FCC Test Report

Report No.: RFBDYS-WTW-P21040408-1

FCC ID: 2AKCZ-106

Test Model: APL66-106

Received Date: Apr. 20, 2021

Test Date: Apr. 30 ~ Jul. 09, 2021

Issued Date: Oct. 04, 2021

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FCC Registration / Designation Number: 788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
RFBDYS-WTW-P21040408-1	Original Release	Oct. 04, 2021

1 Certificate of Conformity

Product: Wireless Access Point

Brand: SONICWALL

Test Model: APL66-106

Sample Status: Engineering Sample

Applicant: SonicWall Inc.

Test Date: Apr. 30 ~ Jul. 09, 2021

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

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

Prepared by : Pettie Chen , **Date:** Oct. 04, 2021

Pettie Chen / Senior Specialist

Approved by : Bruce Chen , **Date:** Oct. 04, 2021

Bruce Chen / Senior Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(8)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -10.50dB at 0.15000MHz.
15.407(b) (1/2/3/4(i/ii)/8)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.0dB at 5150.00, 5650.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	-	Reference only.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit.
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector are I-PEX not a standard connector.

Note:

1. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOBE test plots were recorded in Annex A.
2. For U-NII-1 band compliance with rule 15.407(b) of the band-edge items, the test plots were recorded in Annex B. Test Procedures refer to report 4.1.3.
3. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Measurement Uncertainty

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

Measurement	Frequency	Expanded Uncertainty (k=2) (±)
Conducted Emissions at mains ports	150kHz ~ 30MHz	2.79 dB
Radiated Emissions up to 1 GHz	9kHz ~ 30MHz	3.04 dB
	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	APL66-106
Sample Status	Engineering sample
Power Supply Rating	12Vdc from Adapter 48~56Vdc from POE
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM 1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDMA
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n (HT20/40): up to 1200Mbps 802.11ac (VHT20/40/80): up to 1600Mbps 802.11ax: up to 4804Mbps
Operating Frequency	5180 ~ 5240MHz, 5745 ~ 5825MHz
Number of Channel	5G traffic radio (Radio 1): 5180 ~ 5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 4 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2 802.11ac (VHT80), 802.11ax (HE80): 1 5745 ~ 5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 5 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 2 802.11ac (VHT80), 802.11ax (HE80): 1 Scanning radio (Radio 3): 5180 ~ 5240MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 4 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1 5745 ~ 5825MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20): 5 802.11n (HT40), 802.11ac (VHT40): 2 802.11ac (VHT80): 1

Output Power	5G traffic radio (Radio 1): CDD Mode: 5180 ~ 5240MHz: 267.066mW 5745 ~ 5825MHz: 932.750mW Beamforming Mode: 5180 ~ 5240MHz: 176.101mW 5745 ~ 5825MHz: 179.605mW Scanning radio (Radio 3): CDD Mode: 5180 ~ 5240MHz: 143.880mW 5745 ~ 5825MHz: 122.462mW
Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	Adapter (Optional)
Cable Supplied	NA

Note:

1. The EUT incorporates a MIMO function. Physically, the EUT provides 8 completed transmitters and 8 receivers.

Radio	Modulation Mode	Beamforming Mode	TX Function
5G traffic radio (Radio 1)	802.11a	Not Support	8TX
	802.11n (HT20)	Support	8TX
	802.11n (HT40)	Support	8TX
	802.11ac (VHT20)	Support	8TX
	802.11ac (VHT40)	Support	8TX
	802.11ac (VHT80)	Support	8TX
	802.11ax (HE20)	Support	8TX
	802.11ax (HE40)	Support	8TX
	802.11ax (HE80)	Support	8TX
Scanning radio (Radio 3)	802.11a	Not Support	1TX
	802.11n (HT20)	Not Support	1TX
	802.11n (HT40)	Not Support	1TX
	802.11ac (VHT20)	Not Support	1TX
	802.11ac (VHT40)	Not Support	1TX
	802.11ac (VHT80)	Not Support	1TX

* The bandwidth and modulation are similar for HT20/HT40 on 802.11n mode and VHT20/VHT40/VHT80 on 802.11ac mode and HE20/HE40/HE80 on 802.11ax mode. Therefore the investigated worst case is the representative mode in test report. (Final test mode refer section 3.2.1)

* For 802.11n, 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 adapter and PoE.

Adapter (Optional)	
Brand	Sunny
Model	SYS1546-3612-T3
Input Power	100-240Vac, 1.5A MAX, 50-60Hz
Output Power	12Vdc, 3.0A
Power cord	Non-shielded AC (0.5m) Non-shielded DC (1.86m) with one core

POE (Support unit only)	
Brand	EnGenius
Model	PNA90BGS-54
Input Power	100-240Vac, 1.5A, 50-60Hz
Output Power	48~56Vdc, 1.7A

3. The following antennas were provided to the EUT.

Antenna Type	PIFA					
Antenna Connector	I-PEX					
Antenna No.	Gain (dBi)					
	2400MHz	2450MHz	2500MHz	5150MHz	5500MHz	5850MHz
2G1 (Ant1)	3.30	3.87	3.32	-	-	-
2G2 (Ant2)	2.89	4.21	4.24	-	-	-
2G3 (Ant3)	4.08	4.54	4.39	-	-	-
2G4 (Ant4)	4.89	4.66	4.06	-	-	-
5G1 (Ant5)	-	-	-	4.29	4.65	4.37
5G2 (Ant5)	-	-	-	4.54	4.28	4.63
5G3 (Ant6)	-	-	-	5.27	5.25	4.87
5G4 (Ant6)	-	-	-	3.75	4.93	4.55
5G5 (Ant7)	-	-	-	3.94	4.15	4.30
5G6 (Ant7)	-	-	-	4.44	3.91	3.68
5G7 (Ant8)	-	-	-	4.74	4.31	4.67
5G8 (Ant8)	-	-	-	4.63	4.12	3.74
Scan (Ant9)	3.96	4.91	4.84	4.85	5.23	5.23
BLE (Ant10)	3.14	4.05	3.80	-	-	-

*The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

4. The simultaneous operation mode was determined by client.

No	Mode
1	2GHz traffic radio (Radio 2) + 5GHz traffic radio (Radio 1) + 5GHz Scanning radio (Radio 3) + BLE
2	5GHz traffic radio (Radio 1) + 2GHz Scanning radio (Radio 3) + BLE

* 5GHz traffic radio (Radio 1) and 5GHz Scanning radio (Radio 3) cannot transmit in the same band at same time.
* 2GHz traffic radio (Radio 2) and 2GHz Scanning radio (Radio 3) cannot transmit at same time.
* Spurious emission of the simultaneous operation has been evaluated and no non-compliance was found.

3.2 Description of Test Modes

For 5180 ~ 5240MHz:

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

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

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
38	5190 MHz	46	5230 MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

Channel	Frequency
42	5210MHz

For 5745 ~ 5825MHz:

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20):

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), 802.11ax (HE40):

Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

1 channel is provided for 802.11ac (VHT80), 802.11ax (HE80):

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 power from adapter
B	-	√	√	-	EUT power from PoE

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

Note:
1. The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane (For Radio 1), Z-plane (For Radio 3)**.
2. For radiated emission (below 1GHz) and power line conducted emission test items chosen the worst maximum power mode.
3. "-" means no effect.

Radiated Emission Test (Above 1GHz):

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0	Radio 1
	802.11ax (HE20)		36 to 48	36, 40, 48	OFDMA	MCS0	
	802.11ax (HE40)		38 to 46	38, 46	OFDMA	MCS0	
	802.11ax (HE80)		42	42	OFDMA	MCS0	
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0	
	802.11ax (HE20)		149 to 165	149, 157, 165	OFDMA	MCS0	
	802.11ax (HE40)		151 to 159	151, 159	OFDMA	MCS0	
	802.11ax (HE80)		155	155	OFDMA	MCS0	
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0	Radio 3
	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	6.5	
	802.11ac (VHT40)		38 to 46	38, 46	OFDM	13.5	
	802.11ac (VHT80)		42	42	OFDM	29.3	
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0	
	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	6.5	
	802.11ac (VHT40)		151 to 159	151, 159	OFDM	13.5	
	802.11ac (VHT80)		155	155	OFDM	29.3	

Radiated Emission Test (Below 1GHz):

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
A, B	802.11ax (HE40)	5745-5825	151 to 159	159	OFDMA	MCS0	Radio 1
A, B	802.11ac (VHT40)	5180-5240	38 to 46	46	OFDM	13.5	Radio 3

Power Line Conducted Emission Test:

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
A, B	802.11ax (HE40)	5745-5825	151 to 159	159	OFDMA	MCS0	Radio 1
A, B	802.11ac (VHT40)	5180-5240	38 to 46	46	OFDM	13.5	Radio 3

Transmit Power Measurement:

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

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0	Radio 1
	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	6.5	
	802.11ac (VHT40)		38 to 46	38, 46	OFDM	13.5	
	802.11ac (VHT80)		42	42	OFDM	29.3	
	802.11ax (HE20)		36 to 48	36, 40, 48	OFDMA	MCS0	
	802.11ax (HE40)		38 to 46	38, 46	OFDMA	MCS0	
	802.11ax (HE80)		42	42	OFDMA	MCS0	
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0	
	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	6.5	
	802.11ac (VHT40)		151 to 159	151, 159	OFDM	13.5	
	802.11ac (VHT80)		155	155	OFDM	29.3	
	802.11ax (HE20)		149 to 165	149, 157, 165	OFDMA	MCS0	
	802.11ax (HE40)		151 to 159	151, 159	OFDMA	MCS0	
	802.11ax (HE80)		155	155	OFDMA	MCS0	

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0	Radio 3
	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	6.5	
	802.11ac (VHT40)		38 to 46	38, 46	OFDM	13.5	
	802.11ac (VHT80)		42	42	OFDM	29.3	
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0	
	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	6.5	
	802.11ac (VHT40)		151 to 159	151, 159	OFDM	13.5	
	802.11ac (VHT80)		155	155	OFDM	29.3	

Bandwidth, Power Spectral Density and Frequency Stability Measurement:

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

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

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0	Radio 1
	802.11ax (HE20)		36 to 48	36, 40, 48	OFDMA	MCS0	
	802.11ax (HE40)		38 to 46	38, 46	OFDMA	MCS0	
	802.11ax (HE80)		42	42	OFDMA	MCS0	
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0	
	802.11ax (HE20)		149 to 165	149, 157, 165	OFDMA	MCS0	
	802.11ax (HE40)		151 to 159	151, 159	OFDMA	MCS0	
	802.11ax (HE80)		155	155	OFDMA	MCS0	
A	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0	Radio 3
	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	6.5	
	802.11ac (VHT40)		38 to 46	38, 46	OFDM	13.5	
	802.11ac (VHT80)		42	42	OFDM	29.3	
A	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0	
	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	6.5	
	802.11ac (VHT40)		151 to 159	151, 159	OFDM	13.5	
	802.11ac (VHT80)		155	155	OFDM	29.3	

Test Condition:

Applicable to	Environmental Conditions	Input Power (System)	Tested by
RE≥1G	23 deg. C, 69% RH	120Vac, 60Hz	Edison Lee, Adair Peng
RE<1G	23 deg. C, 67% RH	120Vac, 60Hz 56Vdc	Adair Peng
PLC	24 deg. C, 69% RH	120Vac, 60Hz 56Vdc	Adair Peng
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Jisyong Wang

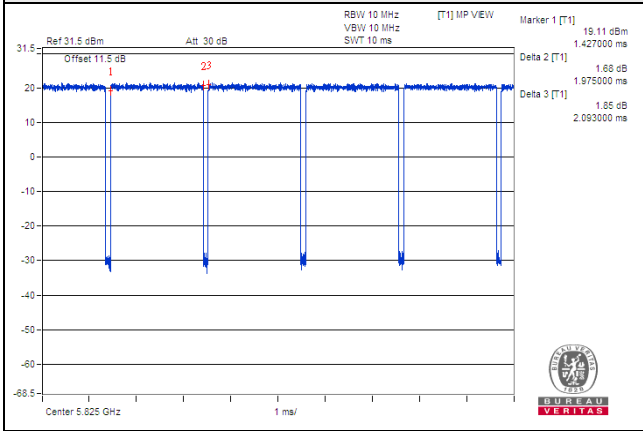
3.3 Duty Cycle of Test Signal

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

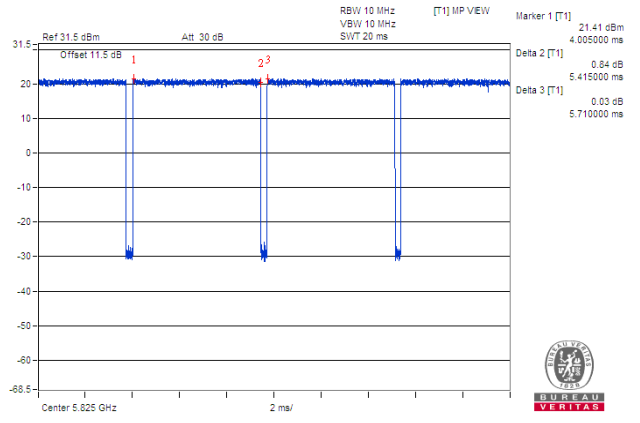
5G traffic radio (Radio 1)

802.11a: Duty cycle = 1.975/2.093 = 0.944, Duty factor = 10 * log (1/0.944) = 0.25
802.11ax (HE20): Duty cycle = 5.415/5.71 = 0.948, Duty factor = 10 * log (1/0.948) = 0.23
802.11ax (HE40): Duty cycle = 5.44/5.74 = 0.948, Duty factor = 10 * log (1/0.948) = 0.23
802.11ax (HE80): Duty cycle = 5.435/5.69 = 0.955, Duty factor = 10 * log (1/0.955) = 0.20

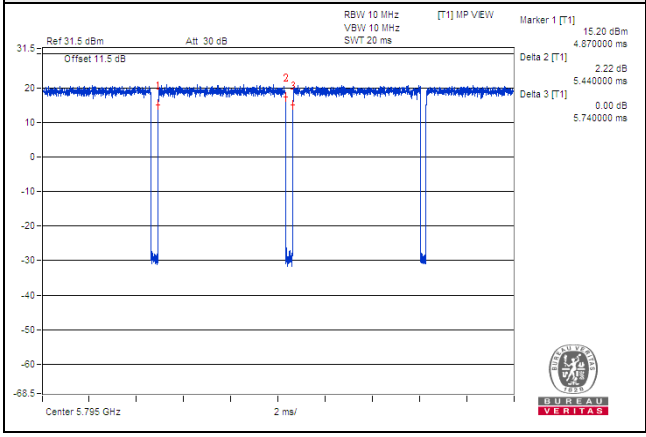
802.11a



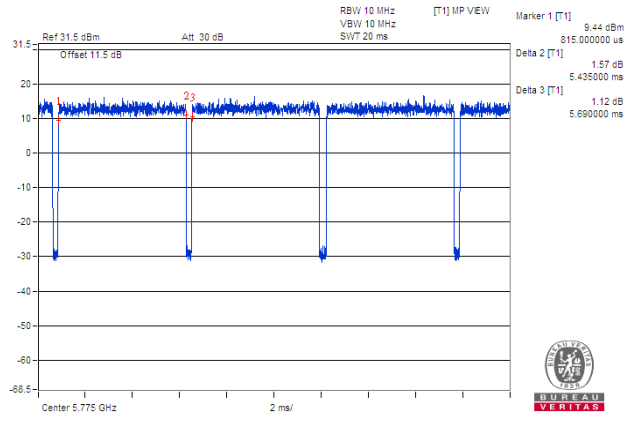
802.11ax (HE20)



802.11ax (HE40)



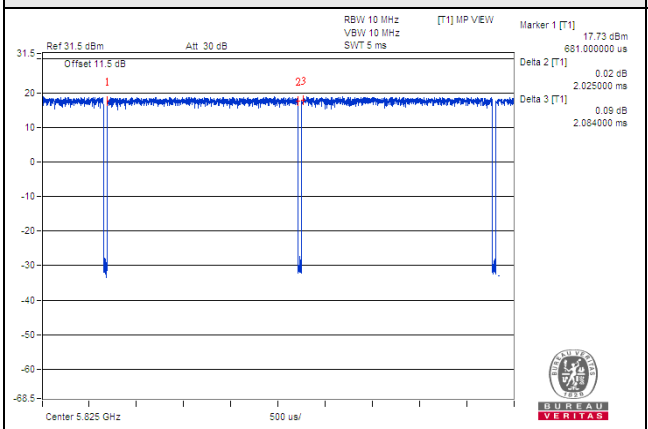
802.11ax (HE80)



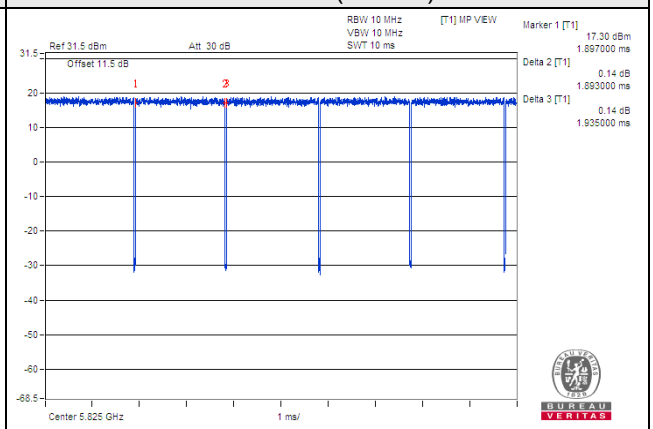
Scanning radio (Radio 3)

802.11a: Duty cycle = 2.025/2.084 = 0.972, Duty factor = 10 * log (1/0.972) = 0.12
802.11ac (VHT20): Duty cycle = 1.893/1.935 = 0.978, Duty factor = 10 * log (1/0.978) = 0.10
802.11ac (VHT40): Duty cycle = 0.935/0.974 = 0.96, Duty factor = 10 * log (1/0.96) = 0.18
802.11ac (VHT80): Duty cycle = 0.454/0.498 = 0.912, Duty factor = 10 * log (1/0.912) = 0.40

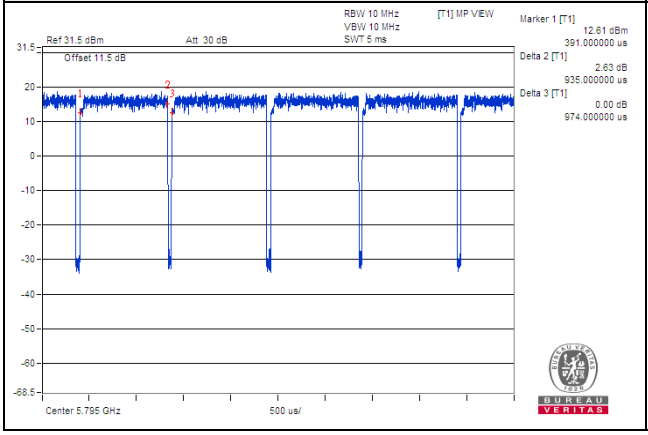
802.11a



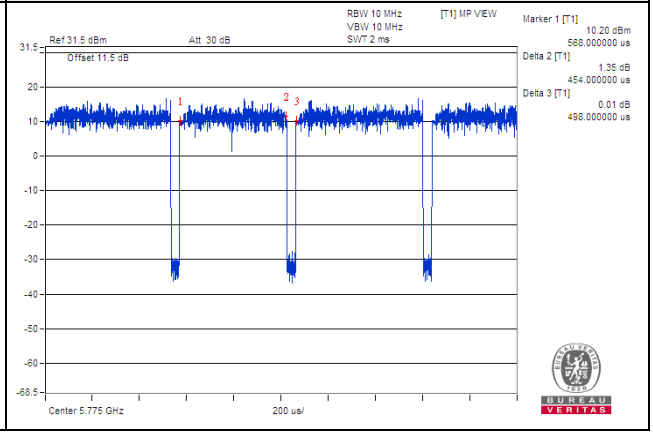
802.11ac (VHT20)



802.11ac (VHT40)



802.11ac (VHT80)



3.4 Description of Support Units

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

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	-
B.	Adapter	Sunny	SYS1546-3612-T3	NA	NA	Provided by client (Optional)
C.	802.3AT/ AF GIGABIT SINGLE PORT PoE INJECTOR	EnGenius	PNA90BGS-54	NA	NA	Provided by client
D.	Flash	HP	v250W	NA	NA	-

Note:

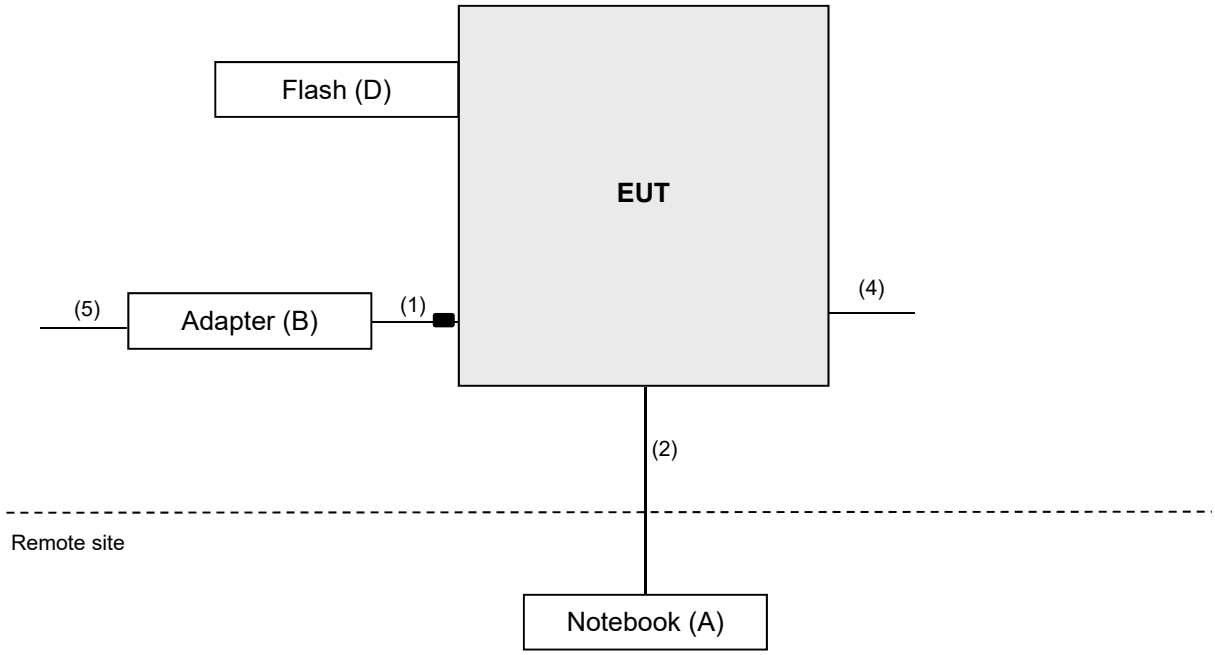
1. All power cords of the above support units are non-shielded (1.8m).
2. Items A acted as communication partner to transfer data.

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	DC Power cable	1	1.86	N	1	Provided by client
2.	LAN cable	1	7.0	N	0	RJ45, Cat5e
3.	LAN cable	1	1.5	N	0	RJ45, Cat5e
4.	Console cable	1	1.5	N	0	Provided by labs
5.	AC Power cable	1	0.5	N	0	Provided by client (Optional) (Brand: KING-CORD, Model: KC-001)
6.	AC Power cable	1	0.6	N	0	Provided by client (Brand: I-SHENG, Model: SP-305B)

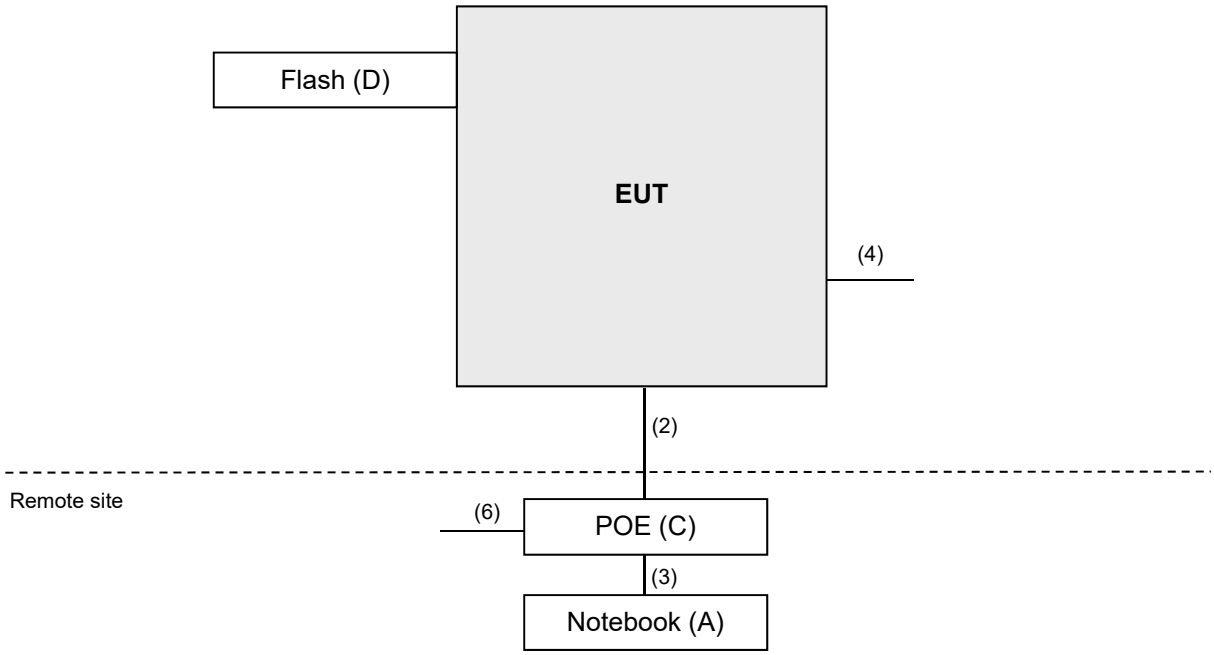
Note: The core(s) is(are) originally attached to the cable(s).

3.4.1 Configuration of System under Test

Test Mode A



Test Mode B



3.5 General Description of Applied Standards and References

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

Test standard:
FCC Part 15, Subpart E (15.407)
ANSI C63.10:2013

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

References Test Guidance:
KDB 789033 D02 General UNII Test Procedure New Rules v02r01
KDB 662911 D01 Multiple Transmitter Output v02r01

All test items have been performed as a reference to the above KDB test guidance.

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

<table>
<tr><th colspan="3">Applicable To</th><th colspan="2">Limit</th></tr>
<tr><td colspan="3" rowspan="2">789033 D02 General UNII Test Procedure New Rules v02r01</td><td colspan="2">Field Strength at 3m</td></tr>
<tr><td>PK: 74 (dBμV/m)</td><td>AV: 54 (dBμV/m)</td></tr>
<tr><td>Frequency Band</td><td colspan="2">Applicable To</td><td>EIRP Limit</td><td>Equivalent Field Strength at 3m</td></tr>
<tr><td>5150~5250 MHz</td><td colspan="2">15.407(b)(1)</td><td rowspan="3">PK: -27 (dBm/MHz)</td><td rowspan="3">PK: 68.2(dBμV/m)</td></tr>
<tr><td>5250~5350 MHz</td><td colspan="2">15.407(b)(2)</td></tr>
<tr><td>5470~5725 MHz</td><td colspan="2">15.407(b)(3)</td></tr>
<tr><td>5725~5850 MHz</td><td>☒</td><td>15.407(b)(4)(i)</td><td>PK: -27 (dBm/MHz) *1
PK: 10 (dBm/MHz) *2
PK: 15.6 (dBm/MHz) *3
PK: 27 (dBm/MHz) *4</td><td>PK: 68.2(dBμV/m) *1
PK: 105.2 (dBμV/m) *2
PK: 110.8(dBμV/m) *3
PK: 122.2 (dBμV/m) *4</td></tr>
<tr><td colspan="5">*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.</td></tr>
</table>

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

$$E = \frac{1000000\ \sqrt{30\,P}}{3}$$ 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	ESR3	102579	Jul. 07, 2020	Jul. 06, 2021
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100269	Jun. 09, 2020	Jun. 08, 2021
			Jun. 07, 2021	Jun. 06, 2022
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Nov. 04, 2020	Nov. 03, 2021
HORN Antenna SCHWARZBECK	9120D	209	Nov. 22, 2020	Nov. 21, 2021
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 22, 2020	Nov. 21, 2021
Loop Antenna EMCI	EM-6879	269	Sep. 17, 2020	Sep. 16, 2021
Loop Antenna TESEQ	HLA 6121	45745	Jul. 06, 2020	Jul. 05, 2021
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	Aug. 16, 2020	Aug. 15, 2021
Preamplifier Agilent (Above 1GHz)	8449B	3008A02465	Mar. 22, 2021	Mar. 21, 2022
RF Coaxial Cable WOKEN With 5dB PAD	8D-FB	Cable-CH3-01	Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 16, 2020	Aug. 15, 2021
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM- SM-8000	Cable-CH3-03 (309224+170907)	Aug. 16, 2020	Aug. 15, 2021
Software BV ADT	ADT_Radiated_ V7.6.15.9.5	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
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA
Pre-amplifier (18GHz-40GHz) EMC	EMC184045B	980175	Sep. 04, 2020	Sep. 03, 2021
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY5519 0004/MY55190007/MY 55210005	Jul. 13, 2020	Jul. 12, 2021

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.

4.1.3 Test Procedures

For Radiated emission below 30MHz

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

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

c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.

