	38.65	9.55
3	#5725.00	73.4 PK	78.2	-4.8	1.80 V	203	63.70	9.70
4	*5745.00	106.9 PK			1.80 V	203	97.14	9.76
5	*5745.00	98.2 AV			1.80 V	203	88.44	9.76
6	#5906.00	62.8 PK	74.0	-11.2	1.67 V	360	52.82	9.98
7	#5906.00	51.4 AV	54.0	-2.6	1.67 V	360	41.42	9.98
8	11490.00	55.0 PK	74.0	-19.0	1.56 V	45	40.14	14.86
9	11490.00	40.5 AV	54.0	-13.5	1.56 V	45	25.64	14.86
10	#17235.00	55.0 PK	74.0	-19.0	1.42 V	260	31.77	23.23
11	#17235.00	39.8 AV	54.0	-14.2	1.42 V	260	16.57	23.23

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 157	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	#5706.00	61.8 PK	68.2	-6.4	1.23 H	39	52.15	9.65
2	*5785.00	107.2 PK			1.23 H	39	97.35	9.85
3	*5785.00	96.9 AV			1.23 H	39	87.05	9.85
4	#5850.00	62.0 PK	78.2	-16.2	1.23 H	39	52.08	9.92
5	#5866.00	60.5 PK	68.2	-7.7	1.65 H	184	50.57	9.93
6	11570.00	55.4 PK	74.0	-18.6	1.50 H	337	40.20	15.20
7	11570.00	40.5 AV	54.0	-13.5	1.50 H	337	25.30	15.20
8	#17355.00	54.1 PK	74.0	-19.9	1.42 H	245	30.54	23.56
9	#17355.00	39.7 AV	54.0	-14.3	1.42 H	245	16.14	23.56
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	#5706.00	64.1 PK	68.2	-4.1	1.84 V	218	54.45	9.65
2	*5785.00	115.1 PK			1.84 V	219	105.25	9.85
3	*5785.00	105.1 AV			1.84 V	219	95.25	9.85
4	#5850.00	65.5 PK	78.2	-12.7	1.84 V	219	55.58	9.92
5	#5866.00	64.2 PK	68.2	-4.0	1.57 V	198	54.27	9.93
6	11570.00	55.5 PK	74.0	-18.5	1.54 V	47	40.30	15.20
7	11570.00	40.7 AV	54.0	-13.3	1.54 V	47	25.50	15.20
8	#17355.00	55.5 PK	74.0	-18.5	1.40 V	268	31.94	23.56
9	#17355.00	40.1 AV	54.0	-13.9	1.40 V	268	16.54	23.56

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 165	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	#5666.00	61.8 PK	74.0	-12.2	1.55 H	193	52.25	9.55
2	#5666.00	44.2 AV	54.0	-9.8	1.55 H	193	34.65	9.55
3	*5825.00	101.8 PK			1.28 H	36	91.89	9.91
4	*5825.00	92.4 AV			1.28 H	36	82.49	9.91
5	#5850.00	64.7 PK	78.2	-13.5	1.28 H	36	54.78	9.92
6	#5906.00	59.4 PK	74.0	-14.6	1.85 H	279	49.42	9.98
7	#5906.00	49.3 AV	54.0	-4.7	1.85 H	279	39.32	9.98
8	11650.00	55.2 PK	74.0	-18.8	1.47 H	338	39.80	15.40
9	11650.00	40.3 AV	54.0	-13.7	1.47 H	338	24.90	15.40
10	#17475.00	53.4 PK	74.0	-20.6	1.39 H	230	29.31	24.09
11	#17475.00	39.2 AV	54.0	-14.8	1.39 H	230	15.11	24.09
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	#5666.00	67.5 PK	74.0	-6.5	1.90 V	360	57.95	9.55
2	#5666.00	47.5 AV	54.0	-6.5	1.90 V	360	37.95	9.55
3	*5825.00	109.6 PK			2.13 V	192	99.69	9.91
4	*5825.00	100.7 AV			2.13 V	192	90.79	9.91
5	#5850.00	67.0 PK	78.2	-11.2	2.13 V	192	57.08	9.92
6	#5906.00	61.9 PK	74.0	-12.1	1.77 V	217	51.92	9.98
7	#5906.00	52.5 AV	54.0	-1.5	1.77 V	217	42.52	9.98
8	11650.00	55.1 PK	74.0	-18.9	1.52 V	40	39.70	15.40
9	11650.00	40.5 AV	54.0	-13.5	1.52 V	40	25.10	15.40
10	#17475.00	55.8 PK	74.0	-18.2	1.37 V	278	31.71	24.09
11	#17475.00	40.1 AV	54.0	-13.9	1.37 V	278	16.01	24.09

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.
6. " # ": The radiated frequency is out of the restricted band.

CDD Mode

802.11ac (VHT40)

CHANNEL	TX Channel 38	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	61.5 PK	74.0	-12.5	1.32 H	30	51.37	10.13
2	5150.00	49.3 AV	54.0	-4.7	1.32 H	30	39.17	10.13
3	*5190.00	95.9 PK			1.32 H	30	85.55	10.35
4	*5190.00	84.9 AV			1.32 H	30	74.55	10.35
5	5350.00	50.6 PK	74.0	-23.4	1.32 H	30	39.83	10.77
6	5350.00	39.8 AV	54.0	-14.2	1.32 H	30	29.03	10.77
7	#10380.00	55.3 PK	74.0	-18.7	1.42 H	353	38.49	16.81
8	#10380.00	40.3 AV	54.0	-13.7	1.42 H	353	23.49	16.81
9	15570.00	53.3 PK	74.0	-20.7	1.34 H	228	31.65	21.65
10	15570.00	39.1 AV	54.0	-14.9	1.34 H	228	17.45	21.65
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	64.9 PK	74.0	-9.1	1.50 V	355	54.77	10.13
2	5150.00	52.4 AV	54.0	-1.6	1.50 V	355	42.27	10.13
3	*5190.00	103.2 PK			1.50 V	355	92.85	10.35
4	*5190.00	93.0 AV			1.50 V	355	82.65	10.35
5	5350.00	51.7 PK	74.0	-22.3	1.50 V	355	40.93	10.77
6	5350.00	40.4 AV	54.0	-13.6	1.50 V	355	29.63	10.77
7	#10380.00	55.6 PK	74.0	-18.4	1.53 V	33	38.79	16.81
8	#10380.00	40.9 AV	54.0	-13.1	1.53 V	33	24.09	16.81
9	15570.00	56.4 PK	74.0	-17.6	1.42 V	265	34.75	21.65
10	15570.00	40.6 AV	54.0	-13.4	1.42 V	265	18.95	21.65

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 46	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	52.9 PK	74.0	-21.1	1.30 H	33	42.77	10.13
2	5150.00	43.8 AV	54.0	-10.2	1.30 H	33	33.67	10.13
3	*5230.00	98.0 PK			1.30 H	33	87.53	10.47
4	*5230.00	86.6 AV			1.30 H	33	76.13	10.47
5	5350.00	53.4 PK	74.0	-20.6	1.30 H	33	42.63	10.77
6	5350.00	43.9 AV	54.0	-10.1	1.30 H	33	33.13	10.77
7	#10460.00	55.1 PK	74.0	-18.9	1.37 H	357	38.50	16.60
8	#10460.00	40.3 AV	54.0	-13.7	1.37 H	357	23.70	16.60
9	15690.00	53.7 PK	74.0	-20.3	1.33 H	225	31.64	22.06
10	15690.00	39.3 AV	54.0	-14.7	1.33 H	225	17.24	22.06
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.4 PK	74.0	-18.6	1.51 V	355	45.27	10.13
2	5150.00	45.9 AV	54.0	-8.1	1.51 V	355	35.77	10.13
3	*5230.00	105.9 PK			1.51 V	355	95.43	10.47
4	*5230.00	94.4 AV			1.51 V	355	83.93	10.47
5	5350.00	55.6 PK	74.0	-18.4	2.40 V	169	44.83	10.77
6	5350.00	46.0 AV	54.0	-8.0	2.40 V	169	35.23	10.77
7	#10460.00	55.5 PK	74.0	-18.5	1.48 V	38	38.90	16.60
8	#10460.00	40.6 AV	54.0	-13.4	1.48 V	38	24.00	16.60
9	15690.00	57.0 PK	74.0	-17.0	1.41 V	278	34.94	22.06
10	15690.00	41.0 AV	54.0	-13.0	1.41 V	278	18.94	22.06

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.

Beamforming Mode

802.11ac (VHT40)

CHANNEL	TX Channel 151	**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	#5715.00	67.0 PK	74.0	-7.0	1.28 H	20	57.32	9.68
2	#5715.00	48.1 AV	54.0	-5.9	1.28 H	20	38.42	9.68
3	#5725.00	73.8 PK	78.2	-4.4	1.28 H	20	64.10	9.70
4	*5755.00	98.9 PK			1.28 H	20	89.13	9.77
5	*5755.00	87.8 AV			1.28 H	20	78.03	9.77
6	11510.00	55.3 PK	74.0	-18.7	1.37 H	360	40.45	14.85
7	11510.00	40.3 AV	54.0	-13.7	1.37 H	360	25.45	14.85
8	#17265.00	53.3 PK	74.0	-20.7	1.32 H	213	30.07	23.23
9	#17265.00	39.0 AV	54.0	-15.0	1.32 H	213	15.77	23.23
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	#5715.00	70.5 PK	74.0	-3.5	1.96 V	190	60.82	9.68
2	#5715.00	51.5 AV	54.0	-2.5	1.96 V	190	41.82	9.68
3	#5725.00	77.9 PK	78.2	-0.3	1.96 V	190	68.20	9.70
4	*5755.00	106.8 PK			1.96 V	190	97.03	9.77
5	*5755.00	95.9 AV			1.96 V	190	86.13	9.77
6	11510.00	55.2 PK	74.0	-18.8	1.45 V	52	40.35	14.85
7	11510.00	40.3 AV	54.0	-13.7	1.45 V	52	25.45	14.85
8	#17265.00	57.0 PK	74.0	-17.0	1.41 V	284	33.77	23.23
9	#17265.00	40.9 AV	54.0	-13.1	1.41 V	284	17.67	23.23

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 159	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	*5795.00	100.9 PK			1.32 H	17	91.02	9.88
2	*5795.00	90.8 AV			1.32 H	17	80.92	9.88
3	#5850.00	66.8 PK	78.2	-11.4	1.32 H	17	56.88	9.92
4	#5860.00	61.1 PK	74.0	-12.9	1.32 H	17	51.17	9.93
5	#5860.00	49.4 AV	54.0	-4.6	1.32 H	17	39.47	9.93
6	11590.00	56.0 PK	74.0	-18.0	1.40 H	348	40.69	15.31
7	11590.00	40.8 AV	54.0	-13.2	1.40 H	348	25.49	15.31
8	#17385.00	53.2 PK	74.0	-20.8	1.28 H	219	29.44	23.76
9	#17385.00	39.0 AV	54.0	-15.0	1.28 H	219	15.24	23.76
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	108.7 PK			1.84 V	214	98.82	9.88
2	*5795.00	98.9 AV			1.84 V	214	89.02	9.88
3	#5850.00	71.1 PK	78.2	-7.1	1.84 V	214	61.18	9.92
4	#5860.00	64.6 PK	74.0	-9.4	1.84 V	214	54.67	9.93
5	#5860.00	52.9 AV	54.0	-1.1	1.84 V	214	42.97	9.93
6	11590.00	55.8 PK	74.0	-18.2	1.46 V	56	40.49	15.31
7	11590.00	40.7 AV	54.0	-13.3	1.46 V	56	25.39	15.31
8	#17385.00	56.8 PK	74.0	-17.2	1.38 V	271	33.04	23.76
9	#17385.00	40.8 AV	54.0	-13.2	1.38 V	271	17.04	23.76

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.

