FCC Test Report

(For 5.18 ~ 5.24GHz, 5.745 ~ 5.825GHz)

Report No.: RF170417C09-1

FCC ID: 2AKCZ-0C1

Test Model: APL42-0C1

Received Date: Apr. 17, 2017

Test Date: Apr. 28 ~ Jun. 06, 2017

Issued Date: Jun. 27, 2017

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Testing Laboratory
2021

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The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any government agencies.

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Release Control Record

Issue No.	Description	Date Issued
RF170417C09-1	Original release.	Jun. 27, 2017

1 Certificate of Conformity

Product: Wireless Access Point

Brand: SONICWALL

Test Model: APL42-0C1

Sample Status: Engineering sample

Applicant: SonicWall Inc.

Test Date: Apr. 28 ~ Jun. 06, 2017

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

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

Prepared by : _____ , **Date:** Jun. 27, 2017
Pettie Chen / Senior Specialist

Approved by : _____ , **Date:** Jun. 27, 2017
Ken Liu / Senior Manager

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -7.60dB at 0.19000MHz.
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 -1.4dB at 5650.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	For Dipole antenna: Antenna connector is N-TYPE not a standard connector. For Sector antenna: Antenna connector is N-jack not a standard connector. For Panel antenna: Antenna connector is N-jack not a standard connector.

*For U-NII-3 band compliance with rule part 15.407(b)(i), the OOBE test plots were recorded in Annex A.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.94 dB
Radiated Emissions up to 1 GHz	30MHz ~ 200MHz	3.86 dB
	200MHz ~1000MHz	3.87 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	Wireless Access Point
Brand	SONICWALL
Test Model	APL42-0C1
Status of EUT	Engineering sample
Power Supply Rating	48-55Vdc (PoE)
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK
Modulation Technology	OFDM
Transfer Rate	802.11a: 54.0/ 48.0/ 36.0/ 24.0/ 18.0/ 12.0/ 9.0/ 6.0Mbps 802.11n: up to 600.0Mbps 802.11ac: up to 1733Mbps
Operating Frequency	5180 ~ 5240MHz & 5745 ~ 5825MHz
Number of Channel	5180 ~ 5240MHz: 4 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80) 5745 ~ 5825MHz: 5 for 802.11a, 802.11n (HT20), 802.11ac (VHT20) 2 for 802.11n (HT40), 802.11ac (VHT40) 1 for 802.11ac (VHT80)
Output Power	Refer to Note
Antenna Type	Refer to Note
Antenna Connector	Refer to Note
Accessory Device	1.8m non-shielded ground cable without core
Data Cable Supplied	0.7m non-shielded antenna cable without core

Note:

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

5GHz Band			
Modulation Mode	TX Function	Beamforming	Remark
802.11a	4TX	Not Support	Radio 2
802.11n (HT20)	4TX	Support	
802.11n (HT40)	4TX	Support	
802.11ac (VHT20)	4TX	Support	
802.11ac (VHT40)	4TX	Support	
802.11ac (VHT80)	4TX	Support	

* The modulation and bandwidth are similar for 802.11n mode for HT20/HT40 and 802.11ac mode for VHT20/VHT40, therefore investigated worst case to representative mode in test report. (Final test mode refer section 3.2.1)

* For 802.11n and 802.11ac, CDD mode and Beamforming mode are presented in power output test item. For other test items, CDD mode is the worst case for final tests after pretesting.

2. The EUT consumes power from the following PoE (support unit only).

Adapter for PoE	
Brand	Powertron Electronics Corp.
Model	PA1040-480IB080
Input Power	100-240Vac~50-60Hz 1.5A
Output Power	48Vdc, 0.8A 38.4W Max
Power Line	1.55m non-shielded cable with one core

PoE (support unit only)	
Brand	EnGenius
Model	EPE-48GR
Output Power	48Vdc, 1.25A maximum

3. The following antennas were provided to the EUT.

	Antenna Model	Freq. Range	Type	Con nector	Gain (dBi)										Remark
					2400	2450	2500	5150	5250	5350	5500	5600	5725	5850	
1	D121-05	2.4G	Dipole	N-TYPE	4.1	4.2	4.5	-	-	-	-	-	-	-	Radio 1 (WLAN 2.4G:4TX)
2	D151-07	5G	Dipole	N-TYPE	-	-	-	6.3	6.3	5.4	5.0	5.1	5.2	5.1	Radio 2 (WLAN 5G:4TX)
					Ant.1			Ant.2		Ant.3			Ant.4		
3	S124-12	2.4G	Sector	N-jack	12.60			12.00		12.30			12.10		Radio 1 (WLAN 2.4G:4TX)
4	S154-15	5G	Sector	N-jack	14.10			14.60		13.81			13.23		Radio 2 (WLAN 5G:4TX)
					2400-2500MHz					5150-5850MHz					
5	P254-07	2.4G/5G	Panel	N-jack	Ant. 5	Ant. 6	Ant. 7	Ant. 8		Ant. 1	Ant. 2	Ant. 3	Ant. 4		Radio 1 (WLAN 2.4G:4TX)/ Radio 2 (WLAN 5G:4TX)
					7.33	8.62	7.58	7.83		10.03	10.16	10.23	10.16		
6	P254-13	2.4G/5G	Panel	N-jack	Ant. 1	Ant. 2	Ant. 3	Ant. 4		Ant. 5	Ant. 6	Ant. 7	Ant. 8		
					11.72	12.91	12.77	11.93		14.48	13.49	13.51	14.26		
7	P254-09	2.4G/5G	Panel	N-jack	Ant. 1	Ant. 2	Ant. 3	Ant. 4		Ant. 5	Ant. 6	Ant. 7	Ant. 8		
					8.9	9.4	9.4	8.9		10.4	9.7	9.7	10.4		
8	P124-10	2.4G	Panel	N-jack	9.7	9.6	9.6	9.7		-	-	-	-		Radio 1 (WLAN 2.4G:4TX)
					5150 MHz	5250 MHz	5350 MHz	5450 MHz		5550 MHz	5650 MHz	5750 MHz	5850 MHz		
9	P154-12	5G	Panel	N-jack	12.51	12.58	12.78	12.53		12.50	12.69	11.91	11.48		Radio 2 (WLAN 5G:4TX)
					2400-2500 MHz										
10	Scanning Antenna	2.4G	PIFA	IPEX	3.15										Radio 3 (WLAN 2.4G: 1TX)
11	BLE Antenna	2.4G	PIFA	IPEX	3.37										Radio 4 (BTLE)

*For Panel antenna: Item 5, 6 were chosen for the final tests.

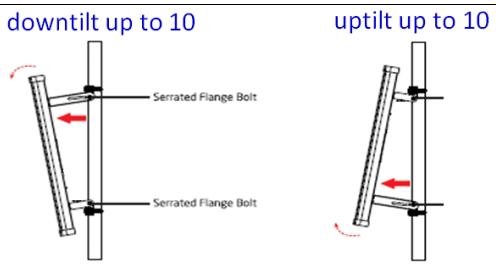
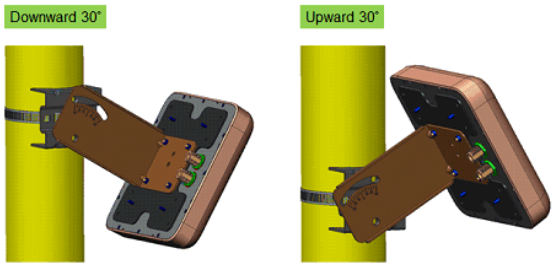
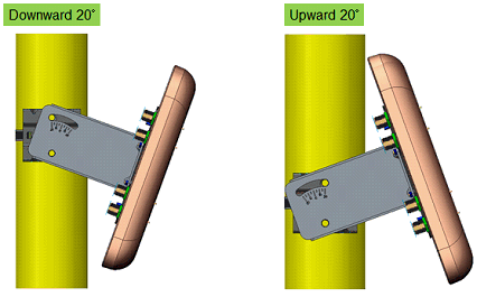
*The power of item 7, 8 were following item 6.

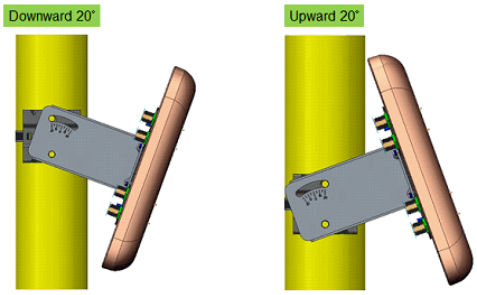
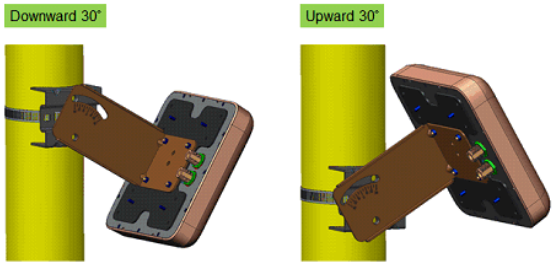
4. Output Power as below.

Output Power (mW)				
Antenna Type	CDD Mode		Beamforming Mode	
	5180 ~ 5240MHz	5745 ~ 5825MHz	5180 ~ 5240MHz	5745 ~ 5825MHz
Dipole	301.420	596.217	71.167	147.578
Sector	24.569	136.956	6.127	34.244
Panel (Model: P254-07)	13.721	339.054	3.380	84.775
Panel (Model: P254-13)	6.978	136.956	1.745	34.244

5. 2.4GHz, 5GHz and BT LE technology can transmit at same time.
6. Spurious emission of the simultaneous operation (2.4GHz, 5GHz and BT LE) has been evaluated and no non-compliance was found.

7. The EUT will install at outdoor area, the highest antenna gain from the horizon above 30 degrees as below, for more detail information please refer to antenna specification and user manual

Antenna Model	Antenna gain	Antenna install degree
D151-07	-3.89dBi	
Due to device will restricted installation position as above photo, thus consider to above 30 degrees from the horizon the highest antenna gain are chosen from antenna specification exhibits from 120 to 240 degrees, 300 to 60 degrees for U-NII-1 band		
S154-15	6.83dBi	
Due to device will restricted installation position as above photo, thus consider to above 30 degrees from the horizon the highest antenna gain are chosen from antenna specification exhibits from 290 to 70 degrees for U-NII-1 band		
P254-07	9.40dBi	
Due to device will restricted installation position as above photo, thus consider to above 30 degrees from the horizon the highest antenna gain are chosen from antenna specification exhibits from 270 to 90 degrees for U-NII-1 band		
P254-13	12.45dBi	
Due to device will restricted installation position as above photo, thus consider to above 30 degrees from the horizon the highest antenna gain are chosen from antenna specification exhibits from 100 to 260 degrees for U-NII-1 band		

P254-09	9.212dBi	
Due to device will restricted installation position as above photo, thus consider to above 30 degrees from the horizon the highest antenna gain are chosen from antenna specification exhibits from 280 to 80 degrees for U-NII-1 band		
P154-12	12.259dBi	
Due to device will restricted installation position as above photo, thus consider to above 30 degrees from the horizon the highest antenna gain are chosen from antenna specification exhibits from 90 to 270 degrees for U-NII-1 band		

8. The power settings are list as below.

Radio 1: Dipole antenna						
	802.11a	802.11n (HT20)		802.11n (HT40)		802.11ac (VHT80)
CH 149	23.5	23.5	CH 151	22	CH 155	18
CH 157	23.5	23.5	CH 159	23.5		
CH 165	23.5	23.5				
Radio 1: Sector antenna						
	802.11a	802.11n (HT20)		802.11n (HT40)		802.11ac (VHT80)
CH 149	16	16	CH 151	16.5	CH 155	16.5
CH 157	16	16	CH 159	16.5		
CH 165	16	16				
Radio 1: Panel antenna (Model: P254-07)						
	802.11a	802.11n (HT20)		802.11n (HT40)		802.11ac (VHT80)
CH 149	20.5	20.5	CH 151	21	CH 155	18
CH 157	20.5	20.5	CH 159	21		
CH 165	20.5	20.5				
Radio 1: Panel antenna (Model: P254-13)						
	802.11a	802.11n (HT20)		802.11n (HT40)		802.11ac (VHT80)
CH 149	16	16	CH 151	16.5	CH 155	16.5
CH 157	16	16	CH 159	16.5		
CH 165	16	16				

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

3.2 Description of Test Modes

FOR 5180 ~ 5240MHz

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

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

2 channels are provided for 802.11n (HT40), 802.11ac (40MHz):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
42	5210MHz

FOR 5745 ~ 5825MHz:

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

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

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

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency
155	5775MHz

3.2.1 Test Mode Applicability and Tested Channel Detail

EUT CONFIGURE MODE	APPLICABLE TO				DESCRIPTION
	RE≥1G	RE<1G	PLC	APCM	
A	√	√	√	√	EUT with Dipole antenna
B	√	√	√	√	EUT with Sector antenna
C	√	√	√	√	EUT with Panel antenna (Model: P254-07)
D	√	√	√	√	EUT with Panel antenna (Model: P254-13)

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

Note: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Z-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	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Remark
A, B, C, D	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0	Radio 2 (4TX)
A, B, C, D	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5	Radio 2 (4TX)
A, B, C, D	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	13.5	Radio 2 (4TX)
A, B, C, D	802.11ac (VHT80)		42	42	OFDM	BPSK	117	Radio 2 (4TX)
A, B, C, D	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0	Radio 2 (4TX)
A, B, C, D	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5	Radio 2 (4TX)
A, B, C, D	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	13.5	Radio 2 (4TX)
A, B, C, D	802.11ac (VHT80)		155	155	OFDM	BPSK	117	Radio 2 (4TX)

Radiated Emission Test (Below 1GHz):

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

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

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Remark
A, B, C, D	802.11a	5180-5320 5745-5825	36 to 64 149 to 165	149	OFDM	BPSK	6.0	Radio 2 (4TX)

Power Line Conducted Emission Test:

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

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

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Remark
A, B, C, D	802.11a	5180-5320 5745-5825	36 to 64 149 to 165	149	OFDM	BPSK	6.0	Radio 2 (4TX)

Antenna Port Conducted Measurement:

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

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

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

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Modulation Type	Data Rate (Mbps)	Remark
A, B, C, D	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	BPSK	6.0	Radio 2 (4TX)
A, B, C, D	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	BPSK	6.5	Radio 2 (4TX)
A, B, C, D	802.11n (HT40)		38 to 46	38, 46	OFDM	BPSK	13.5	Radio 2 (4TX)
A, B, C, D	802.11ac (VHT80)		42	42	OFDM	BPSK	117	Radio 2 (4TX)
A, B, C, D	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	BPSK	6.0	Radio 2 (4TX)
A, B, C, D	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	BPSK	6.5	Radio 2 (4TX)
A, B, C, D	802.11n (HT40)		151 to 159	151, 159	OFDM	BPSK	13.5	Radio 2 (4TX)
A, B, C, D	802.11ac (VHT80)		155	155	OFDM	BPSK	117	Radio 2 (4TX)

Test Condition:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE≥1G	25deg. C, 67%RH	120Vac, 60Hz	James Yang
RE<1G	26deg. C, 67%RH	120Vac, 60Hz	Jones Chang
PLC	25deg. C, 72%RH	120Vac, 60Hz	Jones Chang
APCM	25deg. C, 60%RH	120Vac, 60Hz	Leo Tsai

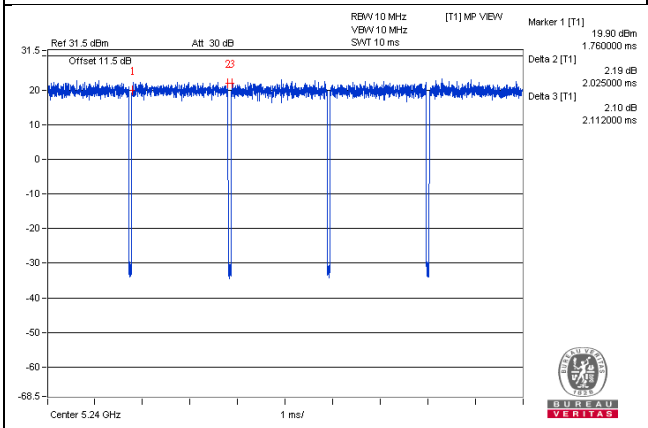
3.3 Duty Cycle of Test Signal

Duty cycle of test signal is ≥ 98 %, duty factor is not required.
Duty cycle of test signal is < 98 %, duty factor is required

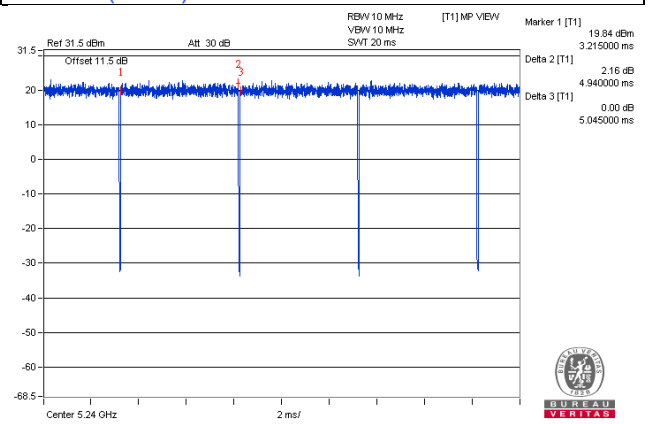
Test Mode A

802.11a: Duty cycle = 2.025/2.115 = 0.959, Duty factor = 10 * log(1/0.959) = 0.18
802.11n (HT20): Duty cycle = 4.94/5.045 = 0.979, Duty factor = 10 * log(1/0.979) = 0.09
802.11n (HT40): Duty cycle = 2.408/2.483 = 0.970, Duty factor = 10 * log(1/0.970) = 0.13
802.11ac (VHT80): Duty cycle = 1.127/1.235 = 0.913, Duty factor = 10 * log(1/0.930) = 0.40

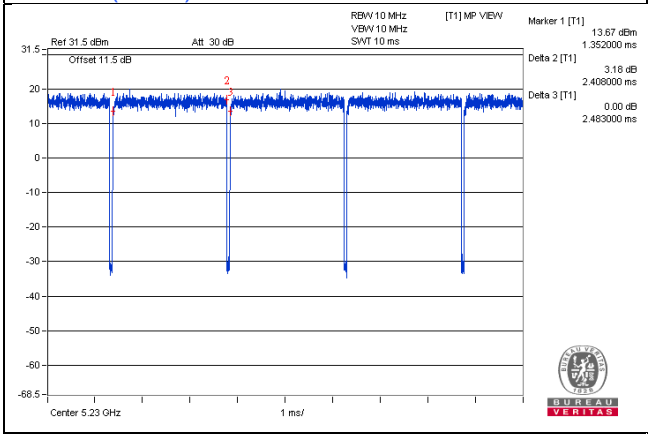
802.11a



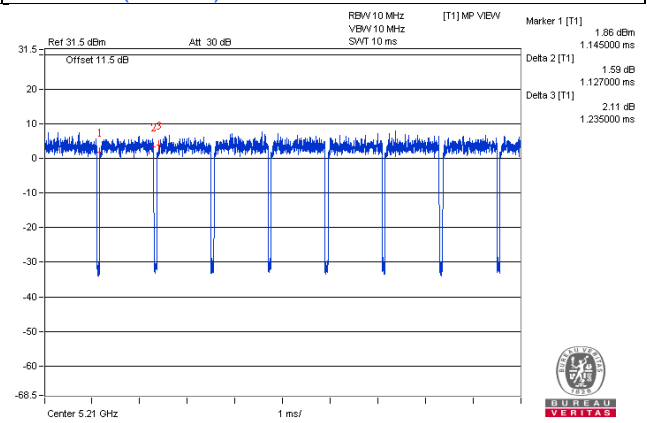
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode B

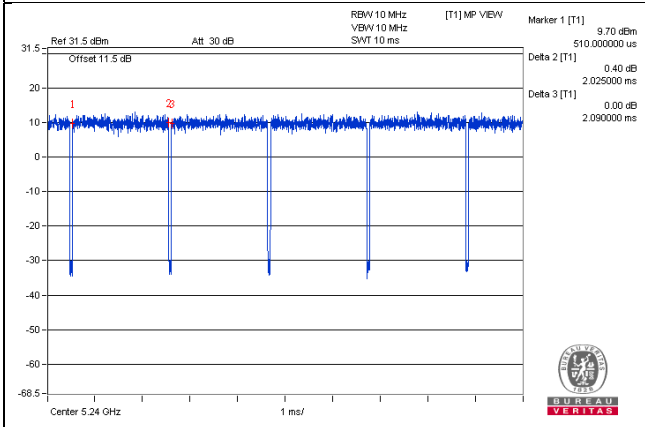
802.11a: Duty cycle = 2.025/2.090 = 0.969, Duty factor = 10 * log(1/0.969) = 0.14

802.11n (HT20): Duty cycle = 4.94/5.035 = 0.981

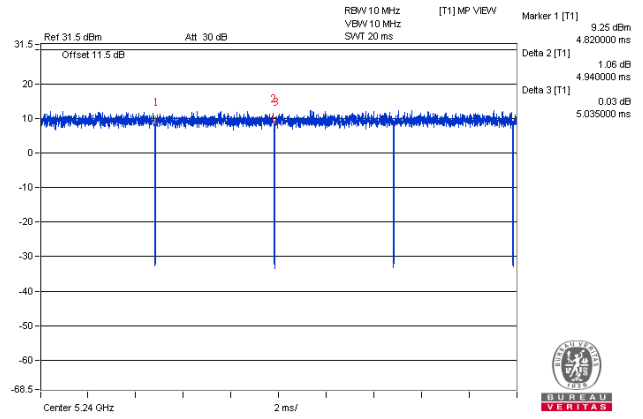
802.11n (HT40): Duty cycle = 2.399/2.482 = 0.967, Duty factor = 10 * log(1/0.967) = 0.15

802.11ac (VHT80): Duty cycle = 1.127/1.197 = 0.942, Duty factor = 10 * log(1/0.942) = 0.26

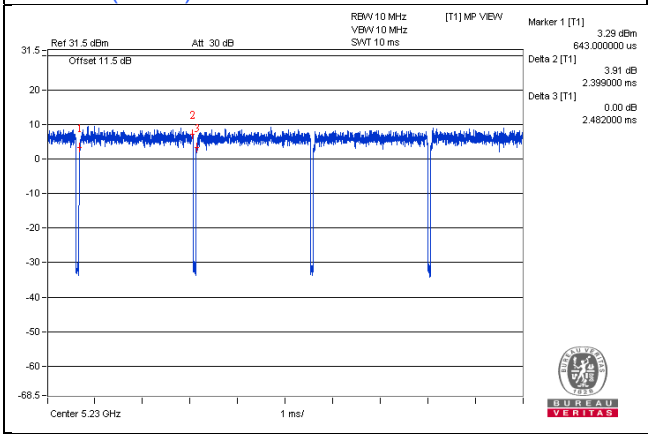
802.11a



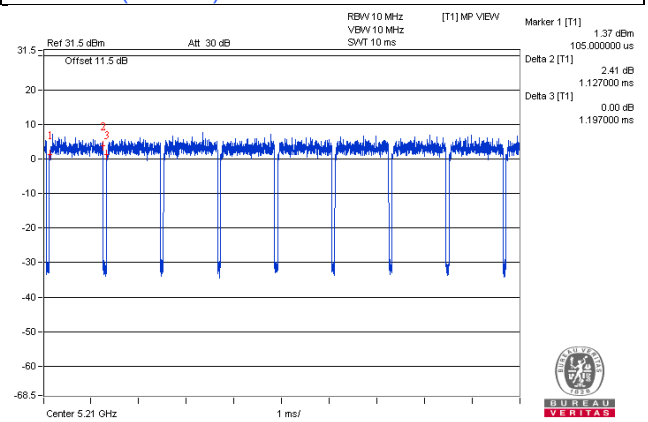
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode C

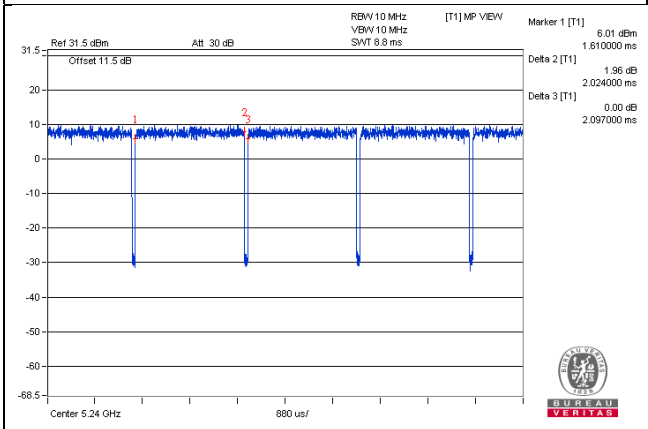
802.11a: Duty cycle = 2.024/2.097 = 0.965, Duty factor = 10 * log(1/0.965) = 0.15

802.11n (HT20): Duty cycle = 4.941/5.029 = 0.983

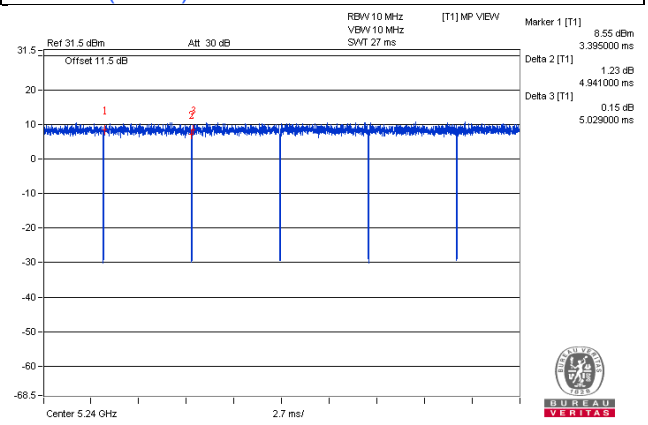
802.11n (HT40): Duty cycle = 2.4/2.48 = 0.968, Duty factor = 10 * log(1/0.968) = 0.14

802.11ac (VHT80): Duty cycle = 1.122/1.225 = 0.916, Duty factor = 10 * log(1/0.916) = 0.38

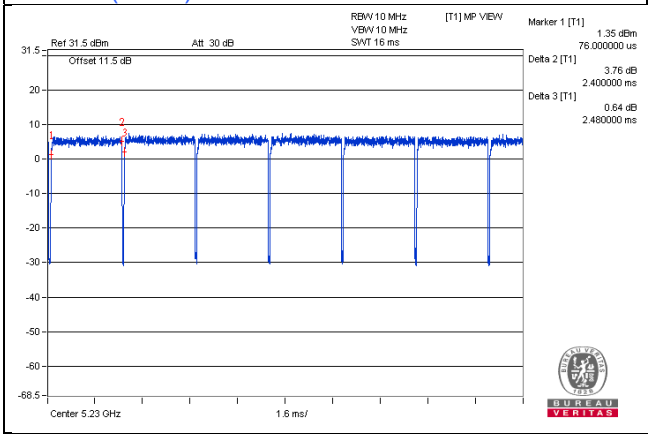
802.11a



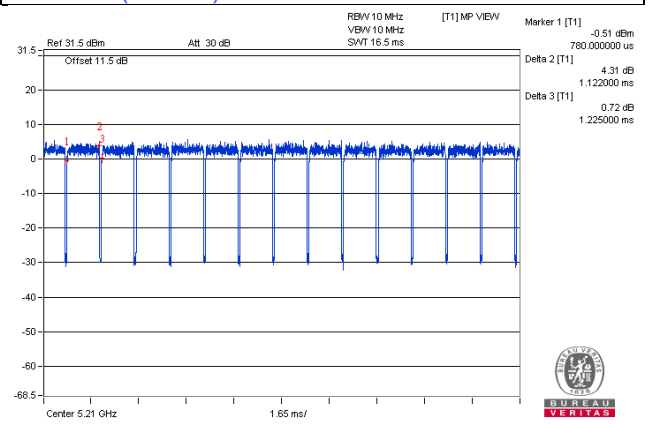
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode D

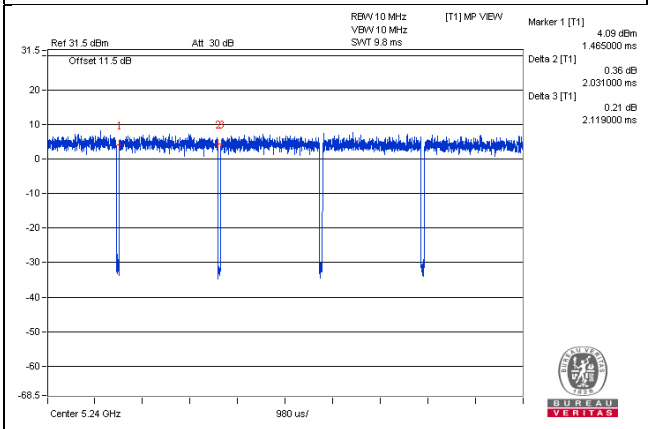
802.11a: Duty cycle = 2.031/2.119 = 0.958, Duty factor = 10 * log(1/0.958) = 0.18

802.11n (HT20): Duty cycle = 4.969/5.054 = 0.983

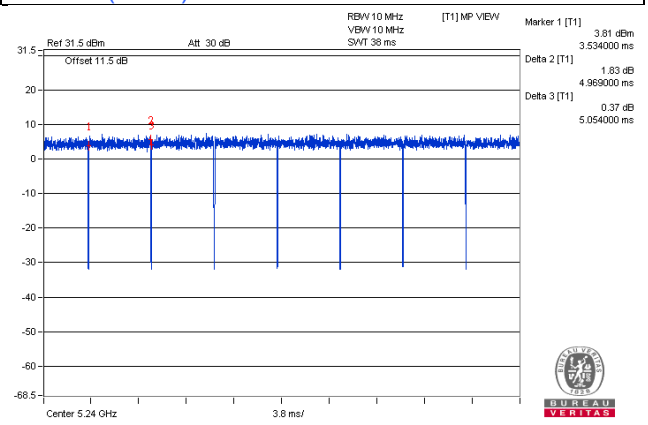
802.11n (HT40): Duty cycle = 2.408/2.491 = 0.967, Duty factor = 10 * log(1/0.967) = 0.15

802.11ac (VHT80): Duty cycle = 1.125/1.226 = 0.918, Duty factor = 10 * log(1/0.918) = 0.37

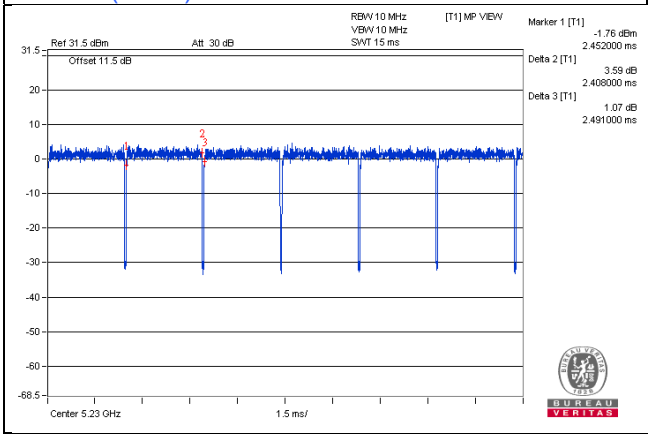
802.11a



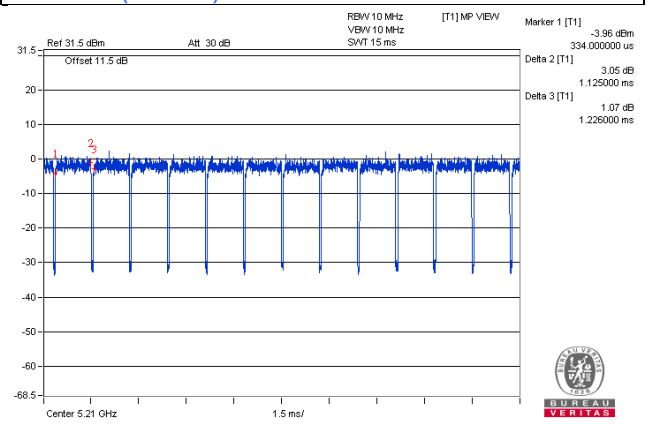
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



3.4 Description of Support Units

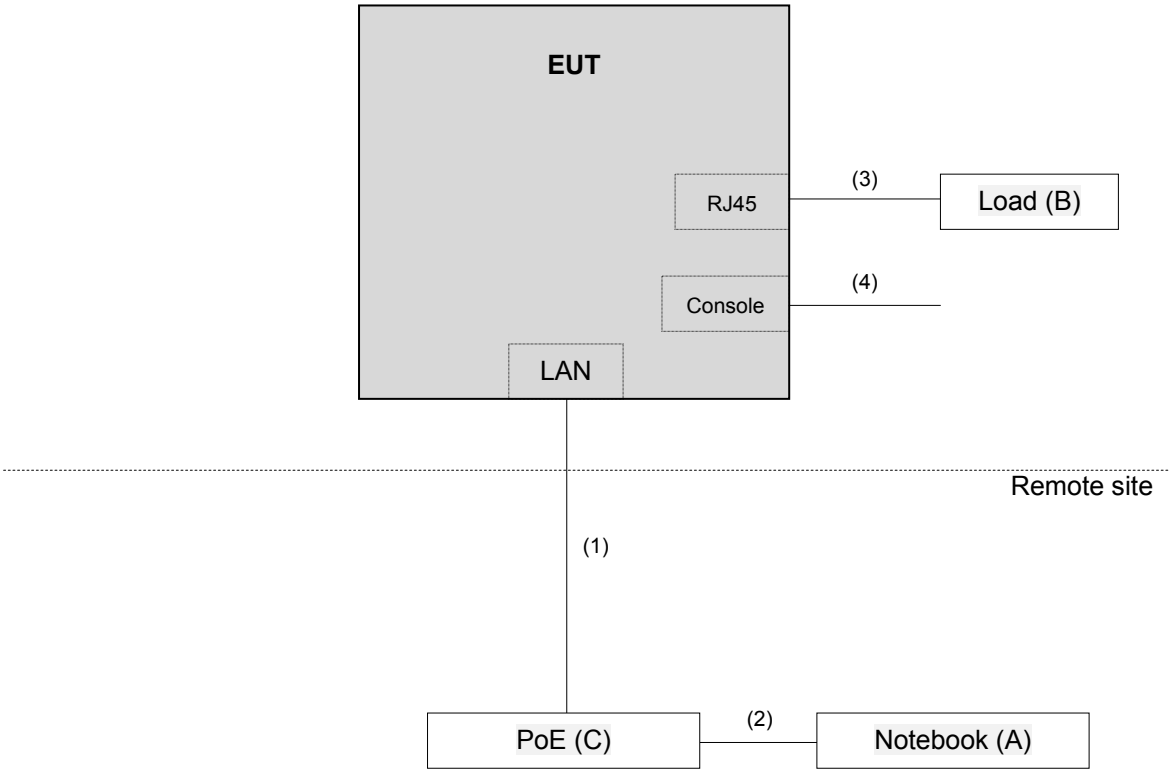
The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	Load	NA	NA	NA	NA	-
C.	PoE	EnGenius	EPE-48GR	NA	NA	Provided by manufacturer

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

ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	RJ45 cable	1	10	N	0	-
2.	RJ45 cable	1	3	N	0	-
3.	RJ45 cable	1	1.8	N	0	-
4.	Console cable	1	1.8	N	0	Accessory of EUT

3.4.1 Configuration of System under Test



3.5 General Description of Applied Standard

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

FCC Part 15, Subpart E (15.407)
KDB 789033 D02 General UNII Test Procedure New Rules v01r04
KDB 662911 D01 Multiple Transmitter Output v02r01
ANSI C63.10-2013

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

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

4 Test Types and Results

4.1 Radiated Emission and Bandedge Measurement

4.1.1 Limits of Radiated Emission and Bandedge Measurement

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

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

NOTE:

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

Limits of Unwanted Emission Out of the Restricted Bands

Applicable To			Limit	
789033 D02 General UNII Test Procedure New Rules v01r04			Field Strength at 3m	
			PK:74 (dBμV/m)	AV:54 (dBμV/m)
Frequency Band	Applicable To		EIRP Limit	Equivalent Field Strength at 3m
5150~5250 MHz	15.407(b)(1)		PK:-27 (dBm/MHz)	PK:68.2(dBμV/m)
5250~5350 MHz	15.407(b)(2)			
5470~5725 MHz	15.407(b)(3)			
5725~5850 MHz	☒	15.407(b)(4)(i)	PK:-27 (dBm/MHz) *1 PK:10 (dBm/MHz) *2 PK:15.6 (dBm/MHz) *3 PK:27 (dBm/MHz) *4	PK: 68.2(dBμV/m) *1 PK:105.2 (dBμV/m) *2 PK: 110.8(dBμV/m) *3 PK:122.2 (dBμV/m) *4
	☐	15.407(b)(4)(ii)	Emission limits in section 15.247(d)	

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

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

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

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

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100424	Oct. 24, 2016	Oct. 23, 2017
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Nov. 16, 2016	Nov. 15, 2017
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Dec. 28, 2016	Dec. 27, 2017
HORN Antenna SCHWARZBECK	9120D	209	Dec. 27, 2016	Dec. 26, 2017
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Dec. 14, 2016	Dec. 13, 2017
Loop Antenna	EM-6879	269	Aug. 11, 2016	Aug. 10, 2017
Preamplifier Agilent	8447D	2944A10738	Aug. 22, 2016	Aug. 21, 2017
Preamplifier Agilent	8449B	3008A01922	Sep. 18, 2016	Sep. 17, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (214378)	Aug. 22, 2016	Aug. 21, 2017
RF signal cable HUBER+SUHNER	SUCOFLEX 106	Cable-CH3-03 (309224+12738)	Aug. 22, 2016	Aug. 21, 2017
Software BV ADT	ADT_Radiated_ V7.6.15.9.4	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller BV ADT	AT100	AT93021702	NA	NA
Turn Table BV ADT	TT100	TT93021702	NA	NA
Turn Table Controller BV ADT	SC100	SC93021702	NA	NA
High Speed Peak Power Meter	ML2495A	0824012	Aug. 11, 2016	Aug. 10, 2017
Power Sensor	MA2411B	0738171	Aug. 11, 2016	Aug. 10, 2017
26GHz ~ 40GHz Amplifier	EM26400	815221	Oct. 17, 2016	Oct. 16, 2017

Note:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Chamber 3.
3. The FCC Designation Number is TW0003. The number will be varied with the Lab location and scope as attached.
4. The horn antenna and preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
5. The FCC Site Registration No. is 988962.
6. The IC Site Registration No. is IC 7450F-3.