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

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

Note:

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

For Radiated emission above 30MHz

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

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

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

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

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

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

Note:

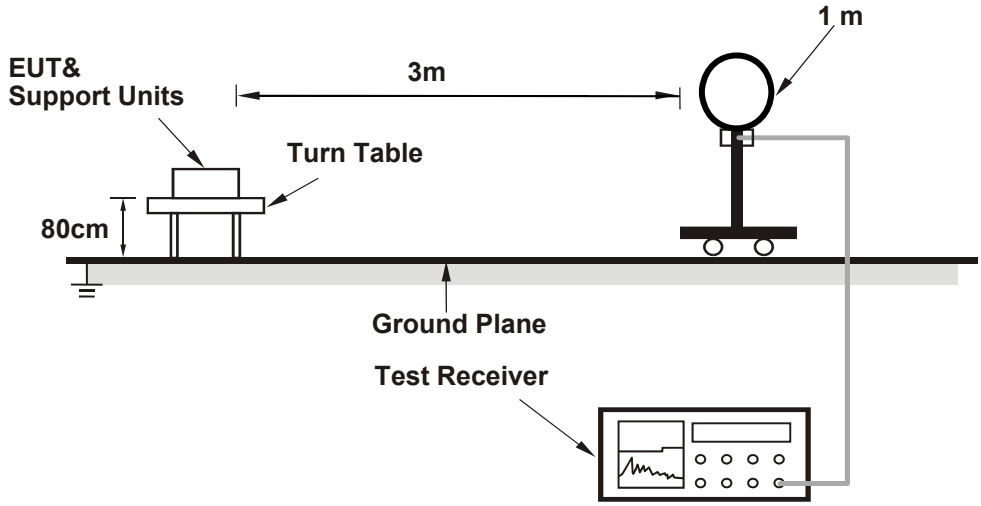
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
   5G traffic radio (Radio 1)
   (802.11a: RBW = 1MHz, VBW = 1kHz; 802.11ax (HE20): RBW = 1MHz, VBW = 1kHz; 802.11ax (HE40): RBW = 1MHz, VBW = 1kHz; 802.11ax (HE80): RBW = 1MHz, VBW = 1kHz)
   Scanning radio (Radio 3)
   (802.11a: RBW = 1MHz, VBW = 1kHz; 802.11ac (VHT20): RBW = 1MHz, VBW = 1kHz; 802.11ac (VHT40): RBW = 1MHz, VBW = 3kHz; 802.11ac (VHT80): RBW = 1MHz, VBW = 3kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

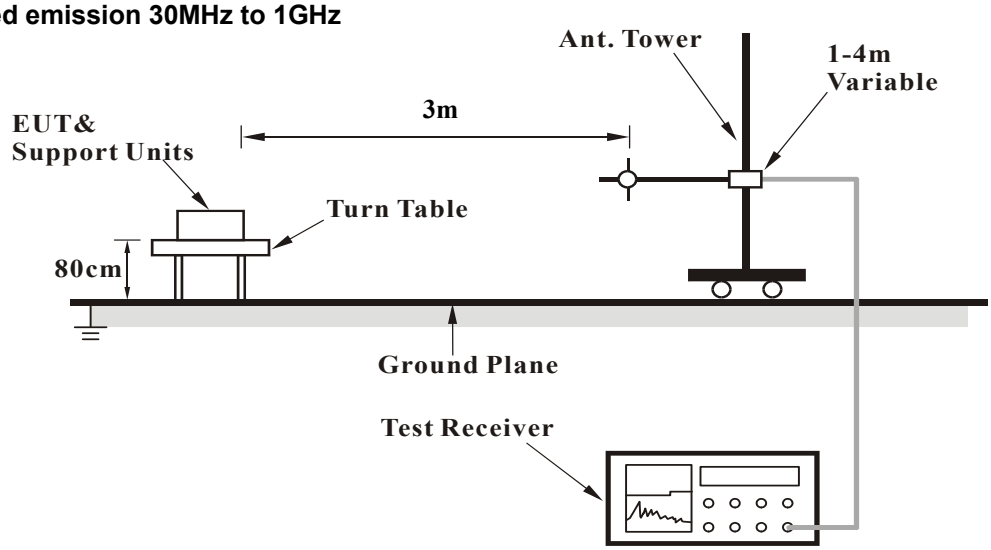
No deviation.

4.1.5 Test Setup

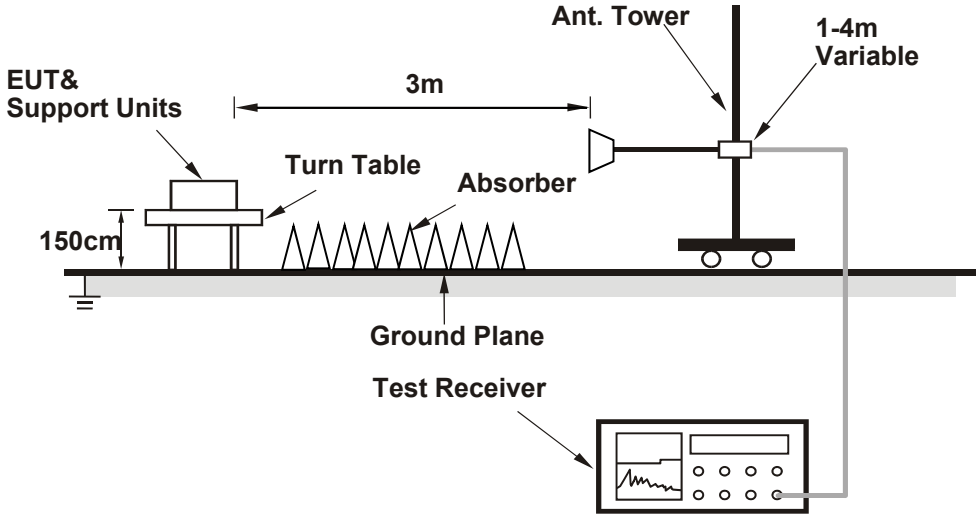
For Radiated emission below 30MHz



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 a notebook to act 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.

4.1.7 Test Results

Above 1GHz data:

5G traffic radio (Radio 1)

RF Mode	TX 802.11a	Channel	CH 36：5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.8 PK	74.0	-15.2	1.78 H	22	52.4	6.4
2	5150.00	46.0 AV	54.0	-8.0	1.78 H	22	39.6	6.4
3	*5180.00	117.8 PK			1.70 H	25	75.6	42.2
4	*5180.00	108.0 AV			1.70 H	25	65.8	42.2
5	#10360.00	57.5 PK	68.2	-10.7	1.77 H	152	41.0	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.1 PK	74.0	-15.9	1.11 V	332	51.7	6.4
2	5150.00	44.6 AV	54.0	-9.4	1.11 V	332	38.2	6.4
3	*5180.00	116.9 PK			1.07 V	337	74.7	42.2
4	*5180.00	107.5 AV			1.07 V	337	65.3	42.2
5	#10360.00	58.4 PK	68.2	-9.8	1.32 V	211	41.9	16.5

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 40：5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	115.7 PK			1.47 H	17	73.6	42.1
2	*5200.00	106.3 AV			1.47 H	17	64.2	42.1
3	#10400.00	58.2 PK	68.2	-10.0	1.75 H	144	41.7	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	114.9 PK			1.11 V	347	72.8	42.1
2	*5200.00	106.0 AV			1.11 V	347	63.9	42.1
3	#10400.00	57.3 PK	68.2	-10.9	1.21 V	213	40.8	16.5

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 48：5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	115.5 PK			1.68 H	16	73.5	42.0
2	*5240.00	106.5 AV			1.68 H	16	64.5	42.0
3	5350.00	57.5 PK	74.0	-16.5	1.76 H	15	51.2	6.3
4	5350.00	45.0 AV	54.0	-9.0	1.76 H	15	38.7	6.3
5	#10480.00	59.8 PK	68.2	-8.4	1.75 H	144	41.7	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	115.4 PK			1.04 V	354	73.4	42.0
2	*5240.00	104.3 AV			1.04 V	354	62.3	42.0
3	5350.00	58.0 PK	74.0	-16.0	1.06 V	347	51.7	6.3
4	5350.00	44.5 AV	54.0	-9.5	1.06 V	347	38.2	6.3
5	#10480.00	58.9 PK	68.2	-9.3	1.36 V	231	40.8	18.1

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 149：5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	58.9 PK	68.2	-9.3	2.66 H	13	52.7	6.2
2	*5745.00	124.4 PK			2.66 H	13	82.2	42.2
3	*5745.00	114.9 AV			2.66 H	13	72.7	42.2
4	#5952.40	59.6 PK	68.2	-8.6	2.66 H	13	52.3	7.3
5	11490.00	60.7 PK	74.0	-13.3	1.37 H	36	42.1	18.6
6	11490.00	47.6 AV	54.0	-6.4	1.37 H	36	29.0	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	58.7 PK	68.2	-9.5	1.58 V	345	52.5	6.2
2	*5745.00	122.3 PK			1.58 V	345	80.1	42.2
3	*5745.00	112.5 AV			1.58 V	345	70.3	42.2
4	#5990.40	59.7 PK	68.2	-8.5	1.58 V	345	52.6	7.1
5	11490.00	60.3 PK	74.0	-13.7	1.91 V	174	41.7	18.6
6	11490.00	47.1 AV	54.0	-6.9	1.91 V	174	28.5	18.6

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 157：5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5646.00	58.2 PK	68.2	-10.0	2.61 H	11	52.0	6.2
2	*5785.00	124.8 PK			2.61 H	11	82.6	42.2
3	*5785.00	115.8 AV			2.61 H	11	73.6	42.2
4	#5973.60	59.5 PK	68.2	-8.7	2.61 H	11	52.4	7.1
5	11570.00	60.9 PK	74.0	-13.1	1.41 H	37	42.5	18.4
6	11570.00	47.7 AV	54.0	-6.3	1.41 H	37	29.3	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5631.60	58.3 PK	68.2	-9.9	1.61 V	240	52.0	6.3
2	*5785.00	122.3 PK			1.61 V	240	80.1	42.2
3	*5785.00	113.5 AV			1.61 V	240	71.3	42.2
4	#5988.00	59.0 PK	68.2	-9.2	1.61 V	240	51.9	7.1
5	11570.00	60.5 PK	74.0	-13.5	1.97 V	177	42.1	18.4
6	11570.00	47.3 AV	54.0	-6.7	1.97 V	177	28.9	18.4

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 165：5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5638.80	58.1 PK	68.2	-10.1	2.54 H	355	51.8	6.3
2	*5825.00	124.3 PK			2.54 H	355	82.0	42.3
3	*5825.00	114.6 AV			2.54 H	355	72.3	42.3
4	#5926.40	59.6 PK	68.2	-8.6	2.54 H	355	52.3	7.3
5	11650.00	60.4 PK	74.0	-13.6	1.50 H	33	42.3	18.1
6	11650.00	47.2 AV	54.0	-6.8	1.50 H	33	29.1	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	58.5 PK	68.2	-9.7	1.63 V	250	52.3	6.2
2	*5825.00	122.1 PK			1.63 V	250	79.8	42.3
3	*5825.00	112.3 AV			1.63 V	250	70.0	42.3
4	#5942.40	60.1 PK	68.2	-8.1	1.63 V	250	52.8	7.3
5	11650.00	59.9 PK	74.0	-14.1	1.86 V	171	41.8	18.1
6	11650.00	46.8 AV	54.0	-7.2	1.86 V	171	28.7	18.1

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 36：5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	59.2 PK	74.0	-14.8	1.36 H	28	52.8	6.4
2	5150.00	45.4 AV	54.0	-8.6	1.36 H	28	39.0	6.4
3	*5180.00	119.8 PK			1.68 H	27	77.6	42.2
4	*5180.00	105.9 AV			1.68 H	27	63.7	42.2
5	#10360.00	57.4 PK	68.2	-10.8	1.66 H	149	40.9	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	58.2 PK	74.0	-15.8	1.03 V	348	51.8	6.4
2	5150.00	45.1 AV	54.0	-8.9	1.03 V	348	38.7	6.4
3	*5180.00	116.9 PK			1.00 V	359	74.7	42.2
4	*5180.00	104.5 AV			1.00 V	359	62.3	42.2
5	#10360.00	57.2 PK	68.2	-11.0	1.25 V	210	40.7	16.5

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 40：5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	119.0 PK			1.30 H	25	76.9	42.1
2	*5200.00	106.3 AV			1.30 H	25	64.2	42.1
3	#10400.00	57.7 PK	68.2	-10.5	1.85 H	147	41.2	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	117.2 PK			1.22 V	1	75.1	42.1
2	*5200.00	104.6 AV			1.22 V	1	62.5	42.1
3	#10400.00	57.3 PK	68.2	-10.9	1.48 V	214	40.8	16.5

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 48：5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	118.2 PK			2.69 H	8	76.2	42.0
2	*5240.00	105.7 AV			2.69 H	8	63.7	42.0
3	5350.00	58.4 PK	74.0	-15.6	1.77 H	29	52.1	6.3
4	5350.00	44.9 AV	54.0	-9.1	1.77 H	29	38.6	6.3
5	#10480.00	59.4 PK	68.2	-8.8	1.75 H	158	41.3	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	116.5 PK			1.22 V	341	74.5	42.0
2	*5240.00	104.1 AV			1.22 V	341	62.1	42.0
3	5350.00	57.7 PK	74.0	-16.3	1.30 V	350	51.4	6.3
4	5350.00	44.4 AV	54.0	-9.6	1.30 V	350	38.1	6.3
5	#10480.00	59.0 PK	68.2	-9.2	1.32 V	222	40.9	18.1

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 149：5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5649.20	58.3 PK	68.2	-9.9	2.69 H	21	52.1	6.2
2	*5745.00	127.5 PK			2.69 H	21	85.3	42.2
3	*5745.00	114.8 AV			2.69 H	21	72.6	42.2
4	#5930.00	60.2 PK	68.2	-8.0	2.69 H	21	52.9	7.3
5	11490.00	61.2 PK	74.0	-12.8	1.53 H	39	42.6	18.6
6	11490.00	48.0 AV	54.0	-6.0	1.53 H	39	29.4	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	59.8 PK	68.2	-8.4	1.70 V	243	53.6	6.2
2	*5745.00	125.3 PK			1.70 V	243	83.1	42.2
3	*5745.00	112.5 AV			1.70 V	243	70.3	42.2
4	#5957.20	60.4 PK	68.2	-7.8	1.70 V	243	53.1	7.3
5	11490.00	60.7 PK	74.0	-13.3	1.91 V	166	42.1	18.6
6	11490.00	47.6 AV	54.0	-6.4	1.91 V	166	29.0	18.6

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 157：5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5626.80	57.2 PK	68.2	-11.0	2.69 H	36	51.0	6.2
2	*5785.00	129.1 PK			2.69 H	36	86.9	42.2
3	*5785.00	115.7 AV			2.69 H	36	73.5	42.2
4	#5979.60	59.2 PK	68.2	-9.0	2.69 H	36	52.1	7.1
5	11570.00	61.1 PK	74.0	-12.9	1.60 H	41	42.7	18.4
6	11570.00	47.9 AV	54.0	-6.1	1.60 H	41	29.5	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5643.60	58.2 PK	68.2	-10.0	1.67 V	252	52.0	6.2
2	*5785.00	126.7 PK			1.67 V	252	84.5	42.2
3	*5785.00	113.4 AV			1.67 V	252	71.2	42.2
4	#5978.00	59.9 PK	68.2	-8.3	1.67 V	252	52.8	7.1
5	11570.00	60.7 PK	74.0	-13.3	1.97 V	165	42.3	18.4
6	11570.00	47.5 AV	54.0	-6.5	1.97 V	165	29.1	18.4

Remarks:

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

RF Mode	TX 802.11ax (HE20)	Channel	CH 165：5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5642.40	57.5 PK	68.2	-10.7	2.68 H	37	51.3	6.2
2	*5825.00	127.1 PK			2.68 H	37	84.8	42.3
3	*5825.00	114.5 AV			2.68 H	37	72.2	42.3
4	#5929.20	59.0 PK	68.2	-9.2	2.68 H	37	51.7	7.3
5	11650.00	60.6 PK	74.0	-13.4	1.67 H	54	42.5	18.1
6	11650.00	47.4 AV	54.0	-6.6	1.67 H	54	29.3	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5638.40	59.4 PK	68.2	-8.8	1.63 V	249	53.1	6.3
2	*5825.00	124.8 PK			1.63 V	249	82.5	42.3
3	*5825.00	112.3 AV			1.63 V	249	70.0	42.3
4	#5929.20	60.4 PK	68.2	-7.8	1.63 V	249	53.1	7.3
5	11650.00	60.3 PK	74.0	-13.7	1.90 V	161	42.2	18.1
6	11650.00	47.0 AV	54.0	-7.0	1.90 V	161	28.9	18.1

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 38：5190 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	65.0 PK	74.0	-9.0	2.90 H	1	58.6	6.4
2	5150.00	50.0 AV	54.0	-4.0	2.90 H	1	43.6	6.4
3	*5190.00	119.5 PK			2.96 H	30	77.4	42.1
4	*5190.00	107.3 AV			2.96 H	30	65.2	42.1
5	#10380.00	57.5 PK	68.2	-10.7	1.70 H	156	40.9	16.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	1.30 V	354	57.1	6.4
2	5150.00	47.4 AV	54.0	-6.6	1.30 V	354	41.0	6.4
3	*5190.00	117.0 PK			1.27 V	356	74.9	42.1
4	*5190.00	105.1 AV			1.27 V	356	63.0	42.1
5	#10380.00	57.4 PK	68.2	-10.8	1.33 V	208	40.8	16.6

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 46：5230 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	117.7 PK			2.92 H	17	75.7	42.0
2	*5230.00	105.4 AV			2.92 H	17	63.4	42.0
3	5350.00	57.7 PK	74.0	-16.3	2.84 H	23	51.4	6.3
4	5350.00	45.6 AV	54.0	-8.4	2.84 H	23	39.3	6.3
5	#10460.00	59.3 PK	68.2	-8.9	1.79 H	159	41.6	17.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	117.3 PK			1.30 V	342	75.3	42.0
2	*5230.00	105.1 AV			1.30 V	342	63.1	42.0
3	5350.00	58.0 PK	74.0	-16.0	1.30 V	336	51.7	6.3
4	5350.00	44.9 AV	54.0	-9.1	1.30 V	336	38.6	6.3
5	#10460.00	59.2 PK	68.2	-9.0	1.33 V	218	41.5	17.7

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 151：5755 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	66.2 PK	68.2	-2.0	1.72 H	10	60.0	6.2
2	#5650.00	66.7 PK	68.2	-1.5	1.80 H	354	60.5	6.2
3	*5755.00	124.4 PK			1.72 H	10	82.1	42.3
4	*5755.00	112.3 AV			1.72 H	10	70.0	42.3
5	#5995.60	59.4 PK	68.2	-8.8	1.72 H	10	52.3	7.1
6	11510.00	59.6 PK	74.0	-14.4	1.73 H	44	41.0	18.6
7	11510.00	46.7 AV	54.0	-7.3	1.73 H	44	28.1	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5634.00	61.8 PK	68.2	-6.4	1.68 V	331	55.5	6.3
2	**#5650.00**	**67.2 PK**	**68.2**	**-1.0**	**1.13 V**	**316**	**61.0**	**6.2**
3	*5755.00	123.3 PK			1.68 V	331	81.0	42.3
4	*5755.00	110.4 AV			1.68 V	331	68.1	42.3
5	#5947.20	59.1 PK	68.2	-9.1	1.68 V	331	51.8	7.3
6	11510.00	59.4 PK	74.0	-14.6	1.91 V	163	40.8	18.6
7	11510.00	46.6 AV	54.0	-7.4	1.91 V	163	28.0	18.6

Remarks:

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

RF Mode	TX 802.11ax (HE40)	Channel	CH 159：5795 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	58.0 PK	68.2	-10.2	1.53 H	9	51.7	6.3
2	*5795.00	124.8 PK			1.53 H	9	82.6	42.2
3	*5795.00	112.4 AV			1.53 H	9	70.2	42.2
4	#5933.20	60.4 PK	68.2	-7.8	1.53 H	9	53.1	7.3
5	11590.00	59.3 PK	74.0	-14.7	1.71 H	40	41.1	18.2
6	11590.00	46.5 AV	54.0	-7.5	1.71 H	40	28.3	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5649.20	58.3 PK	68.2	-9.9	2.22 V	322	52.1	6.2
2	*5795.00	123.2 PK			2.22 V	322	81.0	42.2
3	*5795.00	110.6 AV			2.22 V	322	68.4	42.2
4	#5931.20	61.4 PK	68.2	-6.8	2.22 V	322	54.1	7.3
5	11590.00	58.9 PK	74.0	-15.1	1.87 V	169	40.7	18.2
6	11590.00	46.2 AV	54.0	-7.8	1.87 V	169	28.0	18.2

Remarks:

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 42：5210 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	62.8 PK	74.0	-11.2	2.95 H	1	56.4	6.4
2	5150.00	52.3 AV	54.0	-1.7	2.95 H	1	45.9	6.4
3	*5210.00	113.4 PK			1.58 H	18	71.4	42.0
4	*5210.00	102.5 AV			1.58 H	18	60.5	42.0
5	5350.00	56.6 PK	74.0	-17.4	2.64 H	31	50.3	6.3
6	5350.00	45.0 AV	54.0	-9.0	2.64 H	31	38.7	6.3
7	#10420.00	59.3 PK	68.2	-8.9	1.73 H	155	42.3	17.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	62.5 PK	74.0	-11.5	1.33 V	2	56.1	6.4
2	5150.00	47.9 AV	54.0	-6.1	1.33 V	2	41.5	6.4
3	*5210.00	113.0 PK			1.40 V	6	71.0	42.0
4	*5210.00	102.0 AV			1.40 V	6	60.0	42.0
5	5350.00	57.8 PK	74.0	-16.2	1.35 V	359	51.5	6.3
6	5350.00	45.0 AV	54.0	-9.0	1.35 V	359	38.7	6.3
7	#10420.00	57.8 PK	68.2	-10.4	1.33 V	217	40.8	17.0

Remarks:

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

RF Mode	TX 802.11ax (HE80)	Channel	CH 155：5775 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5640.80	62.1 PK	68.2	-6.1	1.52 H	8	55.9	6.2
2	#5650.00	66.8 PK	68.2	-1.4	2.88 H	13	60.6	6.2
3	*5775.00	118.9 PK			1.52 H	8	76.7	42.2
4	*5775.00	106.5 AV			1.52 H	8	64.3	42.2
5	#5925.00	64.6 PK	68.2	-3.6	1.26 H	38	57.3	7.3
6	#5927.60	60.2 PK	68.2	-8.0	1.52 H	8	52.9	7.3
7	11550.00	59.1 PK	74.0	-14.9	1.77 H	45	40.7	18.4
8	11550.00	45.9 AV	54.0	-8.1	1.77 H	45	27.5	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5646.80	62.9 PK	68.2	-5.3	1.49 V	302	56.7	6.2
2	#5650.00	65.2 PK	68.2	-3.0	1.46 V	303	59.0	6.2
3	*5775.00	116.2 PK			2.92 V	324	74.0	42.2
4	*5775.00	104.5 AV			2.92 V	324	62.3	42.2
5	#5925.00	62.1 PK	68.2	-6.1	1.49 V	302	54.8	7.3
6	#5930.40	59.6 PK	68.2	-8.6	1.49 V	302	52.3	7.3
7	11550.00	58.7 PK	74.0	-15.3	1.97 V	172	40.3	18.4
8	11550.00	45.7 AV	54.0	-8.3	1.97 V	172	27.3	18.4

Remarks:

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

Scanning radio (Radio 3)

RF Mode	TX 802.11a	Channel	CH 36：5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	1.15 H	5	61.5	6.4
2	5150.00	52.0 AV	54.0	-2.0	1.15 H	5	45.6	6.4
3	*5180.00	113.8 PK			1.22 H	4	71.6	42.2
4	*5180.00	103.8 AV			1.22 H	4	61.6	42.2
5	#10360.00	58.2 PK	68.2	-10.0	1.79 H	115	41.7	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	68.8 PK	74.0	-5.2	3.77 V	15	62.4	6.4
2	**5150.00**	**53.0 AV**	**54.0**	**-1.0**	**3.77 V**	**15**	**46.6**	**6.4**
3	*5180.00	114.1 PK			3.93 V	10	71.9	42.2
4	*5180.00	104.0 AV			3.93 V	10	61.8	42.2
5	#10360.00	58.6 PK	68.2	-9.6	2.05 V	222	42.1	16.5

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 40：5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	68.6 PK	74.0	-5.4	1.17 H	10	62.2	6.4
2	5150.00	51.9 AV	54.0	-2.1	1.17 H	10	45.5	6.4
3	*5200.00	117.2 PK			1.21 H	7	75.1	42.1
4	*5200.00	106.6 AV			1.21 H	7	64.5	42.1
5	#10400.00	58.6 PK	68.2	-9.6	1.81 H	123	42.1	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	5150.00	69.7 PK	74.0	-4.3	3.79 V	15	63.3	6.4
2	**5150.00**	**53.0 AV**	**54.0**	**-1.0**	**3.79 V**	**15**	**46.6**	**6.4**
3	*5200.00	117.6 PK			3.89 V	11	75.5	42.1
4	*5200.00	106.9 AV			3.89 V	11	64.8	42.1
5	#10400.00	59.0 PK	68.2	-9.2	2.12 V	215	42.5	16.5

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 48：5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	117.0 PK			1.23 H	6	75.0	42.0
2	*5240.00	106.0 AV			1.23 H	6	64.0	42.0
3	5400.00	62.7 PK	74.0	-11.3	1.20 H	10	56.3	6.4
4	5400.00	50.8 AV	54.0	-3.2	1.20 H	10	44.4	6.4
5	#10480.00	60.0 PK	68.2	-8.2	1.75 H	111	41.9	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	117.3 PK			3.64 V	10	75.3	42.0
2	*5240.00	106.4 AV			3.64 V	10	64.4	42.0
3	5400.00	63.4 PK	74.0	-10.6	3.60 V	9	57.0	6.4
4	5400.00	51.9 AV	54.0	-2.1	3.60 V	9	45.5	6.4
5	#10480.00	60.4 PK	68.2	-7.8	2.12 V	208	42.3	18.1

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 149：5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	59.4 PK	68.2	-8.8	3.94 H	339	53.2	6.2
2	*5745.00	110.9 PK			3.94 H	339	68.7	42.2
3	*5745.00	101.3 AV			3.94 H	339	59.1	42.2
4	#5989.20	60.0 PK	68.2	-8.2	3.94 H	339	52.9	7.1
5	11490.00	60.0 PK	74.0	-14.0	1.91 H	125	41.4	18.6
6	11490.00	47.0 AV	54.0	-7.0	1.91 H	125	28.4	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5648.80	59.0 PK	68.2	-9.2	1.02 V	28	52.8	6.2
2	*5745.00	112.5 PK			1.02 V	28	70.3	42.2
3	*5745.00	102.8 AV			1.02 V	28	60.6	42.2
4	#5926.80	61.0 PK	68.2	-7.2	1.02 V	28	53.7	7.3
5	11490.00	60.3 PK	74.0	-13.7	1.97 V	202	41.7	18.6
6	11490.00	47.5 AV	54.0	-6.5	1.97 V	202	28.9	18.6

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 157：5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	60.7 PK	68.2	-7.5	3.88 H	341	54.5	6.2
2	*5785.00	111.7 PK			3.88 H	341	69.5	42.2
3	*5785.00	101.7 AV			3.88 H	341	59.5	42.2
4	#5933.60	61.8 PK	68.2	-6.4	3.88 H	341	54.5	7.3
5	11570.00	60.0 PK	74.0	-14.0	2.00 H	131	41.6	18.4
6	11570.00	47.0 AV	54.0	-7.0	2.00 H	131	28.6	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5630.80	60.0 PK	68.2	-8.2	1.08 V	26	53.7	6.3
2	*5785.00	113.2 PK			1.08 V	26	71.0	42.2
3	*5785.00	103.2 AV			1.08 V	26	61.0	42.2
4	#5936.80	60.9 PK	68.2	-7.3	1.08 V	26	53.6	7.3
5	11570.00	60.4 PK	74.0	-13.6	2.02 V	215	42.0	18.4
6	11570.00	47.4 AV	54.0	-6.6	2.02 V	215	29.0	18.4

Remarks:

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

RF Mode	TX 802.11a	Channel	CH 165：5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5638.00	60.0 PK	68.2	-8.2	3.93 H	350	53.7	6.3
2	*5825.00	110.9 PK			3.93 H	350	68.6	42.3
3	*5825.00	100.6 AV			3.93 H	350	58.3	42.3
4	#5941.20	60.4 PK	68.2	-7.8	3.93 H	350	53.1	7.3
5	11650.00	59.9 PK	74.0	-14.1	1.87 H	123	41.8	18.1
6	11650.00	46.7 AV	54.0	-7.3	1.87 H	123	28.6	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5622.80	61.5 PK	68.2	-6.7	1.23 V	8	55.3	6.2
2	*5825.00	112.3 PK			1.23 V	8	70.0	42.3
3	*5825.00	102.0 AV			1.23 V	8	59.7	42.3
4	#5929.60	60.6 PK	68.2	-7.6	1.23 V	8	53.3	7.3
5	11650.00	60.0 PK	74.0	-14.0	2.12 V	208	41.9	18.1
6	11650.00	47.0 AV	54.0	-7.0	2.12 V	208	28.9	18.1

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 36：5180 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	65.7 PK	74.0	-8.3	1.21 H	5	59.3	6.4
2	5150.00	51.4 AV	54.0	-2.6	1.21 H	5	45.0	6.4
3	*5180.00	112.7 PK			1.23 H	6	70.5	42.2
4	*5180.00	102.7 AV			1.23 H	6	60.5	42.2
5	#10360.00	58.5 PK	68.2	-9.7	1.75 H	119	42.0	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	66.7 PK	74.0	-7.3	3.78 V	12	60.3	6.4
2	5150.00	52.4 AV	54.0	-1.6	3.78 V	12	46.0	6.4
3	*5180.00	113.2 PK			3.74 V	15	71.0	42.2
4	*5180.00	103.2 AV			3.74 V	15	61.0	42.2
5	#10360.00	58.7 PK	68.2	-9.5	2.05 V	211	42.2	16.5