CDD Mode

802.11ac (VHT80)

CHANNEL	TX Channel 42	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	69.6 PK	74.0	-4.4	1.30 H	19	59.47	10.13
2	5150.00	50.3 AV	54.0	-3.7	1.30 H	19	40.17	10.13
3	*5210.00	94.3 PK			1.30 H	19	83.88	10.42
4	*5210.00	82.4 AV			1.30 H	19	71.98	10.42
5	5350.00	51.8 PK	74.0	-22.2	1.30 H	19	41.03	10.77
6	5350.00	39.5 AV	54.0	-14.5	1.30 H	19	28.73	10.77
7	#10420.00	56.6 PK	74.0	-17.4	1.37 H	360	39.79	16.81
8	#10420.00	41.2 AV	54.0	-12.8	1.37 H	360	24.39	16.81
9	15630.00	53.2 PK	74.0	-20.8	1.28 H	203	31.35	21.85
10	15630.00	39.1 AV	54.0	-14.9	1.28 H	203	17.25	21.85
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	72.4 PK	74.0	-1.6	1.90 V	348	62.27	10.13
2	5150.00	53.5 AV	54.0	-0.5	1.90 V	348	43.37	10.13
3	*5210.00	102.0 PK			1.90 V	348	91.58	10.42
4	*5210.00	90.3 AV			1.90 V	348	79.88	10.42
5	5350.00	53.9 PK	74.0	-20.1	1.90 V	348	43.13	10.77
6	5350.00	40.7 AV	54.0	-13.3	1.90 V	348	29.93	10.77
7	#10420.00	55.6 PK	74.0	-18.4	1.45 V	43	38.79	16.81
8	#10420.00	40.7 AV	54.0	-13.3	1.45 V	43	23.89	16.81
9	15630.00	57.0 PK	74.0	-17.0	1.37 V	257	35.15	21.85
10	15630.00	41.1 AV	54.0	-12.9	1.37 V	257	19.25	21.85

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.

Beamforming Mode

802.11ac (VHT80)

CHANNEL	TX Channel 155	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	#5715.00	60.1 PK	74.0	-13.9	1.31 H	27	50.42	9.68
2	#5715.00	48.7 AV	54.0	-5.3	1.31 H	27	39.02	9.68
3	#5725.00	66.6 PK	78.2	-11.6	1.31 H	27	56.90	9.70
4	*5775.00	94.7 PK			1.31 H	27	84.87	9.83
5	*5775.00	83.0 AV			1.31 H	27	73.17	9.83
6	#5850.00	65.2 PK	78.2	-13.0	1.31 H	27	55.28	9.92
7	#5860.00	60.7 PK	74.0	-13.3	1.31 H	27	50.77	9.93
8	#5860.00	46.2 AV	54.0	-7.8	1.31 H	27	36.27	9.93
9	11550.00	57.2 PK	74.0	-16.8	1.41 H	360	42.11	15.09
10	11550.00	41.7 AV	54.0	-12.3	1.41 H	360	26.61	15.09
11	#17325.00	53.3 PK	74.0	-20.7	1.31 H	189	29.92	23.38
12	#17325.00	39.3 AV	54.0	-14.7	1.31 H	189	15.92	23.38
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	#5715.00	63.4 PK	74.0	-10.6	1.81 V	215	53.72	9.68
2	#5715.00	51.0 AV	54.0	-3.0	1.81 V	215	41.32	9.68
3	#5725.00	70.2 PK	78.2	-8.0	1.81 V	215	60.50	9.70
4	*5775.00	102.3 PK			1.81 V	215	92.47	9.83
5	*5775.00	91.2 AV			1.81 V	215	81.37	9.83
6	#5850.00	67.6 PK	78.2	-10.6	1.81 V	215	57.68	9.92
7	#5860.00	63.0 PK	74.0	-11.0	1.81 V	215	53.07	9.93
8	#5860.00	48.3 AV	54.0	-5.7	1.81 V	215	38.37	9.93
9	11550.00	55.7 PK	74.0	-18.3	1.39 V	50	40.61	15.09
10	11550.00	41.1 AV	54.0	-12.9	1.39 V	50	26.01	15.09
11	#17325.00	56.8 PK	74.0	-17.2	1.42 V	246	33.42	23.38
12	#17325.00	40.8 AV	54.0	-13.2	1.42 V	246	17.42	23.38

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.
6. " # ": The radiated frequency is out of the restricted band.

Below 1GHz Data

Beamforming Mode

802.11ac (VHT20)

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 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	112.01	20.9 QP	43.5	-22.6	1.50 H	360	36.66	-15.72
2	173.03	23.1 QP	43.5	-20.4	2.00 H	67	36.76	-13.69
3	227.59	30.1 QP	46.0	-16.0	1.00 H	255	45.79	-15.74
4	325.95	37.9 QP	46.0	-8.1	1.00 H	16	48.85	-10.92
5	412.81	28.5 QP	46.0	-17.5	1.00 H	345	37.69	-9.22
6	573.78	31.5 QP	46.0	-14.5	1.50 H	298	37.21	-5.69
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	132.00	14.5 QP	43.5	-29.0	1.00 V	360	28.67	-14.15
2	219.83	22.7 QP	46.0	-23.3	1.50 V	321	38.77	-16.05
3	264.79	29.7 QP	46.0	-16.3	1.50 V	311	43.07	-13.40
4	334.19	26.7 QP	46.0	-19.3	1.50 V	61	37.42	-10.75
5	397.78	28.7 QP	46.0	-17.3	1.50 V	1	38.42	-9.70
6	570.19	26.0 QP	46.0	-20.0	1.50 V	311	31.90	-5.88

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

4.1.8 Test Results (Mode 2)

Above 1GHz Data

CDD Mode

802.11a

CHANNEL	TX Channel 36	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	5102.00	59.6 PK	74.0	-14.4	1.75 H	24	49.71	9.89
2	5102.00	43.2 AV	54.0	-10.8	1.75 H	24	33.31	9.89
3	5150.00	63.7 PK	74.0	-10.3	1.72 H	32	53.57	10.13
4	5150.00	45.0 AV	54.0	-9.0	1.72 H	32	34.87	10.13
5	*5180.00	102.4 PK			1.72 H	32	92.10	10.30
6	*5180.00	91.8 AV			1.72 H	32	81.50	10.30
7	#10360.00	54.6 PK	74.0	-19.4	1.43 H	344	37.90	16.70
8	#10360.00	40.1 AV	54.0	-13.9	1.43 H	344	23.40	16.70
9	15540.00	54.8 PK	74.0	-19.2	1.45 H	223	33.24	21.56
10	15540.00	40.1 AV	54.0	-13.9	1.45 H	223	18.54	21.56
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	5102.00	63.6 PK	74.0	-10.4	1.73 V	360	53.71	9.89
2	5102.00	45.2 AV	54.0	-8.8	1.73 V	360	35.31	9.89
3	5150.00	66.2 PK	74.0	-7.8	1.73 V	360	56.07	10.13
4	5150.00	48.2 AV	54.0	-5.8	1.73 V	360	38.07	10.13
5	*5180.00	106.0 PK			1.73 V	360	95.70	10.30
6	*5180.00	95.9 AV			1.73 V	360	85.60	10.30
7	#10360.00	56.3 PK	74.0	-17.7	1.36 V	40	39.60	16.70
8	#10360.00	41.4 AV	54.0	-12.6	1.36 V	40	24.70	16.70
9	15540.00	54.7 PK	74.0	-19.3	1.43 V	220	33.14	21.56
10	15540.00	40.2 AV	54.0	-13.8	1.43 V	220	18.64	21.56

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 40	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	5122.00	53.3 PK	74.0	-20.7	1.71 H	24	43.31	9.99
2	5122.00	42.9 AV	54.0	-11.1	1.71 H	24	32.91	9.99
3	*5200.00	103.2 PK			1.69 H	39	92.80	10.40
4	*5200.00	92.5 AV			1.69 H	39	82.10	10.40
5	5362.00	53.5 PK	74.0	-20.5	1.78 H	19	42.70	10.80
6	5362.00	43.1 AV	54.0	-10.9	1.78 H	19	32.30	10.80
7	#6933.00	55.4 PK	74.0	-18.6	1.70 H	32	38.97	16.43
8	#6933.00	43.2 AV	54.0	-10.8	1.70 H	32	26.77	16.43
9	#10400.00	54.2 PK	74.0	-19.8	1.47 H	338	37.29	16.91
10	#10400.00	39.7 AV	54.0	-14.3	1.47 H	338	22.79	16.91
11	15600.00	54.6 PK	74.0	-19.4	1.43 H	231	32.86	21.74
12	15600.00	39.9 AV	54.0	-14.1	1.43 H	231	18.16	21.74

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	5122.00	55.6 PK	74.0	-18.4	1.66 V	3	45.61	9.99
2	5122.00	46.2 AV	54.0	-7.8	1.66 V	3	36.21	9.99
3	*5200.00	107.0 PK			1.80 V	360	96.60	10.40
4	*5200.00	96.3 AV			1.80 V	360	85.90	10.40
5	5362.00	56.1 PK	74.0	-17.9	1.80 V	360	45.30	10.80
6	5362.00	45.4 AV	54.0	-8.6	1.80 V	360	34.60	10.80
7	#6933.00	56.9 PK	74.0	-17.1	1.62 V	360	40.47	16.43
8	#6933.00	46.0 AV	54.0	-8.0	1.62 V	360	29.57	16.43
9	#10400.00	56.7 PK	74.0	-17.3	1.33 V	43	39.79	16.91
10	#10400.00	41.6 AV	54.0	-12.4	1.33 V	43	24.69	16.91
11	15600.00	54.6 PK	74.0	-19.4	1.40 V	232	32.86	21.74
12	15600.00	40.1 AV	54.0	-13.9	1.40 V	232	18.36	21.74

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 48	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	5082.00	52.2 PK	74.0	-21.8	1.74 H	9	42.38	9.82
2	5082.00	39.2 AV	54.0	-14.8	1.74 H	9	29.38	9.82
3	*5240.00	104.8 PK			1.64 H	30	94.31	10.49
4	*5240.00	93.6 AV			1.64 H	30	83.11	10.49
5	5402.00	55.6 PK	74.0	-18.4	1.75 H	37	44.68	10.92
6	5402.00	44.4 AV	54.0	-9.6	1.75 H	37	33.48	10.92
7	#10480.00	54.4 PK	74.0	-19.6	1.41 H	342	37.91	16.49
8	#10480.00	40.1 AV	54.0	-13.9	1.41 H	342	23.61	16.49
9	15720.00	54.5 PK	74.0	-19.5	1.39 H	228	32.34	22.16
10	15720.00	39.5 AV	54.0	-14.5	1.39 H	228	17.34	22.16
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	5082.00	54.3 PK	74.0	-19.7	1.70 V	360	44.48	9.82
2	5082.00	42.3 AV	54.0	-11.7	1.70 V	360	32.48	9.82
3	*5240.00	108.4 PK			1.91 V	360	97.91	10.49
4	*5240.00	97.6 AV			1.91 V	360	87.11	10.49
5	5402.00	57.6 PK	74.0	-16.4	1.73 V	360	46.68	10.92
6	5402.00	46.5 AV	54.0	-7.5	1.73 V	360	35.58	10.92
7	#10480.00	57.4 PK	74.0	-16.6	1.38 V	55	40.91	16.49
8	#10480.00	42.1 AV	54.0	-11.9	1.38 V	55	25.61	16.49
9	15720.00	55.1 PK	74.0	-18.9	1.35 V	220	32.94	22.16
10	15720.00	40.6 AV	54.0	-13.4	1.35 V	220	18.44	22.16

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.