4.1.3 Test Procedure

For Radiated emission below 30MHz

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

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

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

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

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

NOTE:

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

For Radiated emission above 30MHz

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

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

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

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

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

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

Note:

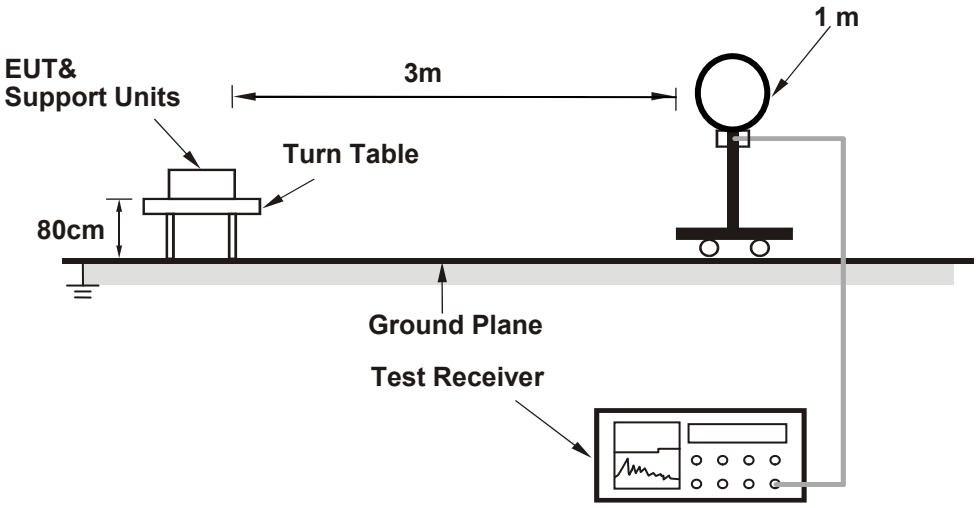
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.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

4.1.4 Deviation from Test Standard

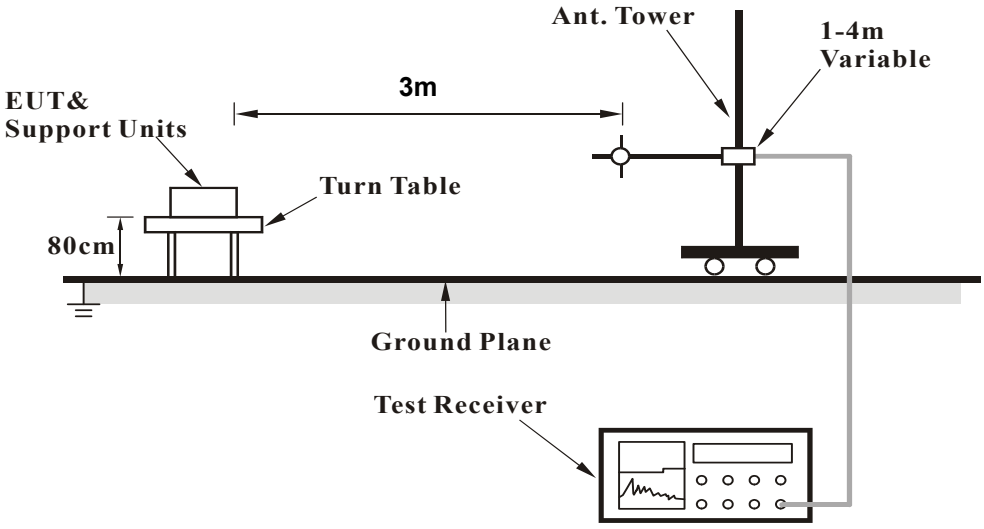
No deviation.

4.1.5 Test Setup

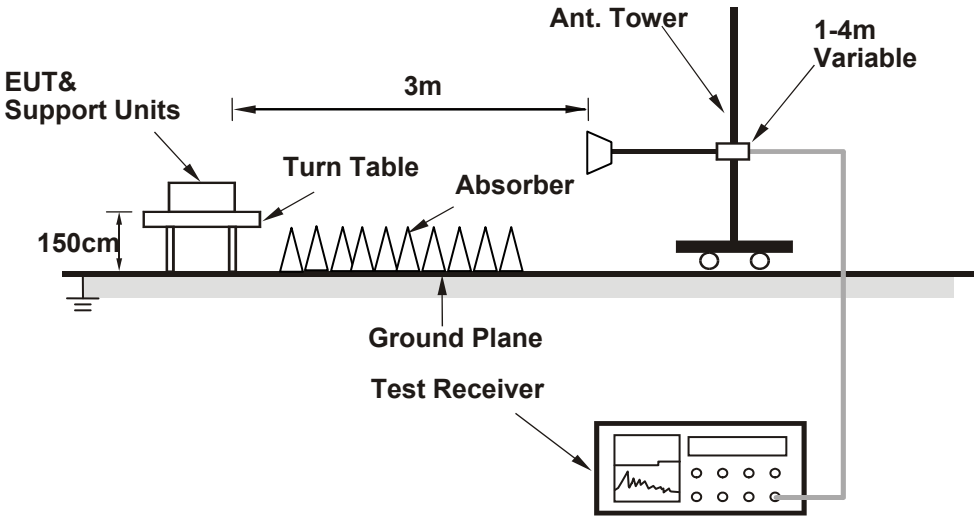
For Radiated emission below 30MHz



For Radiated emission 30MHz to 1GHz



For Radiated emission above 1GHz



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

4.1.6 EUT Operating Conditions

a. Placed the EUT on the testing table.
b. Prepared notebook to act a as a communication partner and placed it outside of testing area.
c. 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.
d. The communication partner sent data to EUT by command "PING".

4.1.7 Test Results

Test Mode A

Above 1GHz Data：

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.9 PK	74.0	-20.1	2.21 H	125	53.1	0.8
2	5150.00	41.2 AV	54.0	-12.8	2.21 H	125	40.4	0.8
3	*5180.00	100.0 PK			2.31 H	189	61.3	38.7
4	*5180.00	89.0 AV			2.31 H	189	50.3	38.7
5	#10360.00	56.8 PK	74.0	-17.2	2.23 H	184	44.1	12.7
6	#10360.00	43.7 AV	54.0	-10.3	2.23 H	184	31.0	12.7
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	65.5 PK	74.0	-8.5	2.01 V	269	64.7	0.8
2	5150.00	52.2 AV	54.0	-1.8	2.01 V	269	51.4	0.8
3	*5180.00	121.2 PK			1.80 V	0	82.5	38.7
4	*5180.00	110.4 AV			1.80 V	0	71.7	38.7
5	#10360.00	57.8 PK	74.0	-16.2	1.50 V	222	45.1	12.7
6	#10360.00	43.4 AV	54.0	-10.6	1.50 V	222	30.7	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	103.3 PK			2.22 H	153	64.6	38.7
2	*5200.00	92.9 AV			2.22 H	153	54.2	38.7
3	#10400.00	57.4 PK	74.0	-16.6	2.22 H	218	44.7	12.7
4	#10400.00	43.8 AV	54.0	-10.2	2.22 H	218	31.1	12.7
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	*5200.00	123.7 PK			1.81 V	351	85.0	38.7
2	*5200.00	112.5 AV			1.81 V	351	73.8	38.7
3	#10400.00	57.6 PK	74.0	-16.4	1.79 V	256	44.9	12.7
4	#10400.00	44.0 AV	54.0	-10.0	1.79 V	256	31.3	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.6 PK	74.0	-19.4	1.84 H	265	53.8	0.8
2	5150.00	41.5 AV	54.0	-12.5	1.84 H	265	40.7	0.8
3	*5240.00	103.4 PK			2.27 H	152	64.6	38.8
4	*5240.00	93.1 AV			2.27 H	152	54.3	38.8
5	#10480.00	57.4 PK	74.0	-16.6	2.00 H	235	43.9	13.5
6	#10480.00	44.3 AV	54.0	-9.7	2.00 H	235	30.8	13.5
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	5150.00	55.6 PK	74.0	-18.4	1.32 V	348	54.8	0.8
2	5150.00	42.1 AV	54.0	-11.9	1.32 V	348	41.3	0.8
3	*5240.00	123.4 PK			1.98 V	350	84.6	38.8
4	*5240.00	112.1 AV			1.98 V	350	73.3	38.8
5	#10480.00	57.6 PK	74.0	-16.4	1.12 V	212	44.1	13.5
6	#10480.00	44.5 AV	54.0	-9.5	1.12 V	212	31.0	13.5

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)
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) 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	#5605.60	55.6 PK	68.2	-12.6	1.59 H	212	53.9	1.7
2	*5745.00	110.8 PK			1.59 H	212	70.9	39.9
3	*5745.00	99.6 AV			1.59 H	212	59.7	39.9
4	#5960.80	57.3 PK	68.2	-10.9	1.59 H	212	54.7	2.6
5	11490.00	60.5 PK	74.0	-13.5	1.46 H	41	46.0	14.5
6	11490.00	47.6 AV	54.0	-6.4	1.46 H	41	33.1	14.5
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	63.5 PK	68.5	-5.0	1.51 V	171	61.8	1.7
2	*5745.00	126.2 PK			1.51 V	171	86.3	39.9
3	*5745.00	115.4 AV			1.51 V	171	75.5	39.9
4	#5978.40	61.4 PK	68.2	-6.8	1.51 V	171	58.6	2.8
5	11490.00	59.7 PK	74.0	-14.3	1.36 V	224	45.2	14.5
6	11490.00	47.0 AV	54.0	-7.0	1.36 V	224	32.5	14.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5636.80	55.8 PK	68.2	-12.4	1.11 H	317	54.1	1.7
2	*5785.00	108.6 PK			1.11 H	317	68.5	40.1
3	*5785.00	98.0 AV			1.11 H	317	57.9	40.1
4	#5993.60	57.3 PK	68.2	-10.9	1.11 H	317	54.5	2.8
5	11570.00	62.5 PK	74.0	-11.5	1.00 H	45	48.2	14.3
6	11570.00	49.6 AV	54.0	-4.4	1.00 H	45	35.3	14.3
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	#5607.20	60.6 PK	68.2	-7.6	1.49 V	172	58.9	1.7
2	*5785.00	126.0 PK			1.49 V	172	85.9	40.1
3	*5785.00	115.5 AV			1.49 V	172	75.4	40.1
4	#5979.20	61.6 PK	68.2	-6.6	1.49 V	172	58.8	2.8
5	11570.00	59.7 PK	74.0	-14.3	1.50 V	264	45.4	14.3
6	11570.00	46.7 AV	54.0	-7.3	1.50 V	264	32.4	14.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5632.80	55.7 PK	68.2	-12.5	1.07 H	321	54.0	1.7
2	*5825.00	108.0 PK			1.07 H	321	67.8	40.2
3	*5825.00	97.7 AV			1.07 H	321	57.5	40.2
4	#5967.20	57.1 PK	68.2	-11.1	1.07 H	321	54.4	2.7
5	11650.00	61.9 PK	74.0	-12.1	1.00 H	50	47.5	14.4
6	11650.00	48.3 AV	54.0	-5.7	1.00 H	50	33.9	14.4
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	#5607.20	55.6 PK	68.2	-12.6	1.48 V	172	53.9	1.7
2	*5825.00	124.7 PK			1.48 V	172	84.5	40.2
3	*5825.00	114.4 AV			1.48 V	172	74.2	40.2
4	#5964.00	57.2 PK	68.2	-11.0	1.48 V	172	54.5	2.7
5	11650.00	58.3 PK	74.0	-15.7	1.50 V	350	43.9	14.4
6	11650.00	45.3 AV	54.0	-8.7	1.50 V	350	30.9	14.4

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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.4 PK	74.0	-19.6	2.12 H	169	53.6	0.8
2	5150.00	43.9 AV	54.0	-10.1	2.12 H	169	43.1	0.8
3	*5180.00	98.3 PK			2.52 H	199	59.6	38.7
4	*5180.00	87.3 AV			2.52 H	199	48.6	38.7
5	#10360.00	56.5 PK	74.0	-17.5	2.11 H	333	43.8	12.7
6	#10360.00	43.5 AV	54.0	-10.5	2.11 H	333	30.8	12.7
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	67.9 PK	74.0	-6.1	2.00 V	263	67.1	0.8
2	5150.00	52.4 AV	54.0	-1.6	2.00 V	263	51.6	0.8
3	*5180.00	120.4 PK			1.77 V	353	81.7	38.7
4	*5180.00	109.9 AV			1.77 V	353	71.2	38.7
5	#10360.00	57.4 PK	74.0	-16.6	1.55 V	226	44.7	12.7
6	#10360.00	44.3 AV	54.0	-9.7	1.55 V	226	31.6	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	99.6 PK			2.24 H	192	60.9	38.7
2	*5200.00	89.7 AV			2.24 H	192	51.0	38.7
3	#10400.00	56.9 PK	74.0	-17.1	2.33 H	144	44.2	12.7
4	#10400.00	43.8 AV	54.0	-10.2	2.33 H	144	31.1	12.7
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	*5200.00	122.2 PK			1.79 V	350	83.5	38.7
2	*5200.00	111.5 AV			1.79 V	350	72.8	38.7
3	#10400.00	57.5 PK	74.0	-16.5	2.00 V	222	44.8	12.7
4	#10400.00	44.8 AV	54.0	-9.2	2.00 V	222	32.1	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	99.1 PK			2.24 H	195	60.3	38.8
2	*5240.00	90.1 AV			2.24 H	195	51.3	38.8
3	5350.00	53.9 PK	74.0	-20.1	2.22 H	207	52.8	1.1
4	5350.00	44.0 AV	54.0	-10.0	2.22 H	207	42.9	1.1
5	#10480.00	57.3 PK	74.0	-16.7	2.40 H	182	43.8	13.5
6	#10480.00	44.4 AV	54.0	-9.6	2.40 H	182	30.9	13.5
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	*5240.00	121.9 PK			1.58 V	346	83.1	38.8
2	*5240.00	112.2 AV			1.58 V	346	73.4	38.8
3	5350.00	53.9 PK	74.0	-20.1	1.76 V	192	52.8	1.1
4	5350.00	42.8 AV	54.0	-11.2	1.76 V	192	41.7	1.1
5	#10480.00	58.0 PK	74.0	-16.0	2.31 V	246	44.5	13.5
6	#10480.00	44.9 AV	54.0	-9.1	2.31 V	246	31.4	13.5

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)
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) 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	#5616.00	56.0 PK	68.2	-12.2	1.12 H	317	54.3	1.7
2	*5745.00	108.1 PK			1.12 H	317	68.2	39.9
3	*5745.00	97.0 AV			1.12 H	317	57.1	39.9
4	#5980.80	57.3 PK	68.2	-10.9	1.12 H	317	54.5	2.8
5	11490.00	62.8 PK	74.0	-11.2	1.00 H	46	48.3	14.5
6	11490.00	49.1 AV	54.0	-4.9	1.00 H	46	34.6	14.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.00	60.5 PK	68.2	-7.7	1.55 V	348	58.8	1.7
2	*5745.00	125.4 PK			1.55 V	348	85.5	39.9
3	*5745.00	115.2 AV			1.55 V	348	75.3	39.9
4	#5956.00	62.0 PK	68.2	-6.2	1.55 V	348	59.4	2.6
5	11490.00	59.5 PK	74.0	-14.5	1.60 V	342	45.0	14.5
6	11490.00	47.1 AV	54.0	-6.9	1.60 V	342	32.6	14.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5628.80	55.4 PK	68.2	-12.8	1.12 H	317	53.7	1.7
2	*5785.00	108.9 PK			1.12 H	317	68.8	40.1
3	*5785.00	97.6 AV			1.12 H	317	57.5	40.1
4	#5982.40	56.8 PK	68.2	-11.4	1.12 H	317	54.0	2.8
5	11570.00	62.1 PK	74.0	-11.9	1.00 H	46	47.8	14.3
6	11570.00	48.1 AV	54.0	-5.9	1.00 H	46	33.8	14.3
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	#5637.60	60.4 PK	68.2	-7.8	1.72 V	350	58.7	1.7
2	*5785.00	125.5 PK			1.72 V	350	85.4	40.1
3	*5785.00	113.9 AV			1.72 V	350	73.8	40.1
4	#5980.00	61.9 PK	68.2	-6.3	1.72 V	350	59.1	2.8
5	11570.00	60.5 PK	74.0	-13.5	1.72 V	263	46.2	14.3
6	11570.00	46.9 AV	54.0	-7.1	1.72 V	263	32.6	14.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5636.00	55.5 PK	68.2	-12.7	1.06 H	321	53.8	1.7
2	*5825.00	108.0 PK			1.06 H	321	67.8	40.2
3	*5825.00	96.9 AV			1.06 H	321	56.7	40.2
4	#5971.20	57.4 PK	68.2	-10.8	1.06 H	321	54.7	2.7
5	11650.00	60.6 PK	74.0	-13.4	1.00 H	50	46.2	14.4
6	11650.00	47.3 AV	54.0	-6.7	1.00 H	50	32.9	14.4
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	#5625.60	61.0 PK	68.2	-7.2	1.66 V	167	59.3	1.7
2	*5825.00	124.9 PK			1.66 V	167	84.7	40.2
3	*5825.00	113.8 AV			1.66 V	167	73.6	40.2
4	#5996.80	61.8 PK	68.2	-6.4	1.66 V	167	59.0	2.8
5	11650.00	60.3 PK	74.0	-13.7	1.65 V	280	45.9	14.4
6	11650.00	47.4 AV	54.0	-6.6	1.65 V	280	33.0	14.4

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

802.11n (HT40)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.9 PK	74.0	-20.1	2.20 H	200	53.1	0.8
2	5150.00	41.9 AV	54.0	-12.1	2.20 H	200	41.1	0.8
3	*5190.00	91.1 PK			2.24 H	192	52.4	38.7
4	*5190.00	81.4 AV			2.24 H	192	42.7	38.7
5	#10380.00	56.3 PK	74.0	-17.7	1.87 H	220	43.5	12.8
6	#10380.00	43.1 AV	54.0	-10.9	1.87 H	220	30.3	12.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.3 PK	74.0	-8.7	1.98 V	343	64.5	0.8
2	5150.00	52.4 AV	54.0	-1.6	1.98 V	343	51.6	0.8
3	*5190.00	111.5 PK			1.97 V	347	72.8	38.7
4	*5190.00	101.8 AV			1.97 V	347	63.1	38.7
5	#10380.00	56.1 PK	74.0	-17.9	2.05 V	247	43.3	12.8
6	#10380.00	43.3 AV	54.0	-10.7	2.05 V	247	30.5	12.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	52.9 PK	74.0	-21.1	1.96 H	213	52.1	0.8
2	5150.00	42.2 AV	54.0	-11.8	1.96 H	213	41.4	0.8
3	*5230.00	97.7 PK			2.22 H	195	58.9	38.8
4	*5230.00	87.6 AV			2.22 H	195	48.8	38.8
5	#10460.00	56.9 PK	74.0	-17.1	1.60 H	154	43.6	13.3
6	#10460.00	43.7 AV	54.0	-10.3	1.60 H	154	30.4	13.3
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	63.5 PK	74.0	-10.5	1.61 V	343	62.7	0.8
2	5150.00	52.4 AV	54.0	-1.6	1.61 V	343	51.6	0.8
3	*5230.00	118.7 PK			1.97 V	349	79.9	38.8
4	*5230.00	109.0 AV			1.97 V	349	70.2	38.8
5	#10460.00	57.4 PK	74.0	-16.6	2.30 V	269	44.1	13.3
6	#10460.00	44.1 AV	54.0	-9.9	2.30 V	269	30.8	13.3

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)
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) 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	#5620.80	55.5 PK	68.2	-12.7	1.08 H	319	53.8	1.7
2	#5650.00	56.1 PK	68.2	-12.1	1.00 H	180	54.4	1.7
3	*5755.00	103.5 PK			1.08 H	319	63.6	39.9
4	*5755.00	93.4 AV			1.08 H	319	53.5	39.9
5	#5966.40	57.1 PK	68.2	-11.1	1.08 H	319	54.4	2.7
6	11510.00	59.9 PK	74.0	-14.1	1.00 H	45	45.4	14.5
7	11510.00	46.9 AV	54.0	-7.1	1.00 H	45	32.4	14.5
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	#5645.60	65.0 PK	68.2	-3.2	1.90 V	350	63.3	1.7
2	#5650.00	66.6 PK	68.2	-1.6	1.90 V	162	64.9	1.7
3	*5755.00	120.8 PK			1.90 V	350	80.9	39.9
4	*5755.00	110.7 AV			1.90 V	350	70.8	39.9
5	#5942.40	61.1 PK	68.2	-7.1	1.90 V	350	58.5	2.6
6	11510.00	59.8 PK	74.0	-14.2	1.93 V	210	45.3	14.5
7	11510.00	46.6 AV	54.0	-7.4	1.93 V	210	32.1	14.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5604.80	55.1 PK	68.2	-13.1	1.11 H	317	53.4	1.7
2	*5795.00	104.9 PK			1.11 H	317	64.8	40.1
3	*5795.00	94.9 AV			1.11 H	317	54.8	40.1
4	#5925.00	58.0 PK	68.2	-10.2	1.00 H	121	55.4	2.6
5	#6000.00	57.2 PK	68.2	-11.0	1.11 H	317	54.4	2.8
6	11590.00	60.4 PK	74.0	-13.6	1.00 H	44	46.1	14.3
7	11590.00	46.6 AV	54.0	-7.4	1.00 H	44	32.3	14.3
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	#5641.60	60.8 PK	68.2	-7.4	1.51 V	351	59.1	1.7
2	*5795.00	121.6 PK			1.51 V	351	81.5	40.1
3	*5795.00	111.5 AV			1.51 V	351	71.4	40.1
4	#5925.00	64.1 PK	68.2	-4.1	1.87 V	30	61.5	2.6
5	#5953.60	61.3 PK	68.2	-6.9	1.51 V	351	58.7	2.6
6	11590.00	60.4 PK	74.0	-13.6	1.54 V	260	46.1	14.3
7	11590.00	46.6 AV	54.0	-7.4	1.54 V	260	32.3	14.3

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

802.11ac (VHT80)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.8 PK	74.0	-20.2	1.79 H	333	53.0	0.8
2	5150.00	42.1 AV	54.0	-11.9	1.79 H	333	41.3	0.8
3	*5210.00	86.6 PK			3.43 H	153	47.9	38.7
4	*5210.00	76.4 AV			3.43 H	153	37.7	38.7
5	5350.00	55.3 PK	74.0	-18.7	1.88 H	34	54.2	1.1
6	5350.00	43.2 AV	54.0	-10.8	1.88 H	34	42.1	1.1
7	#10420.00	56.4 PK	74.0	-17.6	1.99 H	189	43.5	12.9
8	#10420.00	43.1 AV	54.0	-10.9	1.99 H	189	30.2	12.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	64.1 PK	74.0	-9.9	1.99 V	351	63.3	0.8
2	5150.00	52.3 AV	54.0	-1.7	1.99 V	351	51.5	0.8
3	*5210.00	105.9 PK			1.98 V	350	67.2	38.7
4	*5210.00	95.4 AV			1.98 V	350	56.7	38.7
5	5350.00	55.9 PK	74.0	-18.1	1.00 V	350	54.8	1.1
6	5350.00	43.6 AV	54.0	-10.4	1.00 V	350	42.5	1.1
7	#10420.00	56.5 PK	74.0	-17.5	2.32 V	0	43.6	12.9
8	#10420.00	43.9 AV	54.0	-10.1	2.32 V	0	31.0	12.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.00	55.9 PK	68.2	-12.3	1.00 H	151	54.2	1.7
2	#5650.40	55.8 PK	68.5	-12.7	1.02 H	317	54.1	1.7
3	*5775.00	95.8 PK			1.02 H	317	55.8	40.0
4	*5775.00	86.0 AV			1.02 H	317	46.0	40.0
5	#5980.00	57.7 PK	68.2	-10.5	1.02 H	317	54.9	2.8
6	11550.00	59.5 PK	74.0	-14.5	1.00 H	340	45.0	14.5
7	11550.00	46.1 AV	54.0	-7.9	1.00 H	340	31.6	14.5
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	#5649.60	64.4 PK	68.2	-3.8	1.50 V	171	62.7	1.7
2	#5650.00	66.5 PK	68.2	-1.7	1.48 V	161	64.8	1.7
3	*5775.00	114.5 PK			1.50 V	171	74.5	40.0
4	*5775.00	104.3 AV			1.50 V	171	64.3	40.0
5	#5933.60	60.2 PK	68.2	-8.0	1.50 V	171	57.6	2.6
6	11550.00	60.8 PK	74.0	-13.2	1.50 V	249	46.3	14.5
7	11550.00	46.7 AV	54.0	-7.3	1.50 V	249	32.2	14.5

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)
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 149	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	101.84	32.4 QP	43.5	-11.1	1.99 H	57	50.6	-18.2
2	599.58	39.5 QP	46.0	-6.5	1.00 H	9	44.9	-5.4
3	624.85	39.4 QP	46.0	-6.6	1.00 H	3	44.2	-4.8
4	700.68	39.4 QP	46.0	-6.6	1.50 H	1	43.0	-3.6
5	729.84	41.6 QP	46.0	-4.4	1.50 H	192	44.4	-2.8
6	768.73	36.8 QP	46.0	-9.2	1.50 H	197	38.9	-2.1
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	35.73	35.9 QP	40.0	-4.1	1.00 V	63	51.8	-15.9
2	169.89	29.1 QP	43.5	-14.4	1.00 V	155	43.0	-13.9
3	652.07	37.3 QP	46.0	-8.7	1.00 V	105	41.9	-4.6
4	727.90	40.5 QP	46.0	-5.5	1.50 V	146	43.4	-2.9
5	799.84	35.5 QP	46.0	-10.5	1.00 V	10	37.0	-1.5
6	848.45	36.0 QP	46.0	-10.0	1.00 V	25	36.8	-0.8

REMARKS:

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

Test Mode B

Above 1GHz Data：

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.1 PK	74.0	-18.9	1.66 H	301	54.3	0.8
2	5150.00	43.4 AV	54.0	-10.6	1.66 H	301	42.6	0.8
3	*5180.00	111.9 PK			2.01 H	327	73.2	38.7
4	*5180.00	101.4 AV			2.01 H	327	62.7	38.7
5	#10360.00	57.4 PK	74.0	-16.6	1.52 H	0	44.7	12.7
6	#10360.00	45.5 AV	54.0	-8.5	1.52 H	0	32.8	12.7
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	55.0 PK	74.0	-19.0	1.70 V	327	54.2	0.8
2	5150.00	42.4 AV	54.0	-11.6	1.70 V	327	41.6	0.8
3	*5180.00	111.8 PK			2.02 V	335	73.1	38.7
4	*5180.00	101.1 AV			2.02 V	335	62.4	38.7
5	#10360.00	56.9 PK	74.0	-17.1	1.50 V	359	44.2	12.7
6	#10360.00	44.8 AV	54.0	-9.2	1.50 V	359	32.1	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	111.6 PK			2.01 H	333	72.9	38.7
2	*5200.00	100.9 AV			2.01 H	333	62.2	38.7
3	#10400.00	57.9 PK	74.0	-16.1	1.89 H	340	45.2	12.7
4	#10400.00	45.3 AV	54.0	-8.7	1.89 H	340	32.6	12.7
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	*5200.00	111.4 PK			1.94 V	333	72.7	38.7
2	*5200.00	100.8 AV			1.94 V	333	62.1	38.7
3	#10400.00	56.0 PK	74.0	-18.0	1.76 V	293	43.3	12.7
4	#10400.00	44.0 AV	54.0	-10.0	1.76 V	293	31.3	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	112.0 PK			1.98 H	326	73.2	38.8
2	*5240.00	101.3 AV			1.98 H	326	62.5	38.8
3	5350.00	54.4 PK	74.0	-19.6	1.89 H	333	53.3	1.1
4	5350.00	43.6 AV	54.0	-10.4	1.89 H	333	42.5	1.1
5	#10480.00	58.4 PK	74.0	-15.6	1.63 H	359	44.9	13.5
6	#10480.00	46.2 AV	54.0	-7.8	1.63 H	359	32.7	13.5
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	*5240.00	111.9 PK			1.96 V	334	73.1	38.8
2	*5240.00	101.0 AV			1.96 V	334	62.2	38.8
3	5350.00	54.2 PK	74.0	-19.8	1.44 V	26	53.1	1.1
4	5350.00	42.1 AV	54.0	-11.9	1.44 V	26	41.0	1.1
5	#10480.00	57.7 PK	74.0	-16.3	1.94 V	20	44.2	13.5
6	#10480.00	45.2 AV	54.0	-8.8	1.94 V	20	31.7	13.5

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)
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) 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	#5624.00	57.3 PK	68.2	-10.9	1.82 H	347	55.6	1.7
2	*5745.00	119.5 PK			1.82 H	347	79.6	39.9
3	*5745.00	108.7 AV			1.82 H	347	68.8	39.9
4	#5995.20	57.5 PK	68.2	-10.7	1.82 H	347	54.7	2.8
5	11490.00	60.2 PK	74.0	-13.8	2.50 H	250	45.7	14.5
6	11490.00	46.8 AV	54.0	-7.2	2.50 H	250	32.3	14.5
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	#5617.60	56.6 PK	68.2	-11.6	1.74 V	351	54.9	1.7
2	*5745.00	120.1 PK			1.74 V	351	80.2	39.9
3	*5745.00	108.9 AV			1.74 V	351	69.0	39.9
4	#5966.40	57.5 PK	68.2	-10.7	1.74 V	351	54.8	2.7
5	11490.00	59.7 PK	74.0	-14.3	2.50 V	250	45.2	14.5
6	11490.00	46.6 AV	54.0	-7.4	2.50 V	250	32.1	14.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5645.60	56.2 PK	68.2	-12.0	1.78 H	347	54.5	1.7
2	*5785.00	118.8 PK			1.78 H	347	78.7	40.1
3	*5785.00	108.2 AV			1.78 H	347	68.1	40.1
4	#5980.00	57.8 PK	68.2	-10.4	1.78 H	347	55.0	2.8
5	11570.00	60.3 PK	74.0	-13.7	2.50 H	250	46.0	14.3
6	11570.00	46.8 AV	54.0	-7.2	2.50 H	250	32.5	14.3
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	#5630.40	56.7 PK	68.2	-11.5	1.76 V	356	55.0	1.7
2	*5785.00	119.6 PK			1.76 V	356	79.5	40.1
3	*5785.00	108.5 AV			1.76 V	356	68.4	40.1
4	#5980.80	58.1 PK	68.2	-10.1	1.76 V	356	55.3	2.8
5	11570.00	60.1 PK	74.0	-13.9	2.50 V	250	45.8	14.3
6	11570.00	46.8 AV	54.0	-7.2	2.50 V	250	32.5	14.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5618.40	56.1 PK	68.2	-12.1	1.76 H	348	54.4	1.7
2	*5825.00	118.3 PK			1.76 H	348	78.1	40.2
3	*5825.00	107.3 AV			1.76 H	348	67.1	40.2
4	#5972.80	57.8 PK	68.2	-10.4	1.76 H	348	55.1	2.7
5	11650.00	59.6 PK	74.0	-14.4	2.50 H	250	45.2	14.4
6	11650.00	46.5 AV	54.0	-7.5	2.50 H	250	32.1	14.4
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	#5612.00	56.2 PK	68.2	-12.0	1.75 V	352	54.5	1.7
2	*5825.00	120.3 PK			1.75 V	352	80.1	40.2
3	*5825.00	109.2 AV			1.75 V	352	69.0	40.2
4	#5972.00	58.2 PK	68.2	-10.0	1.75 V	352	55.5	2.7
5	11650.00	60.2 PK	74.0	-13.8	2.50 V	250	45.8	14.4
6	11650.00	46.5 AV	54.0	-7.5	2.50 V	250	32.1	14.4

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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.9 PK	74.0	-19.1	1.98 H	336	54.1	0.8
2	5150.00	43.4 AV	54.0	-10.6	1.98 H	336	42.6	0.8
3	*5180.00	111.0 PK			1.98 H	328	72.3	38.7
4	*5180.00	100.5 AV			1.98 H	328	61.8	38.7
5	#10360.00	57.9 PK	74.0	-16.1	1.88 H	345	45.2	12.7
6	#10360.00	45.0 AV	54.0	-9.0	1.88 H	345	32.3	12.7
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	53.4 PK	74.0	-20.6	1.88 V	310	52.6	0.8
2	5150.00	42.2 AV	54.0	-11.8	1.88 V	310	41.4	0.8
3	*5180.00	111.1 PK			1.99 V	325	72.4	38.7
4	*5180.00	100.3 AV			1.99 V	325	61.6	38.7
5	#10360.00	54.2 PK	74.0	-19.8	1.22 V	23	41.5	12.7
6	#10360.00	44.1 AV	54.0	-9.9	1.22 V	23	31.4	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	111.0 PK			2.00 H	332	72.3	38.7
2	*5200.00	100.5 AV			2.00 H	332	61.8	38.7
3	#10400.00	57.2 PK	74.0	-16.8	1.66 H	22	44.5	12.7
4	#10400.00	45.0 AV	54.0	-9.0	1.66 H	22	32.3	12.7
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	*5200.00	111.2 PK			1.96 V	330	72.5	38.7
2	*5200.00	100.2 AV			1.96 V	330	61.5	38.7
3	#10400.00	56.4 PK	74.0	-17.6	1.76 V	23	43.7	12.7
4	#10400.00	44.4 AV	54.0	-9.6	1.76 V	23	31.7	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	111.6 PK			2.01 H	326	72.8	38.8
2	*5240.00	100.6 AV			2.01 H	326	61.8	38.8
3	5350.00	55.7 PK	74.0	-18.3	1.99 H	346	54.6	1.1
4	5350.00	43.5 AV	54.0	-10.5	1.99 H	346	42.4	1.1
5	#10480.00	58.8 PK	74.0	-15.2	1.36 H	25	45.3	13.5
6	#10480.00	45.9 AV	54.0	-8.1	1.36 H	25	32.4	13.5
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	*5240.00	111.9 PK			1.92 V	323	73.1	38.8
2	*5240.00	101.2 AV			1.92 V	323	62.4	38.8
3	5350.00	54.6 PK	74.0	-19.4	1.66 V	300	53.5	1.1
4	5350.00	42.6 AV	54.0	-11.4	1.66 V	300	41.5	1.1
5	#10480.00	57.3 PK	74.0	-16.7	1.90 V	320	43.8	13.5
6	#10480.00	45.3 AV	54.0	-8.7	1.90 V	320	31.8	13.5

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)
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) 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	#5645.60	56.1 PK	68.2	-12.1	1.89 H	349	54.4	1.7
2	*5745.00	119.8 PK			1.89 H	349	79.9	39.9
3	*5745.00	109.2 AV			1.89 H	349	69.3	39.9
4	#5930.40	57.0 PK	68.2	-11.2	1.89 H	349	54.4	2.6
5	11490.00	60.1 PK	74.0	-13.9	2.06 H	351	45.6	14.5
6	11490.00	47.0 AV	54.0	-7.0	2.06 H	351	32.5	14.5
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	#5613.60	56.1 PK	68.2	-12.1	1.78 V	350	54.4	1.7
2	*5745.00	119.6 PK			1.78 V	350	79.7	39.9
3	*5745.00	109.2 AV			1.78 V	350	69.3	39.9
4	#5942.40	57.8 PK	68.2	-10.4	1.78 V	350	55.2	2.6
5	11490.00	58.8 PK	74.0	-15.2	1.58 V	12	44.3	14.5
6	11490.00	45.8 AV	54.0	-8.2	1.58 V	12	31.3	14.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5624.80	57.7 PK	68.2	-10.5	1.88 H	341	56.0	1.7
2	*5785.00	119.0 PK			1.88 H	341	78.9	40.1
3	*5785.00	108.3 AV			1.88 H	341	68.2	40.1
4	#5968.80	58.3 PK	68.2	-9.9	1.88 H	341	55.6	2.7
5	11570.00	60.0 PK	74.0	-14.0	2.11 H	355	45.7	14.3
6	11570.00	47.0 AV	54.0	-7.0	2.11 H	355	32.7	14.3
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	#5631.20	57.2 PK	68.2	-11.0	1.76 V	350	55.5	1.7
2	*5785.00	119.2 PK			1.76 V	350	79.1	40.1
3	*5785.00	108.6 AV			1.76 V	350	68.5	40.1
4	#5976.80	57.4 PK	68.2	-10.8	1.76 V	350	54.6	2.8
5	11570.00	58.7 PK	74.0	-15.3	1.61 V	35	44.4	14.3
6	11570.00	45.8 AV	54.0	-8.2	1.61 V	35	31.5	14.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5647.20	56.0 PK	68.2	-12.2	1.91 H	347	54.3	1.7
2	*5825.00	118.1 PK			1.91 H	347	77.9	40.2
3	*5825.00	107.4 AV			1.91 H	347	67.2	40.2
4	#5981.60	57.0 PK	68.2	-11.2	1.91 H	347	54.2	2.8
5	11650.00	60.2 PK	74.0	-13.8	2.12 H	358	45.8	14.4
6	11650.00	47.2 AV	54.0	-6.8	2.12 H	358	32.8	14.4
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	#5622.40	56.5 PK	68.2	-11.7	1.90 V	349	54.8	1.7
2	*5825.00	120.1 PK			1.90 V	349	79.9	40.2
3	*5825.00	109.0 AV			1.90 V	349	68.8	40.2
4	#5980.80	57.9 PK	68.2	-10.3	1.90 V	349	55.1	2.8
5	11650.00	58.7 PK	74.0	-15.3	1.63 V	299	44.3	14.4
6	11650.00	46.1 AV	54.0	-7.9	1.63 V	299	31.7	14.4

