

FCC Test Report

Report No.: RF190701C26-3

FCC ID: M72-8300

Test Model: Trio 8300

Received Date: Jul. 01, 2019

Test Date: Jul. 01 ~ Jul. 19, 2019

Issued Date: Jul. 24, 2019

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FCC Registration / 788550 / TW0003
Designation Number:



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Release Control Record

Issue No.	Description	Date Issued
RF190701C26-3	Original release.	Jul. 24, 2019

1 Certificate of Conformity

Product: Conference Telephone

Brand: Poly

Test Model: Trio 8300

Sample Status: Engineering sample

Applicant: Polycom Inc.

Test Date: Jul. 01 ~ Jul. 19, 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: Jul. 24, 2019
Pettie Chen / Senior Specialist

Approved by : Bruce Chen , Date: Jul. 24, 2019
Bruce Chen / 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	Pass	Meet the requirement of limit. Minimum passing margin is -16.09dB at 22.31475MHz.
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 -7.4dB at 5470.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is IPEX MHF connector not a standard connector.

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

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) ($\pm$)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.94 dB
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	Conference Telephone
Brand	Poly
Test Model	Trio 8300
Sample Status	Engineering sample
Nominal Voltage	50Vdc (PoE)
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, 5500~5720MHz, 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 5500~5720MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 12 802.11n (HT40), 802.11ac (VHT40): 6 802.11ac (VHT80): 3 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: 21.777mW 5260~5320MHz: 19.724mW 5500~5720MHz: 16.218mW 5745~5825MHz: 14.928mW
Antenna Type	Dipole antenna with 4.62dBi gain
Antenna Connector	IPEX MHF connector
Accessory Device	Refer to note
Cable Supplied	Refer to note

Note:

1. The EUT uses the following devices.

Item	Brand	Model	Specification	Remark
POE Injector	Microsemi	PD-3501GC/AC, 1465-44749-001	I/P: 100-240Vac, 50/60Hz, 0.5A O/P: 50Vdc, 0.35A Cable: 1.75m non-shielded AC power cable without core	Accessory
RP Trio Ex Mics	Polycom	2201-69085-001	-	Accessory, 2 pcs
IP Phone	Poly	Trio 8300	-	Support Unit
RJ11 Cable	Polycom	2457-41220-001	2.1m non-shielded RJ11 cable without core	Accessory, 2 pcs
Network Cable (RJ45)	NA	2457-17977-002	7.6m shielded RJ45 cable without core	Accessory, 25ft, 1 pc
Network Cable (RJ45)	NA	2457-17977-007	2.1m shielded RJ45 cable without core	Accessory, 7ft, 1 pc
USB Cable w/screw	NA	2200-49307-002	1.2m shielded USB cable without core	Accessory, 4ft, 1pc

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 HT20/HT40 and 802.11ac mode for VHT20/VHT40. After pre-testing, 802.11ac (VHT20/VHT40) power is lower than 802.11n (HT20/HT40), therefore 802.11n (HT20/HT40) is the worst case to representative mode in test report. (Final test mode refer section 3.2.1)

3.2 Description of Test Modes

5180~5240MHz:

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

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

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

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

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	5290MHz

5500~5720MHz:

12 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	144	5720 MHz

6 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	142	5710 MHz

3 channels are provided for 802.11ac (VHT80):

Channel	Frequency	Channel	Frequency
106	5530 MHz	122	5610 MHz
138	5690 MHz		

5745~5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

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

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:

- The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **X-plane**.

Radiated Emission Test (Above 1GHz):

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

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	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
	802.11n (HT20)		100 to 144	100, 116, 140, 144	OFDM	6.5
	802.11n (HT40)		102 to 142	102, 110, 134, 142	OFDM	13.5
	802.11ac (VHT80)		106 to 138	106, 122, 138	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)
-	802.11a	5180-5240	36 to 48	36	OFDM	6.0
		5260-5320	52 to 64		OFDM	6.0
		5500-5720	100 to 144		OFDM	6.0
		5745-5825	149 to 165		OFDM	6.0

Power Line Conducted Emission Test:

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)
-	802.11a	5180-5240	36 to 48	36	OFDM	6.0
		5260-5320	52 to 64		OFDM	6.0
		5500-5720	100 to 144		OFDM	6.0
		5745-5825	149 to 165		OFDM	6.0

Antenna Port Conducted Measurement:

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

EUT Configure Mode	Mode	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	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0
	802.11n (HT20)		100 to 144	100, 116, 140, 144	OFDM	6.5
	802.11n (HT40)		102 to 142	102, 110, 134, 142	OFDM	13.5
	802.11ac (VHT80)		106 to 138	106, 122, 138	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 $\geq$ 1G	22deg. C, 66%RH	50Vdc	Han Wu
RE<1G	22deg. C, 66%RH	50Vdc	Han Wu
PLC	24deg. C, 66%RH	50Vdc	Adair Peng
APCM	25deg. C, 60%RH	50Vdc	Leo Tsai

3.3 Duty Cycle of Test Signal

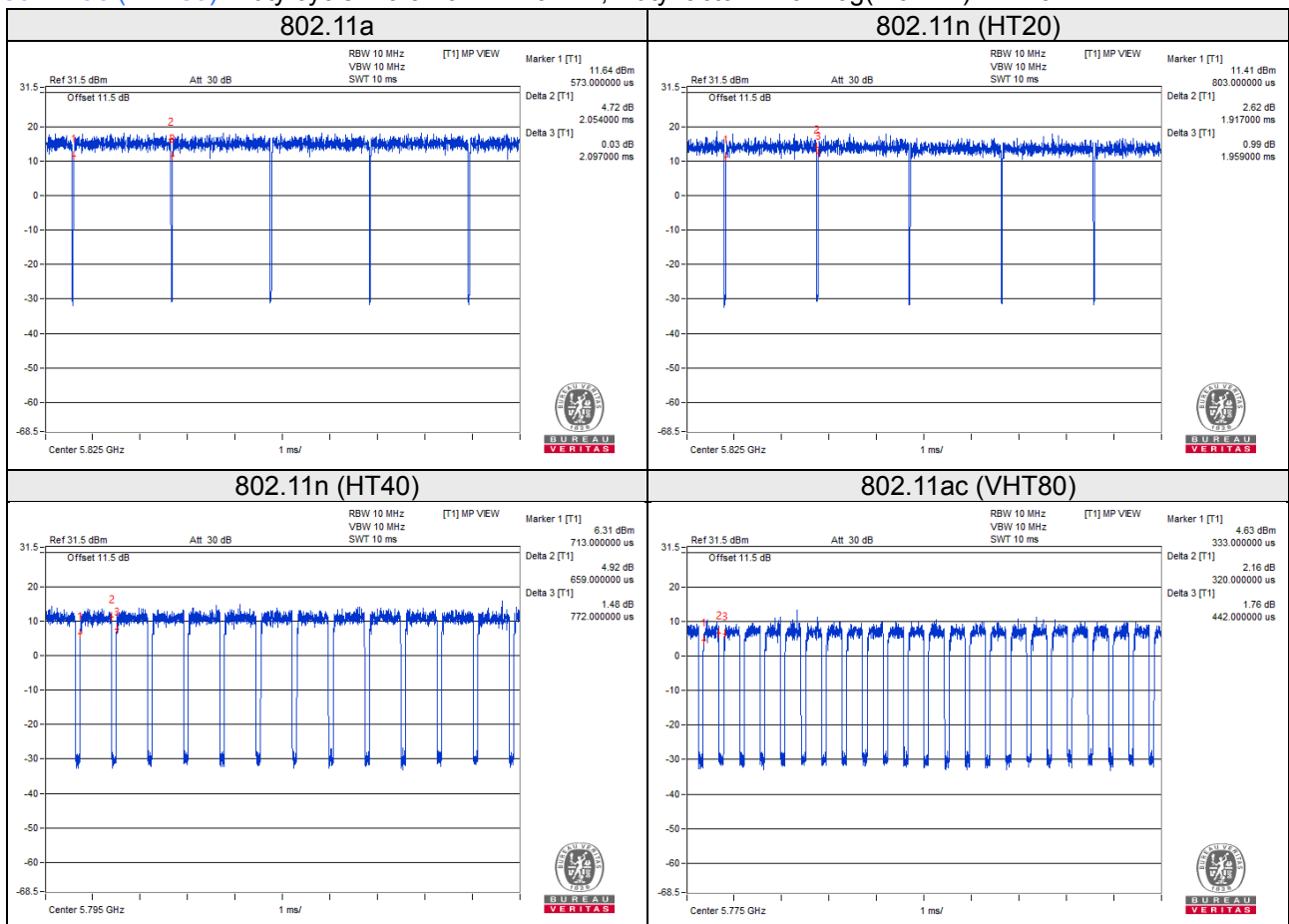
Duty cycle of test signal is < 98 %, duty factor is required

802.11a: Duty cycle = $2.054/2.097 = 0.979$, Duty factor = $10 * \log(1/0.979) = 0.09$

802.11n (HT20): Duty cycle = $1.917/1.959 = 0.979$, Duty factor = $10 * \log(1/0.979) = 0.09$

802.11n (HT40): Duty cycle = $0.659/0.772 = 0.854$, Duty factor = $10 * \log(1/0.854) = 0.69$

802.11ac (VHT80): Duty cycle = $0.32/0.442 = 0.724$, Duty factor = $10 * \log(1/0.724) = 1.40$



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.

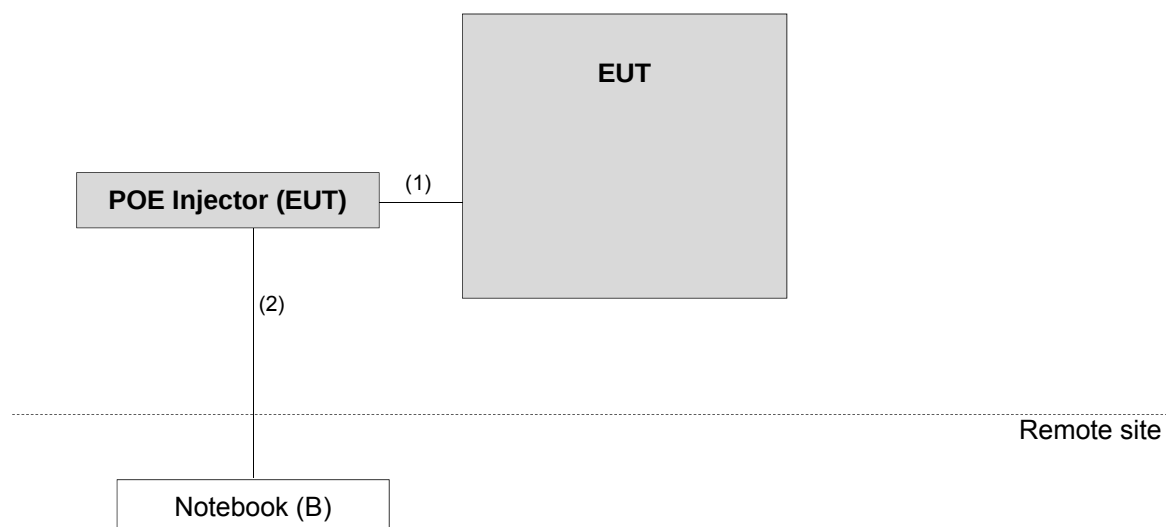
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	POE Injector	Microsemi	PD-3501GC/AC-UK, 1465-44749-001	NA	NA	Accessory
B.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-

Note:

1. All power cords of the above support units are non-shielded (1.8m).
2. Item A acted as a communication partner to transfer data.

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45, Cat5e	1	2.1	Y	0	Accessory of EUT
2.	RJ45, Cat5e	1	7.6	Y	0	Accessory of EUT

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

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:

- The lower limit shall apply at the transition frequencies.
- Emission level (dBuV/m) = 20 log Emission level (uV/m).
- 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	☒	15.407(b)(4)(i)	PK: -27 (dBm/MHz) * ¹ PK: 10 (dBm/MHz) * ² PK: 15.6 (dBm/MHz) * ³ PK: 27 (dBm/MHz) * ⁴	PK: 68.2(dBµV/m) * ¹ PK: 105.2 (dBµV/m) * ² PK: 110.8(dBµV/m) * ³ PK: 122.2 (dBµV/m) * ⁴
	☐	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	
^{*1} beyond 75 MHz or more above of the band edge.			^{*2} below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above.	
^{*3} below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above.			^{*4} from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.	

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver KEYSIGHT	N9038A	MY55420137	Apr. 15, 2019	Apr. 14, 2020
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Jun. 04, 2019	Jun. 03, 2020
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
Preamplifier Agilent (Below 1GHz)	8447D	2944A10638	Aug. 08, 2018	Aug. 07, 2019
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
RF signal cable Woken	8D-FB	Cable-CH9-01	Jul. 31, 2018	Jul. 30, 2019
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
Pre-amplifier (18GHz- 40GHz) EMC	EMC184045B	980175	Nov. 14, 2018	Nov. 13, 2019
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190 004/MY55190007/MY55 210005	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:

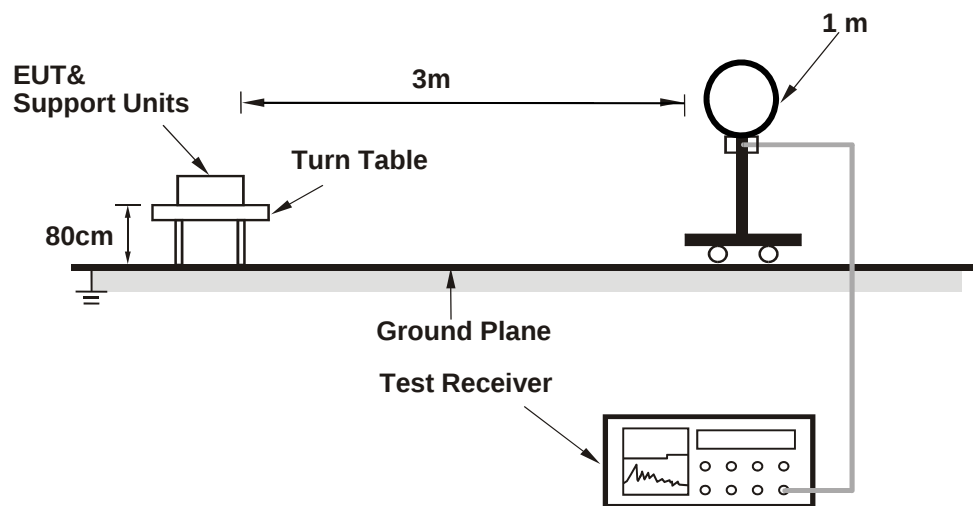
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

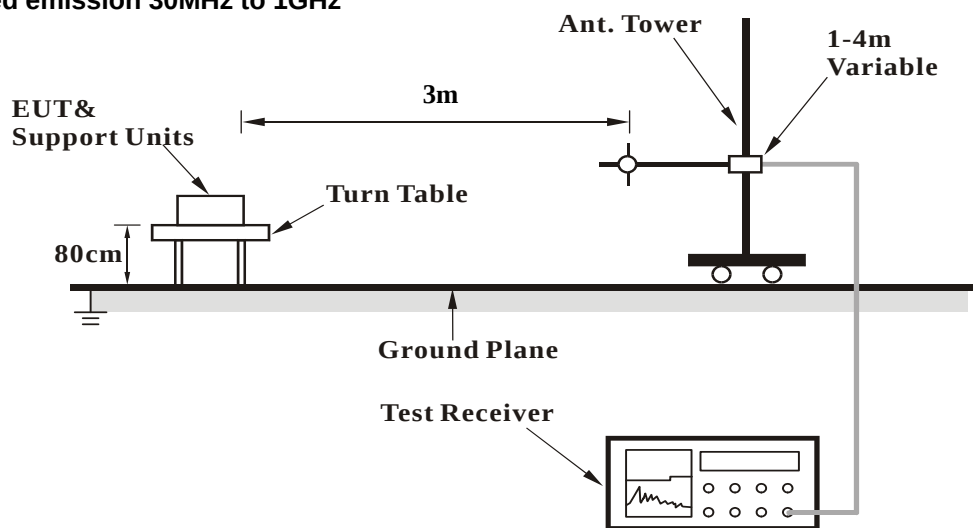
No deviation.