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 40：5200 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	66.2 PK	74.0	-7.8	1.19 H	4	59.8	6.4
2	5150.00	51.3 AV	54.0	-2.7	1.19 H	4	44.9	6.4
3	*5200.00	116.4 PK			1.25 H	9	74.3	42.1
4	*5200.00	106.2 AV			1.25 H	9	64.1	42.1
5	#10400.00	58.6 PK	68.2	-9.6	1.82 H	122	42.1	16.5
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	67.4 PK	74.0	-6.6	3.77 V	17	61.0	6.4
2	5150.00	52.4 AV	54.0	-1.6	3.77 V	17	46.0	6.4
3	*5200.00	117.0 PK			3.88 V	10	74.9	42.1
4	*5200.00	106.6 AV			3.88 V	10	64.5	42.1
5	#10400.00	59.0 PK	68.2	-9.2	2.02 V	209	42.5	16.5

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 48：5240 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	115.8 PK			1.13 H	4	73.8	42.0
2	*5240.00	105.0 AV			1.13 H	4	63.0	42.0
3	5400.00	62.5 PK	74.0	-11.5	1.48 H	359	56.1	6.4
4	5400.00	51.6 AV	54.0	-2.4	1.48 H	359	45.2	6.4
5	#10480.00	60.2 PK	68.2	-8.0	1.77 H	114	42.1	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	117.2 PK			3.65 V	12	75.2	42.0
2	*5240.00	106.2 AV			3.65 V	12	64.2	42.0
3	5400.00	63.9 PK	74.0	-10.1	3.47 V	5	57.5	6.4
4	5400.00	51.9 AV	54.0	-2.1	3.47 V	5	45.5	6.4
5	#10480.00	60.6 PK	68.2	-7.6	2.03 V	199	42.5	18.1

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 149：5745 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	59.5 PK	68.2	-8.7	3.85 H	344	53.2	6.3
2	*5745.00	110.3 PK			3.85 H	344	68.1	42.2
3	*5745.00	100.2 AV			3.85 H	344	58.0	42.2
4	#5931.20	60.6 PK	68.2	-7.6	3.85 H	344	53.3	7.3
5	11490.00	60.1 PK	74.0	-13.9	2.01 H	130	41.5	18.6
6	11490.00	47.1 AV	54.0	-6.9	2.01 H	130	28.5	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5602.00	59.7 PK	68.2	-8.5	1.25 V	24	53.5	6.2
2	*5745.00	111.8 PK			1.25 V	24	69.6	42.2
3	*5745.00	101.6 AV			1.25 V	24	59.4	42.2
4	#5974.00	60.5 PK	68.2	-7.7	1.25 V	24	53.4	7.1
5	11490.00	60.4 PK	74.0	-13.6	2.07 V	200	41.8	18.6
6	11490.00	47.3 AV	54.0	-6.7	2.07 V	200	28.7	18.6

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 157：5785 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5619.20	61.3 PK	68.2	-6.9	3.81 H	347	55.1	6.2
2	*5785.00	111.3 PK			3.81 H	347	69.1	42.2
3	*5785.00	101.2 AV			3.81 H	347	59.0	42.2
4	#5999.60	60.2 PK	68.2	-8.0	3.81 H	347	53.1	7.1
5	11570.00	60.4 PK	74.0	-13.6	2.00 H	128	42.0	18.4
6	11570.00	47.0 AV	54.0	-7.0	2.00 H	128	28.6	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	60.5 PK	68.2	-7.7	1.18 V	25	54.2	6.3
2	*5785.00	112.8 PK			1.18 V	25	70.6	42.2
3	*5785.00	102.7 AV			1.18 V	25	60.5	42.2
4	#5943.60	59.9 PK	68.2	-8.3	1.18 V	25	52.6	7.3
5	11570.00	60.6 PK	74.0	-13.4	2.17 V	215	42.2	18.4
6	11570.00	47.4 AV	54.0	-6.6	2.17 V	215	29.0	18.4

Remarks:

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

RF Mode	TX 802.11ac (VHT20)	Channel	CH 165：5825 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5627.60	59.7 PK	68.2	-8.5	3.77 H	343	53.5	6.2
2	*5825.00	110.0 PK			3.77 H	343	67.7	42.3
3	*5825.00	99.8 AV			3.77 H	343	57.5	42.3
4	#5960.40	59.9 PK	68.2	-8.3	3.77 H	343	52.6	7.3
5	11650.00	59.8 PK	74.0	-14.2	1.88 H	123	41.7	18.1
6	11650.00	46.6 AV	54.0	-7.4	1.88 H	123	28.5	18.1
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	60.6 PK	68.2	-7.6	1.16 V	26	54.4	6.2
2	*5825.00	111.3 PK			1.16 V	26	69.0	42.3
3	*5825.00	101.1 AV			1.16 V	26	58.8	42.3
4	#5982.40	60.4 PK	68.2	-7.8	1.16 V	26	53.3	7.1
5	11650.00	60.1 PK	74.0	-13.9	2.08 V	208	42.0	18.1
6	11650.00	46.7 AV	54.0	-7.3	2.08 V	208	28.6	18.1

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 38：5190 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	66.5 PK	74.0	-7.5	1.26 H	7	60.1	6.4
2	**5150.00**	**53.0 AV**	**54.0**	**-1.0**	**1.26 H**	**7**	**46.6**	**6.4**
3	*5190.00	111.0 PK			1.17 H	7	68.9	42.1
4	*5190.00	100.4 AV			1.17 H	7	58.3	42.1
5	#10380.00	58.8 PK	68.2	-9.4	1.81 H	120	42.2	16.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	3.76 V	16	59.1	6.4
2	5150.00	52.4 AV	54.0	-1.6	3.76 V	16	46.0	6.4
3	*5190.00	110.7 PK			3.86 V	13	68.6	42.1
4	*5190.00	99.9 AV			3.86 V	13	57.8	42.1
5	#10380.00	58.6 PK	68.2	-9.6	2.12 V	209	42.0	16.6

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 46：5230 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	65.9 PK	74.0	-8.1	1.16 H	7	59.5	6.4
2	5150.00	52.4 AV	54.0	-1.6	1.16 H	7	46.0	6.4
3	*5230.00	113.8 PK			1.13 H	9	71.8	42.0
4	*5230.00	102.4 AV			1.13 H	9	60.4	42.0
5	#10460.00	60.1 PK	68.2	-8.1	1.82 H	117	42.4	17.7
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	67.0 PK	74.0	-7.0	3.76 V	18	60.6	6.4
2	5150.00	52.7 AV	54.0	-1.3	3.76 V	18	46.3	6.4
3	*5230.00	114.6 PK			3.84 V	14	72.6	42.0
4	*5230.00	103.2 AV			3.84 V	14	61.2	42.0
5	#10460.00	60.2 PK	68.2	-8.0	2.02 V	215	42.5	17.7

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 151：5755 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5608.00	59.7 PK	68.2	-8.5	3.83 H	351	53.5	6.2
2	*5755.00	108.3 PK			3.83 H	351	66.0	42.3
3	*5755.00	97.1 AV			3.83 H	351	54.8	42.3
4	#5956.80	60.1 PK	68.2	-8.1	3.83 H	351	52.8	7.3
5	11510.00	60.5 PK	74.0	-13.5	1.88 H	129	41.9	18.6
6	11510.00	47.2 AV	54.0	-6.8	1.88 H	129	28.6	18.6
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5608.00	59.5 PK	68.2	-8.7	1.04 V	28	53.3	6.2
2	*5755.00	109.7 PK			1.04 V	28	67.4	42.3
3	*5755.00	98.5 AV			1.04 V	28	56.2	42.3
4	#5986.40	60.1 PK	68.2	-8.1	1.04 V	28	53.0	7.1
5	11510.00	60.8 PK	74.0	-13.2	2.17 V	202	42.2	18.6
6	11510.00	47.5 AV	54.0	-6.5	2.17 V	202	28.9	18.6

Remarks:

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

RF Mode	TX 802.11ac (VHT40)	Channel	CH 159：5795 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5638.00	60.9 PK	68.2	-7.3	3.89 H	349	54.6	6.3
2	*5795.00	108.0 PK			3.89 H	349	65.8	42.2
3	*5795.00	97.2 AV			3.89 H	349	55.0	42.2
4	#5934.40	60.7 PK	68.2	-7.5	3.89 H	349	53.4	7.3
5	11590.00	60.2 PK	74.0	-13.8	1.99 H	123	42.0	18.2
6	11590.00	47.0 AV	54.0	-7.0	1.99 H	123	28.8	18.2
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5640.40	60.0 PK	68.2	-8.2	1.19 V	27	53.8	6.2
2	*5795.00	109.5 PK			1.19 V	27	67.3	42.2
3	*5795.00	98.7 AV			1.19 V	27	56.5	42.2
4	#5934.00	60.6 PK	68.2	-7.6	1.19 V	27	53.3	7.3
5	11590.00	60.6 PK	74.0	-13.4	2.21 V	212	42.4	18.2
6	11590.00	47.4 AV	54.0	-6.6	2.21 V	212	29.2	18.2

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 42：5210 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	66.1 PK	74.0	-7.9	1.26 H	8	59.7	6.4
2	**5150.00**	**53.0 AV**	**54.0**	**-1.0**	**1.26 H**	**8**	**46.6**	**6.4**
3	*5210.00	103.4 PK			1.15 H	8	61.4	42.0
4	*5210.00	92.0 AV			1.15 H	8	50.0	42.0
5	5350.00	58.6 PK	74.0	-15.4	1.21 H	12	52.3	6.3
6	5350.00	46.2 AV	54.0	-7.8	1.21 H	12	39.9	6.3
7	#10420.00	58.9 PK	68.2	-9.3	1.88 H	111	41.9	17.0
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (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	66.4 PK	74.0	-7.6	3.77 V	18	60.0	6.4
2	**5150.00**	**53.0 AV**	**54.0**	**-1.0**	**3.77 V**	**18**	**46.6**	**6.4**
3	*5210.00	103.8 PK			3.83 V	13	61.8	42.0
4	*5210.00	93.0 AV			3.83 V	13	51.0	42.0
5	5350.00	59.1 PK	74.0	-14.9	3.79 V	20	52.8	6.3
6	5350.00	45.3 AV	54.0	-8.7	3.79 V	20	39.0	6.3
7	#10420.00	59.0 PK	68.2	-9.2	2.05 V	206	42.0	17.0

Remarks:

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

RF Mode	TX 802.11ac (VHT80)	Channel	CH 155：5775 MHz
Frequency Range	1GHz ~ 40GHz	Detector Function	Peak (PK) Average (AV)

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (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	62.1 PK	68.2	-6.1	3.79 H	341	55.9	6.2
2	#5650.00	65.2 PK	68.2	-3.0	3.63 H	350	59.0	6.2
3	*5775.00	105.3 PK			3.79 H	341	63.1	42.2
4	*5775.00	94.2 AV			3.79 H	341	52.0	42.2
5	#5925.00	60.7 PK	68.2	-7.5	3.71 H	333	53.4	7.3
6	#5925.60	62.3 PK	68.2	-5.9	3.79 H	341	55.0	7.3
7	11550.00	60.2 PK	74.0	-13.8	1.96 H	120	41.8	18.4
8	11550.00	47.1 AV	54.0	-6.9	1.96 H	120	28.7	18.4
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	#5639.60	64.5 PK	68.2	-3.7	1.22 V	29	58.2	6.3
2	#5650.00	66.7 PK	68.2	-1.5	1.35 V	8	60.5	6.2
3	*5775.00	106.8 PK			1.22 V	29	64.6	42.2
4	*5775.00	95.7 AV			1.22 V	29	53.5	42.2
5	#5925.00	62.5 PK	68.2	-5.7	1.17 V	30	55.2	7.3
6	#5934.00	63.8 PK	68.2	-4.4	1.22 V	29	56.5	7.3
7	11550.00	60.5 PK	74.0	-13.5	2.08 V	211	42.1	18.4
8	11550.00	47.4 AV	54.0	-6.6	2.08 V	211	29.0	18.4

Remarks:

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

Below 1GHz Worst-Case Data:

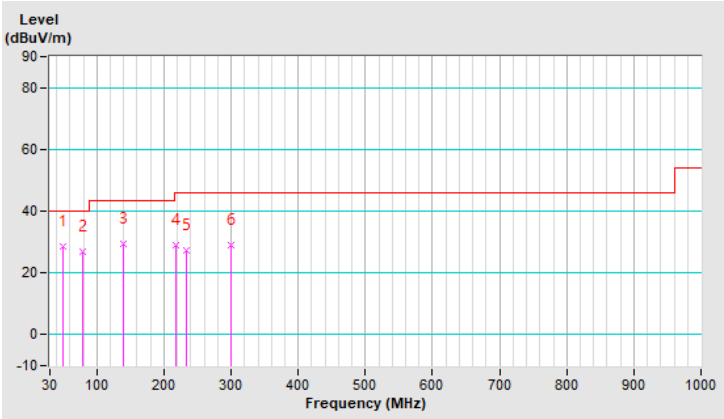
5G traffic radio (Radio 1)

RF Mode	TX 802.11ax (HE40)	Channel	CH 159：5795 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)
Test Mode	A		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	49.68	28.6 QP	40.0	-11.4	1.00 H	290	37.7	-9.1
2	79.20	27.0 QP	40.0	-13.0	2.00 H	263	40.1	-13.1
3	139.65	29.6 QP	43.5	-13.9	2.00 H	156	38.6	-9.0
4	216.97	29.0 QP	46.0	-17.0	1.00 H	142	39.6	-10.6
5	232.43	27.2 QP	46.0	-18.8	1.00 H	279	37.3	-10.1
6	299.91	28.9 QP	46.0	-17.1	1.00 H	317	35.5	-6.6

Remarks:

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

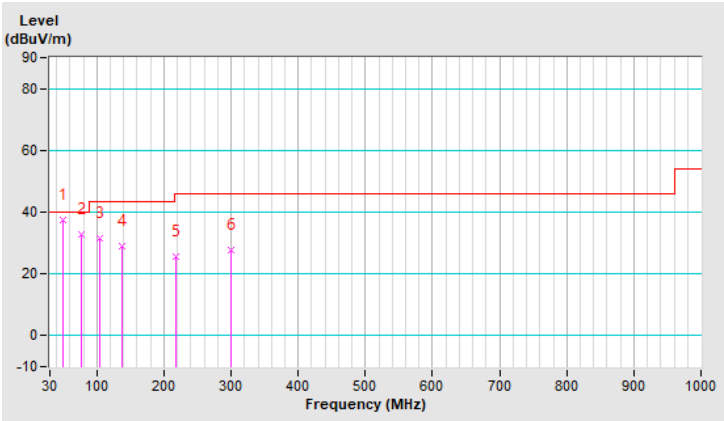


RF Mode	TX 802.11ax (HE40)	Channel	CH 159：5795 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)
Test Mode	A		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	49.68	37.6 QP	40.0	-2.4	1.00 V	310	46.7	-9.1
2	76.39	32.7 QP	40.0	-7.3	1.99 V	129	45.2	-12.5
3	104.51	31.6 QP	43.5	-11.9	1.00 V	129	44.1	-12.5
4	138.25	29.0 QP	43.5	-14.5	1.00 V	12	38.1	-9.1
5	216.97	25.5 QP	46.0	-20.5	1.00 V	141	36.1	-10.6
6	299.91	27.7 QP	46.0	-18.3	1.99 V	270	34.3	-6.6

Remarks:

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

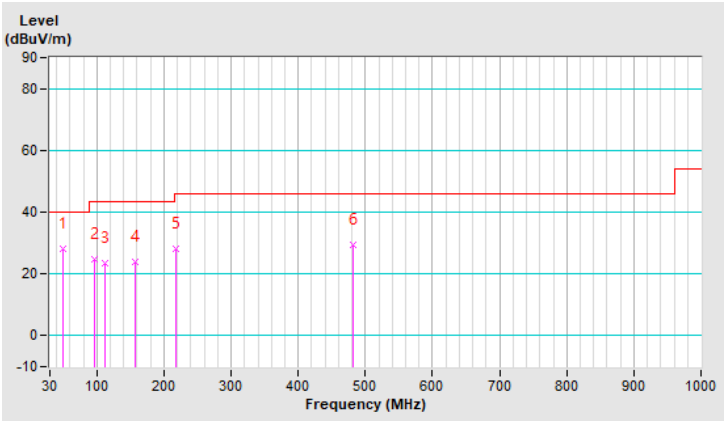


RF Mode	TX 802.11ax (HE40)	Channel	CH 159：5795 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)
Test Mode	B		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	49.68	28.2 QP	40.0	-11.8	2.00 H	139	37.3	-9.1
2	96.07	24.8 QP	43.5	-18.7	1.50 H	315	38.6	-13.8
3	111.54	23.6 QP	43.5	-19.9	2.00 H	77	35.4	-11.8
4	156.52	23.9 QP	43.5	-19.6	1.50 H	254	32.3	-8.4
5	216.97	28.2 QP	46.0	-17.8	1.00 H	140	38.8	-10.6
6	481.26	29.6 QP	46.0	-16.4	1.50 H	358	32.2	-2.6

Remarks:

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

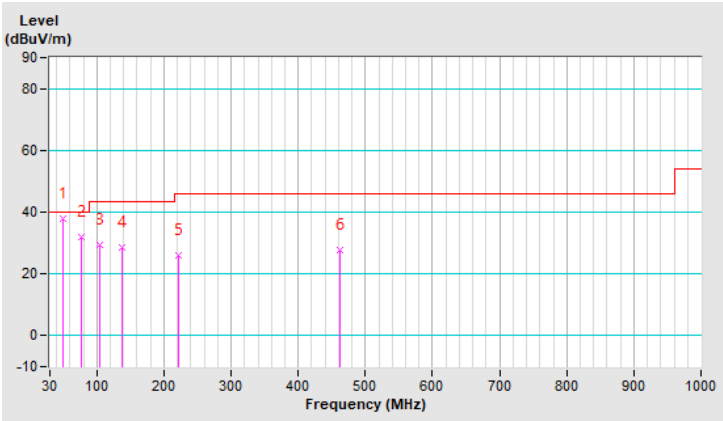


RF Mode	TX 802.11ax (HE40)	Channel	CH 159：5795 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)
Test Mode	B		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	49.68	37.8 QP	40.0	-2.2	1.00 V	268	46.9	-9.1
2	76.39	32.0 QP	40.0	-8.0	1.50 V	6	44.5	-12.5
3	104.51	29.5 QP	43.5	-14.0	1.50 V	94	42.0	-12.5
4	138.25	28.6 QP	43.5	-14.9	2.00 V	150	37.7	-9.1
5	222.59	26.1 QP	46.0	-19.9	1.50 V	188	36.7	-10.6
6	462.99	27.7 QP	46.0	-18.3	1.00 V	172	30.7	-3.0

Remarks:

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



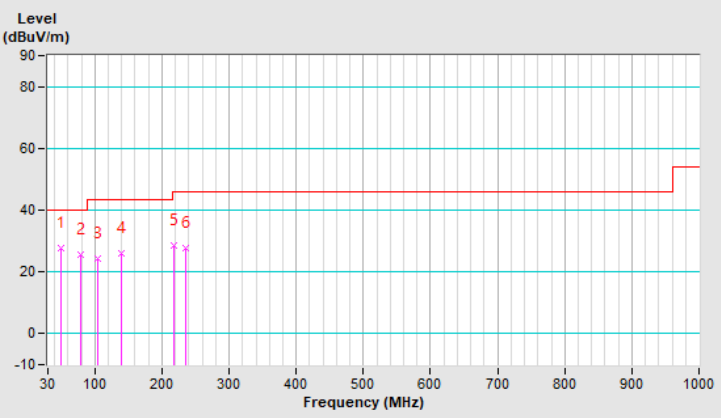
Scanning radio (Radio 3)

RF Mode	TX 802.11ac (VHT40)	Channel	CH 46：5230 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)
Test Mode	A		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	49.68	27.7 QP	40.0	-12.3	1.50 H	221	36.8	-9.1
2	79.20	25.5 QP	40.0	-14.5	1.50 H	229	38.6	-13.1
3	104.51	24.2 QP	43.5	-19.3	1.00 H	253	36.7	-12.5
4	139.65	26.2 QP	43.5	-17.3	1.50 H	171	35.2	-9.0
5	216.97	28.7 QP	46.0	-17.3	1.00 H	252	39.3	-10.6
6	235.25	27.8 QP	46.0	-18.2	1.50 H	132	37.5	-9.7

Remarks:

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

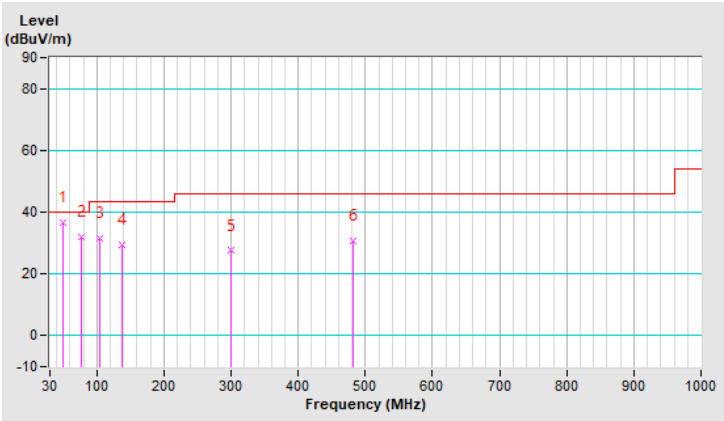


RF Mode	TX 802.11ac (VHT40)	Channel	CH 46：5230 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)
Test Mode	A		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	49.68	36.8 QP	40.0	-3.2	1.50 V	94	45.9	-9.1
2	76.39	32.0 QP	40.0	-8.0	1.50 V	335	44.5	-12.5
3	104.51	31.6 QP	43.5	-11.9	1.00 V	127	44.1	-12.5
4	138.25	29.5 QP	43.5	-14.0	1.50 V	7	38.6	-9.1
5	299.91	27.5 QP	46.0	-18.5	1.50 V	268	34.1	-6.6
6	481.26	30.6 QP	46.0	-15.4	2.00 V	72	33.2	-2.6

Remarks:

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

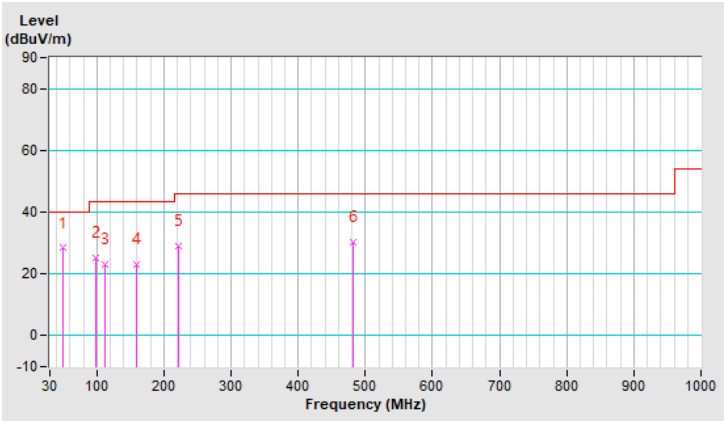


RF Mode	TX 802.11ac (VHT40)	Channel	CH 46：5230 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)
Test Mode	B		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	49.68	28.3 QP	40.0	-11.7	1.50 H	90	37.4	-9.1
2	97.48	25.2 QP	43.5	-18.3	2.00 H	313	38.9	-13.7
3	111.54	23.1 QP	43.5	-20.4	1.50 H	263	34.9	-11.8
4	159.33	22.9 QP	43.5	-20.6	1.50 H	281	31.2	-8.3
5	222.59	28.9 QP	46.0	-17.1	1.00 H	141	39.5	-10.6
6	481.26	30.3 QP	46.0	-15.7	1.00 H	15	32.9	-2.6

Remarks:

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

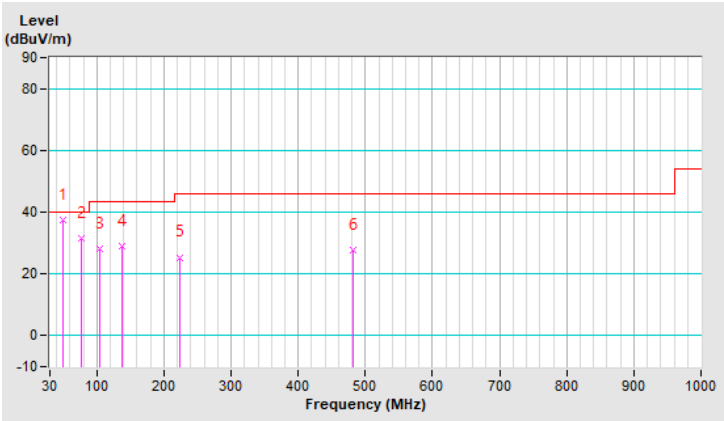


RF Mode	TX 802.11ac (VHT40)	Channel	CH 46：5230 MHz
Frequency Range	30MHz ~ 1GHz	Detector Function	Quasi-Peak (QP)
Test Mode	B		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	49.68	37.6 QP	40.0	-2.4	1.50 V	297	46.7	-9.1
2	76.39	31.6 QP	40.0	-8.4	1.50 V	13	44.1	-12.5
3	104.51	28.3 QP	43.5	-15.2	1.50 V	35	40.8	-12.5
4	138.25	29.1 QP	43.5	-14.4	1.00 V	37	38.2	-9.1
5	224.00	25.4 QP	46.0	-20.6	1.50 V	173	36.0	-10.6
6	481.26	27.6 QP	46.0	-18.4	2.00 V	88	30.2	-2.6

Remarks:

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



4.2 Conducted Emission Measurement

4.2.1 Limits of Conducted Emission Measurement

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

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

4.2.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESR3	102783	Dec. 21, 2020	Dec. 20, 2021
RF signal cable (with 10dB PAD) Woken	5D-FB	Cable-cond2-01	Sep. 04, 2020	Sep. 03, 2021
LISN ROHDE & SCHWARZ (EUT)	NNBL 8226-2	8226-142	Jul. 31, 2020	Jul. 30, 2021
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100312	Aug. 18, 2020	Aug. 17, 2021
Software ADT	BV ADT_Cond_ V7.3.7.4	NA	NA	NA

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in HwaYa Shielded Room 2 (Conduction 2).
3. The VCCI Site Registration No. is C-12047.

4.2.3 Test Procedures

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.

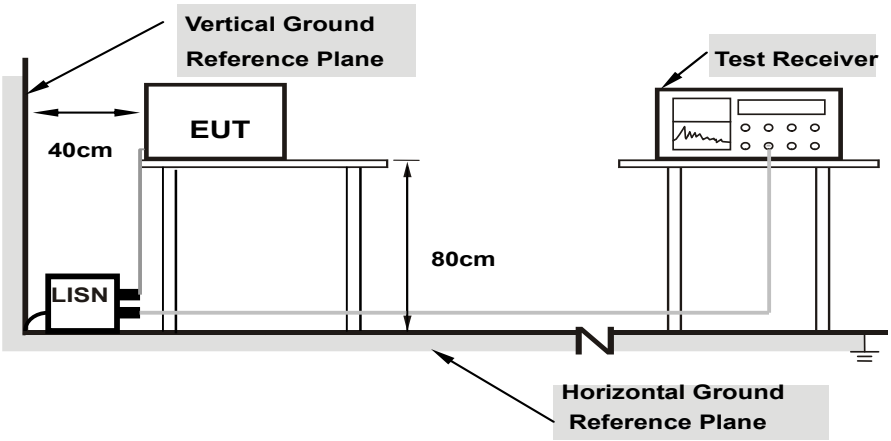
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

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.

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

Worst-case data:

5G traffic radio (Radio 1)

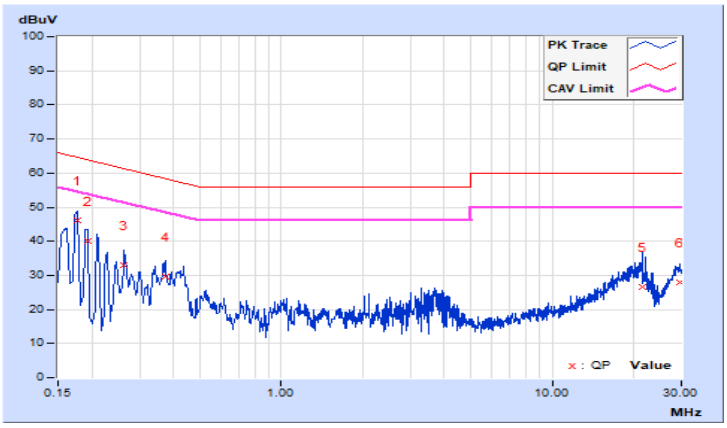
802.11ax (HE40)

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

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	0.17651	10.07	36.20	20.60	46.27	30.67	64.65	54.65	-18.38	-23.98
2	0.19301	10.08	30.14	12.77	40.22	22.85	63.91	53.91	-23.69	-31.06
3	0.26339	10.08	22.97	11.30	33.05	21.38	61.32	51.32	-28.27	-29.94
4	0.37287	10.09	19.60	12.05	29.69	22.14	58.44	48.44	-28.75	-26.30
5	21.56507	10.41	16.32	8.86	26.73	19.27	60.00	50.00	-33.27	-30.73
6	29.53365	10.21	17.70	10.84	27.91	21.05	60.00	50.00	-32.09	-28.95

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.