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

802.11n (HT40)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	54.9 PK	74.0	-19.1	1.66 H	0	54.1	0.8
2	5150.00	42.3 AV	54.0	-11.7	1.66 H	0	41.5	0.8
3	*5190.00	108.0 PK			1.84 H	326	69.3	38.7
4	*5190.00	97.9 AV			1.84 H	326	59.2	38.7
5	#10380.00	57.3 PK	74.0	-16.7	1.77 H	26	44.5	12.8
6	#10380.00	44.0 AV	54.0	-10.0	1.77 H	26	31.2	12.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.3 PK	74.0	-17.7	1.83 V	356	55.5	0.8
2	5150.00	44.5 AV	54.0	-9.5	1.83 V	356	43.7	0.8
3	*5190.00	108.0 PK			1.91 V	319	69.3	38.7
4	*5190.00	97.7 AV			1.91 V	319	59.0	38.7
5	#10380.00	56.6 PK	74.0	-17.4	1.67 V	19	43.8	12.8
6	#10380.00	44.4 AV	54.0	-9.6	1.67 V	19	31.6	12.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	109.0 PK			1.96 H	325	70.2	38.8
2	*5230.00	98.8 AV			1.96 H	325	60.0	38.8
3	5350.00	54.2 PK	74.0	-19.8	2.02 H	42	53.1	1.1
4	5350.00	42.5 AV	54.0	-11.5	2.02 H	42	41.4	1.1
5	#10460.00	58.6 PK	74.0	-15.4	1.30 H	350	45.3	13.3
6	#10460.00	45.4 AV	54.0	-8.6	1.30 H	350	32.1	13.3
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	*5230.00	108.4 PK			1.88 V	313	69.6	38.8
2	*5230.00	98.3 AV			1.88 V	313	59.5	38.8
3	5350.00	54.2 PK	74.0	-19.8	1.58 V	31	53.1	1.1
4	5350.00	42.1 AV	54.0	-11.9	1.58 V	31	41.0	1.1
5	#10460.00	56.7 PK	74.0	-17.3	2.01 V	68	43.4	13.3
6	#10460.00	44.6 AV	54.0	-9.4	2.01 V	68	31.3	13.3

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)
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) 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	#5641.60	57.1 PK	68.2	-11.1	1.88 H	350	55.4	1.7
2	*5755.00	115.0 PK			1.88 H	350	75.1	39.9
3	*5755.00	105.6 AV			1.88 H	350	65.7	39.9
4	#5929.60	56.7 PK	68.2	-11.5	1.88 H	350	54.1	2.6
5	11510.00	59.6 PK	74.0	-14.4	1.96 H	333	45.1	14.5
6	11510.00	46.5 AV	54.0	-7.5	1.96 H	333	32.0	14.5
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	#5620.80	55.9 PK	68.2	-12.3	1.89 V	347	54.2	1.7
2	*5755.00	116.7 PK			1.89 V	347	76.8	39.9
3	*5755.00	106.4 AV			1.89 V	347	66.5	39.9
4	#5945.60	57.0 PK	68.2	-11.2	1.89 V	347	54.4	2.6
5	11510.00	58.1 PK	74.0	-15.9	1.56 V	33	43.6	14.5
6	11510.00	45.1 AV	54.0	-8.9	1.56 V	33	30.6	14.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5650.40	56.1 PK	68.5	-12.4	1.88 H	347	54.4	1.7
2	*5795.00	114.8 PK			1.88 H	347	74.7	40.1
3	*5795.00	105.2 AV			1.88 H	347	65.1	40.1
4	#5968.00	56.9 PK	68.2	-11.3	1.88 H	347	54.2	2.7
5	11590.00	59.2 PK	74.0	-14.8	2.11 H	47	44.9	14.3
6	11590.00	46.2 AV	54.0	-7.8	2.11 H	47	31.9	14.3
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	#5624.00	56.8 PK	68.2	-11.4	1.90 V	340	55.1	1.7
2	*5795.00	117.0 PK			1.90 V	340	76.9	40.1
3	*5795.00	106.5 AV			1.90 V	340	66.4	40.1
4	#5964.80	58.1 PK	68.2	-10.1	1.90 V	340	55.4	2.7
5	11590.00	58.1 PK	74.0	-15.9	1.55 V	7	43.8	14.3
6	11590.00	45.3 AV	54.0	-8.7	1.55 V	7	31.0	14.3

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

802.11ac (VHT80)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.7 PK	74.0	-11.3	1.93 H	331	61.9	0.8
2	5150.00	49.7 AV	54.0	-4.3	1.93 H	331	48.9	0.8
3	*5210.00	105.3 PK			1.95 H	328	66.6	38.7
4	*5210.00	95.6 AV			1.95 H	328	56.9	38.7
5	5350.00	56.6 PK	74.0	-17.4	1.90 H	325	55.5	1.1
6	5350.00	43.3 AV	54.0	-10.7	1.90 H	325	42.2	1.1
7	#10420.00	57.4 PK	74.0	-16.6	1.74 H	40	44.5	12.9
8	#10420.00	45.1 AV	54.0	-8.9	1.74 H	40	32.2	12.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.4 PK	74.0	-18.6	1.79 V	309	54.6	0.8
2	5150.00	44.1 AV	54.0	-9.9	1.79 V	309	43.3	0.8
3	*5210.00	104.9 PK			1.92 V	306	66.2	38.7
4	*5210.00	94.9 AV			1.92 V	306	56.2	38.7
5	5350.00	54.0 PK	74.0	-20.0	1.88 V	16	52.9	1.1
6	5350.00	42.7 AV	54.0	-11.3	1.88 V	16	41.6	1.1
7	#10420.00	56.8 PK	74.0	-17.2	1.68 V	66	43.9	12.9
8	#10420.00	44.7 AV	54.0	-9.3	1.68 V	66	31.8	12.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5649.60	61.0 PK	68.2	-7.2	1.89 H	349	59.3	1.7
2	#5650.00	63.4 PK	68.2	-4.8	1.85 H	0	61.7	1.7
3	*5775.00	112.1 PK			1.89 H	349	72.2	39.9
4	*5775.00	101.8 AV			1.89 H	349	61.9	39.9
5	#5925.00	58.9 PK	68.2	-9.3	1.72 H	333	56.3	2.6
6	#5930.40	59.0 PK	68.2	-9.2	1.89 H	349	56.4	2.6
7	11550.00	59.0 PK	74.0	-15.0	1.69 H	350	44.5	14.5
8	11550.00	46.1 AV	54.0	-7.9	1.69 H	350	31.6	14.5
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	#5633.60	63.0 PK	68.2	-5.2	1.91 V	347	61.3	1.7
2	#5650.00	65.5 PK	68.2	-2.7	1.80 V	340	63.8	1.7
3	*5775.00	112.9 PK			1.89 V	347	72.9	40.0
4	*5775.00	102.8 AV			1.89 V	347	62.8	40.0
5	#5925.00	60.8 PK	68.2	-7.4	1.88 V	343	58.2	2.6
6	#5930.40	60.4 PK	68.2	-7.8	1.91 V	347	57.8	2.6
7	11550.00	59.0 PK	74.0	-15.0	1.49 V	25	44.5	14.5
8	11550.00	46.0 AV	54.0	-8.0	1.49 V	25	31.5	14.5

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)
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 149	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	84.34	28.2 QP	40.0	-11.8	2.00 H	218	47.6	-19.4
2	179.61	34.3 QP	43.5	-9.2	2.00 H	209	49.2	-14.9
3	253.49	33.4 QP	46.0	-12.6	1.50 H	307	47.3	-13.9
4	731.79	39.9 QP	46.0	-6.1	1.00 H	97	42.6	-2.7
5	768.73	37.1 QP	46.0	-8.9	1.00 H	85	39.2	-2.1
6	856.22	34.5 QP	46.0	-11.5	2.00 H	261	35.1	-0.6
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	33.79	36.0 QP	40.0	-4.0	1.00 V	165	51.9	-15.9
2	152.39	31.6 QP	43.5	-11.9	1.00 V	298	45.4	-13.8
3	325.43	32.7 QP	46.0	-13.3	1.00 V	175	44.1	-11.4
4	652.07	34.6 QP	46.0	-11.4	1.00 V	87	39.2	-4.6
5	727.90	36.7 QP	46.0	-9.3	1.00 V	87	39.6	-2.9
6	776.51	35.4 QP	46.0	-10.6	1.50 V	118	37.1	-1.7

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

Test Mode C

Above 1GHz Data：

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	51.9 PK	74.0	-22.1	2.00 H	315	51.1	0.8
2	5150.00	41.0 AV	54.0	-13.0	2.00 H	315	40.2	0.8
3	*5180.00	105.9 PK			1.55 H	350	67.2	38.7
4	*5180.00	95.0 AV			1.55 H	350	56.3	38.7
5	#10360.00	56.1 PK	74.0	-17.9	1.61 H	216	43.4	12.7
6	#10360.00	43.4 AV	54.0	-10.6	1.61 H	216	30.7	12.7
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	51.2 PK	74.0	-22.8	2.55 V	46	50.4	0.8
2	5150.00	39.9 AV	54.0	-14.1	2.55 V	46	39.1	0.8
3	*5180.00	105.4 PK			1.88 V	355	66.7	38.7
4	*5180.00	95.9 AV			1.88 V	355	57.2	38.7
5	#10360.00	56.8 PK	74.0	-17.2	2.00 V	238	44.1	12.7
6	#10360.00	43.7 AV	54.0	-10.3	2.00 V	238	31.0	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	107.5 PK			1.58 H	350	68.8	38.7
2	*5200.00	96.0 AV			1.58 H	350	57.3	38.7
3	#10400.00	55.9 PK	74.0	-18.1	1.84 H	236	43.2	12.7
4	#10400.00	43.1 AV	54.0	-10.9	1.84 H	236	30.4	12.7
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	*5200.00	106.1 PK			1.86 V	342	67.4	38.7
2	*5200.00	96.0 AV			1.86 V	342	57.3	38.7
3	#10400.00	56.7 PK	74.0	-17.3	2.45 V	244	44.0	12.7
4	#10400.00	43.9 AV	54.0	-10.1	2.45 V	244	31.2	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	108.1 PK			1.54 H	351	69.3	38.8
2	*5240.00	97.0 AV			1.54 H	351	58.2	38.8
3	5350.00	52.6 PK	74.0	-21.4	1.96 H	310	51.5	1.1
4	5350.00	41.1 AV	54.0	-12.9	1.96 H	310	40.0	1.1
5	#10480.00	56.6 PK	74.0	-17.4	1.66 H	126	43.1	13.5
6	#10480.00	43.8 AV	54.0	-10.2	1.66 H	126	30.3	13.5
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	*5240.00	107.0 PK			1.86 V	342	68.2	38.8
2	*5240.00	96.2 AV			1.86 V	342	57.4	38.8
3	5350.00	51.9 PK	74.0	-22.1	2.06 V	102	50.8	1.1
4	5350.00	40.9 AV	54.0	-13.1	2.06 V	102	39.8	1.1
5	#10480.00	57.9 PK	74.0	-16.1	2.41 V	234	44.4	13.5
6	#10480.00	44.8 AV	54.0	-9.2	2.41 V	234	31.3	13.5

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)
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) 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	#5612.00	60.9 PK	68.2	-7.3	1.59 H	336	59.2	1.7
2	*5745.00	121.4 PK			1.59 H	336	81.5	39.9
3	*5745.00	110.2 AV			1.59 H	336	70.3	39.9
4	#5994.40	62.1 PK	68.2	-6.1	1.59 H	336	59.3	2.8
5	11490.00	59.0 PK	74.0	-15.0	1.91 H	271	44.5	14.5
6	11490.00	45.6 AV	54.0	-8.4	1.91 H	271	31.1	14.5
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	#5604.80	56.2 PK	68.2	-12.0	1.91 V	348	54.5	1.7
2	*5745.00	121.2 PK			1.91 V	348	81.3	39.9
3	*5745.00	110.8 AV			1.91 V	348	70.9	39.9
4	#5957.60	56.6 PK	68.2	-11.6	1.91 V	348	54.0	2.6
5	11490.00	59.4 PK	74.0	-14.6	1.85 V	273	44.9	14.5
6	11490.00	46.5 AV	54.0	-7.5	1.85 V	273	32.0	14.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5643.20	61.4 PK	68.2	-6.8	1.68 H	349	59.7	1.7
2	*5785.00	122.2 PK			1.68 H	349	82.1	40.1
3	*5785.00	111.5 AV			1.68 H	349	71.4	40.1
4	#5978.40	61.6 PK	68.2	-6.6	1.68 H	349	58.8	2.8
5	11570.00	58.9 PK	74.0	-15.1	1.60 H	214	44.6	14.3
6	11570.00	45.4 AV	54.0	-8.6	1.60 H	214	31.1	14.3
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	#5604.00	55.6 PK	68.2	-12.6	1.59 V	354	53.9	1.7
2	*5785.00	120.9 PK			1.59 V	354	80.8	40.1
3	*5785.00	110.7 AV			1.59 V	354	70.6	40.1
4	#5991.20	56.5 PK	68.2	-11.7	1.59 V	354	53.7	2.8
5	11570.00	59.0 PK	74.0	-15.0	1.88 V	225	44.7	14.3
6	11570.00	44.9 AV	54.0	-9.1	1.88 V	225	30.6	14.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5626.40	55.5 PK	68.2	-12.7	2.25 H	0	53.8	1.7
2	*5825.00	121.3 PK			2.25 H	0	81.1	40.2
3	*5825.00	110.5 AV			2.25 H	0	70.3	40.2
4	#5976.00	57.4 PK	68.2	-10.8	2.25 H	0	54.6	2.8
5	11650.00	58.9 PK	74.0	-15.1	1.75 H	253	44.5	14.4
6	11650.00	44.9 AV	54.0	-9.1	1.75 H	253	30.5	14.4
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	#5632.00	55.8 PK	68.2	-12.4	1.27 V	348	54.1	1.7
2	*5825.00	120.5 PK			1.27 V	348	80.3	40.2
3	*5825.00	110.0 AV			1.27 V	348	69.8	40.2
4	#5993.60	56.9 PK	68.2	-11.3	1.27 V	348	54.1	2.8
5	11650.00	58.1 PK	74.0	-15.9	1.90 V	265	43.7	14.4
6	11650.00	44.5 AV	54.0	-9.5	1.90 V	265	30.1	14.4

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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	53.9 PK	74.0	-20.1	2.01 H	310	53.1	0.8
2	5150.00	41.9 AV	54.0	-12.1	2.01 H	310	41.1	0.8
3	*5180.00	106.2 PK			1.60 H	340	67.5	38.7
4	*5180.00	95.0 AV			1.60 H	340	56.3	38.7
5	#10360.00	56.6 PK	74.0	-17.4	1.69 H	199	43.9	12.7
6	#10360.00	43.6 AV	54.0	-10.4	1.69 H	199	30.9	12.7
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	52.3 PK	74.0	-21.7	2.99 V	315	51.5	0.8
2	5150.00	41.3 AV	54.0	-12.7	2.99 V	315	40.5	0.8
3	*5180.00	106.5 PK			1.88 V	357	67.8	38.7
4	*5180.00	95.7 AV			1.88 V	357	57.0	38.7
5	#10360.00	57.2 PK	74.0	-16.8	1.99 V	222	44.5	12.7
6	#10360.00	44.1 AV	54.0	-9.9	1.99 V	222	31.4	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	106.6 PK			1.58 H	351	67.9	38.7
2	*5200.00	95.3 AV			1.58 H	351	56.6	38.7
3	#10400.00	56.1 PK	74.0	-17.9	1.70 H	22	43.4	12.7
4	#10400.00	43.1 AV	54.0	-10.9	1.70 H	22	30.4	12.7
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	*5200.00	106.4 PK			1.91 V	359	67.7	38.7
2	*5200.00	95.9 AV			1.91 V	359	57.2	38.7
3	#10400.00	57.4 PK	74.0	-16.6	2.30 V	226	44.7	12.7
4	#10400.00	44.3 AV	54.0	-9.7	2.30 V	226	31.6	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	107.7 PK			1.66 H	350	68.9	38.8
2	*5240.00	96.5 AV			1.66 H	350	57.7	38.8
3	5350.00	53.7 PK	74.0	-20.3	2.00 H	323	52.6	1.1
4	5350.00	41.7 AV	54.0	-12.3	2.00 H	323	40.6	1.1
5	#10480.00	57.0 PK	74.0	-17.0	1.77 H	16	43.5	13.5
6	#10480.00	44.0 AV	54.0	-10.0	1.77 H	16	30.5	13.5
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	*5240.00	106.5 PK			1.93 V	2	67.7	38.8
2	*5240.00	95.9 AV			1.93 V	2	57.1	38.8
3	5350.00	50.7 PK	74.0	-23.3	2.88 V	340	49.6	1.1
4	5350.00	39.9 AV	54.0	-14.1	2.88 V	340	38.8	1.1
5	#10480.00	57.5 PK	74.0	-16.5	2.29 V	250	44.0	13.5
6	#10480.00	45.4 AV	54.0	-8.6	2.29 V	250	31.9	13.5

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)
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) 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	#5645.60	61.2 PK	68.2	-7.0	1.76 H	350	59.5	1.7
2	*5745.00	122.8 PK			1.76 H	350	82.9	39.9
3	*5745.00	111.7 AV			1.76 H	350	71.8	39.9
4	#5969.60	62.1 PK	68.2	-6.1	1.76 H	350	59.4	2.7
5	11490.00	59.0 PK	74.0	-15.0	1.80 H	280	44.5	14.5
6	11490.00	45.6 AV	54.0	-8.4	1.80 H	280	31.1	14.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5623.20	56.4 PK	68.2	-11.8	1.41 V	352	54.7	1.7
2	*5745.00	120.5 PK			1.41 V	352	80.6	39.9
3	*5745.00	109.4 AV			1.41 V	352	69.5	39.9
4	#5966.40	56.4 PK	68.2	-11.8	1.41 V	352	53.7	2.7
5	11490.00	58.3 PK	74.0	-15.7	1.50 V	168	43.8	14.5
6	11490.00	45.2 AV	54.0	-8.8	1.50 V	168	30.7	14.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5617.60	61.2 PK	68.2	-7.0	1.91 H	354	59.5	1.7
2	*5785.00	122.6 PK			1.91 H	354	82.5	40.1
3	*5785.00	111.4 AV			1.91 H	354	71.3	40.1
4	#5991.20	61.7 PK	68.2	-6.5	1.91 H	354	58.9	2.8
5	11570.00	59.0 PK	74.0	-15.0	1.83 H	214	44.7	14.3
6	11570.00	45.4 AV	54.0	-8.6	1.83 H	214	31.1	14.3
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	#5633.60	56.5 PK	68.2	-11.7	1.72 V	349	54.8	1.7
2	*5785.00	120.3 PK			1.72 V	349	80.2	40.1
3	*5785.00	109.4 AV			1.72 V	349	69.3	40.1
4	#5983.20	57.4 PK	68.2	-10.8	1.72 V	349	54.6	2.8
5	11570.00	58.3 PK	74.0	-15.7	1.41 V	253	44.0	14.3
6	11570.00	44.7 AV	54.0	-9.3	1.41 V	253	30.4	14.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5604.80	61.9 PK	68.2	-6.3	1.93 H	355	60.2	1.7
2	*5825.00	121.8 PK			1.93 H	355	81.6	40.2
3	*5825.00	110.7 AV			1.93 H	355	70.5	40.2
4	#5976.00	61.9 PK	68.2	-6.3	1.93 H	355	59.1	2.8
5	11650.00	58.7 PK	74.0	-15.3	1.93 H	229	44.3	14.4
6	11650.00	44.8 AV	54.0	-9.2	1.93 H	229	30.4	14.4
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	#5624.80	56.6 PK	68.2	-11.6	1.30 V	354	54.9	1.7
2	*5825.00	119.8 PK			1.30 V	354	79.6	40.2
3	*5825.00	109.2 AV			1.30 V	354	69.0	40.2
4	#5964.00	57.5 PK	68.2	-10.7	1.30 V	354	54.8	2.7
5	11650.00	58.8 PK	74.0	-15.2	1.72 V	220	44.4	14.4
6	11650.00	45.3 AV	54.0	-8.7	1.72 V	220	30.9	14.4

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

802.11n (HT40)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	57.8 PK	74.0	-16.2	1.66 H	358	57.0	0.8
2	5150.00	44.7 AV	54.0	-9.3	1.66 H	358	43.9	0.8
3	*5190.00	103.5 PK			1.62 H	1	64.8	38.7
4	*5190.00	93.5 AV			1.62 H	1	54.8	38.7
5	#10380.00	56.4 PK	74.0	-17.6	1.39 H	200	43.6	12.8
6	#10380.00	43.4 AV	54.0	-10.6	1.39 H	200	30.6	12.8
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	51.1 PK	74.0	-22.9	1.85 V	0	50.3	0.8
2	5150.00	41.2 AV	54.0	-12.8	1.85 V	0	40.4	0.8
3	*5190.00	102.5 PK			1.84 V	336	63.8	38.7
4	*5190.00	93.2 AV			1.84 V	336	54.5	38.7
5	#10380.00	56.5 PK	74.0	-17.5	1.69 V	285	43.7	12.8
6	#10380.00	43.5 AV	54.0	-10.5	1.69 V	285	30.7	12.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	103.6 PK			1.67 H	0	64.8	38.8
2	*5230.00	93.6 AV			1.67 H	0	54.8	38.8
3	5350.00	54.1 PK	74.0	-19.9	1.70 H	350	53.0	1.1
4	5350.00	42.7 AV	54.0	-11.3	1.70 H	350	41.6	1.1
5	#10460.00	57.0 PK	74.0	-17.0	1.40 H	230	43.7	13.3
6	#10460.00	43.7 AV	54.0	-10.3	1.40 H	230	30.4	13.3
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	*5230.00	102.7 PK			1.88 V	357	63.9	38.8
2	*5230.00	93.0 AV			1.88 V	357	54.2	38.8
3	5350.00	54.6 PK	74.0	-19.4	1.80 V	350	53.5	1.1
4	5350.00	42.0 AV	54.0	-12.0	1.80 V	350	40.9	1.1
5	#10460.00	57.4 PK	74.0	-16.6	2.01 V	288	44.1	13.3
6	#10460.00	44.4 AV	54.0	-9.6	2.01 V	288	31.1	13.3

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)
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) 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	#5644.00	59.6 PK	68.2	-8.6	1.87 H	348	57.9	1.7
2	*5755.00	120.5 PK			1.87 H	348	80.6	39.9
3	*5755.00	109.4 AV			1.87 H	348	69.5	39.9
4	#5996.00	56.4 PK	68.2	-11.8	1.87 H	348	53.6	2.8
5	11510.00	59.4 PK	74.0	-14.6	1.87 H	267	44.9	14.5
6	11510.00	45.8 AV	54.0	-8.2	1.87 H	267	31.3	14.5
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	#5647.20	59.0 PK	68.2	-9.2	1.27 V	352	57.3	1.7
2	*5755.00	118.1 PK			1.27 V	352	78.2	39.9
3	*5755.00	107.9 AV			1.27 V	352	68.0	39.9
4	#5948.00	57.4 PK	68.2	-10.8	1.27 V	352	54.8	2.6
5	11510.00	58.1 PK	74.0	-15.9	1.46 V	310	43.6	14.5
6	11510.00	45.0 AV	54.0	-9.0	1.46 V	310	30.5	14.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5641.60	56.3 PK	68.2	-11.9	1.91 H	350	54.6	1.7
2	*5795.00	120.1 PK			1.91 H	350	80.0	40.1
3	*5795.00	109.2 AV			1.91 H	350	69.1	40.1
4	#5996.00	56.6 PK	68.2	-11.6	1.91 H	350	53.8	2.8
5	11590.00	58.8 PK	74.0	-15.2	1.87 H	254	44.5	14.3
6	11590.00	45.4 AV	54.0	-8.6	1.87 H	254	31.1	14.3
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	#5628.00	57.0 PK	68.2	-11.2	1.30 V	353	55.3	1.7
2	*5795.00	118.3 PK			1.30 V	353	78.2	40.1
3	*5795.00	108.0 AV			1.30 V	353	67.9	40.1
4	#5983.20	58.0 PK	68.2	-10.2	1.30 V	353	55.2	2.8
5	11590.00	58.4 PK	74.0	-15.6	1.38 V	234	44.1	14.3
6	11590.00	45.2 AV	54.0	-8.8	1.38 V	234	30.9	14.3

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

802.11ac (VHT80)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.5 PK	74.0	-18.5	1.68 H	358	54.7	0.8
2	5150.00	46.0 AV	54.0	-8.0	1.68 H	358	45.2	0.8
3	*5210.00	99.8 PK			1.73 H	359	61.1	38.7
4	*5210.00	90.1 AV			1.73 H	359	51.4	38.7
5	5350.00	52.3 PK	74.0	-21.7	1.70 H	350	51.2	1.1
6	5350.00	40.3 AV	54.0	-13.7	1.70 H	350	39.2	1.1
7	#10420.00	56.9 PK	74.0	-17.1	2.22 H	45	44.0	12.9
8	#10420.00	43.8 AV	54.0	-10.2	2.22 H	45	30.9	12.9
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	54.6 PK	74.0	-19.4	2.06 V	345	53.8	0.8
2	5150.00	41.9 AV	54.0	-12.1	2.06 V	345	41.1	0.8
3	*5210.00	106.5 PK			1.96 V	331	67.8	38.7
4	*5210.00	96.3 AV			1.96 V	331	57.6	38.7
5	5350.00	51.5 PK	74.0	-22.5	1.96 V	349	50.4	1.1
6	5350.00	40.5 AV	54.0	-13.5	1.96 V	349	39.4	1.1
7	#10420.00	56.4 PK	74.0	-17.6	2.12 V	236	43.5	12.9
8	#10420.00	43.4 AV	54.0	-10.6	2.12 V	236	30.5	12.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5641.60	64.2 PK	68.2	-4.0	1.87 H	345	62.5	1.7
2	**#5650.00**	**66.8 PK**	**68.2**	**-1.4**	**2.00 H**	**343**	**65.1**	**1.7**
3	*5775.00	113.9 PK			1.87 H	345	73.9	40.0
4	*5775.00	103.3 AV			1.87 H	345	63.3	40.0
5	#5956.80	56.6 PK	68.2	-11.6	1.87 H	345	54.0	2.6
6	11550.00	59.2 PK	74.0	-14.8	1.88 H	269	44.7	14.5
7	11550.00	46.0 AV	54.0	-8.0	1.88 H	269	31.5	14.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5648.00	64.2 PK	68.2	-4.0	1.34 V	357	62.5	1.7
2	#5650.00	65.9 PK	68.2	-2.3	1.31 V	359	64.2	1.7
3	*5775.00	111.7 PK			1.34 V	357	71.7	40.0
4	*5775.00	101.6 AV			1.34 V	357	61.6	40.0
5	#5955.20	57.9 PK	68.2	-10.3	1.34 V	357	55.3	2.6
6	11550.00	58.4 PK	74.0	-15.6	1.46 V	298	43.9	14.5
7	11550.00	45.3 AV	54.0	-8.7	1.46 V	298	30.8	14.5

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)
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 149	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	57.12	27.0 QP	40.0	-13.0	2.00 H	327	41.6	-14.6
2	179.61	34.5 QP	43.5	-9.0	2.00 H	211	49.4	-14.9
3	263.21	34.7 QP	46.0	-11.3	1.50 H	302	48.1	-13.4
4	731.79	39.8 QP	46.0	-6.2	1.00 H	95	42.5	-2.7
5	817.34	35.6 QP	46.0	-10.4	2.00 H	258	36.7	-1.1
6	852.33	35.0 QP	46.0	-11.0	2.00 H	258	35.7	-0.7
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	33.79	35.2 QP	40.0	-4.8	1.00 V	169	51.1	-15.9
2	152.39	32.5 QP	43.5	-11.0	1.00 V	280	46.3	-13.8
3	259.33	28.2 QP	46.0	-17.8	1.00 V	272	41.8	-13.6
4	652.07	34.1 QP	46.0	-11.9	1.00 V	93	38.7	-4.6
5	690.96	34.8 QP	46.0	-11.2	1.50 V	95	38.5	-3.7
6	727.90	35.9 QP	46.0	-10.1	1.50 V	90	38.8	-2.9

REMARKS:

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

Test Mode D

Above 1GHz Data：

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.1 PK	74.0	-17.9	1.70 H	354	55.3	0.8
2	5150.00	44.3 AV	54.0	-9.7	1.70 H	354	43.5	0.8
3	*5180.00	107.7 PK			1.54 H	348	69.0	38.7
4	*5180.00	97.5 AV			1.54 H	348	58.8	38.7
5	#10360.00	57.6 PK	74.0	-16.4	1.33 H	22	44.9	12.7
6	#10360.00	44.4 AV	54.0	-9.6	1.33 H	22	31.7	12.7
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	53.9 PK	74.0	-20.1	2.38 V	344	53.1	0.8
2	5150.00	43.1 AV	54.0	-10.9	2.38 V	344	42.3	0.8
3	*5180.00	107.2 PK			2.41 V	355	68.5	38.7
4	*5180.00	96.3 AV			2.41 V	355	57.6	38.7
5	#10360.00	57.3 PK	74.0	-16.7	1.89 V	13	44.6	12.7
6	#10360.00	44.6 AV	54.0	-9.4	1.89 V	13	31.9	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	108.4 PK			1.70 H	347	69.7	38.7
2	*5200.00	97.8 AV			1.70 H	347	59.1	38.7
3	#10400.00	57.7 PK	74.0	-16.3	1.41 H	34	45.0	12.7
4	#10400.00	44.5 AV	54.0	-9.5	1.41 H	34	31.8	12.7
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	*5200.00	109.1 PK			1.93 V	347	70.4	38.7
2	*5200.00	98.4 AV			1.93 V	347	59.7	38.7
3	#10400.00	57.7 PK	74.0	-16.3	2.11 V	309	45.0	12.7
4	#10400.00	44.8 AV	54.0	-9.2	2.11 V	309	32.1	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	109.5 PK			1.64 H	347	70.7	38.8
2	*5240.00	99.0 AV			1.64 H	347	60.2	38.8
3	5350.00	54.2 PK	74.0	-19.8	1.66 H	350	53.1	1.1
4	5350.00	42.5 AV	54.0	-11.5	1.66 H	350	41.4	1.1
5	#10480.00	58.1 PK	74.0	-15.9	1.39 H	350	44.6	13.5
6	#10480.00	45.0 AV	54.0	-9.0	1.39 H	350	31.5	13.5
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	*5240.00	109.4 PK			1.91 V	348	70.6	38.8
2	*5240.00	98.8 AV			1.91 V	348	60.0	38.8
3	5350.00	52.9 PK	74.0	-21.1	1.88 V	340	51.8	1.1
4	5350.00	42.0 AV	54.0	-12.0	1.88 V	340	40.9	1.1
5	#10480.00	57.8 PK	74.0	-16.2	2.19 V	1	44.3	13.5
6	#10480.00	45.1 AV	54.0	-8.9	2.19 V	1	31.6	13.5

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)
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) 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	#5629.60	55.3 PK	68.2	-12.9	1.85 H	351	53.6	1.7
2	*5745.00	122.0 PK			1.85 H	351	82.1	39.9
3	*5745.00	111.9 AV			1.85 H	351	72.0	39.9
4	#5927.20	56.8 PK	68.2	-11.4	1.85 H	351	54.2	2.6
5	11490.00	58.4 PK	74.0	-15.6	1.58 H	217	43.9	14.5
6	11490.00	46.4 AV	54.0	-7.6	1.58 H	217	31.9	14.5
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	#5626.40	60.2 PK	68.2	-8.0	1.77 V	345	58.5	1.7
2	*5745.00	120.7 PK			1.77 V	345	80.8	39.9
3	*5745.00	110.5 AV			1.77 V	345	70.6	39.9
4	#5944.80	61.1 PK	68.2	-7.1	1.77 V	345	58.5	2.6
5	11490.00	58.0 PK	74.0	-16.0	2.17 V	14	43.5	14.5
6	11490.00	45.5 AV	54.0	-8.5	2.17 V	14	31.0	14.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5611.20	60.4 PK	68.2	-7.8	1.88 H	349	58.7	1.7
2	*5785.00	121.7 PK			1.88 H	349	81.6	40.1
3	*5785.00	111.3 AV			1.88 H	349	71.2	40.1
4	#5937.60	61.6 PK	68.2	-6.6	1.88 H	349	59.0	2.6
5	11570.00	60.2 PK	74.0	-13.8	1.55 H	313	45.9	14.3
6	11570.00	47.9 AV	54.0	-6.1	1.55 H	313	33.6	14.3
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	#5609.60	59.8 PK	68.2	-8.4	1.78 V	349	58.1	1.7
2	*5785.00	120.7 PK			1.78 V	349	80.6	40.1
3	*5785.00	110.4 AV			1.78 V	349	70.3	40.1
4	#5979.20	61.2 PK	68.2	-7.0	1.78 V	349	58.4	2.8
5	11570.00	57.6 PK	74.0	-16.4	2.08 V	9	43.3	14.3
6	11570.00	45.3 AV	54.0	-8.7	2.08 V	9	31.0	14.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5604.00	59.5 PK	68.2	-8.7	1.80 H	349	57.8	1.7
2	*5825.00	121.8 PK			1.80 H	349	81.6	40.2
3	*5825.00	111.1 AV			1.80 H	349	70.9	40.2
4	#5941.60	60.8 PK	68.2	-7.4	1.80 H	349	58.2	2.6
5	11650.00	60.2 PK	74.0	-13.8	1.50 H	321	45.8	14.4
6	11650.00	47.7 AV	54.0	-6.3	1.50 H	321	33.3	14.4
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	#5629.60	60.4 PK	68.2	-7.8	1.80 V	349	58.7	1.7
2	*5825.00	120.6 PK			1.76 V	350	80.4	40.2
3	*5825.00	110.5 AV			1.76 V	350	70.3	40.2
4	#5929.60	61.2 PK	68.2	-7.0	1.80 V	349	58.6	2.6
5	11650.00	57.9 PK	74.0	-16.1	2.12 V	311	43.5	14.4
6	11650.00	45.5 AV	54.0	-8.5	2.12 V	311	31.1	14.4

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)
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) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	52.4 PK	74.0	-21.6	1.69 H	355	51.6	0.8
2	5150.00	41.3 AV	54.0	-12.7	1.69 H	355	40.5	0.8
3	*5180.00	108.0 PK			1.61 H	348	69.3	38.7
4	*5180.00	96.9 AV			1.61 H	348	58.2	38.7
5	#10360.00	57.8 PK	74.0	-16.2	1.44 H	16	45.1	12.7
6	#10360.00	44.7 AV	54.0	-9.3	1.44 H	16	32.0	12.7
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	54.9 PK	74.0	-19.1	1.91 V	349	54.1	0.8
2	5150.00	43.2 AV	54.0	-10.8	1.91 V	349	42.4	0.8
3	*5180.00	108.3 PK			1.91 V	349	69.6	38.7
4	*5180.00	97.4 AV			1.91 V	349	58.7	38.7
5	#10360.00	57.9 PK	74.0	-16.1	1.80 V	326	45.2	12.7
6	#10360.00	45.2 AV	54.0	-8.8	1.80 V	326	32.5	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5200.00	108.1 PK			4.00 H	348	69.4	38.7
2	*5200.00	97.3 AV			4.00 H	348	58.6	38.7
3	#10400.00	58.0 PK	74.0	-16.0	1.55 H	48	45.3	12.7
4	#10400.00	45.0 AV	54.0	-9.0	1.55 H	48	32.3	12.7
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	*5200.00	108.3 PK			1.90 V	345	69.6	38.7
2	*5200.00	97.7 AV			1.90 V	345	59.0	38.7
3	#10400.00	58.1 PK	74.0	-15.9	1.77 V	320	45.4	12.7
4	#10400.00	45.1 AV	54.0	-8.9	1.77 V	320	32.4	12.7

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	109.5 PK			1.65 H	347	70.7	38.8
2	*5240.00	98.6 AV			1.65 H	347	59.8	38.8
3	5350.00	53.6 PK	74.0	-20.4	1.63 H	342	52.5	1.1
4	5350.00	42.5 AV	54.0	-11.5	1.63 H	342	41.4	1.1
5	#10480.00	58.8 PK	74.0	-15.2	1.25 H	34	45.3	13.5
6	#10480.00	45.7 AV	54.0	-8.3	1.25 H	34	32.2	13.5
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	*5240.00	109.0 PK			1.92 V	345	70.2	38.8
2	*5240.00	98.3 AV			1.92 V	345	59.5	38.8
3	5350.00	54.7 PK	74.0	-19.3	2.00 V	342	53.6	1.1
4	5350.00	42.8 AV	54.0	-11.2	2.00 V	342	41.7	1.1
5	#10480.00	59.1 PK	74.0	-14.9	1.80 V	0	45.6	13.5
6	#10480.00	45.9 AV	54.0	-8.1	1.80 V	0	32.4	13.5

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)
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) 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	#5635.20	56.9 PK	68.2	-11.3	1.32 H	358	55.2	1.7
2	*5745.00	121.9 PK			1.32 H	358	82.0	39.9
3	*5745.00	109.9 AV			1.32 H	358	70.0	39.9
4	#5993.60	56.6 PK	68.2	-11.6	1.32 H	358	53.8	2.8
5	11490.00	58.3 PK	74.0	-15.7	2.10 H	265	43.8	14.5
6	11490.00	45.2 AV	54.0	-8.8	2.10 H	265	30.7	14.5
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	#5636.80	56.3 PK	68.2	-11.9	1.57 V	352	54.6	1.7
2	*5745.00	120.5 PK			1.57 V	352	80.6	39.9
3	*5745.00	110.1 AV			1.57 V	352	70.2	39.9
4	#5960.00	56.6 PK	68.2	-11.6	1.57 V	352	54.0	2.6
5	11490.00	58.6 PK	74.0	-15.4	1.63 V	139	44.1	14.5
6	11490.00	45.6 AV	54.0	-8.4	1.63 V	139	31.1	14.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5629.60	59.3 PK	68.2	-8.9	1.76 H	352	57.6	1.7
2	*5785.00	120.7 PK			1.76 H	352	80.6	40.1
3	*5785.00	110.0 AV			1.76 H	352	69.9	40.1
4	#5967.20	59.8 PK	68.2	-8.4	1.76 H	352	57.1	2.7
5	11570.00	58.4 PK	74.0	-15.6	2.20 H	314	44.1	14.3
6	11570.00	44.8 AV	54.0	-9.2	2.20 H	314	30.5	14.3
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	#5628.80	56.3 PK	68.2	-11.9	1.60 V	352	54.6	1.7
2	*5785.00	119.9 PK			1.60 V	352	79.8	40.1
3	*5785.00	109.6 AV			1.60 V	352	69.5	40.1
4	#5984.80	56.9 PK	68.2	-11.3	1.60 V	352	54.1	2.8
5	11570.00	58.2 PK	74.0	-15.8	1.57 V	172	43.9	14.3
6	11570.00	45.2 AV	54.0	-8.8	1.57 V	172	30.9	14.3