4.1.5 Test Set Up

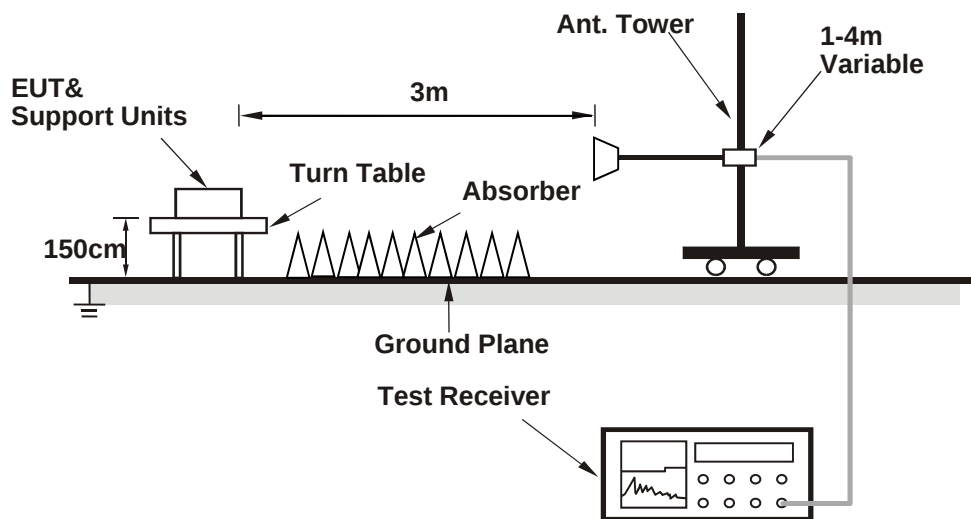
For Radiated emission below 30MHz



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

- Placed the EUT on the testing table.
- Prepared a notebook to act as a communication partner and placed it outside of testing area.
- The communication partner connected with EUT via a RJ45 cable and ran a test program (provided by manufacturer) to enable EUT under transmission condition continuously at specific channel frequency.
- The communication partner sent data to EUT by command "PING".

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	56.0 PK	74.0	-18.0	1.00 H	139	52.5	3.5
2	5150.00	40.2 AV	54.0	-13.8	1.00 H	139	36.7	3.5
3	*5180.00	101.2 PK			1.00 H	135	63.2	38.0
4	*5180.00	91.5 AV			1.00 H	135	53.5	38.0
5	#10360.00	55.6 PK	68.2	-12.6	2.88 H	226	40.0	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	54.5 PK	74.0	-19.5	1.00 V	256	51.0	3.5
2	5150.00	40.4 AV	54.0	-13.6	1.00 V	256	36.9	3.5
3	*5180.00	98.6 PK			1.00 V	258	60.6	38.0
4	*5180.00	88.8 AV			1.00 V	258	50.8	38.0
5	#10360.00	54.3 PK	68.2	-13.9	1.93 V	17	38.7	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 40	DETECTOR	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz	FUNCTION	Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	100.3 PK			1.02 H	147	62.4	37.9
2	*5200.00	91.1 AV			1.02 H	147	53.2	37.9
3	#10400.00	56.5 PK	68.2	-11.7	2.91 H	216	40.9	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	*5200.00	98.0 PK			3.41 V	170	60.1	37.9
2	*5200.00	88.6 AV			3.41 V	170	50.7	37.9
3	#10400.00	56.7 PK	68.2	-11.5	1.97 V	25	41.1	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	101.1 PK			1.10 H	148	63.4	37.7
2	*5240.00	91.5 AV			1.10 H	148	53.8	37.7
3	5350.00	53.6 PK	74.0	-20.4	1.11 H	147	50.2	3.4
4	5350.00	39.8 AV	54.0	-14.2	1.11 H	147	36.4	3.4
5	#10480.00	56.4 PK	68.2	-11.8	2.87 H	225	41.0	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	98.7 PK			3.47 V	169	61.0	37.7
2	*5240.00	89.1 AV			3.47 V	169	51.4	37.7
3	5350.00	52.9 PK	74.0	-21.1	1.10 V	148	49.5	3.4
4	5350.00	39.6 AV	54.0	-14.4	1.10 V	148	36.2	3.4
5	#10480.00	55.9 PK	68.2	-12.3	1.95 V	20	40.5	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.

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	53.5 PK	74.0	-20.5	1.48 H	28	50.0	3.5
2	5150.00	40.0 AV	54.0	-14.0	1.48 H	28	36.5	3.5
3	*5260.00	96.7 PK			1.43 H	24	59.1	37.6
4	*5260.00	87.2 AV			1.43 H	24	49.6	37.6
5	#10520.00	55.7 PK	68.2	-12.5	2.89 H	220	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	53.1 PK	74.0	-20.9	1.01 V	21	49.6	3.5
2	5150.00	29.6 AV	54.0	-24.4	1.01 V	21	26.1	3.5
3	*5260.00	94.0 PK			1.00 V	19	56.4	37.6
4	*5260.00	84.4 AV			1.00 V	19	46.8	37.6
5	#10520.00	56.4 PK	68.2	-11.8	1.96 V	21	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	96.2 PK			1.39 H	20	58.6	37.6
2	*5300.00	86.8 AV			1.39 H	20	49.2	37.6
3	11060.00	57.0 PK	74.0	-17.0	2.96 H	222	40.3	16.7
4	11060.00	43.9 AV	54.0	-10.1	2.96 H	222	27.2	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	*5300.00	93.6 PK			1.02 V	22	56.0	37.6
2	*5300.00	84.4 AV			1.02 V	22	46.8	37.6
3	11060.00	58.0 PK	74.0	-16.0	1.94 V	15	41.3	16.7
4	11060.00	44.1 AV	54.0	-9.9	1.94 V	15	27.4	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 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	97.0 PK			1.46 H	20	59.3	37.7
2	*5320.00	87.4 AV			1.46 H	20	49.7	37.7
3	5350.00	52.8 PK	74.0	-21.2	1.42 H	22	49.4	3.4
4	5350.00	39.7 AV	54.0	-14.3	1.42 H	22	36.3	3.4
5	10640.00	57.1 PK	74.0	-16.9	2.85 H	228	41.4	15.7
6	10640.00	43.1 AV	54.0	-10.9	2.85 H	228	27.4	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	94.2 PK			1.02 V	16	56.5	37.7
2	*5320.00	85.0 AV			1.02 V	16	47.3	37.7
3	5350.00	52.6 PK	74.0	-21.4	1.01 V	15	49.2	3.4
4	5350.00	40.0 AV	54.0	-14.0	1.01 V	15	36.6	3.4
5	10640.00	57.0 PK	74.0	-17.0	1.90 V	26	41.3	15.7
6	10640.00	43.1 AV	54.0	-10.9	1.90 V	26	27.4	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	54.4 PK	74.0	-19.6	1.52 H	20	50.5	3.9
2	5460.00	41.1 AV	54.0	-12.9	1.52 H	20	37.2	3.9
3	#5470.00	54.9 PK	68.2	-13.3	1.51 H	19	51.0	3.9
4	*5500.00	94.6 PK			1.51 H	19	56.4	38.2
5	*5500.00	85.0 AV			1.51 H	19	46.8	38.2
6	11000.00	57.6 PK	74.0	-16.4	2.87 H	221	40.3	17.3
7	11000.00	44.7 AV	54.0	-9.3	2.87 H	221	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	54.1 PK	74.0	-19.9	1.05 V	16	50.2	3.9
2	5460.00	41.0 AV	54.0	-13.0	1.05 V	16	37.1	3.9
3	#5470.00	55.0 PK	68.2	-13.2	1.01 V	21	51.1	3.9
4	*5500.00	91.8 PK			1.05 V	16	53.6	38.2
5	*5500.00	82.1 AV			1.05 V	16	43.9	38.2
6	11000.00	58.2 PK	74.0	-15.8	1.96 V	27	40.9	17.3
7	11000.00	44.8 AV	54.0	-9.2	1.96 V	27	27.5	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	93.3 PK			1.54 H	11	55.1	38.2
2	*5580.00	83.4 AV			1.54 H	11	45.2	38.2
3	11160.00	56.8 PK	74.0	-17.2	2.83 H	219	40.8	16.0
4	11160.00	43.2 AV	54.0	-10.8	2.83 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	90.5 PK			1.04 V	17	52.3	38.2
2	*5580.00	80.9 AV			1.04 V	17	42.7	38.2
3	11160.00	57.0 PK	74.0	-17.0	1.92 V	11	41.0	16.0
4	11160.00	43.2 AV	54.0	-10.8	1.92 V	11	27.2	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	92.8 PK			1.28 H	8	54.4	38.4
2	*5700.00	83.3 AV			1.28 H	8	44.9	38.4
3	#5725.00	57.7 PK	68.2	-10.5	1.21 H	7	53.6	4.1
4	11400.00	57.6 PK	74.0	-16.4	2.98 H	235	41.2	16.4
5	11400.00	43.8 AV	54.0	-10.2	2.98 H	235	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	90.3 PK			1.01 V	21	51.9	38.4
2	*5700.00	80.4 AV			1.01 V	21	42.0	38.4
3	#5725.00	57.3 PK	68.2	-10.9	1.01 V	15	53.2	4.1
4	11400.00	56.8 PK	74.0	-17.2	1.93 V	9	40.4	16.4
5	11400.00	43.9 AV	54.0	-10.1	1.93 V	9	27.5	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 144	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	53.5 PK	74.0	-20.5	1.16 H	1	49.6	3.9
2	5460.00	40.6 AV	54.0	-13.4	1.16 H	1	36.7	3.9
3	#5470.00	54.3 PK	68.2	-13.9	1.17 H	9	50.4	3.9
4	*5720.00	92.5 PK			1.18 H	3	54.1	38.4
5	*5720.00	83.0 AV			1.18 H	3	44.6	38.4
6	#5850.00	54.9 PK	68.2	-13.3	1.16 H	9	50.6	4.3
7	11440.00	57.6 PK	74.0	-16.4	2.93 H	233	41.5	16.1
8	11440.00	43.7 AV	54.0	-10.3	2.93 H	233	27.6	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	54.0 PK	74.0	-20.0	1.02 V	18	50.1	3.9
2	5460.00	40.1 AV	54.0	-13.9	1.02 V	18	36.2	3.9
3	#5470.00	54.1 PK	68.2	-14.1	1.02 V	16	50.2	3.9
4	*5720.00	89.8 PK			1.01 V	18	51.4	38.4
5	*5720.00	80.5 AV			1.01 V	18	42.1	38.4
6	#5850.00	54.8 PK	68.2	-13.4	1.03 V	17	50.5	4.3
7	11440.00	56.2 PK	74.0	-17.8	2.00 V	17	40.1	16.1
8	11440.00	43.7 AV	54.0	-10.3	2.00 V	17	27.6	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 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	#5630.40	53.0 PK	68.2	-15.2	1.00 H	299	49.1	3.9
2	*5745.00	97.8 PK			1.00 H	299	59.3	38.5
3	*5745.00	88.3 AV			1.00 H	299	49.8	38.5
4	#5937.60	53.1 PK	68.2	-15.1	1.00 H	299	48.4	4.7
5	11490.00	56.0 PK	74.0	-18.0	2.91 H	230	40.3	15.7
6	11490.00	43.3 AV	54.0	-10.7	2.91 H	230	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	#5627.20	53.2 PK	68.2	-15.0	1.09 V	17	49.3	3.9
2	*5745.00	94.9 PK			1.09 V	17	56.4	38.5
3	*5745.00	85.3 AV			1.09 V	17	46.8	38.5
4	#5932.80	53.2 PK	68.2	-15.0	1.09 V	17	48.5	4.7
5	11490.00	56.4 PK	74.0	-17.6	2.02 V	35	40.7	15.7
6	11490.00	43.2 AV	54.0	-10.8	2.02 V	35	27.5	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 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	#5632.00	52.7 PK	68.2	-15.5	1.00 H	297	48.8	3.9
2	*5785.00	97.3 PK			1.00 H	297	58.6	38.7
3	*5785.00	87.8 AV			1.00 H	297	49.1	38.7
4	#5960.00	53.8 PK	68.2	-14.4	1.00 H	297	49.0	4.8
5	11570.00	55.5 PK	74.0	-18.5	2.81 H	221	40.0	15.5
6	11570.00	42.7 AV	54.0	-11.3	2.81 H	221	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	#5639.20	53.5 PK	68.2	-14.7	1.12 V	15	49.5	4.0
2	*5785.00	94.6 PK			1.12 V	15	55.9	38.7
3	*5785.00	85.0 AV			1.12 V	15	46.3	38.7
4	#5939.20	53.7 PK	68.2	-14.5	1.12 V	15	49.0	4.7
5	11570.00	57.0 PK	74.0	-17.0	2.01 V	31	41.5	15.5
6	11570.00	42.8 AV	54.0	-11.2	2.01 V	31	27.3	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 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	#5607.20	53.3 PK	68.2	-14.9	1.00 H	298	49.5	3.8
2	*5825.00	98.5 PK			1.00 H	298	59.7	38.8
3	*5825.00	88.9 AV			1.00 H	298	50.1	38.8
4	#5981.60	52.9 PK	68.2	-15.3	1.00 H	298	48.2	4.7
5	11650.00	55.8 PK	74.0	-18.2	2.95 H	225	40.4	15.4
6	11650.00	43.0 AV	54.0	-11.0	2.95 H	225	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	#5648.80	53.3 PK	68.2	-14.9	1.05 V	16	49.2	4.1
2	*5825.00	95.6 PK			1.05 V	16	56.8	38.8
3	*5825.00	86.2 AV			1.05 V	16	47.4	38.8
4	#5959.20	52.9 PK	68.2	-15.3	1.05 V	16	48.2	4.7
5	11650.00	56.6 PK	74.0	-17.4	1.92 V	29	41.2	15.4
6	11650.00	42.8 AV	54.0	-11.2	1.92 V	29	27.4	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	48.1 PK	74.0	-25.9	1.00 H	147	44.6	3.5
2	5150.00	44.0 AV	54.0	-10.0	1.00 H	147	40.5	3.5
3	*5180.00	100.1 PK			1.05 H	142	62.1	38.0
4	*5180.00	90.1 AV			1.05 H	142	52.1	38.0
5	#10360.00	55.7 PK	68.2	-12.5	2.94 H	217	40.1	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	44.8 PK	74.0	-29.2	3.44 V	170	41.3	3.5
2	5150.00	40.7 AV	54.0	-13.3	3.44 V	170	37.2	3.5
3	*5180.00	96.6 PK			3.44 V	170	58.6	38.0
4	*5180.00	86.6 AV			3.44 V	170	48.6	38.0
5	#10360.00	55.9 PK	68.2	-12.3	1.92 V	32	40.3	15.6

