

FCC Test Report

Report No.: RF190530C17B-1

FCC ID: H8NCDR8011

Test Model: CDR8010-DBB1

Series Model: CDR8011-DBA1, CDR8011-DDA1, CDR8011-DDB1, CDR8011-SBA1, CDR8011-SBB1, CDR8011-SDA1, CDR8011-SDB1 (refer to item 3.1 for more details)

Received Date: Feb. 25, 2019

Test Date: Apr. 17 ~ Aug. 28, 2019

Issued Date: Sep. 02, 2019

Applicant: ASKEY COMPUTER CORP.

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**FCC Registration /
Designation Number:** 788550 / TW0003



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Release Control Record

Issue No.	Description	Date Issued
RF190530C17B-1	Original release	Sep. 02, 2019

1 Certificate of Conformity

Product: iDVR800

Brand: ASKEY

Test Model: CDR8010-DBB1

Series Model: CDR8011-DBA1, CDR8011-DDA1, CDR8011-DDB1, CDR8011-SBA1, CDR8011-SBB1, CDR8011-SDA1, CDR8011-SDB1 (refer to item 3.1 for more details)

Sample Status: Engineering sample

Applicant: ASKEY COMPUTER CORP.

Test Date: Apr. 17 ~ Aug. 28, 2019

Standards: 47 CFR FCC Part 15, Subpart E (Section 15.407)
ANSI C63.10:2013

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

Prepared by : Pettie Chen , **Date:** Sep. 02, 2019
Pettie Chen / Senior Specialist

Approved by : Bruce Chen , **Date:** Sep. 02, 2019
Bruce Chen / Senior Project Engineer

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	NA	EUT is powered from DC
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -0.8dB at 5350.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(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 I-PEX not a standard connector.

Note:

- Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (\pm)
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	30MHz ~ 200MHz	3.59 dB
	200MHz ~ 1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	iDVR800
Brand	ASKEY
Test Model	CDR8010-DBB1
Series Model	CDR8011-DBA1, CDR8011-DDA1, CDR8011-DDB1, CDR8011-SBA1, CDR8011-SBB1, CDR8011-SDA1, CDR8011-SDB1
Model Difference	Refer to Note
Sample Status	Engineering Sample
Power Supply Rating	12Vdc / 24Vdc (Car Charger) 3.7Vdc (Battery)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n: up to 150Mbps 802.11ac: up to 433.3Mbps
Operating Frequency	5180 ~ 5240MHz, 5260 ~ 5320MHz, 5500 ~ 5700MHz, 5745 ~ 5825MHz
Number of Channel	5180 ~ 5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5260 ~ 5320MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5500 ~ 5700MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 11 802.11n (HT40), 802.11ac (VHT40): 5 802.11ac (VHT80): 2 5745 ~ 5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1
Output Power	5180 ~ 5240MHz: For Outdoor Access Point: 53.703mW For Client device: 87.297mW 5260 ~ 5320MHz: 100.925mW 5500 ~ 5700MHz: 104.472mW 5745 ~ 5825MHz: 115.080mW
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	Car charger, SD Card
Cable Supplied	NA

Note:

1. All models are listed as below. Model CDR8010-DBB1 is the representative for final test.

Model	PCB	Camera	NFC	Fan	eSIM	RAM
CDR8010-DBB1	Same PCB	Dual	Yes	Yes	N/A	3GB
CDR8011-DBA1			Yes	Yes		N/A
CDR8011-DDA1			Yes	No		N/A
CDR8011-DDB1			Yes	No		3GB
CDR8011-SBA1		Single	Yes	Yes		N/A
CDR8011-SBB1			Yes	Yes		3GB
CDR8011-SDA1			Yes	No		N/A
CDR8011-SDB1			Yes	No		3GB

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

Modulation Mode	TX Function
802.11a	1TX
802.11n (HT20)	1TX
802.11n (HT40)	1TX
802.11ac (VHT20)	1TX
802.11ac (VHT40)	1TX
802.11ac (VHT80)	1TX

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

3. The following antennas were provided to the EUT.

Antenna Type	PIFA					
Connector Type	I-PEX					
Brand	WHAYU					
Model	C407-510916-A					
Antenna gain (dBi)						
2400MHz	2450MHz	2500MHz	5150MHz	5350MHz	5725MHz	5825MHz
1.32	-0.68	-0.46	3.39	-0.04	3.44	2.40

4. The EUT is powered by the following car charger and battery.

Car charger	
Brand	Sunny
Model	SYD1202-1005
Input Power	12Vdc / 24Vdc, 1.5A
Output Power	5Vdc, 2.1A
Power Line	5.1m cable with USB Type C connector

Battery	
Brand	FUJI ELECTRONICS(SHENZHEN)CO., LTD
Model	ICP463048XS
Rating	3.7Vdc, 750mA

5. Spurious emission of the simultaneous operation (WWAN+WLAN 2.4GHz, WWAN+WLAN 5.0GHz, WWAN+BT) have been evaluated and no non-compliance was found.

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	5210 MHz

For 5260 ~ 5320MHz:

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
58	5290 MHz

For 5500 ~ 5700MHz:

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

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

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

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

2 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	122	5610 MHz

For 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775 MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT Configure Mode	Applicable to				Description
	RE \geq 1G	RE<1G	PLC	APCM	
-	√	√	NOTE 2	√	-

Where RE \geq 1G: Radiated Emission above 1GHz & Bandedge Measurement
 RE<1G: Radiated Emission below 1GHz
 PLC: Power Line Conducted Emission
 APCM: Antenna Port Conducted Measurement

Note:

1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on Z-plane.
2. No need to concern of PLC due to the EUT is powered from DC.

Radiated Emission Test (Above 1GHz):

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11n (HT40)		38 to 46	38, 46	OFDM	13.5
	802.11ac (VHT80)		42	42	OFDM	29.3
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	6.5
	802.11n (HT40)		54 to 62	54, 62	OFDM	13.5
	802.11ac (VHT80)		58	58	OFDM	29.3
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	6.5
	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	13.5
	802.11ac (VHT80)		106 to 122	106, 122	OFDM	29.3
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11n (HT40)		151 to 159	151, 159	OFDM	13.5
	802.11ac (VHT80)		155	155	OFDM	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.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11n (HT40)	5180-5240	38 to 46	159	OFDM	13.5
	802.11n (HT40)	5260-5320	54 to 62		OFDM	13.5
	802.11n (HT40)	5500-5700	102 to 134		OFDM	13.5
	802.11n (HT40)	5745-5825	151 to 159		OFDM	13.5

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.

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	6.5
	802.11n (HT40)		38 to 46	38, 46	OFDM	13.5
	802.11ac (VHT80)		42	42	OFDM	29.3
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0
	802.11n (HT20)		52 to 64	52, 60, 64	OFDM	6.5
	802.11n (HT40)		54 to 62	54, 62	OFDM	13.5
	802.11ac (VHT80)		58	58	OFDM	29.3
-	802.11a	5500-5700	100 to 140	100, 116, 140	OFDM	6.0
	802.11n (HT20)		100 to 140	100, 116, 140	OFDM	6.5
	802.11n (HT40)		102 to 134	102, 110, 134	OFDM	13.5
	802.11ac (VHT80)		106 to 122	106, 122	OFDM	29.3
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0
	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5
	802.11n (HT40)		151 to 159	151, 159	OFDM	13.5
	802.11ac (VHT80)		155	155	OFDM	29.3

Test Condition:

Applicable to	Environmental Conditions	Input Power	Tested by
RE≥1G	22 deg. C, 68% RH	3.7Vdc	Greg Lin
RE<1G	22 deg. C, 68% RH	3.7Vdc	Greg Lin
APCM	25 deg. C, 60% RH	3.7Vdc	Frank Liu

3.3 Duty Cycle of Test Signal

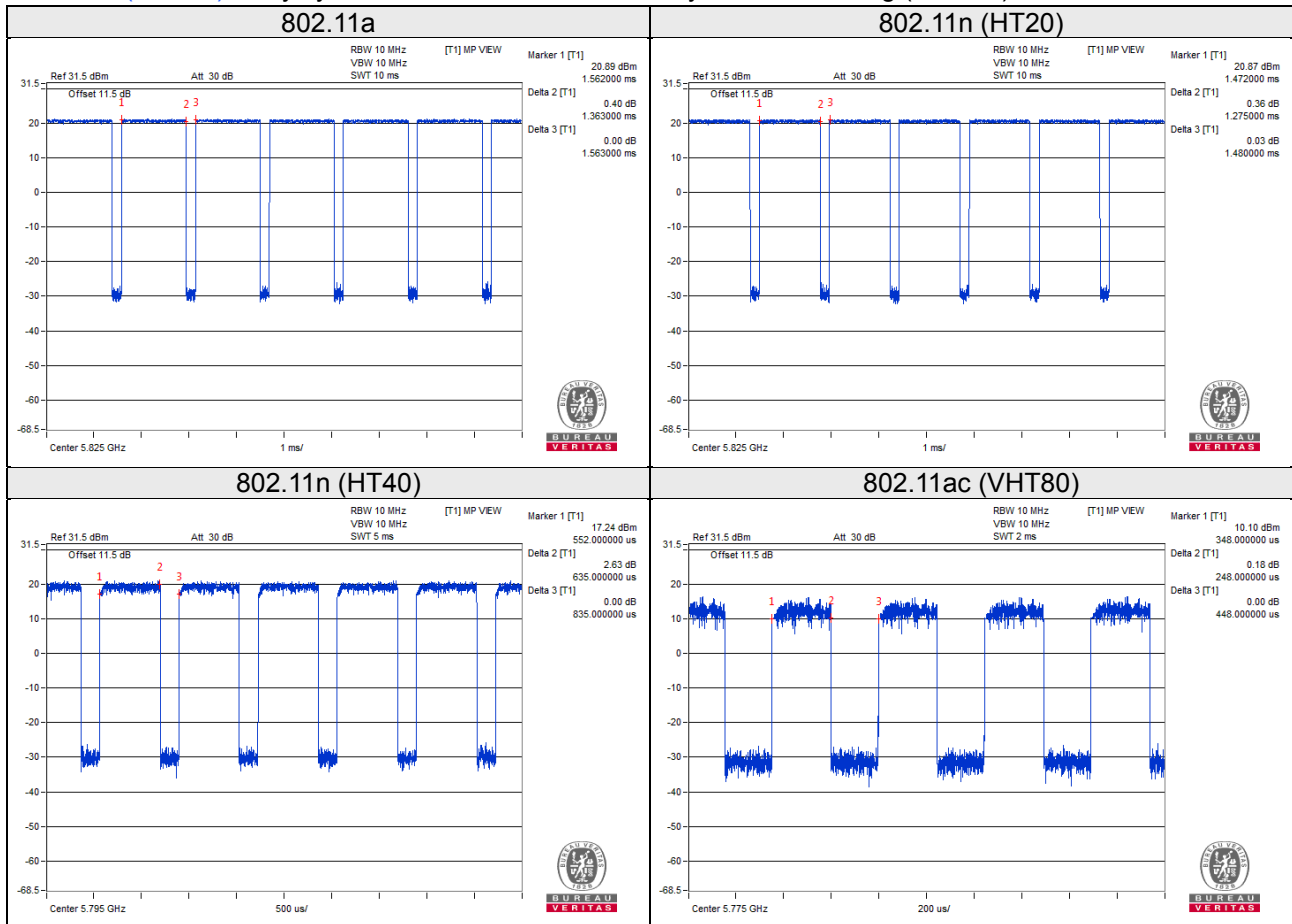
Duty cycle of test signal is < 98%, duty factor is required.

802.11a: Duty cycle = 1.363/1.563 = 0.872, Duty factor = $10 \cdot \log(1/0.872) = 0.59$

802.11n (HT20): Duty cycle = 1.275/1.48 = 0.861, Duty factor = $10 \cdot \log(1/0.861) = 0.65$

802.11n (HT40): Duty cycle = 0.635/0.835 = 0.760, Duty factor = $10 \cdot \log(1/0.760) = 1.19$

802.11ac (VHT80): Duty cycle = 0.248/0.448 = 0.554, Duty factor = $10 \cdot \log(1/0.554) = 2.57$



3.4 Description of Support Units

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

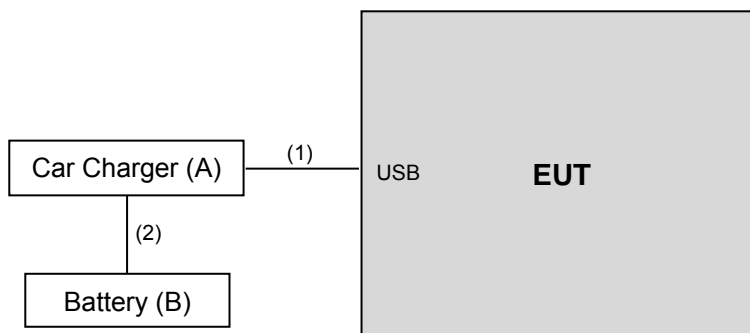
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Car Charger	Sunny	SYD1202-1005	NA	NA	Accessory of EUT
B.	Battery	YUASA	ST-CLN126-6S	NA	NA	-

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.	Type C to car charger	1	5.1	N	0	Accessory of EUT
2.	DC cable	1	1	N	0	-

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standards

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

FCC Part 15, Subpart E (15.407)

KDB 789033 D02 General UNII Test Procedure New Rules v02r01

KDB 662911 D01 Multiple Transmitter Output v02r01

ANSI C63.10:2013

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

Note:

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

Limits of unwanted emission out of the restricted bands

Applicable To		Limit	
789033 D02 General UNII Test Procedure New Rules v02r01		Field Strength at 3m	
		PK: 74 (dBµV/m)	AV: 54 (dBµV/m)
Frequency Band	Applicable To	EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)	PK: -27 (dBm/MHz)	PK: 68.2(dBµV/m)
5250~5350 MHz	15.407(b)(2)		
5470~5725 MHz	15.407(b)(3)		
5725~5850 MHz	<input checked="" type="checkbox"/> 15.407(b)(4)(i)	PK: -27 (dBm/MHz) ^{*1} PK: 10 (dBm/MHz) ^{*2} PK: 15.6 (dBm/MHz) ^{*3} PK: 27 (dBm/MHz) ^{*4}	PK: 68.2(dBµV/m) ^{*1} PK: 105.2 (dBµV/m) ^{*2} PK: 110.8(dBµV/m) ^{*3} PK: 122.2 (dBµV/m) ^{*4}
	<input type="checkbox"/> 15.407(b)(4)(ii)	Emission limits in section 15.247(d)	
*1 beyond 75 MHz or more above of the band edge.		*2 below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.	
*3 below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.		*4 from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.	