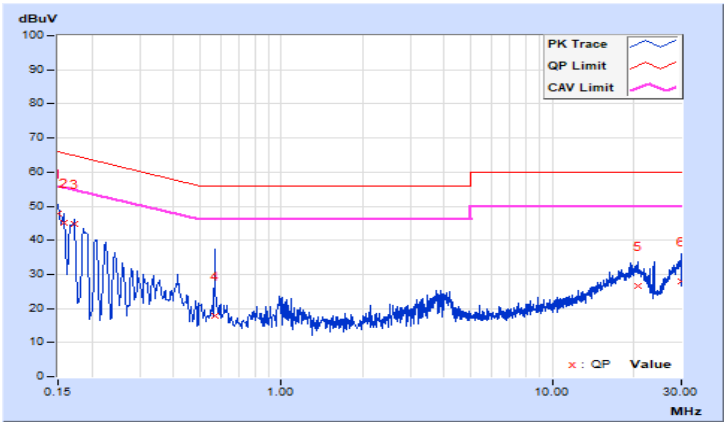


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

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	0.15000	10.08	37.66	22.93	47.74	33.01	66.00	56.00	-18.26	-22.99
2	0.15782	10.08	35.19	17.03	45.27	27.11	65.58	55.58	-20.31	-28.47
3	0.17328	10.08	34.79	18.67	44.87	28.75	64.80	54.80	-19.93	-26.05
4	0.56837	10.11	7.68	2.05	17.79	12.16	56.00	46.00	-38.21	-33.84
5	20.64622	10.63	16.00	8.31	26.63	18.94	60.00	50.00	-33.37	-31.06
6	29.81517	10.38	17.64	10.76	28.02	21.14	60.00	50.00	-31.98	-28.86

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.

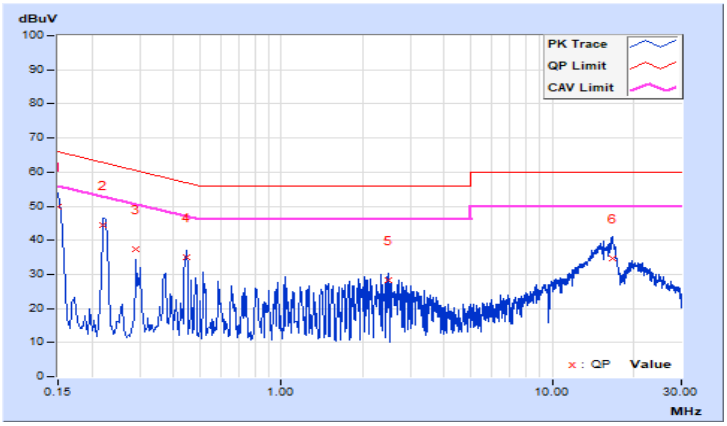


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

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	**0.15000**	**10.07**	**39.77**	**35.43**	**49.84**	**45.50**	**66.00**	**56.00**	**-16.16**	**-10.50**
2	0.22038	10.08	34.22	26.35	44.30	36.43	62.80	52.80	-18.50	-16.37
3	0.29076	10.08	27.43	13.73	37.51	23.81	60.50	50.50	-22.99	-26.69
4	0.44716	10.09	25.03	17.96	35.12	28.05	56.93	46.93	-21.81	-18.88
5	2.49991	10.17	18.04	1.24	28.21	11.41	56.00	46.00	-27.79	-34.59
6	16.68930	10.40	24.44	10.94	34.84	21.34	60.00	50.00	-25.16	-28.66

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.

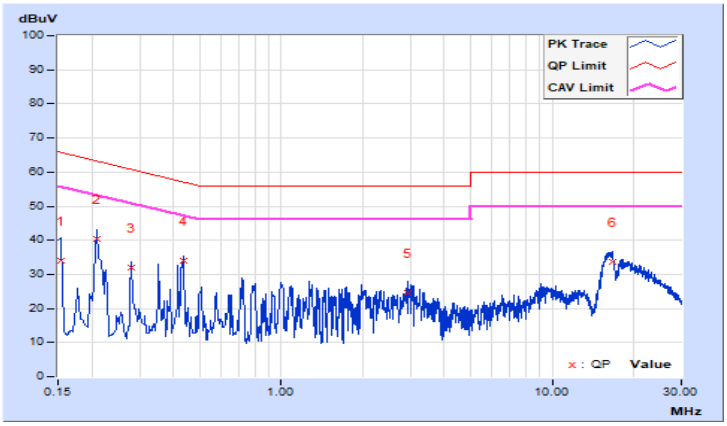


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

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	0.15391	10.08	24.03	7.89	34.11	17.97	65.79	55.79	-31.68	-37.82
2	0.20865	10.08	30.22	16.67	40.30	26.75	63.26	53.26	-22.96	-26.51
3	0.27903	10.09	21.96	4.89	32.05	14.98	60.84	50.84	-28.79	-35.86
4	0.43543	10.10	23.77	18.11	33.87	28.21	57.15	47.15	-23.28	-18.94
5	2.94956	10.21	14.30	1.72	24.51	11.93	56.00	46.00	-31.49	-34.07
6	16.66584	10.57	23.06	10.24	33.63	20.81	60.00	50.00	-26.37	-29.19

Remarks:

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



Scanning radio (Radio 3)

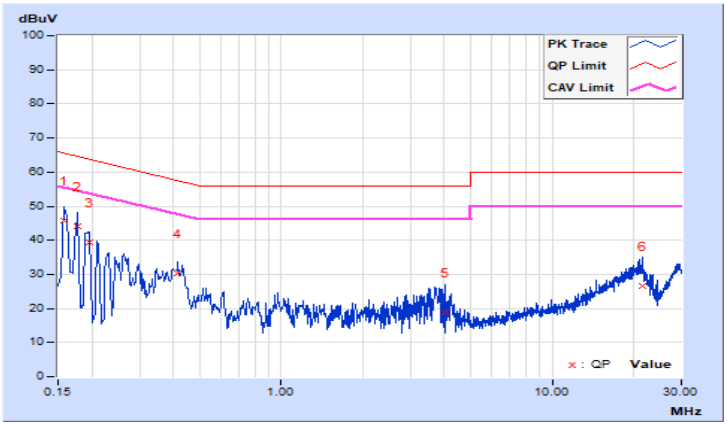
802.11ac (VHT40)

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

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	0.15782	10.07	35.66	18.29	45.73	28.36	65.58	55.58	-19.85	-27.22
2	0.17737	10.07	33.93	19.16	44.00	29.23	64.61	54.61	-20.61	-25.38
3	0.19510	10.08	29.16	11.81	39.24	21.89	63.82	53.82	-24.58	-31.93
4	0.41588	10.09	20.11	13.60	30.20	23.69	57.53	47.53	-27.33	-23.84
5	4.02481	10.22	8.76	1.45	18.98	11.67	56.00	46.00	-37.02	-34.33
6	21.68237	10.41	16.14	8.35	26.55	18.76	60.00	50.00	-33.45	-31.24

Remarks:

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

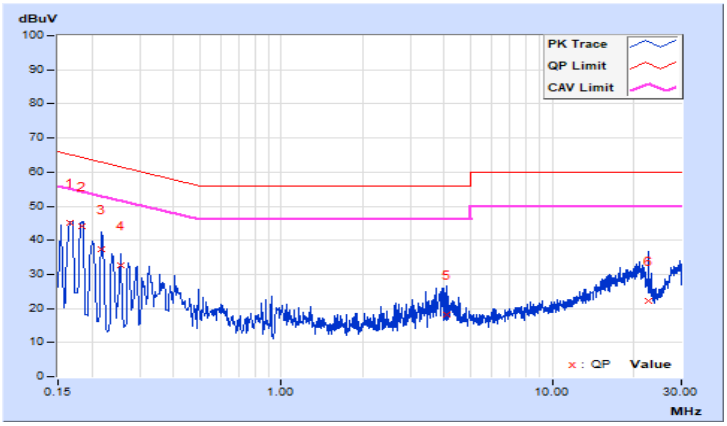


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	A		

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	0.16569	10.08	34.99	18.21	45.07	28.29	65.17	55.17	-20.10	-26.88
2	0.18266	10.08	34.05	18.26	44.13	28.34	64.36	54.36	-20.23	-26.02
3	0.21647	10.08	27.30	11.64	37.38	21.72	62.95	52.95	-25.57	-31.23
4	0.25557	10.09	22.68	10.51	32.77	20.60	61.57	51.57	-28.80	-30.97
5	4.08346	10.26	7.90	2.01	18.16	12.27	56.00	46.00	-37.84	-33.73
6	22.62077	10.58	11.56	3.00	22.14	13.58	60.00	50.00	-37.86	-36.42

Remarks:

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

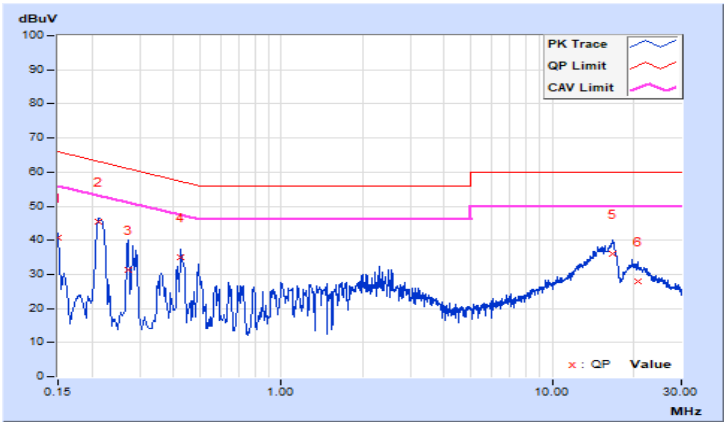


Phase	Line (L)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

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	0.15000	10.07	30.77	22.95	40.84	33.02	66.00	56.00	-25.16	-22.98
2	0.21256	10.08	35.22	24.21	45.30	34.29	63.10	53.10	-17.80	-18.81
3	0.27120	10.08	21.32	2.12	31.40	12.20	61.08	51.08	-29.68	-38.88
4	0.42761	10.09	24.89	17.66	34.98	27.75	57.30	47.30	-22.32	-19.55
5	16.77923	10.40	25.69	14.77	36.09	25.17	60.00	50.00	-23.91	-24.83
6	20.67359	10.43	17.53	5.19	27.96	15.62	60.00	50.00	-32.04	-34.38

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.

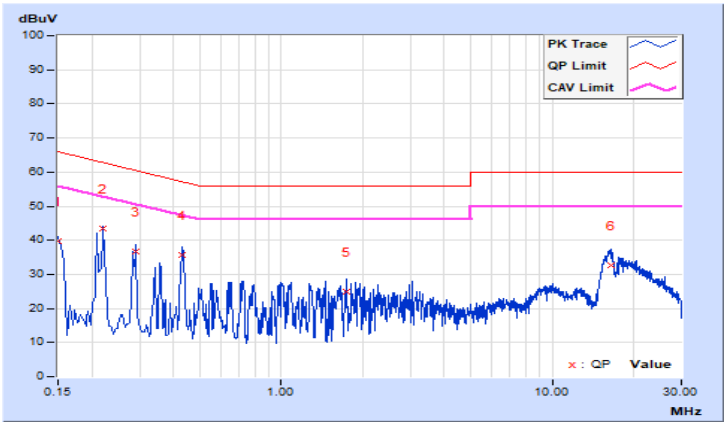


Phase	Neutral (N)	Detector Function	Quasi-Peak (QP) / Average (AV)
Test Mode	B		

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	0.15000	10.08	29.72	23.09	39.80	33.17	66.00	56.00	-26.20	-22.83
2	0.22038	10.08	33.24	19.56	43.32	29.64	62.80	52.80	-19.48	-23.16
3	0.29076	10.09	26.56	12.62	36.65	22.71	60.50	50.50	-23.85	-27.79
4	0.43152	10.10	25.56	19.86	35.66	29.96	57.22	47.22	-21.56	-17.26
5	1.74919	10.16	14.82	1.39	24.98	11.55	56.00	46.00	-31.02	-34.45
6	16.41951	10.56	22.21	10.22	32.77	20.78	60.00	50.00	-27.23	-29.22

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)

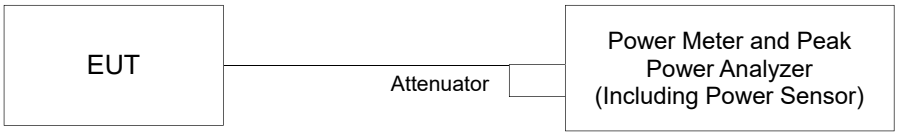
*B is the 26 dB emission bandwidth in megahertz

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



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

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

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

5G traffic radio (Radio 1)

CDD Mode

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)								Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
36	5180	12.03	11.33	12.58	11.46	11.77	11.64	11.38	12.49	122.753	20.89	27.73	Pass
40	5200	12.15	11.41	12.53	11.37	11.47	11.59	11.62	12.56	122.857	20.89	27.73	Pass
48	5240	12.59	11.55	12.12	11.38	11.61	11.67	11.74	12.63	124.906	20.97	27.73	Pass
149	5745	19.41	18.50	19.44	18.46	18.53	18.42	19.11	19.70	631.723	28.01	28.13	Pass
157	5785	19.31	18.24	19.10	18.49	18.67	18.41	18.72	19.58	612.124	27.87	28.13	Pass
165	5825	19.37	18.41	19.28	18.20	19.02	18.52	18.97	19.63	628.272	27.98	28.13	Pass

Note: For 5180~5240MHz: Directional gain = 8.27dBi > 6dBi, so the power limit shall be reduced to 30-(8.27-6) = 27.73dBm.

For 5745~5825MHz: Directional gain = 7.87dBi > 6dBi, so the power limit shall be reduced to 30-(7.87-6) = 28.13dBm.

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)								Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
36	5180	12.48	11.56	12.64	11.22	11.79	11.77	11.75	12.68	127.262	21.05	27.73	Pass
40	5200	12.52	11.42	12.63	11.35	11.70	11.77	11.57	12.77	126.802	21.03	27.73	Pass
48	5240	12.50	11.50	12.30	11.43	11.48	11.68	11.54	12.54	123.777	20.93	27.73	Pass
149	5745	19.28	18.56	19.01	18.36	18.47	18.35	19.03	19.56	613.714	27.88	28.13	Pass
157	5785	19.26	18.20	18.93	18.14	18.51	18.40	18.62	19.50	595.772	27.75	28.13	Pass
165	5825	19.38	18.20	19.26	18.40	18.77	18.46	18.84	19.46	616.631	27.90	28.13	Pass

Note: For 5180~5240MHz: Directional gain = 8.27dBi > 6dBi, so the power limit shall be reduced to 30-(8.27-6) = 27.73dBm.

For 5745~5825MHz: Directional gain = 7.87dBi > 6dBi, so the power limit shall be reduced to 30-(7.87-6) = 28.13dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)								Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
38	5190	15.52	14.44	15.38	14.49	14.88	14.86	15.05	15.69	256.513	24.09	30.00	Pass
46	5230	15.75	14.33	15.35	14.77	15.13	14.90	14.86	15.74	260.558	24.16	30.00	Pass
151	5755	19.91	18.96	19.89	19.04	19.24	19.19	19.41	20.21	713.503	28.53	30.00	Pass
159	5795	21.10	19.70	20.96	19.74	20.43	19.98	20.38	21.78	910.831	29.59	30.00	Pass

Note: For 5180~5240MHz: Max. gain = 5.27dBi < 6dBi, so the power limit is not reduced.
For 5745~5825MHz: Max. gain = 4.87dBi < 6dBi, so the power limit is not reduced.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)								Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
42	5210	14.70	13.50	14.71	14.54	14.49	14.03	14.82	14.60	222.515	23.47	30.00	Pass
155	5775	15.48	14.75	15.36	14.38	15.14	14.95	14.83	16.05	261.544	24.18	30.00	Pass

Note: For 5180~5240MHz: Max. gain = 5.27dBi < 6dBi, so the power limit is not reduced.
For 5745~5825MHz: Max. gain = 4.87dBi < 6dBi, so the power limit is not reduced.

802.11ax (HE20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)								Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
36	5180	12.54	11.58	12.72	11.38	11.84	11.83	11.86	12.78	129.612	21.13	27.73	Pass
40	5200	12.55	11.51	12.66	11.54	11.86	11.82	11.76	12.79	129.412	21.12	27.73	Pass
48	5240	12.58	11.63	12.45	11.44	11.65	11.71	11.72	12.72	127.192	21.04	27.73	Pass
149	5745	19.42	18.60	19.17	18.47	18.59	18.50	19.08	19.63	628.667	27.98	28.13	Pass
157	5785	19.36	18.23	19.00	18.31	18.70	18.47	18.77	19.57	610.369	27.86	28.13	Pass
165	5825	19.39	18.38	19.32	18.50	18.80	18.58	18.93	19.59	629.185	27.99	28.13	Pass

Note: For 5180~5240MHz: Directional gain = 8.27dBi > 6dBi, so the power limit shall be reduced to 30-(8.27-6) = 27.73dBm.
For 5745~5825MHz: Directional gain = 7.87dBi > 6dBi, so the power limit shall be reduced to 30-(7.87-6) = 28.13dBm.

802.11ax (HE40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)								Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
38	5190	15.62	14.53	15.53	14.64	15.01	14.97	15.07	15.72	262.251	24.19	30.00	Pass
46	5230	15.87	14.53	15.42	14.86	15.32	15.02	14.93	15.76	**267.066**	24.27	30.00	Pass
151	5755	20.04	19.01	19.92	19.14	19.40	19.22	19.52	20.27	727.359	28.62	30.00	Pass
159	5795	21.26	19.86	21.07	19.83	20.63	20.03	20.42	21.81	**932.750**	29.70	30.00	Pass

Note: For 5180~5240MHz: Max. gain = 5.27dBi < 6dBi, so the power limit is not reduced.
For 5745~5825MHz: Max. gain = 4.87dBi < 6dBi, so the power limit is not reduced.

802.11ax (HE80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)								Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
42	5210	14.72	13.55	14.87	14.62	14.57	14.08	14.99	14.72	227.384	23.57	30.00	Pass
155	5775	15.63	14.77	15.52	14.48	15.23	15.07	14.99	16.12	268.206	24.28	30.00	Pass

Note: For 5180~5240MHz: Max. gain = 5.27dBi < 6dBi, so the power limit is not reduced.
For 5745~5825MHz: Max. gain = 4.87dBi < 6dBi, so the power limit is not reduced.

Beamforming Mode

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)								Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
36	5180	12.48	11.56	12.64	11.22	11.79	11.77	11.75	12.68	127.262	21.05	22.51	Pass
40	5200	12.52	11.42	12.63	11.35	11.70	11.77	11.57	12.77	126.802	21.03	22.51	Pass
48	5240	12.50	11.50	12.30	11.43	11.48	11.68	11.54	12.54	123.777	20.93	22.51	Pass
149	5745	13.38	13.25	13.70	13.05	13.16	13.04	13.72	13.75	174.641	22.42	22.61	Pass
157	5785	13.95	12.89	13.62	12.83	13.20	13.09	13.31	13.89	173.669	22.40	22.61	Pass
165	5825	13.48	12.89	13.95	13.09	13.46	13.15	13.53	13.95	177.149	22.48	22.61	Pass

Note:

For 5180~5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.49dBi > 6dBi, so the power limit shall be reduced to 30-(13.49-6) = 22.51dBm.

For 5745~5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.39dBi > 6dBi, so the power limit shall be reduced to 30-(13.39-6) = 22.61dBm.

802.11ac (VHT40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)								Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
38	5190	13.56	12.48	13.42	12.53	12.92	12.90	13.09	13.73	163.346	22.13	22.51	Pass
46	5230	13.79	12.37	13.39	12.81	13.17	12.94	12.90	13.78	165.922	22.20	22.51	Pass
151	5755	13.87	12.92	13.85	13.00	13.20	13.15	13.37	13.97	176.405	22.47	22.61	Pass
159	5795	14.07	12.67	13.93	12.71	13.40	12.95	13.35	14.05	176.039	22.46	22.61	Pass

Note:

For 5180~5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.49dBi > 6dBi, so the power limit shall be reduced to 30-(13.49-6) = 22.51dBm.

For 5745~5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.39dBi > 6dBi, so the power limit shall be reduced to 30-(13.39-6) = 22.61dBm.

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)								Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
42	5210	13.69	12.49	13.62	13.53	13.48	13.02	13.64	13.59	174.993	22.43	22.51	Pass
155	5775	13.23	13.71	12.98	13.59	12.61	13.37	13.18	13.06	168.244	22.26	22.61	Pass

Note:

For 5180~5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.49dBi > 6dBi, so the power limit shall be reduced to 30-(13.49-6) = 22.51dBm.

For 5745~5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.39dBi > 6dBi, so the power limit shall be reduced to 30-(13.39-6) = 22.61dBm.

802.11ax (HE20)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)								Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
36	5180	12.54	11.58	12.72	11.38	11.84	11.83	11.86	12.78	129.612	21.13	22.51	Pass
40	5200	12.55	11.51	12.66	11.54	11.86	11.82	11.76	12.79	129.412	21.12	22.51	Pass
48	5240	12.58	11.63	12.45	11.44	11.65	11.71	11.72	12.72	127.192	21.04	22.51	Pass
149	5745	13.12	13.29	13.86	13.16	13.28	13.19	13.77	13.95	177.646	22.50	22.61	Pass
157	5785	14.05	12.92	13.69	13.00	13.39	13.16	13.46	13.96	177.938	22.50	22.61	Pass
165	5825	13.28	13.07	14.01	13.19	13.49	13.27	13.62	13.97	179.108	22.53	22.61	Pass

Note:

For 5180~5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.49dBi > 6dBi, so the power limit shall be reduced to 30-(13.49-6) = 22.51dBm.

For 5745~5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.39dBi > 6dBi, so the power limit shall be reduced to 30-(13.39-6) = 22.61dBm.

802.11ax (HE40)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)								Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
38	5190	13.66	12.57	13.57	12.68	13.05	13.01	13.11	13.76	167.001	22.23	22.51	Pass
46	5230	13.91	12.57	13.46	12.90	13.36	13.06	12.97	13.80	170.067	22.31	22.51	Pass
151	5755	14.00	12.97	13.88	13.10	13.36	13.18	13.48	13.99	**179.605**	22.54	22.61	Pass
159	5795	14.15	12.75	13.96	12.72	13.52	12.92	13.31	14.11	177.705	22.50	22.61	Pass

Note:

For 5180~5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.49dBi > 6dBi, so the power limit shall be reduced to 30-(13.49-6) = 22.51dBm.

For 5745~5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.39dBi > 6dBi, so the power limit shall be reduced to 30-(13.39-6) = 22.61dBm.

802.11ax (HE80)

Chan.	Freq. (MHz)	Maximum Conducted Power (dBm)								Total Power (mW)	Total Power (dBm)	Power Limit (dBm)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
42	5210	13.61	12.44	13.76	13.51	13.46	12.97	13.88	13.61	**176.101**	22.46	22.51	Pass
155	5775	13.23	13.86	13.00	13.75	12.71	13.46	13.30	13.22	172.241	22.36	22.61	Pass

Note:

For 5180~5240MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.49dBi > 6dBi, so the power limit shall be reduced to 30-(13.49-6) = 22.51dBm.

For 5745~5825MHz: Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.39dBi > 6dBi, so the power limit shall be reduced to 30-(13.39-6) = 22.61dBm.

Scanning radio (Radio 3)

CDD Mode

802.11a

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	100.231	20.01	30.00	Pass
40	5200	141.906	21.52	30.00	Pass
48	5240	128.529	21.09	30.00	Pass
149	5745	114.288	20.58	30.00	Pass
157	5785	111.173	20.46	30.00	Pass
165	5825	117.761	20.71	30.00	Pass

802.11ac (VHT20)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
36	5180	87.902	19.44	30.00	Pass
40	5200	141.579	21.51	30.00	Pass
48	5240	124.451	20.95	30.00	Pass
149	5745	116.413	20.66	30.00	Pass
157	5785	**122.462**	20.88	30.00	Pass
165	5825	114.288	20.58	30.00	Pass

802.11ac (VHT40)

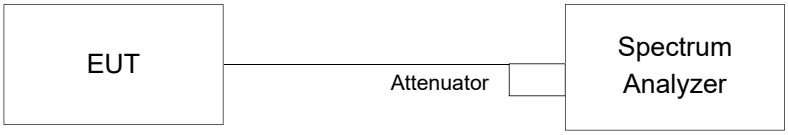
Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
38	5190	61.376	17.88	30.00	Pass
46	5230	**143.880**	21.58	30.00	Pass
151	5755	106.414	20.27	30.00	Pass
159	5795	108.393	20.35	30.00	Pass

802.11ac (VHT80)

Chan.	Freq. (MHz)	Maximum Conducted Power (mW)	Maximum Conducted Power (dBm)	Power Limit (dBm)	Pass / Fail
42	5210	25.235	14.02	30.00	Pass
155	5775	84.723	19.28	30.00	Pass

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Result

5G traffic radio (Radio 1)

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)							
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7
36	5180	16.43	16.43	16.43	16.43	16.43	16.43	16.43	16.43
40	5200	16.44	16.44	16.44	16.44	16.44	16.44	16.44	16.44
48	5240	16.44	16.44	16.44	16.44	16.44	16.44	16.44	16.44
149	5745	17.65	19.91	19.92	20.08	20.52	20.08	20.17	20.52
157	5785	17.40	18.12	18.12	17.88	18.36	18.12	18.24	18.12
165	5825	19.20	19.32	19.32	19.20	19.20	19.32	19.56	19.32

802.11ax (HE20)

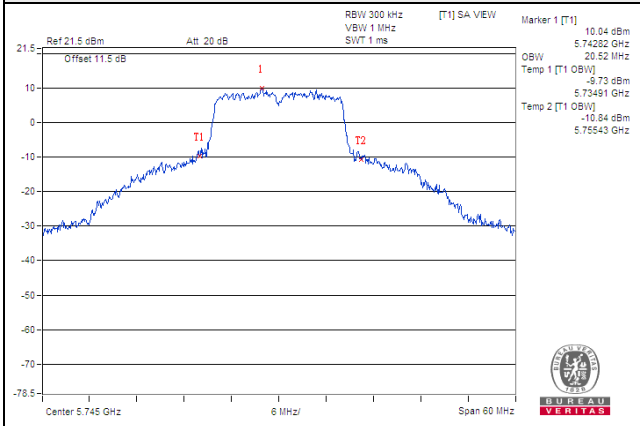
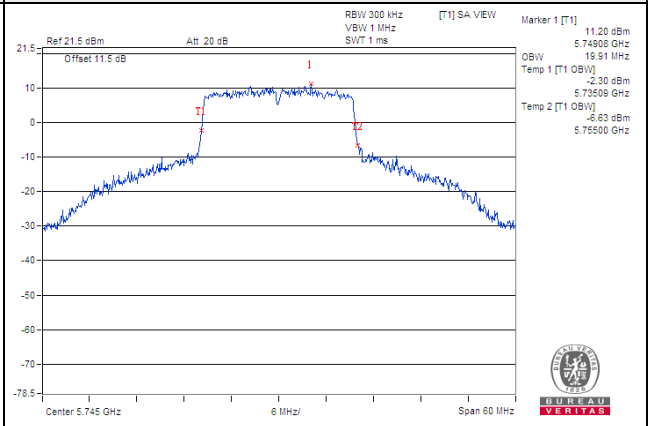
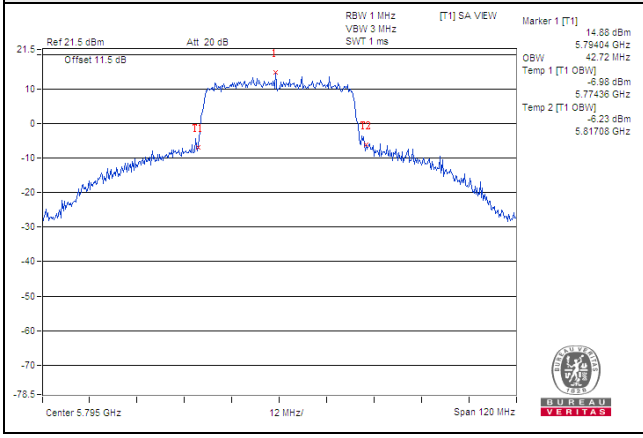
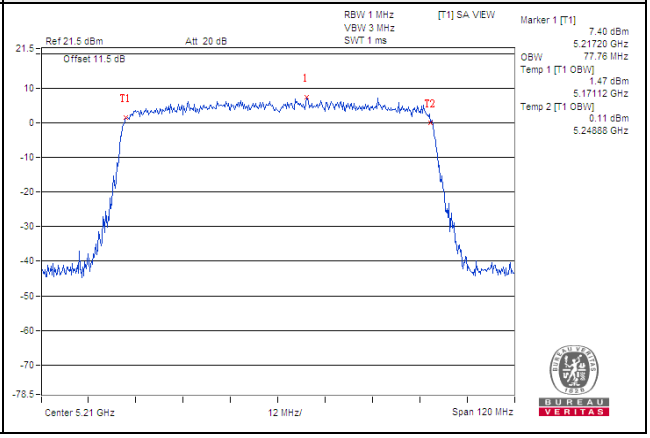
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)							
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7
36	5180	19.05	19.05	18.96	19.05	18.96	18.87	18.87	18.96
40	5200	18.96	19.08	18.96	19.08	18.84	18.96	19.08	18.96
48	5240	18.84	18.96	18.84	19.08	18.84	18.84	18.96	18.96
149	5745	19.68	19.66	19.74	19.74	19.57	19.74	19.91	19.57
157	5785	19.32	19.32	19.32	19.56	19.44	19.32	19.32	19.44
165	5825	19.44	19.56	19.68	19.56	19.44	19.56	19.44	19.56