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	101.5 PK			1.01 H	143	63.6	37.9
2	*5200.00	90.8 AV			1.01 H	143	52.9	37.9
3	#10400.00	55.9 PK	68.2	-12.3	3.00 H	215	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	*5200.00	98.9 PK			3.45 V	174	61.0	37.9
2	*5200.00	88.1 AV			3.45 V	174	50.2	37.9
3	#10400.00	55.6 PK	68.2	-12.6	1.86 V	21	40.0	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	100.1 PK			1.00 H	147	62.4	37.7
2	*5240.00	90.0 AV			1.00 H	147	52.3	37.7
3	5350.00	52.4 PK	74.0	-21.6	1.00 H	143	49.0	3.4
4	5350.00	39.4 AV	54.0	-14.6	1.00 H	143	36.0	3.4
5	#10480.00	55.4 PK	68.2	-12.8	2.89 H	227	40.0	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	97.7 PK			3.34 V	169	60.0	37.7
2	*5240.00	87.1 AV			3.34 V	169	49.4	37.7
3	5350.00	52.2 PK	74.0	-21.8	3.41 V	171	48.8	3.4
4	5350.00	39.5 AV	54.0	-14.5	3.41 V	171	36.1	3.4
5	#10480.00	56.3 PK	68.2	-11.9	1.91 V	29	40.9	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	52.4 PK	74.0	-21.6	1.40 H	27	48.9	3.5
2	5150.00	39.5 AV	54.0	-14.5	1.40 H	27	36.0	3.5
3	*5260.00	98.0 PK			1.45 H	24	60.4	37.6
4	*5260.00	86.9 AV			1.45 H	24	49.3	37.6
5	#10520.00	56.4 PK	68.2	-11.8	2.94 H	219	41.1	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	52.7 PK	74.0	-21.3	1.01 V	18	49.2	3.5
2	5150.00	39.6 AV	54.0	-14.4	1.01 V	18	36.1	3.5
3	*5260.00	95.7 PK			1.05 V	19	58.1	37.6
4	*5260.00	84.5 AV			1.05 V	19	46.9	37.6
5	#10520.00	56.0 PK	68.2	-12.2	2.03 V	18	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	96.7 PK			1.36 H	20	59.1	37.6
2	*5300.00	86.4 AV			1.36 H	20	48.8	37.6
3	10600.00	56.7 PK	74.0	-17.3	2.91 H	236	41.2	15.5
4	10600.00	42.7 AV	54.0	-11.3	2.91 H	236	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	*5300.00	94.0 PK			1.05 V	17	56.4	37.6
2	*5300.00	83.6 AV			1.05 V	17	46.0	37.6
3	10600.00	55.9 PK	74.0	-18.1	1.90 V	12	40.4	15.5
4	10600.00	42.8 AV	54.0	-11.2	1.90 V	12	27.3	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	96.7 PK			1.32 H	21	59.0	37.7
2	*5320.00	86.5 AV			1.32 H	21	48.8	37.7
3	5350.00	52.6 PK	74.0	-21.4	1.38 H	24	49.2	3.4
4	5350.00	39.8 AV	54.0	-14.2	1.38 H	24	36.4	3.4
5	10640.00	56.3 PK	74.0	-17.7	2.90 H	218	40.6	15.7
6	10640.00	42.9 AV	54.0	-11.1	2.90 H	218	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	*5320.00	94.0 PK			1.02 V	16	56.3	37.7
2	*5320.00	84.1 AV			1.02 V	16	46.4	37.7
3	5350.00	52.5 PK	74.0	-21.5	1.00 V	19	49.1	3.4
4	5350.00	40.0 AV	54.0	-14.0	1.00 V	19	36.6	3.4
5	10640.00	57.1 PK	74.0	-16.9	2.02 V	12	41.4	15.7
6	10640.00	43.0 AV	54.0	-11.0	2.02 V	12	27.3	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	53.6 PK	74.0	-20.4	1.42 H	10	49.7	3.9
2	5460.00	40.5 AV	54.0	-13.5	1.42 H	10	36.6	3.9
3	#5470.00	54.5 PK	68.2	-13.7	1.42 H	16	50.6	3.9
4	*5500.00	94.8 PK			1.40 H	11	56.6	38.2
5	*5500.00	84.7 AV			1.40 H	11	46.5	38.2
6	11000.00	58.3 PK	74.0	-15.7	2.85 H	224	41.0	17.3
7	11000.00	44.7 AV	54.0	-9.3	2.85 H	224	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	54.0 PK	74.0	-20.0	1.01 V	16	50.1	3.9
2	5460.00	40.7 AV	54.0	-13.3	1.01 V	16	36.8	3.9
3	#5470.00	54.8 PK	68.2	-13.4	1.01 V	16	50.9	3.9
4	*5500.00	92.3 PK			1.02 V	16	54.1	38.2
5	*5500.00	82.0 AV			1.02 V	16	43.8	38.2
6	11000.00	58.0 PK	74.0	-16.0	1.89 V	14	40.7	17.3
7	11000.00	44.7 AV	54.0	-9.3	1.89 V	14	27.4	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	95.6 PK			1.05 H	2	57.4	38.2
2	*5580.00	84.8 AV			1.05 H	2	46.6	38.2
3	11160.00	57.5 PK	74.0	-16.5	2.91 H	219	41.5	16.0
4	11160.00	43.2 AV	54.0	-10.8	2.91 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	92.9 PK			1.03 V	19	54.7	38.2
2	*5580.00	82.1 AV			1.03 V	19	43.9	38.2
3	11160.00	56.9 PK	74.0	-17.1	1.92 V	19	40.9	16.0
4	11160.00	43.2 AV	54.0	-10.8	1.92 V	19	27.2	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	93.4 PK			1.16 H	7	55.0	38.4
2	*5700.00	83.7 AV			1.16 H	7	45.3	38.4
3	#5725.00	55.6 PK	68.2	-12.6	1.15 H	6	51.5	4.1
4	11400.00	57.3 PK	74.0	-16.7	2.98 H	229	40.9	16.4
5	11400.00	43.9 AV	54.0	-10.1	2.98 H	229	27.5	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	91.0 PK			1.02 V	21	52.6	38.4
2	*5700.00	81.2 AV			1.02 V	21	42.8	38.4
3	#5725.00	55.2 PK	68.2	-13.0	1.05 V	17	51.1	4.1
4	11400.00	57.5 PK	74.0	-16.5	1.95 V	0	41.1	16.4
5	11400.00	43.8 AV	54.0	-10.2	1.95 V	0	27.4	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 144	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	53.8 PK	74.0	-20.2	1.43 H	6	49.9	3.9
2	5460.00	40.8 AV	54.0	-13.2	1.43 H	6	36.9	3.9
3	#5470.00	53.6 PK	68.2	-14.6	1.43 H	3	49.7	3.9
4	*5720.00	93.3 PK			1.47 H	6	54.9	38.4
5	*5720.00	83.2 AV			1.47 H	6	44.8	38.4
6	#5850.00	54.8 PK	68.2	-13.4	1.53 H	7	50.5	4.3
7	11440.00	56.5 PK	74.0	-17.5	2.89 H	224	40.4	16.1
8	11440.00	43.4 AV	54.0	-10.6	2.89 H	224	27.3	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	54.0 PK	74.0	-20.0	1.03 V	19	50.1	3.9
2	5460.00	40.1 AV	54.0	-13.9	1.03 V	19	36.2	3.9
3	#5470.00	54.2 PK	68.2	-14.0	1.03 V	17	50.3	3.9
4	*5720.00	90.9 PK			1.03 V	19	52.5	38.4
5	*5720.00	80.6 AV			1.03 V	19	42.2	38.4
6	#5850.00	54.8 PK	68.2	-13.4	1.02 V	22	50.5	4.3
7	11440.00	56.6 PK	74.0	-17.4	1.85 V	19	40.5	16.1
8	11440.00	43.3 AV	54.0	-10.7	1.85 V	19	27.2	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 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	#5632.80	53.1 PK	68.2	-15.1	1.00 H	299	49.1	4.0
2	*5745.00	97.5 PK			1.00 H	299	59.0	38.5
3	*5745.00	87.5 AV			1.00 H	299	49.0	38.5
4	#5972.00	53.7 PK	68.2	-14.5	1.00 H	299	49.0	4.7
5	11490.00	56.7 PK	74.0	-17.3	2.96 H	228	41.0	15.7
6	11490.00	43.0 AV	54.0	-11.0	2.96 H	228	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	#5644.00	53.6 PK	68.2	-14.6	1.06 V	16	49.5	4.1
2	*5745.00	94.7 PK			1.06 V	16	56.2	38.5
3	*5745.00	84.6 AV			1.06 V	16	46.1	38.5
4	#5931.20	53.6 PK	68.2	-14.6	1.06 V	16	48.9	4.7
5	11490.00	57.1 PK	74.0	-16.9	2.05 V	19	41.4	15.7
6	11490.00	43.0 AV	54.0	-11.0	2.05 V	19	27.3	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	#5639.20	52.9 PK	68.2	-15.3	1.00 H	298	48.9	4.0
2	*5785.00	97.9 PK			1.00 H	298	59.2	38.7
3	*5785.00	87.4 AV			1.00 H	298	48.7	38.7
4	#5946.40	53.4 PK	68.2	-14.8	1.00 H	298	48.7	4.7
5	11570.00	56.3 PK	74.0	-17.7	2.85 H	230	40.8	15.5
6	11570.00	43.0 AV	54.0	-11.0	2.85 H	230	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	#5650.40	53.6 PK	68.5	-14.9	1.04 V	14	49.5	4.1
2	*5785.00	95.1 PK			1.04 V	14	56.4	38.7
3	*5785.00	84.4 AV			1.04 V	14	45.7	38.7
4	#5927.20	53.7 PK	68.2	-14.5	1.04 V	14	49.0	4.7
5	11570.00	55.8 PK	74.0	-18.2	2.04 V	23	40.3	15.5
6	11570.00	42.7 AV	54.0	-11.3	2.04 V	23	27.2	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	52.2 PK	68.2	-16.0	1.01 H	298	48.1	4.1
2	*5825.00	98.1 PK			1.01 H	298	59.3	38.8
3	*5825.00	88.3 AV			1.01 H	298	49.5	38.8
4	#5956.00	52.8 PK	68.2	-15.4	1.01 H	298	48.1	4.7
5	11650.00	56.1 PK	74.0	-17.9	2.82 H	230	40.7	15.4
6	11650.00	42.8 AV	54.0	-11.2	2.82 H	230	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	#5608.80	53.2 PK	68.2	-15.0	1.13 V	21	49.4	3.8
2	*5825.00	95.5 PK			1.13 V	21	56.7	38.8
3	*5825.00	85.6 AV			1.13 V	21	46.8	38.8
4	#5934.40	53.8 PK	68.2	-14.4	1.13 V	21	49.1	4.7
5	11650.00	56.1 PK	74.0	-17.9	1.90 V	31	40.7	15.4
6	11650.00	42.6 AV	54.0	-11.4	1.90 V	31	27.2	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)
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	58.1 PK	74.0	-15.9	1.11 H	150	54.6	3.5
2	5150.00	42.9 AV	54.0	-11.1	1.11 H	150	39.4	3.5
3	*5190.00	98.6 PK			1.12 H	150	60.7	37.9
4	*5190.00	89.4 AV			1.12 H	150	51.5	37.9
5	#10380.00	57.2 PK	68.2	-11.0	3.03 H	226	41.5	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	5150.00	56.7 PK	74.0	-17.3	3.43 V	174	53.2	3.5
2	5150.00	42.8 AV	54.0	-11.2	3.43 V	174	39.3	3.5
3	*5190.00	96.3 PK			3.42 V	173	58.4	37.9
4	*5190.00	86.7 AV			3.42 V	173	48.8	37.9
5	#10380.00	56.1 PK	68.2	-12.1	1.86 V	30	40.4	15.7

Remarks:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency.
- " # ": 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	*5230.00	97.6 PK			1.12 H	151	59.9	37.7
2	*5230.00	87.6 AV			1.12 H	151	49.9	37.7
3	5350.00	52.9 PK	74.0	-21.1	1.11 H	147	49.5	3.4
4	5350.00	40.3 AV	54.0	-13.7	1.11 H	147	36.9	3.4
5	#10460.00	56.5 PK	68.2	-11.7	3.01 H	221	41.1	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	*5230.00	95.2 PK			3.38 V	171	57.5	37.7
2	*5230.00	85.0 AV			3.38 V	171	47.3	37.7
3	5350.00	53.6 PK	74.0	-20.4	3.41 V	173	50.2	3.4
4	5350.00	40.5 AV	54.0	-13.5	3.41 V	173	37.1	3.4
5	#10460.00	56.1 PK	68.2	-12.1	1.96 V	33	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	52.6 PK	74.0	-21.4	1.14 H	28	49.1	3.5
2	5150.00	40.3 AV	54.0	-13.7	1.14 H	28	36.8	3.5
3	*5270.00	94.5 PK			1.18 H	23	56.9	37.6
4	*5270.00	84.0 AV			1.18 H	23	46.4	37.6
5	#10540.00	56.2 PK	68.2	-12.0	2.81 H	236	40.8	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	52.7 PK	74.0	-21.3	1.05 V	18	49.2	3.5
2	5150.00	40.1 AV	54.0	-13.9	1.05 V	18	36.6	3.5
3	*5270.00	92.2 PK			1.02 V	17	54.6	37.6
4	*5270.00	81.5 AV			1.02 V	17	43.9	37.6
5	#10540.00	55.7 PK	68.2	-12.5	1.94 V	14	40.3	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	93.7 PK			1.22 H	22	56.0	37.7
2	*5310.00	84.3 AV			1.22 H	22	46.6	37.7
3	5350.00	52.8 PK	74.0	-21.2	1.27 H	20	49.4	3.4
4	5350.00	40.6 AV	54.0	-13.4	1.27 H	20	37.2	3.4
5	10620.00	56.8 PK	74.0	-17.2	2.80 H	234	41.1	15.7
6	10620.00	42.9 AV	54.0	-11.1	2.80 H	234	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	91.2 PK			1.02 V	16	53.5	37.7
2	*5310.00	81.4 AV			1.02 V	16	43.7	37.7
3	5350.00	53.0 PK	74.0	-21.0	1.03 V	16	49.6	3.4
4	5350.00	40.2 AV	54.0	-13.8	1.03 V	16	36.8	3.4
5	10620.00	56.1 PK	74.0	-17.9	1.86 V	19	40.4	15.7
6	10620.00	42.9 AV	54.0	-11.1	1.86 V	19	27.2	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.