CDD Mode

802.11a

CHANNEL	TX Channel 149	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	#5715.00	63.1 PK	74.0	-10.9	1.58 H	40	53.42	9.68
2	#5715.00	49.5 AV	54.0	-4.5	1.58 H	40	39.82	9.68
3	#5725.00	73.8 PK	78.2	-4.4	1.58 H	40	64.10	9.70
4	*5745.00	108.7 PK			1.58 H	40	98.94	9.76
5	*5745.00	98.5 AV			1.58 H	40	88.74	9.76
6	#5960.00	61.9 PK	74.0	-12.1	1.78 H	51	51.68	10.22
7	#5960.00	49.7 AV	54.0	-4.3	1.78 H	51	39.48	10.22
8	11490.00	55.1 PK	74.0	-18.9	1.47 H	344	40.24	14.86
9	11490.00	40.5 AV	54.0	-13.5	1.47 H	344	25.64	14.86
10	#17235.00	55.0 PK	74.0	-19.0	1.33 H	237	31.77	23.23
11	#17235.00	39.8 AV	54.0	-14.2	1.33 H	237	16.57	23.23
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	#5715.00	65.0 PK	74.0	-9.0	1.69 V	2	55.32	9.68
2	#5715.00	52.3 AV	54.0	-1.7	1.69 V	2	42.62	9.68
3	#5725.00	77.8 PK	78.2	-0.4	1.83 V	360	68.10	9.70
4	*5745.00	112.1 PK			1.83 V	360	102.34	9.76
5	*5745.00	101.8 AV			1.83 V	360	92.04	9.76
6	#5960.00	63.6 PK	74.0	-10.4	1.75 V	360	53.38	10.22
7	#5960.00	52.5 AV	54.0	-1.5	1.75 V	360	42.28	10.22
8	11490.00	58.1 PK	74.0	-15.9	1.38 V	67	43.24	14.86
9	11490.00	42.5 AV	54.0	-11.5	1.38 V	67	27.64	14.86
10	#17235.00	54.7 PK	74.0	-19.3	1.39 V	211	31.47	23.23
11	#17235.00	40.5 AV	54.0	-13.5	1.39 V	211	17.27	23.23

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 157	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	#5707.00	64.0 PK	68.2	-4.2	1.82 H	63	54.34	9.66
2	*5785.00	112.9 PK			1.59 H	29	103.05	9.85
3	*5785.00	102.9 AV			1.59 H	29	93.05	9.85
4	#5850.00	64.5 PK	78.2	-13.7	1.59 H	29	54.58	9.92
5	#5867.00	65.5 PK	68.2	-2.7	1.55 H	33	55.57	9.93
6	11570.00	55.1 PK	74.0	-18.9	1.46 H	352	39.90	15.20
7	11570.00	40.4 AV	54.0	-13.6	1.46 H	352	25.20	15.20
8	#17355.00	55.5 PK	74.0	-18.5	1.39 H	240	31.94	23.56
9	#17355.00	40.2 AV	54.0	-13.8	1.39 H	240	16.64	23.56
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	**#5707.00**	**68.0 PK**	**68.2**	**-0.2**	**1.76 V**	**360**	**58.34**	**9.66**
2	*5785.00	116.3 PK			1.89 V	360	106.45	9.85
3	*5785.00	106.2 AV			1.89 V	360	96.35	9.85
4	#5850.00	66.5 PK	78.2	-11.7	1.89 V	360	56.58	9.92
5	#5867.00	67.7 PK	68.2	-0.5	1.88 V	360	57.77	9.93
6	11570.00	58.1 PK	74.0	-15.9	1.43 V	75	42.90	15.20
7	11570.00	42.7 AV	54.0	-11.3	1.43 V	75	27.50	15.20
8	#17355.00	55.2 PK	74.0	-18.8	1.41 V	211	31.64	23.56
9	#17355.00	40.7 AV	54.0	-13.3	1.41 V	211	17.14	23.56

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 165	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	*5825.00	110.3 PK			1.62 H	42	100.39	9.91
2	*5825.00	100.0 AV			1.62 H	42	90.09	9.91
3	#5850.00	72.5 PK	78.2	-5.7	1.62 H	42	62.58	9.92
4	#5860.00	65.9 PK	74.0	-8.1	1.62 H	42	55.97	9.93
5	#5860.00	44.8 AV	54.0	-9.2	1.62 H	42	34.87	9.93
6	#5906.00	62.0 PK	74.0	-12.0	1.64 H	28	52.02	9.98
7	#5906.00	49.5 AV	54.0	-4.5	1.64 H	28	39.52	9.98
8	11650.00	55.3 PK	74.0	-18.7	1.50 H	341	39.90	15.40
9	11650.00	40.7 AV	54.0	-13.3	1.50 H	341	25.30	15.40
10	#17475.00	56.0 PK	74.0	-18.0	1.36 H	230	31.91	24.09
11	#17475.00	40.5 AV	54.0	-13.5	1.36 H	230	16.41	24.09
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	*5825.00	113.7 PK			1.85 V	360	103.79	9.91
2	*5825.00	103.3 AV			1.85 V	360	93.39	9.91
3	#5850.00	75.5 PK	78.2	-2.7	1.85 V	360	65.58	9.92
4	#5860.00	67.9 PK	74.0	-6.1	1.85 V	360	57.97	9.93
5	#5860.00	47.6 AV	54.0	-6.4	1.85 V	360	37.67	9.93
6	#5906.00	64.1 PK	74.0	-9.9	1.69 V	360	54.12	9.98
7	#5906.00	53.6 AV	54.0	-0.4	1.69 V	360	43.62	9.98
8	11650.00	58.3 PK	74.0	-15.7	1.48 V	63	42.90	15.40
9	11650.00	42.6 AV	54.0	-11.4	1.48 V	63	27.20	15.40
10	#17475.00	55.0 PK	74.0	-19.0	1.40 V	218	30.91	24.09
11	#17475.00	40.5 AV	54.0	-13.5	1.40 V	218	16.41	24.09

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.
6. " # ": The radiated frequency is out of the restricted band.

CDD Mode

802.11ac (VHT20)

CHANNEL	TX Channel 36	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	5101.00	58.2 PK	74.0	-15.8	1.52 H	311	48.33	9.87
2	5101.00	45.3 AV	54.0	-8.7	1.52 H	311	35.43	9.87
3	5150.00	67.2 PK	74.0	-6.8	1.68 H	39	57.07	10.13
4	5150.00	43.9 AV	54.0	-10.1	1.68 H	39	33.77	10.13
5	*5180.00	106.1 PK			1.68 H	39	95.80	10.30
6	*5180.00	95.5 AV			1.68 H	39	85.20	10.30
7	#10360.00	55.2 PK	74.0	-18.8	1.52 H	346	38.50	16.70
8	#10360.00	40.3 AV	54.0	-13.7	1.52 H	346	23.60	16.70
9	15540.00	55.7 PK	74.0	-18.3	1.37 H	231	34.14	21.56
10	15540.00	40.3 AV	54.0	-13.7	1.37 H	231	18.74	21.56
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	5101.00	58.6 PK	74.0	-15.4	1.58 V	360	48.73	9.87
2	5101.00	47.8 AV	54.0	-6.2	1.58 V	360	37.93	9.87
3	5150.00	70.8 PK	74.0	-3.2	1.76 V	360	60.67	10.13
4	5150.00	47.0 AV	54.0	-7.0	1.76 V	360	36.87	10.13
5	*5180.00	110.0 PK			1.76 V	360	99.70	10.30
6	*5180.00	99.6 AV			1.76 V	360	89.30	10.30
7	#10360.00	58.4 PK	74.0	-15.6	1.54 V	75	41.70	16.70
8	#10360.00	42.5 AV	54.0	-11.5	1.54 V	75	25.80	16.70
9	15540.00	54.9 PK	74.0	-19.1	1.38 V	214	33.34	21.56
10	15540.00	40.7 AV	54.0	-13.3	1.38 V	214	19.14	21.56

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 40	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	5121.00	51.5 PK	74.0	-22.5	1.67 H	334	41.51	9.99
2	5121.00	41.7 AV	54.0	-12.3	1.67 H	334	31.71	9.99
3	*5200.00	103.4 PK			1.62 H	46	93.00	10.40
4	*5200.00	92.1 AV			1.62 H	46	81.70	10.40
5	5361.00	52.5 PK	74.0	-21.5	1.55 H	31	41.71	10.79
6	5361.00	42.0 AV	54.0	-12.0	1.55 H	31	31.21	10.79
7	#10400.00	55.1 PK	74.0	-18.9	1.47 H	335	38.19	16.91
8	#10400.00	40.4 AV	54.0	-13.6	1.47 H	335	23.49	16.91
9	15600.00	55.6 PK	74.0	-18.4	1.32 H	236	33.86	21.74
10	15600.00	40.0 AV	54.0	-14.0	1.32 H	236	18.26	21.74
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	5121.00	54.8 PK	74.0	-19.2	1.58 V	360	44.81	9.99
2	5121.00	43.9 AV	54.0	-10.1	1.58 V	360	33.91	9.99
3	*5200.00	106.4 PK			1.82 V	360	96.00	10.40
4	*5200.00	96.1 AV			1.82 V	360	85.70	10.40
5	5361.00	55.9 PK	74.0	-18.1	1.92 V	360	45.11	10.79
6	5361.00	45.1 AV	54.0	-8.9	1.92 V	360	34.31	10.79
7	#10400.00	58.2 PK	74.0	-15.8	1.52 V	84	41.29	16.91
8	#10400.00	42.4 AV	54.0	-11.6	1.52 V	84	25.49	16.91
9	15600.00	55.4 PK	74.0	-18.6	1.42 V	203	33.66	21.74
10	15600.00	41.0 AV	54.0	-13.0	1.42 V	203	19.26	21.74

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 48	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	5081.00	54.8 PK	74.0	-19.2	1.66 H	329	44.98	9.82
2	5081.00	39.9 AV	54.0	-14.1	1.66 H	329	30.08	9.82
3	*5240.00	103.4 PK			1.64 H	60	92.91	10.49
4	*5240.00	92.1 AV			1.64 H	60	81.61	10.49
5	5401.00	54.6 PK	74.0	-19.4	1.53 H	20	43.68	10.92
6	5401.00	43.1 AV	54.0	-10.9	1.53 H	20	32.18	10.92
7	#10480.00	55.3 PK	74.0	-18.7	1.43 H	334	38.81	16.49
8	#10480.00	40.4 AV	54.0	-13.6	1.43 H	334	23.91	16.49
9	15720.00	55.4 PK	74.0	-18.6	1.36 H	250	33.24	22.16
10	15720.00	40.0 AV	54.0	-14.0	1.36 H	250	17.84	22.16
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	5081.00	53.4 PK	74.0	-20.6	1.79 V	360	43.58	9.82
2	5081.00	41.1 AV	54.0	-12.9	1.79 V	360	31.28	9.82
3	*5240.00	107.4 PK			1.82 V	360	96.91	10.49
4	*5240.00	96.2 AV			1.82 V	360	85.71	10.49
5	5401.00	56.4 PK	74.0	-17.6	1.76 V	360	45.48	10.92
6	5401.00	45.4 AV	54.0	-8.6	1.76 V	360	34.48	10.92
7	#10480.00	58.7 PK	74.0	-15.3	1.57 V	75	42.21	16.49
8	#10480.00	42.8 AV	54.0	-11.2	1.57 V	75	26.31	16.49
9	15720.00	55.0 PK	74.0	-19.0	1.37 V	192	32.84	22.16
10	15720.00	40.6 AV	54.0	-13.4	1.37 V	192	18.44	22.16

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.