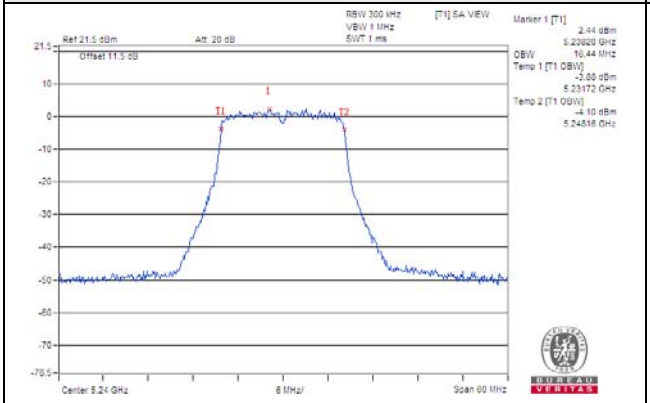
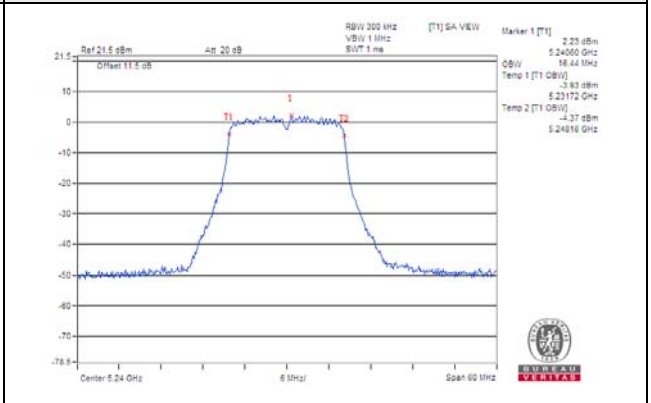
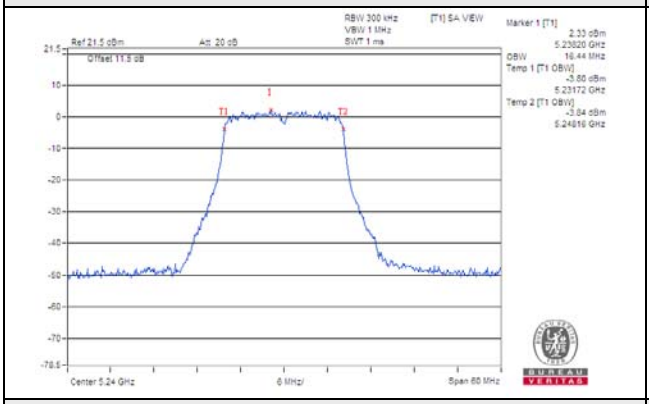
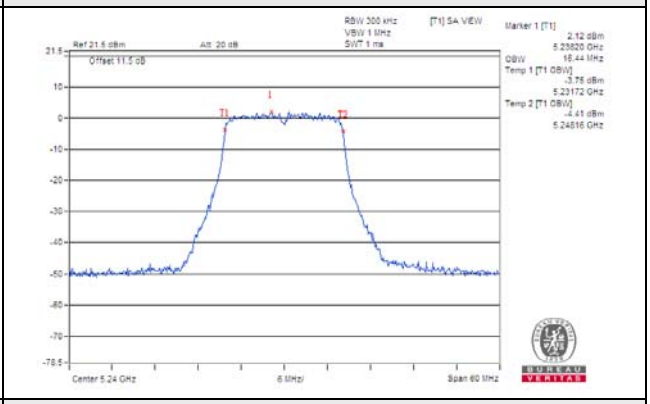
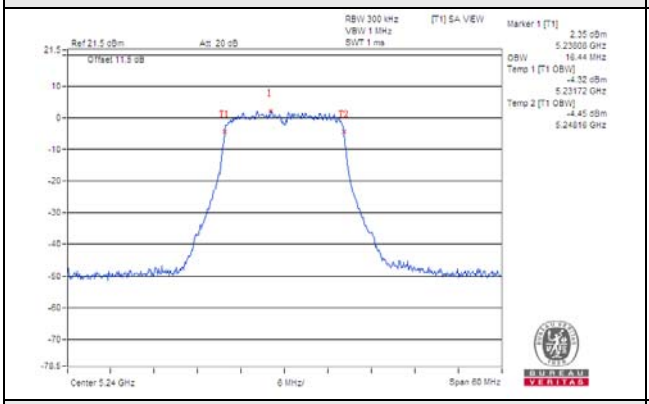
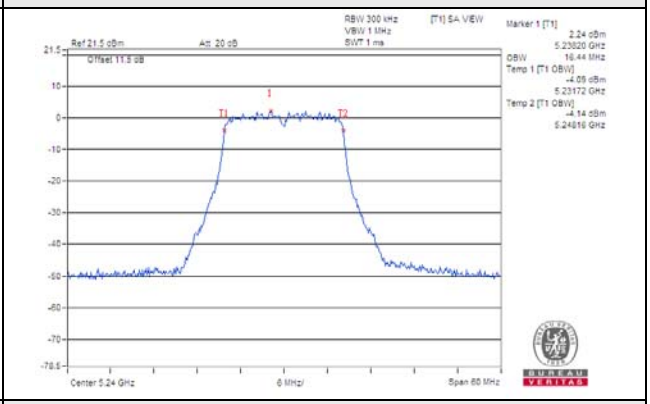
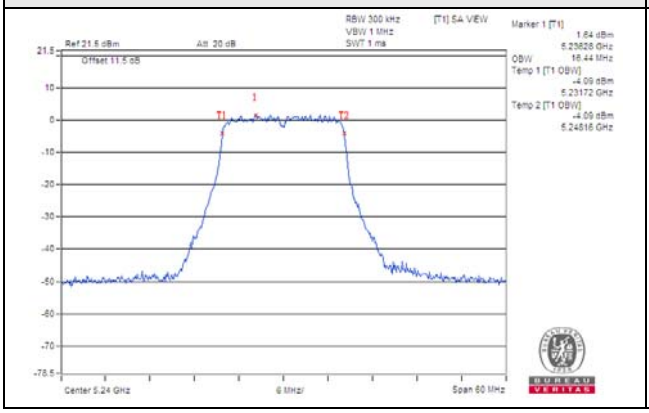
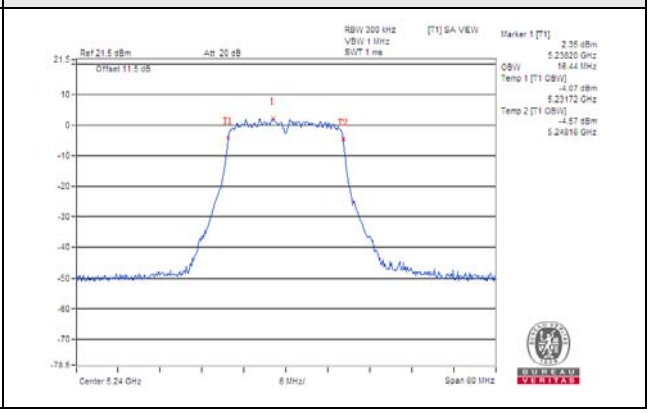
802.11ax (HE40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)							
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7
38	5190	37.92	38.09	38.09	38.60	37.92	38.09	38.09	37.92
46	5230	38.60	37.92	37.92	38.60	38.60	37.92	38.09	37.92
151	5755	39.66	39.30	40.17	40.70	40.00	40.18	40.87	40.87
159	5795	42.72	38.88	39.12	39.36	39.60	39.12	39.36	39.36

802.11ax (HE80)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)							
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7
42	5210	77.28	77.76	77.52	77.76	77.28	77.28	77.28	77.52
155	5775	77.52	77.39	77.21	77.22	77.39	77.22	77.22	77.39

Spectrum Plot of Worst Value	
802.11a	802.11ax (HE20)
	
802.11ax (HE40)	802.11ax (HE80)
	

Spectrum Plot for near By DFS Band	
802.11a / Chain 0 / CH 48	802.11a / Chain 1 / CH 48
	
802.11a / Chain 2 / CH 48	802.11a / Chain 3 / CH 48
	
802.11a / Chain 4 / CH 48	802.11a / Chain 5 / CH 48
	
802.11a / Chain 6 / CH 48	802.11a / Chain 7 / CH 48
	

Spectrum Plot for near By DFS Band	
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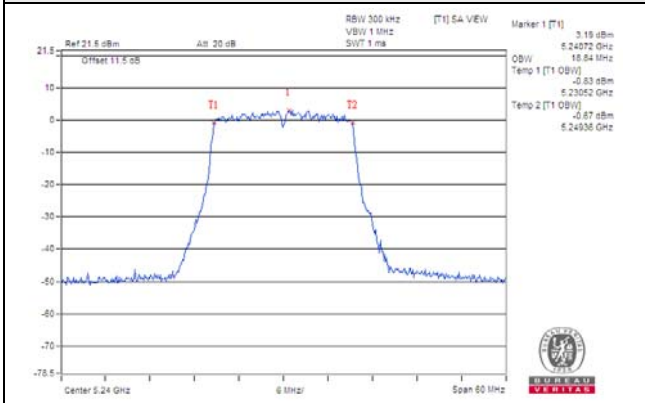
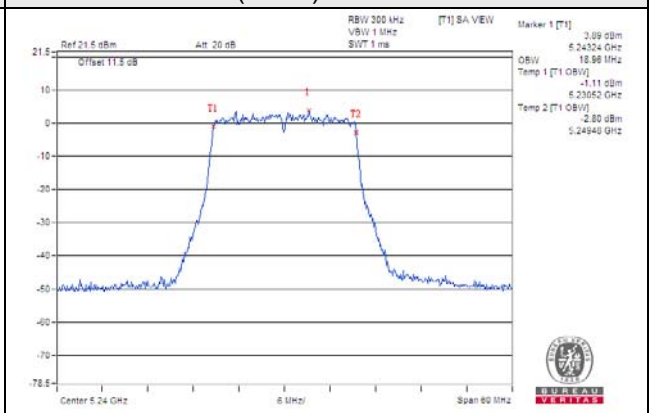
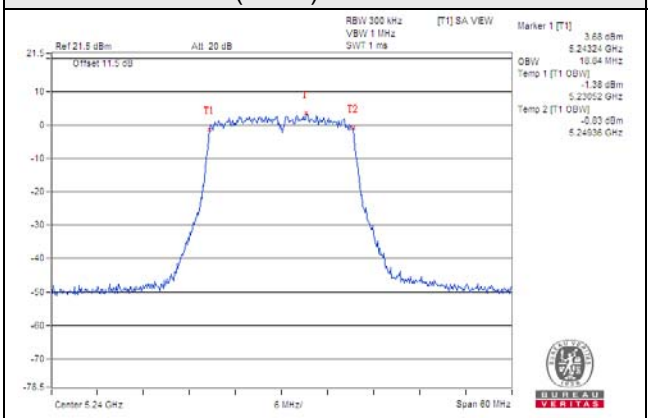
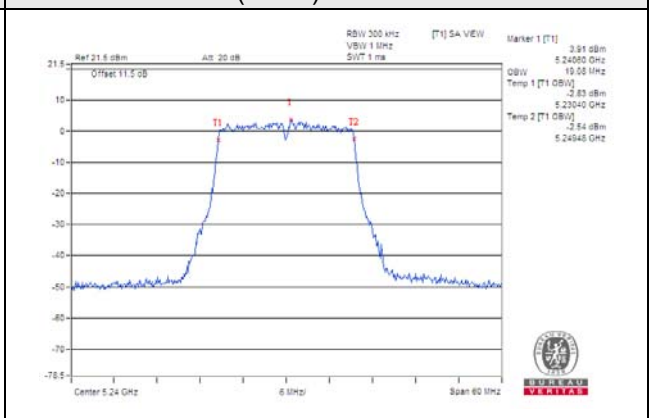
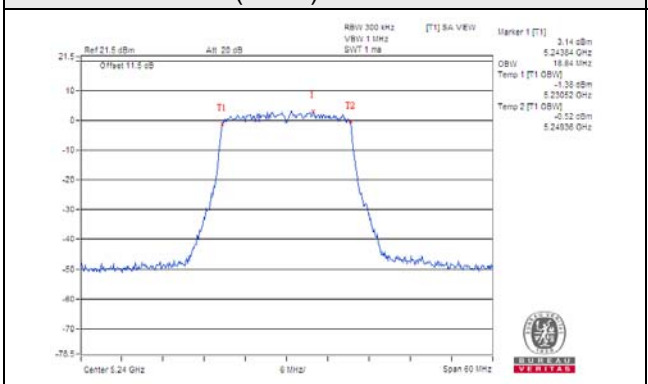
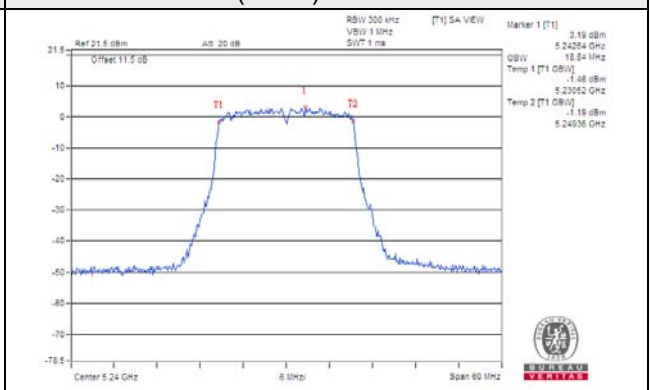
	
802.11ax (HE20) / Chain 2 / CH 48	802.11ax (HE20) / Chain 3 / CH 48
	
802.11ax (HE20) / Chain 4 / CH 48	802.11ax (HE20) / Chain 5 / CH 48
	
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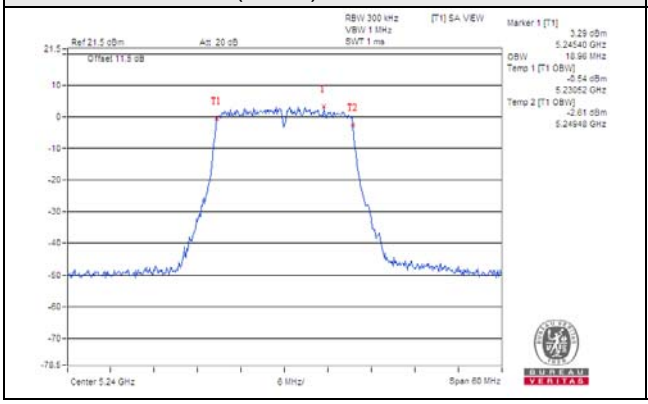	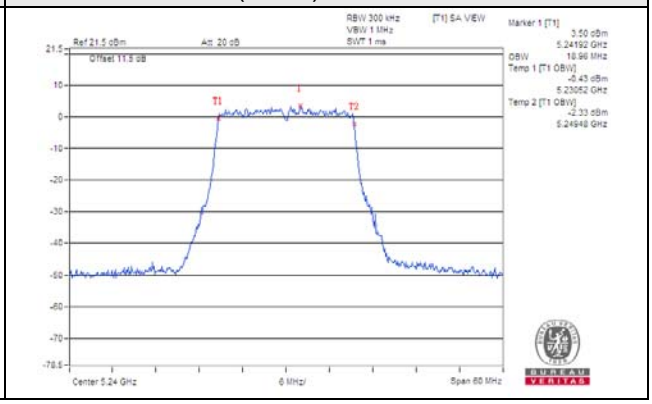

Spectrum Plot for near By DFS Band	
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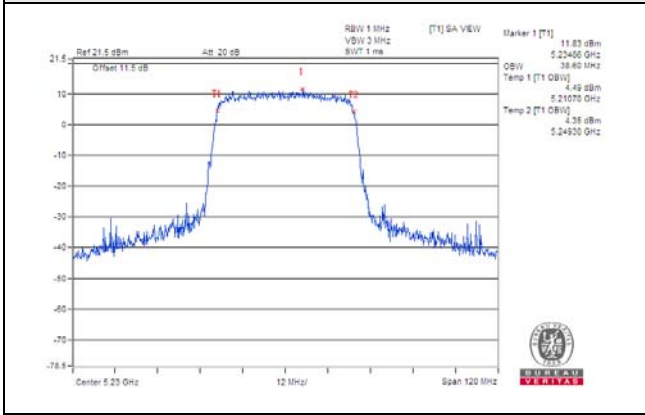
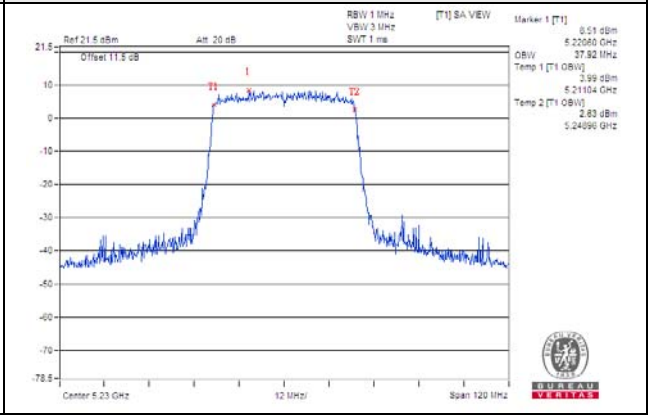
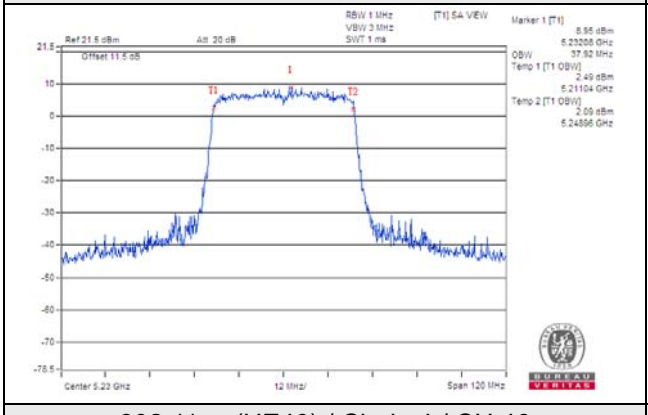
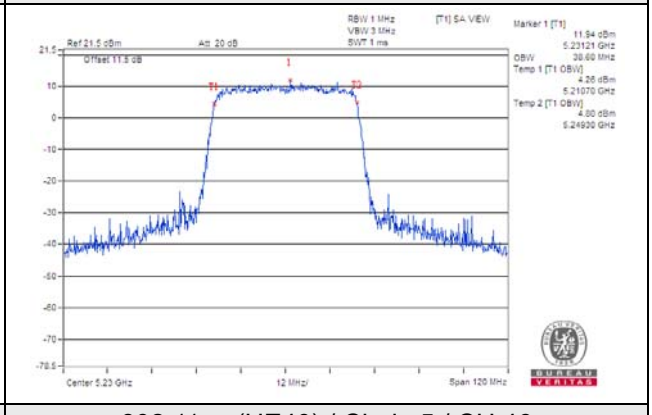
	
802.11ax (HE40) / Chain 2 / CH 46	802.11ax (HE40) / Chain 3 / CH 46
	
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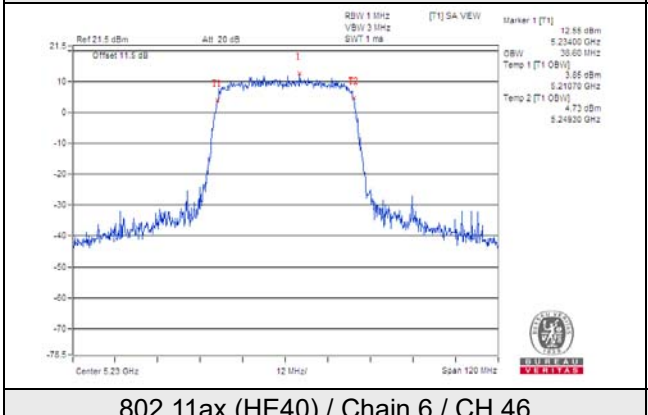	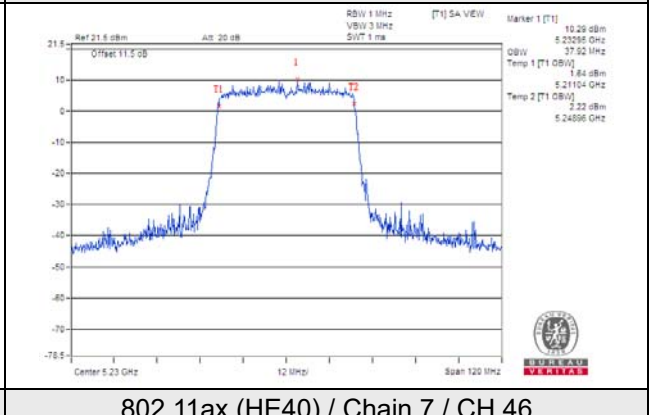
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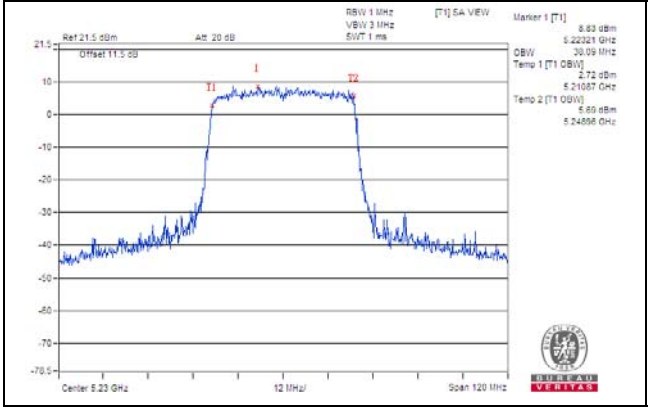	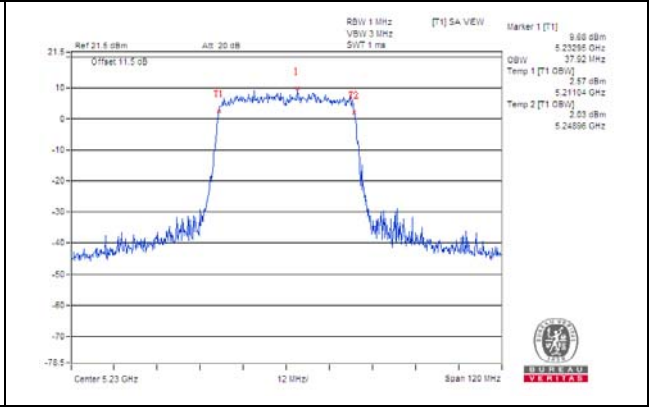

Spectrum Plot for near By DFS Band	
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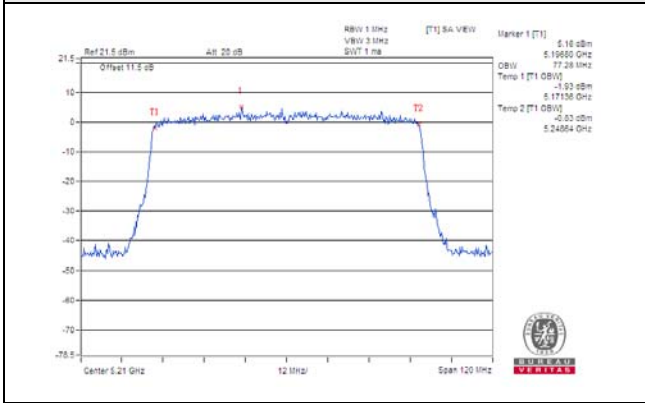	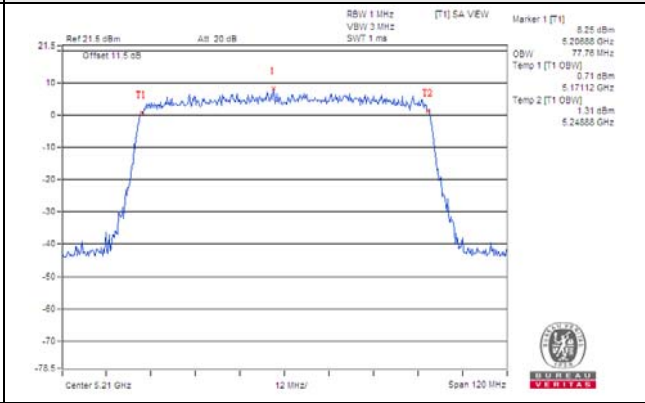
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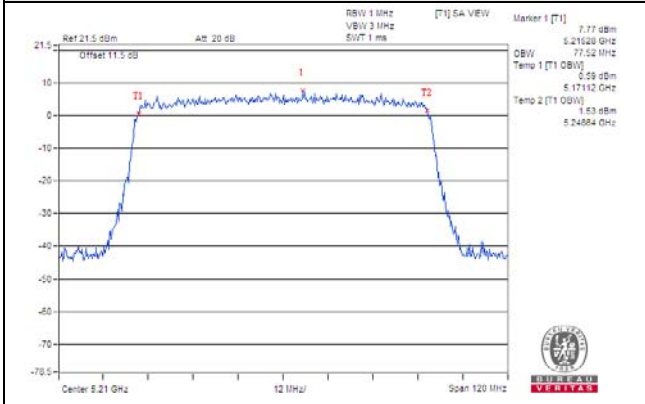	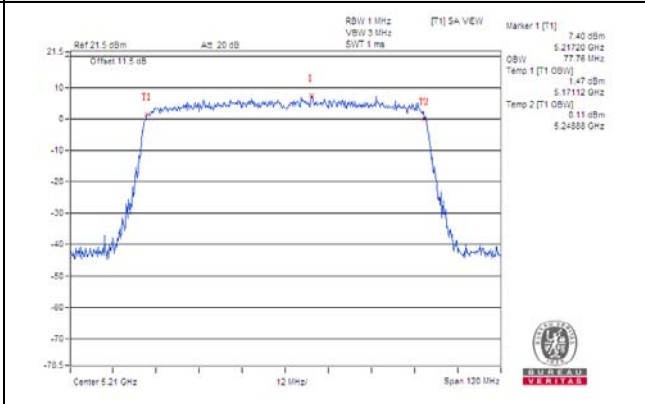
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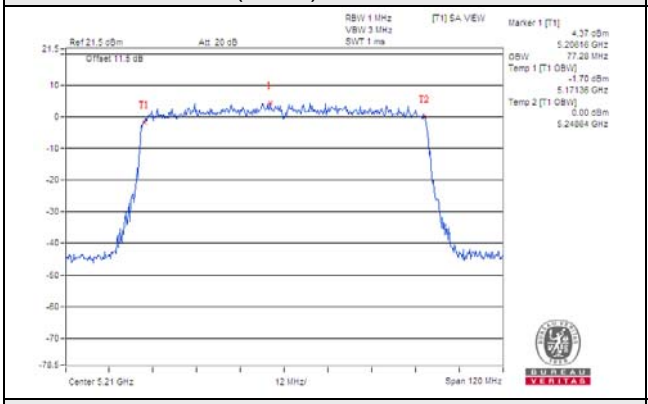	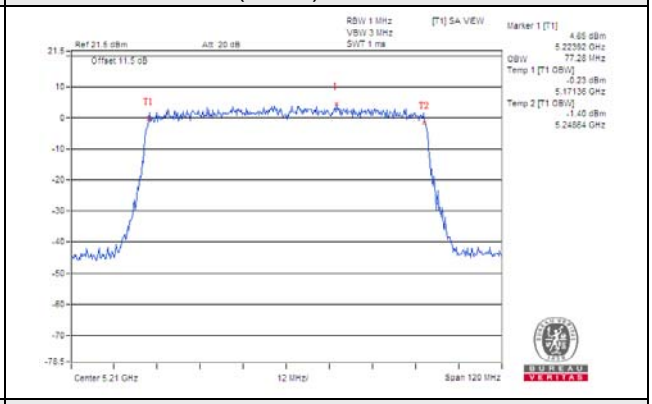
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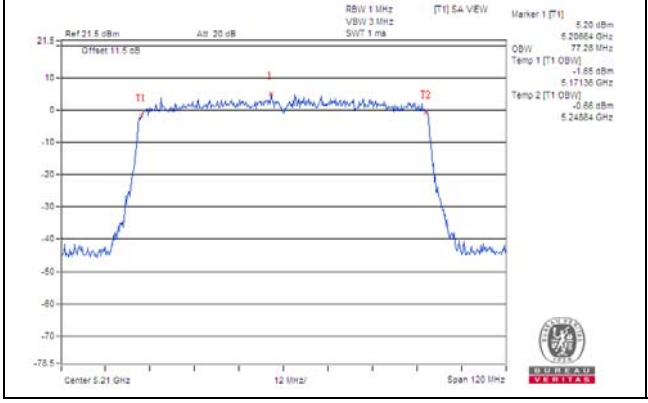	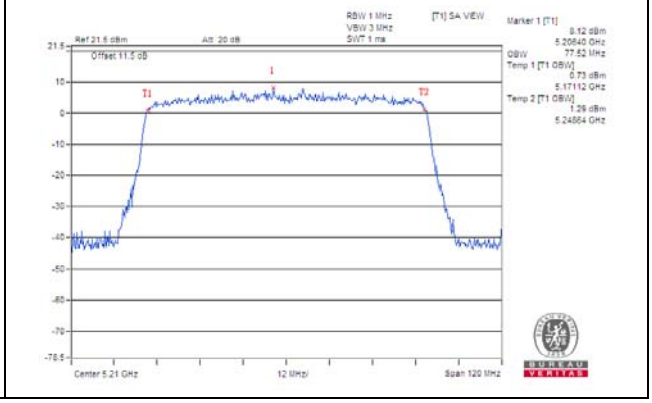