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	55.1 PK	74.0	-18.9	1.25 H	12	51.2	3.9
2	5460.00	41.8 AV	54.0	-12.2	1.25 H	12	37.9	3.9
3	#5470.00	54.1 PK	68.2	-14.1	1.24 H	12	50.2	3.9
4	*5510.00	89.4 PK			1.25 H	14	51.1	38.3
5	*5510.00	80.1 AV			1.25 H	14	41.8	38.3
6	11020.00	58.3 PK	74.0	-15.7	2.88 H	222	41.2	17.1
7	11020.00	44.7 AV	54.0	-9.3	2.88 H	222	27.6	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	54.7 PK	74.0	-19.3	1.00 V	15	50.8	3.9
2	5460.00	40.8 AV	54.0	-13.2	1.00 V	15	36.9	3.9
3	#5470.00	54.5 PK	68.2	-13.7	1.00 V	17	50.6	3.9
4	*5510.00	86.8 PK			1.04 V	18	48.5	38.3
5	*5510.00	77.6 AV			1.04 V	18	39.3	38.3
6	11020.00	57.7 PK	74.0	-16.3	1.99 V	13	40.6	17.1
7	11020.00	44.4 AV	54.0	-9.6	1.99 V	13	27.3	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	*5550.00	90.1 PK			1.07 H	11	51.9	38.2
2	*5550.00	80.4 AV			1.07 H	11	42.2	38.2
3	11100.00	57.0 PK	74.0	-17.0	2.90 H	234	40.8	16.2
4	11100.00	43.8 AV	54.0	-10.2	2.90 H	234	27.6	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	*5550.00	87.8 PK			1.04 V	21	49.6	38.2
2	*5550.00	77.6 AV			1.04 V	21	39.4	38.2
3	11100.00	58.1 PK	74.0	-15.9	2.03 V	25	40.8	17.3
4	11100.00	44.8 AV	54.0	-9.2	2.03 V	25	27.5	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 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	89.2 PK			1.00 H	4	50.7	38.5
2	*5670.00	80.0 AV			1.00 H	4	41.5	38.5
3	#5725.00	54.4 PK	68.2	-13.8	1.00 H	6	50.3	4.1
4	11340.00	57.2 PK	74.0	-16.8	2.91 H	225	40.6	16.6
5	11340.00	44.0 AV	54.0	-10.0	2.91 H	225	27.4	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	86.9 PK			1.01 V	20	48.4	38.5
2	*5670.00	77.1 AV			1.01 V	20	38.6	38.5
3	#5745.00	54.7 PK	68.2	-13.5	1.01 V	20	50.6	4.1
4	11340.00	57.1 PK	74.0	-16.9	1.92 V	10	40.5	16.6
5	11340.00	43.9 AV	54.0	-10.1	1.92 V	10	27.3	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 142	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	54.6 PK	74.0	-19.4	1.00 H	302	50.7	3.9
2	5460.00	41.2 AV	54.0	-12.8	1.00 H	302	37.3	3.9
3	#5470.00	53.8 PK	68.2	-14.4	1.00 H	301	49.9	3.9
4	*5710.00	92.6 PK			1.00 H	301	54.2	38.4
5	*5710.00	83.5 AV			1.00 H	301	45.1	38.4
6	#5850.00	53.3 PK	68.2	-14.9	1.00 H	302	49.0	4.3
7	11420.00	57.1 PK	74.0	-16.9	2.90 H	219	40.8	16.3
8	11420.00	43.8 AV	54.0	-10.2	2.90 H	219	27.5	16.3
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	54.5 PK	74.0	-19.5	1.05 V	19	50.6	3.9
2	5460.00	41.7 AV	54.0	-12.3	1.05 V	19	37.8	3.9
3	#5470.00	54.1 PK	68.2	-14.1	1.05 V	15	50.2	3.9
4	*5710.00	89.8 PK			1.01 V	15	51.4	38.4
5	*5710.00	80.8 AV			1.01 V	15	42.4	38.4
6	#5850.00	54.6 PK	68.2	-13.6	1.02 V	20	50.3	4.3
7	11420.00	57.3 PK	74.0	-16.7	1.88 V	23	41.0	16.3
8	11420.00	43.9 AV	54.0	-10.1	1.88 V	23	27.6	16.3

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 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	#5640.00	52.3 PK	68.2	-15.9	1.00 H	299	48.2	4.1
2	*5755.00	93.6 PK			1.00 H	299	55.0	38.6
3	*5755.00	84.0 AV			1.00 H	299	45.4	38.6
4	#5947.20	53.2 PK	68.2	-15.0	1.00 H	299	48.5	4.7
5	11510.00	56.7 PK	74.0	-17.3	2.79 H	219	41.0	15.7
6	11510.00	43.2 AV	54.0	-10.8	2.79 H	219	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	#5632.80	53.4 PK	68.2	-14.8	1.11 V	17	49.4	4.0
2	*5755.00	90.7 PK			1.11 V	17	52.1	38.6
3	*5755.00	81.0 AV			1.11 V	17	42.4	38.6
4	#5935.20	54.1 PK	68.2	-14.1	1.11 V	17	49.4	4.7
5	11510.00	56.8 PK	74.0	-17.2	1.99 V	28	41.1	15.7
6	11510.00	43.3 AV	54.0	-10.7	1.99 V	28	27.6	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	#5604.80	52.3 PK	68.2	-15.9	1.00 H	296	48.5	3.8
2	*5795.00	93.2 PK			1.00 H	296	54.5	38.7
3	*5795.00	84.0 AV			1.00 H	296	45.3	38.7
4	#5933.60	52.2 PK	68.2	-16.0	1.00 H	296	47.5	4.7
5	11590.00	56.3 PK	74.0	-17.7	2.85 H	220	40.9	15.4
6	11590.00	42.7 AV	54.0	-11.3	2.85 H	220	27.3	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	#5644.00	53.5 PK	68.2	-14.7	1.09 V	19	49.4	4.1
2	*5795.00	90.5 PK			1.09 V	19	51.8	38.7
3	*5795.00	81.0 AV			1.09 V	19	42.3	38.7
4	#5934.40	54.4 PK	68.2	-13.8	1.09 V	19	49.7	4.7
5	11590.00	55.8 PK	74.0	-18.2	2.02 V	29	40.4	15.4
6	11590.00	42.9 AV	54.0	-11.1	2.02 V	29	27.5	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.

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CHANNEL	TX Channel 42	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	56.6 PK	74.0	-17.4	1.12 H	154	53.1	3.5
2	5150.00	43.1 AV	54.0	-10.9	1.12 H	154	39.6	3.5
3	*5210.00	94.0 PK			1.13 H	150	56.2	37.8
4	*5210.00	84.1 AV			1.13 H	150	46.3	37.8
5	5350.00	52.8 PK	74.0	-21.2	1.13 H	150	49.4	3.4
6	5350.00	40.3 AV	54.0	-13.7	1.13 H	150	36.9	3.4
7	#10420.00	56.9 PK	68.2	-11.3	2.91 H	210	41.3	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	53.6 PK	74.0	-20.4	3.48 V	167	50.1	3.5
2	5150.00	39.5 AV	54.0	-14.5	3.48 V	167	36.0	3.5
3	*5210.00	91.3 PK			3.46 V	167	53.5	37.8
4	*5210.00	81.3 AV			3.46 V	167	43.5	37.8
5	5350.00	52.6 PK	74.0	-21.4	3.35 V	168	49.2	3.4
6	5350.00	39.8 AV	54.0	-14.2	3.35 V	168	36.4	3.4
7	#10420.00	56.8 PK	68.2	-11.4	1.92 V	31	41.2	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	5150.00	53.3 PK	74.0	-20.7	1.20 H	20	49.8	3.5
2	5150.00	41.3 AV	54.0	-12.7	1.20 H	20	37.8	3.5
3	*5290.00	89.4 PK			1.22 H	24	51.8	37.6
4	*5290.00	79.4 AV			1.22 H	24	41.8	37.6
5	5350.00	52.8 PK	74.0	-21.2	1.22 H	20	49.4	3.4
6	5350.00	41.6 AV	54.0	-12.4	1.22 H	20	38.2	3.4
7	#10580.00	55.9 PK	68.2	-12.3	2.95 H	235	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	53.1 PK	74.0	-20.9	1.05 V	22	49.6	3.5
2	5150.00	40.7 AV	54.0	-13.3	1.05 V	22	37.2	3.5
3	*5290.00	86.7 PK			1.04 V	22	49.1	37.6
4	*5290.00	76.9 AV			1.04 V	22	39.3	37.6
5	5350.00	53.1 PK	74.0	-20.9	1.04 V	17	49.7	3.4
6	5350.00	40.5 AV	54.0	-13.5	1.04 V	17	37.1	3.4
7	#10580.00	56.0 PK	68.2	-12.2	1.99 V	17	40.4	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.

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	58.7 PK	74.0	-15.3	1.00 H	304	54.8	3.9
2	5460.00	45.9 AV	54.0	-8.1	1.00 H	304	42.0	3.9
3	#5470.00	60.8 PK	68.2	-7.4	1.00 H	300	56.9	3.9
4	*5530.00	90.4 PK			1.00 H	300	52.2	38.2
5	*5530.00	81.1 AV			1.00 H	300	42.9	38.2
6	11060.00	58.2 PK	74.0	-15.8	2.91 H	227	41.5	16.7
7	11060.00	44.3 AV	54.0	-9.7	2.91 H	227	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	55.8 PK	74.0	-18.2	1.03 V	21	51.9	3.9
2	5460.00	44.2 AV	54.0	-9.8	1.03 V	21	40.3	3.9
3	#5470.00	57.2 PK	68.2	-11.0	1.03 V	22	53.3	3.9
4	*5530.00	87.6 PK			1.00 V	22	49.4	38.2
5	*5530.00	78.4 AV			1.00 V	22	40.2	38.2
6	11060.00	58.1 PK	74.0	-15.9	1.88 V	10	41.4	16.7
7	11060.00	44.0 AV	54.0	-10.0	1.88 V	10	27.3	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	54.1 PK	74.0	-19.9	1.00 H	300	50.2	3.9
2	5460.00	40.7 AV	54.0	-13.3	1.00 H	300	36.8	3.9
3	#5470.00	53.8 PK	68.2	-14.4	1.00 H	301	49.9	3.9
4	*5610.00	88.9 PK			1.00 H	301	50.6	38.3
5	*5610.00	79.2 AV			1.00 H	301	40.9	38.3
6	#5725.00	54.3 PK	68.2	-13.9	1.00 H	301	50.2	4.1
7	11220.00	57.3 PK	74.0	-16.7	2.98 H	219	41.2	16.1
8	11220.00	43.4 AV	54.0	-10.6	2.98 H	219	27.3	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	54.5 PK	74.0	-19.5	1.02 V	19	50.6	3.9
2	5460.00	30.1 AV	54.0	-23.9	1.02 V	19	26.2	3.9
3	#5470.00	54.7 PK	68.2	-13.5	1.02 V	18	50.8	3.9
4	*5610.00	86.1 PK			1.05 V	18	47.8	38.3
5	*5610.00	76.4 AV			1.05 V	18	38.1	38.3
6	#5725.00	54.4 PK	68.2	-13.8	1.01 V	19	50.3	4.1
7	11220.00	57.1 PK	74.0	-16.9	1.89 V	12	41.0	16.1
8	11220.00	43.4 AV	54.0	-10.6	1.89 V	12	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 138	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	54.5 PK	74.0	-19.5	1.00 H	302	50.6	3.9
2	5460.00	41.1 AV	54.0	-12.9	1.00 H	302	37.2	3.9
3	#5470.00	53.9 PK	68.2	-14.3	1.00 H	309	50.0	3.9
4	*5690.00	88.9 PK			1.00 H	301	50.5	38.4
5	*5690.00	78.6 AV			1.00 H	301	40.2	38.4
6	#5850.00	53.4 PK	68.2	-14.8	1.00 H	300	49.1	4.3
7	11380.00	56.8 PK	74.0	-17.2	2.85 H	221	40.3	16.5
8	11380.00	44.1 AV	54.0	-9.9	2.85 H	221	27.6	16.5
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	5460.00	54.1 PK	74.0	-19.9	1.00 V	15	50.2	3.9
2	5460.00	41.2 AV	54.0	-12.8	1.00 V	15	37.3	3.9
3	#5470.00	54.4 PK	68.2	-13.8	1.00 V	19	50.5	3.9
4	*5690.00	86.5 PK			1.01 V	19	48.1	38.4
5	*5690.00	76.2 AV			1.01 V	19	37.8	38.4
6	#5850.00	54.8 PK	68.2	-13.4	1.04 V	17	50.5	4.3
7	11380.00	56.7 PK	74.0	-17.3	1.98 V	22	40.2	16.5
8	11380.00	44.0 AV	54.0	-10.0	1.98 V	22	27.5	16.5