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

CHANNEL	TX Channel 165	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5649.60	56.4 PK	68.2	-11.8	1.46 H	355	54.7	1.7
2	*5825.00	120.7 PK			1.46 H	355	80.5	40.2
3	*5825.00	109.6 AV			1.46 H	355	69.4	40.2
4	#5972.00	56.7 PK	68.2	-11.5	1.46 H	355	54.0	2.7
5	11650.00	57.8 PK	74.0	-16.2	1.11 H	279	43.4	14.4
6	11650.00	44.8 AV	54.0	-9.2	1.11 H	279	30.4	14.4
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	#5614.40	56.3 PK	68.2	-11.9	1.50 V	353	54.6	1.7
2	*5825.00	119.9 PK			1.50 V	353	79.7	40.2
3	*5825.00	109.1 AV			1.50 V	353	68.9	40.2
4	#5972.80	56.7 PK	68.2	-11.5	1.50 V	353	54.0	2.7
5	11650.00	58.2 PK	74.0	-15.8	2.08 V	160	43.8	14.4
6	11650.00	44.9 AV	54.0	-9.1	2.08 V	160	30.5	14.4

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

802.11n (HT40)

CHANNEL	TX Channel 38	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.9 PK	74.0	-18.1	1.73 H	348	55.1	0.8
2	5150.00	44.5 AV	54.0	-9.5	1.73 H	348	43.7	0.8
3	*5190.00	104.1 PK			1.73 H	348	65.4	38.7
4	*5190.00	94.4 AV			1.73 H	348	55.7	38.7
5	#10380.00	58.1 PK	74.0	-15.9	1.50 H	300	45.3	12.8
6	#10380.00	44.2 AV	54.0	-9.8	1.50 H	300	31.4	12.8
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	56.6 PK	74.0	-17.4	1.59 V	343	55.8	0.8
2	5150.00	45.5 AV	54.0	-8.5	1.59 V	343	44.7	0.8
3	*5190.00	104.4 PK			1.59 V	351	65.7	38.7
4	*5190.00	94.6 AV			1.59 V	351	55.9	38.7
5	#10380.00	57.1 PK	74.0	-16.9	2.30 V	51	44.3	12.8
6	#10380.00	44.2 AV	54.0	-9.8	2.30 V	51	31.4	12.8

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5230.00	105.4 PK			1.70 H	347	66.6	38.8
2	*5230.00	96.3 AV			1.70 H	347	57.5	38.8
3	5350.00	54.7 PK	74.0	-19.3	1.59 H	288	53.6	1.1
4	5350.00	42.8 AV	54.0	-11.2	1.59 H	288	41.7	1.1
5	#10460.00	58.4 PK	74.0	-15.6	1.40 H	19	45.1	13.3
6	#10460.00	44.6 AV	54.0	-9.4	1.40 H	19	31.3	13.3
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	*5230.00	104.8 PK			1.66 V	348	66.0	38.8
2	*5230.00	94.8 AV			1.66 V	348	56.0	38.8
3	5350.00	53.7 PK	74.0	-20.3	1.62 V	330	52.6	1.1
4	5350.00	42.5 AV	54.0	-11.5	1.62 V	330	41.4	1.1
5	#10460.00	57.9 PK	74.0	-16.1	2.22 V	57	44.6	13.3
6	#10460.00	44.3 AV	54.0	-9.7	2.22 V	57	31.0	13.3

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)
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) 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	#5632.80	56.6 PK	68.2	-11.6	1.30 H	345	54.9	1.7
2	*5755.00	117.0 PK			1.30 H	345	77.1	39.9
3	*5755.00	107.2 AV			1.30 H	345	67.3	39.9
4	#6000.00	56.7 PK	68.2	-11.5	1.30 H	345	53.9	2.8
5	11510.00	58.9 PK	74.0	-15.1	1.36 H	314	44.4	14.5
6	11510.00	45.4 AV	54.0	-8.6	1.36 H	314	30.9	14.5
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	#5603.20	56.6 PK	68.2	-11.6	1.50 V	351	54.9	1.7
2	*5755.00	117.8 PK			1.50 V	351	77.9	39.9
3	*5755.00	107.5 AV			1.50 V	351	67.6	39.9
4	#5996.00	56.5 PK	68.2	-11.7	1.50 V	351	53.7	2.8
5	11510.00	59.1 PK	74.0	-14.9	1.51 V	229	44.6	14.5
6	11510.00	45.4 AV	54.0	-8.6	1.51 V	229	30.9	14.5

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5625.60	56.0 PK	68.2	-12.2	1.27 H	346	54.3	1.7
2	*5795.00	117.0 PK			1.27 H	346	76.9	40.1
3	*5795.00	106.6 AV			1.27 H	346	66.5	40.1
4	#5988.80	56.2 PK	68.2	-12.0	1.27 H	346	53.4	2.8
5	11590.00	58.6 PK	74.0	-15.4	2.15 H	283	44.3	14.3
6	11590.00	45.4 AV	54.0	-8.6	2.15 H	283	31.1	14.3
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	#5610.40	56.1 PK	68.2	-12.1	1.46 V	353	54.4	1.7
2	*5795.00	117.1 PK			1.46 V	353	77.0	40.1
3	*5795.00	107.0 AV			1.46 V	353	66.9	40.1
4	#5987.20	56.6 PK	68.2	-11.6	1.46 V	353	53.8	2.8
5	11590.00	58.6 PK	74.0	-15.4	2.20 V	267	44.3	14.3
6	11590.00	45.2 AV	54.0	-8.8	2.20 V	267	30.9	14.3

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

802.11ac (VHT80)

CHANNEL	TX Channel 42	DETECTOR FUNCTION	Peak (PK) Average (AV)
FREQUENCY RANGE	1GHz ~ 40GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.1 PK	74.0	-18.9	1.70 H	350	54.3	0.8
2	5150.00	43.1 AV	54.0	-10.9	1.70 H	350	42.3	0.8
3	*5210.00	101.7 PK			1.68 H	349	63.0	38.7
4	*5210.00	91.9 AV			1.68 H	349	53.2	38.7
5	5350.00	52.2 PK	74.0	-21.8	1.63 H	329	51.1	1.1
6	5350.00	41.3 AV	54.0	-12.7	1.63 H	329	40.2	1.1
7	#10420.00	56.7 PK	74.0	-17.3	2.44 H	60	43.8	12.9
8	#10420.00	44.9 AV	54.0	-9.1	2.44 H	60	32.0	12.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.9 PK	74.0	-18.1	2.00 V	351	55.1	0.8
2	5150.00	46.6 AV	54.0	-7.4	2.00 V	351	45.8	0.8
3	*5210.00	101.8 PK			2.07 V	347	63.1	38.7
4	*5210.00	92.0 AV			2.07 V	347	53.3	38.7
5	5350.00	53.7 PK	74.0	-20.3	1.90 V	346	52.6	1.1
6	5350.00	42.5 AV	54.0	-11.5	1.90 V	346	41.4	1.1
7	#10420.00	56.7 PK	74.0	-17.3	2.11 V	6	43.8	12.9
8	#10420.00	44.7 AV	54.0	-9.3	2.11 V	6	31.8	12.9

REMARKS:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5649.60	62.1 PK	68.2	-6.1	1.91 H	351	60.4	1.7
2	*5775.00	114.1 PK			1.91 H	351	74.1	40.0
3	*5775.00	104.3 AV			1.91 H	351	64.3	40.0
4	#5980.00	57.0 PK	68.2	-11.2	1.91 H	351	54.2	2.8
5	11550.00	58.4 PK	74.0	-15.6	1.68 H	221	43.9	14.5
6	11550.00	45.6 AV	54.0	-8.4	1.68 H	221	31.1	14.5
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	#5631.20	61.2 PK	68.2	-7.0	1.56 V	355	59.5	1.7
2	*5775.00	114.2 PK			1.56 V	355	74.2	40.0
3	*5775.00	103.8 AV			1.56 V	355	63.8	40.0
4	#5995.20	57.1 PK	68.2	-11.1	1.56 V	355	54.3	2.8
5	11550.00	59.0 PK	74.0	-15.0	2.39 V	291	44.5	14.5
6	11550.00	46.0 AV	54.0	-8.0	2.39 V	291	31.5	14.5

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)
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 149	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	84.34	27.5 QP	40.0	-12.5	2.00 H	236	46.9	-19.4
2	160.17	32.6 QP	43.5	-10.9	1.49 H	132	46.2	-13.6
3	261.27	36.8 QP	46.0	-9.2	1.00 H	320	50.4	-13.6
4	727.90	39.9 QP	46.0	-6.1	1.00 H	98	42.8	-2.9
5	776.51	36.4 QP	46.0	-9.6	1.00 H	70	38.1	-1.7
6	817.34	36.0 QP	46.0	-10.0	2.00 H	257	37.1	-1.1
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	33.79	36.5 QP	40.0	-3.5	1.01 V	178	52.4	-15.9
2	152.39	33.7 QP	43.5	-9.8	1.01 V	263	47.5	-13.8
3	261.27	35.1 QP	46.0	-10.9	1.50 V	255	48.7	-13.6
4	624.85	32.1 QP	46.0	-13.9	1.50 V	125	36.9	-4.8
5	727.90	35.7 QP	46.0	-10.3	1.50 V	300	38.6	-2.9
6	768.73	35.3 QP	46.0	-10.7	1.01 V	118	37.4	-2.1

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)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Nov. 21, 2016	Nov. 20, 2017
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond1-01	Dec. 22, 2016	Dec. 21, 2017
LISN ROHDE & SCHWARZ (EUT)	ESH3-Z5	835239/001	Mar. 10, 2017	Mar. 09, 2018
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Jul. 28, 2016	Jul. 27, 2017
Software ADT	BV ADT_Cond_ V7.3.7.3	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 1.
3. The VCCI Site Registration No. is C-2040.

4.2.3 Test Procedure

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

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

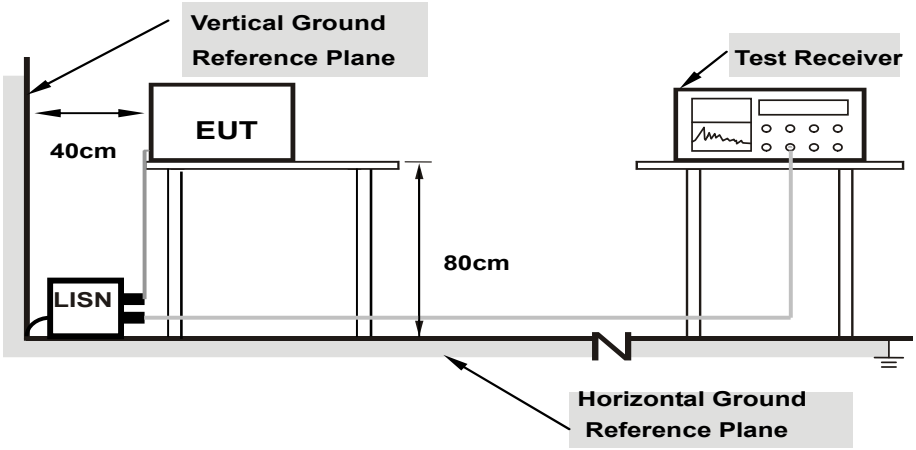
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: 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.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

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

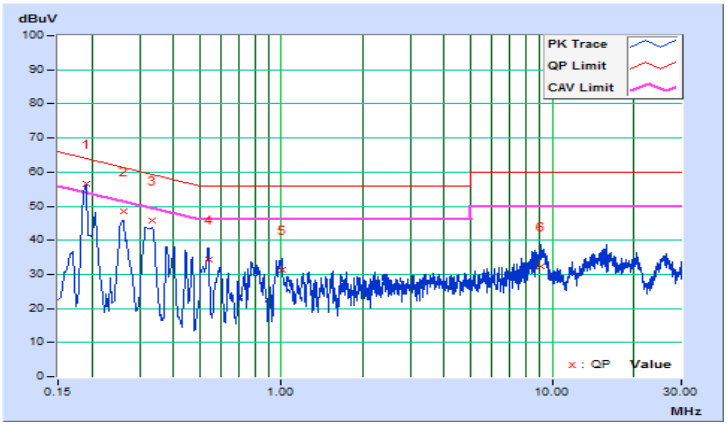
Test Mode A

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

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	**0.19000**	**10.36**	**46.08**	**32.17**	**56.44**	**42.53**	**64.04**	**54.04**	**-7.60**	**-11.51**
2	0.26083	10.38	38.21	27.10	48.59	37.48	61.40	51.40	-12.81	-13.92
3	0.33325	10.39	35.27	25.04	45.66	35.43	59.37	49.37	-13.71	-13.94
4	0.53800	10.40	23.97	10.42	34.37	20.82	56.00	46.00	-21.63	-25.18
5	1.01000	10.40	21.05	11.03	31.45	21.43	56.00	46.00	-24.55	-24.57
6	9.11800	10.79	21.56	14.18	32.35	24.97	60.00	50.00	-27.65	-25.03

REMARKS:

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

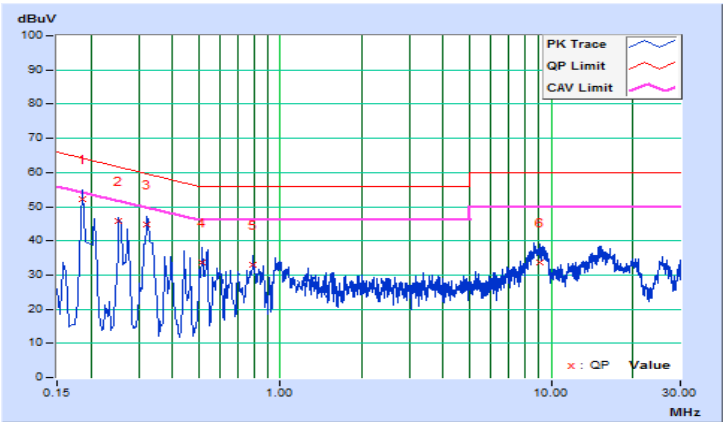


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18600	10.13	42.11	24.92	52.24	35.05	64.21	54.21	-11.97	-19.16
2	0.25405	10.15	35.68	21.67	45.83	31.82	61.62	51.62	-15.79	-19.80
3	0.32203	10.15	34.74	23.66	44.89	33.81	59.65	49.65	-14.76	-15.84
4	0.51400	10.16	23.58	11.55	33.74	21.71	56.00	46.00	-22.26	-24.29
5	0.79400	10.17	22.95	10.61	33.12	20.78	56.00	46.00	-22.88	-25.22
6	9.12200	10.52	23.07	15.69	33.59	26.21	60.00	50.00	-26.41	-23.79

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.



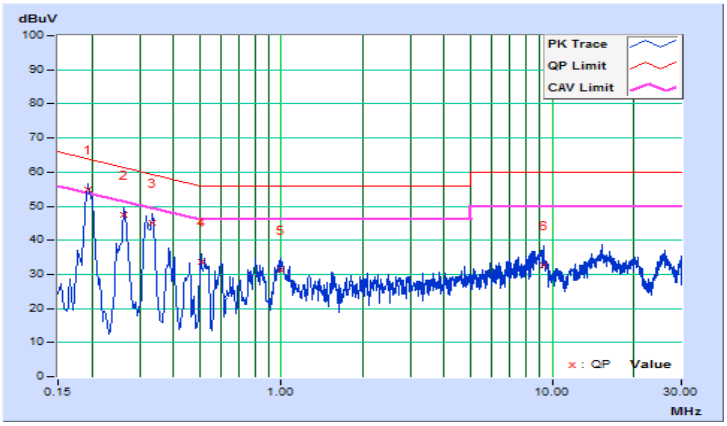
Test Mode B

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

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19400	10.37	44.54	33.57	54.91	43.94	63.86	53.86	-8.95	-9.92
2	0.26221	10.38	37.26	26.67	47.64	37.05	61.36	51.36	-13.72	-14.31
3	0.33413	10.39	34.63	24.30	45.02	34.69	59.35	49.35	-14.33	-14.66
4	0.50600	10.40	23.42	11.14	33.82	21.54	56.00	46.00	-22.18	-24.46
5	0.99000	10.40	21.02	8.26	31.42	18.66	56.00	46.00	-24.58	-27.34
6	9.26200	10.80	21.84	14.47	32.64	25.27	60.00	50.00	-27.36	-24.73

REMARKS:

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

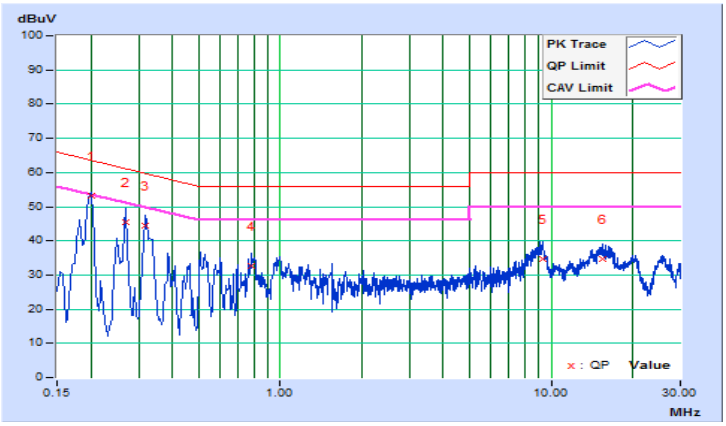


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19989	10.14	43.01	30.18	53.15	40.32	63.62	53.62	-10.47	-13.30
2	0.26992	10.15	35.26	18.61	45.41	28.76	61.12	51.12	-15.71	-22.36
3	0.31800	10.15	34.29	23.11	44.44	33.26	59.76	49.76	-15.32	-16.50
4	0.78600	10.17	22.45	10.09	32.62	20.26	56.00	46.00	-23.38	-25.74
5	9.29000	10.53	24.04	15.34	34.57	25.87	60.00	50.00	-25.43	-24.13
6	15.43000	10.77	24.01	17.02	34.78	27.79	60.00	50.00	-25.22	-22.21

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.



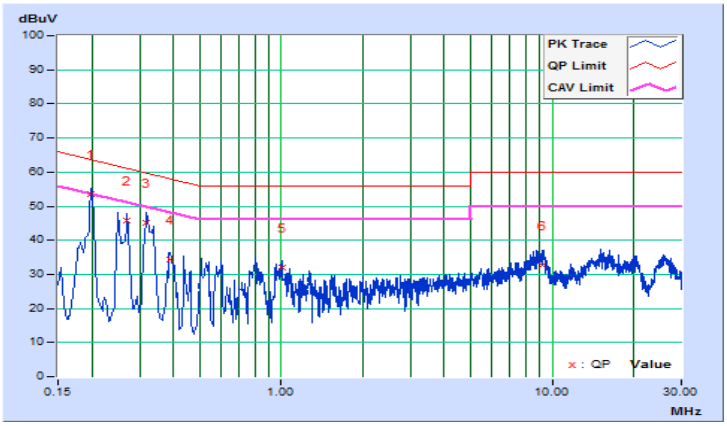
Test Mode C

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

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.19800	10.37	43.00	31.87	53.37	42.24	63.69	53.69	-10.32	-11.45
2	0.27000	10.38	35.36	20.91	45.74	31.29	61.12	51.12	-15.38	-19.83
3	0.31800	10.39	34.82	25.50	45.21	35.89	59.76	49.76	-14.55	-13.87
4	0.39000	10.40	23.90	12.95	34.30	23.35	58.06	48.06	-23.76	-24.71
5	1.01000	10.40	21.49	11.09	31.89	21.49	56.00	46.00	-24.11	-24.51
6	9.15800	10.79	22.02	13.00	32.81	23.79	60.00	50.00	-27.19	-26.21

REMARKS:

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

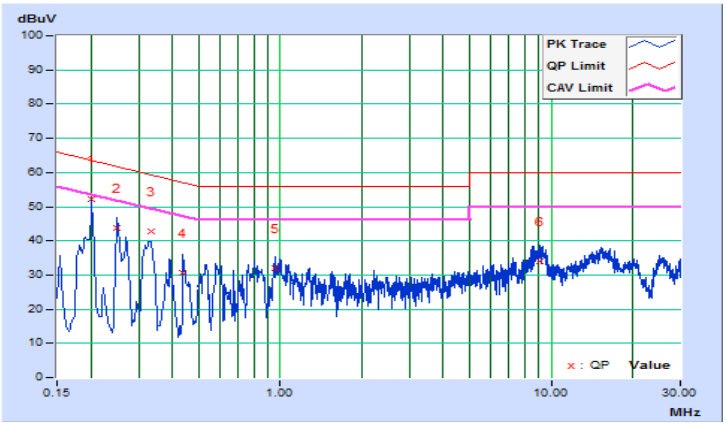


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20201	10.14	42.02	27.33	52.16	37.47	63.53	53.53	-11.37	-16.06
2	0.25000	10.15	33.54	16.94	43.69	27.09	61.76	51.76	-18.07	-24.67
3	0.33400	10.15	32.53	22.02	42.68	32.17	59.35	49.35	-16.67	-17.18
4	0.43800	10.16	20.63	5.74	30.79	15.90	57.10	47.10	-26.31	-31.20
5	0.95400	10.17	21.77	8.72	31.94	18.89	56.00	46.00	-24.06	-27.11
6	9.09400	10.52	23.44	14.10	33.96	24.62	60.00	50.00	-26.04	-25.38

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.



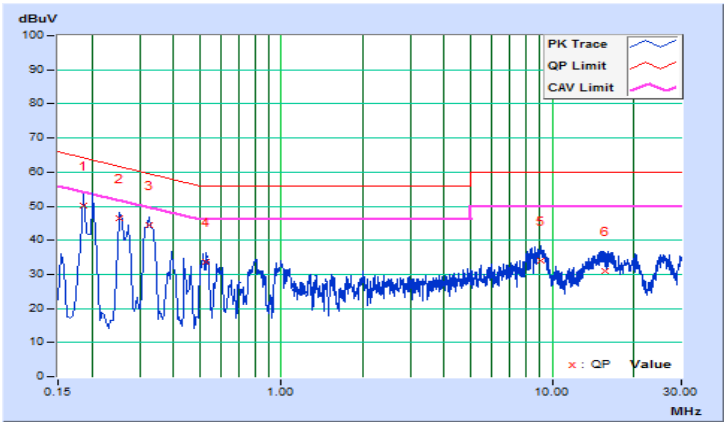
Test Mode D

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

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.18600	10.36	39.90	23.92	50.26	34.28	64.21	54.21	-13.95	-19.93
2	0.25405	10.38	36.19	23.81	46.57	34.19	61.62	51.62	-15.05	-17.43
3	0.32600	10.39	34.10	26.17	44.49	36.56	59.55	49.55	-15.06	-12.99
4	0.53000	10.40	23.11	12.84	33.51	23.24	56.00	46.00	-22.49	-22.76
5	9.09000	10.79	23.09	13.48	33.88	24.27	60.00	50.00	-26.12	-25.73
6	15.62600	11.12	19.94	12.80	31.06	23.92	60.00	50.00	-28.94	-26.08

REMARKS:

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

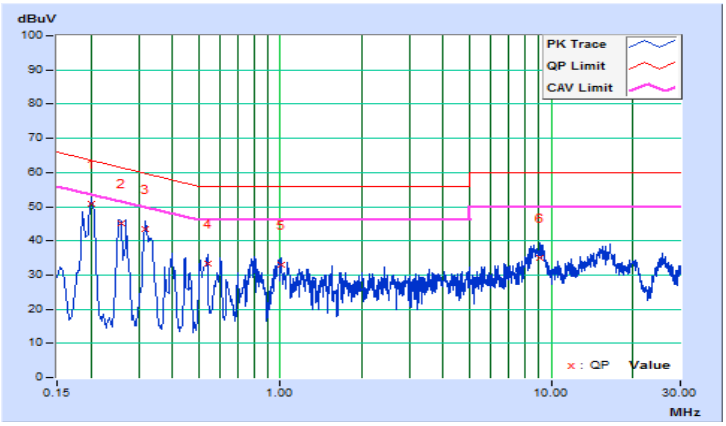


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)

No	Freq.	Corr. Factor	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
	[MHz]	(dB)	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.20201	10.14	40.62	26.29	50.76	36.43	63.53	53.53	-12.77	-17.10
2	0.25800	10.15	35.09	22.63	45.24	32.78	61.50	51.50	-16.26	-18.72
3	0.31781	10.15	33.13	22.73	43.28	32.88	59.76	49.76	-16.48	-16.88
4	0.53800	10.16	23.26	10.61	33.42	20.77	56.00	46.00	-22.58	-25.23
5	1.01000	10.17	22.69	12.34	32.86	22.51	56.00	46.00	-23.14	-23.49
6	9.05800	10.52	24.64	17.69	35.16	28.21	60.00	50.00	-24.84	-21.79

REMARKS:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

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

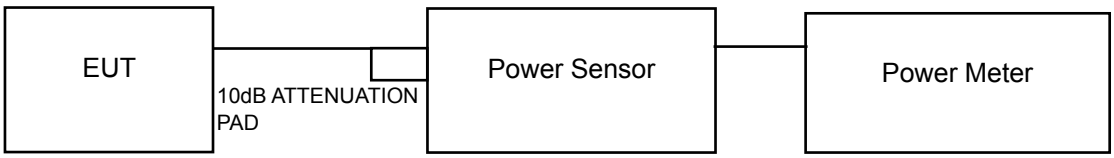
*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,
Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

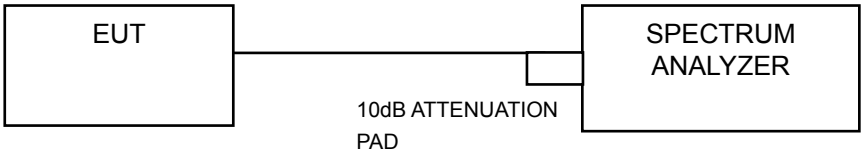
For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.3.2 Test Setup

For Power Output Measurement



For 26dB 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. Duty factor is not added to measured value.

For 802.11ac (VHT80)

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

FOR 26dB BANDWIDTH

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating 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:

Test Mode A

CDD Mode:

For U-NII-1 Band (Outdoor Access Point Mode)

802.11a

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
36	5180	16.37	16.86	16.52	16.28	179.217	22.53	-3.89	18.64	21.00	Pass
40	5200	18.67	19.06	18.60	18.74	**301.420**	24.79	-3.89	20.90	21.00	Pass
48	5240	18.41	19.11	18.65	18.80	299.953	24.77	-3.89	20.88	21.00	Pass

Note:
Gain = -3.89dBi (above 30 degrees from the horizon),
EIRP = conducted power +(-3.89dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
36	5180	16.15	16.59	16.25	16.09	169.628	22.29	-3.89	18.40	21.00	Pass
40	5200	18.27	18.61	18.51	18.58	282.823	24.52	-3.89	20.63	21.00	Pass
48	5240	18.56	18.68	18.30	18.54	284.627	24.54	-3.89	20.65	21.00	Pass

Note:
Gain = -3.89dBi (above 30 degrees from the horizon),
EIRP = conducted power +(-3.89dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
38	5190	10.86	11.28	10.81	10.71	49.444	16.94	-3.89	13.05	21.00	Pass
46	5230	18.22	18.37	18.09	18.24	266.179	24.25	-3.89	20.36	21.00	Pass

Note:
Gain = -3.89dBi (above 30 degrees from the horizon),
EIRP = conducted power +(-3.89dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
42	5210	8.24	8.91	8.49	8.05	27.894	14.46	-3.89	10.57	21.00	Pass

Note:
Gain = -3.89dBi (above 30 degrees from the horizon),
EIRP = conducted power +(-3.89dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

CDD Mode:

For U-NII-3 Band

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	21.93	21.78	21.27	21.40	578.622	27.62	29.7	Pass
157	5785	21.99	21.98	21.14	21.77	**596.217**	27.75	29.7	Pass
165	5825	21.71	22.04	20.99	21.87	587.626	27.69	29.7	Pass

*Max. gain: 6.3dBi, so the power limit shall be reduced to 30-(6.3-6) = 29.7dBm.

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	21.81	21.74	21.34	21.33	572.959	27.58	29.7	Pass
157	5785	21.74	22.01	21.21	21.76	590.232	27.71	29.7	Pass
165	5825	21.61	22.03	21.03	21.70	579.141	27.63	29.7	Pass

*Max. gain: 6.3dBi, so the power limit shall be reduced to 30-(6.3-6) = 29.7dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	20.01	20.57	20.37	20.24	428.831	26.32	29.7	Pass
159	5795	21.80	21.98	21.17	21.61	584.912	27.67	29.7	Pass

*Max. gain: 6.3dBi, so the power limit shall be reduced to 30-(6.3-6) = 29.7dBm.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	16.54	16.87	16.39	16.54	182.356	22.61	29.7	Pass

*Max. gain: 6.3dBi, so the power limit shall be reduced to 30-(6.3-6) = 29.7dBm.

Test Mode A

Beamforming Mode:

For U-NII-1 Band (Outdoor Access Point Mode)

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
36	5180	10.13	10.57	10.23	10.07	42.413	16.27	2.13	18.40	21.00	Pass
40	5200	12.25	12.59	12.49	12.56	70.715	18.50	2.13	20.63	21.00	Pass
48	5240	12.54	12.66	12.28	12.52	**71.167**	18.52	2.13	20.65	21.00	Pass

Note:
Gain = -3.89dBi (above 30 degrees from the horizon),
EIRP = conducted power +(-3.89dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).
Directional gain =-3.89dBi + 10log(4)=2.13dBi

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
38	5190	4.84	5.26	4.79	4.69	12.363	10.92	2.13	13.05	21.00	Pass
46	5230	12.20	12.35	12.07	12.22	66.554	18.23	2.13	20.36	21.00	Pass

Note:
Gain = -3.89dBi (above 30 degrees from the horizon),
EIRP = conducted power +(-3.89dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).
Directional gain =-3.89dBi + 10log(4)=2.13dBi

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
42	5210	2.22	2.89	2.47	2.03	6.975	8.44	2.13	10.57	21.00	Pass

Note:
Gain = -3.89dBi (above 30 degrees from the horizon),
EIRP = conducted power +(-3.89dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).
Directional gain =-3.89dBi + 10log(4)=2.13dBi

Beamforming Mode:

For U-NII-3 Band

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	15.79	15.72	15.32	15.31	143.260	21.56	23.68	Pass
157	5785	15.72	15.99	15.19	15.74	**147.578**	21.69	23.68	Pass
165	5825	15.59	16.01	15.01	15.68	144.805	21.61	23.68	Pass

* Directional gain =6.3dBi + 10log(4)=12.32dBi, so the power limit shall be reduced to 30-(12.32-6) = 23.68dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	13.99	14.55	14.35	14.22	107.222	20.30	23.68	Pass
159	5795	15.78	15.96	15.15	15.59	146.248	21.65	23.68	Pass

* Directional gain =6.3dBi + 10log(4)=12.32dBi, so the power limit shall be reduced to 30-(12.32-6) = 23.68dBm.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	10.52	10.85	10.37	10.52	45.595	16.59	23.68	Pass

* Directional gain =6.3dBi + 10log(4)=12.32dBi, so the power limit shall be reduced to 30-(12.32-6) = 23.68dBm.

Test Mode B

CDD Mode:

For U-NII-1 Band (Outdoor Access Point Mode)

802.11a

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
36	5180	7.23	8.40	7.77	8.05	**24.569**	13.90	6.83	20.73	21.00	Pass
40	5200	7.06	8.36	7.82	7.96	24.242	13.85	6.83	20.68	21.00	Pass
48	5240	6.54	8.37	8.11	7.49	23.460	13.70	6.83	20.53	21.00	Pass

Note:
Gain = 6.83dBi (above 30 degrees from the horizon),
EIRP = conducted power +(6.83dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
36	5180	6.92	8.18	7.37	7.78	22.953	13.61	6.83	20.44	21.00	Pass
40	5200	6.67	8.16	7.53	7.62	22.634	13.55	6.83	20.38	21.00	Pass
48	5240	6.28	8.23	7.62	7.40	22.175	13.46	6.83	20.29	21.00	Pass

Note:
Gain = 6.83dBi (above 30 degrees from the horizon),
EIRP = conducted power +(6.83dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
38	5190	7.13	8.55	7.81	7.88	24.502	13.89	6.83	20.72	21.00	Pass
46	5230	6.71	8.56	7.49	7.79	23.488	13.71	6.83	20.54	21.00	Pass

Note:
Gain = 6.83dBi (above 30 degrees from the horizon),
EIRP = conducted power +(6.83dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
42	5210	7.01	8.61	7.87	7.83	24.475	13.89	6.83	20.72	21.00	Pass

Note:
Gain = 6.83dBi (above 30 degrees from the horizon),
EIRP = conducted power +(6.83dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

CDD Mode:

For U-NII-3 Band

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	14.97	15.57	15.19	15.26	134.074	21.27	21.40	Pass
157	5785	14.85	15.79	15.13	15.21	134.253	21.28	21.40	Pass
165	5825	15.13	15.94	15.14	15.11	136.941	21.37	21.40	Pass

*Max. Gain: 14.60dBi, so the power limit shall be reduced to 30-(14.60-6) = 21.40dBm.

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	14.53	15.17	15.07	15.07	125.538	20.99	21.40	Pass
157	5785	14.64	15.61	14.90	15.15	129.136	21.11	21.40	Pass
165	5825	14.82	15.65	14.95	14.91	129.302	21.12	21.40	Pass

*Max. Gain: 14.60dBi, so the power limit shall be reduced to 30-(14.60-6) = 21.40dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	14.88	15.49	15.08	15.40	133.046	21.24	21.40	Pass
159	5795	15.04	15.78	14.91	15.31	134.696	21.29	21.40	Pass

*Max. Gain: 14.60dBi, so the power limit shall be reduced to 30-(14.60-6) = 21.40dBm.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	15.02	15.78	15.12	15.42	**136.956**	21.37	21.40	Pass

*Max. Gain: 14.60dBi, so the power limit shall be reduced to 30-(14.60-6) = 21.40dBm.

Test Mode B

Beamforming Mode:

For U-NII-1 Band (Outdoor Access Point Mode)

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
36	5180	0.90	2.16	1.35	1.76	5.739	7.59	12.85	20.44	21.00	Pass
40	5200	0.65	2.14	1.51	1.60	5.659	7.53	12.85	20.38	21.00	Pass
48	5240	0.26	2.21	1.60	1.38	5.545	7.44	12.85	20.29	21.00	Pass

Note:
Gain = 6.83dBi (above 30 degrees from the horizon),
EIRP = conducted power +(6.83dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).
Directional gain =6.83dBi + 10log(4)=12.85dBi

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
38	5190	1.11	2.53	1.79	1.86	**6.127**	7.87	12.85	20.72	21.00	Pass
46	5230	0.69	2.54	1.47	1.77	5.873	7.69	12.85	20.54	21.00	Pass

Note:
Gain = 6.83dBi (above 30 degrees from the horizon),
EIRP = conducted power +(6.83dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).
Directional gain =6.83dBi + 10log(4)=12.85dBi

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
42	5210	0.99	2.59	1.85	1.81	6.120	7.87	12.85	20.72	21.00	Pass

Note:
Gain = 6.83dBi (above 30 degrees from the horizon),
EIRP = conducted power +(6.83dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).
Directional gain =6.83dBi + 10log(4)=12.85dBi

Beamforming Mode:

For U-NII-3 Band

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	8.51	9.15	9.05	9.05	31.389	14.97	16.03	Pass
157	5785	8.62	9.59	8.88	9.13	32.288	15.09	16.03	Pass
165	5825	8.80	9.63	8.93	8.89	32.330	15.10	16.03	Pass

* Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$ + ... + $10^{GN/20}$)^2/4] = 19.97dBi, so the power limit shall be reduced to 30-(19.97-6) = 16.03dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	8.86	9.47	9.06	9.38	33.266	15.22	16.03	Pass
159	5795	9.02	9.76	8.89	9.29	33.679	15.27	16.03	Pass

* Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$ + ... + $10^{GN/20}$)^2/4] = 19.97dBi, so the power limit shall be reduced to 30-(19.97-6) = 16.03dBm.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	9.00	9.76	9.10	9.40	**34.244**	15.35	16.03	Pass

* Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$ + ... + $10^{GN/20}$)^2/4] = 19.97dBi, so the power limit shall be reduced to 30-(19.97-6) = 16.03dBm.

Test Mode C

CDD Mode:

For U-NII-1 Band (Outdoor Access Point Mode)

802.11a

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
36	5180	4.59	5.83	4.97	4.94	12.965	11.13	9.40	20.53	21.00	Pass
40	5200	4.62	5.75	4.93	4.95	12.893	11.10	9.40	20.50	21.00	Pass
48	5240	5.04	5.91	5.20	5.21	**13.721**	11.37	9.40	20.77	21.00	Pass

Note:
Gain = 9.40dBi (above 30 degrees from the horizon),
EIRP = conducted power +(9.40dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
36	5180	4.81	5.85	5.26	5.17	13.519	11.31	9.40	20.71	21.00	Pass
40	5200	4.78	5.77	5.11	5.33	13.437	11.28	9.40	20.68	21.00	Pass
48	5240	4.79	5.72	5.01	5.09	13.144	11.19	9.40	20.59	21.00	Pass

Note:
Gain = 9.40dBi (above 30 degrees from the horizon),
EIRP = conducted power +(9.40dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
38	5190	4.77	5.71	4.95	4.72	12.814	11.08	9.40	20.48	21.00	Pass
46	5230	4.75	5.67	4.82	4.88	12.785	11.07	9.40	20.47	21.00	Pass

Note:
Gain = 9.40dBi (above 30 degrees from the horizon),
EIRP = conducted power +(9.40dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
42	5210	4.87	5.81	4.85	4.99	13.090	11.17	9.40	20.57	21.00	Pass

Note:
Gain = 9.40dBi (above 30 degrees from the horizon),
EIRP = conducted power +(9.40dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

CDD Mode:

For U-NII-3 Band

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	18.23	19.22	19.48	19.01	318.419	25.03	25.77	Pass
157	5785	18.41	19.65	19.25	19.22	329.300	25.18	25.77	Pass
165	5825	18.45	19.82	19.35	19.13	333.869	25.24	25.77	Pass

*Max. Gain: 10.23dBi, so the power limit shall be reduced to 30-(10.23-6) = 25.77dBm.

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	18.02	19.02	19.32	18.95	307.217	24.87	25.77	Pass
157	5785	18.23	19.55	19.12	19.07	319.066	25.04	25.77	Pass
165	5825	18.27	19.69	19.27	19.06	325.320	25.12	25.77	Pass

*Max. Gain: 10.23dBi, so the power limit shall be reduced to 30-(10.23-6) = 25.77dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	18.41	19.51	19.40	19.32	331.277	25.20	25.77	Pass
159	5795	18.63	19.76	19.20	19.46	**339.054**	25.30	25.77	Pass

*Max. Gain: 10.23dBi, so the power limit shall be reduced to 30-(10.23-6) = 25.77dBm.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	15.85	16.76	16.41	16.55	174.821	22.43	25.77	Pass

*Max. Gain: 10.23dBi, so the power limit shall be reduced to 30-(10.23-6) = 25.77dBm.