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Jan. 03, 2019	Jan. 02, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 25, 2018	Sep. 24, 2019
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Nov. 21, 2018	Nov. 20, 2019
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-1169	Nov. 25, 2018	Nov. 24, 2019
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 25, 2018	Nov. 24, 2019
Loop Antenna TESEQ	HLA 6121	45745	Jun. 14, 2018	Jun. 13, 2019
			Jul. 01, 2019	Jun. 30, 2020
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Aug. 08, 2018	Aug. 07, 2019
			Jul. 11, 2019	Jul. 10, 2020
Preamplifier Agilent (Above 1GHz)	8449B	3008A02367	Feb. 19, 2019	Feb. 18, 2020
RF signal cable HUBER+SUHNER&EMCI	SUCOFLEX 104 & EMC104-SM-SM8000	CABLE-CH9-02 (248780+171006)	Jan. 19, 2019	Jan. 18, 2020
RF signal cable HUBER+SUHNER	SUCOFLEX 104	CABLE-CH9-(250795/4)	Aug. 08, 2018	Aug. 07, 2019
			Jul. 11, 2019	Jul. 10, 2020
RF signal cable Woken	8D-FB	Cable-CH9-01	Jul. 31, 2018	Jul. 30, 2019
			Jul. 30, 2019	Jul. 29, 2020
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	NA	NA	NA
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower & Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Turn Table Controller BV ADT	SC100	SC93021705	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY551900 04/MY55190007/MY5521 0005	Jul. 17, 2018	Jul. 16, 2019
			Jul. 15, 2019	Jul. 14, 2020

- Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 9.

4.1.3 Test Procedures

For Radiated emission below 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

Note:

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

For Radiated emission above 30MHz

- a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.
- f. The test-receiver system was set to peak and average 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:

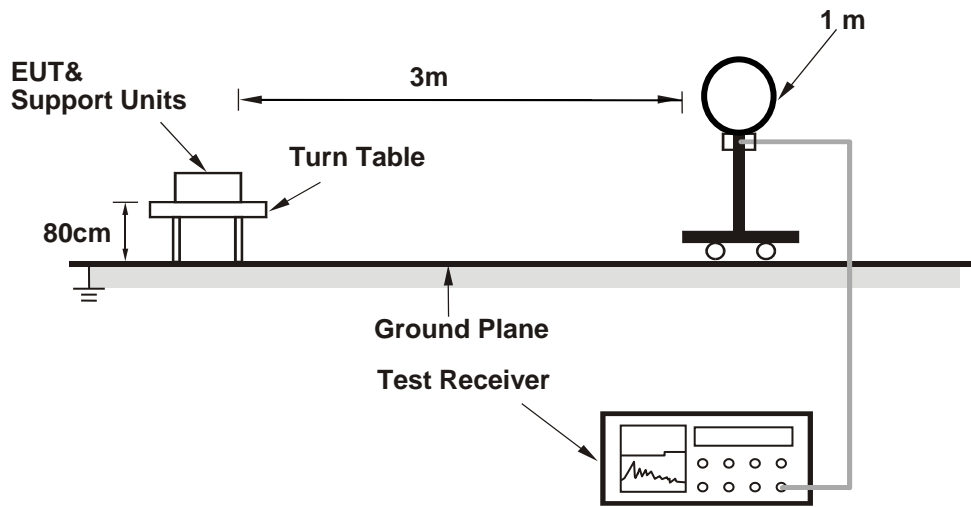
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
(802.11a: RBW = 1MHz, VBW = 1kHz; 802.11n (HT20): RBW = 1MHz, VBW = 1kHz;
802.11n (HT40): RBW = 1MHz, VBW = 3kHz; 802.11ac (VHT80): RBW = 1MHz, VBW = 10kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

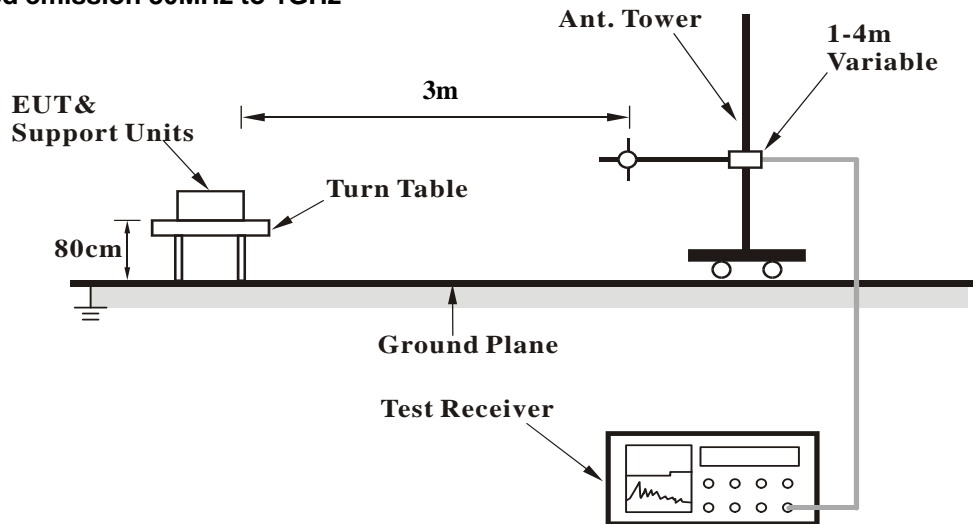
No deviation.

4.1.5 Test Setup

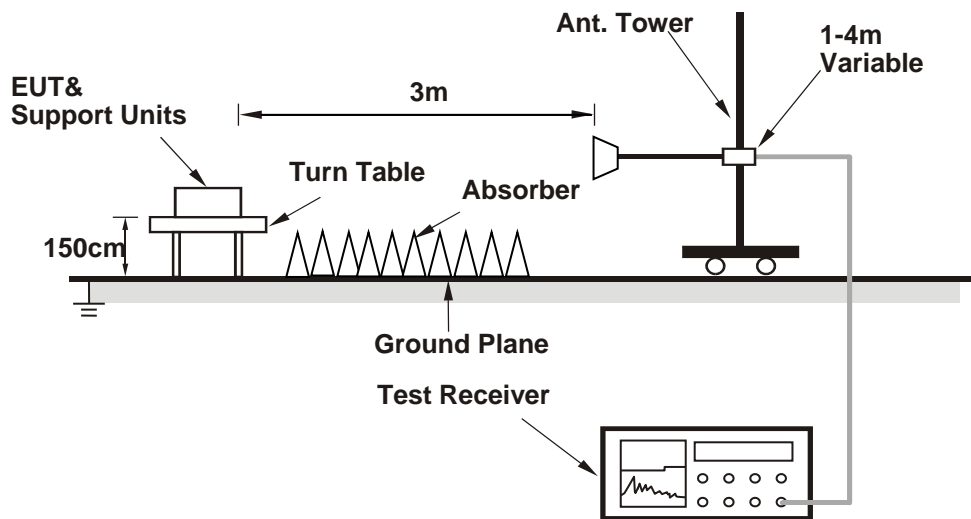
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

- a. Set the EUT under transmission condition continuously at specific channel frequency.

4.1.7 Test Results

Above 1GHz data:

802.11a

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	71.2 PK	74.0	-2.8	1.57 H	184	67.7	3.5
2	5150.00	51.6 AV	54.0	-2.4	1.57 H	184	48.1	3.5
3	*5180.00	106.6 PK			1.49 H	176	68.6	38.0
4	*5180.00	96.2 AV			1.49 H	176	58.2	38.0
5	#10360.00	55.4 PK	68.2	-12.8	1.09 H	216	39.8	15.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	72.4 PK	74.0	-1.6	1.03 V	153	68.9	3.5
2	5150.00	52.7 AV	54.0	-1.3	1.03 V	153	49.2	3.5
3	*5180.00	108.5 PK			1.17 V	139	70.5	38.0
4	*5180.00	98.1 AV			1.17 V	139	60.1	38.0
5	#10360.00	55.9 PK	68.2	-12.3	2.64 V	125	40.3	15.6

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	71.9 PK	74.0	-2.1	1.63 H	181	68.4	3.5
2	5150.00	51.7 AV	54.0	-2.3	1.63 H	181	48.2	3.5
3	*5200.00	108.9 PK			1.52 H	173	71.0	37.9
4	*5200.00	98.0 AV			1.52 H	173	60.1	37.9
5	#10400.00	55.8 PK	68.2	-12.4	1.02 H	210	40.2	15.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	73.1 PK	74.0	-0.9	1.52 V	154	69.6	3.5
2	5150.00	53.0 AV	54.0	-1.0	1.52 V	154	49.5	3.5
3	*5200.00	110.2 PK			1.00 V	154	72.3	37.9
4	*5200.00	99.3 AV			1.00 V	154	61.4	37.9
5	#10400.00	56.3 PK	68.2	-11.9	1.58 V	119	40.7	15.6

Remarks:

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

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	108.8 PK			1.43 H	172	71.1	37.7
2	*5240.00	98.3 AV			1.43 H	172	60.6	37.7
3	5350.00	53.6 PK	74.0	-20.4	1.52 H	181	50.2	3.4
4	5350.00	42.0 AV	54.0	-12.0	1.52 H	181	38.6	3.4
5	#10480.00	55.5 PK	68.2	-12.7	1.13 H	208	40.1	15.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	110.0 PK			1.05 V	154	72.3	37.7
2	*5240.00	99.6 AV			1.05 V	154	61.9	37.7
3	5350.00	54.2 PK	74.0	-19.8	1.13 V	162	50.8	3.4
4	5350.00	42.8 AV	54.0	-11.2	1.13 V	162	39.4	3.4
5	#10480.00	56.1 PK	68.2	-12.1	1.62 V	124	40.7	15.4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.8 PK	74.0	-20.2	1.43 H	166	50.3	3.5
2	5150.00	42.7 AV	54.0	-11.3	1.43 H	166	39.2	3.5
3	*5260.00	109.2 PK			1.37 H	171	71.6	37.6
4	*5260.00	98.2 AV			1.37 H	171	60.6	37.6
5	#10520.00	55.7 PK	68.2	-12.5	1.20 H	215	40.4	15.3

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	54.7 PK	74.0	-19.3	1.13 V	147	51.2	3.5
2	5150.00	43.3 AV	54.0	-10.7	1.13 V	147	39.8	3.5
3	*5260.00	110.6 PK			1.04 V	142	73.0	37.6
4	*5260.00	99.6 AV			1.04 V	142	62.0	37.6
5	#10520.00	56.4 PK	68.2	-11.8	2.53 V	117	41.1	15.3

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	107.8 PK			1.40 H	176	70.2	37.6
2	*5300.00	97.7 AV			1.40 H	176	60.1	37.6
3	10600.00	55.6 PK	74.0	-18.4	1.16 H	207	40.1	15.5
4	10600.00	42.3 AV	54.0	-11.7	1.16 H	207	26.8	15.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	109.0 PK			1.10 V	142	71.4	37.6
2	*5300.00	98.9 AV			1.10 V	142	61.3	37.6
3	10600.00	56.1 PK	74.0	-17.9	2.67 V	120	40.6	15.5
4	10600.00	43.8 AV	54.0	-10.2	2.67 V	120	28.3	15.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	105.1 PK			1.36 H	182	67.4	37.7
2	*5320.00	94.2 AV			1.36 H	182	56.5	37.7
3	5350.00	71.5 PK	74.0	-2.5	1.31 H	175	68.1	3.4
4	5350.00	50.1 AV	54.0	-3.9	1.31 H	175	46.7	3.4
5	10640.00	56.0 PK	74.0	-18.0	1.21 H	227	40.3	15.7
6	10640.00	42.7 AV	54.0	-11.3	1.21 H	227	27.0	15.7

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	106.4 PK			1.17 V	132	68.7	37.7
2	*5320.00	95.5 AV			1.17 V	132	57.8	37.7
3	5350.00	73.0 PK	74.0	-1.0	1.15 V	131	69.6	3.4
4	5350.00	51.6 AV	54.0	-2.4	1.15 V	131	48.2	3.4
5	10640.00	56.4 PK	74.0	-17.6	2.66 V	131	40.7	15.7
6	10640.00	43.9 AV	54.0	-10.1	2.66 V	131	28.2	15.7

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	67.1 PK	74.0	-6.9	1.47 H	186	63.2	3.9
2	5460.00	47.7 AV	54.0	-6.3	1.47 H	186	43.8	3.9
3	#5470.00	66.1 PK	68.2	-2.1	1.53 H	182	62.2	3.9
4	*5500.00	104.8 PK			1.37 H	177	66.6	38.2
5	*5500.00	93.9 AV			1.37 H	177	55.7	38.2
6	11000.00	57.8 PK	74.0	-16.2	1.25 H	210	40.5	17.3
7	11000.00	44.7 AV	54.0	-9.3	1.25 H	210	27.4	17.3

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	68.4 PK	74.0	-5.6	1.20 V	122	64.5	3.9
2	5460.00	49.0 AV	54.0	-5.0	1.20 V	122	45.1	3.9
3	#5470.00	67.3 PK	68.2	-0.9	1.17 V	119	63.4	3.9
4	*5500.00	106.1 PK			1.16 V	139	67.9	38.2
5	*5500.00	95.2 AV			1.16 V	139	57.0	38.2
6	11000.00	58.5 PK	74.0	-15.5	2.73 V	134	41.2	17.3
7	11000.00	45.7 AV	54.0	-8.3	2.73 V	134	28.4	17.3

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	109.6 PK			1.43 H	174	71.4	38.2
2	*5580.00	98.6 AV			1.43 H	174	60.4	38.2
3	11160.00	56.4 PK	74.0	-17.6	1.32 H	224	40.4	16.0
4	11160.00	43.3 AV	54.0	-10.7	1.32 H	224	27.3	16.0

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	110.8 PK			1.12 V	139	72.6	38.2
2	*5580.00	99.8 AV			1.12 V	139	61.6	38.2
3	11160.00	57.3 PK	74.0	-16.7	2.68 V	122	41.3	16.0
4	11160.00	44.5 AV	54.0	-9.5	2.68 V	122	28.5	16.0