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 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	#5633.60	52.8 PK	68.2	-15.4	1.00 H	300	48.8	4.0
2	*5775.00	89.8 PK			1.00 H	300	51.2	38.6
3	*5775.00	80.0 AV			1.00 H	300	41.4	38.6
4	#5971.20	53.2 PK	68.2	-15.0	1.00 H	300	48.5	4.7
5	11550.00	55.8 PK	74.0	-18.2	2.90 H	225	40.2	15.6
6	11550.00	42.8 AV	54.0	-11.2	2.90 H	225	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	#5613.60	53.1 PK	68.2	-15.1	1.07 V	17	49.2	3.9
2	*5775.00	87.0 PK			1.07 V	17	48.4	38.6
3	*5775.00	77.1 AV			1.07 V	17	38.5	38.6
4	#5948.00	53.0 PK	68.2	-15.2	1.07 V	17	48.3	4.7
5	11550.00	56.0 PK	74.0	-18.0	1.96 V	21	40.4	15.6
6	11550.00	43.0 AV	54.0	-11.0	1.96 V	21	27.4	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:

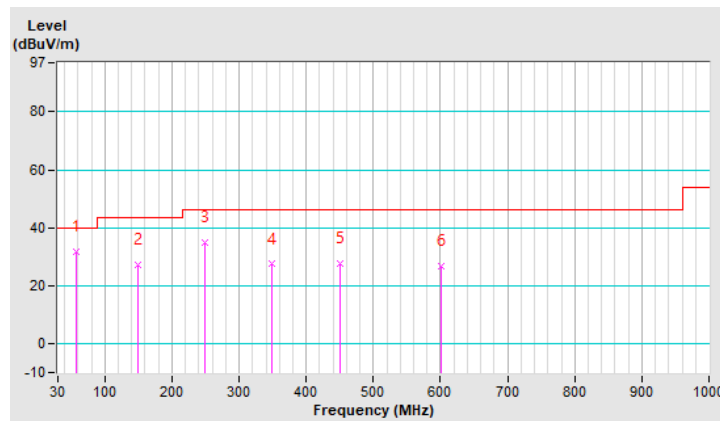
802.11a

CHANNEL	TX Channel 36	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	58.12	31.6 QP	40.0	-8.4	1.49 H	52	41.9	-10.3
2	149.49	27.2 QP	43.5	-16.3	1.49 H	281	36.6	-9.4
3	249.30	35.0 QP	46.0	-11.0	1.00 H	90	44.7	-9.7
4	349.12	27.4 QP	46.0	-18.6	1.00 H	194	34.7	-7.3
5	450.33	27.8 QP	46.0	-18.2	1.49 H	174	33.0	-5.2
6	600.75	26.9 QP	46.0	-19.1	1.00 H	271	29.2	-2.3

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
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.

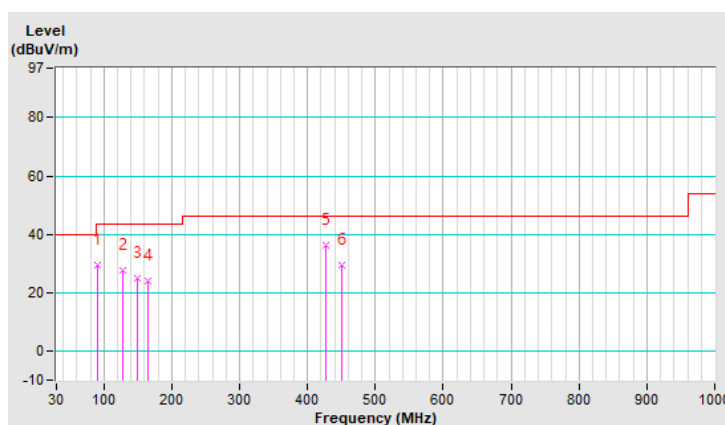


CHANNEL	TX Channel 36	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

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	90.45	29.4 QP	43.5	-14.1	1.50 V	140	44.1	-14.7
2	128.41	27.7 QP	43.5	-15.8	1.50 V	140	38.6	-10.9
3	149.49	25.0 QP	43.5	-18.5	1.01 V	292	34.4	-9.4
4	164.96	23.8 QP	43.5	-19.7	1.50 V	140	33.2	-9.4
5	427.84	36.4 QP	46.0	-9.6	1.50 V	56	42.0	-5.6
6	450.33	29.5 QP	46.0	-16.5	1.50 V	14	34.7	-5.2

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
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 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

Note: 1. The lower limit shall apply at the transition frequencies.

2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESR3	102412	Feb. 14, 2019	Feb. 13, 2020
RF signal cable Woken	5D-FB	Cable-cond2-01	Sep. 05, 2018	Sep. 04, 2019
LISN ROHDE & SCHWARZ (EUT)	ESH2-Z5	100100	Jan. 30, 2019	Jan. 29, 2020
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 13, 2018	Aug. 12, 2019
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

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

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

3. The VCCI Site Registration No. is C-12047.

4.2.3 Test Procedures

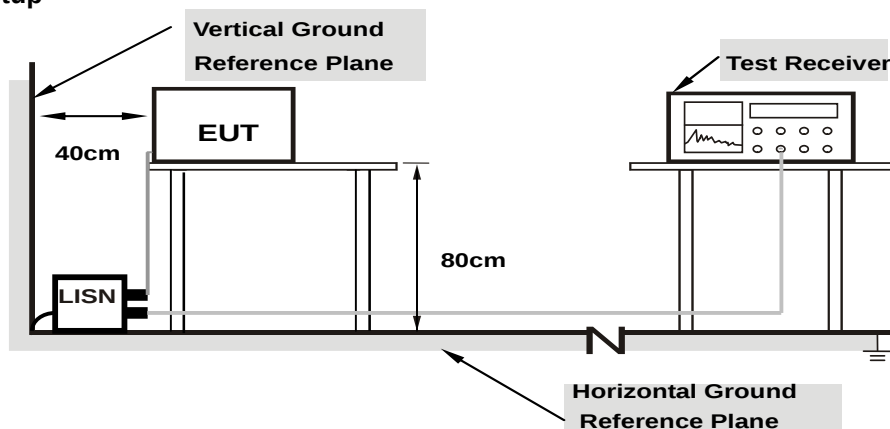
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as 4.1.6.

4.2.7 Test Results

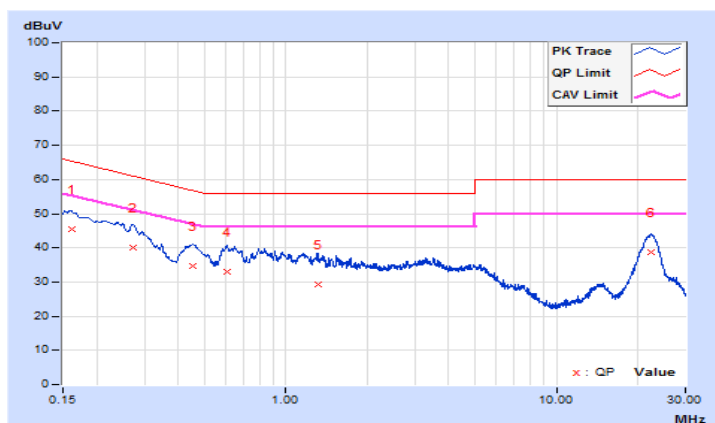
802.11a

Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.16093	10.07	35.49	21.26	45.56	31.33	65.42	55.42	-19.86	-24.09
2	0.27144	10.07	30.14	21.54	40.21	31.61	61.07	51.07	-20.86	-19.46
3	0.45065	10.07	24.70	12.12	34.77	22.19	56.86	46.86	-22.09	-24.67
4	0.60412	10.07	22.77	13.12	32.84	23.19	56.00	46.00	-23.16	-22.81
5	1.30949	10.08	19.33	12.74	29.41	22.82	56.00	46.00	-26.59	-23.18
6	22.31475	10.47	28.35	23.44	38.82	33.91	60.00	50.00	-21.18	-16.09

REMARKS:

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

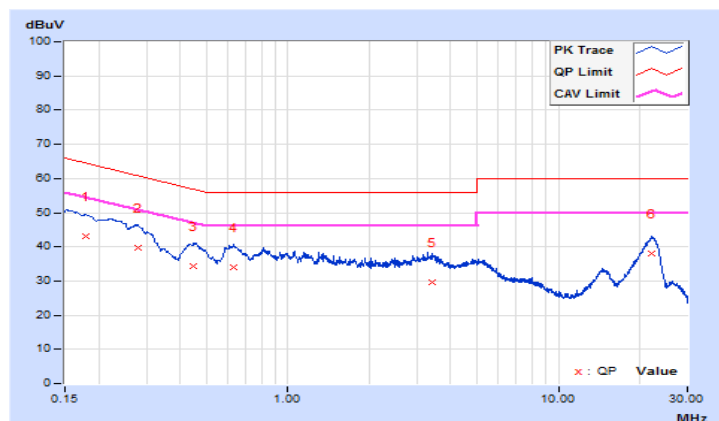


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
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No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.17838	10.13	32.94	19.35	43.07	29.48	64.56	54.56	-21.49	-25.08
2	0.27871	10.13	29.59	20.30	39.72	30.43	60.85	50.85	-21.13	-20.42
3	0.44710	10.13	24.17	11.74	34.30	21.87	56.93	46.93	-22.63	-25.06
4	0.62925	10.13	23.74	14.64	33.87	24.77	56.00	46.00	-22.13	-21.23
5	3.42825	10.20	19.37	12.47	29.57	22.67	56.00	46.00	-26.43	-23.33
6	22.22250	10.62	27.45	22.37	38.07	32.99	60.00	50.00	-21.93	-17.01

REMARKS:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

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

*B is the 26 dB emission bandwidth in megahertz

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

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

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

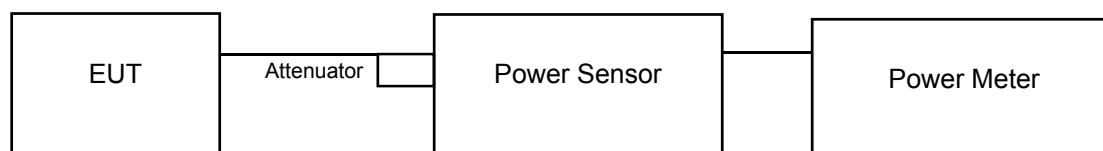
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

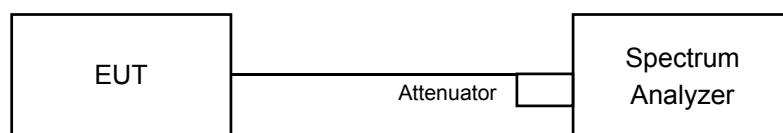
4.3.2 Test Setup

For Power Output

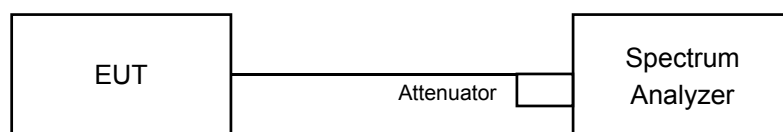
802.11a, 802.11n (HT20), 802.11n (HT40)



802.11ac (VHT80)



For 26dB and Occupied Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

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 and set the detector to AVERAGE. Duty factor is not added to measured value.

For 802.11ac (VHT80)

- Set span to encompass the entire 26 dB EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- Set sweep trigger to "free run".
- Set RBW = 1 MHz
- Set VBW $\geq$ 3 MHz
- Number of points in sweep $\geq$ 2 Span / RBW
- Sweep time $\leq$ (number of points in sweep) * T
- Using emission bandwidth to determine the frequency span for integration the channel bandwidth.
- Detector = RMS
- Trace mode = max hold
- Allow max hold to run for at least 60 seconds, or longer as needed to allow the trace to stabilize.
- 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

- Set RBW = approximately 1% of the emission bandwidth.
- Set the VBW > RBW.
- Detector = Peak.
- Trace mode = max hold.
- 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%.

For Occupied Bandwidth

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to 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.

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

Power Output:

802.11a

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	21.777	13.38	24.00	Pass
40	5200	18.880	12.76	24.00	Pass
48	5240	18.880	12.76	24.00	Pass
52	5260	19.724	12.95	24.00	Pass
60	5300	19.143	12.82	24.00	Pass
64	5320	19.231	12.84	24.00	Pass
100	5500	15.922	12.02	24.00	Pass
116	5580	14.223	11.53	24.00	Pass
140	5700	12.764	11.06	24.00	Pass
144	5720 For U-NII-2C	7.278	8.62	22.97	Pass
144	5720 For U-NII-3	1.279	1.07	30.00	Pass
149	5745	14.928	11.74	30.00	Pass
157	5785	14.191	11.52	30.00	Pass
165	5825	13.213	11.21	30.00	Pass

Note:

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

1. $11\text{dBm} + 10\log(21.47) = 24.31 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.56) = 24.33 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.57) = 24.33 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.39) = 24.30 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.64) = 24.35 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.44) = 24.31 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.24) = 22.97 < 24\text{dBm}$

For Reference only-Power meter value

The power value was measured by power meter with average sensor

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)
144	5720	8.557	9.32

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	16.596	12.20	24.00	Pass
40	5200	17.579	12.45	24.00	Pass
48	5240	17.620	12.46	24.00	Pass
52	5260	17.338	12.39	24.00	Pass
60	5300	18.113	12.58	24.00	Pass
64	5320	16.106	12.07	24.00	Pass
100	5500	16.218	12.10	24.00	Pass
116	5580	13.552	11.32	24.00	Pass
140	5700	12.735	11.05	24.00	Pass
144	5720 For U-NII-2C	6.330	8.01	23.03	Pass
144	5720 For U-NII-3	1.254	0.98	30.00	Pass
149	5745	13.366	11.26	30.00	Pass
157	5785	13.366	11.26	30.00	Pass
165	5825	12.618	11.01	30.00	Pass

Note:

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

1. $11\text{dBm} + 10\log(21.66) = 24.35 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.70) = 24.36 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.83) = 24.39 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.03) = 23.03 < 24\text{dBm}$