Test Mode C

Beamforming Mode:

For U-NII-1 Band (Outdoor Access Point Mode)

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
36	5180	-1.21	-0.17	-0.76	-0.85	**3.380**	5.29	15.42	20.71	21.00	Pass
40	5200	-1.24	-0.25	-0.91	-0.69	3.360	5.26	15.42	20.68	21.00	Pass
48	5240	-1.23	-0.30	-1.01	-0.93	3.286	5.17	15.42	20.59	21.00	Pass

Note:
Gain = 9.40dBi (above 30 degrees from the horizon),
EIRP = conducted power +(9.40dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).
Directional gain =9.40dBi + 10log(4)=15.42dBi

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
38	5190	-1.25	-0.31	-1.07	-1.30	3.204	5.06	15.42	20.48	21.00	Pass
46	5230	-1.27	-0.35	-1.20	-1.14	3.197	5.05	15.42	20.47	21.00	Pass

Note:
Gain = 9.40dBi (above 30 degrees from the horizon),
EIRP = conducted power +(9.40dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).
Directional gain =9.40dBi + 10log(4)=15.42dBi

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
42	5210	-1.15	-0.21	-1.17	-1.03	3.273	5.15	15.42	20.57	21.00	Pass

Note:
Gain = 9.40dBi (above 30 degrees from the horizon),
EIRP = conducted power +(9.40dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).
Directional gain =9.40dBi + 10log(4)=15.42dBi

Beamforming Mode:

For U-NII-3 Band

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	12.00	13.00	13.30	12.93	76.815	18.85	19.83	Pass
157	5785	12.21	13.53	13.10	13.05	79.778	19.02	19.83	Pass
165	5825	12.25	13.67	13.25	13.04	81.341	19.10	19.83	Pass

* Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$ + ... + $10^{GN/20}$)^2/4] = 16.17dBi, so the power limit shall be reduced to 30-(16.17-6) = 19.83dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	12.39	13.49	13.38	13.30	82.830	19.18	19.83	Pass
159	5795	12.61	13.74	13.18	13.44	**84.775**	19.28	19.83	Pass

* Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$ + ... + $10^{GN/20}$)^2/4] = 16.17dBi, so the power limit shall be reduced to 30-(16.17-6) = 19.83dBm.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	9.83	10.74	10.39	10.53	43.711	16.41	19.83	Pass

* Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$ + ... + $10^{GN/20}$)^2/4] = 16.17dBi, so the power limit shall be reduced to 30-(16.17-6) = 19.83dBm.

Test Mode D

CDD Mode:

For U-NII-1 Band (Outdoor Access Point Mode)

802.11a

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
36	5180	1.80	2.69	2.28	2.14	6.699	8.26	12.45	20.71	21.00	Pass
40	5200	1.97	2.58	2.35	2.21	6.766	8.30	12.45	20.75	21.00	Pass
48	5240	1.82	2.55	2.03	2.33	6.626	8.21	12.45	20.66	21.00	Pass

Note:
Gain = 12.45dBi (above 30 degrees from the horizon),
EIRP = conducted power +(12.45dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
36	5180	1.47	2.37	2.23	2.19	6.456	8.10	12.45	20.55	21.00	Pass
40	5200	1.59	2.16	2.33	2.27	6.483	8.12	12.45	20.57	21.00	Pass
48	5240	2.14	2.62	2.31	2.46	6.929	8.41	12.45	20.86	21.00	Pass

Note:
Gain = 12.45dBi (above 30 degrees from the horizon),
EIRP = conducted power +(12.45dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
38	5190	2.11	2.67	2.25	2.61	**6.978**	8.44	12.45	20.89	21.00	Pass
46	5230	2.07	2.55	2.07	2.28	6.711	8.27	12.45	20.72	21.00	Pass

Note:
Gain = 12.45dBi (above 30 degrees from the horizon),
EIRP = conducted power +(12.45dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
42	5210	2.02	2.70	2.34	2.37	6.894	8.38	12.45	20.83	21.00	Pass

Note:
Gain = 12.45dBi (above 30 degrees from the horizon),
EIRP = conducted power +(12.45dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).

CDD Mode:

For U-NII-3 Band

802.11a

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	14.97	15.57	15.19	15.26	134.074	21.27	21.52	Pass
157	5785	14.85	15.79	15.13	15.21	134.253	21.28	21.52	Pass
165	5825	15.13	15.94	15.14	15.11	136.941	21.37	21.52	Pass

*Max. Gain: 14.48dBi, so the power limit shall be reduced to 30-(14.48-6) = 21.52dBm.

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	14.53	15.17	15.07	15.07	125.538	20.99	21.52	Pass
157	5785	14.64	15.61	14.90	15.15	129.136	21.11	21.52	Pass
165	5825	14.82	15.65	14.95	14.91	129.302	21.12	21.52	Pass

*Max. Gain: 14.48dBi, so the power limit shall be reduced to 30-(14.48-6) = 21.52dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	14.88	15.49	15.08	15.40	133.046	21.24	21.52	Pass
159	5795	15.04	15.78	14.91	15.31	134.696	21.29	21.52	Pass

*Max. Gain: 14.48dBi, so the power limit shall be reduced to 30-(14.48-6) = 21.52dBm.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	15.02	15.78	15.12	15.42	**136.956**	21.37	21.52	Pass

*Max. Gain: 14.48dBi, so the power limit shall be reduced to 30-(14.48-6) = 21.52dBm.

Test Mode D

Beamforming Mode:

For U-NII-1 Band (Outdoor Access Point Mode)

802.11n (HT20)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
36	5180	-4.55	-3.65	-3.79	-3.83	1.614	2.08	18.47	20.55	21.00	Pass
40	5200	-4.43	-3.86	-3.69	-3.75	1.621	2.10	18.47	20.57	21.00	Pass
48	5240	-3.88	-3.40	-3.71	-3.56	1.733	2.39	18.47	20.86	21.00	Pass

Note:
Gain = 12.45dBi (above 30 degrees from the horizon),
EIRP = conducted power +(12.45dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).
Directional gain =12.45dBi + 10log(4)=18.47dBi

802.11n (HT40)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
38	5190	-3.91	-3.35	-3.77	-3.41	**1.745**	2.42	18.47	20.89	21.00	Pass
46	5230	-3.95	-3.47	-3.95	-3.74	1.678	2.25	18.47	20.72	21.00	Pass

Note:
Gain = 12.45dBi (above 30 degrees from the horizon),
EIRP = conducted power +(12.45dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).
Directional gain =12.45dBi + 10log(4)=18.47dBi

802.11ac (VHT80)

Chan.	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Directional Gain (dBi)	EIRP (dBm)	EIRP limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain3						
42	5210	-4.00	-3.32	-3.68	-3.65	1.724	2.36	18.47	20.83	21.00	Pass

Note:
Gain = 12.45dBi (above 30 degrees from the horizon),
EIRP = conducted power +(12.45dBi) + array gain = (0 dB (i.e., no array gain) for $N_{ANT} \leq 4$).
Directional gain =12.45dBi + 10log(4)=18.47dBi

Beamforming Mode:

For U-NII-3 Band

802.11n (HT20)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	8.51	9.15	9.05	9.05	31.389	14.97	16.03	Pass
157	5785	8.62	9.59	8.88	9.13	32.288	15.09	16.03	Pass
165	5825	8.80	9.63	8.93	8.89	32.330	15.10	16.03	Pass

* Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$ + ... + $10^{GN/20}$)^2/4] = 19.97dBi, so the power limit shall be reduced to 30-(19.97-6) = 16.03dBm.

802.11n (HT40)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	8.86	9.47	9.06	9.38	33.266	15.22	16.03	Pass
159	5795	9.02	9.76	8.89	9.29	33.679	15.27	16.03	Pass

* Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$ + ... + $10^{GN/20}$)^2/4] = 19.97dBi, so the power limit shall be reduced to 30-(19.97-6) = 16.03dBm.

802.11ac (VHT80)

Channel	Frequency (MHz)	Maximum Conducted Power (dBm)				Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	9.00	9.76	9.10	9.40	**34.244**	15.35	16.03	Pass

* Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$ + ... + $10^{GN/20}$)^2/4] = 19.97dBi, so the power limit shall be reduced to 30-(19.97-6) = 16.03dBm.

26dB BANDWIDTH:

Test Mode A

802.11a

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
36	5180	20.33	20.02	19.72	19.79	Pass
40	5200	20.42	21.01	20.38	20.31	Pass
48	5240	20.20	21.33	20.66	20.06	Pass

802.11n (HT20)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
36	5180	20.80	20.80	20.80	20.62	Pass
40	5200	20.77	21.53	20.75	20.48	Pass
48	5240	21.04	21.68	21.30	21.02	Pass

802.11n (HT40)

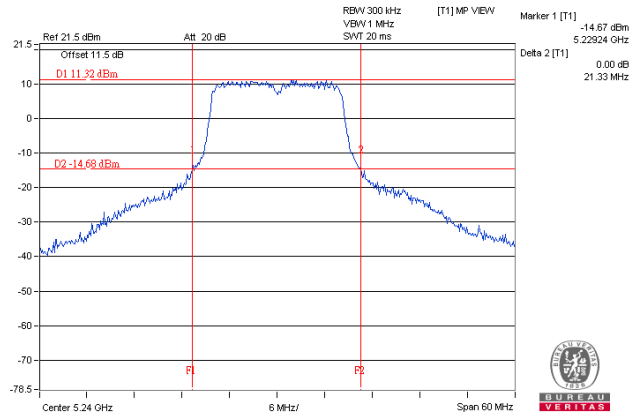
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
38	5190	40.95	41.04	40.76	40.71	Pass
46	5230	41.30	40.93	40.92	40.94	Pass

802.11ac (VHT80)

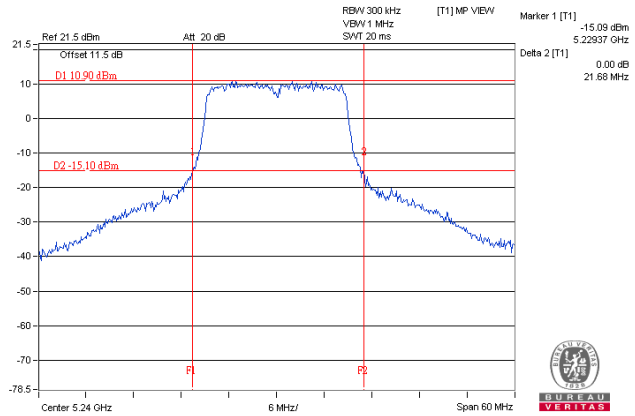
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
42	5210	84.98	85.45	84.34	84.78	Pass

SPECTRUM PLOT OF WORST VALUE

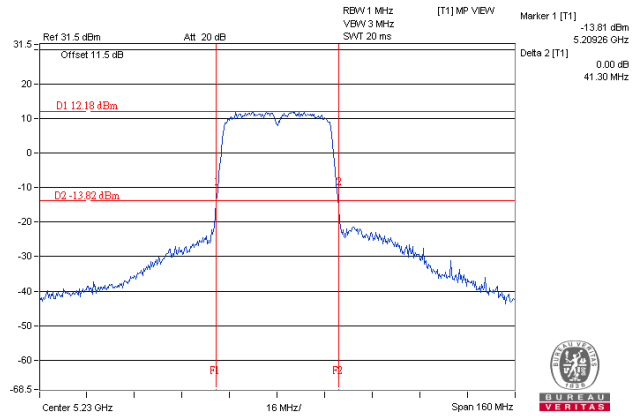
802.11a



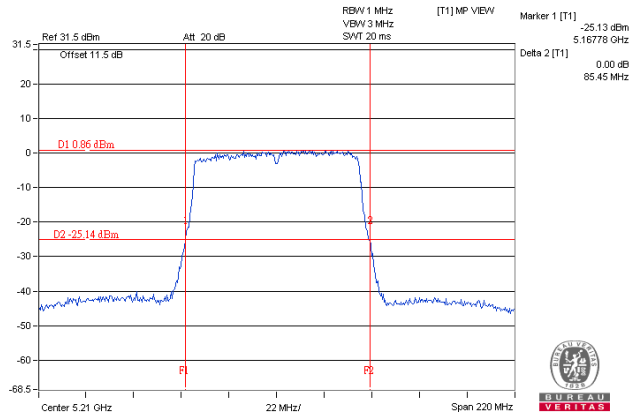
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode B

802.11a

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
36	5180	19.92	19.71	19.71	19.78	Pass
40	5200	20.23	19.71	20.20	19.87	Pass
48	5240	20.11	19.84	20.25	19.62	Pass

802.11n (HT20)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
36	5180	20.99	20.66	20.79	20.72	Pass
40	5200	21.04	20.64	20.78	20.60	Pass
48	5240	21.05	20.86	20.81	20.55	Pass

802.11n (HT40)

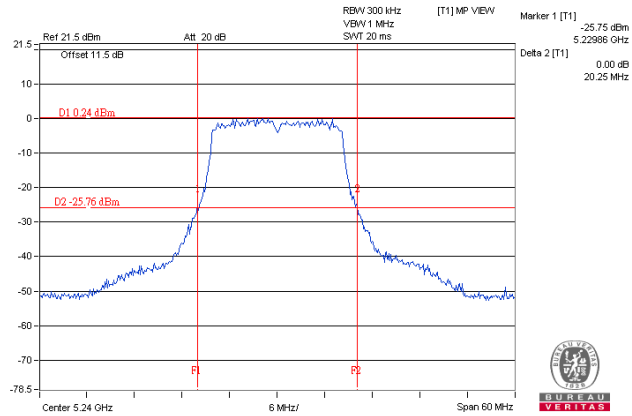
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
38	5190	40.73	40.96	41.10	40.79	Pass
46	5230	40.83	40.77	40.96	40.83	Pass

802.11ac (VHT80)

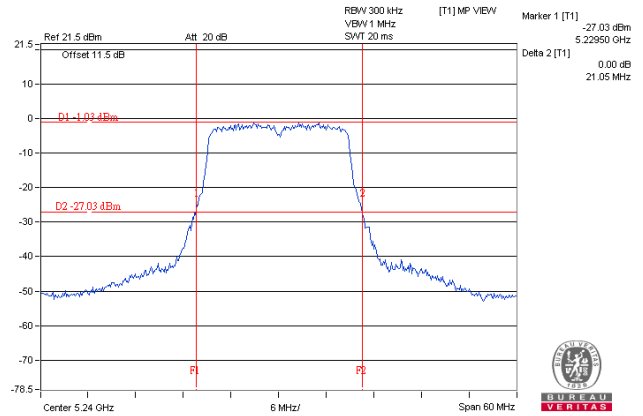
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
42	5210	84.68	85.33	84.63	84.45	Pass

SPECTRUM PLOT OF WORST VALUE

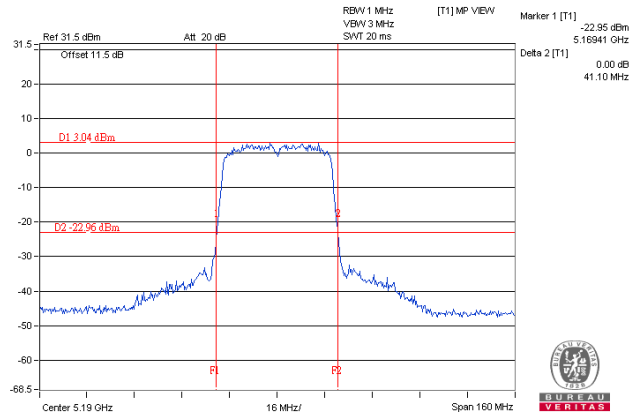
802.11a



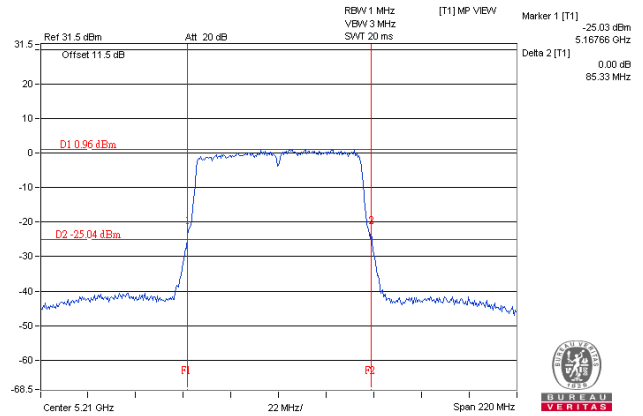
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode C

802.11a

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
36	5180	19.96	19.58	19.88	19.77	Pass
40	5200	20.04	20.02	20.03	19.61	Pass
48	5240	19.83	19.81	20.09	19.63	Pass

802.11n (HT20)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
36	5180	20.76	20.81	20.67	20.64	Pass
40	5200	20.76	20.71	20.51	20.48	Pass
48	5240	21.08	21.08	20.55	20.64	Pass

802.11n (HT40)

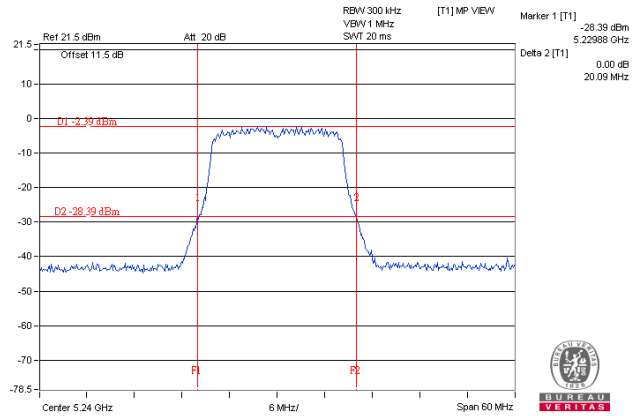
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
38	5190	40.82	40.56	40.64	40.61	Pass
46	5230	40.91	40.50	40.48	40.57	Pass

802.11ac (VHT80)

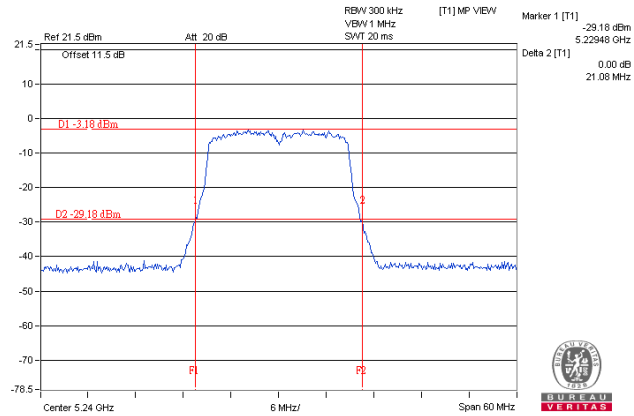
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
42	5210	86.16	85.10	84.54	84.65	Pass

SPECTRUM PLOT OF WORST VALUE

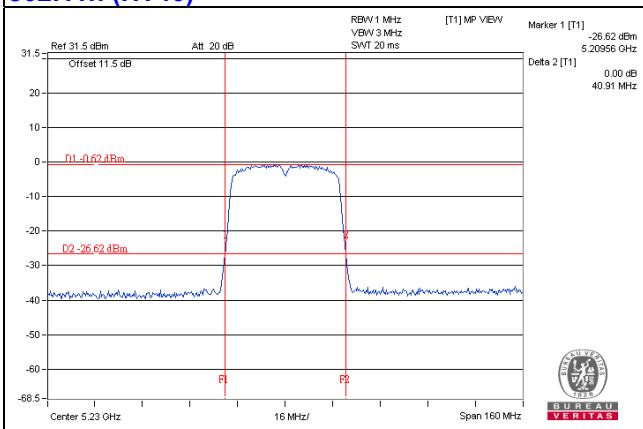
802.11a



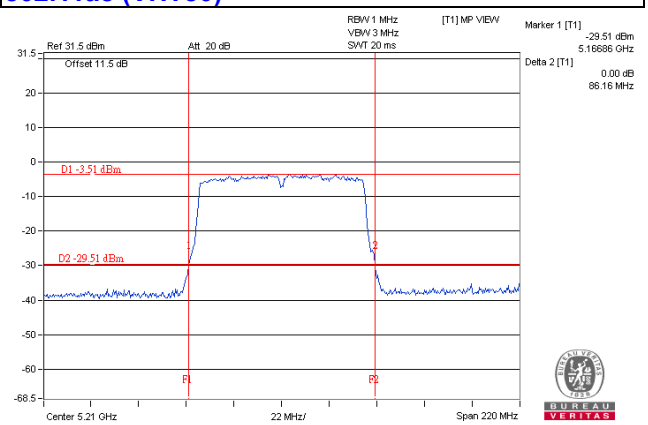
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode D

802.11a

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
36	5180	19.76	19.69	19.73	19.74	Pass
40	5200	19.64	19.88	19.88	19.97	Pass
48	5240	19.70	19.90	19.76	19.62	Pass

802.11n (HT20)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
36	5180	20.56	20.79	20.71	20.64	Pass
40	5200	20.68	20.66	20.75	20.48	Pass
48	5240	20.68	20.58	20.46	20.64	Pass

802.11n (HT40)

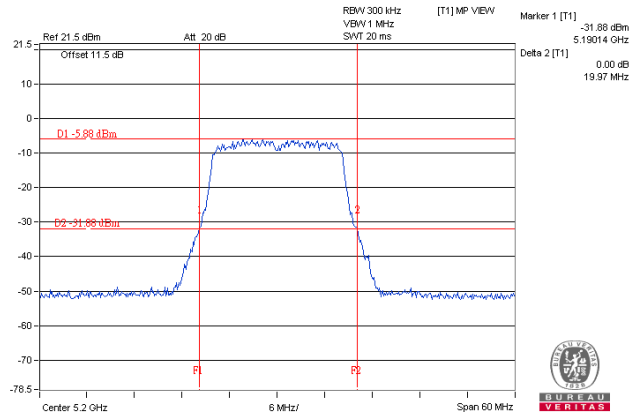
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
38	5190	40.77	40.89	41.09	40.61	Pass
46	5230	40.95	40.93	40.95	40.57	Pass

802.11ac (VHT80)

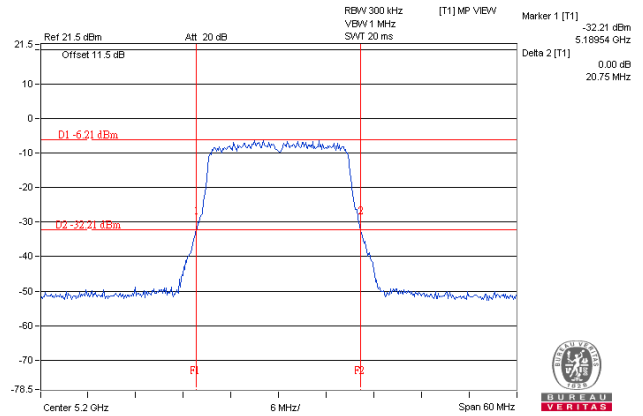
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)				Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	
42	5210	84.34	84.29	84.66	84.65	Pass

SPECTRUM PLOT OF WORST VALUE

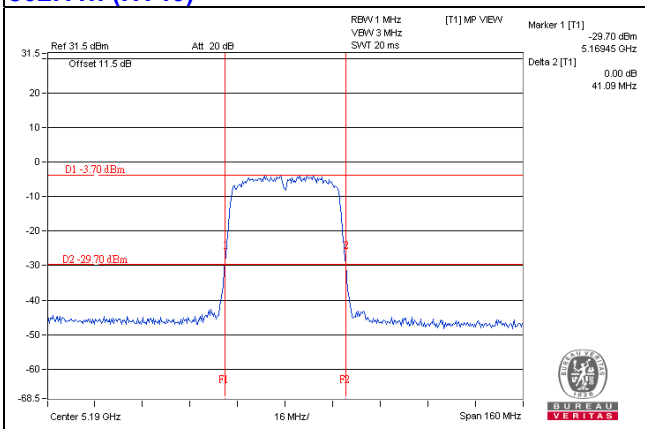
802.11a



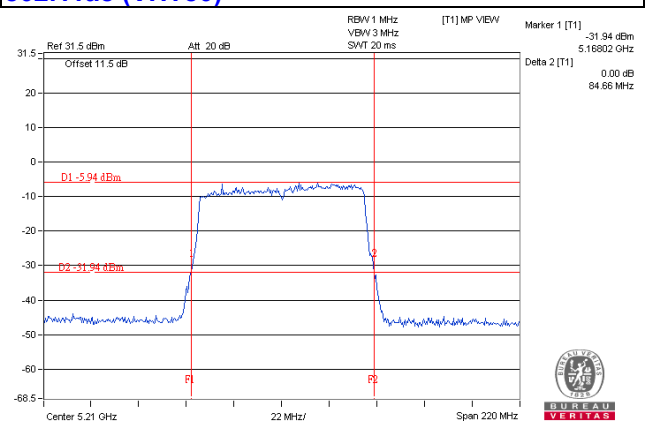
802.11n (HT20)



802.11n (HT40)

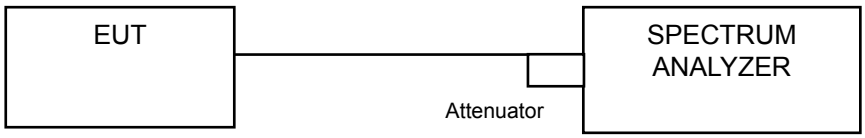


802.11ac (VHT80)



4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Results

Test Mode A

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	16.44	16.56	16.44	16.44
40	5200	16.68	16.56	16.56	16.56
48	5240	16.56	16.56	16.56	16.56
149	5745	28.08	29.04	34.20	27.96
157	5785	31.44	28.56	28.56	27.24
165	5825	29.88	28.32	27.36	26.52

802.11n (HT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	17.64	17.76	17.64	17.76
40	5200	17.76	17.64	17.76	17.76
48	5240	17.76	17.76	17.76	17.76
149	5745	31.68	27.84	29.76	27.96
157	5785	32.04	28.80	27.84	27.24
165	5825	30.00	28.56	26.28	26.76

802.11n (HT40)

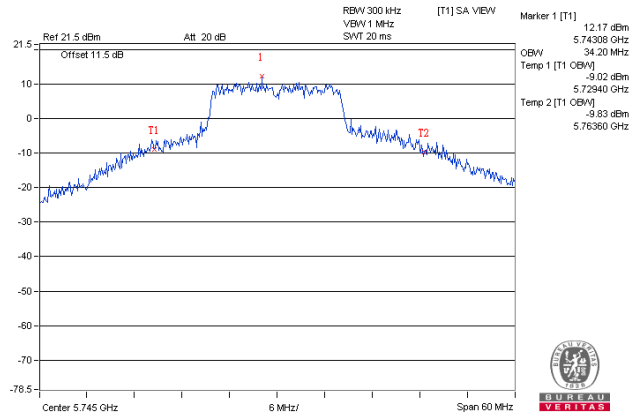
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
38	5190	36.24	36.24	36.24	36.24
46	5230	36.24	36.24	36.24	36.36
151	5755	36.72	39.00	40.68	37.08
159	5795	44.64	41.52	40.20	38.52

802.11ac (VHT80)

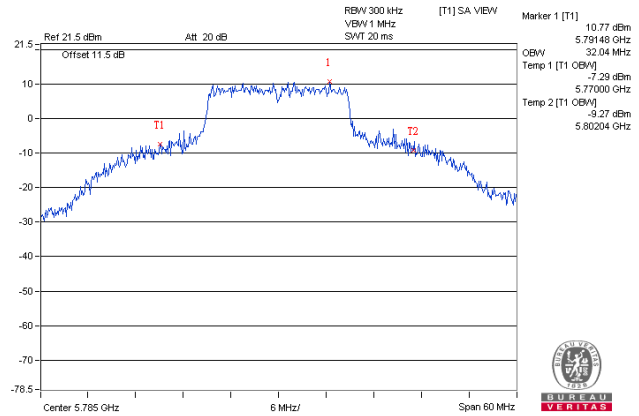
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	75.84	76.08	75.84	76.08
155	5775	75.84	76.08	75.84	84.00

SPECTRUM PLOT OF WORST VALUE

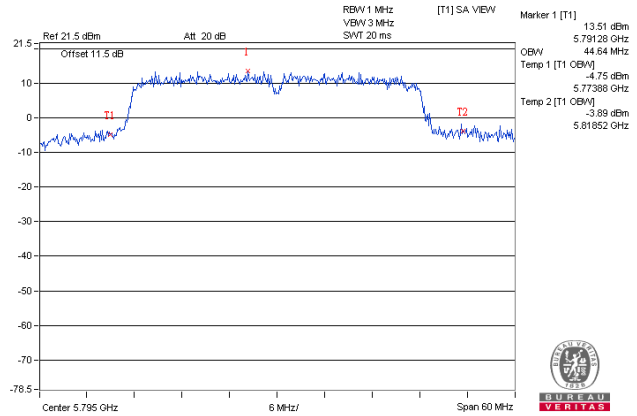
802.11a



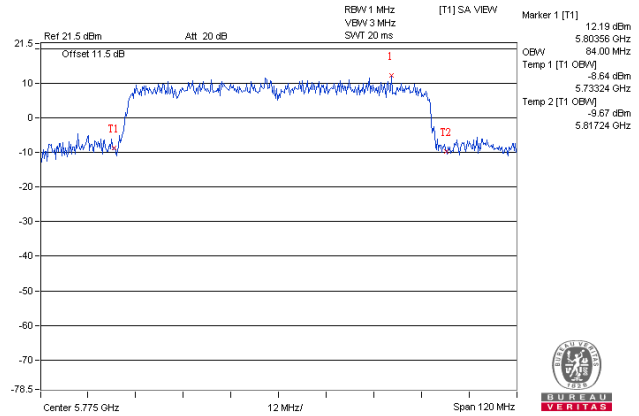
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode B

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	16.44	16.56	16.56	16.56
40	5200	16.44	16.56	16.56	16.44
48	5240	16.44	16.44	16.56	16.44
149	5745	16.44	16.56	16.68	22.56
157	5785	16.56	16.56	16.56	16.56
165	5825	16.44	16.44	16.44	16.56

802.11n (HT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	17.76	17.76	17.76	17.64
40	5200	17.64	17.64	17.64	17.76
48	5240	17.76	17.64	17.76	17.76
149	5745	17.64	17.64	17.76	17.64
157	5785	17.64	17.64	17.64	17.76
165	5825	17.64	17.76	17.64	17.76

802.11n (HT40)

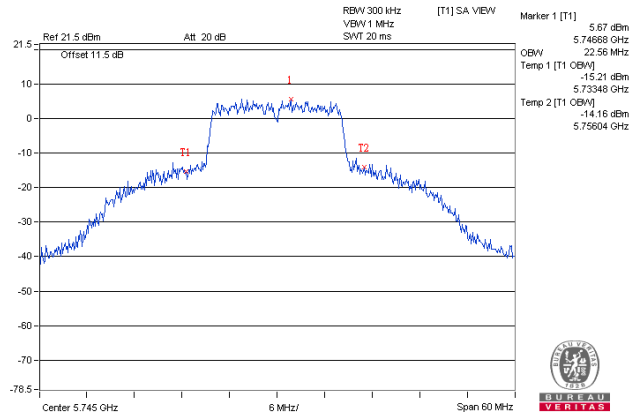
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
38	5190	36.24	36.24	36.36	36.24
46	5230	36.24	36.24	36.24	36.24
151	5755	36.24	36.36	36.24	36.24
159	5795	36.36	36.48	36.36	36.24

802.11ac (VHT80)

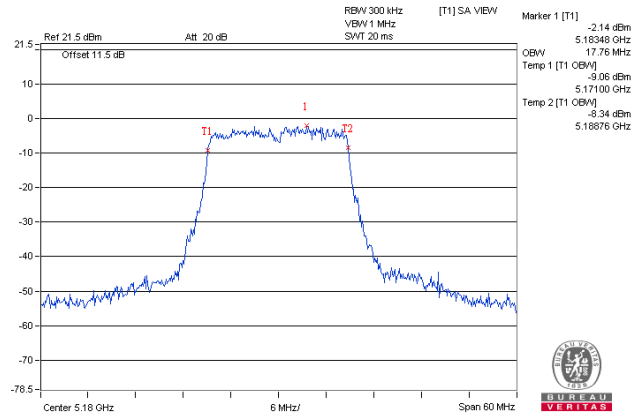
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	75.84	76.08	75.84	76.08
155	5775	76.08	76.08	75.84	76.08

SPECTRUM PLOT OF WORST VALUE

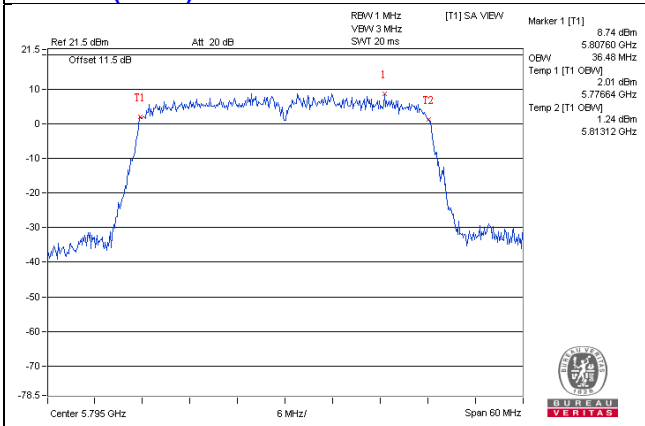
802.11a



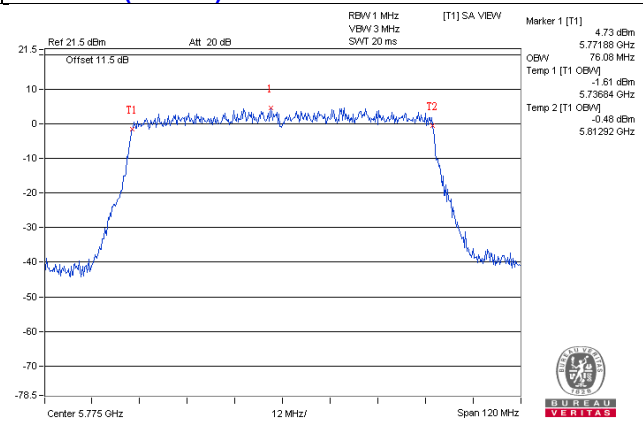
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode C

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	16.44	16.44	16.44	16.44
40	5200	16.44	16.44	16.44	16.44
48	5240	16.44	16.44	16.44	16.44
149	5745	16.70	17.47	16.78	19.22
157	5785	16.80	17.88	16.80	18.72
165	5825	16.68	19.08	17.04	19.20

802.11n (HT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	17.64	17.64	17.64	17.64
40	5200	17.64	17.64	17.64	17.64
48	5240	17.64	17.64	17.64	17.64
149	5745	17.88	18.12	17.88	19.20
157	5785	17.88	18.24	17.88	18.72
165	5825	17.88	19.08	17.88	18.48

802.11n (HT40)

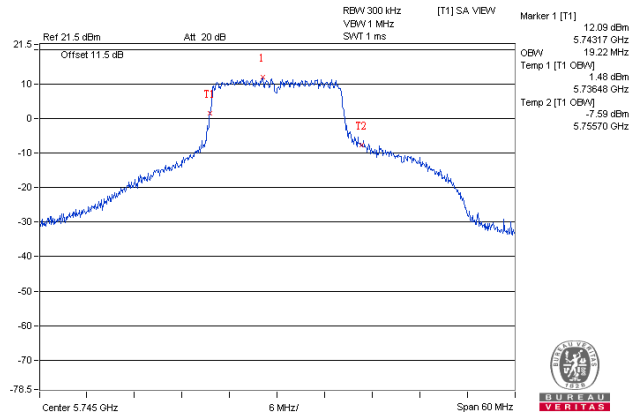
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
38	5190	36.12	36.12	36.24	36.12
46	5230	36.12	36.12	36.12	36.12
151	5755	36.48	36.60	36.48	36.60
159	5795	36.48	36.60	36.36	36.60

802.11ac (VHT80)

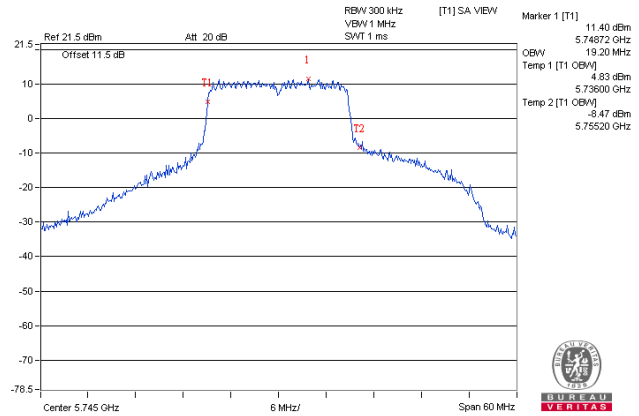
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	75.84	75.84	75.84	75.84
155	5775	75.84	75.84	75.84	75.84

SPECTRUM PLOT OF WORST VALUE

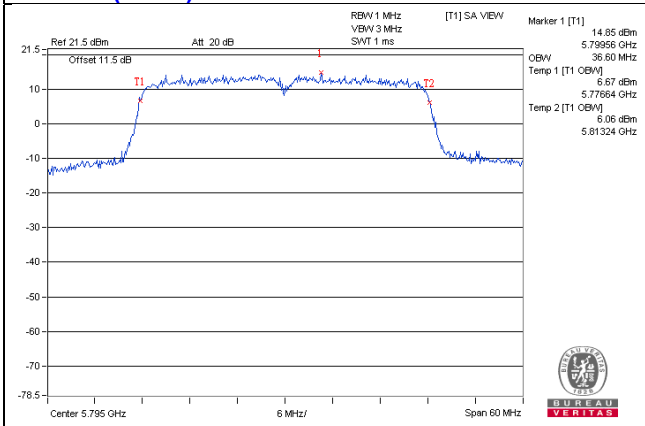
802.11a



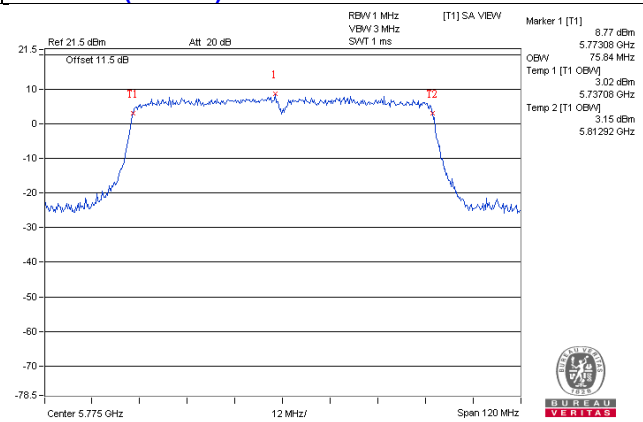
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode D

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	16.56	16.56	16.44	16.56
40	5200	16.44	16.44	16.44	16.44
48	5240	16.44	16.44	16.56	16.56
149	5745	16.56	16.56	16.56	16.68
157	5785	16.68	16.68	16.68	16.68
165	5825	16.68	16.68	16.68	16.68

802.11n (HT20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	17.64	17.64	17.76	17.64
40	5200	17.64	17.64	17.76	17.64
48	5240	17.76	17.76	17.64	17.64
149	5745	17.76	17.76	17.76	17.76
157	5785	17.76	17.88	17.88	17.76
165	5825	17.76	17.88	17.88	17.76

802.11n (HT40)

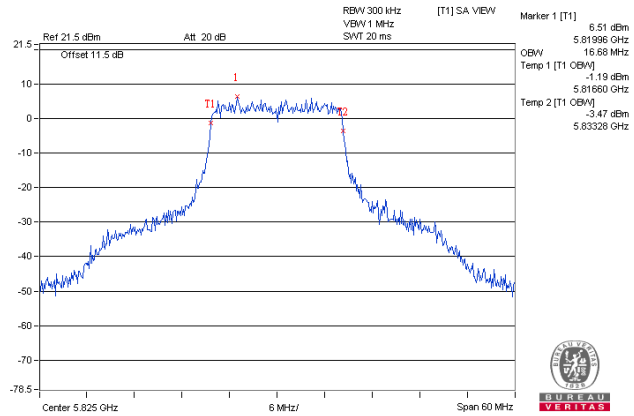
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
38	5190	36.12	36.12	36.24	36.12
46	5230	36.24	36.24	36.24	36.12
151	5755	36.24	36.36	36.36	36.24
159	5795	36.36	36.48	36.48	36.48

802.11ac (VHT80)

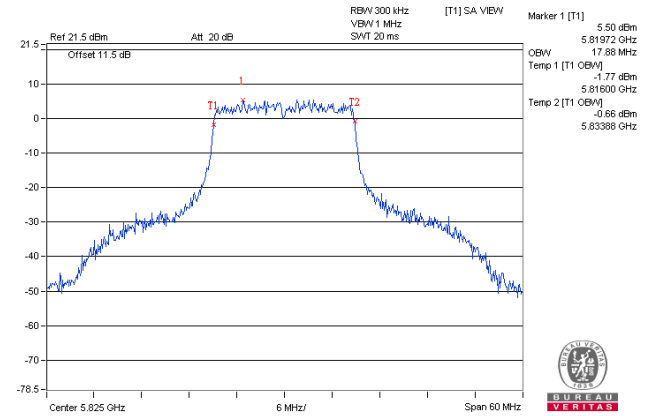
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	75.84	75.84	75.84	75.84
155	5775	75.84	76.08	76.08	75.84

SPECTRUM PLOT OF WORST VALUE

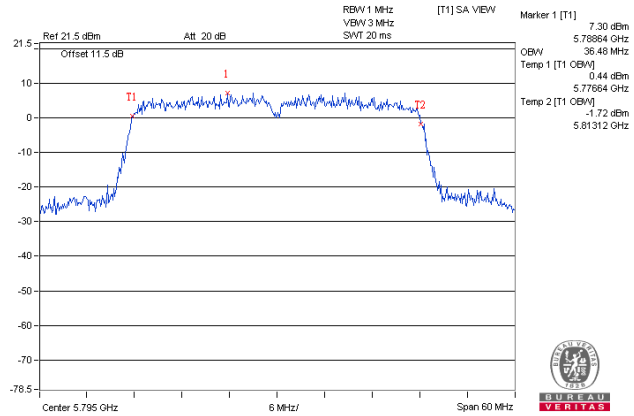
802.11a



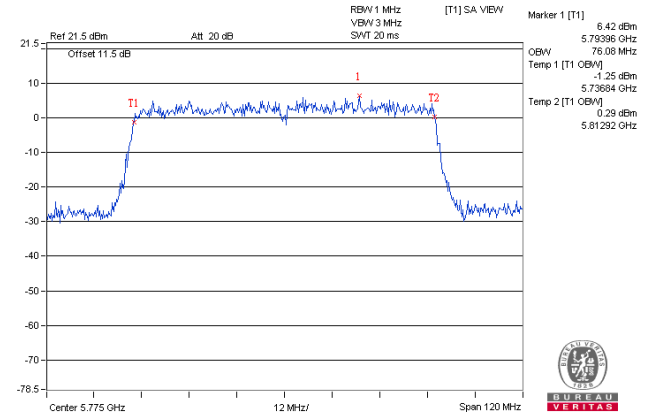
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

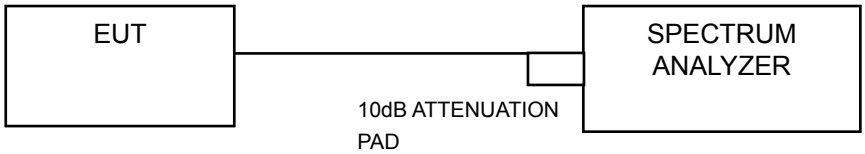


4.5 Peak Power Spectral Density Measurement

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 Procedure

For U-NII-1 band:

Duty cycle of test signal is ≥ 98 %
Using method SA-1
1. Set span to encompass the entire emission bandwidth (EBW) of the signal.
2. Set RBW = 1MHz, Set VBW ≥ 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

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

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Condition

Same as Item 4.3.6.