Spectrum Plot for near By DFS Band	
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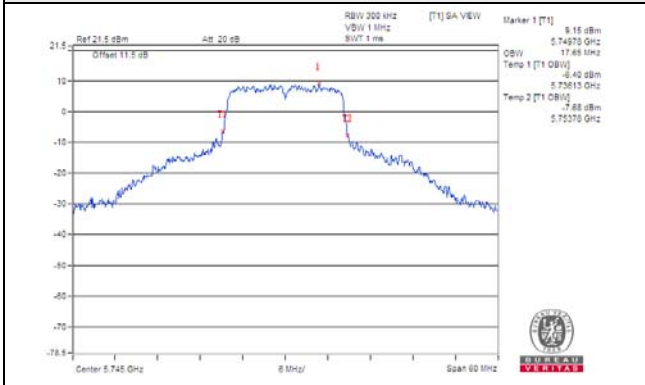
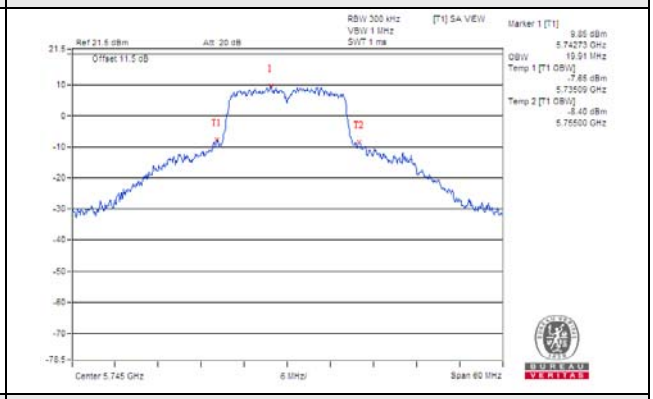
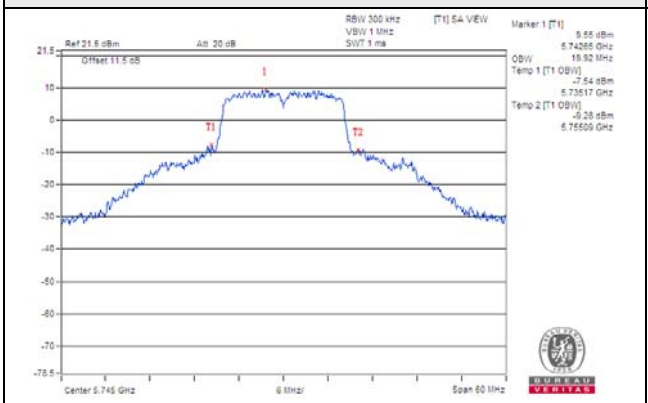
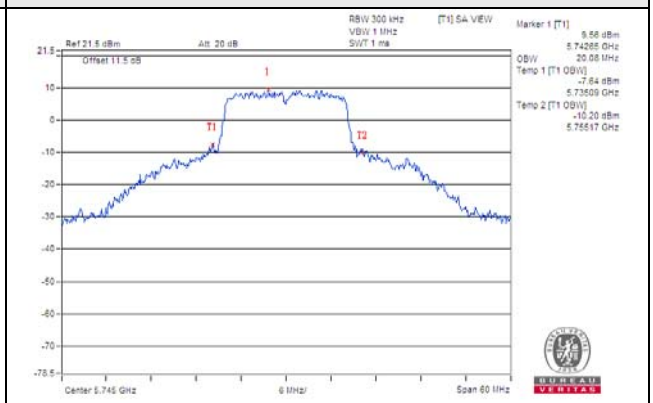
	
802.11a / Chain 2 / CH 149	802.11a / Chain 3 / CH 149
	
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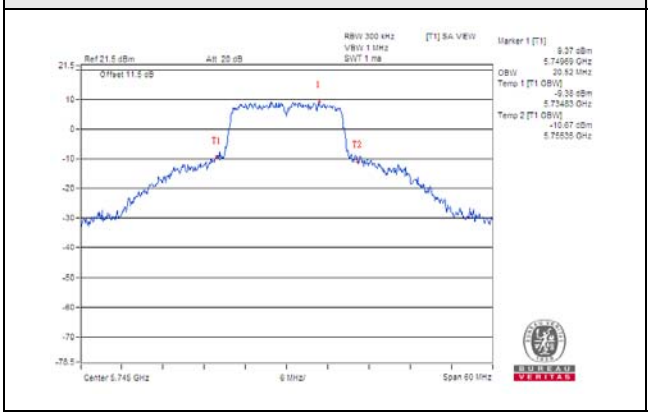	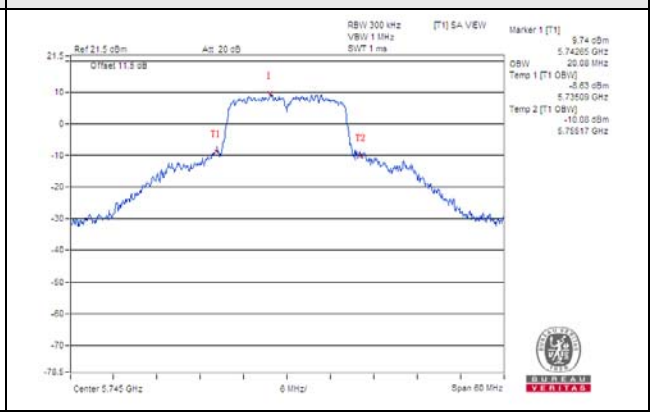
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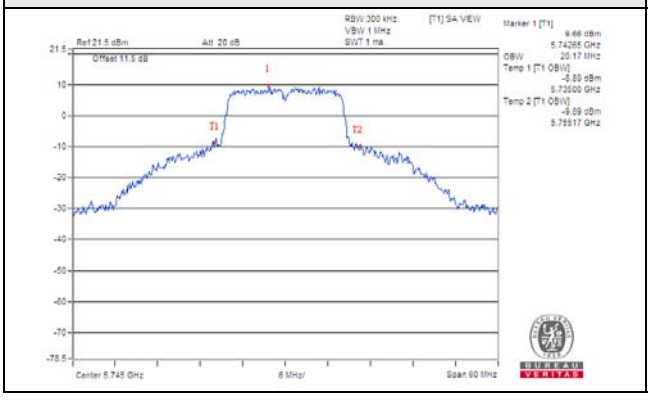	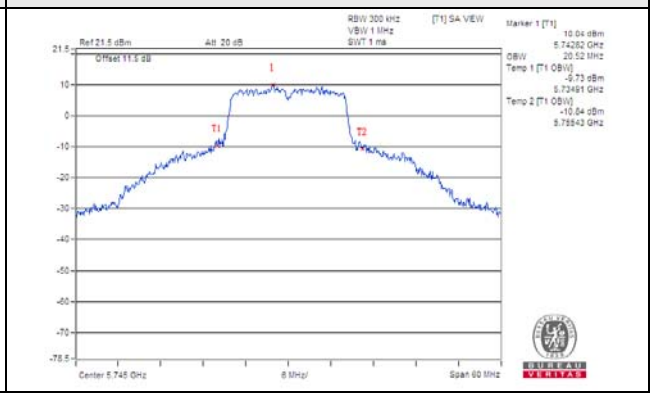

Spectrum Plot for near By DFS Band	
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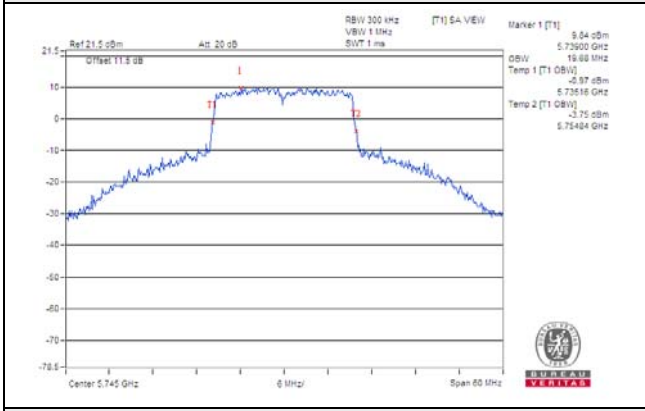	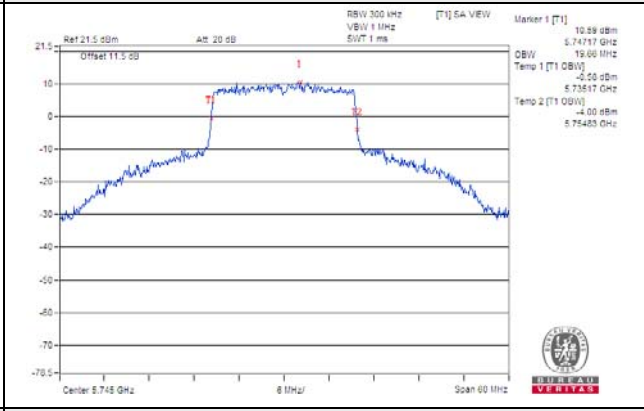
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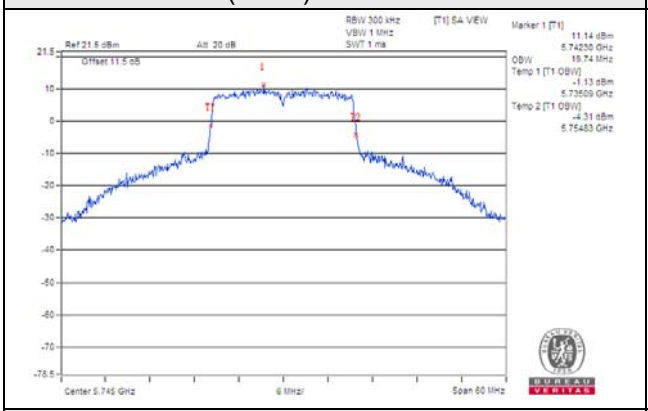	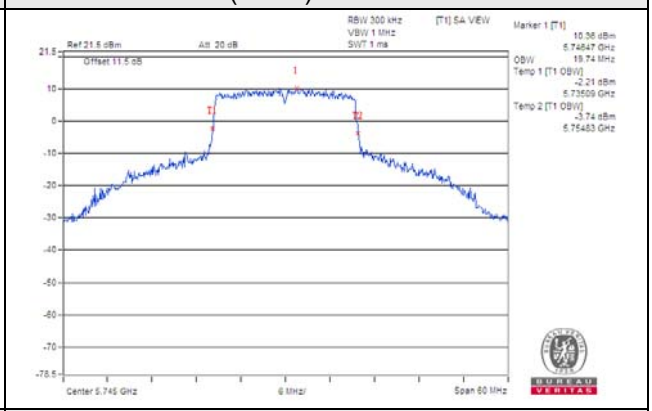
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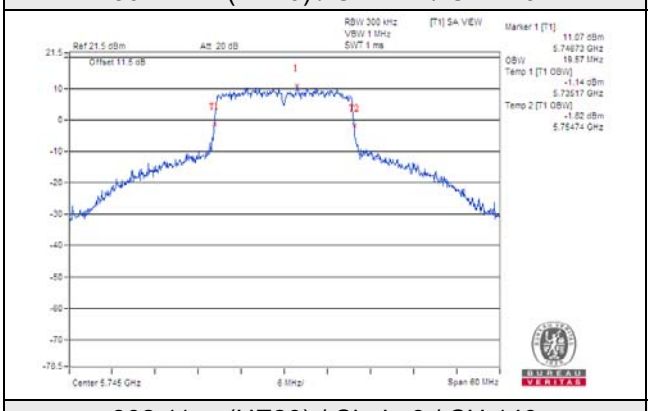	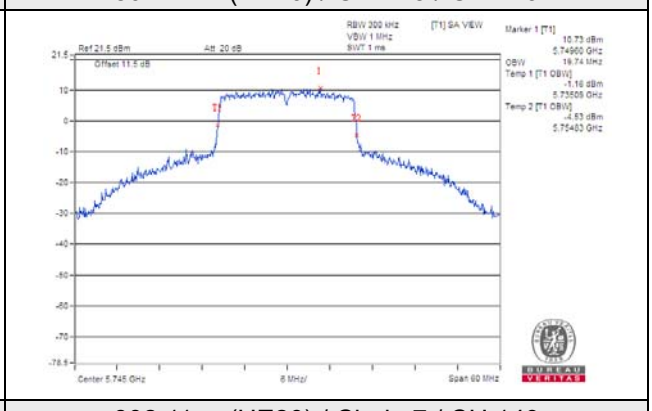
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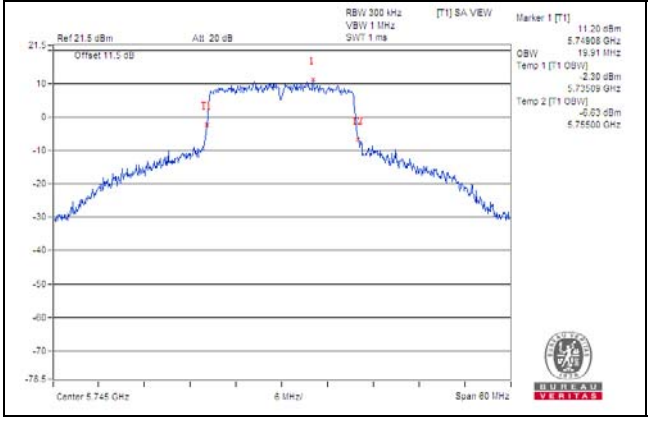	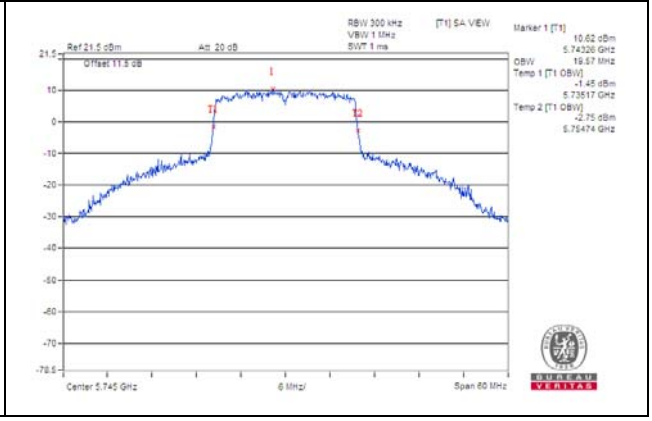

Spectrum Plot for near By DFS Band	
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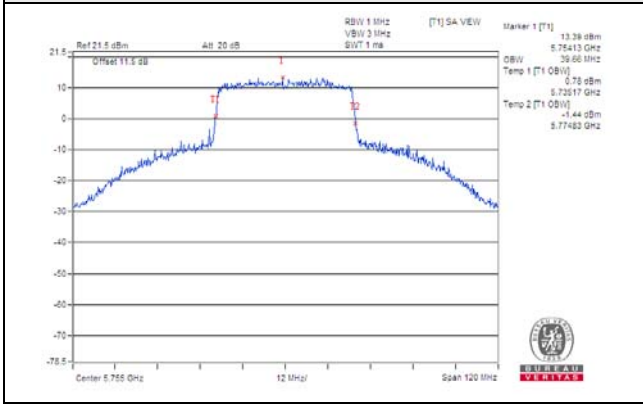	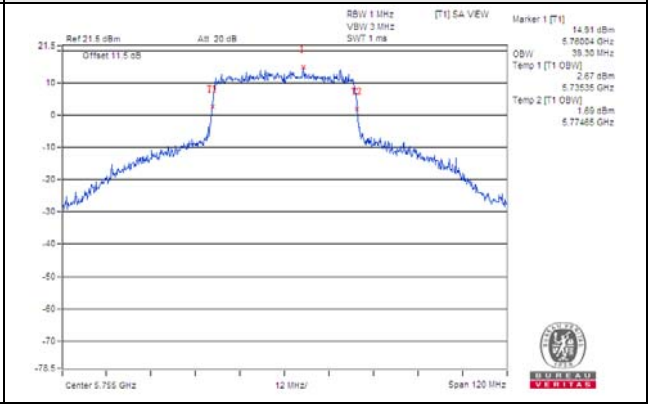
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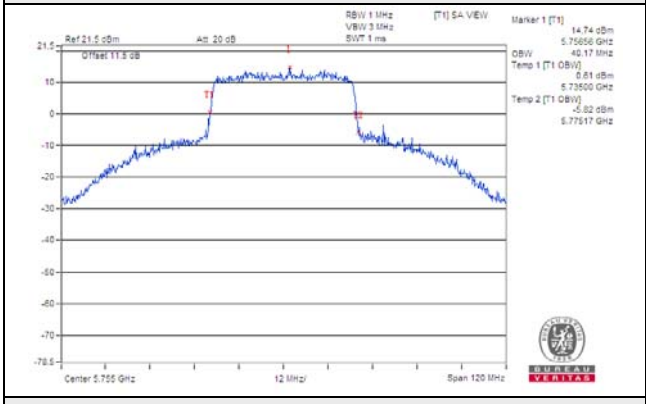	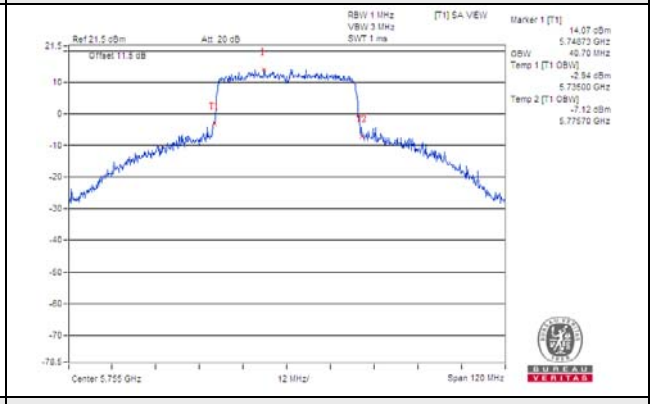
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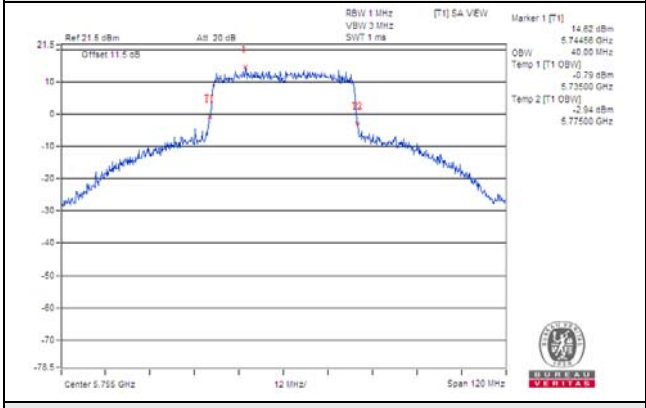	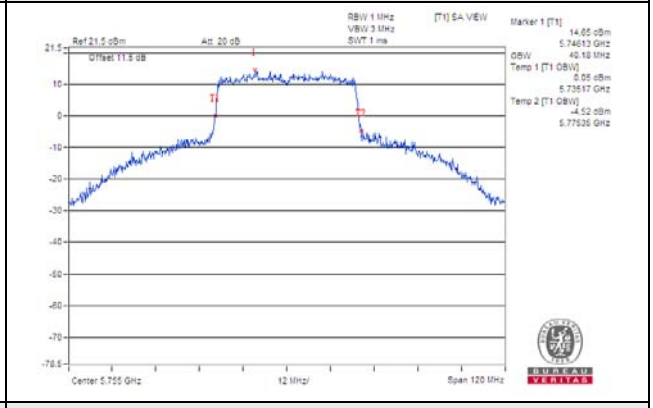
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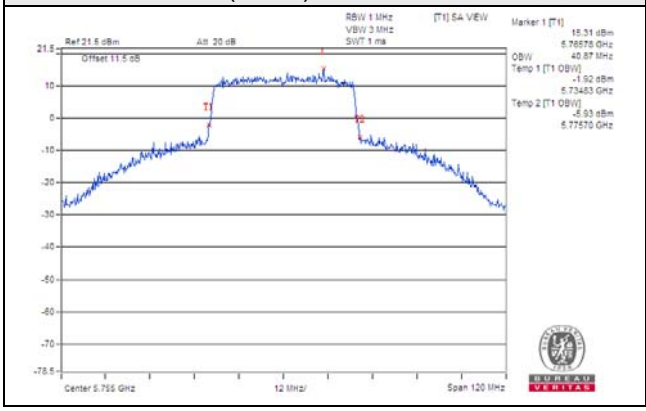	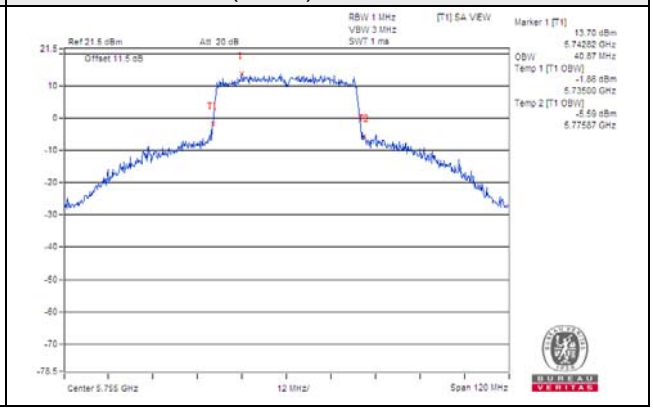

Spectrum Plot for near By DFS Band	
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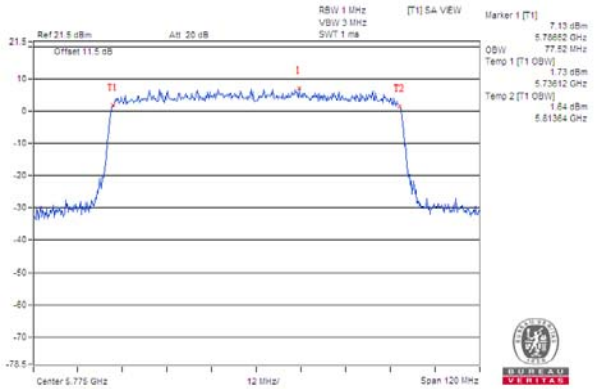
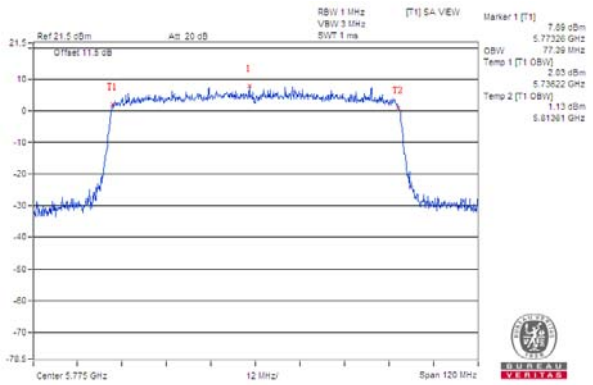
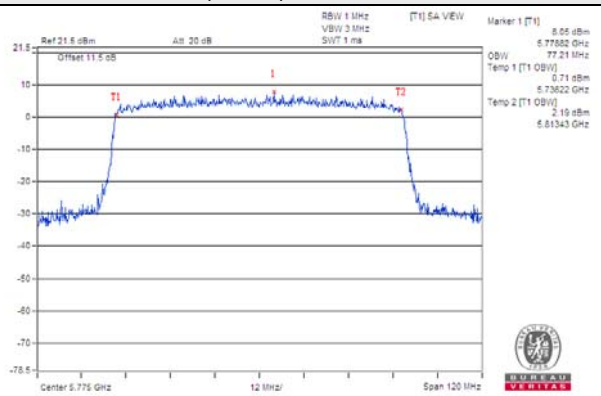
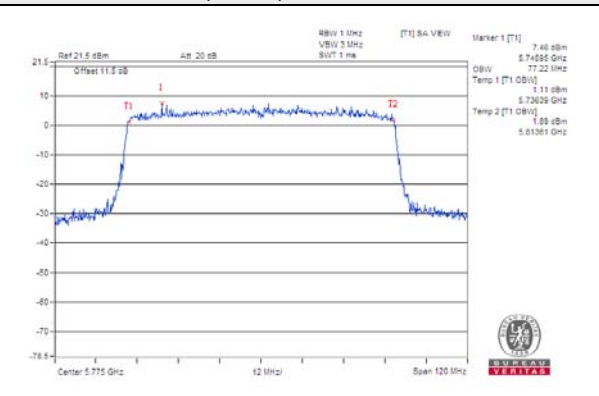
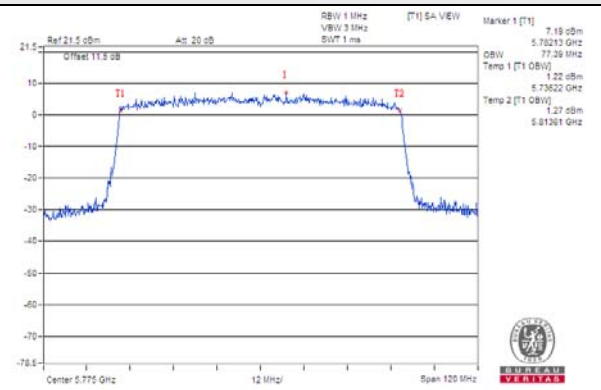
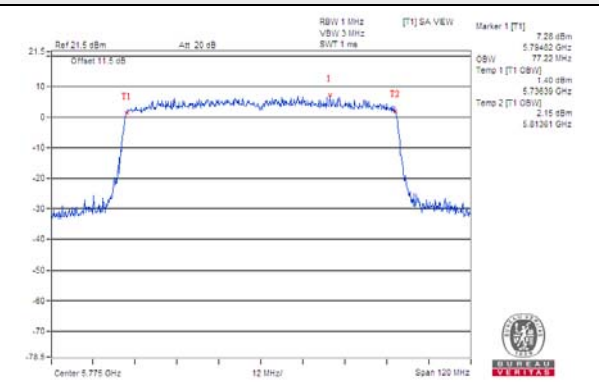
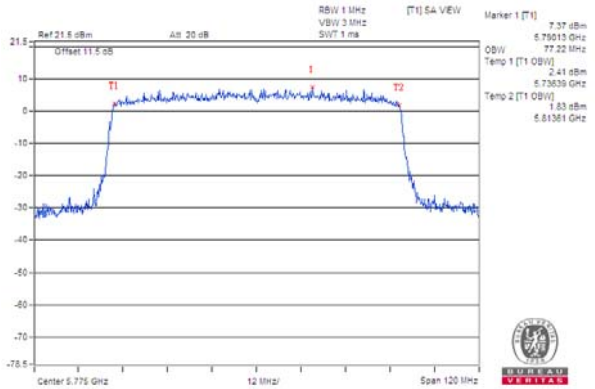
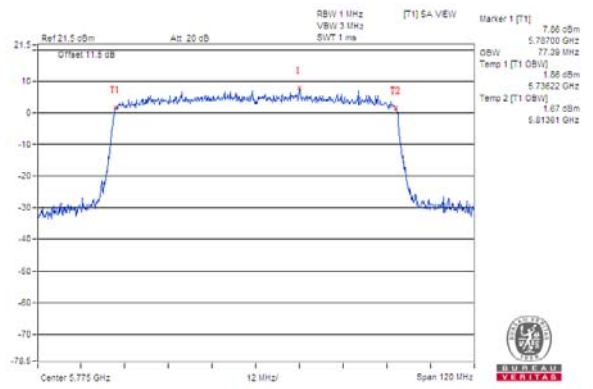
	
802.11ax (HE80) / Chain 2 / CH 155	802.11ax (HE80) / Chain 3 / CH 155
	
802.11ax (HE80) / Chain 4 / CH 155	802.11ax (HE80) / Chain 5 / CH 155
	
802.11ax (HE80) / Chain 6 / CH 155	802.11ax (HE80) / Chain 7 / CH 155
	

Scanning radio (Radio 3)

802.11a

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	17.28
40	5200	19.20
48	5240	19.32
149	5745	18.61
157	5785	25.68
165	5825	21.00

802.11ac (VHT20)

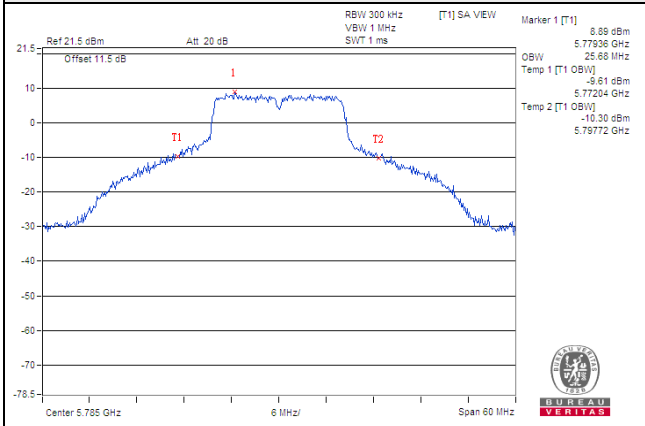
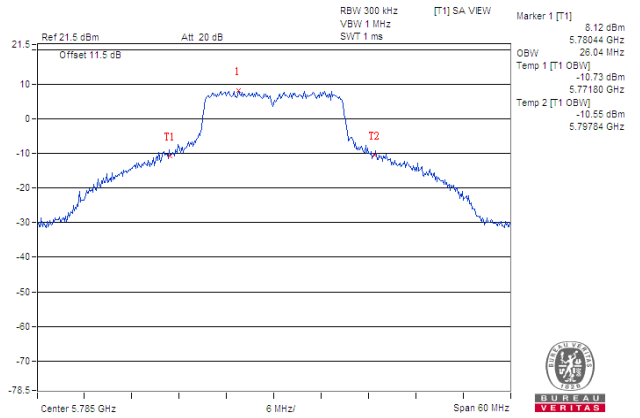
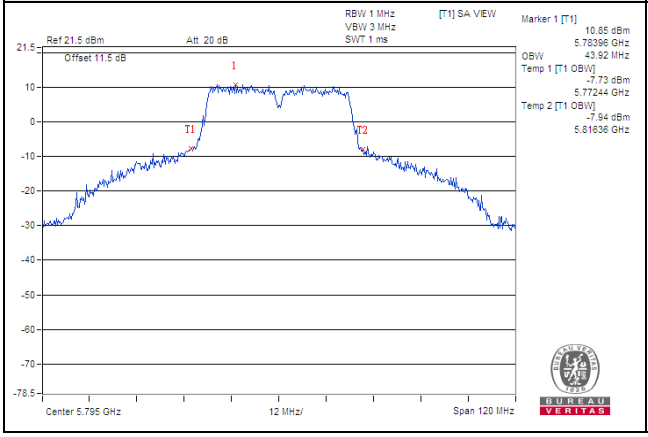
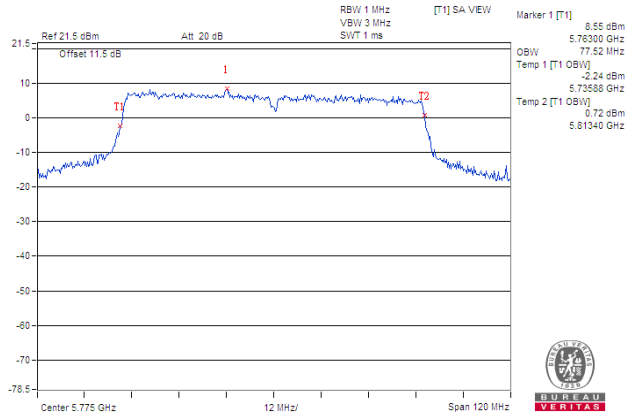
Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
36	5180	18.24
40	5200	19.80
48	5240	19.68
149	5745	19.32
157	5785	26.04
165	5825	21.48