For Reference only-Power meter value

The power value was measured by power meter with average sensor

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)
144	5720	7.584	8.8

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	15.311	11.85	24.00	Pass
46	5230	14.421	11.59	24.00	Pass
54	5270	14.689	11.67	24.00	Pass
62	5310	15.066	11.78	24.00	Pass
102	5510	11.858	10.74	24.00	Pass
110	5550	11.143	10.47	24.00	Pass
134	5670	9.354	9.71	24.00	Pass
142	5710 For U-NII-2C	1.647	2.17	24.00	Pass
142	5710 For U-NII-3	0.09857	-10.06	30.00	Pass
151	5755	11.041	10.43	30.00	Pass
159	5795	10.691	10.29	30.00	Pass

Note:

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

1. $11\text{dBm} + 10\log(41.00) = 27.12 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.18) = 27.14 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.38) = 27.16 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.25) = 27.15 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.12) = 27.14 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5689.50) = 26.50 > 24\text{dBm}$

For Reference only-Power meter value

The power value was measured by power meter with average sensor

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)
142	5710	1.74557	2.42

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	11.092	10.45	24.00	Pass
58	5290	11.092	10.45	24.00	Pass
106	5530	8.974	9.53	24.00	Pass
122	5610	7.980	9.02	24.00	Pass
138	5690 For U-NII-2C	0.7555	-1.22	24.00	Pass
138	5690 For U-NII-3	0.02334	-16.32	30.00	Pass
155	5775	8.590	9.34	30.00	Pass

Note:

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

1. $11\text{dBm} + 10\log(82.34) = 30.15 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(82.14) = 30.14 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(82.00) = 30.13 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(5725.00 - 5648.93) = 29.81 > 24\text{dBm}$

For Reference only-Power meter value

The power value was measured by power meter with average sensor

Chan.	Freq. (MHz)	Conducted Power (mW)	Conducted Power (dBm)
138	5690	0.77884	-1.09

26dB Bandwidth:

802.11a

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	21.51
40	5200	21.44
48	5240	21.65
52	5260	21.47
60	5300	21.56
64	5320	21.57
100	5500	21.39
116	5580	21.64
140	5700	21.44
144	5720 For U-NII-2C	15.76

802.11n (HT20)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
36	5180	21.69
40	5200	21.96
48	5240	21.67
52	5260	21.66
60	5300	21.80
64	5320	21.80
100	5500	21.74
116	5580	21.70
140	5700	21.83
144	5720 For U-NII-2C	15.97

802.11n (HT40)

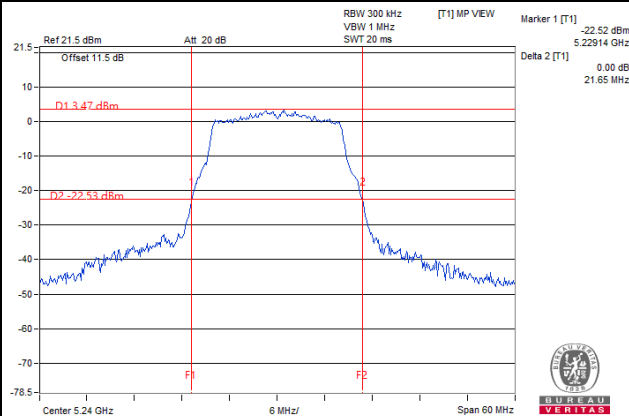
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
38	5190	41.27
46	5230	41.12
54	5270	41.00
62	5310	41.18
102	5510	41.38
110	5550	41.25
134	5670	41.12
142	5710 For U-NII-2C	35.50

802.11ac (VHT80)

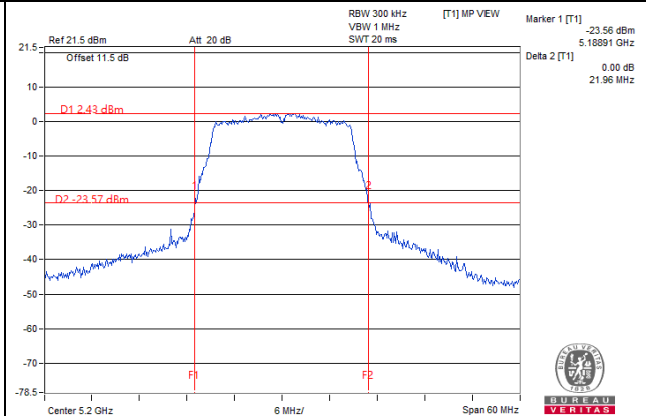
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)
42	5210	82.39
58	5290	82.34
106	5530	82.14
122	5610	82.00
138	5690 For U-NII-2C	76.07

Spectrum Plot of Worst Value

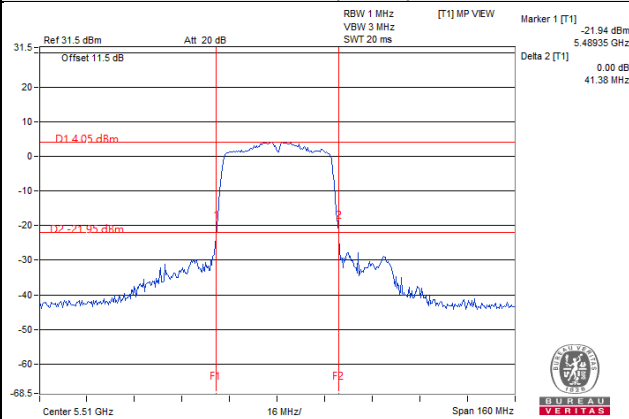
802.11a



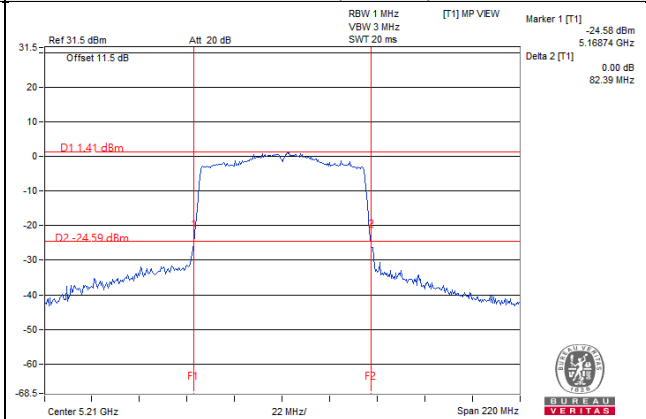
802.11n (HT20)



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	19.724	12.95
5470~5725	15.922	12.02

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

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	18.113	12.58
5470~5725	16.218	12.10

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

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	15.066	11.78
5470~5725	11.858	10.74

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

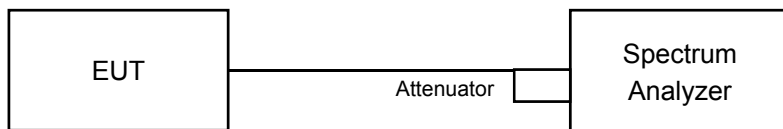
802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	11.092	10.45
5470~5725	8.974	9.53

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

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth and set the detector to 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.

4.4.4 Test Result

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	16.92
40	5200	16.92
48	5240	16.92
52	5260	16.92
60	5300	16.92
64	5320	16.92
100	5500	16.92
116	5580	16.92
140	5700	16.92
144	5720 For U-NII-2C	13.28
144	5720 For U-NII-3	3.16
149	5745	16.92
157	5785	16.92
165	5825	16.92

802.11n (HT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
36	5180	18.00
40	5200	18.00
48	5240	18.00
52	5260	18.00
60	5300	18.00
64	5320	18.12
100	5500	18.00
116	5580	18.12
140	5700	18.12
144	5720 For U-NII-2C	13.88
144	5720 For U-NII-3	3.76
149	5745	18.12
157	5785	18.12
165	5825	18.00

802.11n (HT40)

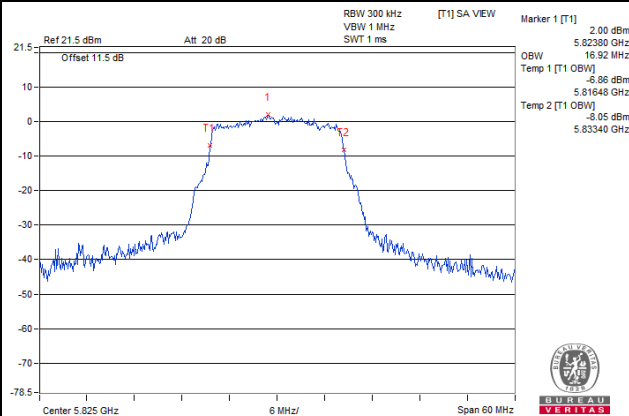
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
38	5190	36.48
46	5230	36.60
54	5270	36.60
62	5310	36.60
102	5510	36.60
110	5550	36.60
134	5670	36.48
142	5710 For U-NII-2C	33.36
142	5710 For U-NII-3	3.24
151	5755	36.60
159	5795	36.48

802.11ac (VHT80)

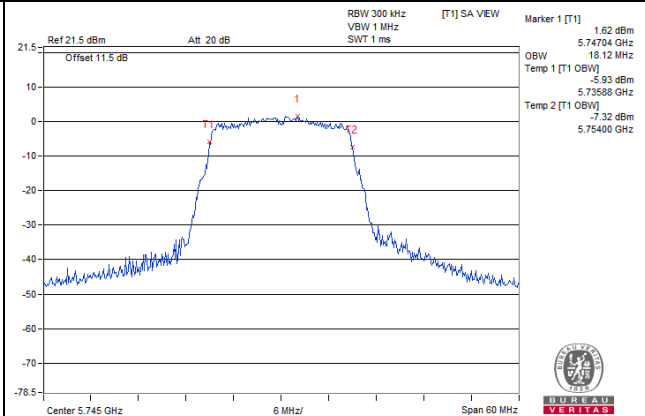
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)
42	5210	75.60
58	5290	75.60
106	5530	75.60
122	5610	75.84
138	5690 For U-NII-2C	72.92
138	5690 For U-NII-3	2.92
155	5775	75.60

Spectrum Plot of Worst Value

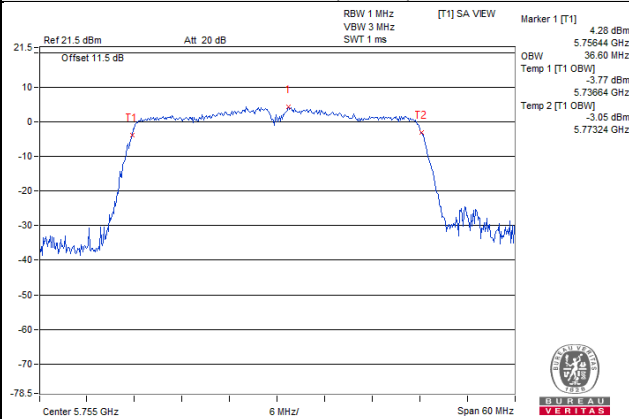
802.11a



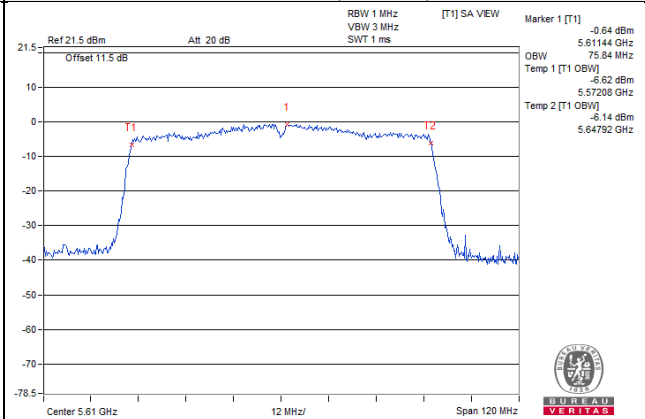
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

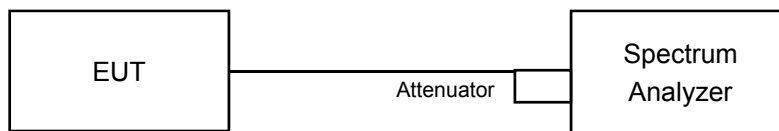


4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

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

Duty cycle of test signal is < 98%

Using method SA-2

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

For U-NII-3 band:

Duty cycle of test signal is < 98%

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

Same as 4.3.6.

4.5.7 Test Results

For U-NII-1, U-NII-2A, 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
36	5180	-0.51	0.09	-0.42	11	Pass
40	5200	-0.34	0.09	-0.25	11	Pass
48	5240	-0.63	0.09	-0.54	11	Pass
52	5260	-0.65	0.09	-0.56	11	Pass
60	5300	-0.42	0.09	-0.33	11	Pass
64	5320	-0.70	0.09	-0.61	11	Pass
100	5500	-0.94	0.09	-0.85	11	Pass
116	5580	-1.44	0.09	-1.35	11	Pass
140	5700	-2.06	0.09	-1.97	11	Pass
144	5720 For U-NII-2C	-1.75	0.09	-1.66	11	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	-1.35	0.09	-1.26	11	Pass
40	5200	-1.28	0.09	-1.19	11	Pass
48	5240	-1.12	0.09	-1.03	11	Pass
52	5260	-1.20	0.09	-1.11	11	Pass
60	5300	-1.10	0.09	-1.01	11	Pass
64	5320	-1.19	0.09	-1.10	11	Pass
100	5500	-1.74	0.09	-1.65	11	Pass
116	5580	-2.10	0.09	-2.01	11	Pass
140	5700	-2.66	0.09	-2.57	11	Pass
144	5720 For U-NII-2C	-2.61	0.09	-2.52	11	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	-5.85	0.69	-5.16	11	Pass
46	5230	-5.76	0.69	-5.07	11	Pass
54	5270	-5.78	0.69	-5.09	11	Pass
62	5310	-5.60	0.69	-4.91	11	Pass
102	5510	-5.85	0.69	-5.16	11	Pass
110	5550	-6.59	0.69	-5.90	11	Pass
134	5670	-7.20	0.69	-6.51	11	Pass
142	5710 For U-NII-2C	-7.27	0.69	-6.58	11	Pass

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

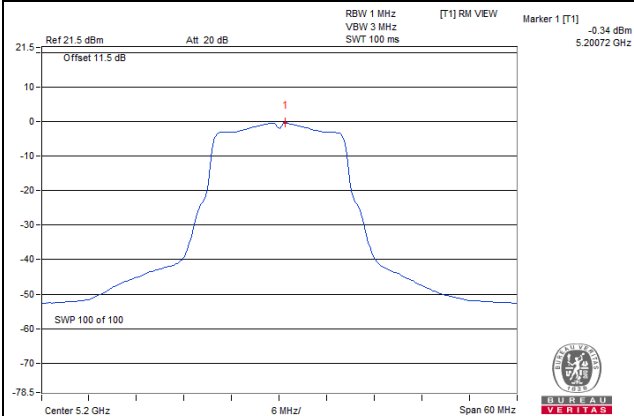
802.11ac (VHT80)