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	103.5 PK			1.42 H	183	65.1	38.4
2	*5700.00	93.0 AV			1.42 H	183	54.6	38.4
3	#5725.00	65.7 PK	68.2	-2.5	1.52 H	177	61.6	4.1
4	11400.00	57.1 PK	74.0	-16.9	1.26 H	227	40.7	16.4
5	11400.00	43.8 AV	54.0	-10.2	1.26 H	227	27.4	16.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	104.7 PK			1.49 V	227	66.3	38.4
2	*5700.00	94.3 AV			1.49 V	227	55.9	38.4
3	#5725.00	67.0 PK	68.2	-1.2	1.25 V	121	62.9	4.1
4	11400.00	58.2 PK	74.0	-15.8	2.74 V	116	41.8	16.4
5	11400.00	44.9 AV	54.0	-9.1	2.74 V	116	28.5	16.4

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 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.80	65.1 PK	68.2	-3.1	1.02 H	176	61.0	4.1
2	*5745.00	110.6 PK			1.02 H	176	72.1	38.5
3	*5745.00	99.6 AV			1.02 H	176	61.1	38.5
4	#5930.40	54.2 PK	68.2	-14.0	1.02 H	176	49.5	4.7
5	11490.00	56.5 PK	74.0	-17.5	1.24 H	217	40.8	15.7
6	11490.00	43.0 AV	54.0	-11.0	1.24 H	217	27.3	15.7

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5649.60	65.1 PK	68.2	-3.1	1.22 V	123	61.0	4.1
2	*5745.00	110.8 PK			1.22 V	123	72.3	38.5
3	*5745.00	99.8 AV			1.22 V	123	61.3	38.5
4	#5936.80	54.2 PK	68.2	-14.0	1.22 V	123	49.5	4.7
5	11490.00	57.6 PK	74.0	-16.4	2.64 V	113	41.9	15.7
6	11490.00	44.0 AV	54.0	-10.0	2.64 V	113	28.3	15.7

Remarks:

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

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5636.00	54.4 PK	68.2	-13.8	1.19 H	166	50.4	4.0
2	*5785.00	109.8 PK			1.19 H	166	71.1	38.7
3	*5785.00	99.3 AV			1.19 H	166	60.6	38.7
4	#5937.60	53.8 PK	68.2	-14.4	1.19 H	166	49.1	4.7
5	11570.00	56.1 PK	74.0	-17.9	1.29 H	218	40.6	15.5
6	11570.00	43.0 AV	54.0	-11.0	1.29 H	218	27.5	15.5

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	#5623.20	56.1 PK	68.2	-12.1	1.23 V	123	52.2	3.9
2	*5785.00	109.9 PK			1.23 V	123	71.2	38.7
3	*5785.00	99.3 AV			1.23 V	123	60.6	38.7
4	#5994.40	56.5 PK	68.2	-11.7	1.23 V	123	51.8	4.7
5	11570.00	57.3 PK	74.0	-16.7	2.63 V	112	41.8	15.5
6	11570.00	44.0 AV	54.0	-10.0	2.63 V	112	28.5	15.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5636.80	53.8 PK	68.2	-14.4	1.17 H	164	49.8	4.0
2	*5825.00	110.5 PK			1.17 H	164	71.7	38.8
3	*5825.00	99.3 AV			1.17 H	164	60.5	38.8
4	#5936.00	54.7 PK	68.2	-13.5	1.17 H	164	50.0	4.7
5	11650.00	56.2 PK	74.0	-17.8	1.32 H	211	40.8	15.4
6	11650.00	42.8 AV	54.0	-11.2	1.32 H	211	27.4	15.4

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	#5638.40	53.2 PK	68.2	-15.0	1.20 V	122	49.2	4.0
2	*5825.00	110.5 PK			1.20 V	122	71.7	38.8
3	*5825.00	99.4 AV			1.20 V	122	60.6	38.8
4	#5933.60	57.0 PK	68.2	-11.2	1.20 V	122	52.3	4.7
5	11650.00	57.5 PK	74.0	-16.5	2.76 V	125	42.1	15.4
6	11650.00	44.0 AV	54.0	-10.0	2.76 V	125	28.6	15.4

Remarks:

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

802.11n (HT20)

CHANNEL	TX Channel 36	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	71.3 PK	74.0	-2.7	1.51 H	178	67.8	3.5
2	5150.00	50.6 AV	54.0	-3.4	1.51 H	178	47.1	3.5
3	*5180.00	105.6 PK			1.44 H	169	67.6	38.0
4	*5180.00	95.1 AV			1.44 H	169	57.1	38.0
5	#10360.00	55.9 PK	68.2	-12.3	1.13 H	221	40.3	15.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	72.6 PK	74.0	-1.4	1.47 V	168	69.1	3.5
2	5150.00	51.8 AV	54.0	-2.2	1.47 V	168	48.3	3.5
3	*5180.00	106.8 PK			1.00 V	155	68.8	38.0
4	*5180.00	96.3 AV			1.00 V	155	58.3	38.0
5	#10360.00	56.4 PK	68.2	-11.8	2.58 V	121	40.8	15.6

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	71.6 PK	74.0	-2.4	1.49 H	182	68.1	3.5
2	5150.00	51.3 AV	54.0	-2.7	1.49 H	182	47.8	3.5
3	*5200.00	109.3 PK			1.42 H	176	71.4	37.9
4	*5200.00	98.5 AV			1.42 H	176	60.6	37.9
5	#10400.00	56.0 PK	68.2	-12.2	1.08 H	215	40.4	15.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	72.8 PK	74.0	-1.2	1.12 V	144	69.3	3.5
2	5150.00	52.6 AV	54.0	-1.4	1.12 V	144	49.1	3.5
3	*5200.00	110.6 PK			1.07 V	144	72.7	37.9
4	*5200.00	99.8 AV			1.07 V	144	61.9	37.9
5	#10400.00	56.4 PK	68.2	-11.8	2.63 V	118	40.8	15.6

Remarks:

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

CHANNEL	TX Channel 48	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	110.2 PK			1.47 H	175	72.5	37.7
2	*5240.00	99.1 AV			1.47 H	175	61.4	37.7
3	5350.00	53.5 PK	74.0	-20.5	1.41 H	167	50.1	3.4
4	5350.00	42.2 AV	54.0	-11.8	1.41 H	167	38.8	3.4
5	#10480.00	55.2 PK	68.2	-13.0	1.17 H	218	39.8	15.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	111.5 PK			1.06 V	144	73.8	37.7
2	*5240.00	100.5 AV			1.06 V	144	62.8	37.7
3	5350.00	54.1 PK	74.0	-19.9	1.07 V	159	50.7	3.4
4	5350.00	42.8 AV	54.0	-11.2	1.07 V	159	39.4	3.4
5	#10480.00	56.0 PK	68.2	-12.2	2.63 V	127	40.6	15.4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.8 PK	74.0	-20.2	1.41 H	169	50.3	3.5
2	5150.00	42.3 AV	54.0	-11.7	1.41 H	169	38.8	3.5
3	*5260.00	108.3 PK			1.44 H	178	70.7	37.6
4	*5260.00	97.6 AV			1.44 H	178	60.0	37.6
5	#10520.00	55.5 PK	68.2	-12.7	1.22 H	218	40.2	15.3

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	54.4 PK	74.0	-19.6	1.23 V	141	50.9	3.5
2	5150.00	43.2 AV	54.0	-10.8	1.23 V	141	39.7	3.5
3	*5260.00	109.5 PK			1.17 V	132	71.9	37.6
4	*5260.00	98.8 AV			1.17 V	132	61.2	37.6
5	#10520.00	56.0 PK	68.2	-12.2	2.73 V	135	40.7	15.3

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	108.1 PK			1.43 H	167	70.5	37.6
2	*5300.00	97.3 AV			1.43 H	167	59.7	37.6
3	10600.00	55.8 PK	74.0	-18.2	1.16 H	201	40.3	15.5
4	10600.00	42.9 AV	54.0	-11.1	1.16 H	201	27.4	15.5

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	109.5 PK			1.16 V	132	71.9	37.6
2	*5300.00	98.6 AV			1.16 V	132	61.0	37.6
3	10600.00	56.4 PK	74.0	-17.6	2.63 V	116	40.9	15.5
4	10600.00	44.0 AV	54.0	-10.0	2.63 V	116	28.5	15.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	105.1 PK			1.37 H	175	67.4	37.7
2	*5320.00	94.0 AV			1.37 H	175	56.3	37.7
3	5350.00	71.5 PK	74.0	-2.5	1.41 H	182	68.1	3.4
4	5350.00	50.7 AV	54.0	-3.3	1.41 H	182	47.3	3.4
5	10640.00	56.1 PK	74.0	-17.9	1.26 H	207	40.4	15.7
6	10640.00	43.2 AV	54.0	-10.8	1.26 H	207	27.5	15.7

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	106.4 PK			1.13 V	133	68.7	37.7
2	*5320.00	95.2 AV			1.13 V	133	57.5	37.7
3	5350.00	72.9 PK	74.0	-1.1	1.14 V	132	69.5	3.4
4	5350.00	52.1 AV	54.0	-1.9	1.14 V	132	48.7	3.4
5	10640.00	56.5 PK	74.0	-17.5	2.77 V	124	40.8	15.7
6	10640.00	44.0 AV	54.0	-10.0	2.77 V	124	28.3	15.7

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	62.1 PK	74.0	-11.9	1.40 H	172	58.2	3.9
2	5460.00	44.4 AV	54.0	-9.6	1.40 H	172	40.5	3.9
3	#5470.00	65.5 PK	68.2	-2.7	1.37 H	176	61.6	3.9
4	*5500.00	104.6 PK			1.44 H	178	66.4	38.2
5	*5500.00	94.1 AV			1.44 H	178	55.9	38.2
6	11000.00	58.1 PK	74.0	-15.9	1.25 H	213	40.8	17.3
7	11000.00	44.6 AV	54.0	-9.4	1.25 H	213	27.3	17.3

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.2 PK	74.0	-10.8	1.47 V	216	59.3	3.9
2	5460.00	45.5 AV	54.0	-8.5	1.47 V	216	41.6	3.9
3	#5470.00	67.1 PK	68.2	-1.1	1.56 V	225	63.2	3.9
4	*5500.00	106.0 PK			1.54 V	229	67.8	38.2
5	*5500.00	95.5 AV			1.54 V	229	57.3	38.2
6	11000.00	59.5 PK	74.0	-14.5	2.72 V	128	42.2	17.3
7	11000.00	45.9 AV	54.0	-8.1	2.72 V	128	28.6	17.3

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	109.1 PK			1.48 H	180	70.9	38.2
2	*5580.00	97.9 AV			1.48 H	180	59.7	38.2
3	11160.00	56.6 PK	74.0	-17.4	1.31 H	219	40.6	16.0
4	11160.00	43.2 AV	54.0	-10.8	1.31 H	219	27.2	16.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	110.4 PK			1.58 V	230	72.2	38.2
2	*5580.00	99.2 AV			1.58 V	230	61.0	38.2
3	11160.00	57.6 PK	74.0	-16.4	2.65 V	114	41.6	16.0
4	11160.00	44.0 AV	54.0	-10.0	2.65 V	114	28.0	16.0

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	103.3 PK			1.53 H	173	64.9	38.4
2	*5700.00	92.7 AV			1.53 H	173	54.3	38.4
3	#5725.00	65.5 PK	68.2	-2.7	1.47 H	184	61.4	4.1
4	11400.00	57.0 PK	74.0	-17.0	1.38 H	221	40.6	16.4
5	11400.00	43.5 AV	54.0	-10.5	1.38 H	221	27.1	16.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	104.5 PK			1.27 V	228	66.1	38.4
2	*5700.00	93.9 AV			1.27 V	228	55.5	38.4
3	#5725.00	66.9 PK	68.2	-1.3	1.32 V	230	62.8	4.1
4	11400.00	58.1 PK	74.0	-15.9	2.71 V	125	41.7	16.4
5	11400.00	44.8 AV	54.0	-9.2	2.71 V	125	28.4	16.4

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 149	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5649.60	64.0 PK	68.2	-4.2	1.20 H	163	59.9	4.1
2	*5745.00	110.6 PK			1.20 H	163	72.1	38.5
3	*5745.00	99.3 AV			1.20 H	163	60.8	38.5
4	#5997.60	55.6 PK	68.2	-12.6	1.20 H	163	50.9	4.7
5	11490.00	57.0 PK	74.0	-17.0	1.22 H	215	41.3	15.7
6	11490.00	43.3 AV	54.0	-10.7	1.22 H	215	27.6	15.7

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5639.20	63.8 PK	68.2	-4.4	1.26 V	123	59.8	4.0
2	*5745.00	110.7 PK			1.26 V	123	72.2	38.5
3	*5745.00	99.5 AV			1.26 V	123	61.0	38.5
4	#5940.00	53.1 PK	68.2	-15.1	1.26 V	123	48.4	4.7
5	11490.00	57.9 PK	74.0	-16.1	2.65 V	116	42.2	15.7
6	11490.00	44.4 AV	54.0	-9.6	2.65 V	116	28.7	15.7

Remarks:

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

CHANNEL	TX Channel 157	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5647.20	53.5 PK	68.2	-14.7	1.09 H	185	49.4	4.1
2	*5785.00	110.2 PK			1.09 H	185	71.5	38.7
3	*5785.00	98.9 AV			1.09 H	185	60.2	38.7
4	#5949.60	53.2 PK	68.2	-15.0	1.09 H	185	48.5	4.7
5	11570.00	56.2 PK	74.0	-17.8	1.36 H	225	40.7	15.5
6	11570.00	42.7 AV	54.0	-11.3	1.36 H	225	27.2	15.5

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	#5648.00	53.7 PK	68.2	-14.5	1.30 V	131	49.6	4.1
2	*5785.00	110.1 PK			1.30 V	131	71.4	38.7
3	*5785.00	99.0 AV			1.30 V	131	60.3	38.7
4	#5957.60	53.8 PK	68.2	-14.4	1.30 V	131	49.1	4.7
5	11570.00	57.5 PK	74.0	-16.5	2.61 V	129	42.0	15.5
6	11570.00	43.9 AV	54.0	-10.1	2.61 V	129	28.4	15.5

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5640.00	54.2 PK	68.2	-14.0	1.18 H	179	50.1	4.1
2	*5825.00	109.3 PK			1.18 H	179	70.5	38.8
3	*5825.00	98.6 AV			1.18 H	179	59.8	38.8
4	#5927.20	57.2 PK	68.2	-11.0	1.18 H	179	52.5	4.7
5	11650.00	56.3 PK	74.0	-17.7	1.37 H	221	40.9	15.4
6	11650.00	43.0 AV	54.0	-11.0	1.37 H	221	27.6	15.4