4.5.7 Test Results

Test Mode A

For U-NII-1 Band (Outdoor Access Point Mode)

802.11a

Chan.	Freq. (MHz)	PSD (dBm/MHz)				Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	1.98	3.19	1.53	2.03	0.18	8.43	10.68	Pass
40	5200	4.01	4.85	3.88	3.93	0.18	10.39	10.68	Pass
48	5240	4.14	5.14	4.08	4.41	0.18	10.67	10.68	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain =6.3dBi + 10log(4)=12.32dBi > 6dBi, so the power density limit shall be reduced to 17-(12.32-6) = 10.68dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/MHz)				Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	1.48	2.67	1.09	1.61	0.09	7.87	10.68	Pass
40	5200	3.61	4.18	3.41	3.54	0.09	9.81	10.68	Pass
48	5240	3.66	4.66	3.12	3.88	0.09	9.98	10.68	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain =6.3dBi + 10log(4)=12.32dBi > 6dBi, so the power density limit shall be reduced to 17-(12.32-6) = 10.68dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Chan.	Freq. (MHz)	PSD (dBm/MHz)				Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	-6.59	-5.35	-7.31	-6.46	0.13	-0.22	10.68	Pass
46	5230	0.59	1.76	0.38	0.85	0.13	7.08	10.68	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain =6.3dBi + 10log(4)=12.32dBi > 6dBi, so the power density limit shall be reduced to 17-(12.32-6) = 10.68dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

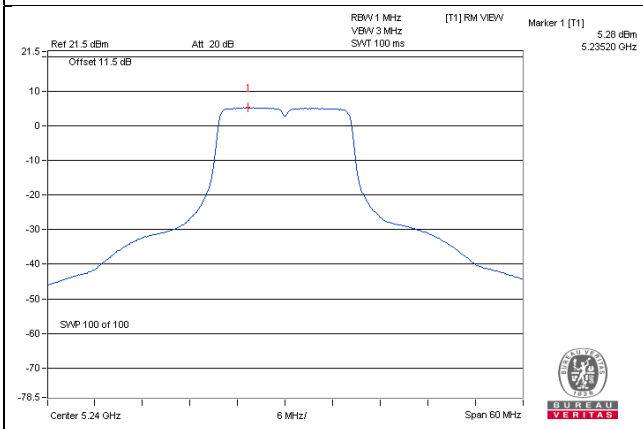
Chan.	Freq. (MHz)	PSD (dBm/MHz)				Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	-12.41	-10.81	-12.53	-12.34	0.40	-5.55	10.68	Pass

Note:

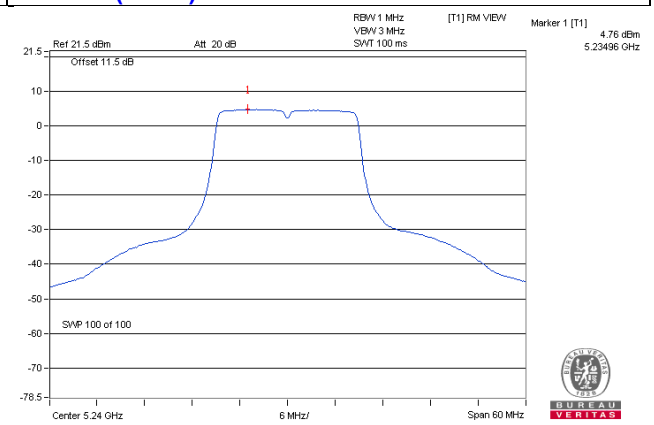
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain =6.3dBi + 10log(4)=12.32dBi > 6dBi, so the power density limit shall be reduced to 17-(12.32-6) = 10.68dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

SPECTRUM PLOT OF WORST VALUE

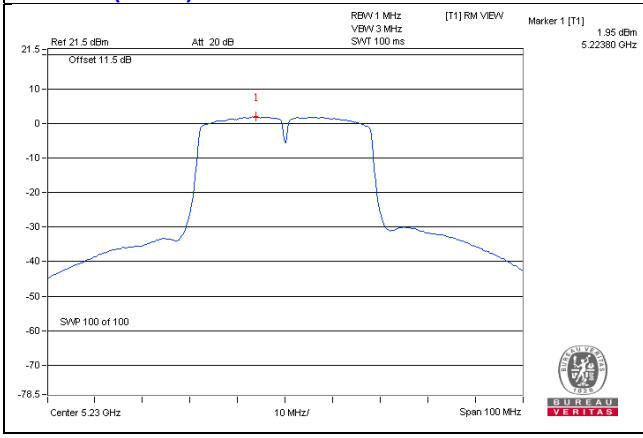
802.11a / CH 48 / Chain 1



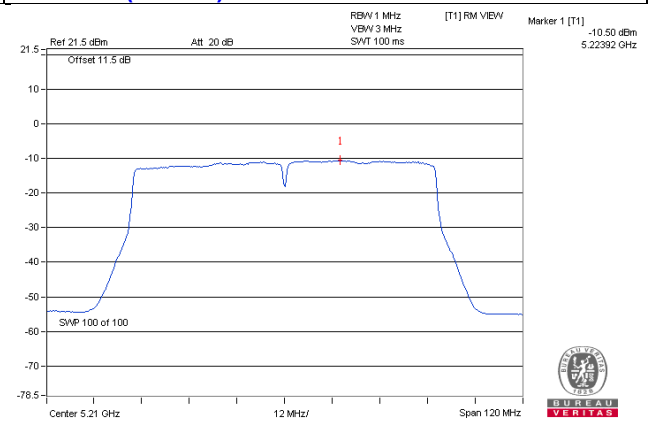
802.11n (HT20) / CH 48 / Chain 1



802.11n (HT40) / CH 46 / Chain 1



802.11ac (VHT80) / CH 42 / Chain 1



For U-NII-3 Band

802.11a

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Duty factor	Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	-1.68	-0.70	-1.95	-1.12	0.54	1.52	0.27	1.10	0.18	7.09	23.68	Pass
157	5785	-1.53	-0.99	-1.97	-1.44	0.69	1.23	0.25	0.78	0.18	6.95	23.68	Pass
165	5825	-1.94	-1.08	-2.14	-1.87	0.28	1.14	0.08	0.35	0.18	6.68	23.68	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain =6.3dBi + 10log(4)=12.32dBi > 6dBi, so the power density limit shall be reduced to 30-(12.32-6) = 23.68dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Duty factor	Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	-2.19	-1.12	-2.13	-1.57	0.03	1.10	0.09	0.65	0.09	6.60	23.68	Pass
157	5785	-2.04	-1.36	-2.29	-1.92	0.18	0.86	-0.07	0.30	0.09	6.44	23.68	Pass
165	5825	-2.38	-1.34	-2.48	-2.31	-0.16	0.88	-0.26	-0.09	0.09	6.23	23.68	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain =6.3dBi + 10log(4)=12.32dBi > 6dBi, so the power density limit shall be reduced to 30-(12.32-6) = 23.68dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Duty factor	Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	-7.17	-4.35	-5.50	-5.34	-4.95	-2.13	-3.28	-3.12	0.13	2.89	23.68	Pass
159	5795	-5.05	-4.38	-5.40	-5.16	-2.83	-2.16	-3.18	-2.94	0.13	3.39	23.68	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain =6.3dBi + 10log(4)=12.32dBi > 6dBi, so the power density limit shall be reduced to 30-(12.32-6) = 23.68dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

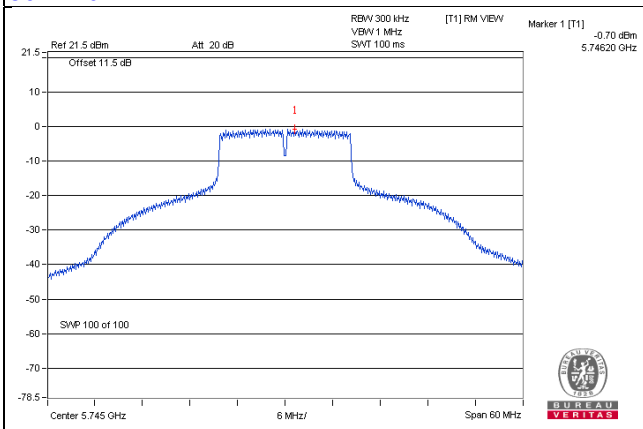
802.11ac (VHT80)

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Duty factor	Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	-13.71	-12.15	-12.95	-8.25	-11.49	-9.93	-10.73	-6.03	0.40	-2.56	23.68	Pass

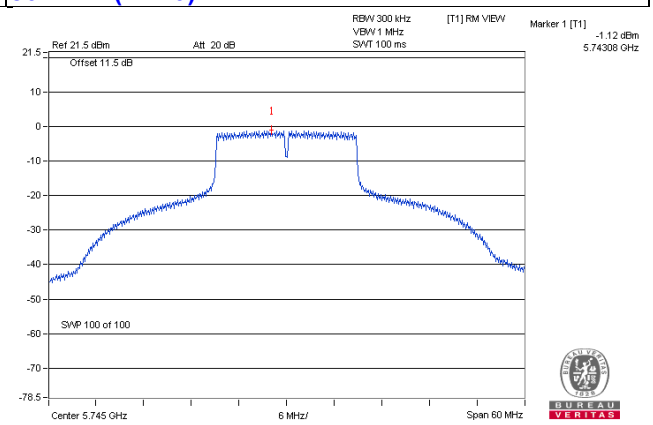
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain =6.3dBi + 10log(4)=12.32dBi > 6dBi, so the power density limit shall be reduced to 30-(12.32-6) = 23.68dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

SPECTRUM PLOT OF WORST VALUE

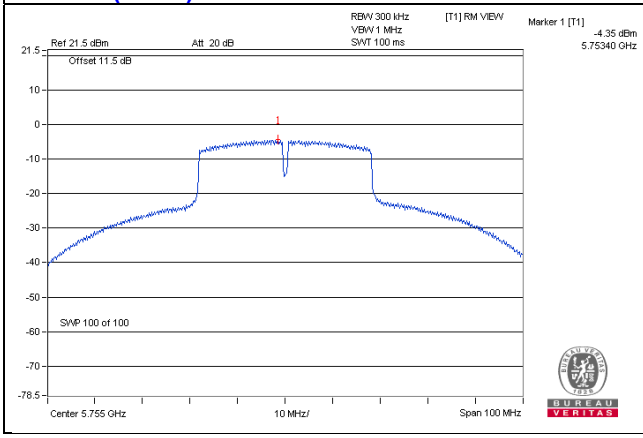
802.11a



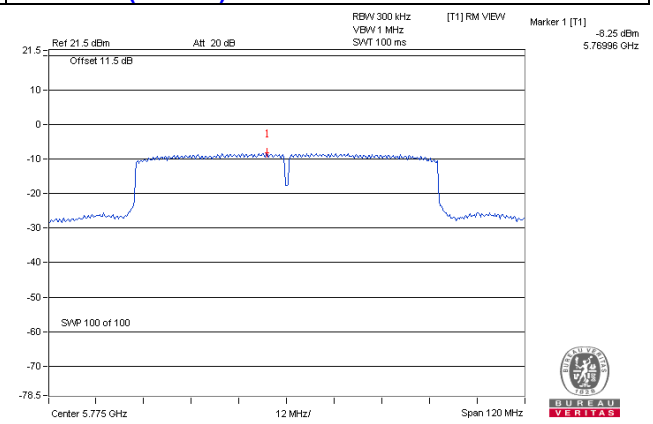
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode B

For U-NII-1 Band (Outdoor Access Point Mode)

802.11a

Chan.	Freq. (MHz)	PSD (dBm/MHz)				Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	-5.76	-4.51	-6.51	-5.97	0.14	0.53	3.03	Pass
40	5200	-5.98	-4.49	-6.36	-5.89	0.14	0.54	3.03	Pass
48	5240	-5.82	-4.61	-5.85	-5.35	0.14	0.78	3.03	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 19.97dBi > 6dBi, so the power density limit shall be reduced to 17-(19.97-6) = 3.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
36	5180	-6.46	-4.99	-6.87	-6.39	-0.10	3.03	Pass
40	5200	-6.47	-4.96	-6.72	-6.29	-0.03	3.03	Pass
48	5240	-6.33	-5.06	-6.03	-5.96	0.20	3.03	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 19.97dBi > 6dBi, so the power density limit shall be reduced to 17-(19.97-6) = 3.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Chan.	Freq. (MHz)	PSD (dBm/MHz)				Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	-8.87	-7.61	-9.03	-9.00	0.15	-2.42	3.03	Pass
46	5230	-8.96	-7.44	-8.54	-8.58	0.15	-2.17	3.03	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 19.97dBi > 6dBi, so the power density limit shall be reduced to 17-(19.97-6) = 3.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

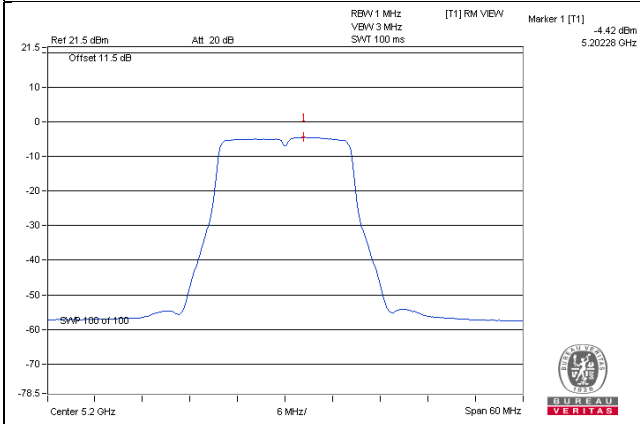
Chan.	Freq. (MHz)	PSD (dBm/MHz)				Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	-12.27	-10.59	-11.56	-11.96	0.26	-5.27	3.03	Pass

Note:

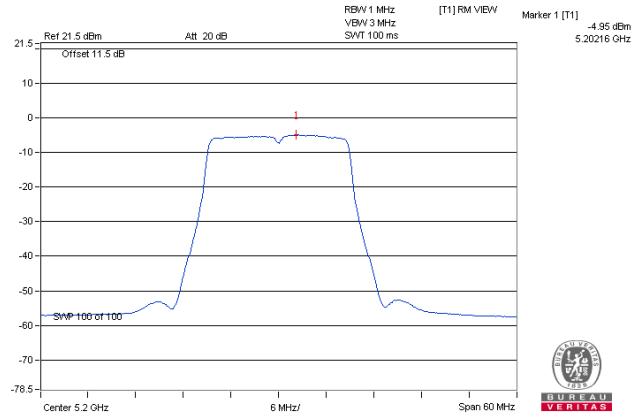
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 19.97dBi > 6dBi, so the power density limit shall be reduced to 17-(19.97-6) = 3.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

SPECTRUM PLOT OF WORST VALUE

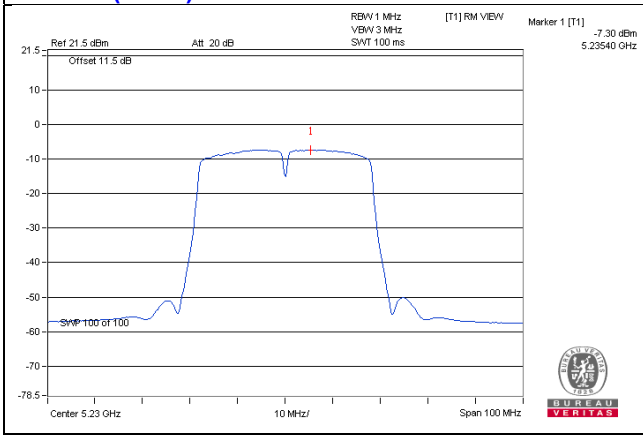
802.11a / CH 40 / Chain 1



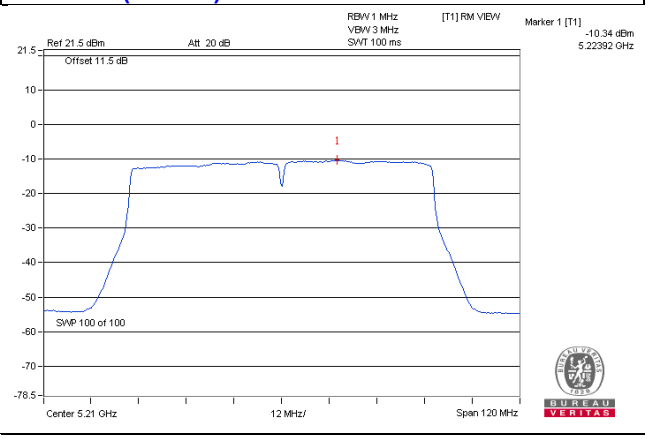
802.11n (HT20) / CH 40 / Chain 1



802.11n (HT40) / CH 46 / Chain 1



802.11ac (VHT80) / CH 42 / Chain 1



For U-NII-3 Band

802.11a

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Duty factor	Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	-7.50	-6.84	-7.85	-6.84	-5.28	-4.62	-5.63	-4.62	0.14	1.14	16.03	Pass
157	5785	-7.59	-6.62	-7.55	-7.26	-5.37	-4.40	-5.33	-5.04	0.14	1.14	16.03	Pass
165	5825	-7.60	-6.81	-7.21	-7.58	-5.38	-4.59	-4.99	-5.36	0.14	1.09	16.03	Pass

Note:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 19.97dBi > 6dBi, so the power density limit shall be reduced to 30-(19.97-6) = 16.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3			
149	5745	-8.14	-7.38	-7.93	-7.64	-5.92	-5.16	-5.71	-5.42	0.48	16.03	Pass
157	5785	-8.01	-7.25	-7.48	-7.82	-5.79	-5.03	-5.26	-5.60	0.61	16.03	Pass
165	5825	-8.29	-7.29	-7.60	-8.18	-6.07	-5.07	-5.38	-5.96	0.42	16.03	Pass

Note:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 19.97dBi > 6dBi, so the power density limit shall be reduced to 30-(19.97-6) = 16.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Duty factor	Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	-11.05	-10.14	-11.20	-10.58	-8.83	-7.92	-8.98	-8.36	0.15	-2.34	16.03	Pass
159	5795	-10.73	-10.03	-10.93	-10.76	-8.51	-7.81	-8.71	-8.54	0.15	-2.21	16.03	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 19.97dBi > 6dBi, so the power density limit shall be reduced to 30-(19.97-6) = 16.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

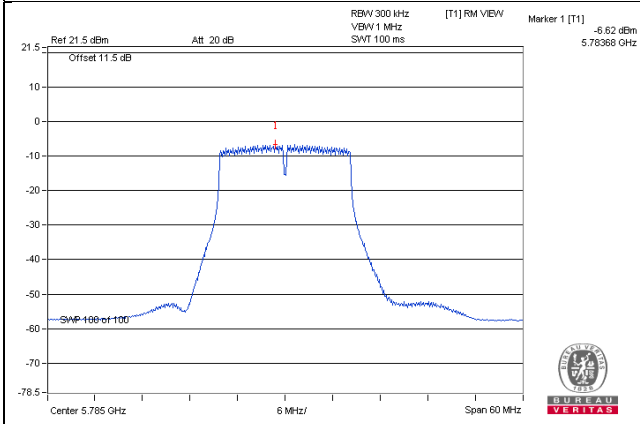
802.11ac (VHT80)

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Duty factor	Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	-14.41	-13.51	-14.46	-13.84	-12.19	-11.29	-12.24	-11.62	0.26	-5.54	16.03	Pass

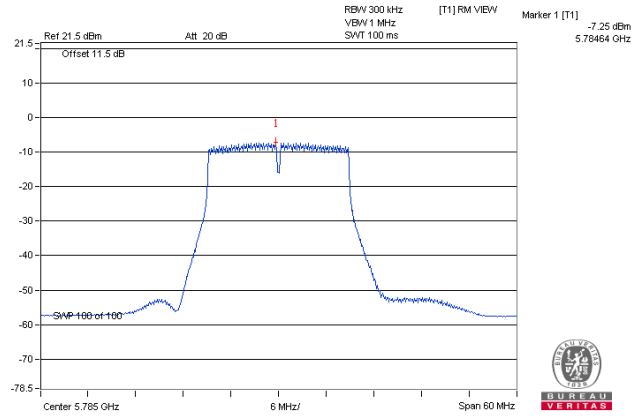
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 19.97dBi > 6dBi, so the power density limit shall be reduced to 30-(19.97-6) = 16.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

SPECTRUM PLOT OF WORST VALUE

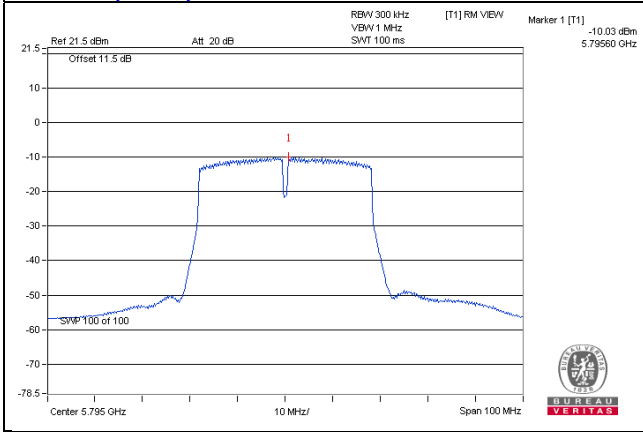
802.11a



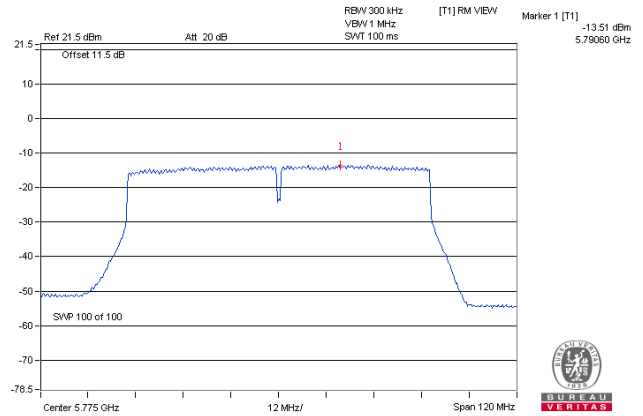
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode C

For U-NII-1 Band (Outdoor Access Point Mode)

802.11a

Chan.	Freq. (MHz)	PSD (dBm/MHz)				Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	-8.04	-8.60	-8.32	-8.18	0.15	-2.10	6.83	Pass
40	5200	-8.06	-8.74	-8.29	-8.16	0.15	-2.13	6.83	Pass
48	5240	-8.11	-8.38	-7.60	-7.45	0.15	-1.69	6.83	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 16.17dBi > 6dBi, so the power density limit shall be reduced to 17-(16.17-6) = 6.83dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
36	5180	-8.08	-8.46	-8.33	-8.14	-2.23	6.83	Pass
40	5200	-8.31	-9.01	-8.16	-7.86	-2.29	6.83	Pass
48	5240	-8.16	-8.69	-8.07	-8.01	-2.20	6.83	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 16.17dBi > 6dBi, so the power density limit shall be reduced to 17-(16.17-6) = 6.83dBm.

802.11n (HT40)

Chan.	Freq. (MHz)	PSD (dBm/MHz)				Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	-11.16	-11.52	-11.31	-11.09	0.14	-5.10	6.83	Pass
46	5230	-11.16	-11.80	-11.24	-11.04	0.14	-5.14	6.83	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 16.17dBi > 6dBi, so the power density limit shall be reduced to 17-(16.17-6) = 6.83dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

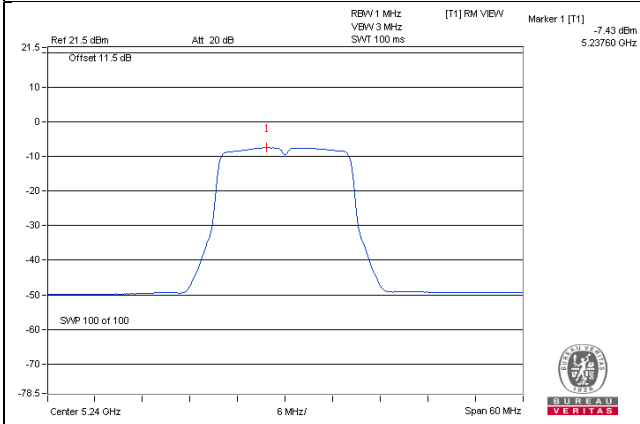
Chan.	Freq. (MHz)	PSD (dBm/MHz)				Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	-14.47	-14.82	-14.47	-14.25	0.38	-8.10	6.83	Pass

Note:

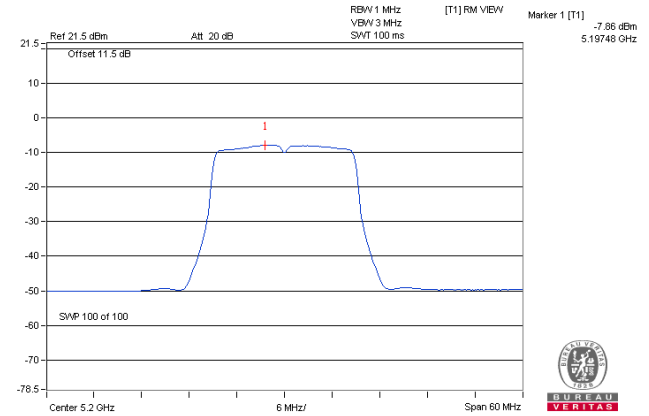
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 16.17dBi > 6dBi, so the power density limit shall be reduced to 17-(16.17-6) = 6.83dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

SPECTRUM PLOT OF WORST VALUE

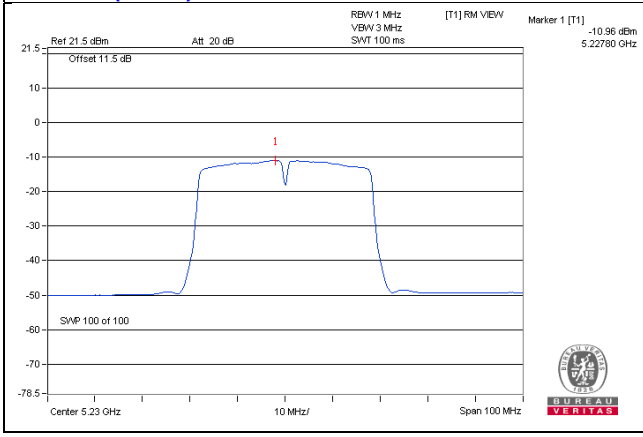
802.11a / CH 48 / Chain 3



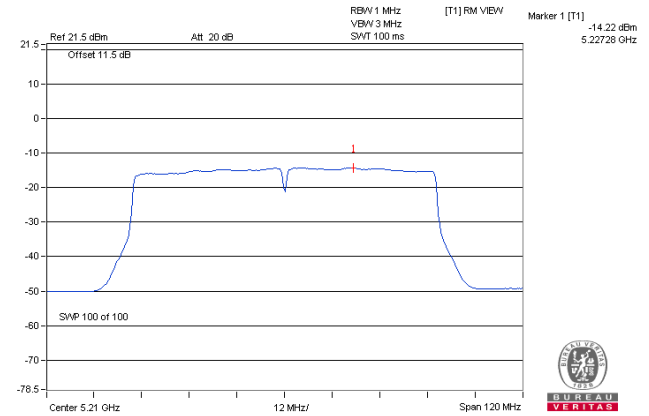
802.11n (HT20) / CH 40 / Chain 3



802.11n (HT40) / CH 46 / Chain 3



802.11ac (VHT80) / CH 42 / Chain 3



For U-NII-3 Band

802.11a

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Duty factor	Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	-1.91	-0.69	-1.59	-1.49	0.31	1.53	0.63	0.73	0.15	7.00	19.83	Pass
157	5785	-2.05	-0.51	-1.59	-1.33	0.17	1.71	0.63	0.89	0.15	7.06	19.83	Pass
165	5825	-2.27	-0.58	-1.64	-1.19	-0.05	1.64	0.58	1.03	0.15	7.02	19.83	Pass

Note:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 16.17dBi > 6dBi, so the power density limit shall be reduced to 30-(16.17-6) = 19.83dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3			
149	5745	-2.26	-1.07	-2.16	-1.85	-0.04	1.15	0.06	0.37	6.43	19.83	Pass
157	5785	-2.34	-1.01	-2.14	-1.75	-0.12	1.21	0.08	0.47	6.46	19.83	Pass
165	5825	-2.69	-1.09	-2.16	-1.64	-0.47	1.13	0.06	0.58	6.38	19.83	Pass

Note:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 16.17dBi > 6dBi, so the power density limit shall be reduced to 30-(16.17-6) = 19.83dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Duty factor	Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	-5.00	-4.30	-5.53	-5.34	-2.78	-2.08	-3.31	-3.12	0.14	3.36	19.83	Pass
159	5795	-5.19	-4.47	-5.54	-5.18	-2.97	-2.25	-3.32	-2.96	0.14	3.30	19.83	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 16.17dBi > 6dBi, so the power density limit shall be reduced to 30-(16.17-6) = 19.83dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

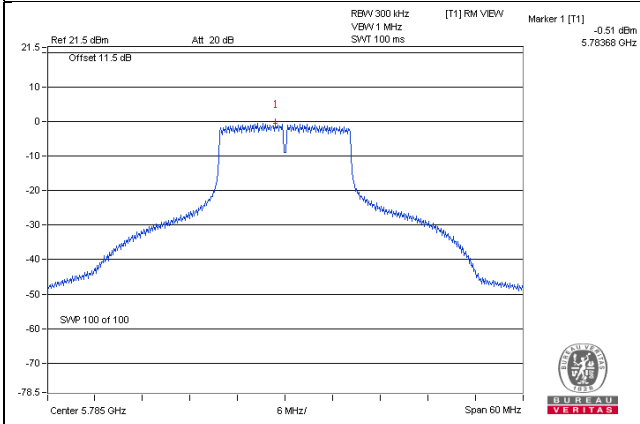
802.11ac (VHT80)

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Duty factor	Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	-10.73	-10.59	-11.64	-11.46	-8.51	-8.37	-9.42	-9.24	0.38	-2.46	19.83	Pass

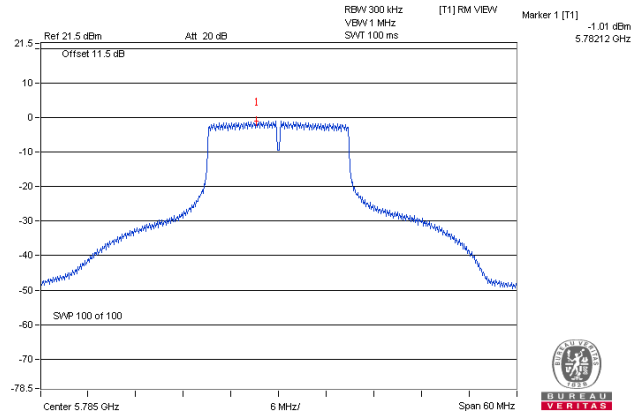
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 16.17dBi > 6dBi, so the power density limit shall be reduced to 30-(16.17-6) = 19.83dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

SPECTRUM PLOT OF WORST VALUE

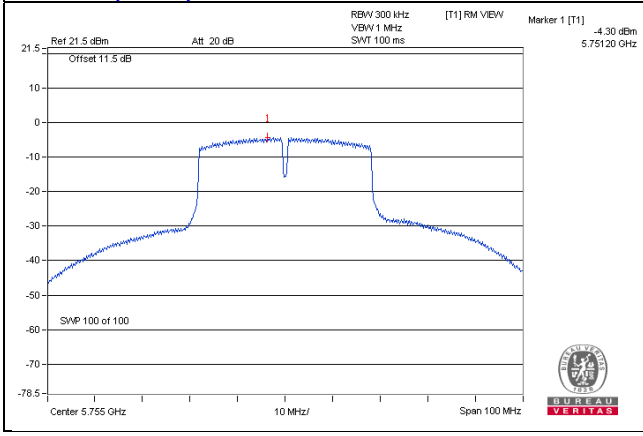
802.11a



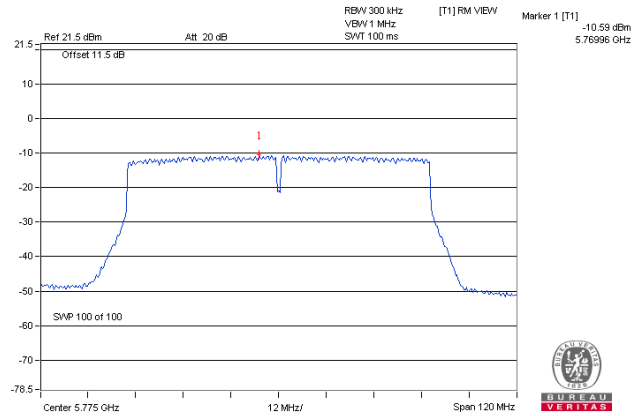
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode D

For U-NII-1 Band (Outdoor Access Point Mode)

802.11a

Chan.	Freq. (MHz)	PSD (dBm/MHz)				Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	-11.98	-11.86	-11.85	-12.09	0.18	-5.74	3.03	Pass
40	5200	-12.04	-11.94	-11.91	-12.04	0.18	-5.78	3.03	Pass
48	5240	-11.78	-11.55	-11.54	-11.70	0.18	-5.43	3.03	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 19.97dBi > 6dBi, so the power density limit shall be reduced to 17-(19.97-6) = 3.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Chan.	Freq. (MHz)	PSD (dBm/MHz)				Total PSD (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3			
36	5180	-12.51	-12.49	-12.44	-8.00	-4.84	3.03	Pass
40	5200	-12.51	-12.43	-12.48	-7.86	-4.77	3.03	Pass
48	5240	-12.18	-12.07	-12.14	-8.01	-4.66	3.03	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 19.97dBi > 6dBi, so the power density limit shall be reduced to 17-(19.97-6) = 3.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT40)