Beamforming Mode

802.11ac (VHT20)

CHANNEL	TX Channel 149	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	#5666.00	60.4 PK	74.0	-13.6	1.56 H	34	50.85	9.55
2	#5666.00	48.9 AV	54.0	-5.1	1.56 H	34	39.35	9.55
3	#5725.00	73.7 PK	78.2	-4.5	1.66 H	68	64.00	9.70
4	*5745.00	107.5 PK			1.66 H	68	97.74	9.76
5	*5745.00	96.3 AV			1.66 H	68	86.54	9.76
6	#5906.00	60.1 PK	74.0	-13.9	1.60 H	32	50.12	9.98
7	#5906.00	48.6 AV	54.0	-5.4	1.60 H	32	38.62	9.98
8	11490.00	55.1 PK	74.0	-18.9	1.46 H	319	40.24	14.86
9	11490.00	40.3 AV	54.0	-13.7	1.46 H	319	25.44	14.86
10	#17235.00	54.7 PK	74.0	-19.3	1.33 H	265	31.47	23.23
11	#17235.00	39.6 AV	54.0	-14.4	1.33 H	265	16.37	23.23
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	#5666.00	62.5 PK	74.0	-11.5	1.72 V	360	52.95	9.55
2	#5666.00	51.7 AV	54.0	-2.3	1.72 V	360	42.15	9.55
3	#5725.00	77.7 PK	78.2	-0.5	1.76 V	360	68.00	9.70
4	*5745.00	110.9 PK			1.76 V	360	101.14	9.76
5	*5745.00	99.6 AV			1.76 V	360	89.84	9.76
6	#5906.00	62.3 PK	74.0	-11.7	1.72 V	360	52.32	9.98
7	#5906.00	51.1 AV	54.0	-2.9	1.72 V	360	41.12	9.98
8	11490.00	58.5 PK	74.0	-15.5	1.54 V	65	43.64	14.86
9	11490.00	42.5 AV	54.0	-11.5	1.54 V	65	27.64	14.86
10	#17235.00	54.7 PK	74.0	-19.3	1.37 V	180	31.47	23.23
11	#17235.00	40.4 AV	54.0	-13.6	1.37 V	180	17.17	23.23

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 157	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	#5703.00	65.2 PK	68.2	-3.0	1.65 H	18	55.56	9.64
2	*5785.00	114.1 PK			1.61 H	64	104.25	9.85
3	*5785.00	102.5 AV			1.61 H	64	92.65	9.85
4	#5850.00	64.7 PK	78.2	-13.5	1.61 H	64	54.78	9.92
5	#5866.00	63.6 PK	68.2	-4.6	1.67 H	72	53.67	9.93
6	11570.00	55.2 PK	74.0	-18.8	1.45 H	316	40.00	15.20
7	11570.00	40.7 AV	54.0	-13.3	1.45 H	316	25.50	15.20
8	#17355.00	54.6 PK	74.0	-19.4	1.28 H	257	31.04	23.56
9	#17355.00	39.3 AV	54.0	-14.7	1.28 H	257	15.74	23.56
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	**#5703.00**	**68.0 PK**	**68.2**	**-0.2**	**1.61 V**	**360**	**58.36**	**9.64**
2	*5785.00	117.3 PK			1.75 V	360	107.45	9.85
3	*5785.00	105.9 AV			1.75 V	360	96.05	9.85
4	#5850.00	68.7 PK	78.2	-9.5	1.75 V	360	58.78	9.92
5	#5866.00	66.1 PK	68.2	-2.1	1.68 V	360	56.17	9.93
6	11570.00	58.3 PK	74.0	-15.7	1.50 V	72	43.10	15.20
7	11570.00	42.3 AV	54.0	-11.7	1.50 V	72	27.10	15.20
8	#17355.00	54.7 PK	74.0	-19.3	1.37 V	189	31.14	23.56
9	#17355.00	40.2 AV	54.0	-13.8	1.37 V	189	16.64	23.56

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 165	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	*5825.00	109.6 PK			1.60 H	55	99.69	9.91
2	*5825.00	98.3 AV			1.60 H	55	88.39	9.91
3	#5850.00	68.4 PK	78.2	-9.8	1.60 H	55	58.48	9.92
4	#5860.00	66.2 PK	74.0	-7.8	1.60 H	55	56.27	9.93
5	#5860.00	49.5 AV	54.0	-4.5	1.60 H	55	39.57	9.93
6	#5903.00	60.8 PK	68.2	-7.4	1.60 H	48	50.83	9.97
7	11650.00	55.2 PK	74.0	-18.8	1.44 H	304	39.80	15.40
8	11650.00	40.6 AV	54.0	-13.4	1.44 H	304	25.20	15.40
9	#17475.00	54.8 PK	74.0	-19.2	1.34 H	252	30.71	24.09
10	#17475.00	39.3 AV	54.0	-14.7	1.34 H	252	15.21	24.09
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	*5825.00	113.0 PK			1.82 V	360	103.09	9.91
2	*5825.00	101.6 AV			1.82 V	360	91.69	9.91
3	#5850.00	73.2 PK	78.2	-5.0	1.82 V	360	63.28	9.92
4	#5860.00	68.4 PK	74.0	-5.6	1.82 V	360	58.47	9.93
5	#5860.00	53.5 AV	54.0	-0.5	1.82 V	360	43.57	9.93
6	#5903.00	63.1 PK	68.2	-5.1	1.82 V	360	53.13	9.97
7	11650.00	58.3 PK	74.0	-15.7	1.55 V	66	42.90	15.40
8	11650.00	42.6 AV	54.0	-11.4	1.55 V	66	27.20	15.40
9	#17475.00	54.6 PK	74.0	-19.4	1.36 V	199	30.51	24.09
10	#17475.00	40.1 AV	54.0	-13.9	1.36 V	199	16.01	24.09

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.
6. " # ": The radiated frequency is out of the restricted band.

CDD Mode

802.11ac (VHT40)

CHANNEL	TX Channel 38	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	72.3 PK	74.0	-1.7	1.66 H	61	62.17	10.13
2	5150.00	49.8 AV	54.0	-4.2	1.66 H	61	39.67	10.13
3	*5190.00	103.7 PK			1.66 H	61	93.35	10.35
4	*5190.00	92.3 AV			1.66 H	61	81.95	10.35
5	5350.00	55.9 PK	74.0	-18.1	1.66 H	61	45.13	10.77
6	5350.00	43.7 AV	54.0	-10.3	1.66 H	61	32.93	10.77
7	#10380.00	54.8 PK	74.0	-19.2	1.46 H	300	37.99	16.81
8	#10380.00	40.2 AV	54.0	-13.8	1.46 H	300	23.39	16.81
9	15570.00	55.1 PK	74.0	-18.9	1.34 H	238	33.45	21.65
10	15570.00	39.4 AV	54.0	-14.6	1.34 H	238	17.75	21.65
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**	**73.8 PK**	**74.0**	**-0.2**	**1.63 V**	**360**	**63.67**	**10.13**
2	**5150.00**	**53.8 AV**	**54.0**	**-0.2**	**1.63 V**	**360**	**43.67**	**10.13**
3	*5190.00	107.1 PK			1.63 V	360	96.75	10.35
4	*5190.00	95.5 AV			1.63 V	360	85.15	10.35
5	5350.00	57.8 PK	74.0	-16.2	1.63 V	360	47.03	10.77
6	5350.00	46.5 AV	54.0	-7.5	1.63 V	360	35.73	10.77
7	#10380.00	58.8 PK	74.0	-15.2	1.59 V	76	41.99	16.81
8	#10380.00	43.0 AV	54.0	-11.0	1.59 V	76	26.19	16.81
9	15570.00	54.4 PK	74.0	-19.6	1.31 V	207	32.75	21.65
10	15570.00	40.0 AV	54.0	-14.0	1.31 V	207	18.35	21.65

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 46	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	59.3 PK	74.0	-14.7	1.67 H	66	49.17	10.13
2	5150.00	41.5 AV	54.0	-12.5	1.67 H	66	31.37	10.13
3	*5230.00	101.3 PK			1.67 H	66	90.83	10.47
4	*5230.00	89.7 AV			1.67 H	66	79.23	10.47
5	5393.00	53.9 PK	74.0	-20.1	1.72 H	251	43.01	10.89
6	5393.00	42.0 AV	54.0	-12.0	1.72 H	251	31.11	10.89
7	#10460.00	54.9 PK	74.0	-19.1	1.47 H	291	38.30	16.60
8	#10460.00	40.4 AV	54.0	-13.6	1.47 H	291	23.80	16.60
9	15690.00	55.2 PK	74.0	-18.8	1.34 H	222	33.14	22.06
10	15690.00	39.4 AV	54.0	-14.6	1.34 H	222	17.34	22.06
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	61.8 PK	74.0	-12.2	1.65 V	360	51.67	10.13
2	5150.00	44.9 AV	54.0	-9.1	1.65 V	360	34.77	10.13
3	*5230.00	105.5 PK			1.65 V	360	95.03	10.47
4	*5230.00	94.1 AV			1.65 V	360	83.63	10.47
5	5393.00	56.4 PK	74.0	-17.6	1.86 V	360	45.51	10.89
6	5393.00	45.2 AV	54.0	-8.8	1.86 V	360	34.31	10.89
7	#10460.00	59.4 PK	74.0	-14.6	1.57 V	86	42.80	16.60
8	#10460.00	43.4 AV	54.0	-10.6	1.57 V	86	26.80	16.60
9	15690.00	53.8 PK	74.0	-20.2	1.29 V	203	31.74	22.06
10	15690.00	39.7 AV	54.0	-14.3	1.29 V	203	17.64	22.06

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.