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	-10.19	1.40	-8.79	11	Pass
58	5290	-10.18	1.40	-8.78	11	Pass
106	5530	-10.85	1.40	-9.45	11	Pass
122	5610	-11.43	1.40	-10.03	11	Pass
138	5690 For U-NII-2C	-11.70	1.40	-10.30	11	Pass

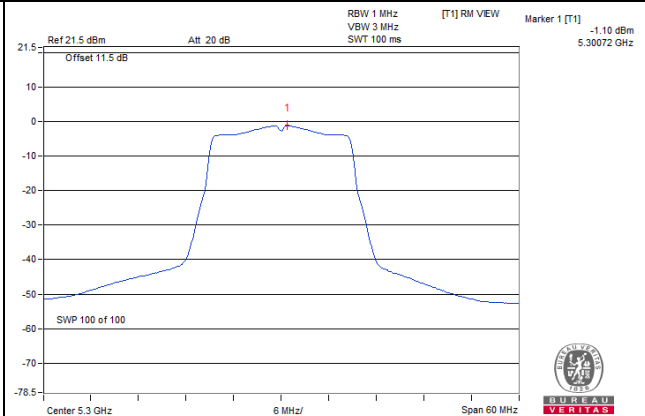
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

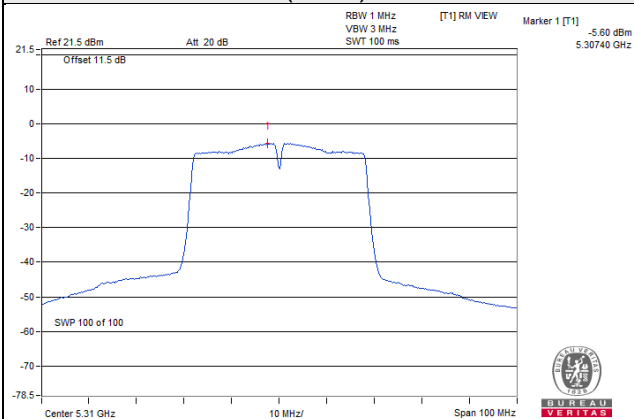
802.11a / CH 40



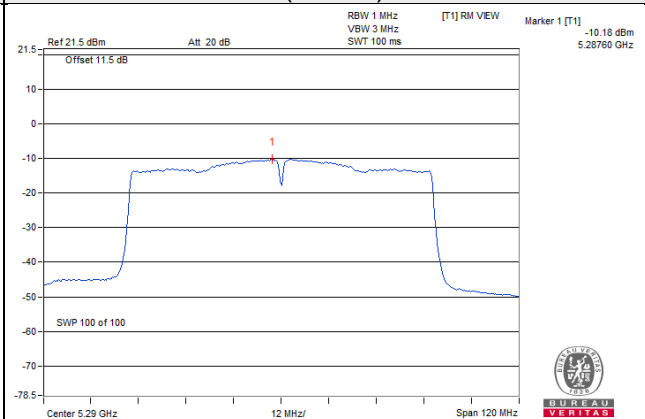
802.11n (HT20) / CH 60



802.11n (HT40) / CH 62



802.11ac (VHT80) / CH 58



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)				
144	5720 For U-NII-3	-12.44	-10.22	0.09	-10.13	30	Pass
149	5745	-9.37	-7.15	0.09	-7.06	30	Pass
157	5785	-9.35	-7.13	0.09	-7.04	30	Pass
165	5825	-9.52	-7.30	0.09	-7.21	30	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)				
144	5720 For U-NII-3	-13.42	-11.20	0.09	-11.11	30	Pass
149	5745	-9.85	-7.63	0.09	-7.54	30	Pass
157	5785	-9.83	-7.61	0.09	-7.52	30	Pass
165	5825	-10.10	-7.88	0.09	-7.79	30	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)				
142	5710 For U-NII-3	-18.02	-15.80	0.69	-15.11	30	Pass
151	5755	-15.18	-12.96	0.69	-12.27	30	Pass
159	5795	-15.28	-13.06	0.69	-12.37	30	Pass

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

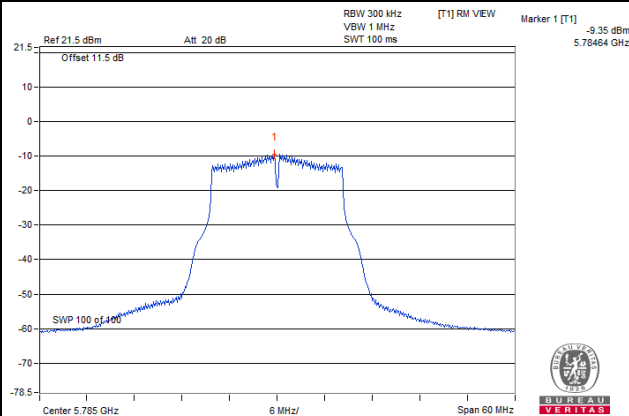
802.11ac (VHT80)

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)				
138	5690 For U-NII-3	-23.12	-20.90	1.40	-19.50	30	Pass
155	5775	-20.00	-17.78	1.40	-16.38	30	Pass

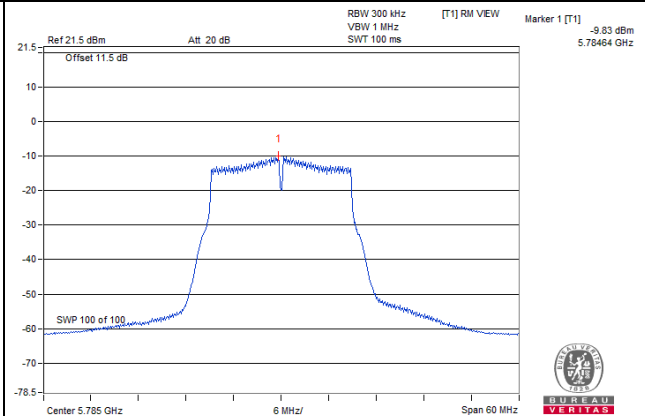
Note: Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

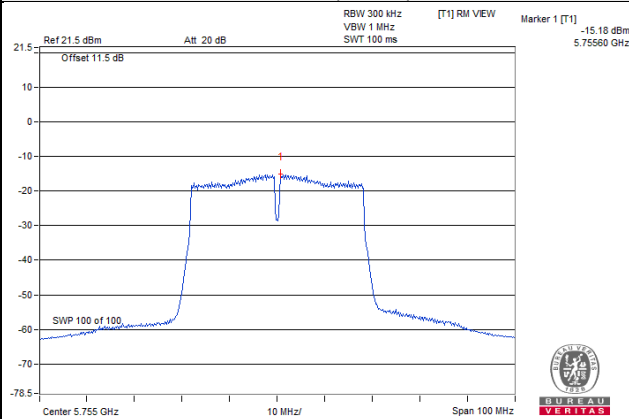
802.11a



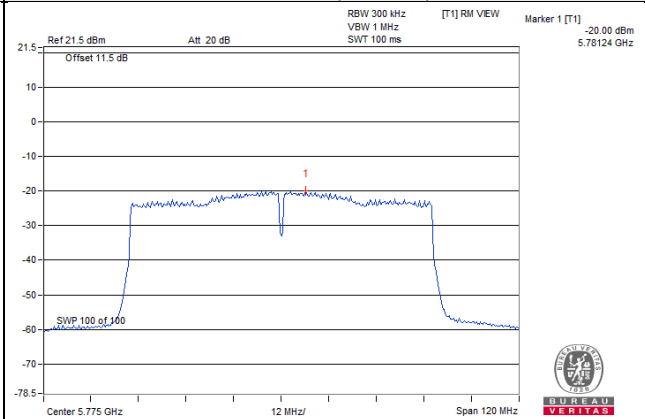
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

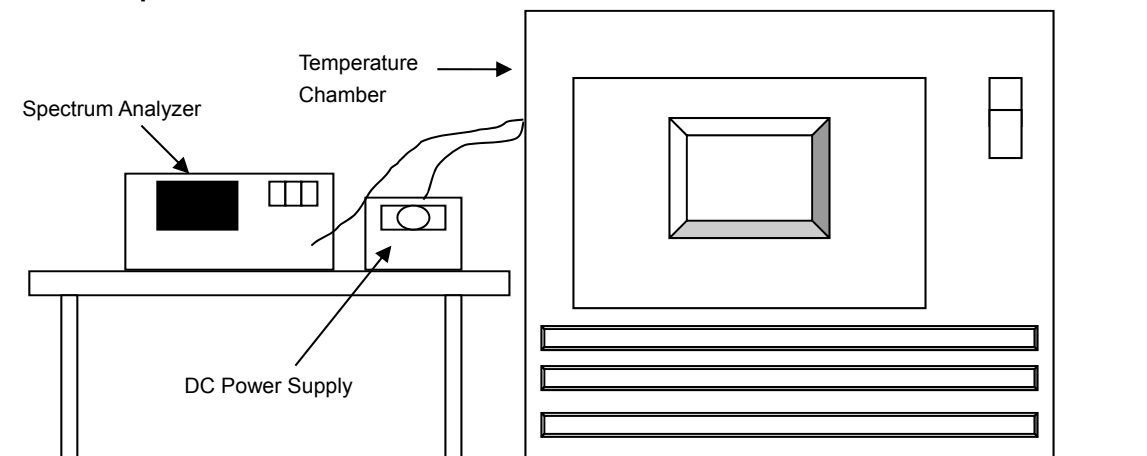


4.6 Frequency Stability

4.6.1 Limits of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100040	Sep. 25, 2018	Sep. 26, 2019
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 03, 2019	Jun. 02, 2020
Digital Multimeter Fluke	87-III	70360742	Jun. 27, 2019	Jun. 26, 2020
DC Power Supply Topward	6306A	727263	NA	NA

4.6.4 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.
- Repeated step d with the temperature chamber sets to each desired temperature.
- The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

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
40	50	5180.0051	PASS	5180.0038	PASS	5180.004	PASS	5180.0025	PASS
30	50	5179.9949	PASS	5179.9985	PASS	5179.9981	PASS	5179.9991	PASS
20	50	5180.0058	PASS	5180.0078	PASS	5180.0081	PASS	5180.0049	PASS
10	50	5179.9743	PASS	5179.9759	PASS	5179.9743	PASS	5179.9766	PASS
0	50	5180.0106	PASS	5180.0123	PASS	5180.0115	PASS	5180.0149	PASS

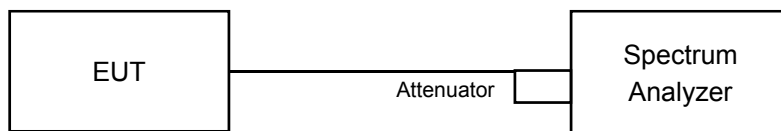
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vdc)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	57.5	5180.0054	PASS	5180.0080	PASS	5180.0084	PASS	5180.0042	PASS
	50	5180.0058	PASS	5180.0078	PASS	5180.0081	PASS	5180.0049	PASS
	42.5	5180.0067	PASS	5180.0088	PASS	5180.0079	PASS	5180.0045	PASS

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

Measurement Procedure REF

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 For U-NII-3	3.16	0.5	Pass
149	5745	16.39	0.5	Pass
157	5785	16.39	0.5	Pass
165	5825	16.39	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
144	5720 For U-NII-3	3.77	0.5	Pass
149	5745	17.57	0.5	Pass
157	5785	17.57	0.5	Pass
165	5825	17.58	0.5	Pass

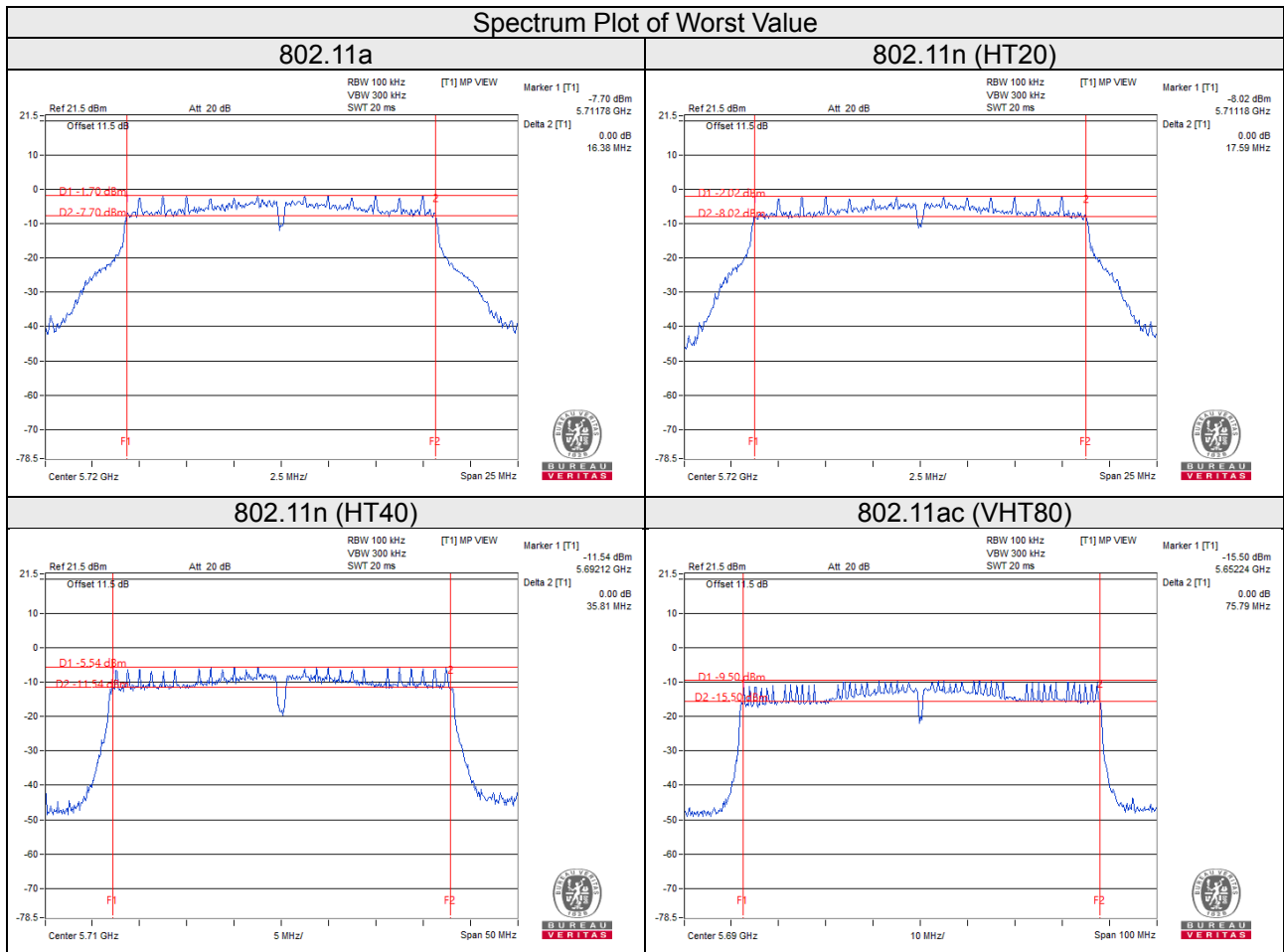
802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
142	5710 For U-NII-3	2.93	0.5	Pass
151	5755	35.94	0.5	Pass
159	5795	35.86	0.5	Pass