Chan.	Freq. (MHz)	PSD (dBm/MHz)				Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
38	5190	-15.10	-15.50	-6.90	-11.11	0.15	-4.53	3.03	Pass
46	5230	-14.86	-15.02	-15.14	-10.96	0.15	-7.42	3.03	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 19.97dBi > 6dBi, so the power density limit shall be reduced to 17-(19.97-6) = 3.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ac (VHT80)

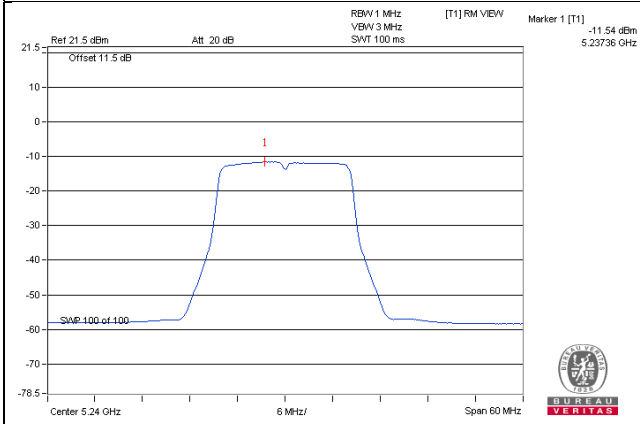
Chan.	Freq. (MHz)	PSD (dBm/MHz)				Duty Factor	Total PSD With Duty Factor (dBm/MHz)	Maximum Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
42	5210	-17.77	-18.05	-18.07	-14.30	0.37	-10.32	3.03	Pass

Note:

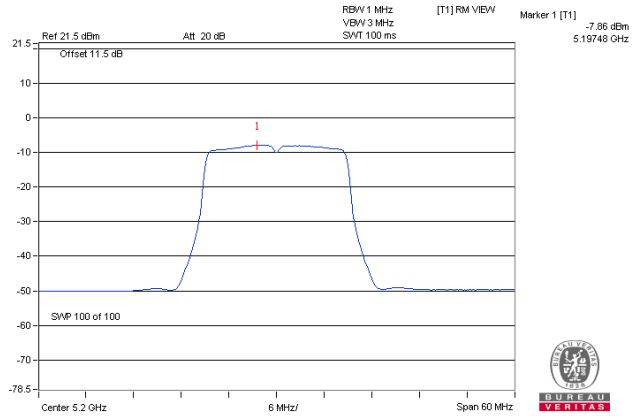
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-1: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$]= 19.97dBi > 6dBi, so the power density limit shall be reduced to 17-(19.97-6) = 3.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

SPECTRUM PLOT OF WORST VALUE

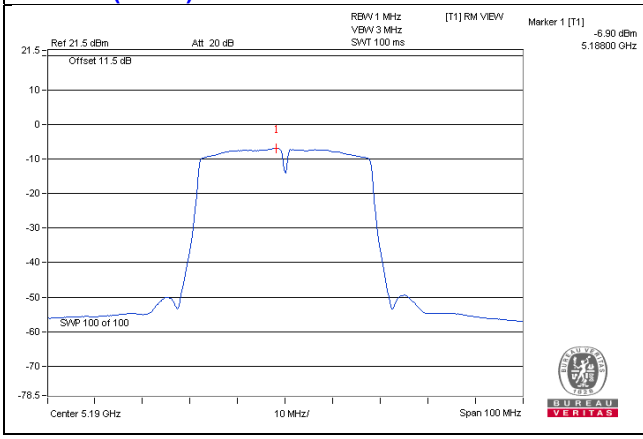
802.11a / CH 48 / Chain 2



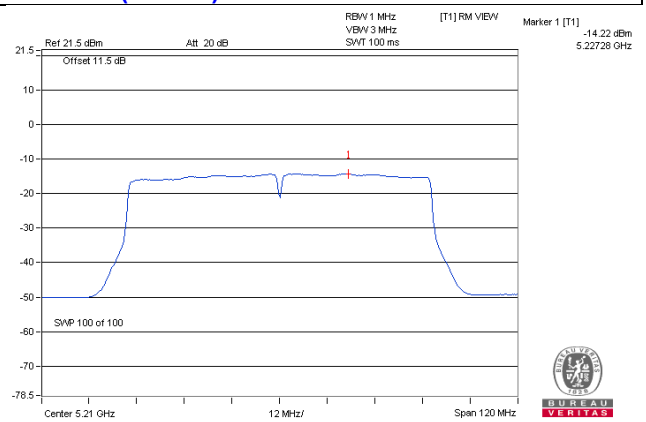
802.11n (HT20) / CH 40 / Chain 3



802.11n (HT40) / CH 38 / Chain 2



802.11ac (VHT80) / CH 42 / Chain 3



For U-NII-3 Band

802.11a

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Duty factor	Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3				
149	5745	-6.64	-6.24	-8.32	-8.09	-4.42	-4.02	-6.10	-5.87	0.18	1.20	16.03	Pass
157	5785	-6.89	-6.31	-8.17	-7.68	-4.67	-4.09	-5.95	-5.46	0.18	1.22	16.03	Pass
165	5825	-7.26	-6.29	-8.38	-7.41	-5.04	-4.07	-6.16	-5.19	0.18	1.15	16.03	Pass

Note:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 19.97dBi > 6dBi, so the power density limit shall be reduced to 30-(19.97-6) = 16.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11n (HT20)

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3			
149	5745	-7.06	-6.65	-8.58	-8.17	-4.84	-4.43	-6.36	-5.95	0.70	16.03	Pass
157	5785	-7.43	-6.96	-8.27	-8.13	-5.21	-4.74	-6.05	-5.91	0.57	16.03	Pass
165	5825	-7.58	-6.80	-8.46	-7.68	-5.36	-4.58	-6.24	-5.46	0.65	16.03	Pass

Note:

1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 19.97dBi > 6dBi, so the power density limit shall be reduced to 30-(19.97-6) = 16.03dBm.

802.11n (HT40)

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Duty factor	Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3				
151	5755	-10.60	-10.15	-11.72	-11.51	-8.38	-7.93	-9.50	-9.29	0.15	-2.56	16.03	Pass
159	5795	-10.80	-10.11	-11.60	-11.51	-8.58	-7.89	-9.38	-9.29	0.15	-2.58	16.03	Pass

Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 19.97dBi > 6dBi, so the power density limit shall be reduced to 30-(19.97-6) = 16.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

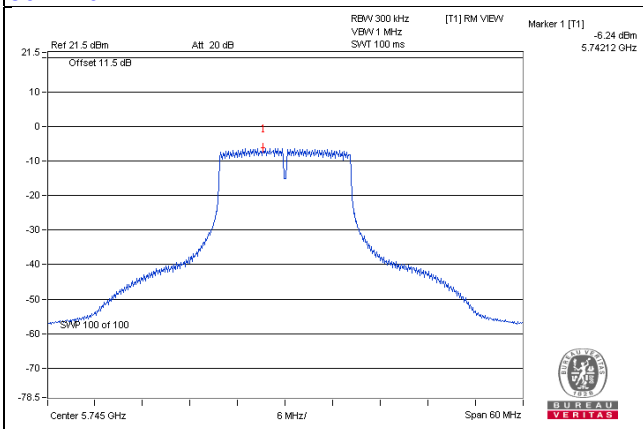
802.11ac (VHT80)

Ch.	Freq. (MHz)	PSD (dBm/300kHz)				PSD (dBm/500kHz)				Duty factor	Total PSD (dBm /500 kHz)	Limit (dBm /500 kHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3				
155	5775	-13.98	-13.39	-15.24	-14.76	-11.76	-11.17	-13.02	-12.54	0.37	-5.67	16.03	Pass

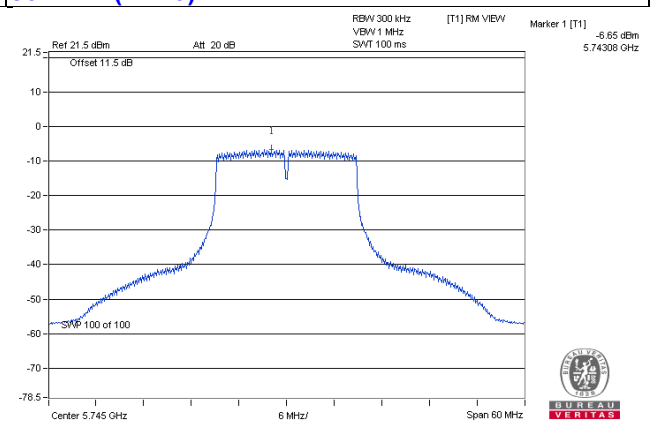
Note:
1. Method 1 of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. For U-NII-3: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/4$] = 19.97dBi > 6dBi, so the power density limit shall be reduced to 30-(19.97-6) = 16.03dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

SPECTRUM PLOT OF WORST VALUE

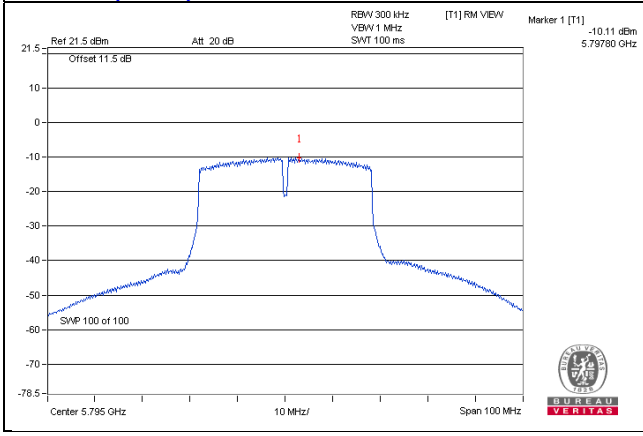
802.11a



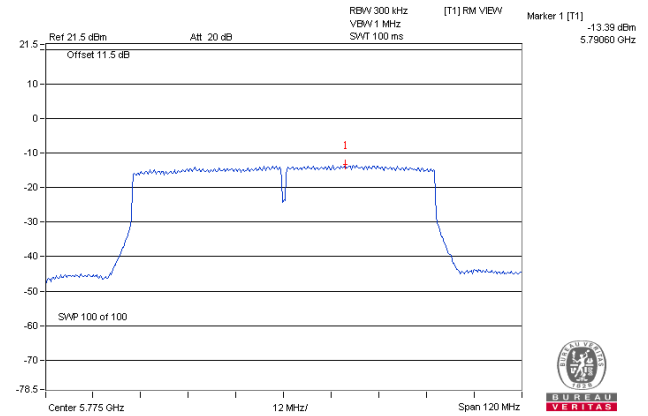
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)

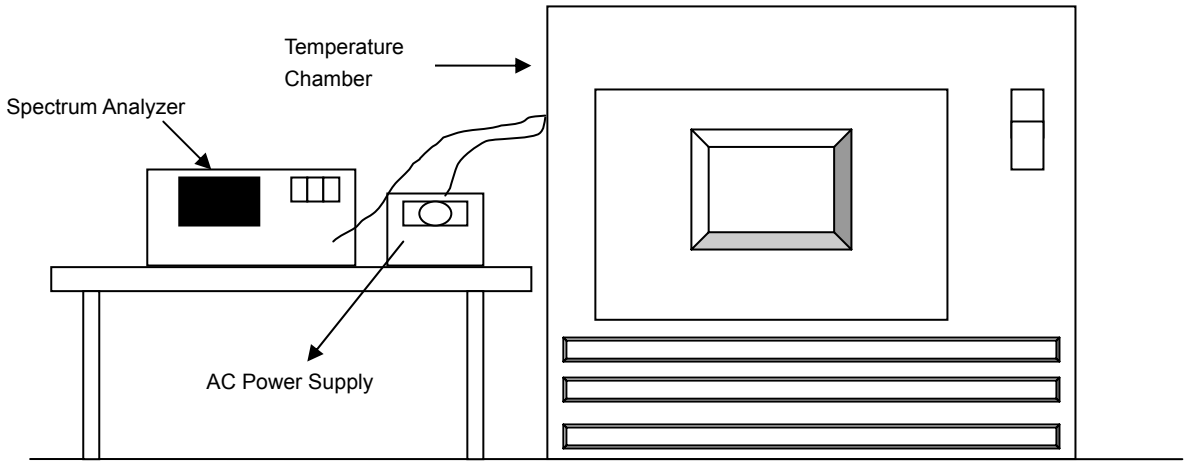


4.6 Frequency Stability

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

Refer to section 4.1.2 to get information of above instrument.

4.6.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal AC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

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

Test Mode A

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
60	120	5180.0092	0.00018	5180.0116	0.00022	5180.0116	0.00022	5180.0141	0.00027
50	120	5179.9986	-0.00003	5180.0000	0.00000	5179.9987	-0.00003	5179.9984	-0.00003
40	120	5179.9767	-0.00045	5179.9763	-0.00046	5179.9775	-0.00043	5179.9752	-0.00048
30	120	5179.9766	-0.00045	5179.9744	-0.00049	5179.9737	-0.00051	5179.9786	-0.00041
20	120	5179.9910	-0.00017	5179.9903	-0.00019	5179.9916	-0.00016	5179.9879	-0.00023
10	120	5179.9897	-0.00020	5179.9890	-0.00021	5179.9860	-0.00027	5179.9889	-0.00021
0	120	5180.0147	0.00028	5180.0143	0.00028	5180.0113	0.00022	5180.0130	0.00025
-10	120	5179.9841	-0.00031	5179.9835	-0.00032	5179.9846	-0.00030	5179.9856	-0.00028
-20	120	5179.9794	-0.00040	5179.9807	-0.00037	5179.9777	-0.00043	5179.9772	-0.00044
-30	120	5180.0139	0.00027	5180.0128	0.00025	5180.0110	0.00021	5180.0111	0.00021
-40	120	5180.0015	0.00003	5180.0021	0.00004	5180.0029	0.00006	5179.9994	-0.00001

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5179.9952	-0.00009	5179.996	-0.00008	5179.9944	-0.00011	5179.9966	-0.00007
	120	5179.9956	-0.00008	5179.9958	-0.00008	5179.9949	-0.00010	5179.9965	-0.00007
	102	5179.9956	-0.00008	5179.9963	-0.00007	5179.9945	-0.00011	5179.9974	-0.00005

Test Mode B

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
60	120	5180.0119	0.00023	5180.0108	0.00021	5180.0103	0.00020	5180.0109	0.00021
50	120	5180.0158	0.00031	5180.0110	0.00021	5180.0135	0.00026	5180.0118	0.00023
40	120	5179.9885	-0.00022	5179.9864	-0.00026	5179.9866	-0.00026	5179.9857	-0.00028
30	120	5179.9946	-0.00010	5179.9946	-0.00010	5179.9913	-0.00017	5179.9938	-0.00012
20	120	5179.9937	-0.00012	5179.9957	-0.00008	5179.9968	-0.00006	5179.9922	-0.00015
10	120	5180.0053	0.00010	5180.0030	0.00006	5180.0034	0.00007	5180.0020	0.00004
0	120	5179.9958	-0.00008	5179.9908	-0.00018	5179.9934	-0.00013	5179.9938	-0.00012
-10	120	5179.9952	-0.00009	5179.9939	-0.00012	5179.9925	-0.00014	5179.9955	-0.00009
-20	120	5180.0210	0.00041	5180.0189	0.00036	5180.0219	0.00042	5180.0220	0.00042
-30	120	5180.0051	0.00010	5180.0020	0.00004	5180.0064	0.00012	5180.0035	0.00007
-40	120	5179.9988	-0.00002	5179.9997	-0.00001	5179.9988	-0.00002	5179.9972	-0.00005

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5180.0231	0.00045	5180.0172	0.00033	5180.0191	0.00037	5180.0175	0.00034
	120	5180.0222	0.00043	5180.0182	0.00035	5180.0189	0.00036	5180.0178	0.00034
	102	5180.0215	0.00042	5180.0176	0.00034	5180.0186	0.00036	5180.0185	0.00036

Test Mode C

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
60	120	5180.0230	0.00044	5180.0203	0.00039	5180.0203	0.00039	5180.0201	0.00039
50	120	5180.0062	0.00012	5180.0041	0.00008	5180.0028	0.00005	5180.0034	0.00007
40	120	5179.9737	-0.00051	5179.9732	-0.00052	5179.9754	-0.00047	5179.9725	-0.00053
30	120	5179.9766	-0.00045	5179.9767	-0.00045	5179.9769	-0.00045	5179.9773	-0.00044
20	120	5179.9999	0.00000	5179.9967	-0.00006	5179.9987	-0.00003	5179.9977	-0.00004
10	120	5180.0172	0.00033	5180.0204	0.00039	5180.0211	0.00041	5180.0190	0.00037
0	120	5180.0176	0.00034	5180.0163	0.00031	5180.0170	0.00033	5180.0150	0.00029
-10	120	5180.0048	0.00009	5180.0061	0.00012	5180.0089	0.00017	5180.0084	0.00016
-20	120	5179.9907	-0.00018	5179.9927	-0.00014	5179.9910	-0.00017	5179.9915	-0.00016
-30	120	5180.0231	0.00045	5180.0227	0.00044	5180.0234	0.00045	5180.0223	0.00043
-40	120	5179.9840	-0.00031	5179.9837	-0.00031	5179.9826	-0.00034	5179.9799	-0.00039

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5180.0099	0.00019	5180.0098	0.00019	5180.0100	0.00019	5180.0093	0.00018
	120	5180.0109	0.00021	5180.0105	0.00020	5180.0105	0.00020	5180.0100	0.00019
	102	5180.0117	0.00023	5180.0108	0.00021	5180.0104	0.00020	5180.0108	0.00021

Test Mode D

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
60	120	5179.9881	-0.00023	5179.9856	-0.00028	5179.9852	-0.00029	5179.9877	-0.00024
50	120	5179.9870	-0.00025	5179.9864	-0.00026	5179.9867	-0.00026	5179.9885	-0.00022
40	120	5179.9847	-0.00030	5179.9878	-0.00024	5179.9872	-0.00025	5179.9886	-0.00022
30	120	5179.9963	-0.00007	5179.9976	-0.00005	5179.9996	-0.00001	5179.9974	-0.00005
20	120	5180.0108	0.00021	5180.0098	0.00019	5180.0118	0.00023	5180.0109	0.00021
10	120	5180.0104	0.00020	5180.0129	0.00025	5180.0120	0.00023	5180.0090	0.00017
0	120	5179.9797	-0.00039	5179.9798	-0.00039	5179.9799	-0.00039	5179.9836	-0.00032
-10	120	5180.0098	0.00019	5180.0097	0.00019	5180.0078	0.00015	5180.0108	0.00021
-20	120	5179.9812	-0.00036	5179.9847	-0.00030	5179.9820	-0.00035	5179.9846	-0.00030
-30	120	5179.9808	-0.00037	5179.9818	-0.00035	5179.9799	-0.00039	5179.9801	-0.00038
-40	120	5179.9784	-0.00042	5179.9780	-0.00042	5179.9741	-0.00050	5179.9759	-0.00047

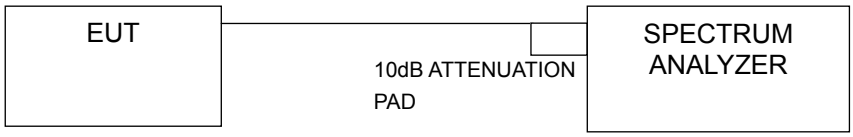
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
20	138	5180.0170	0.00033	5180.0175	0.00034	5180.0186	0.00036	5180.0183	0.00035
	120	5180.0170	0.00033	5180.0168	0.00032	5180.0176	0.00034	5180.0183	0.00035
	102	5180.0168	0.00032	5180.0164	0.00032	5180.0170	0.00033	5180.0174	0.00034

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

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

4.7.5 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

Test Mode A

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	16.37	16.36	16.38	16.38	0.5	Pass
157	5785	16.39	16.37	16.38	16.38	0.5	Pass
165	5825	16.35	16.35	16.33	16.35	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	17.61	17.61	17.60	17.63	0.5	Pass
157	5785	17.63	17.63	17.61	17.63	0.5	Pass
165	5825	17.60	17.62	16.88	17.63	0.5	Pass

802.11n (HT40)

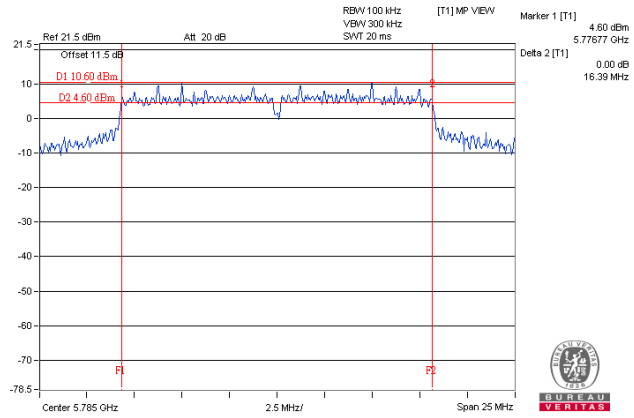
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
151	5755	35.20	35.10	33.86	33.96	0.5	Pass
159	5795	35.44	35.18	33.95	35.15	0.5	Pass

802.11ac (VHT80)

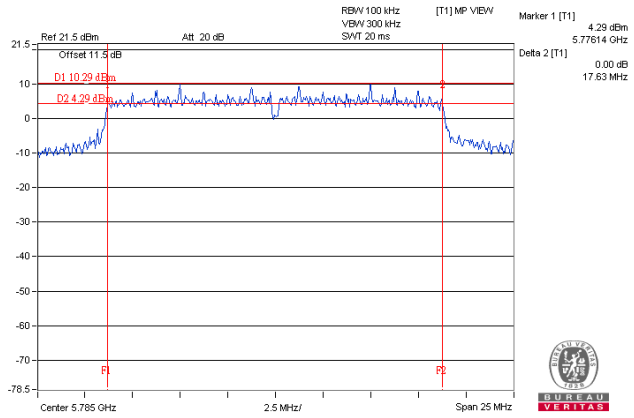
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
155	5775	75.49	75.44	75.29	75.25	0.5	Pass

SPECTRUM PLOT OF WORST VALUE

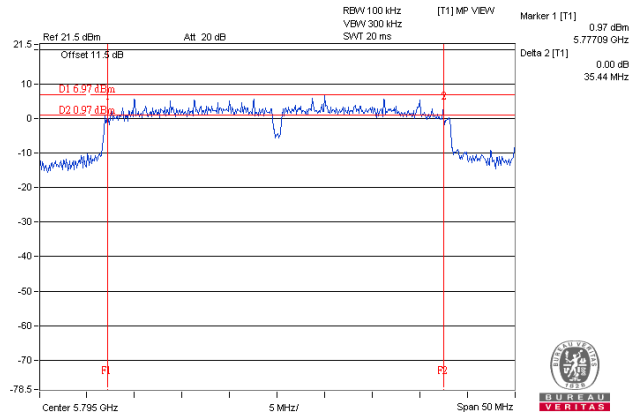
802.11a



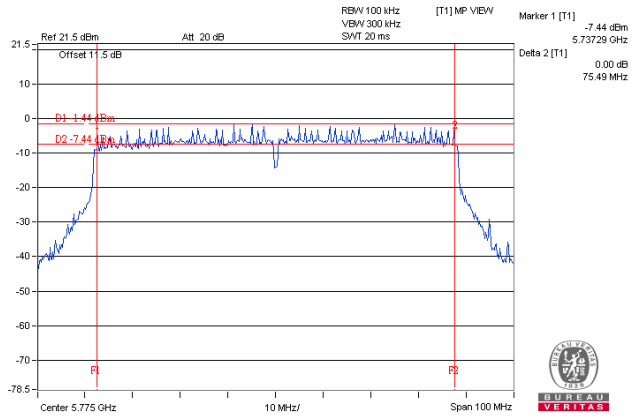
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode B

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	16.37	16.37	16.37	16.41	0.5	Pass
157	5785	16.35	16.38	16.38	16.41	0.5	Pass
165	5825	16.35	16.38	16.34	16.38	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	17.57	17.61	17.58	17.63	0.5	Pass
157	5785	17.61	17.59	17.61	17.62	0.5	Pass
165	5825	17.57	17.61	17.58	17.61	0.5	Pass

802.11n (HT40)

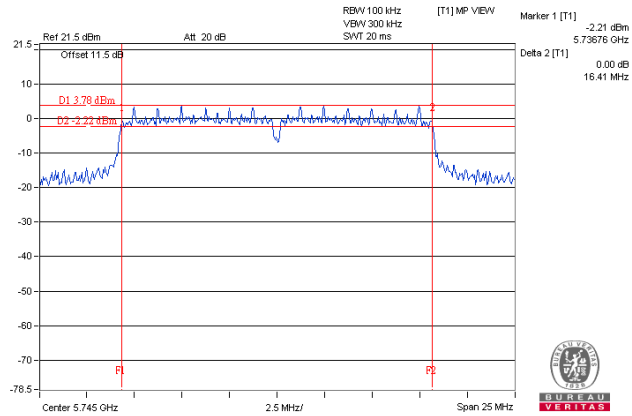
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
151	5755	35.20	35.20	35.17	35.20	0.5	Pass
159	5795	35.18	35.23	35.07	35.20	0.5	Pass

802.11ac (VHT80)

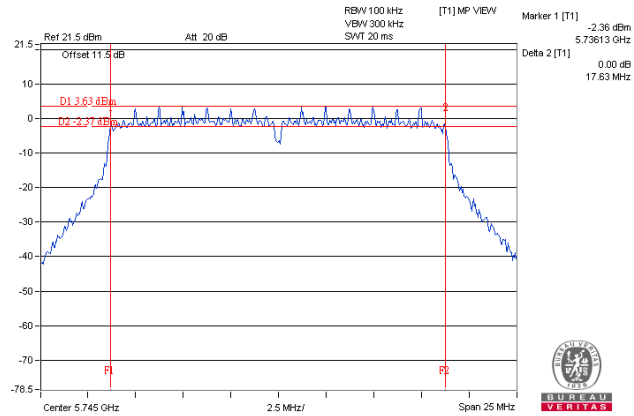
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
155	5775	75.62	75.46	75.45	75.44	0.5	Pass

SPECTRUM PLOT OF WORST VALUE

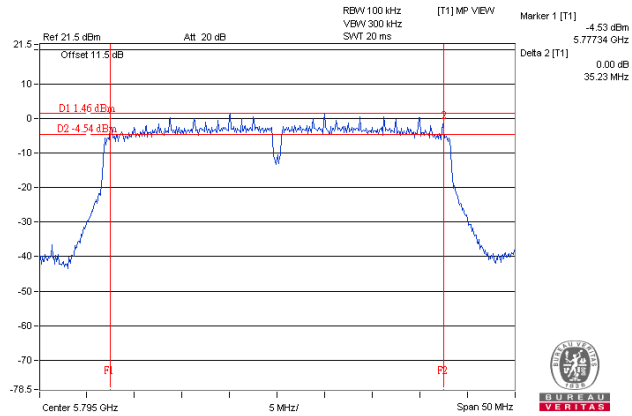
802.11a



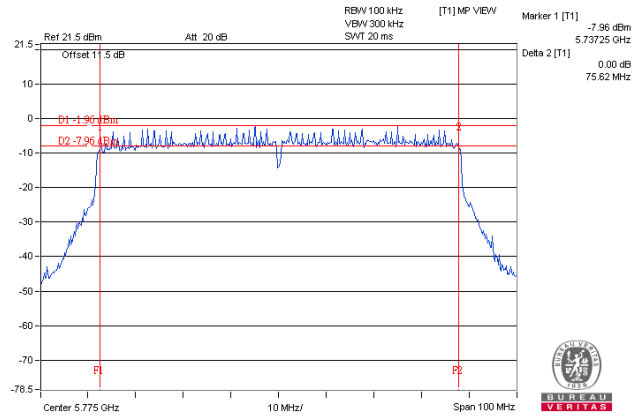
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode C

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	16.37	16.35	16.35	16.36	0.5	Pass
157	5785	16.40	16.41	16.39	16.38	0.5	Pass
165	5825	16.38	16.38	16.36	16.36	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	17.61	17.58	17.62	17.57	0.5	Pass
157	5785	17.61	17.63	17.59	17.59	0.5	Pass
165	5825	17.59	17.62	17.59	17.57	0.5	Pass

802.11n (HT40)

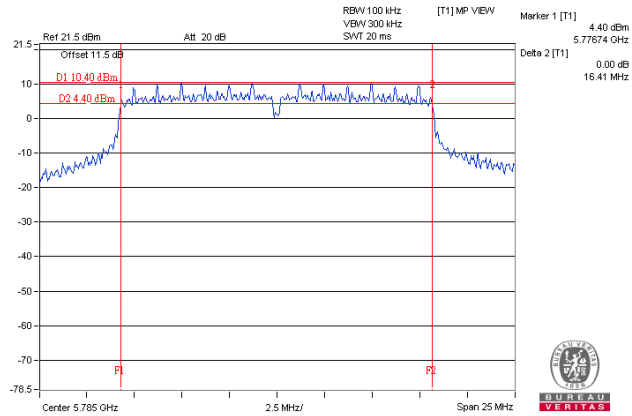
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
151	5755	35.11	35.18	35.24	35.20	0.5	Pass
159	5795	35.20	35.20	35.19	35.19	0.5	Pass

802.11ac (VHT80)

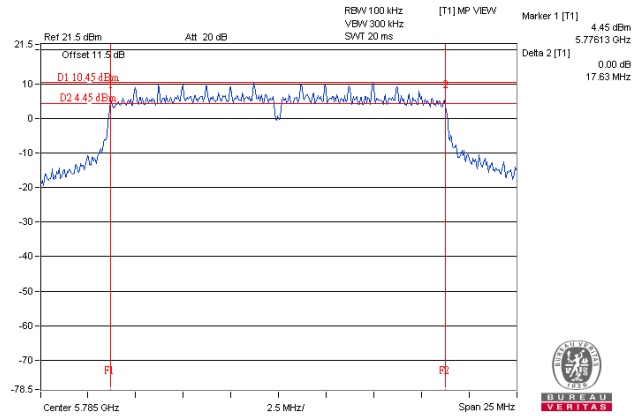
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
155	5775	75.43	75.51	75.49	75.49	0.5	Pass

SPECTRUM PLOT OF WORST VALUE

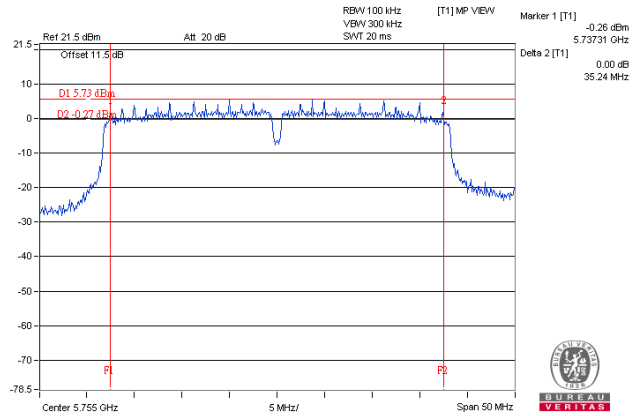
802.11a



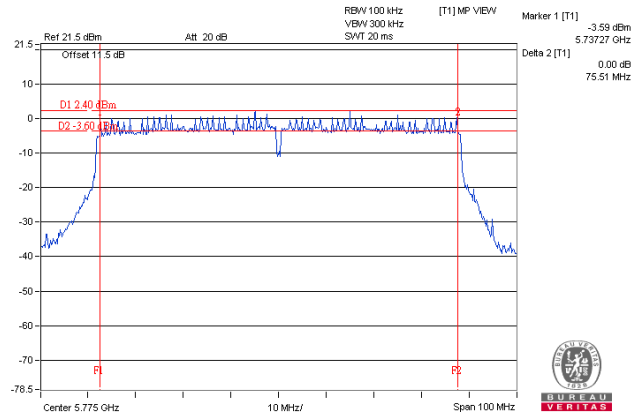
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



Test Mode D

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	16.38	16.37	16.37	16.39	0.5	Pass
157	5785	16.41	16.36	16.36	16.37	0.5	Pass
165	5825	16.37	16.38	16.36	16.31	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
149	5745	17.62	17.61	17.28	17.32	0.5	Pass
157	5785	17.62	17.61	16.97	17.64	0.5	Pass
165	5825	17.61	17.57	17.56	17.21	0.5	Pass

802.11n (HT40)

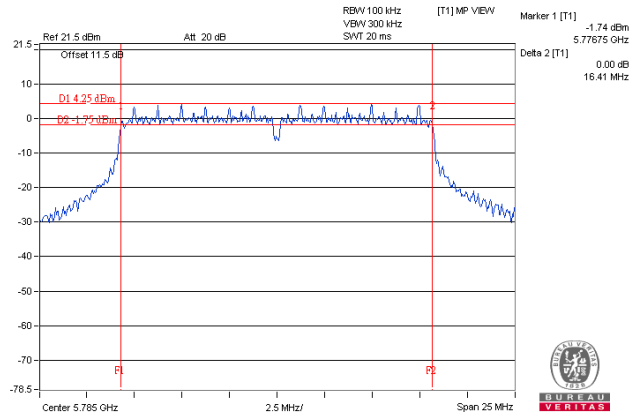
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
151	5755	35.14	35.21	35.19	35.16	0.5	Pass
159	5795	35.18	35.21	35.12	35.13	0.5	Pass

802.11ac (VHT80)

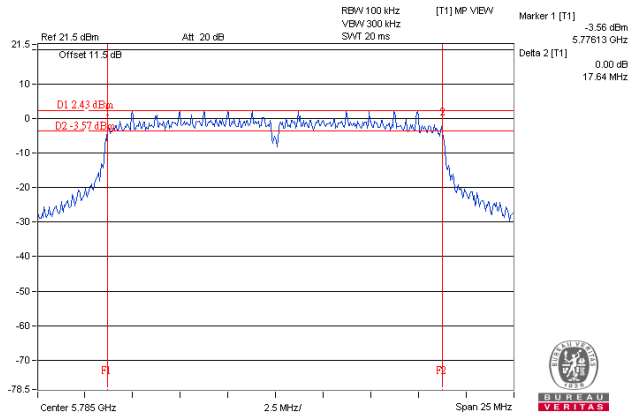
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
155	5775	75.41	75.51	75.52	75.30	0.5	Pass

SPECTRUM PLOT OF WORST VALUE

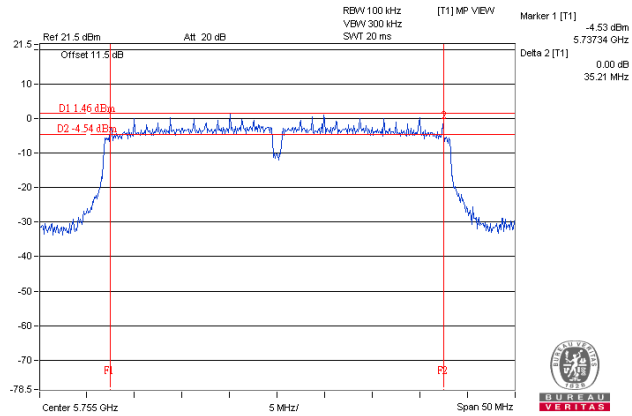
802.11a



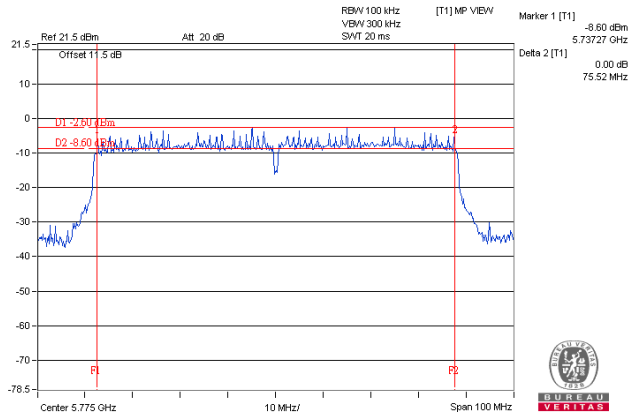
802.11n (HT20)



802.11n (HT40)



802.11ac (VHT80)



5 Pictures of Test Arrangements

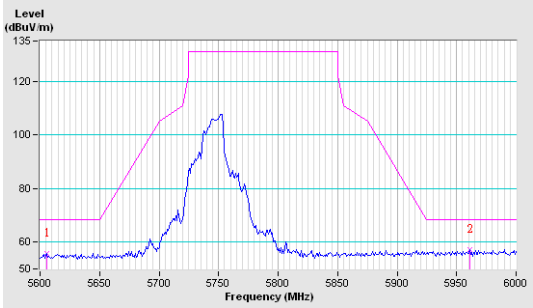
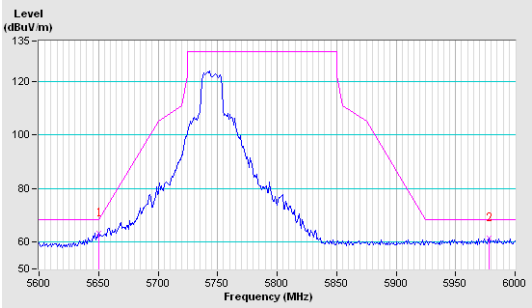
Please refer to the attached file (Test Setup Photo).