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	#5630.40	53.8 PK	68.2	-14.4	1.02 V	224	49.9	3.9
2	*5825.00	109.5 PK			1.02 V	224	70.7	38.8
3	*5825.00	98.7 AV			1.02 V	224	59.9	38.8
4	#5925.60	56.7 PK	68.2	-11.5	1.02 V	224	52.0	4.7
5	11650.00	57.1 PK	74.0	-16.9	2.66 V	120	41.7	15.4
6	11650.00	43.9 AV	54.0	-10.1	2.66 V	120	28.5	15.4

Remarks:

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

802.11n (HT40)

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	67.7 PK	74.0	-6.3	1.44 H	171	64.2	3.5
2	5150.00	51.6 AV	54.0	-2.4	1.44 H	171	48.1	3.5
3	*5190.00	100.2 PK			1.38 H	179	62.3	37.9
4	*5190.00	90.5 AV			1.38 H	179	52.6	37.9
5	#10380.00	56.0 PK	68.2	-12.2	1.03 H	213	40.3	15.7

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	69.2 PK	74.0	-4.8	1.27 V	144	65.7	3.5
2	5150.00	53.0 AV	54.0	-1.0	1.27 V	144	49.5	3.5
3	*5190.00	101.4 PK			1.06 V	143	63.5	37.9
4	*5190.00	90.7 AV			1.06 V	143	52.8	37.9
5	#10380.00	56.5 PK	68.2	-11.7	2.75 V	117	40.8	15.7

Remarks:

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

CHANNEL	TX Channel 46	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	71.7 PK	74.0	-2.3	1.28 H	169	68.2	3.5
2	5150.00	51.6 AV	54.0	-2.4	1.28 H	169	48.1	3.5
3	*5230.00	105.3 PK			1.37 H	172	67.6	37.7
4	*5230.00	94.4 AV			1.37 H	172	56.7	37.7
5	5350.00	58.5 PK	74.0	-15.5	1.43 H	178	55.1	3.4
6	5350.00	43.2 AV	54.0	-10.8	1.43 H	178	39.8	3.4
7	#10460.00	55.5 PK	68.2	-12.7	1.01 H	224	40.1	15.4

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	73.0 PK	74.0	-1.0	1.12 V	143	69.5	3.5
2	5150.00	52.8 AV	54.0	-1.2	1.12 V	143	49.3	3.5
3	*5230.00	106.7 PK			1.26 V	143	69.0	37.7
4	*5230.00	95.7 AV			1.26 V	143	58.0	37.7
5	5350.00	59.8 PK	74.0	-14.2	1.31 V	143	56.4	3.4
6	5350.00	44.5 AV	54.0	-9.5	1.31 V	143	41.1	3.4
7	#10460.00	56.1 PK	68.2	-12.1	2.54 V	113	40.7	15.4

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	58.9 PK	74.0	-15.1	1.43 H	182	55.4	3.5
2	5150.00	43.1 AV	54.0	-10.9	1.43 H	182	39.6	3.5
3	*5270.00	104.7 PK			1.35 H	177	67.1	37.6
4	*5270.00	94.0 AV			1.35 H	177	56.4	37.6
5	5350.00	70.6 PK	74.0	-3.4	1.29 H	168	67.2	3.4
6	5350.00	51.9 AV	54.0	-2.1	1.29 H	168	48.5	3.4
7	#10540.00	55.2 PK	68.2	-13.0	1.21 H	208	39.8	15.4

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	60.1 PK	74.0	-13.9	1.26 V	141	56.6	3.5
2	5150.00	44.4 AV	54.0	-9.6	1.26 V	141	40.9	3.5
3	*5270.00	106.0 PK			1.31 V	134	68.4	37.6
4	*5270.00	95.3 AV			1.31 V	134	57.7	37.6
5	5350.00	71.9 PK	74.0	-2.1	1.15 V	132	68.5	3.4
6	5350.00	53.2 AV	54.0	-0.8	1.15 V	132	49.8	3.4
7	#10540.00	56.0 PK	68.2	-12.2	2.76 V	134	40.6	15.4

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	98.6 PK			1.38 H	169	60.9	37.7
2	*5310.00	87.9 AV			1.38 H	169	50.2	37.7
3	5350.00	70.1 PK	74.0	-3.9	1.43 H	177	66.7	3.4
4	5350.00	51.3 AV	54.0	-2.7	1.43 H	177	47.9	3.4
5	10620.00	56.0 PK	74.0	-18.0	1.02 H	228	40.3	15.7
6	10620.00	42.9 AV	54.0	-11.1	1.02 H	228	27.2	15.7

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	99.9 PK			1.16 V	132	62.2	37.7
2	*5310.00	89.2 AV			1.16 V	132	51.5	37.7
3	5350.00	71.6 PK	74.0	-2.4	1.28 V	140	68.2	3.4
4	5350.00	52.7 AV	54.0	-1.3	1.28 V	140	49.3	3.4
5	10620.00	56.4 PK	74.0	-17.6	2.54 V	136	40.7	15.7
6	10620.00	43.8 AV	54.0	-10.2	2.54 V	136	28.1	15.7

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.2 PK	74.0	-13.8	1.55 H	176	56.3	3.9
2	5460.00	43.6 AV	54.0	-10.4	1.55 H	176	39.7	3.9
3	#5470.00	67.1 PK	68.2	-1.1	1.47 H	182	63.2	3.9
4	*5510.00	98.3 PK			1.51 H	172	60.0	38.3
5	*5510.00	88.1 AV			1.51 H	172	49.8	38.3
6	11020.00	57.9 PK	74.0	-16.1	1.36 H	229	40.8	17.1
7	11020.00	44.5 AV	54.0	-9.5	1.36 H	229	27.4	17.1

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.4 PK	74.0	-12.6	1.42 V	218	57.5	3.9
2	5460.00	44.5 AV	54.0	-9.5	1.42 V	218	40.6	3.9
3	#5470.00	67.1 PK	68.2	-1.1	1.47 V	222	63.2	3.9
4	*5510.00	99.4 PK			1.58 V	220	61.1	38.3
5	*5510.00	89.4 AV			1.58 V	220	51.1	38.3
6	11020.00	59.3 PK	74.0	-14.7	2.79 V	113	42.2	17.1
7	11020.00	45.7 AV	54.0	-8.3	2.79 V	113	28.6	17.1

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5470.00	65.9 PK	68.2	-2.3	1.52 H	184	62.0	3.9
2	*5550.00	105.1 PK			1.47 H	175	66.9	38.2
3	*5550.00	94.6 AV			1.47 H	175	56.4	38.2
4	11100.00	56.8 PK	74.0	-17.2	1.23 H	214	40.6	16.2
5	11100.00	43.2 AV	54.0	-10.8	1.23 H	214	27.0	16.2

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	#5470.00	67.2 PK	68.2	-1.0	1.64 V	225	63.3	3.9
2	*5550.00	106.3 PK			1.63 V	220	68.1	38.2
3	*5550.00	95.8 AV			1.63 V	220	57.6	38.2
4	11100.00	58.0 PK	74.0	-16.0	2.67 V	116	41.8	16.2
5	11100.00	44.5 AV	54.0	-9.5	2.67 V	116	28.3	16.2

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	102.6 PK			1.55 H	177	64.1	38.5
2	*5670.00	92.2 AV			1.55 H	177	53.7	38.5
3	#5725.00	65.8 PK	68.2	-2.4	1.52 H	179	61.7	4.1
4	11340.00	57.4 PK	74.0	-16.6	1.26 H	213	40.8	16.6
5	11340.00	44.1 AV	54.0	-9.9	1.26 H	213	27.5	16.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	103.9 PK			1.47 V	229	65.4	38.5
2	*5670.00	93.5 AV			1.47 V	229	55.0	38.5
3	#5725.00	67.3 PK	68.2	-0.9	1.41 V	228	63.2	4.1
4	11340.00	58.4 PK	74.0	-15.6	2.64 V	113	41.8	16.6
5	11340.00	45.0 AV	54.0	-9.0	2.64 V	113	28.4	16.6

Remarks:

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

CHANNEL	TX Channel 151	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5646.40	61.5 PK	68.2	-6.7	1.19 H	176	57.4	4.1
2	*5755.00	106.5 PK			1.19 H	176	67.9	38.6
3	*5755.00	95.8 AV			1.19 H	176	57.2	38.6
4	#5955.20	53.8 PK	68.2	-14.4	1.19 H	176	49.1	4.7
5	11510.00	56.4 PK	74.0	-17.6	1.35 H	224	40.7	15.7
6	11510.00	42.8 AV	54.0	-11.2	1.35 H	224	27.1	15.7

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.80	66.4 PK	68.2	-1.8	1.04 V	225	62.3	4.1
2	*5755.00	106.7 PK			1.04 V	225	68.1	38.6
3	*5755.00	96.0 AV			1.04 V	225	57.4	38.6
4	#5935.20	56.1 PK	68.2	-12.1	1.04 V	225	51.4	4.7
5	11510.00	57.7 PK	74.0	-16.3	2.67 V	126	42.0	15.7
6	11510.00	44.2 AV	54.0	-9.8	2.67 V	126	28.5	15.7

Remarks:

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

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5649.60	64.1 PK	68.2	-4.1	1.17 H	184	60.0	4.1
2	*5795.00	107.4 PK			1.17 H	184	68.7	38.7
3	*5795.00	96.6 AV			1.17 H	184	57.9	38.7
4	#5928.80	61.1 PK	68.2	-7.1	1.17 H	184	56.4	4.7
5	11590.00	56.3 PK	74.0	-17.7	1.21 H	213	40.9	15.4
6	11590.00	42.9 AV	54.0	-11.1	1.21 H	213	27.5	15.4

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	#5636.00	64.6 PK	68.2	-3.6	1.18 V	225	60.6	4.0
2	*5795.00	107.8 PK			1.18 V	225	69.1	38.7
3	*5795.00	96.9 AV			1.18 V	225	58.2	38.7
4	#5929.60	62.9 PK	68.2	-5.3	1.18 V	225	58.2	4.7
5	11590.00	57.3 PK	74.0	-16.7	2.73 V	127	41.9	15.4
6	11590.00	44.0 AV	54.0	-10.0	2.73 V	127	28.6	15.4

Remarks:

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

802.11ac (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	64.5 PK	74.0	-9.5	1.53 H	182	61.0	3.5
2	5150.00	51.3 AV	54.0	-2.7	1.53 H	182	47.8	3.5
3	*5210.00	95.9 PK			1.46 H	177	58.1	37.8
4	*5210.00	85.2 AV			1.46 H	177	47.4	37.8
5	5350.00	53.8 PK	74.0	-20.2	1.38 H	174	50.4	3.4
6	5350.00	42.7 AV	54.0	-11.3	1.38 H	174	39.3	3.4
7	#10420.00	55.8 PK	68.2	-12.4	1.13 H	205	40.2	15.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.8 PK	74.0	-8.2	1.28 V	144	62.3	3.5
2	5150.00	52.6 AV	54.0	-1.4	1.28 V	144	49.1	3.5
3	*5210.00	97.1 PK			1.07 V	143	59.3	37.8
4	*5210.00	86.4 AV			1.07 V	143	48.6	37.8
5	5350.00	54.1 PK	74.0	-19.9	1.14 V	140	50.7	3.4
6	5350.00	43.2 AV	54.0	-10.8	1.14 V	140	39.8	3.4
7	#10420.00	56.3 PK	68.2	-11.9	2.76 V	123	40.7	15.6

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	95.4 PK			1.42 H	171	57.8	37.6
2	*5290.00	84.6 AV			1.42 H	171	47.0	37.6
3	5350.00	67.2 PK	74.0	-6.8	1.49 H	163	63.8	3.4
4	5350.00	51.3 AV	54.0	-2.7	1.49 H	163	47.9	3.4
5	#10580.00	55.8 PK	68.2	-12.4	1.18 H	203	40.2	15.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5290.00	96.7 PK			1.18 V	131	59.1	37.6
2	*5290.00	85.9 AV			1.18 V	131	48.3	37.6
3	5350.00	68.6 PK	74.0	-5.4	1.16 V	132	65.2	3.4
4	5350.00	52.6 AV	54.0	-1.4	1.16 V	132	49.2	3.4
5	#10580.00	56.5 PK	68.2	-11.7	2.61 V	118	40.9	15.6

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	64.3 PK	74.0	-9.7	1.58 H	189	60.4	3.9
2	5460.00	49.0 AV	54.0	-5.0	1.58 H	189	45.1	3.9
3	#5470.00	65.4 PK	68.2	-2.8	1.56 H	187	61.5	3.9
4	*5530.00	96.8 PK			1.42 H	179	58.6	38.2
5	*5530.00	81.1 AV			1.42 H	179	42.9	38.2
6	#5725.00	54.5 PK	68.2	-13.7	1.34 H	172	50.4	4.1
7	11060.00	57.5 PK	74.0	-16.5	1.31 H	224	40.8	16.7
8	11060.00	44.3 AV	54.0	-9.7	1.31 H	224	27.6	16.7

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	65.7 PK	74.0	-8.3	1.07 V	117	61.8	3.9
2	5460.00	50.3 AV	54.0	-3.7	1.07 V	117	46.4	3.9
3	#5470.00	66.8 PK	68.2	-1.4	1.09 V	120	62.9	3.9
4	*5530.00	98.1 PK			1.13 V	122	59.9	38.2
5	*5530.00	82.4 AV			1.13 V	122	44.2	38.2
6	#5725.00	55.4 PK	68.2	-12.8	1.14 V	127	51.3	4.1
7	11060.00	59.0 PK	74.0	-15.0	2.61 V	128	42.3	16.7
8	11060.00	45.4 AV	54.0	-8.6	2.61 V	128	28.7	16.7

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.8 PK	74.0	-12.2	1.56 H	186	57.9	3.9
2	5460.00	45.4 AV	54.0	-8.6	1.56 H	186	41.5	3.9
3	#5470.00	64.9 PK	68.2	-3.3	1.53 H	188	61.0	3.9
4	*5610.00	102.0 PK			1.47 H	176	63.7	38.3
5	*5610.00	86.3 AV			1.47 H	176	48.0	38.3
6	#5725.00	65.9 PK	68.2	-2.3	1.31 H	168	61.8	4.1
7	11220.00	56.8 PK	74.0	-17.2	1.26 H	217	40.7	16.1
8	11220.00	43.2 AV	54.0	-10.8	1.26 H	217	27.1	16.1