802.11ac (VHT80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
138	5690 For U-NII-3	3.03	0.5	Pass
155	5775	75.57	0.5	Pass

Spectrum Plot of Worst Value



*802.11a: Ch 144 (5720MHz for U-NII-3): $16.38-(5725-5711.78) = 3.16$

*802.11n (HT20): Ch 144 (5720MHz for U-NII-3): $17.59-(5725-5711.18) = 3.77$

*802.11n (HT40): Ch 142 (5710MHz for U-NII-3): $35.81-(5725-5692.12) = 2.93$

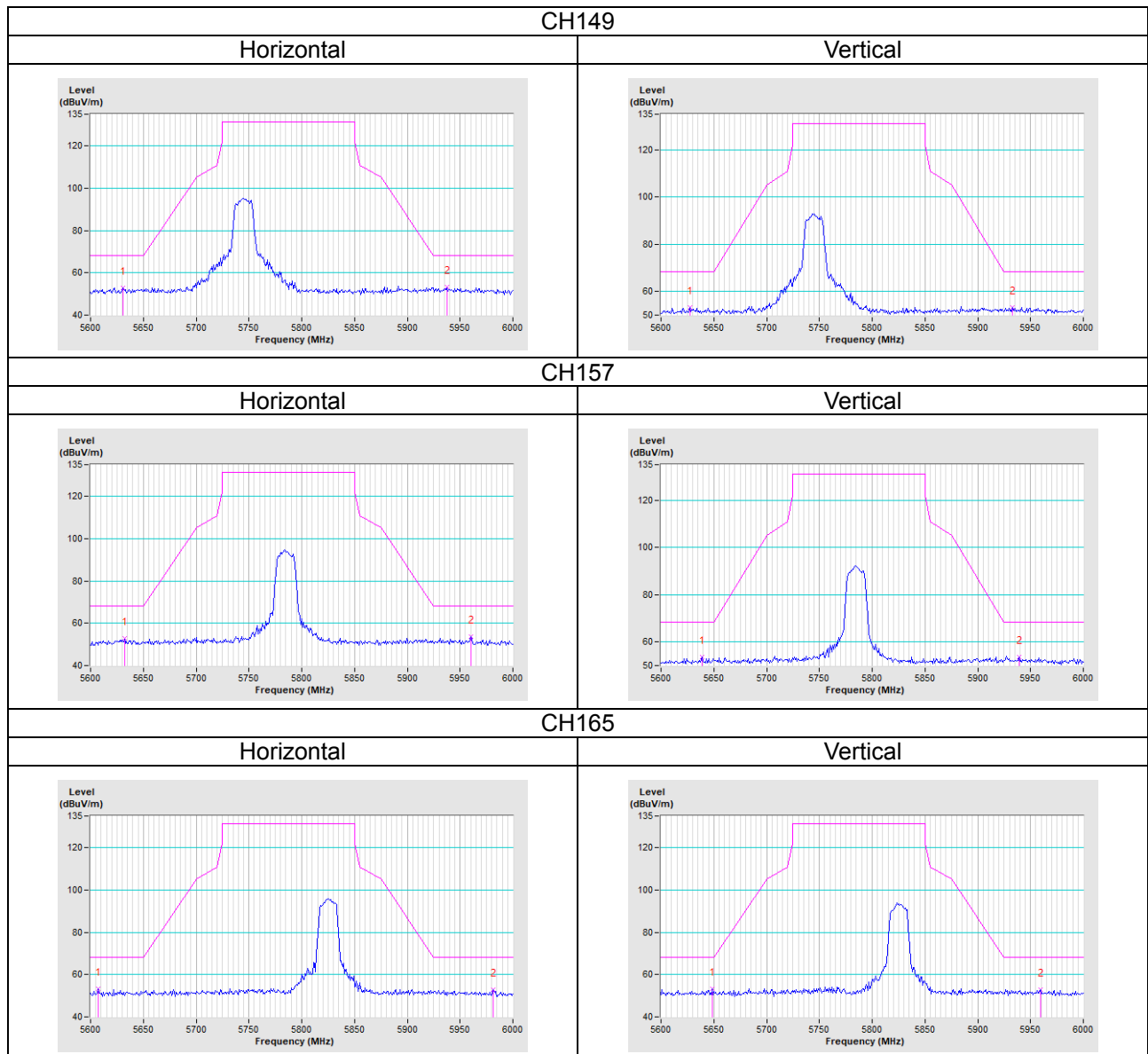
*802.11ac (VHT80): Ch 138 (5690MHz for U-NII-3): $75.79-(5725-5652.24) = 3.03$

5 Pictures of Test Arrangements

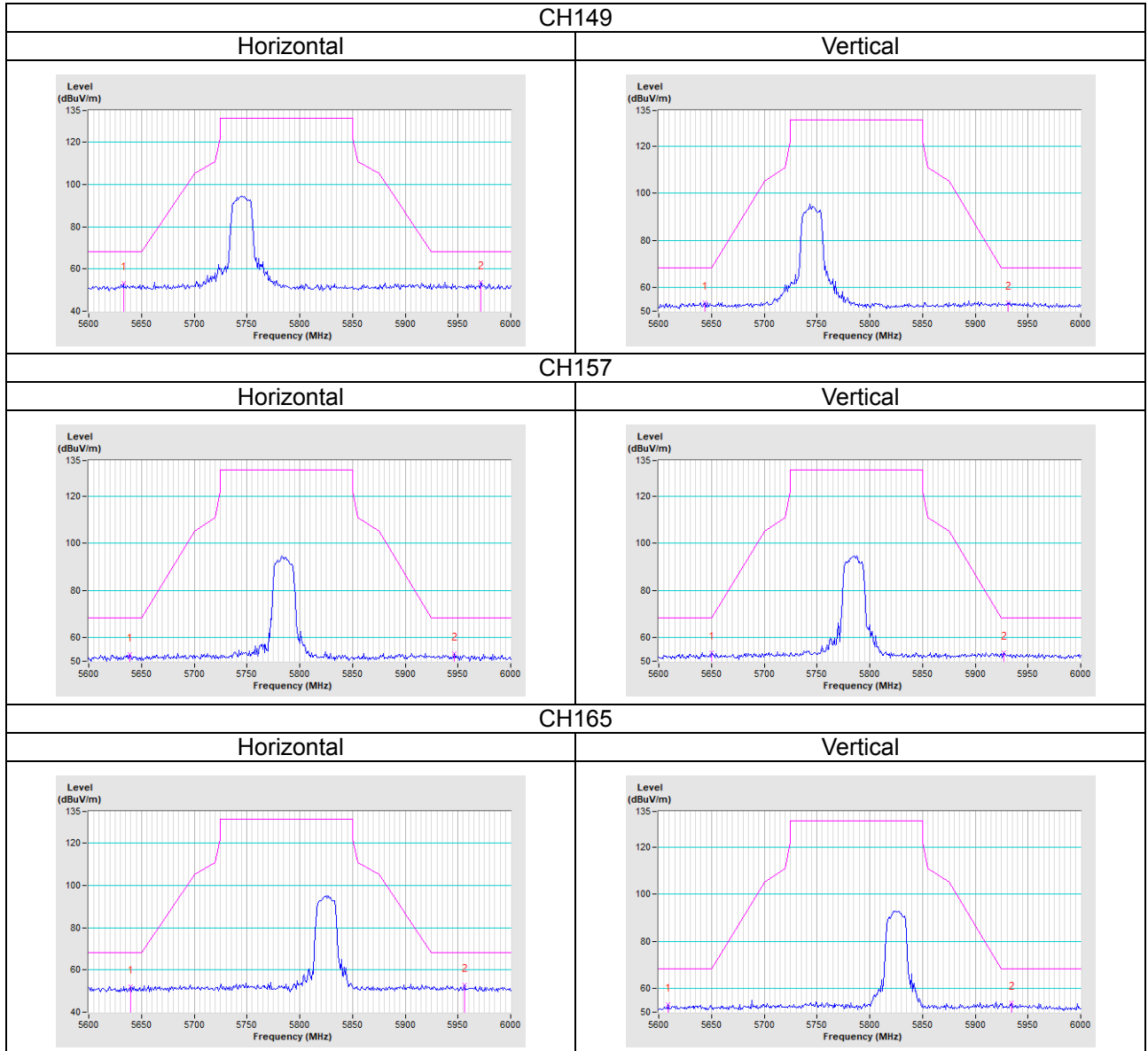
Please refer to the attached file (Test Setup Photo).

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

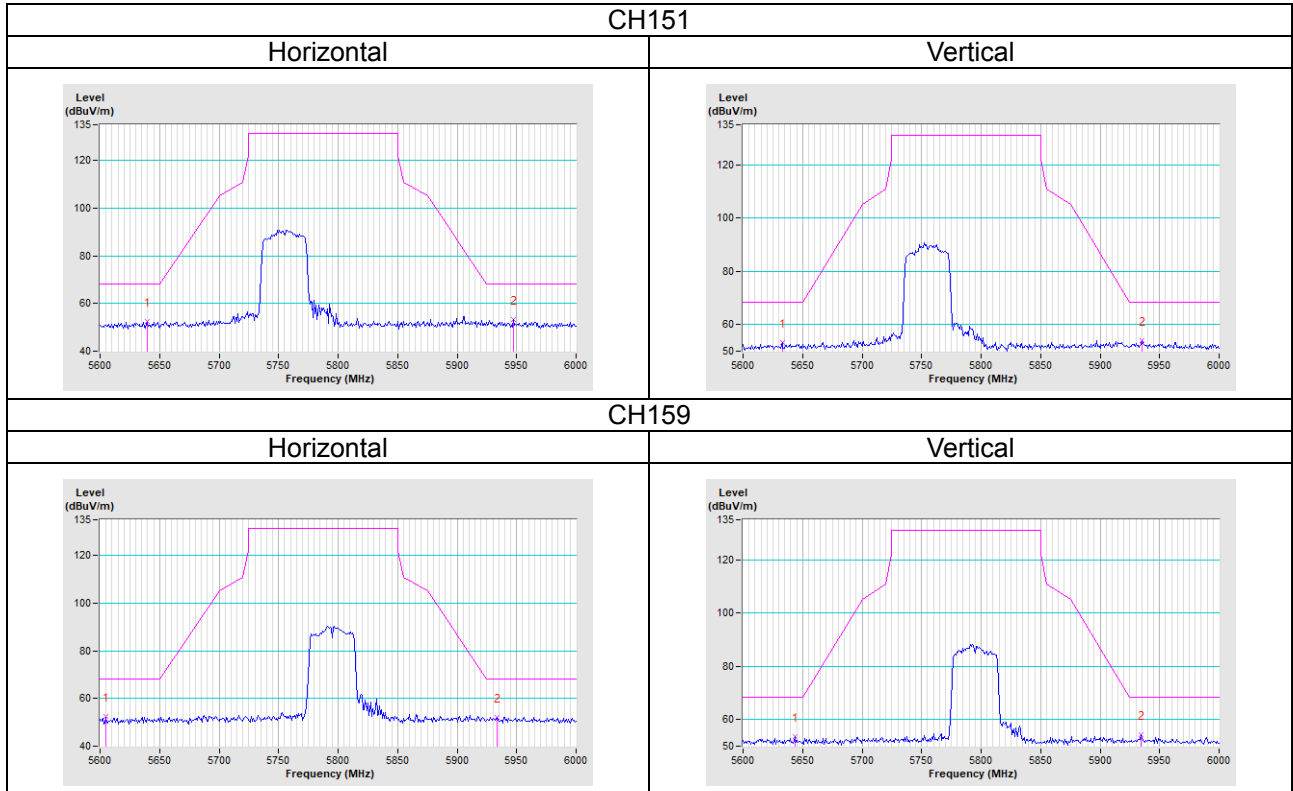
802.11a



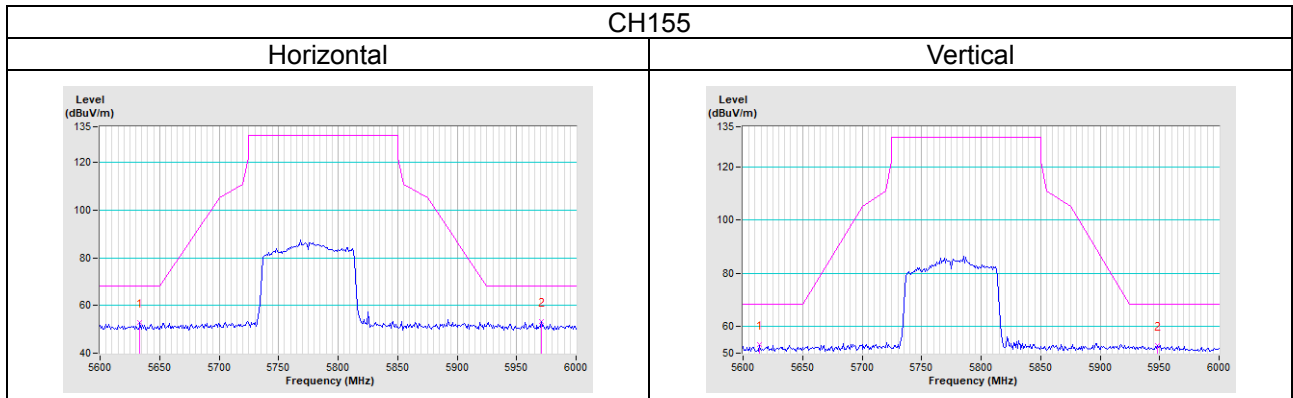
802.11n (HT20)



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 accredited and approved according to ISO/IEC 17025.

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

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Tel: 886-2-26052180

Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab

Tel: 886-3-6668565

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

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