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

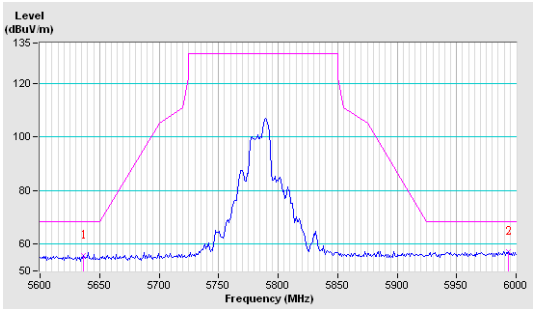
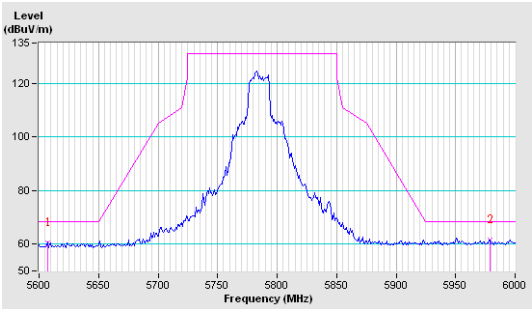
Test Mode A

802.11a

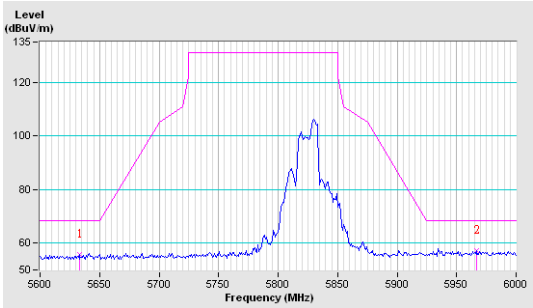
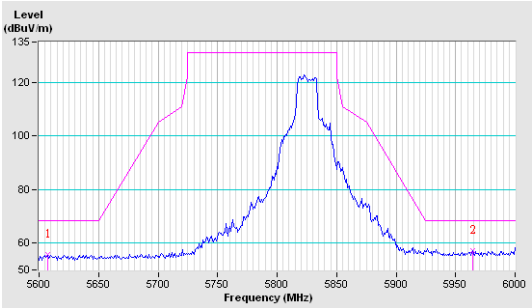
CH149

Horizontal	Vertical
	

CH157

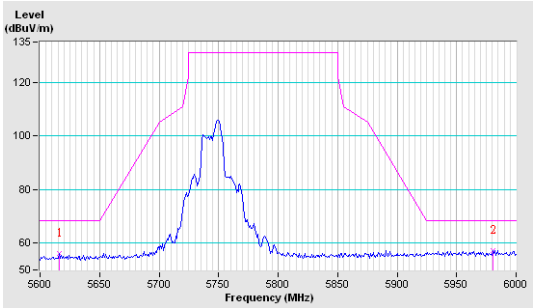
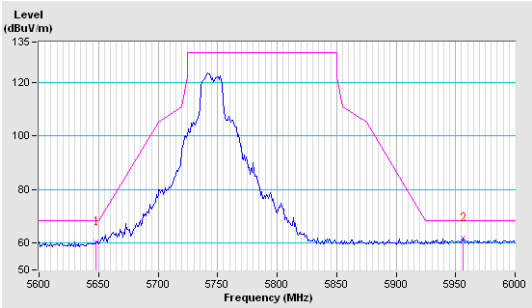
Horizontal	Vertical
	

CH165

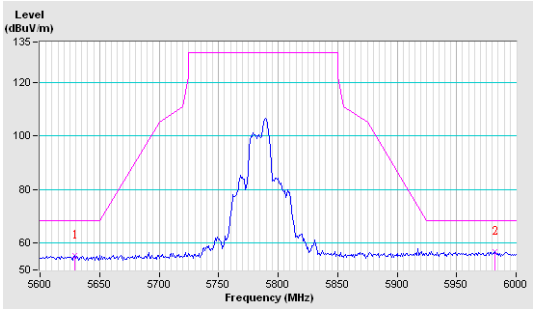
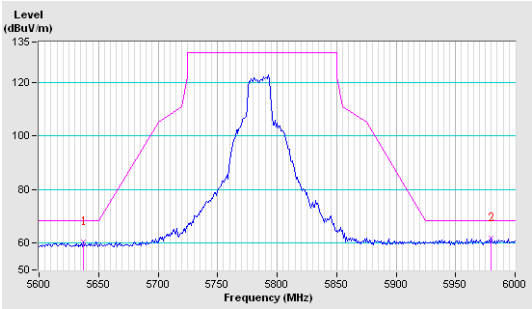
Horizontal	Vertical
	

802.11n (HT20)

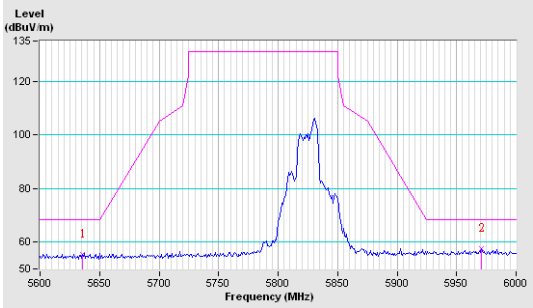
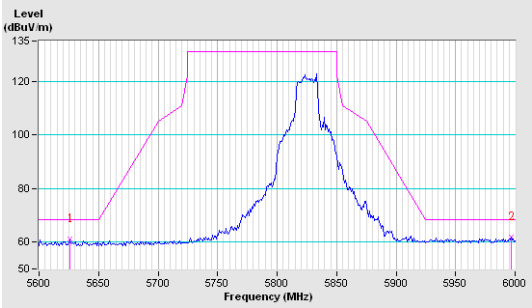
CH149

Horizontal	Vertical
	

CH157

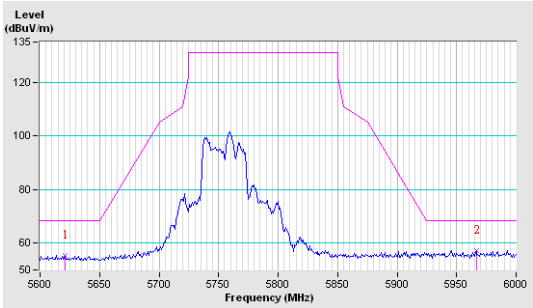
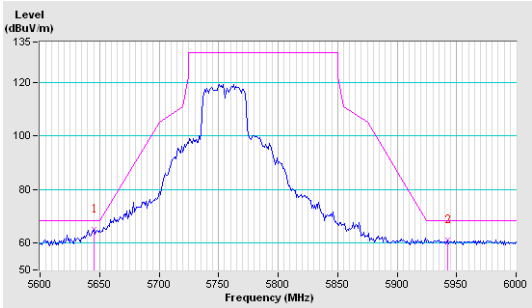
Horizontal	Vertical
	

CH165

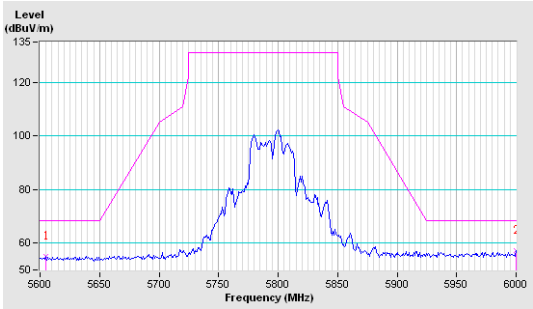
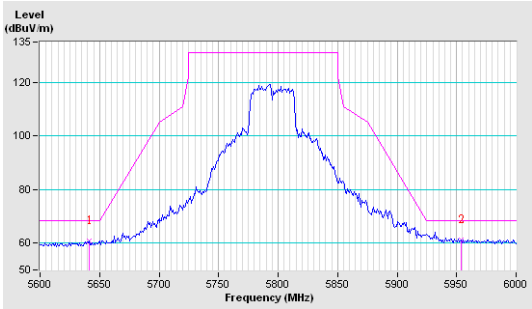
Horizontal	Vertical
	

802.11n (HT40)

CH151

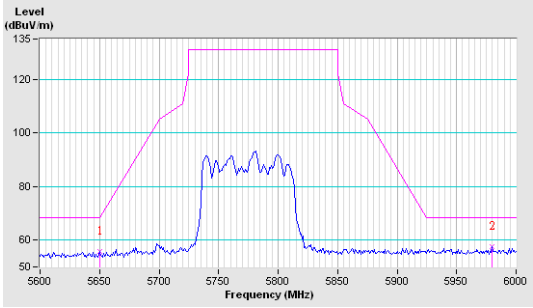
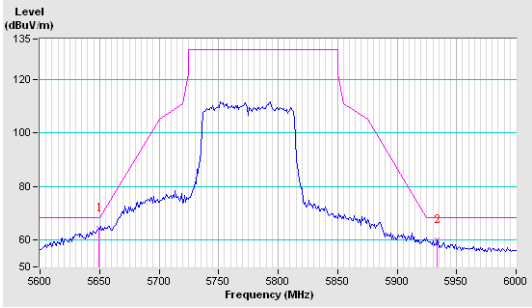
Horizontal	Vertical
	

CH159

Horizontal	Vertical
	

802.11ac (VHT80)

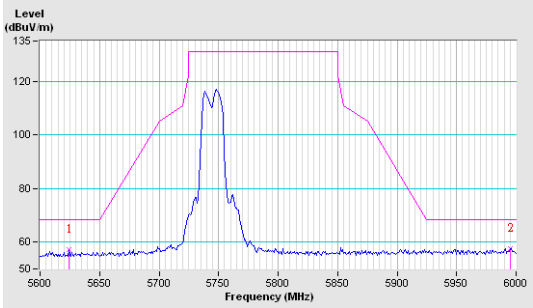
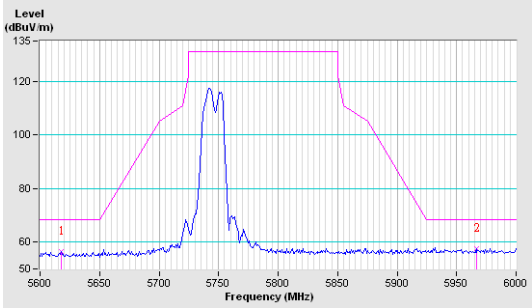
CH155

Horizontal	Vertical
	

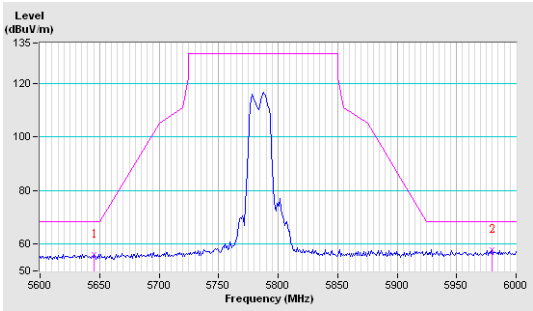
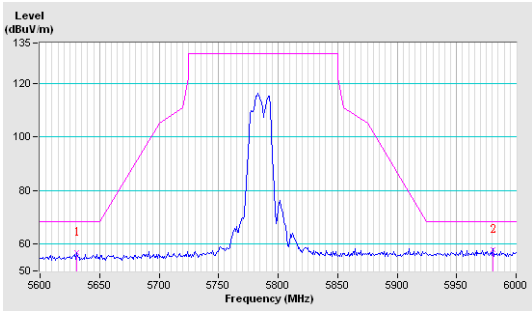
Test Mode B

802.11a

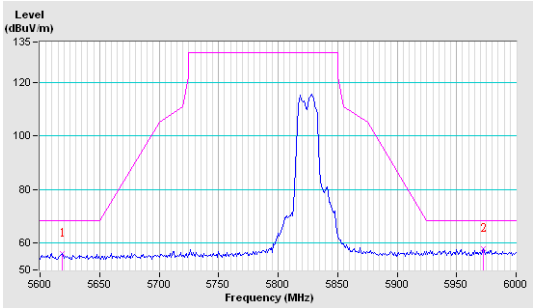
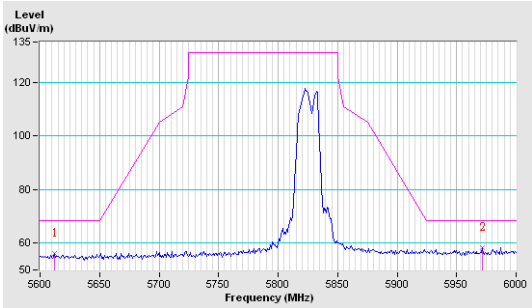
CH149

Horizontal	Vertical
	

CH157

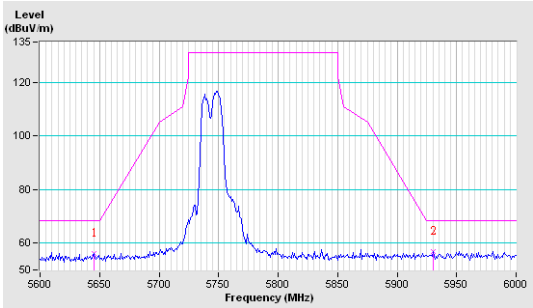
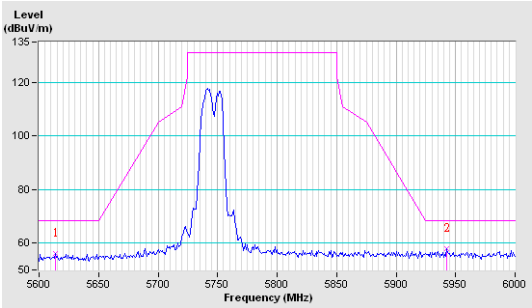
Horizontal	Vertical
	

CH165

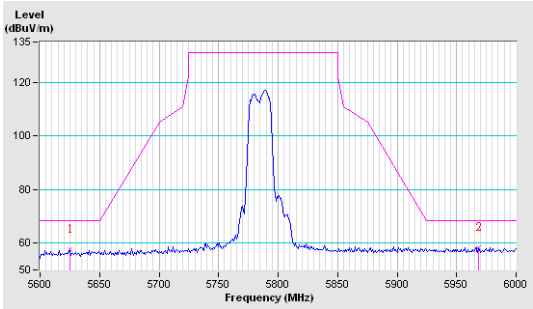
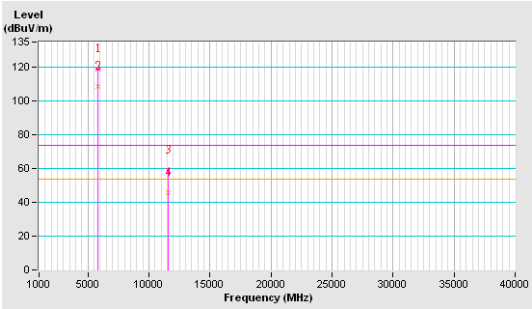
Horizontal	Vertical
	

802.11n (HT20)

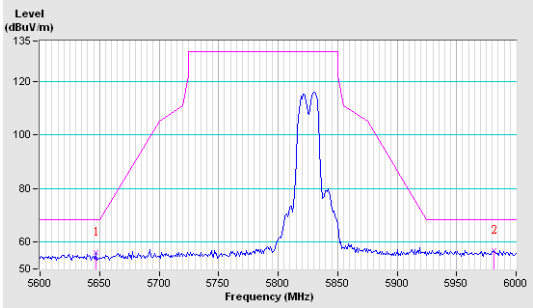
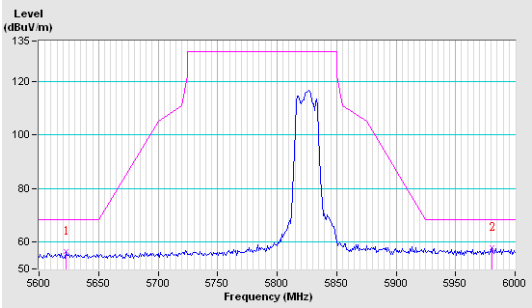
CH149

Horizontal	Vertical
	

CH157

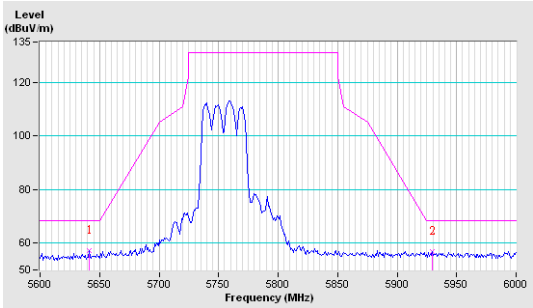
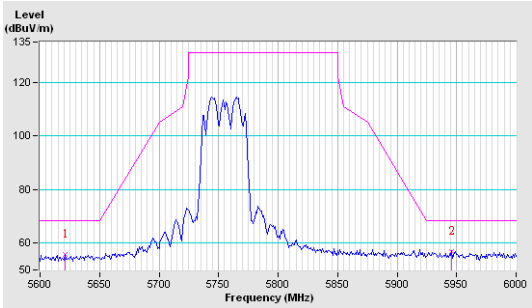
Horizontal	Vertical
	

CH165

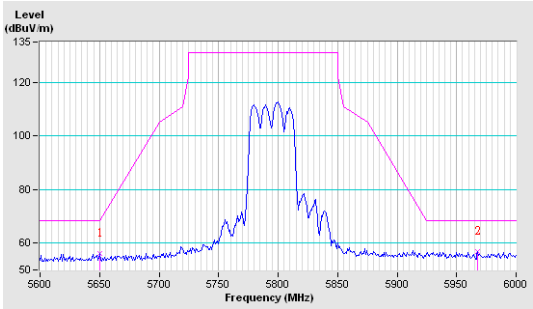
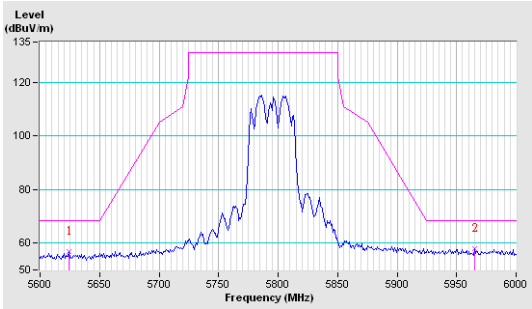
Horizontal	Vertical
	

802.11n (HT40)

CH151

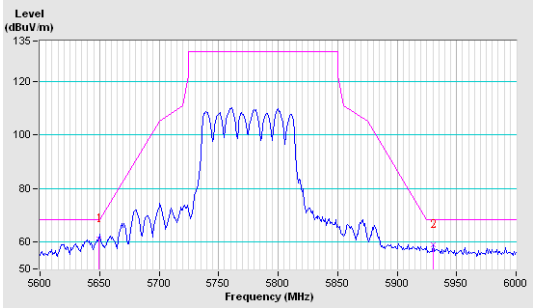
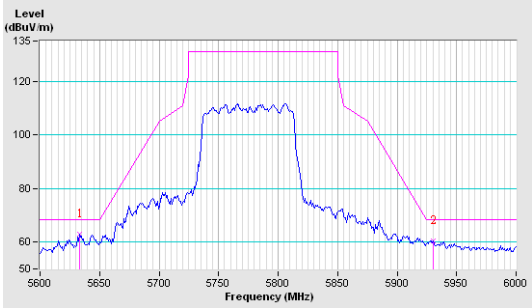
Horizontal	Vertical
	

CH159

Horizontal	Vertical
	

802.11ac (VHT80)

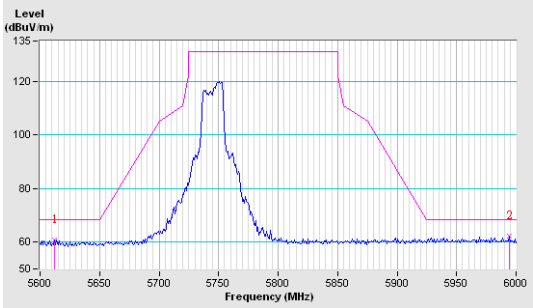
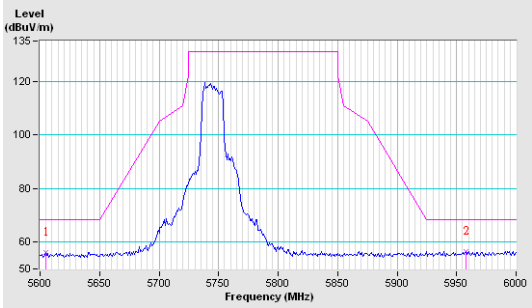
CH155

Horizontal	Vertical
	

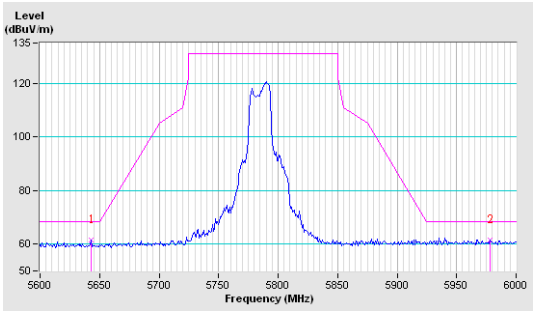
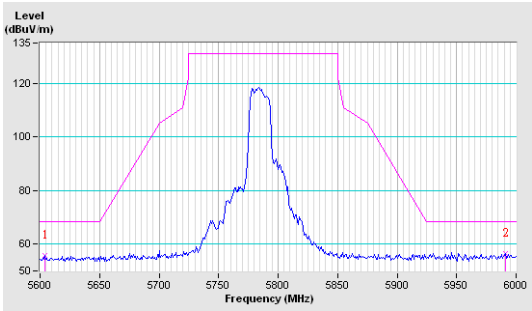
Test Mode C

802.11a

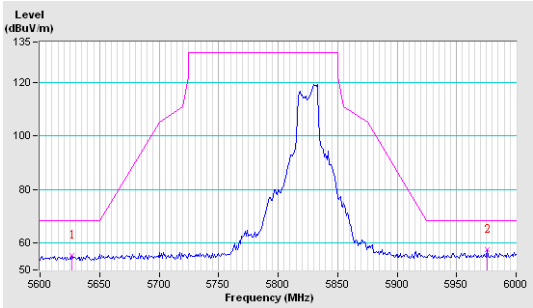
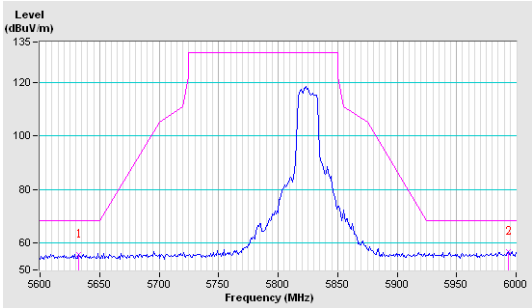
CH149

Horizontal	Vertical
	

CH157

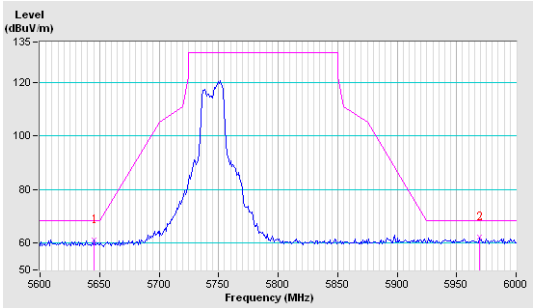
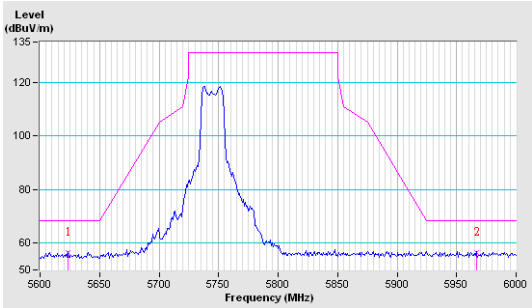
Horizontal	Vertical
	

CH165

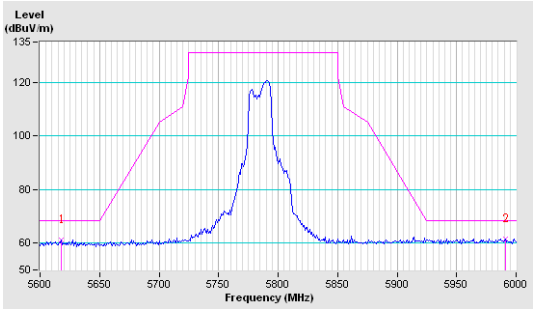
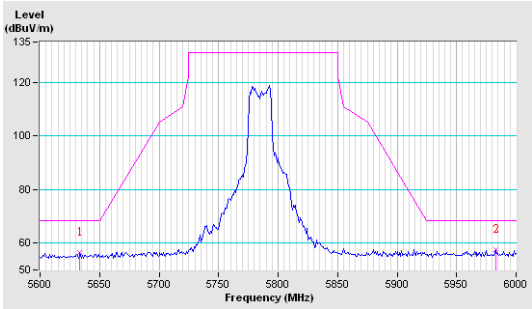
Horizontal	Vertical
	

802.11n (HT20)

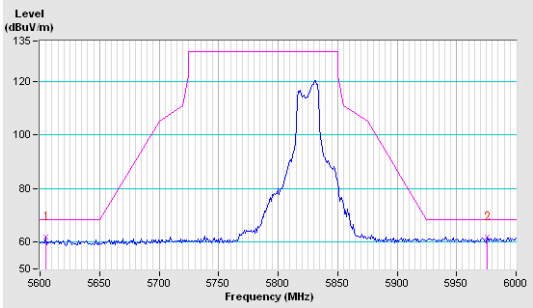
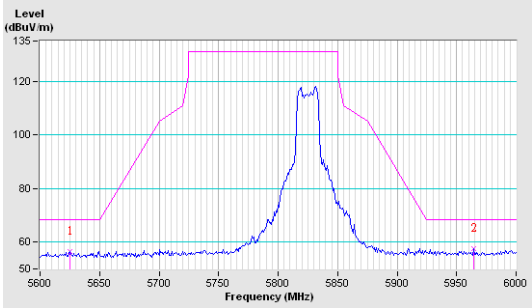
CH149

Horizontal	Vertical
	

CH157

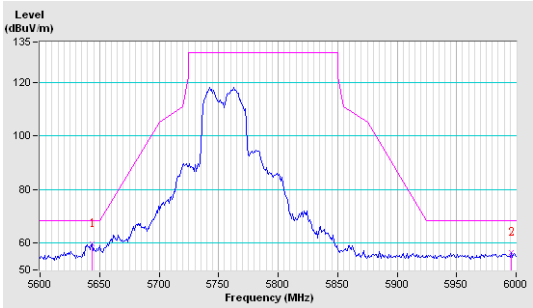
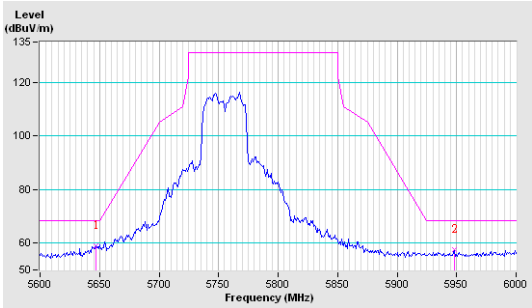
Horizontal	Vertical
	

CH165

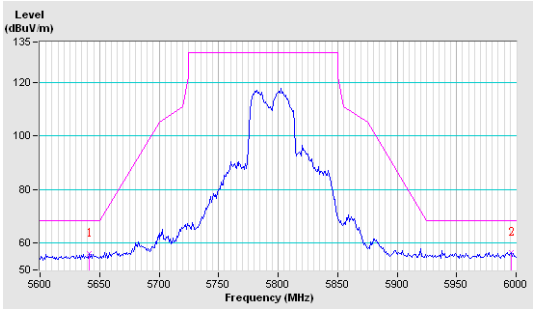
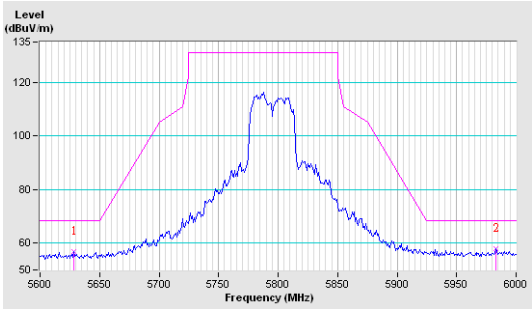
Horizontal	Vertical
	

802.11n (HT40)

CH151

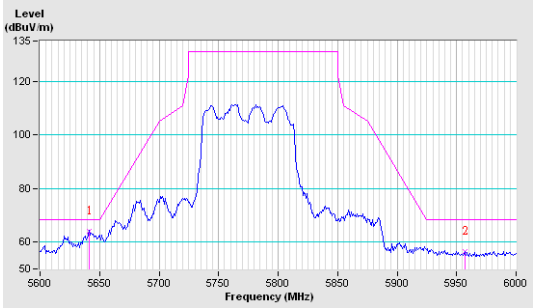
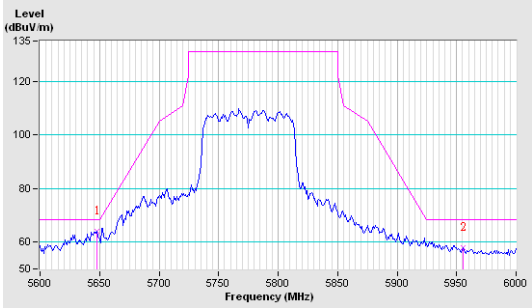
Horizontal	Vertical
	

CH159

Horizontal	Vertical
	

802.11ac (VHT80)

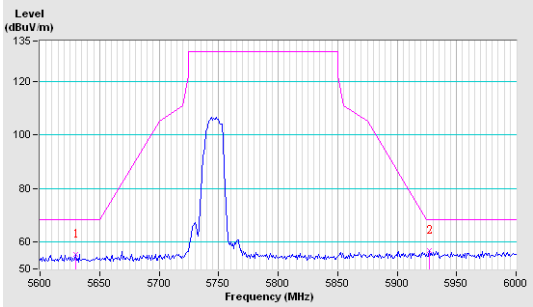
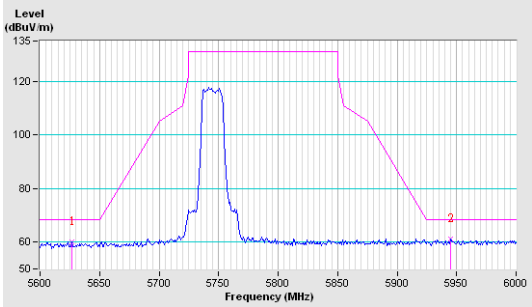
CH155

Horizontal	Vertical
	

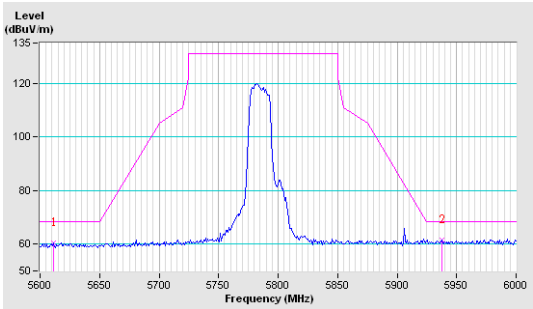
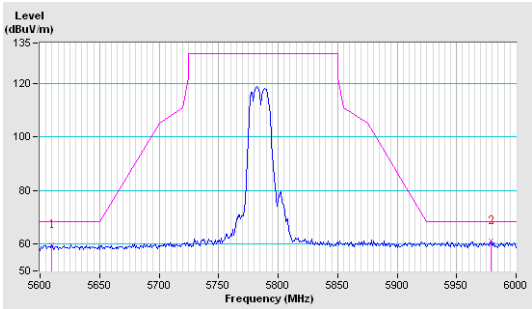
Test Mode D

802.11a

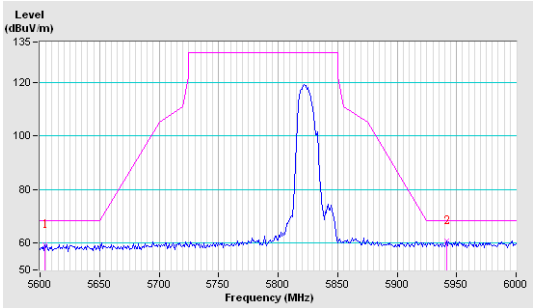
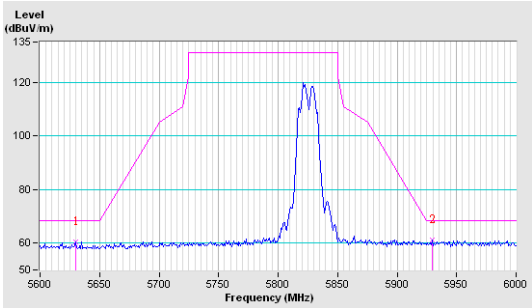
CH149

Horizontal	Vertical
	

CH157

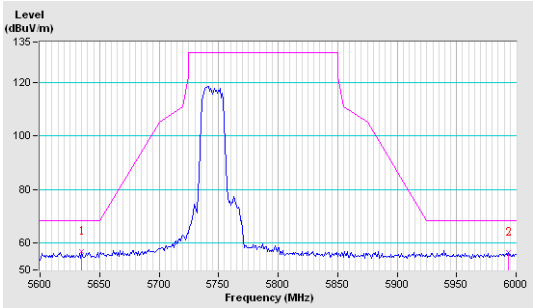
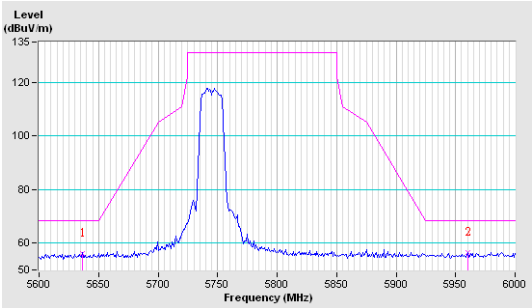
Horizontal	Vertical
	

CH165

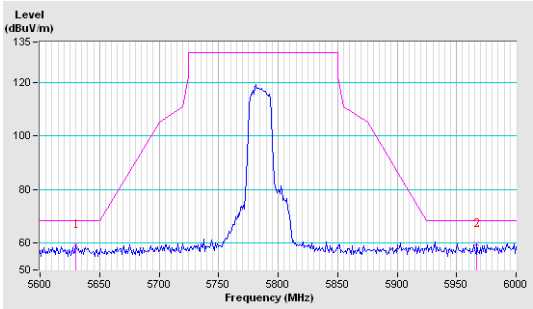
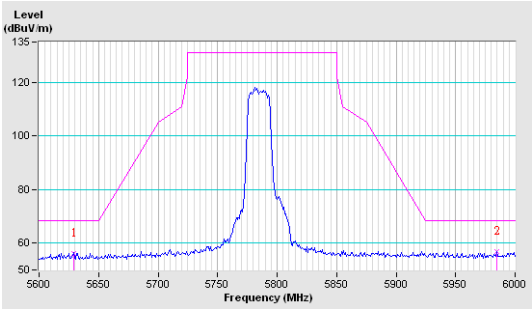
Horizontal	Vertical
	

802.11n (HT20)

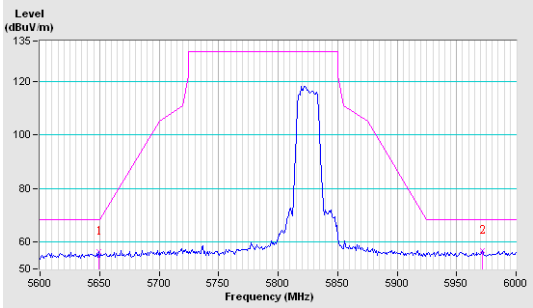
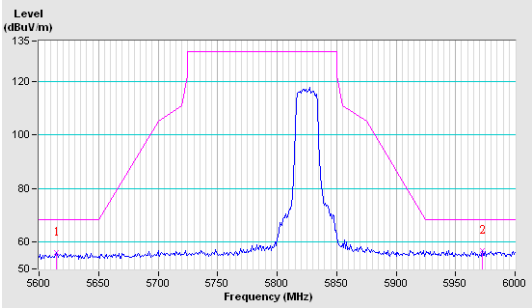
CH149

Horizontal	Vertical
	

CH157

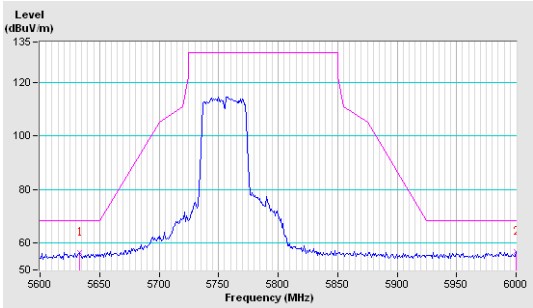
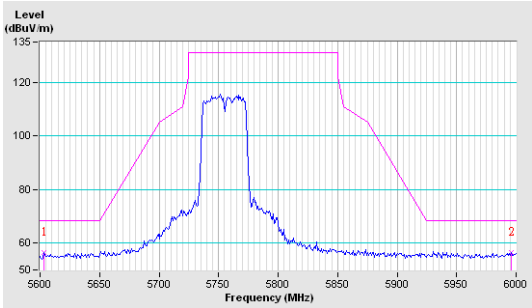
Horizontal	Vertical
	

CH165

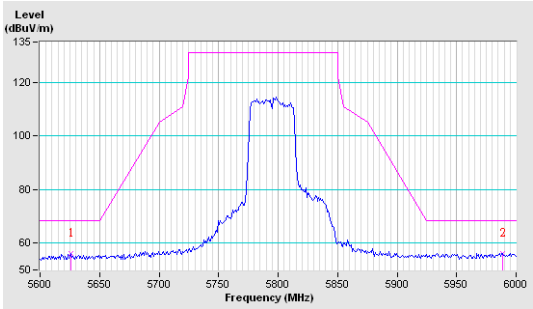
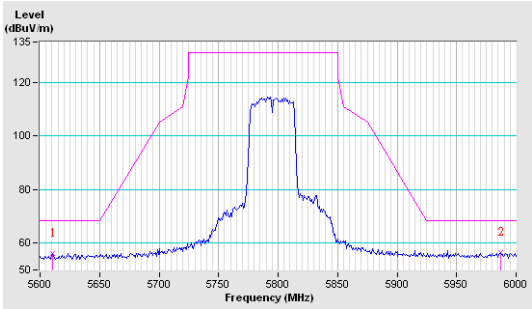
Horizontal	Vertical
	

802.11n (HT40)

CH151

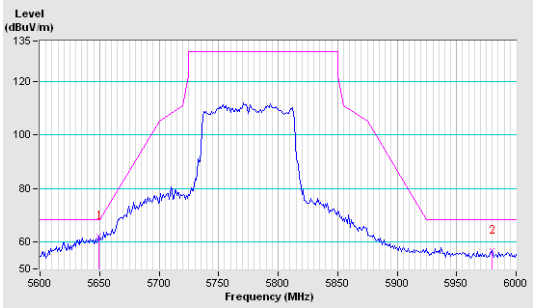
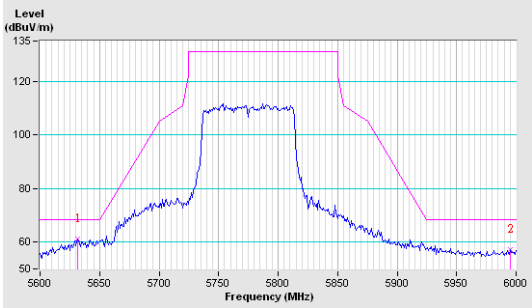
Horizontal	Vertical
	

CH159

Horizontal	Vertical
	

802.11ac (VHT80)

CH155

Horizontal	Vertical
	

Appendix – Information on the Testing Laboratories

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

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

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Web Site: www.bureauveritas-adt.com

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

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