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.1 PK	74.0	-10.9	1.21 V	126	59.2	3.9
2	5460.00	46.7 AV	54.0	-7.3	1.21 V	126	42.8	3.9
3	#5470.00	66.4 PK	68.2	-1.8	1.19 V	124	62.5	3.9
4	*5610.00	103.2 PK			1.28 V	122	64.9	38.3
5	*5610.00	86.5 AV			1.28 V	122	48.2	38.3
6	#5725.00	67.2 PK	68.2	-1.0	1.24 V	121	63.1	4.1
7	11220.00	57.9 PK	74.0	-16.1	2.58 V	124	41.8	16.1
8	11220.00	43.4 AV	54.0	-10.6	2.58 V	124	27.3	16.1

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 155	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.80	65.4 PK	68.2	-2.8	1.17 H	175	61.3	4.1
2	#5650.00	66.7 PK	68.2	-1.5	1.21 H	179	62.6	4.1
3	*5775.00	101.1 PK			1.17 H	175	62.5	38.6
4	*5775.00	90.2 AV			1.17 H	175	51.6	38.6
5	#5925.00	57.5 PK	68.2	-10.7	1.19 H	179	52.8	4.7
6	#5925.60	57.1 PK	68.2	-11.1	1.17 H	175	52.4	4.7
7	11550.00	56.4 PK	74.0	-17.6	1.24 H	215	40.8	15.6
8	11550.00	42.8 AV	54.0	-11.2	1.24 H	215	27.2	15.6

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.80	65.9 PK	68.2	-2.3	1.07 V	224	61.8	4.1
2	#5650.00	66.9 PK	68.2	-1.3	1.12 V	234	62.8	4.1
3	*5775.00	101.5 PK			1.07 V	224	62.9	38.6
4	*5775.00	90.5 AV			1.07 V	224	51.9	38.6
5	#5925.00	60.6 PK	68.2	-7.6	1.09 V	221	55.9	4.7
6	#5931.20	59.8 PK	68.2	-8.4	1.07 V	224	55.1	4.7
7	11550.00	57.4 PK	74.0	-16.6	2.65 V	117	41.8	15.6
8	11550.00	44.0 AV	54.0	-10.0	2.65 V	117	28.4	15.6

Remarks:

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

Below 1GHz Worst-Case Data:

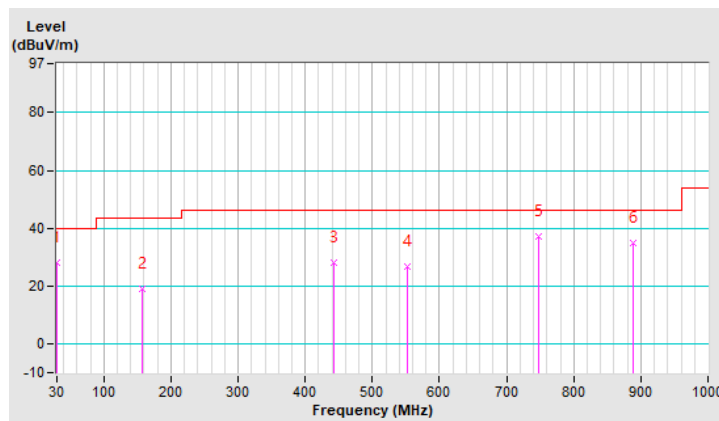
802.11n (HT40)

CHANNEL	TX Channel 159	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	30.97	27.9 QP	40.0	-12.1	1.25 H	102	39.5	-11.6
2	157.07	19.2 QP	43.5	-24.3	1.00 H	27	28.3	-9.1
3	442.25	28.1 QP	46.0	-17.9	1.25 H	293	32.8	-4.7
4	552.83	26.7 QP	46.0	-19.3	1.50 H	1	29.8	-3.1
5	746.83	37.2 QP	46.0	-8.8	1.50 H	43	36.6	0.6
6	889.42	34.7 QP	46.0	-11.3	1.00 H	209	31.9	2.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit of frequency range 30MHz ~ 1000MHz
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report

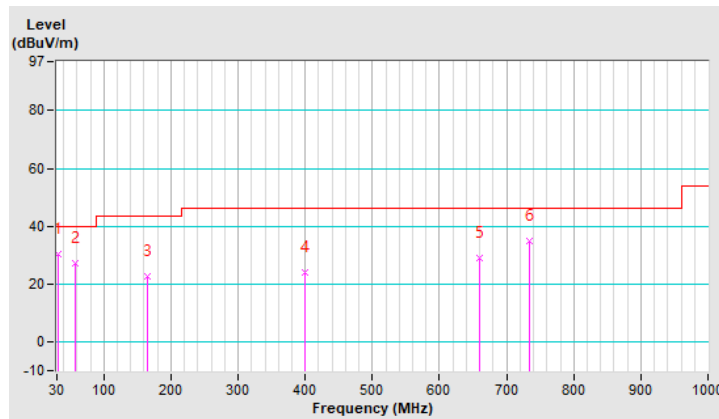


CHANNEL	TX Channel 159	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	32.91	30.4 QP	40.0	-9.6	1.00 V	54	41.6	-11.2
2	58.13	27.1 QP	40.0	-12.9	1.50 V	6	37.5	-10.4
3	165.80	22.7 QP	43.5	-20.8	1.50 V	54	31.9	-9.2
4	399.57	24.1 QP	46.0	-21.9	1.00 V	48	30.0	-5.9
5	660.50	29.0 QP	46.0	-17.0	1.25 V	117	30.2	-1.2
6	734.22	35.1 QP	46.0	-10.9	1.00 V	316	35.0	0.1

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 of frequency range 30MHz ~ 1000MHz
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz ~ 30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report



4.2 Transmit Power Measurement

4.2.1 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} ;

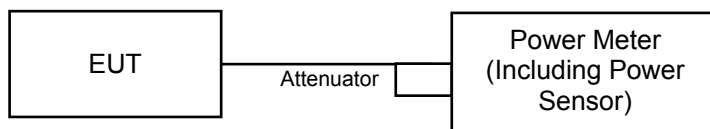
Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

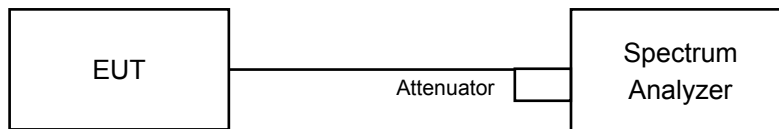
4.2.2 Test Setup

For Power Output

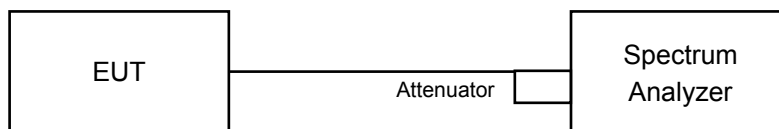
802.11a, 802.11n (HT20), 802.11n (HT40)



802.11ac (VHT80)



For 26dB Bandwidth



4.2.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.2.4 Test Procedure

For Average Power Measurement

For 802.11a, 802.11n (HT20), 802.11n (HT40)

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

For 802.11ac (VHT80)

- a. Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- b. Set sweep trigger to "free run".
- c. Set RBW = 1 MHz
- d. Set VBW \geq 3 MHz
- e. Number of points in sweep \geq 2 Span / RBW
- f. Sweep time \leq (number of points in sweep) * T
- g. Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
- h. Detector = RMS
- i. Trace mode = max hold
- j. Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
- k. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

For 26dB Bandwidth

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

4.2.5 Deviation from Test Standard

No deviation.

4.2.6 EUT Operating Conditions

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

4.2.7 Test Result

Power Output:

For 5180 ~ 5240MHz

For Outdoor Access Point:

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
36	5180	41.115	16.14	3.44	19.58	21.00	Pass
40	5200	52.723	17.22	3.44	20.66	21.00	Pass
48	5240	35.237	15.47	3.44	18.91	21.00	Pass

Note: Gain = 3.44dBi < 6dBi, so the limit no need to reduced.

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
36	5180	38.282	15.83	3.44	19.27	21.00	Pass
40	5200	53.703	17.30	3.44	20.74	21.00	Pass
48	5240	34.514	15.38	3.44	18.82	21.00	Pass

Note: Gain = 3.44dBi < 6dBi, so the limit no need to reduced.

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
38	5190	16.144	12.08	3.44	15.52	21.00	Pass
46	5230	40.832	16.11	3.44	19.55	21.00	Pass

Note: Gain = 3.44dBi < 6dBi, so the limit no need to reduced.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
42	5210	13.836	11.41	3.44	14.85	21.00	Pass

Note: Gain = 3.44dBi < 6dBi, so the limit no need to reduced.

For Client device:

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	41.115	16.14	24.00	Pass
40	5200	87.297	19.41	24.00	Pass
48	5240	35.237	15.47	24.00	Pass

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	38.282	15.83	24.00	Pass
40	5200	75.858	18.80	24.00	Pass
48	5240	34.514	15.38	24.00	Pass

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	16.144	12.08	24.00	Pass
46	5230	40.832	16.11	24.00	Pass

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	13.836	11.41	24.00	Pass

For 5260 ~ 5320MHz and 5500 ~ 5700MHz

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
52	5260	92.470	19.66	24.00	Pass
60	5300	90.573	19.57	24.00	Pass
64	5320	42.560	16.29	24.00	Pass
100	5500	39.355	15.95	24.00	Pass
116	5580	103.514	20.15	24.00	Pass
140	5700	28.184	14.50	24.00	Pass
149	5745	87.902	19.44	30.00	Pass
157	5785	113.501	20.55	30.00	Pass
165	5825	112.202	20.50	30.00	Pass

Note:

For 5260~5320MHz and 5500~5700MHz band:

1. $11\text{dBm} + 10\log(51.22) = 28.09 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(52.61) = 28.21 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(42.41) = 27.27 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(39.55) = 26.97 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(56.20) = 28.49 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(37.36) = 26.72 > 24\text{dBm}$

802.11n (HT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
52	5260	100.925	20.04	24.00	Pass
60	5300	94.842	19.77	24.00	Pass
64	5320	43.551	16.39	24.00	Pass
100	5500	44.361	16.47	24.00	Pass
116	5580	104.472	20.19	24.00	Pass
140	5700	23.067	13.63	24.00	Pass
149	5745	83.368	19.21	30.00	Pass
157	5785	107.895	20.33	30.00	Pass
165	5825	110.154	20.42	30.00	Pass

Note:

For 5260~5320MHz and 5500~5700MHz band:

1. $11\text{dBm} + 10\log(54.74) = 28.38 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(54.86) = 28.39 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(45.82) = 27.61 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(44.32) = 27.46 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(58.43) = 28.66 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(33.49) = 26.24 > 24\text{dBm}$

802.11n (HT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
54	5270	83.946	19.24	24.00	Pass
62	5310	19.907	12.99	24.00	Pass
102	5510	18.923	12.77	24.00	Pass
110	5550	90.991	19.59	24.00	Pass
134	5670	38.019	15.80	24.00	Pass
151	5755	56.105	17.49	30.00	Pass
159	5795	115.080	20.61	30.00	Pass

Note:

For 5260~5320MHz and 5500~5700MHz band:

1. $11\text{dBm} + 10\log(97.10) = 30.87 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(76.64) = 29.84 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(49.27) = 27.92 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(98.73) = 30.94 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(88.47) = 30.46 > 24\text{dBm}$

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
58	5290	18.923	12.77	24.00	Pass
106	5530	25.645	14.09	24.00	Pass
122	5610	59.429	17.74	24.00	Pass
155	5775	45.082	16.54	30.00	Pass

Note:

For 5260~5320MHz and 5500~5700MHz band:

1. $11\text{dBm} + 10\log(92.16) = 30.64 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(102.19) = 31.09 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(123.38) = 31.91 > 24\text{dBm}$

26dB Bandwidth:

802.11a

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)
52	5260	51.22
60	5300	52.61
64	5320	42.41
100	5500	39.55
116	5580	56.20
140	5700	37.36

802.11n (HT20)

Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)
52	5260	54.74
60	5300	54.86
64	5320	45.82
100	5500	44.32
116	5580	58.43
140	5700	33.49

802.11n (HT40)

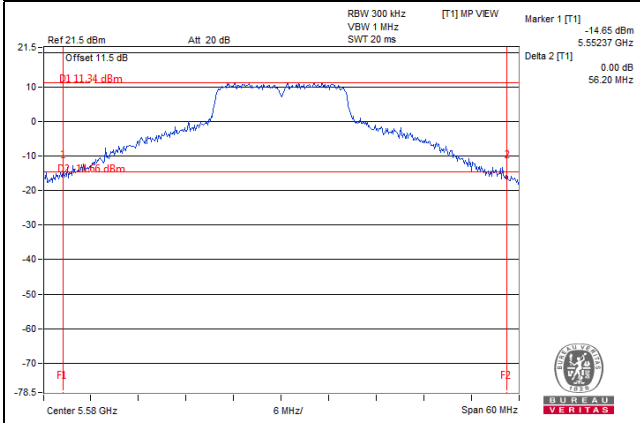
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)
54	5270	97.10
62	5310	76.64
102	5510	49.27
110	5550	98.73
134	5670	88.47

802.11ac (VHT80)

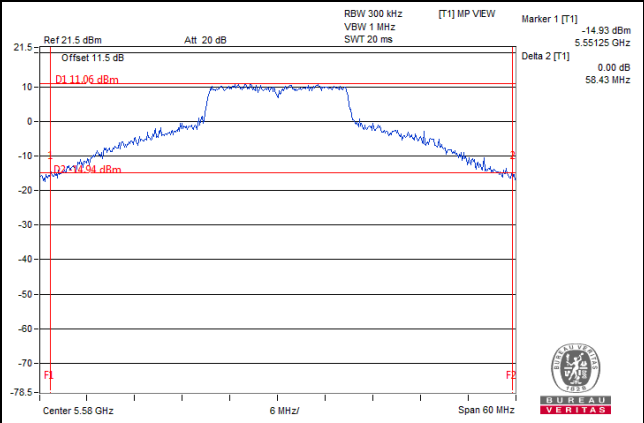
Chan.	Freq. (MHz)	26dBc Bandwidth (MHz)
58	5290	92.16
106	5530	102.19
122	5610	123.38