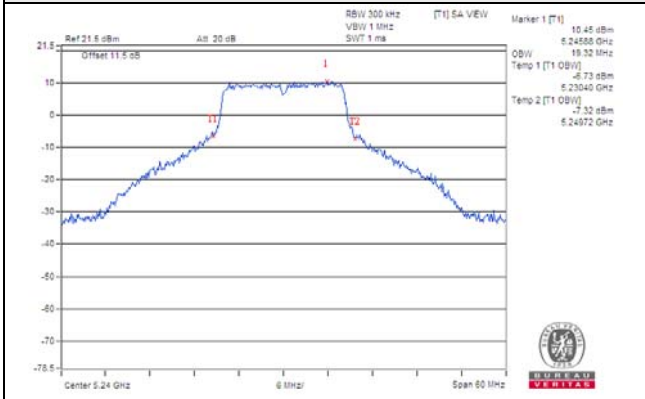
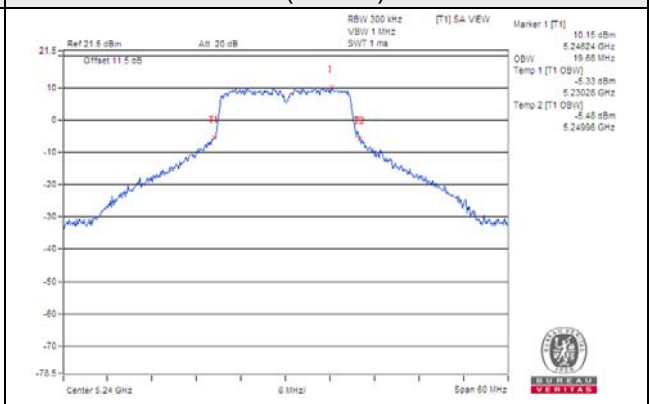
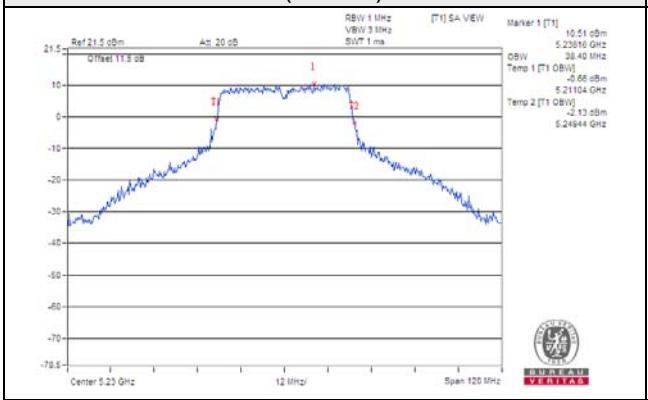
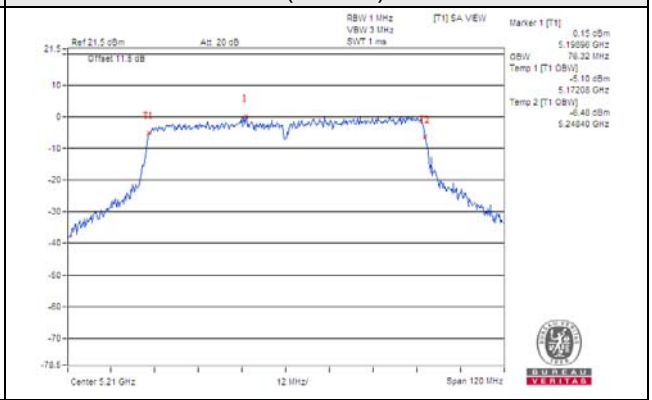
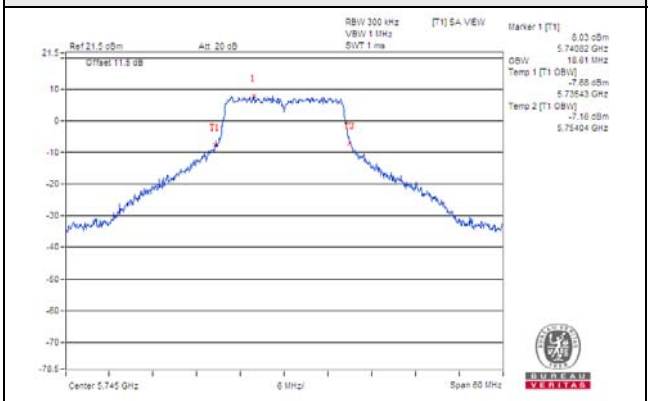
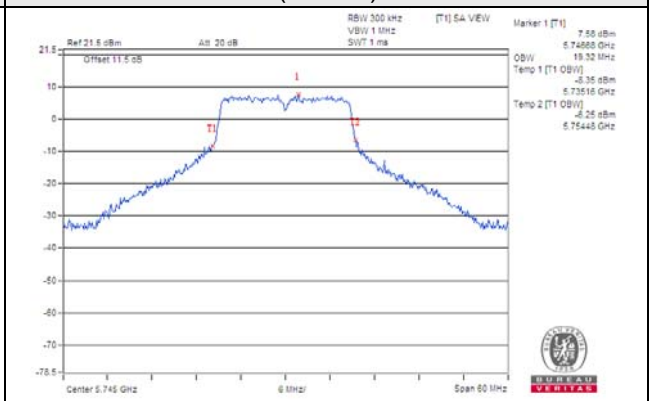
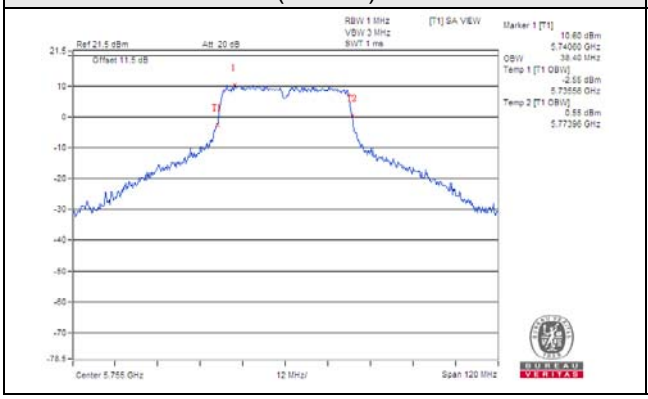
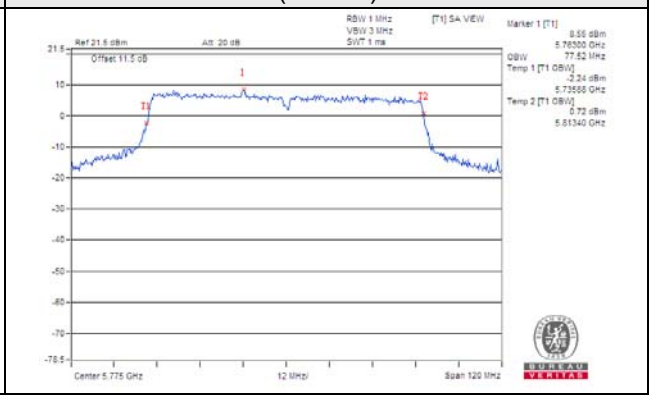
802.11ac (VHT40)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
38	5190	37.44
46	5230	38.40
151	5755	38.40
159	5795	43.92

802.11ac (VHT80)

Chan.	Freq. (MHz)	Occupied Bandwidth (MHz)
42	5210	76.32
155	5775	77.52

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

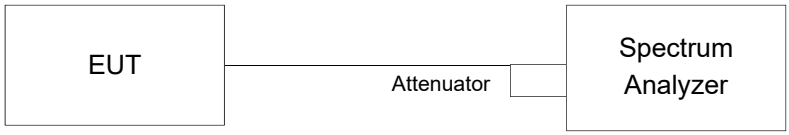
Spectrum Plot for near By DFS Band	
802.11a / CH 48	802.11ac (VHT20) / CH 48
	
802.11ac (VHT40) / CH 46	802.11ac (VHT80) / CH 42
	
802.11a / CH 149	802.11ac (VHT20) / CH 149
	
802.11ac (VHT40) / CH 151	802.11ac (VHT80) / CH 155
	

4.5 Peak Power Spectral Density Measurement

4.5.1 Limits of Peak Power Spectral Density Measurement

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

4.5.2 Test Setup



4.5.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.5.4 Test Procedures

For U-NII-1 band:

Using method SA-2

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.

b. Set RBW = 1MHz, Set VBW ≥ 3 MHz, Detector = RMS

c. Set Channel power measure = 1MHz

d. Sweep time = auto, trigger set to “free run”.

e. Trace average at least 100 traces in power averaging mode.

f. Record the max value and add 10 log (1/duty cycle)

For U-NII-3 band:

a. Set span to encompass the entire emission bandwidth (EBW) of the signal.

b. Set RBW = 300 kHz, Set VBW ≥ 1 MHz, Detector = RMS

c. Use the peak marker function to determine the maximum power level in any 300 kHz band segment within the fundamental EBW.

d. Scale the observed power level to an equivalent value in 500 kHz by adjusting (increasing) the measured power by a bandwidth correction factor (BWCF) where BWCF = 10log(500 kHz / 300 kHz)

e. Sweep time = auto, trigger set to “free run”.

f. Trace average at least 100 traces in power averaging mode.

g. Record the max value and add 10 log (1/duty cycle)

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

Same as 4.3.6.

4.5.7 Test Results

5G traffic radio (Radio 1)

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)								Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
36	5180	0.15	0.00	-0.19	0.00	0.02	0.06	0.21	0.15	0.25	9.33	9.51	Pass
40	5200	0.13	0.08	0.13	0.11	-0.04	-0.16	0.11	-0.04	0.25	9.32	9.51	Pass
48	5240	0.18	0.14	-0.06	0.12	0.02	0.06	-0.17	-0.14	0.25	9.30	9.51	Pass

Note:
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/8$]=13.49dBi > 6dBi, so the power density limit shall be reduced to 17-(13.49-6) = 9.51dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)								Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
36	5180	-0.02	-0.31	-0.11	-0.11	-0.36	-0.39	-0.17	-0.27	0.23	9.05	9.51	Pass
40	5200	0.04	-0.18	-0.08	0.12	-0.37	0.16	-0.15	-0.32	0.23	9.17	9.51	Pass
48	5240	0.14	-0.27	-0.54	-0.08	0.07	-0.41	-0.12	-0.16	0.23	9.10	9.51	Pass

Note:
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/8$]=13.49dBi > 6dBi, so the power density limit shall be reduced to 17-(13.49-6) = 9.51dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)								Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
38	5190	-0.14	0.09	0.23	-0.18	0.04	0.00	0.13	-0.96	0.23	9.18	9.51	Pass
46	5230	0.01	-0.47	-0.11	-0.11	0.00	-0.41	0.02	-0.84	0.23	9.03	9.51	Pass

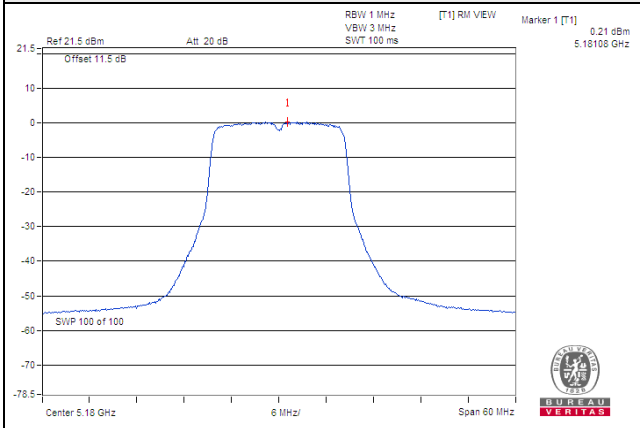
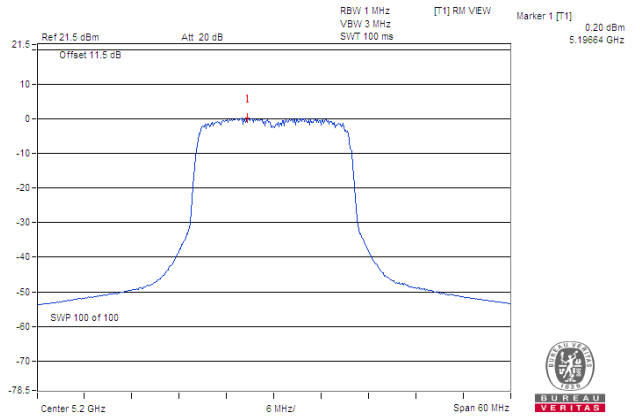
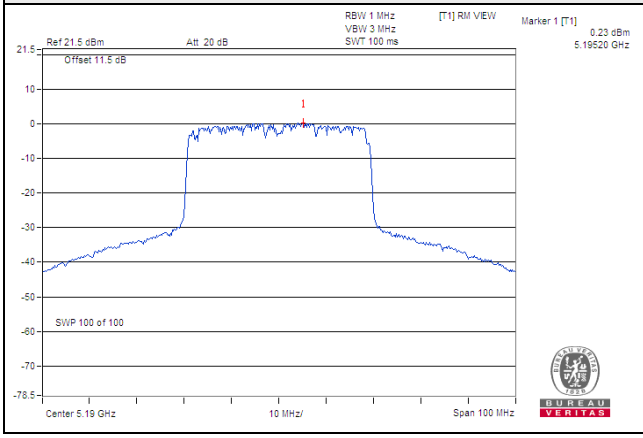
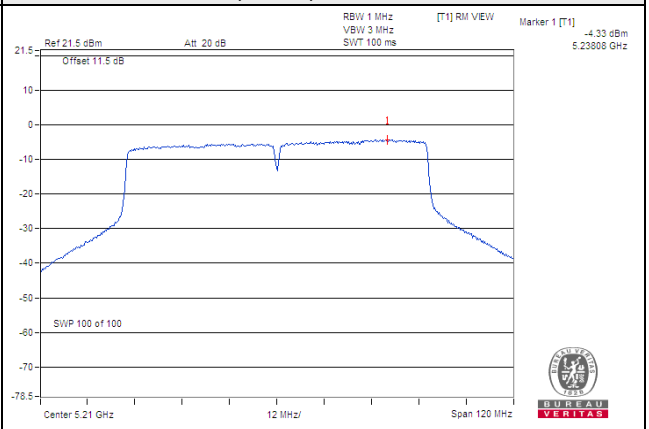
Note:
1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/8$]=13.49dBi > 6dBi, so the power density limit shall be reduced to 17-(13.49-6) = 9.51dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)								Duty Factor (dB)	Total PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7				
42	5210	-4.60	-5.93	-4.34	-4.57	-4.60	-5.23	-4.53	-4.47	0.20	4.47	9.51	Pass

Note:

1. Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/8$]=13.49dBi > 6dBi, so the power density limit shall be reduced to 17-(13.49-6) = 9.51dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a / Chain 6 / CH 36	802.11ax (HE20) / Chain 5 / CH 40
	
802.11ax (HE40) / Chain 2 / CH 38	802.11ax (HE80) / Chain 2 / CH 42
	

For U-NII-3 band:

802.11a

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=8) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	-3.43	-1.21	9.03	0.25	8.07	22.61	Pass
	157	5785	-3.96	-1.74	9.03	0.25	7.54	22.61	Pass
	165	5825	-3.54	-1.32	9.03	0.25	7.96	22.61	Pass
1	149	5745	-3.41	-1.19	9.03	0.25	8.09	22.61	Pass
	157	5785	-3.59	-1.37	9.03	0.25	7.91	22.61	Pass
	165	5825	-3.49	-1.27	9.03	0.25	8.01	22.61	Pass
2	149	5745	-3.61	-1.39	9.03	0.25	7.89	22.61	Pass
	157	5785	-3.74	-1.52	9.03	0.25	7.76	22.61	Pass
	165	5825	-3.47	-1.25	9.03	0.25	8.03	22.61	Pass
3	149	5745	-3.51	-1.29	9.03	0.25	7.99	22.61	Pass
	157	5785	-3.77	-1.55	9.03	0.25	7.73	22.61	Pass
	165	5825	-3.47	-1.25	9.03	0.25	8.03	22.61	Pass
4	149	5745	-3.60	-1.38	9.03	0.25	7.90	22.61	Pass
	157	5785	-3.73	-1.51	9.03	0.25	7.77	22.61	Pass
	165	5825	-3.46	-1.24	9.03	0.25	8.04	22.61	Pass
5	149	5745	-3.67	-1.45	9.03	0.25	7.83	22.61	Pass
	157	5785	-3.69	-1.47	9.03	0.25	7.81	22.61	Pass
	165	5825	-3.54	-1.32	9.03	0.25	7.96	22.61	Pass
6	149	5745	-3.57	-1.35	9.03	0.25	7.93	22.61	Pass
	157	5785	-3.78	-1.56	9.03	0.25	7.72	22.61	Pass
	165	5825	-3.49	-1.27	9.03	0.25	8.01	22.61	Pass
7	149	5745	-3.44	-1.22	9.03	0.25	8.06	22.61	Pass
	157	5785	-3.78	-1.56	9.03	0.25	7.72	22.61	Pass
	165	5825	-3.50	-1.28	9.03	0.25	8.00	22.61	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add 10 log (N_{ANT}) dB.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.39dBi > 6dBi, so the power density limit shall be reduced to 30-(13.39-6) = 22.61dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=8) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	149	5745	-4.97	-2.75	9.03	0.23	6.51	22.61	Pass
	157	5785	-5.44	-3.22	9.03	0.23	6.04	22.61	Pass
	165	5825	-5.27	-3.05	9.03	0.23	6.21	22.61	Pass
1	149	5745	-4.89	-2.67	9.03	0.23	6.59	22.61	Pass
	157	5785	-4.88	-2.66	9.03	0.23	6.60	22.61	Pass
	165	5825	-4.94	-2.72	9.03	0.23	6.54	22.61	Pass
2	149	5745	-4.91	-2.69	9.03	0.23	6.57	22.61	Pass
	157	5785	-5.23	-3.01	9.03	0.23	6.25	22.61	Pass
	165	5825	-4.88	-2.66	9.03	0.23	6.60	22.61	Pass
3	149	5745	-4.90	-2.68	9.03	0.23	6.58	22.61	Pass
	157	5785	-5.19	-2.97	9.03	0.23	6.29	22.61	Pass
	165	5825	-4.71	-2.49	9.03	0.23	6.77	22.61	Pass
4	149	5745	-4.96	-2.74	9.03	0.23	6.52	22.61	Pass
	157	5785	-5.04	-2.82	9.03	0.23	6.44	22.61	Pass
	165	5825	-4.82	-2.60	9.03	0.23	6.66	22.61	Pass
5	149	5745	-4.71	-2.49	9.03	0.23	6.77	22.61	Pass
	157	5785	-5.11	-2.89	9.03	0.23	6.37	22.61	Pass
	165	5825	-4.77	-2.55	9.03	0.23	6.71	22.61	Pass
6	149	5745	-4.78	-2.56	9.03	0.23	6.70	22.61	Pass
	157	5785	-5.22	-3.00	9.03	0.23	6.26	22.61	Pass
	165	5825	-5.08	-2.86	9.03	0.23	6.40	22.61	Pass
7	149	5745	-5.01	-2.79	9.03	0.23	6.47	22.61	Pass
	157	5785	-5.08	-2.86	9.03	0.23	6.40	22.61	Pass
	165	5825	-5.10	-2.88	9.03	0.23	6.38	22.61	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add 10 log (N_{ANT}) dB.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.39dBi > 6dBi, so the power density limit shall be reduced to 30-(13.39-6) = 22.61dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=8) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	151	5755	-7.68	-5.46	9.03	0.23	3.80	22.61	Pass
	159	5795	-7.19	-4.97	9.03	0.23	4.29	22.61	Pass
1	151	5755	-7.08	-4.86	9.03	0.23	4.40	22.61	Pass
	159	5795	-7.25	-5.03	9.03	0.23	4.23	22.61	Pass
2	151	5755	-7.12	-4.90	9.03	0.23	4.36	22.61	Pass
	159	5795	-7.14	-4.92	9.03	0.23	4.34	22.61	Pass
3	151	5755	-7.26	-5.04	9.03	0.23	4.22	22.61	Pass
	159	5795	-7.23	-5.01	9.03	0.23	4.25	22.61	Pass
4	151	5755	-7.25	-5.03	9.03	0.23	4.23	22.61	Pass
	159	5795	-7.39	-5.17	9.03	0.23	4.09	22.61	Pass
5	151	5755	-7.32	-5.10	9.03	0.23	4.16	22.61	Pass
	159	5795	-7.09	-4.87	9.03	0.23	4.39	22.61	Pass
6	151	5755	-7.12	-4.90	9.03	0.23	4.36	22.61	Pass
	159	5795	-7.30	-5.08	9.03	0.23	4.18	22.61	Pass
7	151	5755	-7.23	-5.01	9.03	0.23	4.25	22.61	Pass
	159	5795	-7.16	-4.94	9.03	0.23	4.32	22.61	Pass

Note:

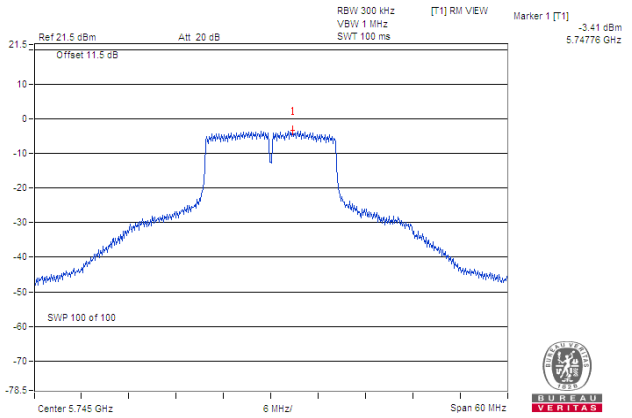
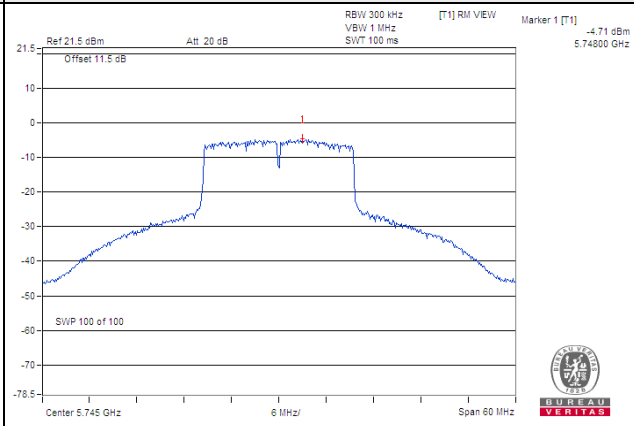
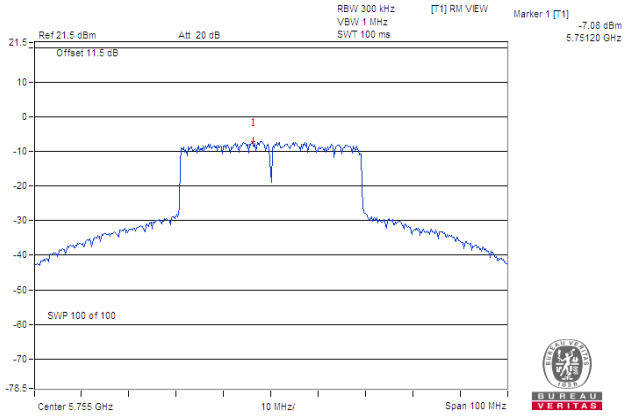
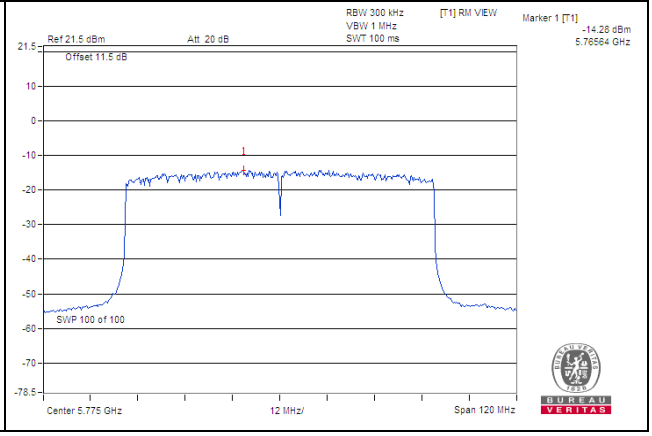
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add 10 log (N_{ANT}) dB.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + \ldots + 10^{GN/20})^2/8$]=13.39dBi > 6dBi, so the power density limit shall be reduced to 30-(13.39-6) = 22.61dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

TX chain	Chan.	Freq. (MHz)	PSD W/O Duty Factor		10 log (N=8) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/300kHz)	(dBm/500kHz)					
0	155	5775	-14.28	-12.06	9.03	0.20	-2.83	22.61	Pass
1	155	5775	-14.38	-12.16	9.03	0.20	-2.93	22.61	Pass
2	155	5775	-14.56	-12.34	9.03	0.20	-3.11	22.61	Pass
3	155	5775	-14.51	-12.29	9.03	0.20	-3.06	22.61	Pass
4	155	5775	-14.38	-12.16	9.03	0.20	-2.93	22.61	Pass
5	155	5775	-14.45	-12.23	9.03	0.20	-3.00	22.61	Pass
6	155	5775	-14.51	-12.29	9.03	0.20	-3.06	22.61	Pass
7	155	5775	-14.37	-12.15	9.03	0.20	-2.92	22.61	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure value and add 10 log (N_{ANT}) dB.
2. Directional gain = 10 log[$(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/8$]=13.39dBi > 6dBi, so the power density limit shall be reduced to 30-(13.39-6) = 22.61dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value	
802.11a	802.11ax (HE20)
	
802.11ax (HE40)	802.11ax (HE80)
	

Scanning radio (Radio 3)

For U-NII-1 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	6.09	0.12	6.21	17.00	Pass
40	5200	6.81	0.12	6.93	17.00	Pass
48	5240	6.21	0.12	6.33	17.00	Pass

Note:
1. Refer to section 3.3 for duty cycle spectrum plot.
2. Max. Antenna Gain 4.85 dBi < 6dBi, so the power density limit no need to reduced.

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
36	5180	5.52	0.10	5.62	17.00	Pass
40	5200	6.47	0.10	6.57	17.00	Pass
48	5240	5.71	0.10	5.81	17.00	Pass

Note:
1. Refer to section 3.3 for duty cycle spectrum plot.
2. Max. Antenna Gain 4.85 dBi < 6dBi, so the power density limit no need to reduced.