Beamforming Mode

802.11ac (VHT40)

CHANNEL	TX Channel 151	**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	#5715.00	69.7 PK	74.0	-4.3	1.68 H	56	60.02	9.68
2	#5715.00	47.7 AV	54.0	-6.3	1.68 H	56	38.02	9.68
3	#5725.00	74.1 PK	78.2	-4.1	1.68 H	56	64.40	9.70
4	*5755.00	104.6 PK			1.68 H	56	94.83	9.77
5	*5755.00	92.9 AV			1.68 H	56	83.13	9.77
6	11510.00	54.9 PK	74.0	-19.1	1.51 H	276	40.05	14.85
7	11510.00	40.4 AV	54.0	-13.6	1.51 H	276	25.55	14.85
8	#17265.00	55.6 PK	74.0	-18.4	1.33 H	228	32.37	23.23
9	#17265.00	39.7 AV	54.0	-14.3	1.33 H	228	16.47	23.23
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	#5715.00	71.9 PK	74.0	-2.1	1.77 V	360	62.22	9.68
2	#5715.00	51.7 AV	54.0	-2.3	1.77 V	360	42.02	9.68
3	**#5725.00**	**78.0 PK**	**78.2**	**-0.2**	**1.77 V**	**360**	**68.30**	**9.70**
4	*5755.00	108.0 PK			1.77 V	360	98.23	9.77
5	*5755.00	96.3 AV			1.77 V	360	86.53	9.77
6	11510.00	59.4 PK	74.0	-14.6	1.57 V	94	44.55	14.85
7	11510.00	43.3 AV	54.0	-10.7	1.57 V	94	28.45	14.85
8	#17265.00	54.3 PK	74.0	-19.7	1.29 V	212	31.07	23.23
9	#17265.00	40.0 AV	54.0	-14.0	1.29 V	212	16.77	23.23

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 159	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	*5795.00	108.3 PK			1.72 H	56	98.42	9.88
2	*5795.00	96.4 AV			1.72 H	56	86.52	9.88
3	#5850.00	73.6 PK	78.2	-4.6	1.72 H	56	63.68	9.92
4	#5860.00	66.7 PK	74.0	-7.3	1.72 H	56	56.77	9.93
5	#5860.00	49.7 AV	54.0	-4.3	1.72 H	56	39.77	9.93
6	11590.00	55.5 PK	74.0	-18.5	1.54 H	288	40.19	15.31
7	11590.00	40.8 AV	54.0	-13.2	1.54 H	288	25.49	15.31
8	#17385.00	55.8 PK	74.0	-18.2	1.29 H	226	32.04	23.76
9	#17385.00	39.7 AV	54.0	-14.3	1.29 H	226	15.94	23.76
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5795.00	111.9 PK			1.85 V	360	102.02	9.88
2	*5795.00	99.8 AV			1.85 V	360	89.92	9.88
3	#5850.00	75.8 PK	78.2	-2.4	1.85 V	360	65.88	9.92
4	#5860.00	68.7 PK	74.0	-5.3	1.85 V	360	58.77	9.93
5	#5860.00	53.7 AV	54.0	-0.3	1.85 V	360	43.77	9.93
6	11590.00	58.6 PK	74.0	-15.4	1.56 V	100	43.29	15.31
7	11590.00	42.8 AV	54.0	-11.2	1.56 V	100	27.49	15.31
8	#17385.00	53.9 PK	74.0	-20.1	1.27 V	218	30.14	23.76
9	#17385.00	39.8 AV	54.0	-14.2	1.27 V	218	16.04	23.76

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.

CDD Mode

802.11ac (VHT80)

CHANNEL	TX Channel 42	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	68.8 PK	74.0	-5.2	1.73 H	43	58.67	10.13
2	5150.00	49.7 AV	54.0	-4.3	1.73 H	43	39.57	10.13
3	*5210.00	99.8 PK			1.73 H	43	89.38	10.42
4	*5210.00	87.8 AV			1.73 H	43	77.38	10.42
5	5350.00	59.3 PK	74.0	-14.7	1.73 H	43	48.53	10.77
6	5350.00	43.2 AV	54.0	-10.8	1.73 H	43	32.43	10.77
7	#10420.00	55.3 PK	74.0	-18.7	1.50 H	294	38.49	16.81
8	#10420.00	40.4 AV	54.0	-13.6	1.50 H	294	23.59	16.81
9	15630.00	56.0 PK	74.0	-18.0	1.26 H	230	34.15	21.85
10	15630.00	39.8 AV	54.0	-14.2	1.26 H	230	17.95	21.85
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	70.9 PK	74.0	-3.1	1.40 V	360	60.77	10.13
2	5150.00	53.7 AV	54.0	-0.3	1.40 V	360	43.57	10.13
3	*5210.00	103.2 PK			1.40 V	360	92.78	10.42
4	*5210.00	91.1 AV			1.40 V	360	80.68	10.42
5	5350.00	61.4 PK	74.0	-12.6	1.40 V	360	50.63	10.77
6	5350.00	46.0 AV	54.0	-8.0	1.40 V	360	35.23	10.77
7	#10420.00	58.3 PK	74.0	-15.7	1.55 V	86	41.49	16.81
8	#10420.00	42.4 AV	54.0	-11.6	1.55 V	86	25.59	16.81
9	15630.00	54.0 PK	74.0	-20.0	1.23 V	221	32.15	21.85
10	15630.00	40.1 AV	54.0	-13.9	1.23 V	221	18.25	21.85

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.

Beamforming Mode

802.11ac (VHT80)

CHANNEL	TX Channel 155	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	#5715.00	68.8 PK	74.0	-5.2	1.69 H	37	59.12	9.68
2	#5715.00	49.8 AV	54.0	-4.2	1.69 H	37	40.12	9.68
3	#5725.00	70.7 PK	78.2	-7.5	1.69 H	37	61.00	9.70
4	*5775.00	101.1 PK			1.69 H	37	91.27	9.83
5	*5775.00	88.9 AV			1.69 H	37	79.07	9.83
6	#5850.00	66.9 PK	78.2	-11.3	1.69 H	37	56.98	9.92
7	#5860.00	65.3 PK	74.0	-8.7	1.69 H	37	55.37	9.93
8	#5860.00	45.9 AV	54.0	-8.1	1.69 H	37	35.97	9.93
9	11550.00	55.6 PK	74.0	-18.4	1.51 H	302	40.51	15.09
10	11550.00	40.6 AV	54.0	-13.4	1.51 H	302	25.51	15.09
11	#17325.00	56.0 PK	74.0	-18.0	1.32 H	233	32.62	23.38
12	#17325.00	39.9 AV	54.0	-14.1	1.32 H	233	16.52	23.38
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	#5715.00	70.9 PK	74.0	-3.1	1.70 V	360	61.22	9.68
2	**#5715.00**	**53.8 AV**	**54.0**	**-0.2**	**1.70 V**	**360**	**44.12**	**9.68**
3	#5725.00	74.7 PK	78.2	-3.5	1.70 V	360	65.00	9.70
4	*5775.00	104.5 PK			1.70 V	360	94.67	9.83
5	*5775.00	92.2 AV			1.70 V	360	82.37	9.83
6	#5850.00	70.9 PK	78.2	-7.3	1.70 V	360	60.98	9.92
7	#5860.00	67.5 PK	74.0	-6.5	1.70 V	360	57.57	9.93
8	#5860.00	49.1 AV	54.0	-4.9	1.70 V	360	39.17	9.93
9	11550.00	57.7 PK	74.0	-16.3	1.59 V	96	42.61	15.09
10	11550.00	42.0 AV	54.0	-12.0	1.59 V	96	26.91	15.09
11	#17325.00	53.8 PK	74.0	-20.2	1.22 V	222	30.42	23.38
12	#17325.00	40.1 AV	54.0	-13.9	1.22 V	222	16.72	23.38

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.
6. " # ": The radiated frequency is out of the restricted band.

Below 1GHz Data

Beamforming Mode

802.11ac (VHT20)

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	Below 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	112.01	20.9 QP	43.5	-22.6	1.50 H	360	36.66	-15.72
2	169.92	24.8 QP	43.5	-18.7	2.00 H	56	38.29	-13.45
3	228.85	29.0 QP	46.0	-17.1	1.00 H	266	44.51	-15.56
4	271.68	34.3 QP	46.0	-11.7	1.00 H	1	47.38	-13.04
5	311.64	37.2 QP	46.0	-8.9	1.00 H	360	48.58	-11.43
6	338.99	34.8 QP	46.0	-11.2	1.00 H	32	45.58	-10.78
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	226.18	23.5 QP	46.0	-22.5	1.00 V	322	39.38	-15.89
2	269.15	29.6 QP	46.0	-16.4	1.50 V	317	42.81	-13.17
3	310.96	28.6 QP	46.0	-17.4	1.50 V	53	40.03	-11.46
4	370.95	29.6 QP	46.0	-16.4	1.50 V	1	39.85	-10.28
5	414.80	29.8 QP	46.0	-16.2	1.50 V	1	38.99	-9.16
6	570.19	26.0 QP	46.0	-20.0	1.50 V	311	31.90	-5.88

REMARKS:

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

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	100287	Apr. 17, 2015	Apr. 16, 2016
Line-Impedance Stabilization Network (for EUT) SCHWARZBECK	NSLK-8127	8127-523	Sep. 29, 2014	Sep. 28, 2015
RF Cable	5D-FB	COACAB-001	May 25, 2015	May 24, 2016
50 ohms Terminator	50	3	Oct. 17, 2014	Oct. 16, 2015
50 ohms Terminator	N/A	EMC-04	Oct. 21, 2014	Oct. 20, 2015
Software BVADT	BVADT_Cond_ V7.3.7.3	NA	NA	NA
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100071	Nov. 10, 2014	Nov. 09, 2015

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. A.
3 The VCCI Con A Registration No. is C-817.
4. Tested Date: Aug. 06, 2015

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.

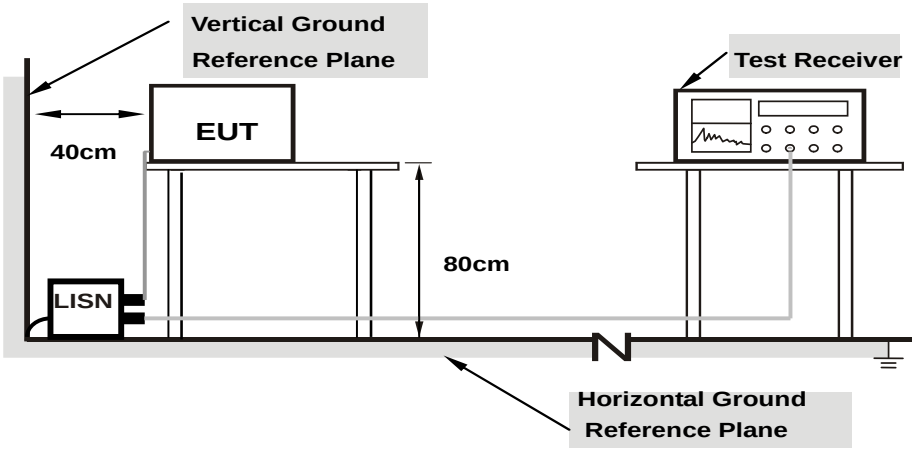
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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 (Mode 2)