Spectrum Plot of Worst Value

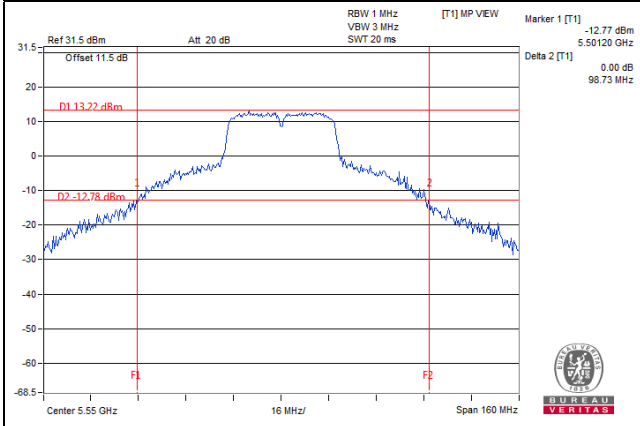
802.11a



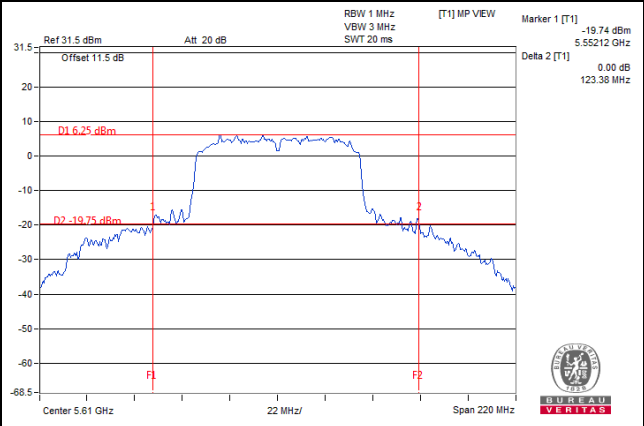
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



EUT Maximum Conducted Power

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	92.470	19.66
5470~5725	103.514	20.15

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	100.925	20.04
5470~5725	104.472	20.19

802.11n (HT40)

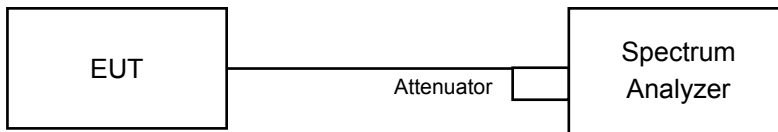
Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	83.946	19.24
5470~5725	90.991	19.59

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	18.923	12.77
5470~5725	59.429	17.74

4.3 Occupied Bandwidth Measurement

4.3.1 Test Setup



4.3.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.3 Test Procedure

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

4.3.4 Test Result

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	20.04
40	5200	34.44
48	5240	19.40
52	5260	35.28
60	5300	35.28
64	5320	22.32
100	5500	19.68
116	5580	36.60
140	5700	17.76
149	5745	36.17
157	5785	39.72
165	5825	39.96

802.11n (HT20)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	20.16
40	5200	33.60
48	5240	18.96
52	5260	37.32
60	5300	37.20
64	5320	23.52
100	5500	23.40
116	5580	38.40
140	5700	18.48
149	5745	36.72
157	5785	41.40
165	5825	41.28

802.11n (HT40)

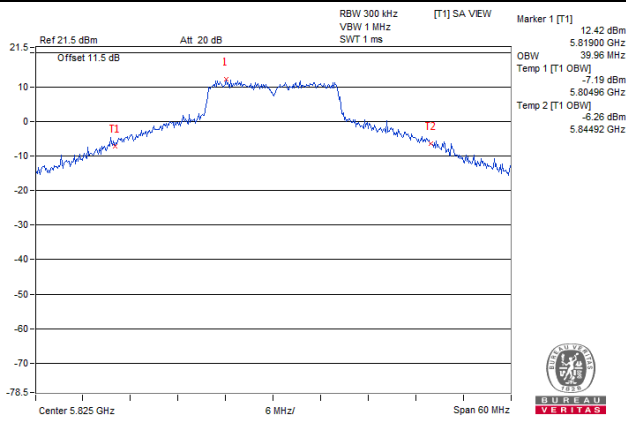
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
38	5190	36.72
46	5230	38.40
54	5270	45.24
62	5310	36.96
102	5510	36.84
110	5550	45.96
134	5670	37.80
151	5755	39.24
159	5795	51.96

802.11ac (VHT80)

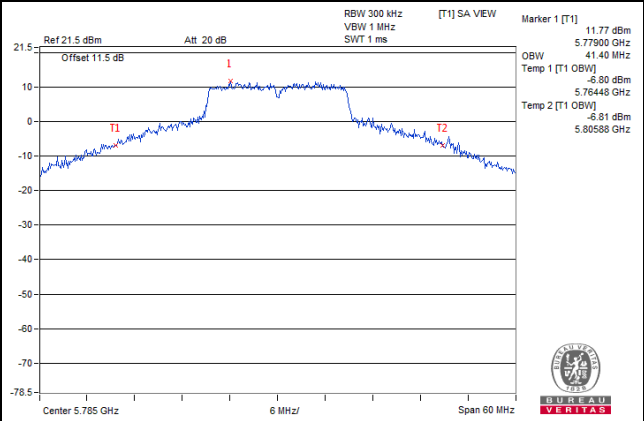
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
42	5210	74.88
58	5290	75.12
106	5530	75.12
122	5610	76.08
155	5775	76.08

Spectrum Plot of Worst Value

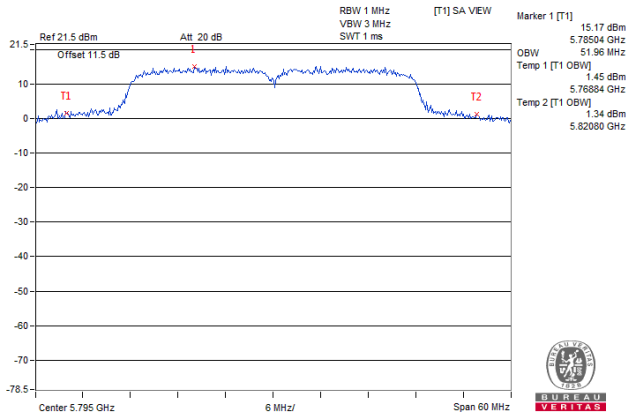
802.11a



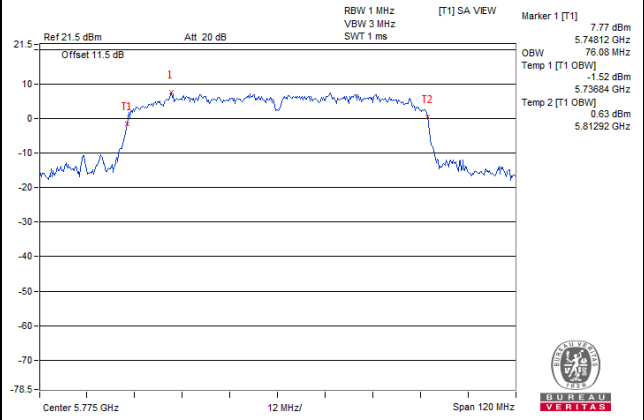
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

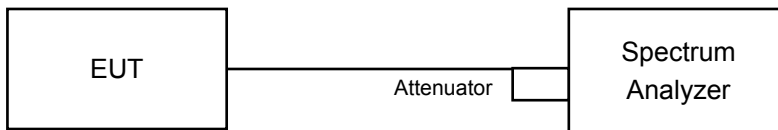


4.4 Peak Power Spectral Density Measurement

4.4.1 Limits of Peak Power Spectral Density Measurement

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

4.4.2 Test Setup



4.4.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.4 Test Procedures

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

Duty cycle of test signal is > 98%

Using method SA-1

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

Duty cycle of test signal is < 98%

Using method SA-2

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

For U-NII-3 band:

Duty cycle of test signal is > 98%

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

Duty cycle of test signal is < 98%

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

4.4.5 Deviation from Test Standard

No deviation.

4.4.6 EUT Operating Conditions

Same as 4.3.6.

4.4.7 Test Results

For U-NII-1

For Outdoor Access Point

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	1.93	0.59	2.52	17.00	Pass
40	5200	2.92	0.59	3.51	17.00	Pass
48	5240	1.24	0.59	1.83	17.00	Pass

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

802.11n (HT20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	0.94	0.65	1.59	17.00	Pass
40	5200	2.23	0.65	2.88	17.00	Pass
48	5240	1.04	0.65	1.69	17.00	Pass

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

802.11n (HT40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	-5.68	1.19	-4.49	17.00	Pass
46	5230	-1.77	1.19	-0.58	17.00	Pass

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

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-10.93	2.57	-8.36	17.00	Pass

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

For Client device:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	1.93	0.59	2.52	11.00	Pass
40	5200	4.90	0.59	5.49	11.00	Pass
48	5240	1.24	0.59	1.83	11.00	Pass

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

802.11n (HT20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	0.94	0.65	1.59	11.00	Pass
40	5200	3.76	0.65	4.41	11.00	Pass
48	5240	1.04	0.65	1.69	11.00	Pass

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

802.11n (HT40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	-5.68	1.19	-4.49	11.00	Pass
46	5230	-1.77	1.19	-0.58	11.00	Pass

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

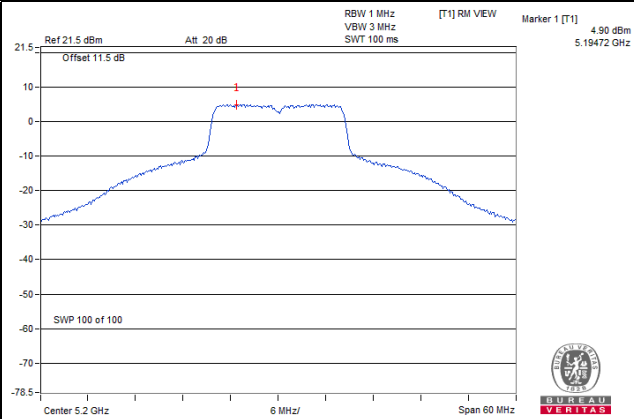
802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-10.93	2.57	-8.36	11.00	Pass

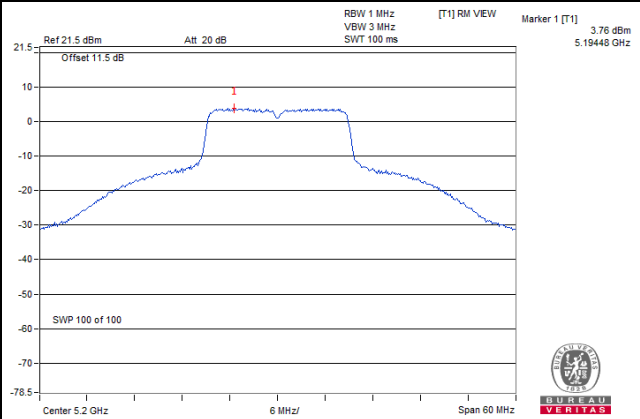
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

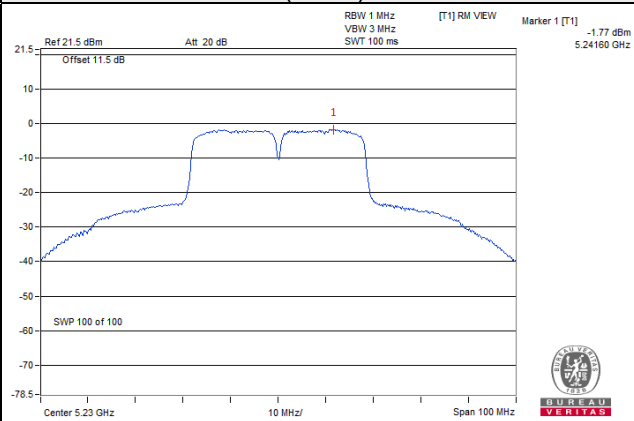
802.11a / CH 40



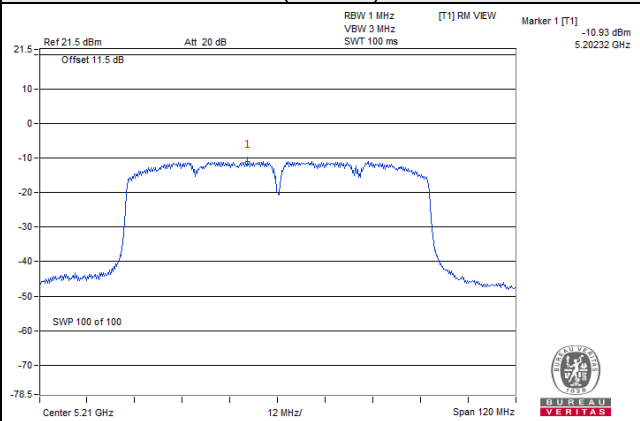
802.11n (HT20) / CH 40



802.11n (HT40) / CH 46



802.11ac (VHT80) / CH 42



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

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
52	5260	5.35	0.59	5.94	11.00	Pass
60	5300	5.39	0.59	5.98	11.00	Pass
64	5320	2.63	0.59	3.22	11.00	Pass
100	5500	1.73	0.59	2.32	11.00	Pass
116	5580	5.70	0.59	6.29	11.00	Pass
140	5700	1.15	0.59	1.74	11.00	Pass

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

802.11n (HT20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
52	5260	4.77	0.65	5.42	11.00	Pass
60	5300	4.81	0.65	5.46	11.00	Pass
64	5320	2.03	0.65	2.68	11.00	Pass
100	5500	1.88	0.65	2.53	11.00	Pass
116	5580	5.28	0.65	5.93	11.00	Pass
140	5700	-0.04	0.65	0.61	11.00	Pass

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

802.11n (HT40)

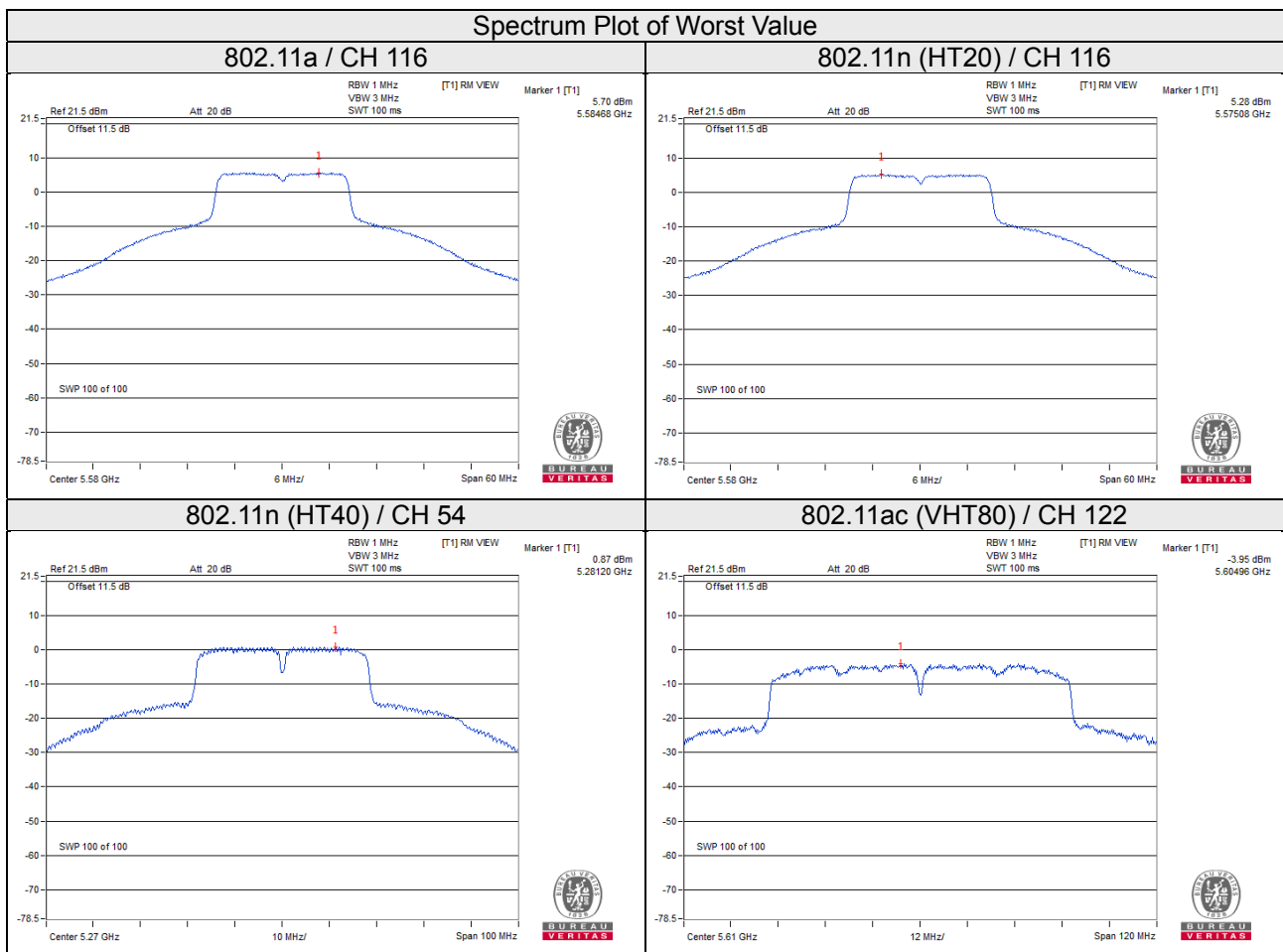
Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
54	5270	0.87	1.19	2.06	11.00	Pass
62	5310	-4.29	1.19	-3.10	11.00	Pass
102	5510	-4.74	1.19	-3.55	11.00	Pass
110	5550	0.85	1.19	2.04	11.00	Pass
134	5670	-1.72	1.19	-0.53	11.00	Pass

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

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
58	5290	-9.42	2.57	-6.85	11.00	Pass
106	5530	-8.76	2.57	-6.19	11.00	Pass
122	5610	-3.95	2.57	-1.38	11.00	Pass

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



For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-2.45	-0.23	0.59	0.36	30.00	Pass
157	5785	-2.08	0.14	0.59	0.73	30.00	Pass
165	5825	-2.00	0.22	0.59	0.81	30.00	Pass

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

802.11n (HT20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-3.08	-0.86	0.65	-0.21	30.00	Pass
157	5785	-2.39	-0.17	0.65	0.48	30.00	Pass
165	5825	-2.65	-0.43	0.65	0.22	30.00	Pass

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

802.11n (HT40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
151	5755	-9.40	-7.18	1.19	-5.99	30.00	Pass
159	5795	-6.40	-4.18	1.19	-2.99	30.00	Pass

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

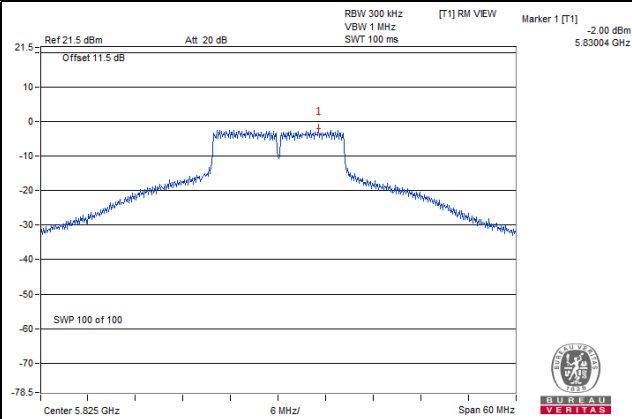
802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
155	5775	-14.16	-11.94	2.57	-9.37	30.00	Pass

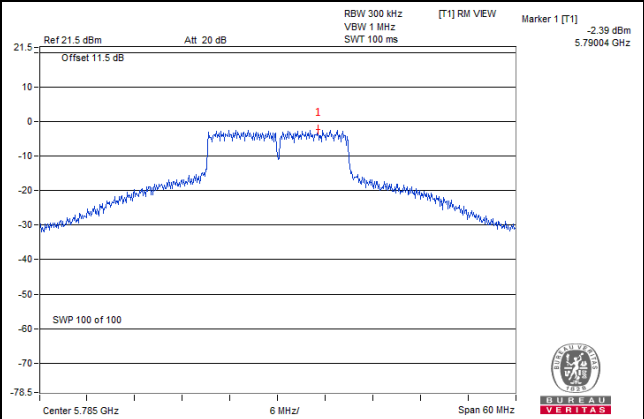
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

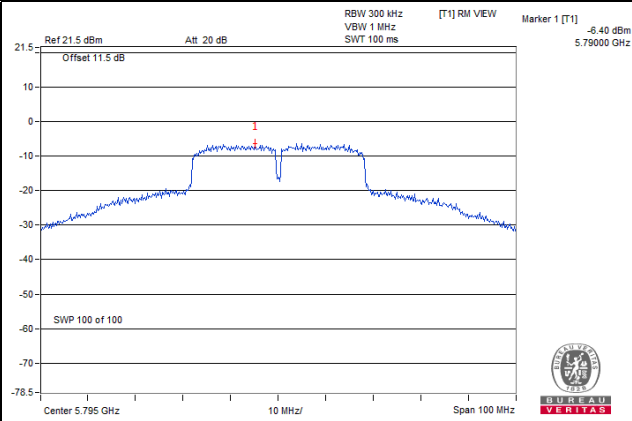
802.11a



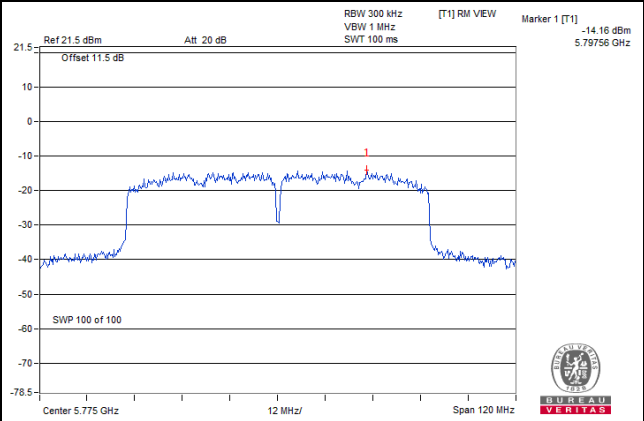
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

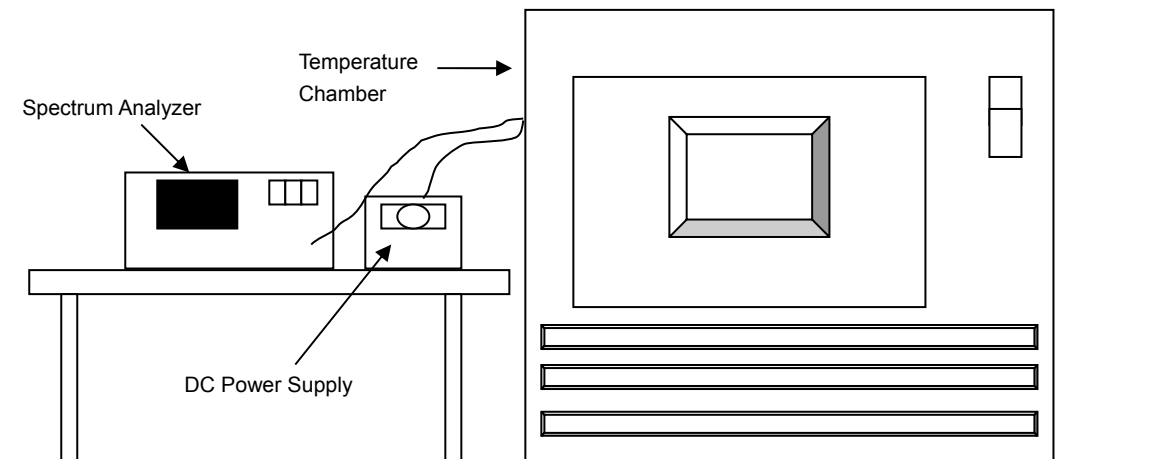


4.5 Frequency Stability

4.5.1 Limits of Frequency Stability Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 25, 2018	Sep. 24, 2019
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 04, 2018	Jun. 03, 2019
			Jun. 03, 2019	Jun. 02, 2020
Digital Multimeter Fluke	87-III	70360742	Jun. 29, 2018	Jun. 28, 2019
			Jun. 27, 2019	Jun. 26, 2020
DC Power Supply Topward	6306A	727263	NA	NA
True RMS Clamp Meter / Fluke	325	31130711WS	May 22, 2018	May 21, 2019
			May 21, 2019	May 20, 2020

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

4.5.4 Test Procedure

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

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

4.5.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
60	3.7	5179.9759	PASS	5179.9736	PASS	5179.9739	PASS	5179.9758	PASS
50	3.7	5179.9752	PASS	5179.9742	PASS	5179.9755	PASS	5179.9763	PASS
40	3.7	5179.9949	PASS	5179.9922	PASS	5179.9908	PASS	5179.9936	PASS
30	3.7	5179.9843	PASS	5179.9850	PASS	5179.9872	PASS	5179.9856	PASS
20	3.7	5179.9961	PASS	5179.9968	PASS	5179.9963	PASS	5179.9919	PASS
10	3.7	5180.0178	PASS	5180.0169	PASS	5180.0200	PASS	5180.0197	PASS
0	3.7	5179.9740	PASS	5179.9735	PASS	5179.9778	PASS	5179.9777	PASS
-10	3.7	5180.0188	PASS	5180.0205	PASS	5180.0179	PASS	5180.0203	PASS

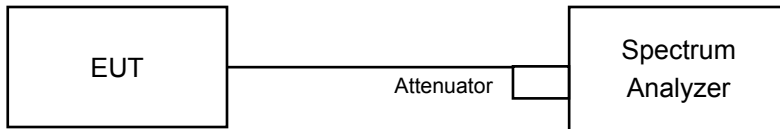
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	4.255	5179.9958	PASS	5179.9974	PASS	5179.9955	PASS	5179.9928	PASS
	3.7	5179.9961	PASS	5179.9968	PASS	5179.9963	PASS	5179.9919	PASS
	3.145	5179.9960	PASS	5179.9960	PASS	5179.9956	PASS	5179.9914	PASS

4.6 6dB Bandwidth Measurement

4.6.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.6.2 Test Setup



4.6.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.38	0.5	Pass
157	5785	16.42	0.5	Pass
165	5825	16.42	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.64	0.5	Pass
157	5785	17.67	0.5	Pass
165	5825	17.66	0.5	Pass

802.11n (HT40)

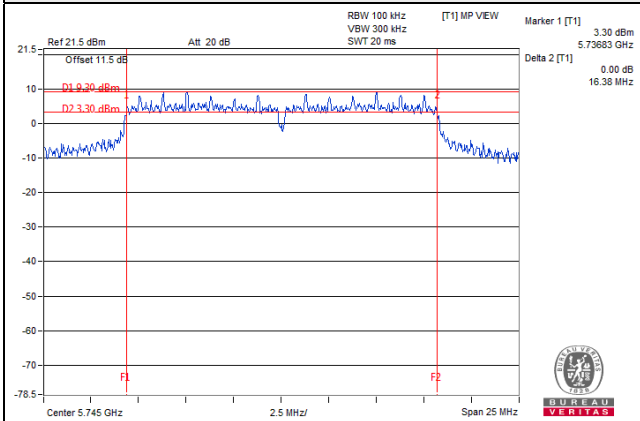
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	35.34	0.5	Pass
159	5795	35.86	0.5	Pass

802.11ac (VHT80)

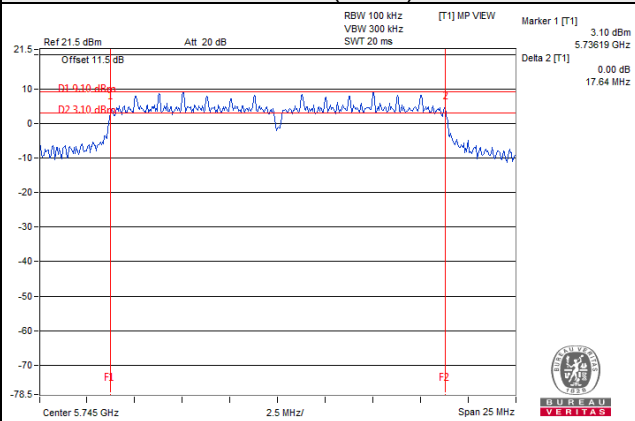
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	75.32	0.5	Pass

Spectrum Plot of Worst Value

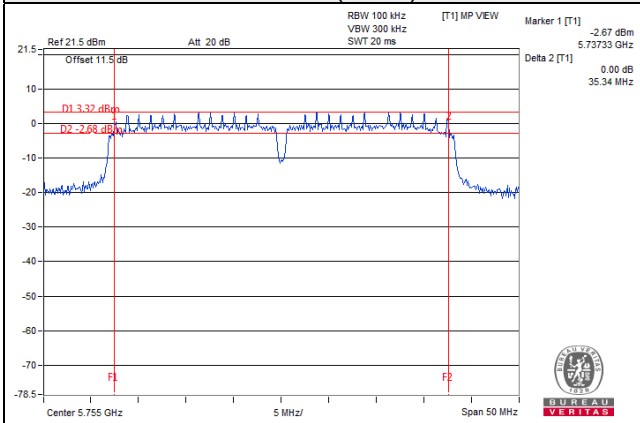
802.11a



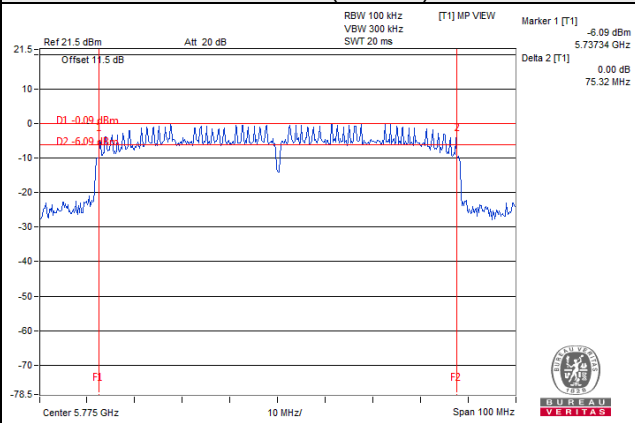
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