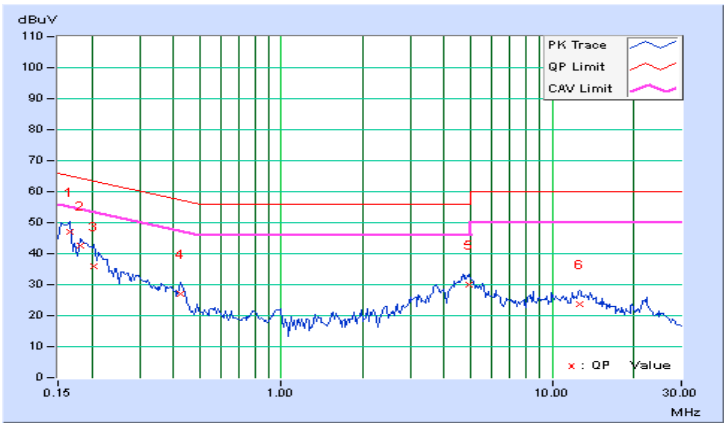
Beamforming Mode

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

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16562	0.10	47.12	32.68	47.22	32.78	65.18	55.18	-17.96	-22.40
2	0.18125	0.10	42.54	25.28	42.64	25.38	64.43	54.43	-21.79	-29.05
3	0.20469	0.10	35.92	16.46	36.02	16.56	63.42	53.42	-27.40	-36.86
4	0.42344	0.16	26.98	17.58	27.14	17.74	57.38	47.38	-30.24	-29.64
5	4.91797	0.37	29.62	23.64	29.99	24.01	56.00	46.00	-26.01	-21.99
6	12.59766	0.60	23.20	17.16	23.80	17.76	60.00	50.00	-36.20	-32.24

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

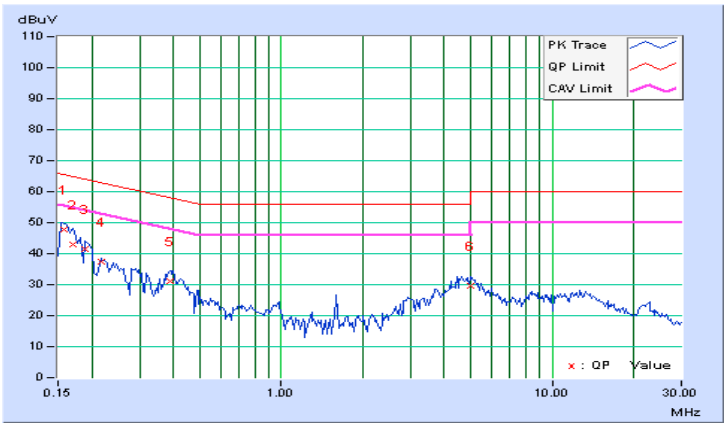


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15781	0.09	47.64	34.96	47.73	35.05	65.58	55.58	-17.85	-20.53
2	0.16953	0.09	42.96	26.72	43.05	26.81	64.98	54.98	-21.93	-28.17
3	0.18906	0.10	41.46	27.52	41.56	27.62	64.08	54.08	-22.52	-26.46
4	0.21641	0.10	37.38	21.64	37.48	21.74	62.96	52.96	-25.47	-31.21
5	0.38828	0.15	31.14	22.76	31.29	22.91	58.10	48.10	-26.81	-25.19
6	5.00781	0.34	29.30	23.34	29.64	23.68	60.00	50.00	-30.36	-26.32

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



4.2.8 Test Results (Mode 3)

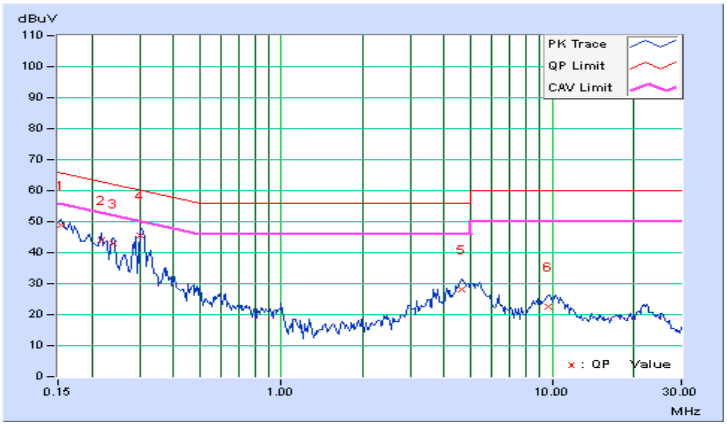
Beamforming Mode

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

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	0.10	48.64	37.18	48.74	37.28	65.79	55.79	-17.05	-18.51
2	0.21641	0.10	44.10	37.84	44.20	37.94	62.96	52.96	-18.75	-15.01
3	0.23984	0.11	42.84	36.56	42.95	36.67	62.10	52.10	-19.15	-15.43
4	0.30234	0.13	45.48	39.96	45.61	40.09	60.18	50.18	-14.57	-10.09
5	4.64844	0.36	27.66	21.56	28.02	21.92	56.00	46.00	-27.98	-24.08
6	9.62500	0.53	22.22	16.90	22.75	17.43	60.00	50.00	-37.25	-32.57

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

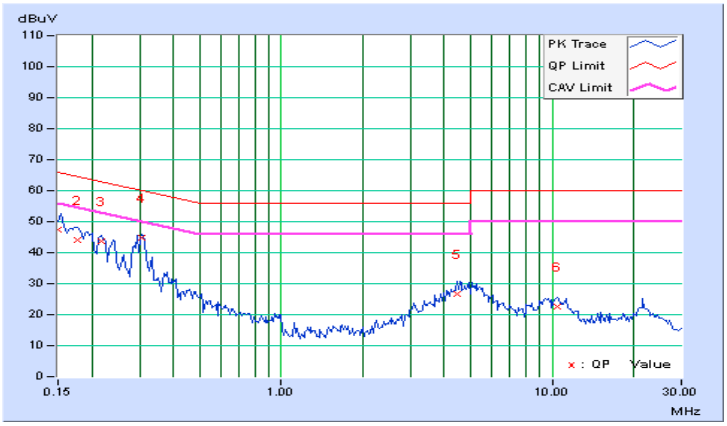


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.08	47.28	37.76	47.36	37.84	66.00	56.00	-18.64	-18.16
2	0.17734	0.09	43.88	33.90	43.97	33.99	64.61	54.61	-20.64	-20.62
3	0.21641	0.10	43.68	36.94	43.78	37.04	62.96	52.96	-19.17	-15.91
4	**0.30625**	**0.13**	**44.64**	**41.50**	**44.77**	**41.63**	**60.07**	**50.07**	**-15.31**	**-8.45**
5	4.45313	0.33	26.52	20.66	26.85	20.99	56.00	46.00	-29.15	-25.01
6	10.39063	0.52	22.06	17.06	22.58	17.58	60.00	50.00	-37.42	-32.42

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



4.2.9 Test Results (Mode 4)

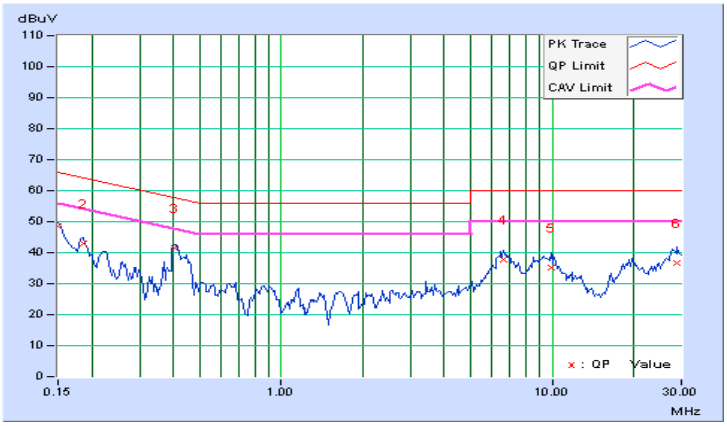
Beamforming Mode

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

Phase Of Power : Line (L)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.10	48.50	40.86	48.60	40.96	66.00	56.00	-17.40	-15.04
2	0.18516	0.10	43.04	35.80	43.14	35.90	64.25	54.25	-21.11	-18.35
3	0.40391	0.16	41.24	35.96	41.40	36.12	57.77	47.77	-16.37	-11.65
4	6.65234	0.43	37.38	31.58	37.81	32.01	60.00	50.00	-22.19	-17.99
5	9.95703	0.54	34.72	28.94	35.26	29.48	60.00	50.00	-24.74	-20.52
6	28.87500	0.91	35.76	29.90	36.67	30.81	60.00	50.00	-23.33	-19.19

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

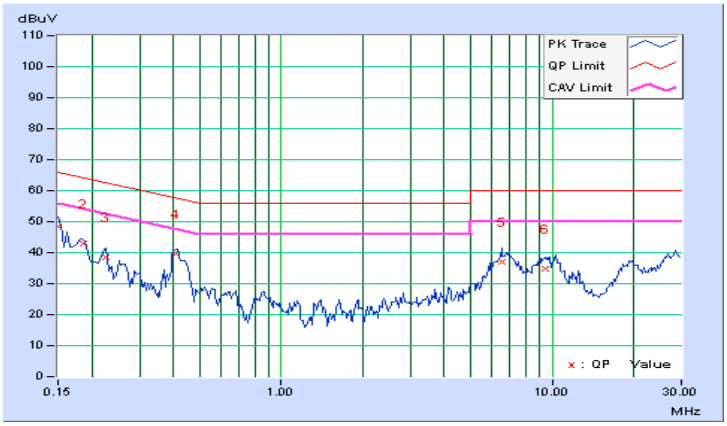


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

Phase Of Power : Neutral (N)										
No	Frequency (MHz)	Correction Factor (dB)	Reading Value (dBuV)		Emission Level (dBuV)		Limit (dBuV)		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	0.08	48.52	40.06	48.60	40.14	66.00	56.00	-17.40	-15.86
2	0.18516	0.10	42.96	34.96	43.06	35.06	64.25	54.25	-21.20	-19.20
3	0.22422	0.11	38.32	29.86	38.43	29.97	62.66	52.66	-24.24	-22.70
4	0.40781	0.15	39.46	34.50	39.61	34.65	57.69	47.69	-18.08	-13.04
5	6.50391	0.39	36.68	30.92	37.07	31.31	60.00	50.00	-22.93	-18.69
6	9.41406	0.49	34.34	28.68	34.83	29.17	60.00	50.00	-25.17	-20.83

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)

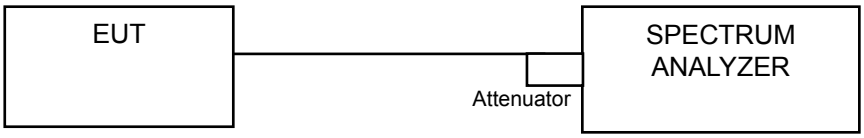
*B is the 26 dB emission bandwidth in megahertz

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



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating 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:

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
802.11a							
36	5180	13.12	14.62	49.485	16.94	30	Pass
40	5200	13.15	14.78	50.715	17.05	30	Pass
48	5240	13.46	14.81	52.451	17.20	30	Pass
149	5745	14.75	16.31	72.61	18.61	30	Pass
157	5785	18.86	20.30	184.065	22.65	30	Pass
165	5825	16.44	17.70	102.939	20.13	30	Pass
802.11ac (VHT20)							
36	5180	13.32	14.96	52.811	17.23	30	Pass
40	5200	13.11	14.87	51.154	17.09	30	Pass
48	5240	13.10	14.96	51.75	17.14	30	Pass
802.11ac (VHT40)							
38	5190	13.11	14.23	46.949	16.72	30	Pass
46	5230	14.64	16.18	70.602	18.49	30	Pass
802.11ac (VHT80)							
42	5210	12.06	13.88	40.503	16.07	30	Pass