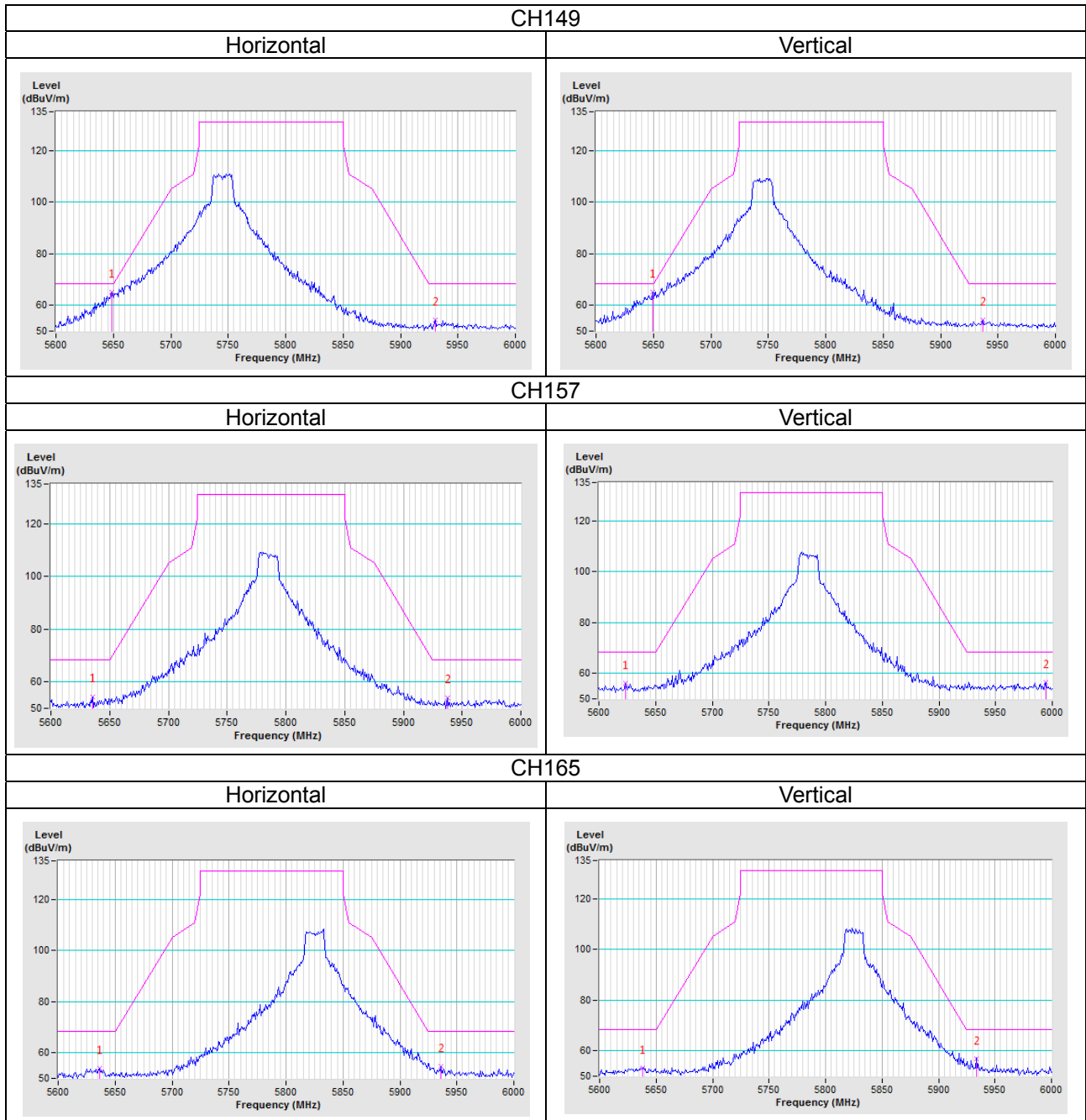


5 Pictures of Test Arrangements

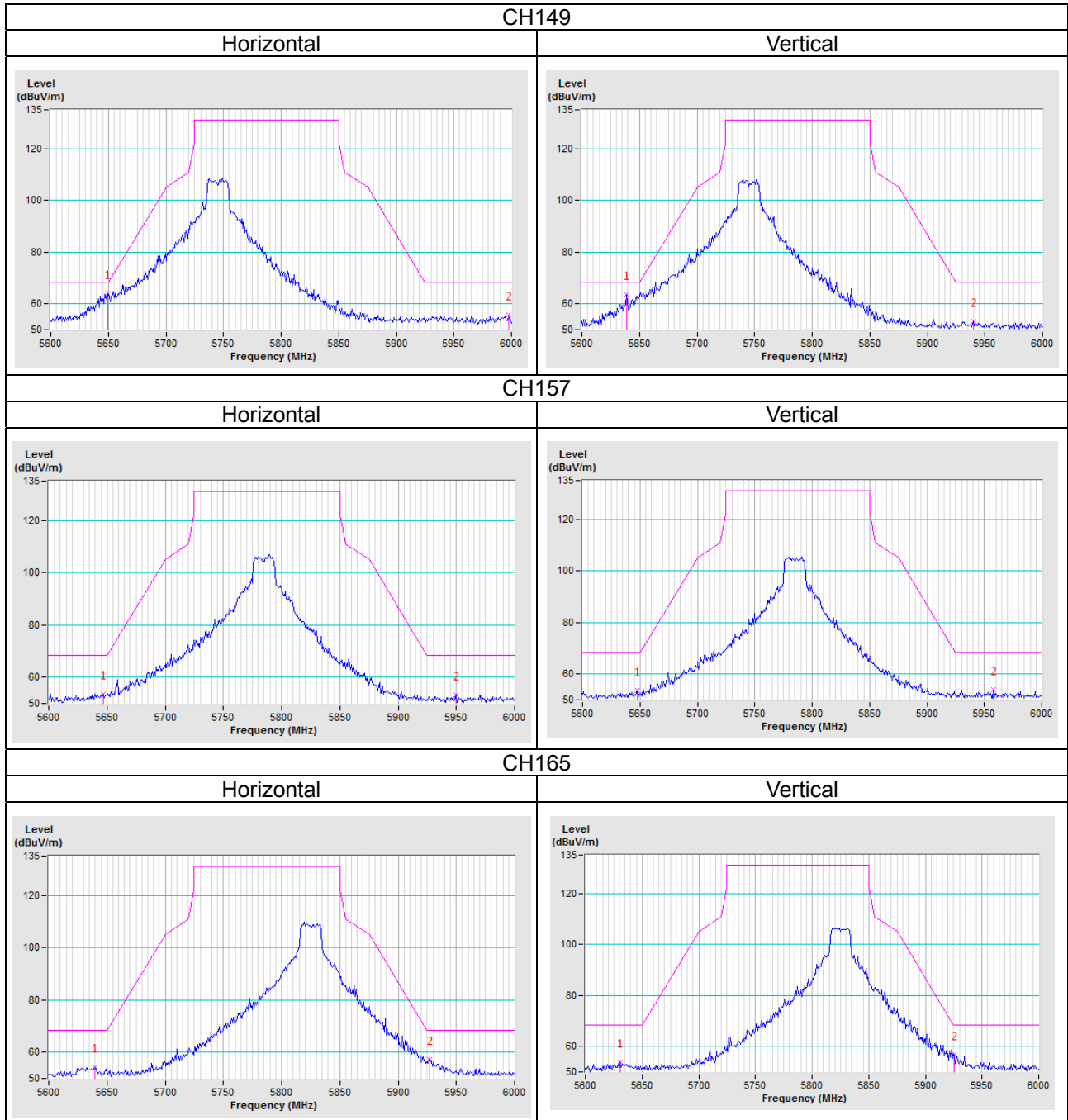
Please refer to the attached file (Test Setup Photo).

Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)

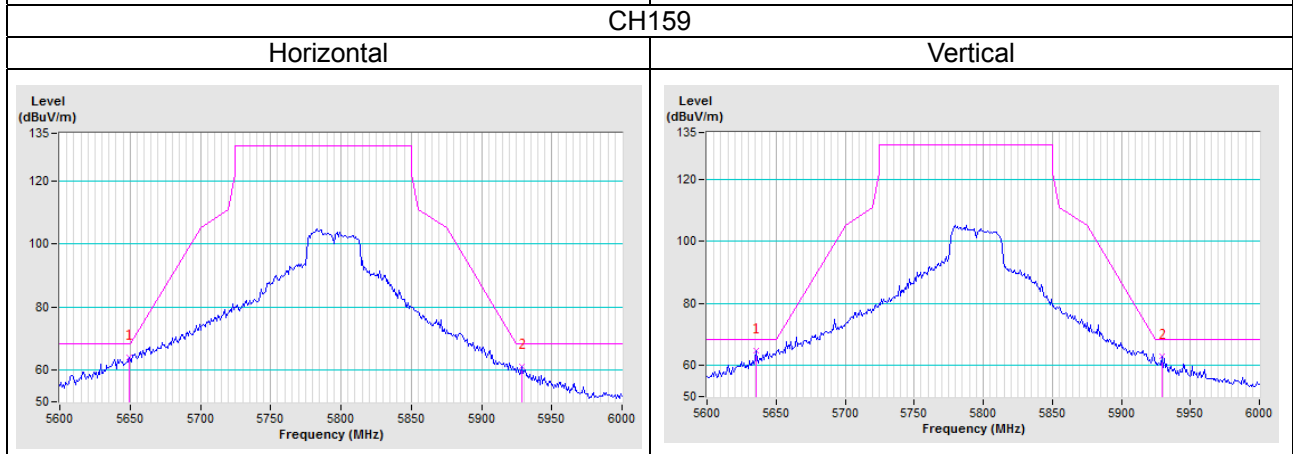
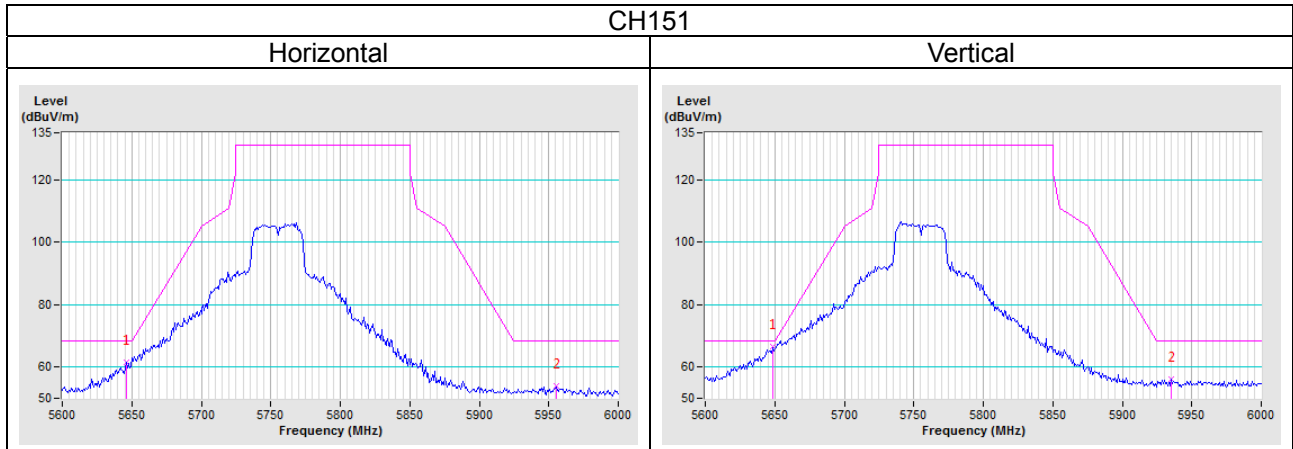
802.11a



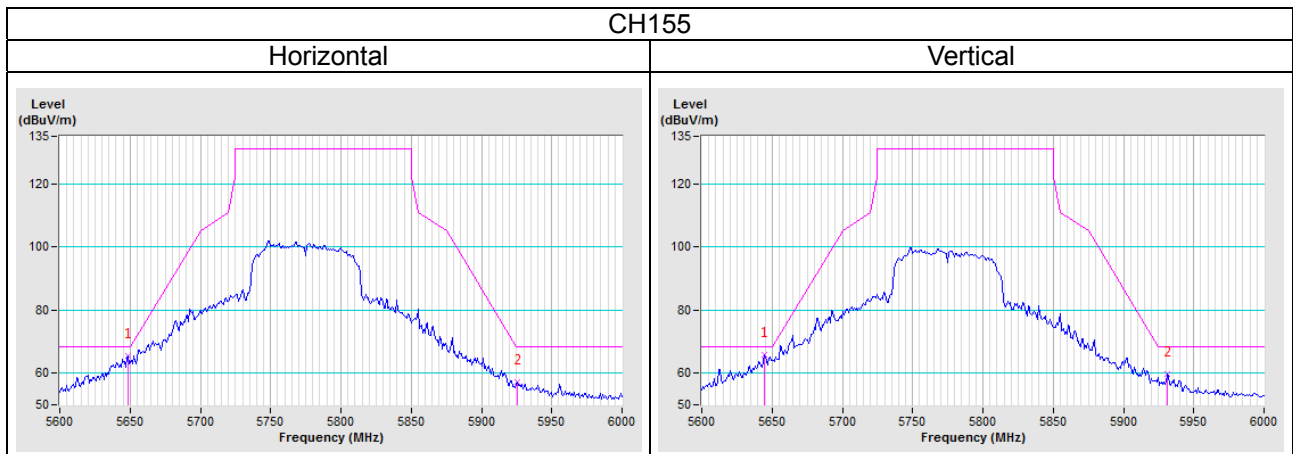
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Appendix – Information of the Testing Laboratories

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

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Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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

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