Beamforming Mode

Chan.	Chan. Freq. (MHz)	Maximum Conducted Power (dBm)		Total Power (mW)	Total Power (dBm)	Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
802.11ac (VHT20)							
36	5180	11.66	13.18	35.452	15.50	26.99	Pass
40	5200	11.78	13.06	35.296	15.48	26.99	Pass
48	5240	11.72	13.14	35.465	15.50	26.99	Pass
149	5745	13.76	15.09	56.053	17.49	26.99	Pass
157	5785	20.13	21.46	242.998	23.86	26.99	Pass
165	5825	16.84	17.58	105.586	20.24	26.99	Pass
802.11ac (VHT40)							
38	5190	12.24	13.88	41.183	16.15	26.99	Pass
46	5230	12.38	13.76	41.066	16.13	26.99	Pass
151	5755	13.53	14.87	53.232	17.26	26.99	Pass
159	5795	17.32	18.56	125.73	20.99	26.99	Pass
802.11ac (VHT80)							
42	5210	12.06	13.88	40.503	16.07	26.99	Pass
155	5775	13.27	14.36	48.522	16.86	26.99	Pass

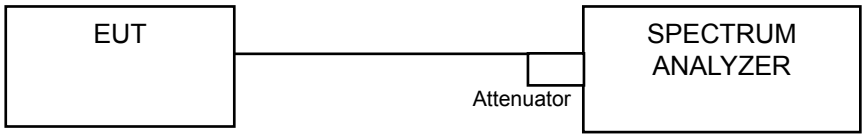
Note: 1. Directional gain = 6dBi + 10log(2) = 9.01dBi > 6dBi, so the power limit shall be reduced to 30-(9.01-6) = 26.99dBm.

4.4 Peak Power Spectral Density Measurement

4.4.1 Limits of Peak Power Spectral Density Measurement

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

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedure

802.11a & 802.11ac (VH20)

For U-NII-1 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

For U-NII-3 band:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300kHz)
5. Sweep time = auto, trigger set to “free run”.
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value

802.11ac (VHT40) & 802.11ac (VHT80)

For U-NII-1 band:

Using method SA-2

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1 MHz, Set VBW ≥ 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 and add 10 log (1/duty cycle)

For U-NII-3 band:

1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS
3. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.
4. Scale the observed power level to an equivalent value in 500 kHz by adjusting (reducing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz/300kHz)
5. Sweep time = auto, trigger set to “free run”.
6. Trace average at least 100 traces in power averaging mode.
7. Record the max value and add 10 log (1/duty cycle)

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Condition

Same as Item 4.3.6.

4.4.7 Test Results

For U-NII-1 Band

CDD Mode

Chan.	Chan. Freq. (MHz)	PSD (dBm)		Total Power Density (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1			
802.11a						
36	5180	-0.79	-0.83	2.20	13.99	Pass
40	5200	-0.61	-0.44	2.49	13.99	Pass
48	5240	-0.17	-0.10	2.88	13.99	Pass
802.11ac (VHT20)						
36	5180	-1.34	-1.22	1.73	13.99	Pass
40	5200	-0.93	-0.92	2.09	13.99	Pass
48	5240	-0.53	-0.59	2.45	13.99	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.

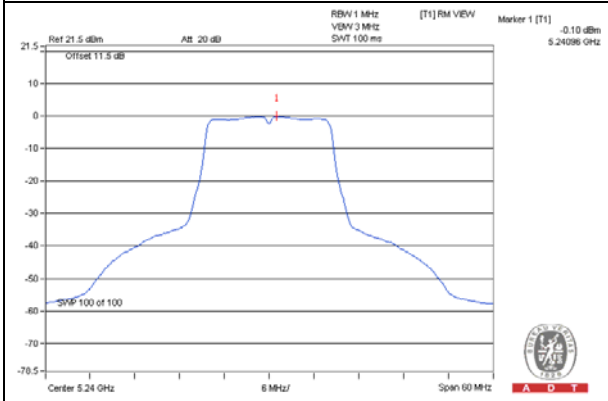
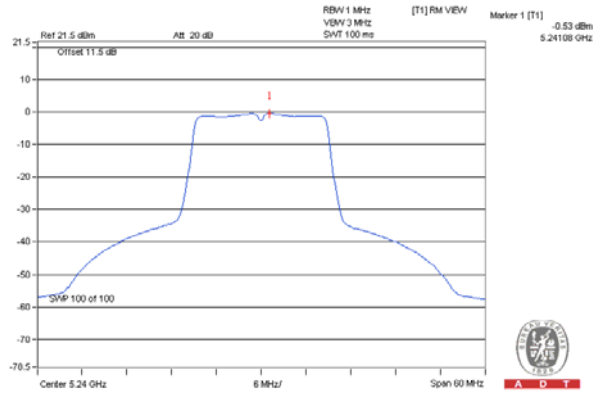
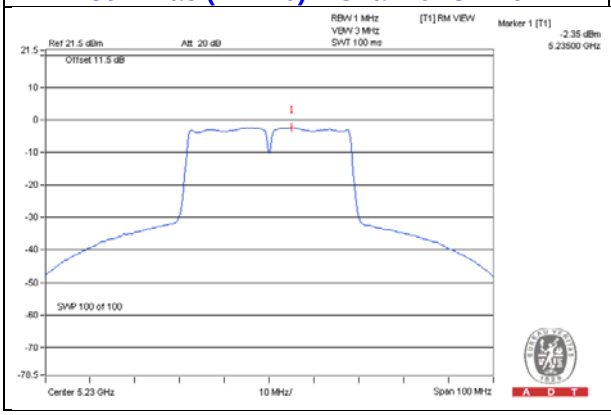
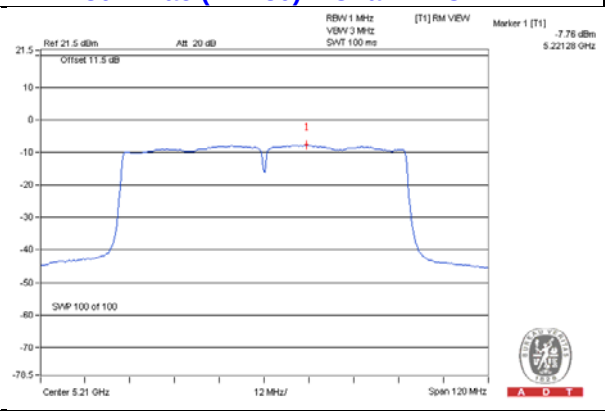
2. Directional gain = 6dBi + 10log(2) = 9.01dBi > 6dBi , so the power density limit shall be reduced to 17-(9.01-6) = 13.99dBm.

Chan.	Chan. Freq. (MHz)	PSD w/o duty factor (dBm)		Duty Factor (dB)	Total PSD with Duty Factor (dBm)	MAX. Limit (dBm)	Pass / Fail
		Chain 0	Chain 1				
802.11ac (VHT40)							
38	5190	-4.22	-4.26	0.15	-1.08	13.99	Pass
46	5230	-2.35	-2.45	0.15	0.76	13.99	Pass
802.11ac (VHT80)							
42	5210	-7.83	-7.76	0.27	-4.52	13.99	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. Directional gain = 6dBi + 10log(2) = 9.01dBi > 6dBi , so the power density limit shall be reduced to 17-(9.01-6) = 13.99dBm.

3. Refer to section 3.3 for duty cycle spectrum plot.

SPECTRUM PLOT OF WORST VALUE	
802.11a – Chain 1: CH 48	**802.11ac (VHT20) – Chain 0: CH 48**
	
802.11ac (VHT40) – Chain 0: CH 46	**802.11ac (VHT80) – Chain 1: CH 42**
	

For U-NII-3 Band

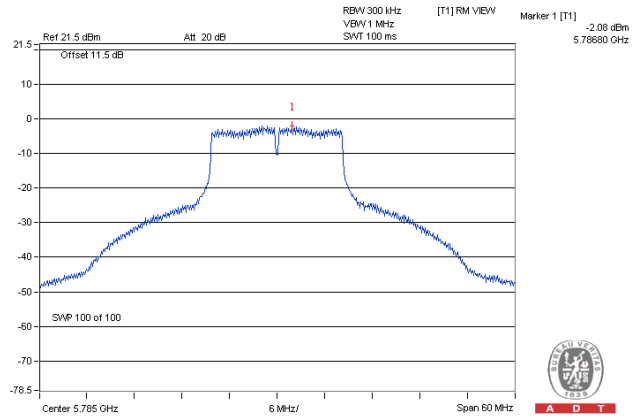
CDD Mode

TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
802.11a								
0	149	5745	-6.43	-4.21	3.01	-1.20	26.99	Pass
	157	5785	-2.31	-0.09	3.01	2.92	26.99	Pass
	165	5825	-4.95	-2.73	3.01	0.28	26.99	Pass
1	149	5745	-6.01	-3.79	3.01	-0.78	26.99	Pass
	157	5785	-2.08	0.14	3.01	3.15	26.99	Pass
	165	5825	-4.39	-2.17	3.01	0.84	26.99	Pass

Note: 1. Directional gain = 6dBi + 10log(2) = 9.01dBi > 6dBi , so the power density limit shall be reduced to 30-(9.01-6) = 26.99dBm.

Spectrum Plot of Worst Value

802.11a – Chain 1: CH 157



Beamforming Mode

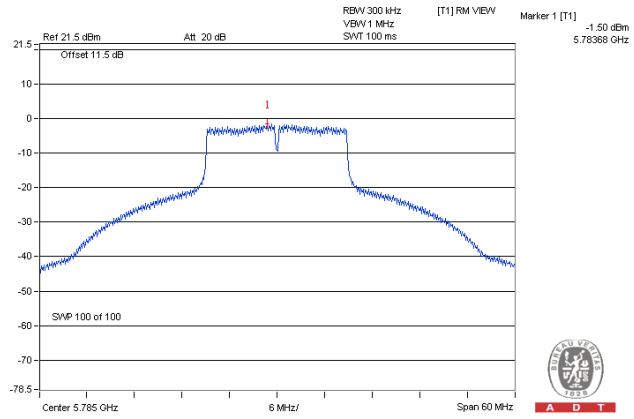
TX chain	Channel	Freq. (MHz)	PSD (dBm/300kHz)	PSD (dBm/500kHz)	10 log (N=2) dB	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
802.11ac (VHT20)								
0	149	5745	-8.05	-5.83	3.01	-2.82	26.99	Pass
	157	5785	-1.63	0.59	3.01	3.60	26.99	Pass
	165	5825	-5.57	-3.35	3.01	-0.34	26.99	Pass
1	149	5745	-7.67	-5.45	3.01	-2.44	26.99	Pass
	157	5785	-1.50	0.72	3.01	3.73	26.99	Pass
	165	5825	-5.17	-2.95	3.01	0.06	26.99	Pass

TX chain	Chan.	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=2) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass /Fail
			(dBm/300kHz)	(dBm/500kHz)					
802.11ac (VHT40)									
0	151	5755	-11.37	-9.15	3.01	0.15	-5.99	26.99	Pass
	159	5795	-7.50	-5.28	3.01	0.15	-2.12	26.99	Pass
1	151	5755	-11.10	-8.88	3.01	0.15	-5.72	26.99	Pass
	159	5795	-7.24	-5.02	3.01	0.15	-1.86	26.99	Pass
802.11ac (VHT80)									
0	155	5775	-14.53	-12.31	3.01	0.27	-9.03	26.99	Pass
1	155	5775	-14.57	-12.35	3.01	0.27	-9.07	26.99	Pass

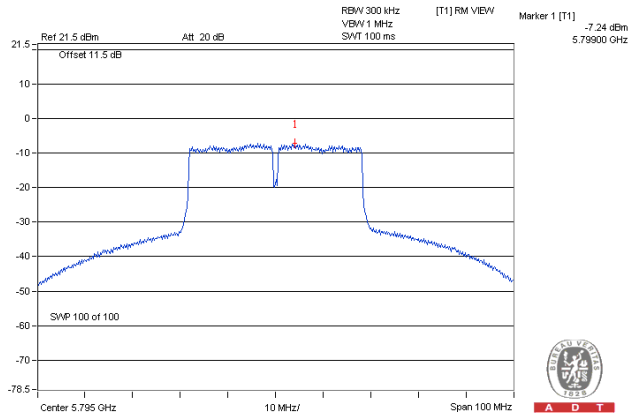
Note:
1. Directional gain = 6dBi + 10log(2) = 9.01dBi > 6dBi , so the power density limit shall be reduced to 30-(9.01-6) = 26.99dBm.
2. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

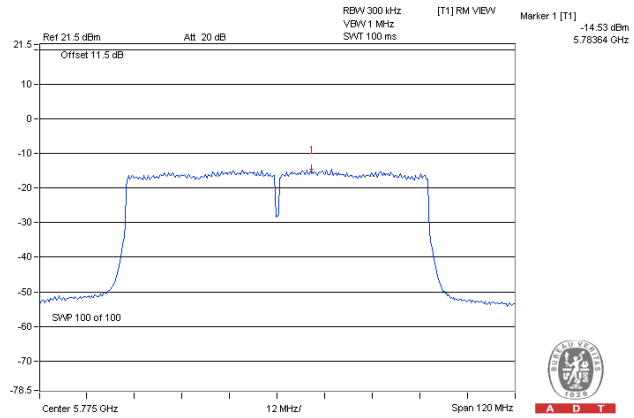
802.11ac (VHT20) – Chain 1: CH 157



802.11ac (VHT40) – Chain 1: CH 159



802.11ac (VHT80) – Chain 0: CH 155

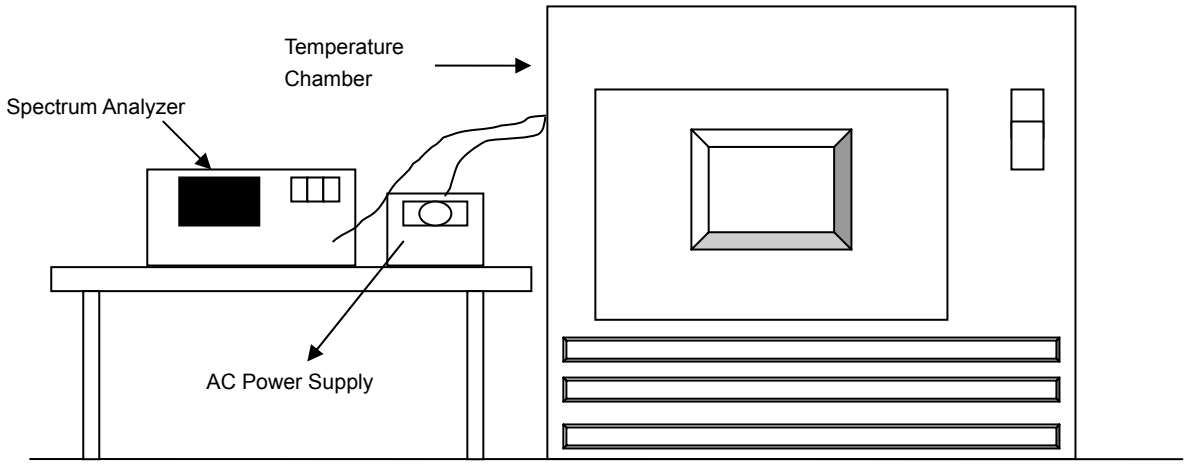


4.5 Frequency Stability Measurement

4.5.1 Limits of Frequency Stability Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedure

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.
.

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

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

4.5.7 Test Results

FREQUEMCY STABILITY VERSUS TEMP.									
OPERATING FREQUENCY: 5180MHz									
TEMP. (℃)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	120	5180.0078	0.00015	5180.0073	0.00014	5180.0038	0.00007	5180.0069	0.00013
40	120	5179.9758	-0.00047	5179.9785	-0.00042	5179.9741	-0.00050	5179.9755	-0.00047
30	120	5180.0024	0.00005	5180.0018	0.00003	5180.0035	0.00007	5179.9998	0.00000
20	120	5180.0136	0.00026	5180.0136	0.00026	5180.0105	0.00020	5180.0109	0.00021
10	120	5179.9751	-0.00048	5179.9764	-0.00046	5179.9754	-0.00047	5179.973	-0.00052
0	120	5180.0121	0.00023	5180.0101	0.00019	5180.0116	0.00022	5180.01	0.00019
-10	120	5180.0226	0.00044	5180.0226	0.00044	5180.0247	0.00048	5180.0238	0.00046
-20	120	5179.9944	-0.00011	5179.993	-0.00014	5179.9921	-0.00015	5179.991	-0.00017
-30	120	5180.015	0.00029	5180.0166	0.00032	5180.0145	0.00028	5180.0157	0.00030

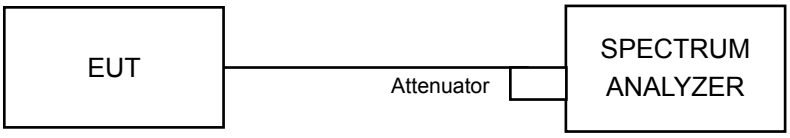
FREQUEMCY STABILITY VERSUS VOLTAGE									
OPERATING FREQUENCY: 5180MHz									
TEMP. (℃)	POWER SUPPLY (Vac)	0 MINUTE		2 MINUTE		5 MINUTE		10 MINUTE	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5180.0142	0.00027	5180.0144	0.00028	5180.0095	0.00018	5180.0107	0.00021
	120	5180.0136	0.00026	5180.0136	0.00026	5180.0105	0.00020	5180.0109	0.00021
	102	5180.014	0.00027	5180.0132	0.00025	5180.0102	0.00020	5180.0115	0.00022

4.6 6dB Bandwidth Measurment

4.6.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

MEASUREMENT PROCEDURE REF

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

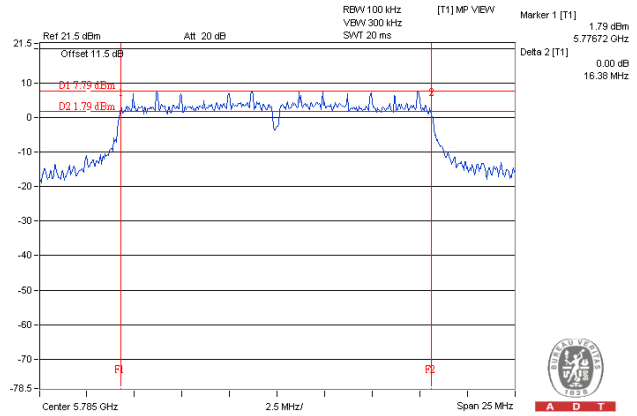
4.6.7 Test Results

CDD Mode

Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
802.11a					
149	5745	16.41	16.42	0.5	Pass
157	5785	16.38	16.43	0.5	Pass
165	5825	16.40	16.42	0.5	Pass

SPECTRUM PLOT OF WORST VALUE

802.11a – Chain 0: CH 157

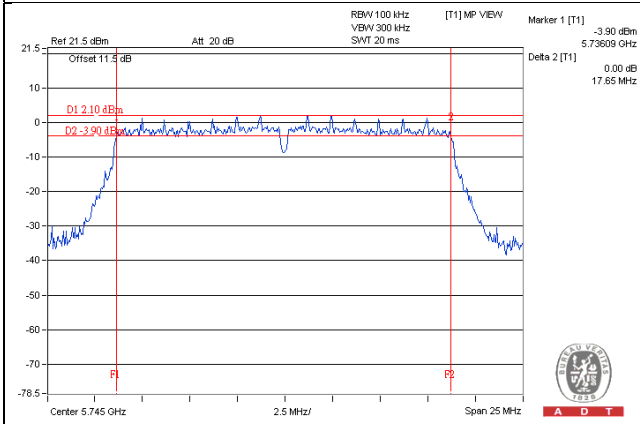


Beamforming Mode

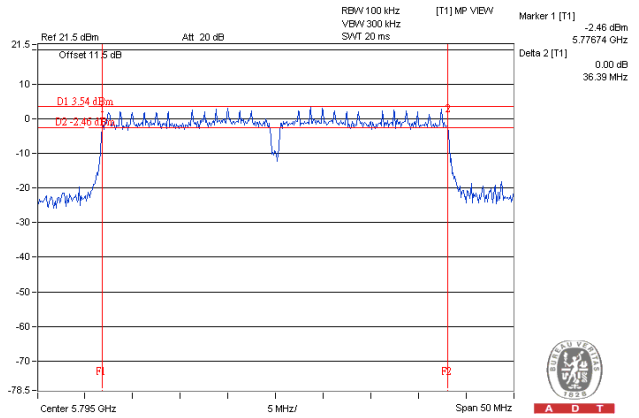
Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1		
802.11ac (VHT20)					
149	5745	17.65	17.66	0.5	Pass
157	5785	17.66	17.66	0.5	Pass
165	5825	17.68	17.68	0.5	Pass
802.11ac (VHT40)					
151	5755	36.41	36.46	0.5	Pass
159	5795	36.39	36.46	0.5	Pass
802.11ac (VHT80)					
155	5775	75.70	76.43	0.5	Pass

SPECTRUM PLOT OF WORST VALUE

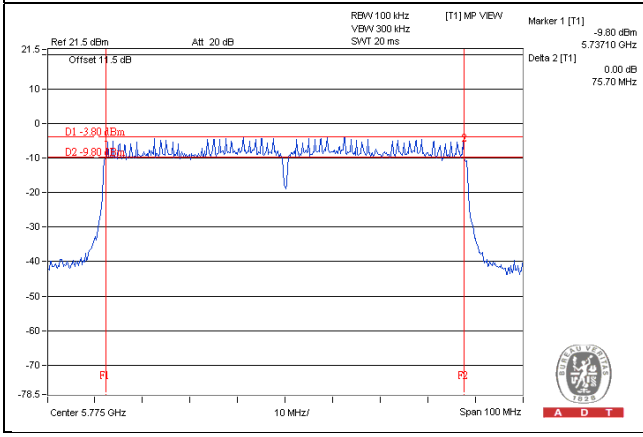
802.11ac (VHT20) – Chain 0: CH149



802.11ac (VHT40) – Chain 0: CH159



802.11ac (VHT80) – Chain 0: CH155



5 Pictures of Test Arrangements

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

Appendix – Information on the Testing Laboratories

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

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

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

Hsin Chu EMC/RF Lab/Telecom Lab
Tel: 886-3-5935343
Fax: 886-3-5935342

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

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