802.11ac (VHT40)

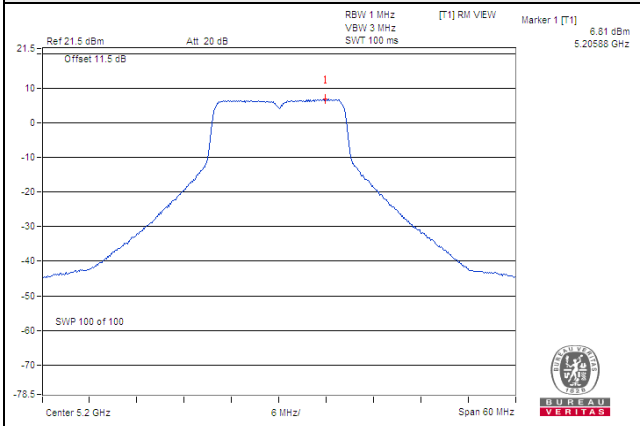
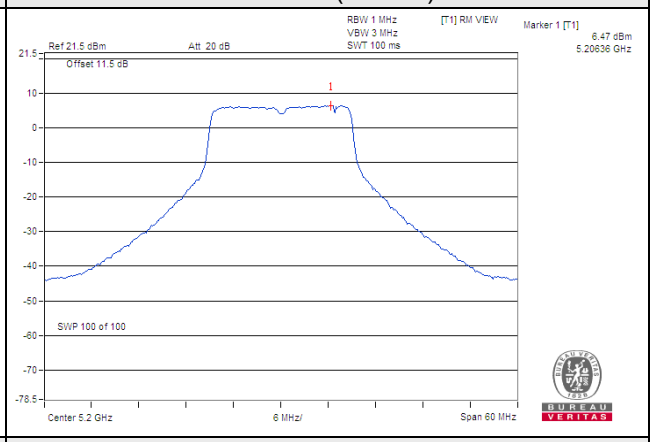
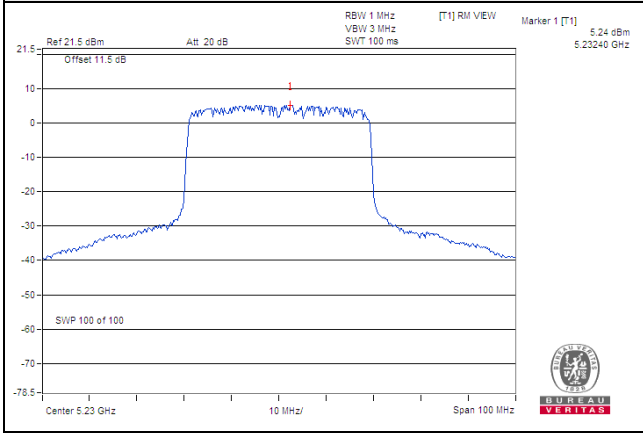
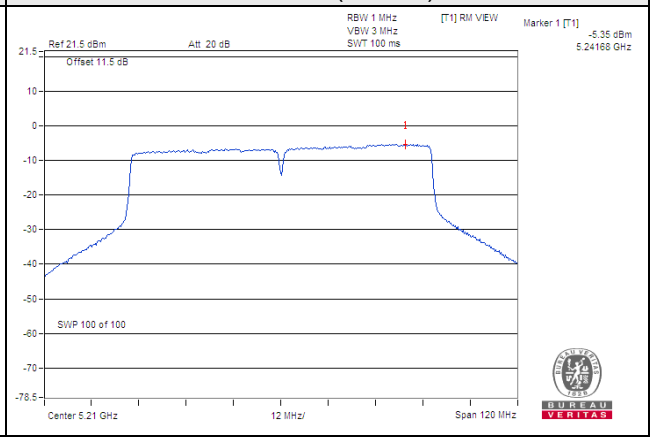
Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
38	5190	1.65	0.18	1.83	17.00	Pass
46	5230	5.24	0.18	5.42	17.00	Pass

Note:
1. Refer to section 3.3 for duty cycle spectrum plot.
2. Max. Antenna Gain 4.85 dBi < 6dBi, so the power density limit no need to reduced.

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor (dBm/MHz)	Duty Factor (dB)	PSD with Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
42	5210	-5.35	0.40	-4.95	17.00	Pass

Note:
1. Refer to section 3.3 for duty cycle spectrum plot.
2. Max. Antenna Gain 4.85 dBi < 6dBi, so the power density limit no need to reduced.

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

For U-NII-3 band:

802.11a

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-4.96	-2.74	0.12	-2.62	30.00	Pass
157	5785	-4.66	-2.44	0.12	-2.32	30.00	Pass
165	5825	-5.23	-3.01	0.12	-2.89	30.00	Pass

Note:
1. Refer to section 3.3 for duty cycle spectrum plot.
2. Max. Antenna Gain 5.23 dBi < 6dBi, so the power density limit no need to reduced.

802.11ac (VHT20)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
149	5745	-5.39	-3.17	0.10	-3.07	30.00	Pass
157	5785	-5.09	-2.87	0.10	-2.77	30.00	Pass
165	5825	-5.66	-3.44	0.10	-3.34	30.00	Pass

Note:
1. Refer to section 3.3 for duty cycle spectrum plot.
2. Max. Antenna Gain 5.23 dBi < 6dBi, so the power density limit no need to reduced.

802.11ac (VHT40)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
151	5755	-8.86	-6.64	0.18	-6.46	30.00	Pass
159	5795	-8.44	-6.22	0.18	-6.04	30.00	Pass

Note:
1. Refer to section 3.3 for duty cycle spectrum plot.
2. Max. Antenna Gain 5.23 dBi < 6dBi, so the power density limit no need to reduced.

802.11ac (VHT80)

Chan.	Freq. (MHz)	PSD w/o Duty Factor		Duty Factor (dB)	Total PSD with Duty Factor (dBm/500kHz)	Limit (dBm/500kHz)	Pass / Fail
		(dBm/300kHz)	(dBm/500kHz)				
155	5775	-11.96	-9.74	0.40	-9.34	30.00	Pass

Note:
1. Refer to section 3.3 for duty cycle spectrum plot.
2. Max. Antenna Gain 5.23 dBi < 6dBi, so the power density limit no need to reduced.

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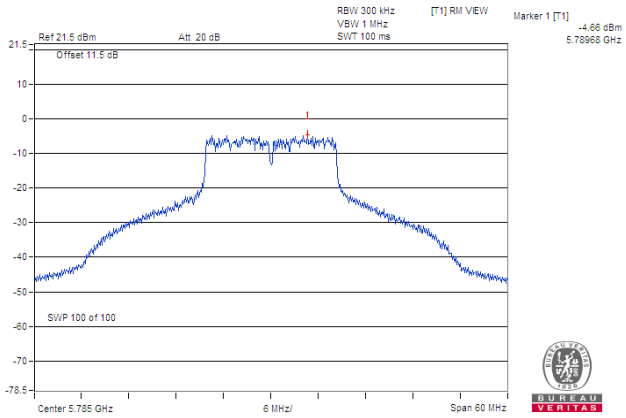
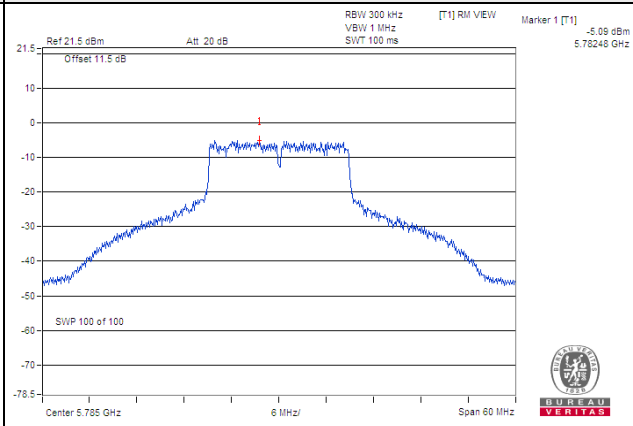
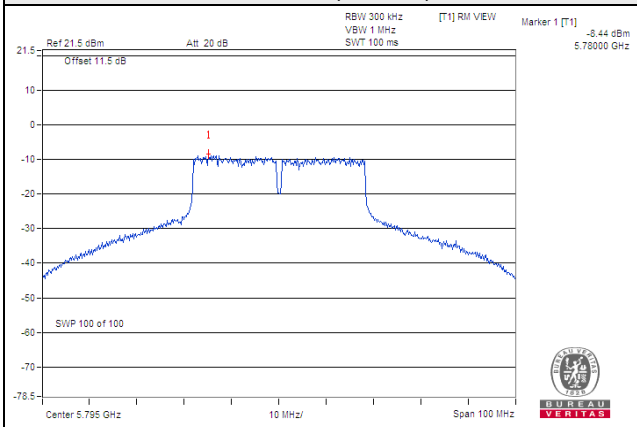
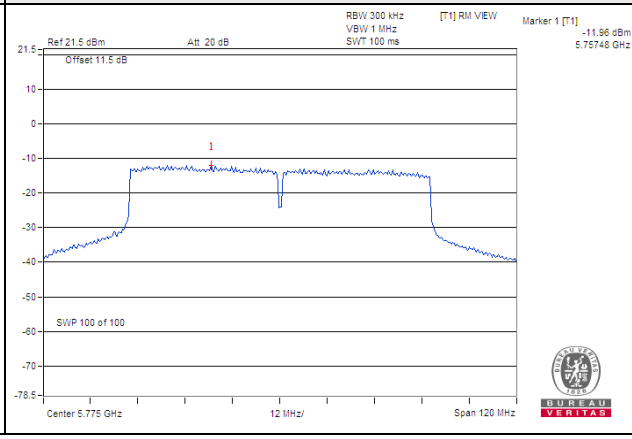
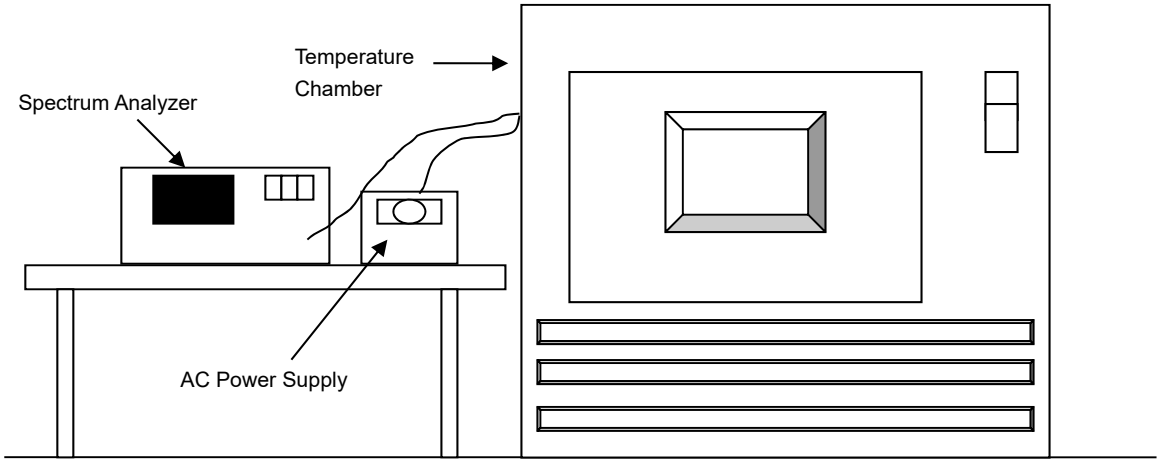
Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

4.6 Frequency Stability

4.6.1 Limits of Frequency Stability Measurement

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

4.6.2 Test Setup



4.6.3 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100039	Jun. 12, 2020	Jun. 11, 2021
Standard Temperature And Humidity Chamber GIANT FORCE	GTH-120-40-CP-AR	MAA1306-019	Sep. 09, 2020	Sep. 08, 2021
Digital Multimeter Fluke	87-III	70360742	Jun. 23, 2020	Jun. 22, 2021
AC Power Supply Extech	CFW-105	E000603	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.

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 (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed.

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

5G traffic radio (Radio 1)

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
40	120	5180.0171	PASS	5180.0165	PASS	5180.0151	PASS	5180.0172	PASS
30	120	5179.9913	PASS	5179.9954	PASS	5179.9924	PASS	5179.9940	PASS
20	120	5179.9843	PASS	5179.9838	PASS	5179.9840	PASS	5179.9880	PASS
10	120	5179.9984	PASS	5180.0015	PASS	5180.0022	PASS	5179.9982	PASS
0	120	5179.9904	PASS	5179.9887	PASS	5179.9880	PASS	5179.9901	PASS

Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5179.9845	PASS	5179.9829	PASS	5179.9850	PASS	5179.9887	PASS
	120	5179.9843	PASS	5179.9838	PASS	5179.9840	PASS	5179.9880	PASS
	102	5179.9845	PASS	5179.9845	PASS	5179.9842	PASS	5179.9879	PASS

Scanning radio (Radio 3)

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
40	120	5180.0141	PASS	5180.0145	PASS	5180.0161	PASS	5180.0168	PASS
30	120	5180.0205	PASS	5180.0237	PASS	5180.0205	PASS	5180.0209	PASS
20	120	5179.9977	PASS	5179.9947	PASS	5179.9957	PASS	5179.9969	PASS
10	120	5180.0235	PASS	5180.0236	PASS	5180.0228	PASS	5180.0240	PASS
0	120	5179.9938	PASS	5179.9930	PASS	5179.9958	PASS	5179.9948	PASS

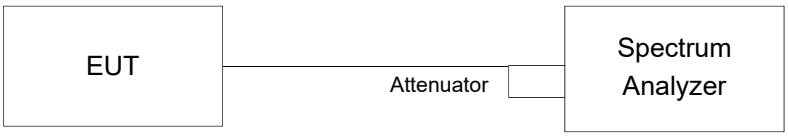
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (℃)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5179.9981	PASS	5179.9943	PASS	5179.9960	PASS	5179.9970	PASS
	120	5179.9977	PASS	5179.9947	PASS	5179.9957	PASS	5179.9969	PASS
	102	5179.9972	PASS	5179.9951	PASS	5179.9964	PASS	5179.9960	PASS

4.7 6dB Bandwidth Measurement

4.7.1 Limits of 6dB Bandwidth Measurement

The minimum of 6dB Bandwidth Measurement is 0.5MHz.

4.7.2 Test Setup



4.7.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.7.4 Test Procedure

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

5G traffic radio (Radio 1)

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)								Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7		
149	5745	16.31	16.32	16.32	16.33	16.32	16.28	16.3	16.35	0.50	Pass
157	5785	16.33	16.34	16.31	16.32	16.35	16.31	16.35	16.32	0.50	Pass
165	5825	16.31	16.34	16.35	16.34	16.33	16.34	16.31	16.36	0.50	Pass

802.11ax (HE20)

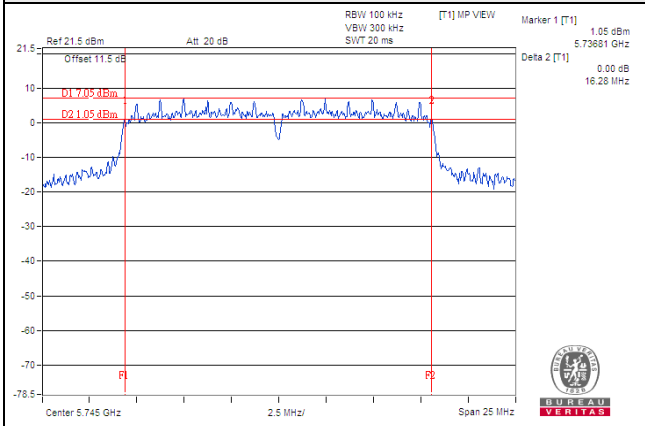
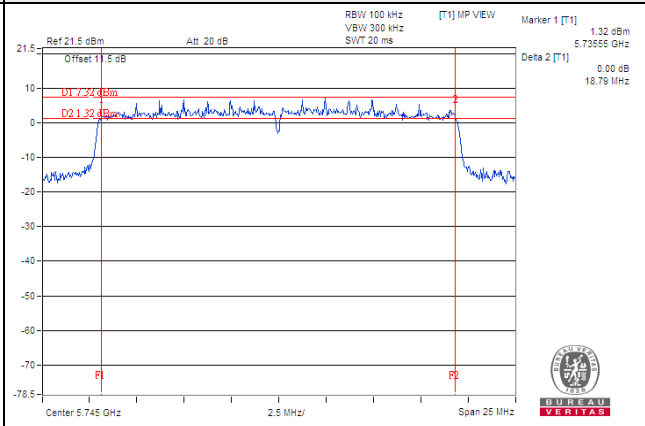
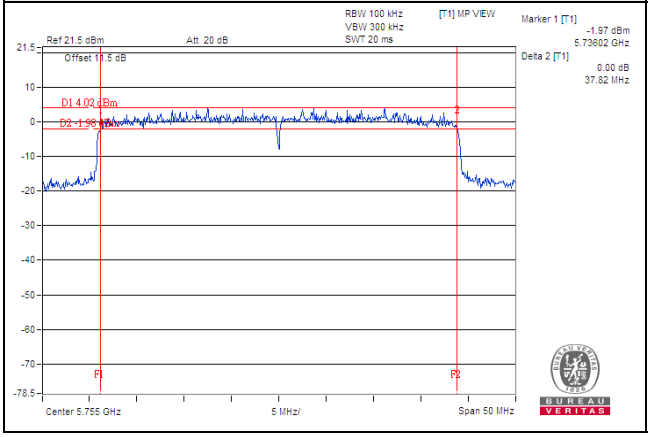
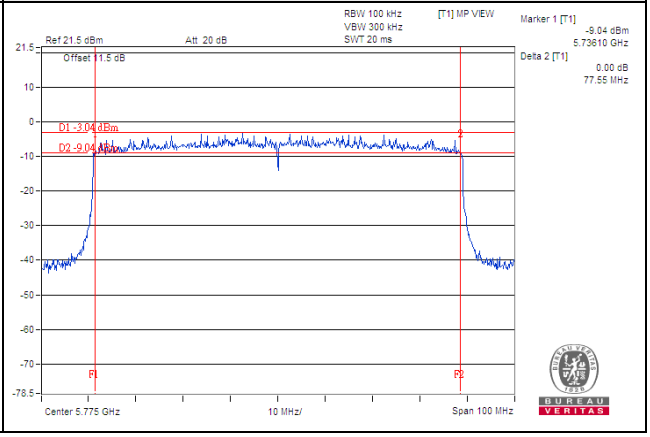
Channel	Frequency (MHz)	6dB Bandwidth (MHz)								Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7		
149	5745	18.99	18.81	18.86	18.80	18.95	18.79	18.89	18.91	0.50	Pass
157	5785	18.87	18.82	18.98	18.93	18.84	18.98	18.87	19.01	0.50	Pass
165	5825	18.94	18.98	18.9	18.99	18.86	18.98	18.84	18.99	0.50	Pass

802.11ax (HE40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)								Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7		
151	5755	37.99	38.06	37.82	38.04	37.99	37.94	37.93	37.90	0.50	Pass
159	5795	38.15	37.96	38.05	38.08	38.11	37.94	38.17	37.96	0.50	Pass

802.11ax (HE80)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)								Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3	Chain 4	Chain 5	Chain 6	Chain 7		
155	5775	77.78	77.72	78.05	77.81	77.57	77.72	77.73	77.55	0.50	Pass

Spectrum Plot of Worst Value	
802.11a	802.11ax (HE20)
	
802.11ax (HE40)	802.11ax (HE80)
	

Scanning radio (Radio 3)

802.11a

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	16.36	0.50	Pass
157	5785	16.40	0.50	Pass
165	5825	16.40	0.50	Pass

802.11ac (VHT20)

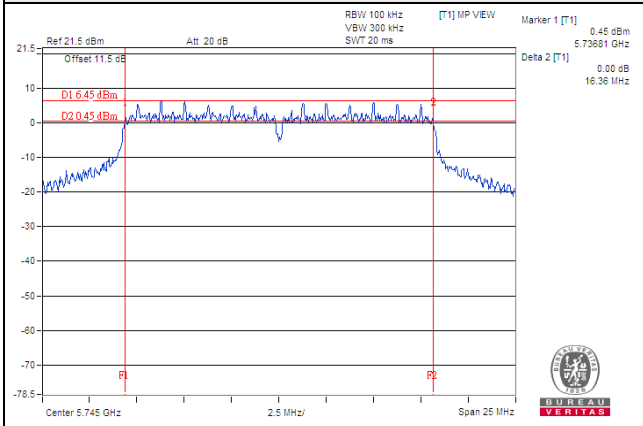
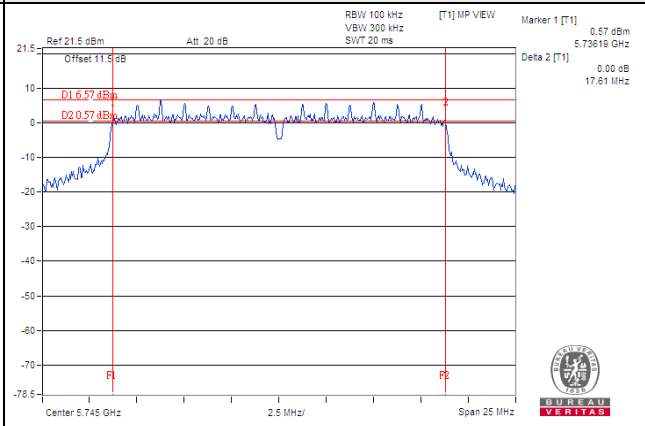
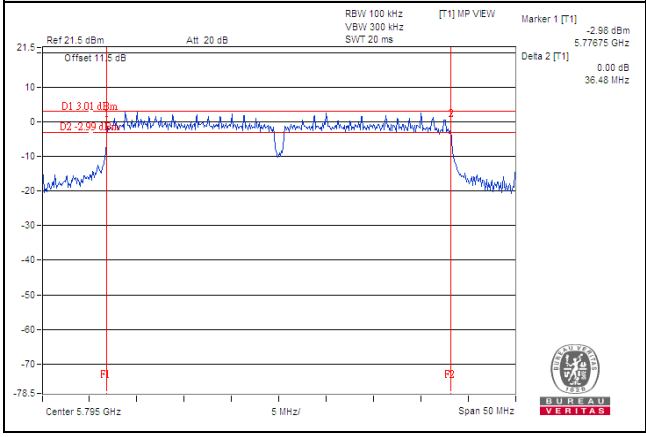
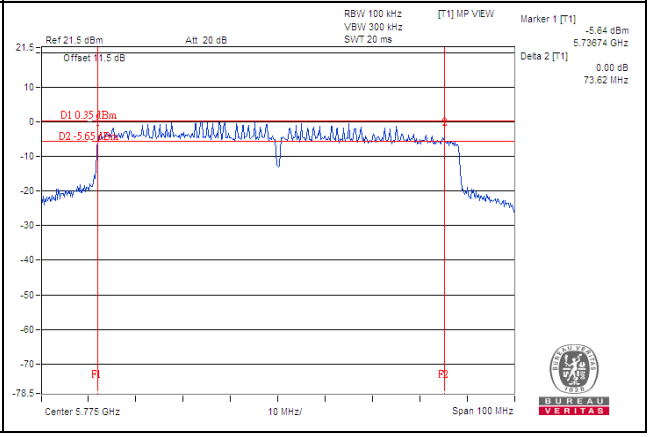
Chan.	Freq. (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
149	5745	17.61	0.50	Pass
157	5785	17.62	0.50	Pass
165	5825	17.63	0.50	Pass

802.11ac (VHT40)

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
151	5755	36.63	0.50	Pass
159	5795	36.48	0.50	Pass

802.11ac (VHT80)

Chan.	Freq. (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
155	5775	73.62	0.50	Pass

Spectrum Plot of Worst Value	
802.11a	802.11ac (VHT20)
	
802.11ac (VHT40)	802.11ac (VHT80)
	

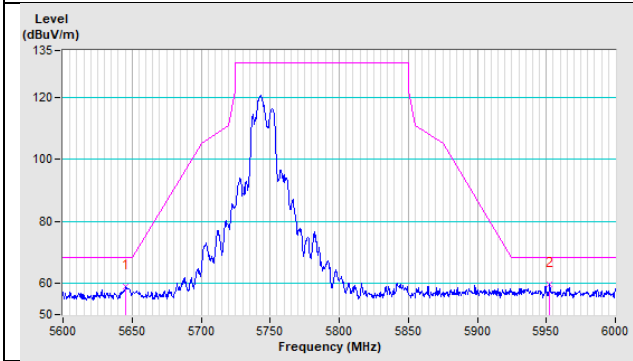
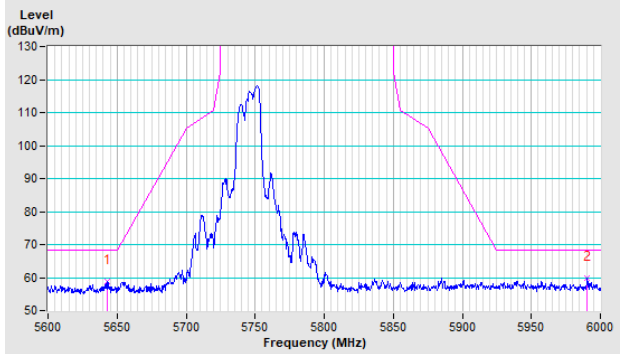
5 Pictures of Test Arrangements

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

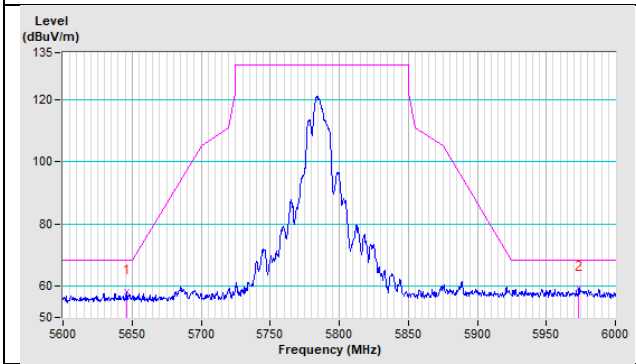
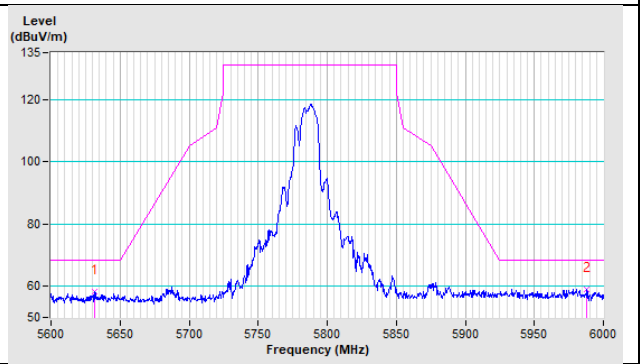
Annex A - Radiated out of Band Emission (OOBE) Measurement (For U-NII-3 band)

5G traffic radio (Radio 1)

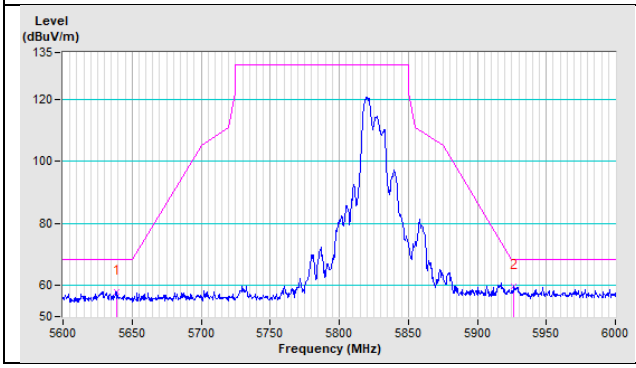
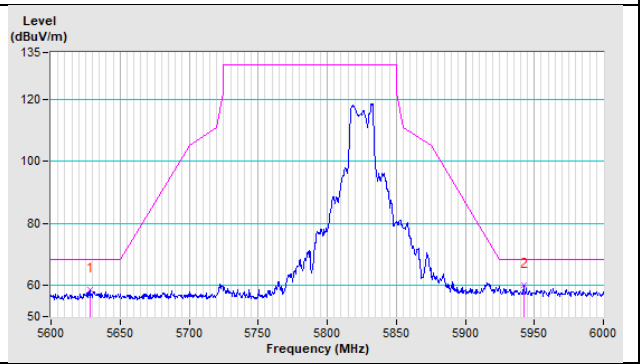
802.11a CH 149：5745 MHz

Horizontal	Vertical
	

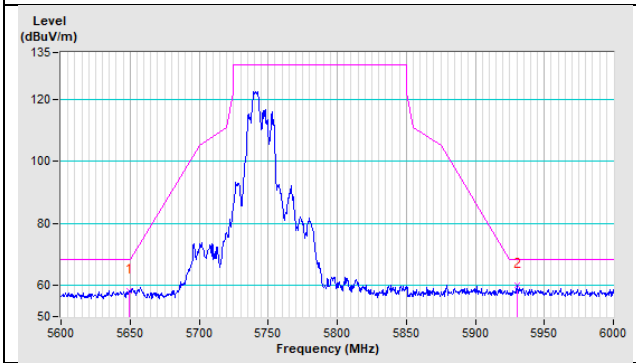
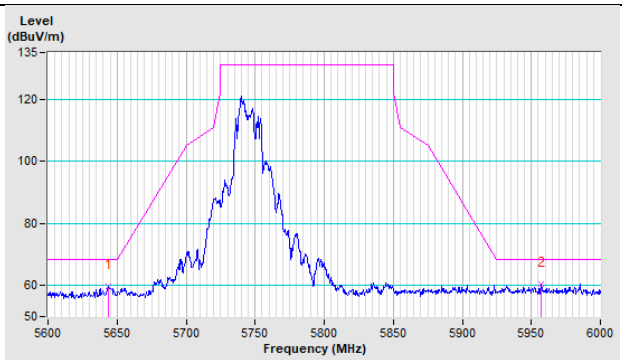
802.11a CH 157：5785 MHz

Horizontal	Vertical
	

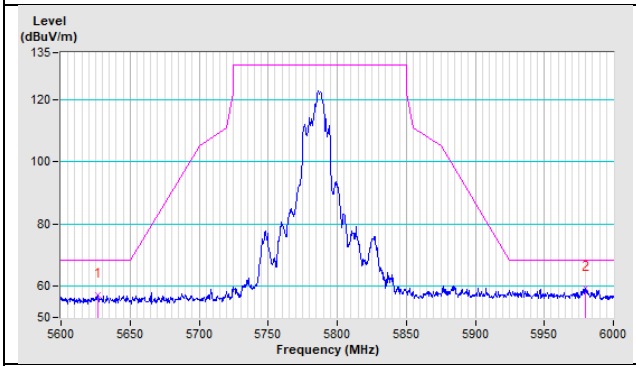
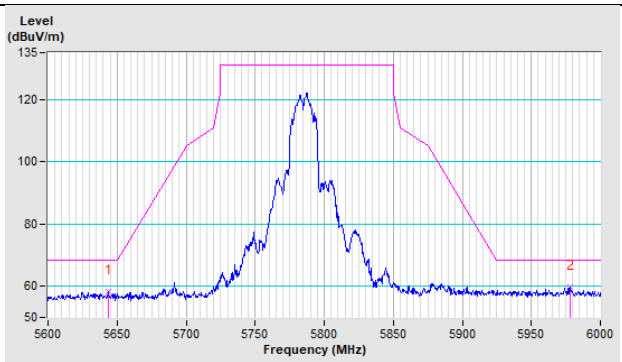
802.11a CH 165：5825 MHz

Horizontal	Vertical
	

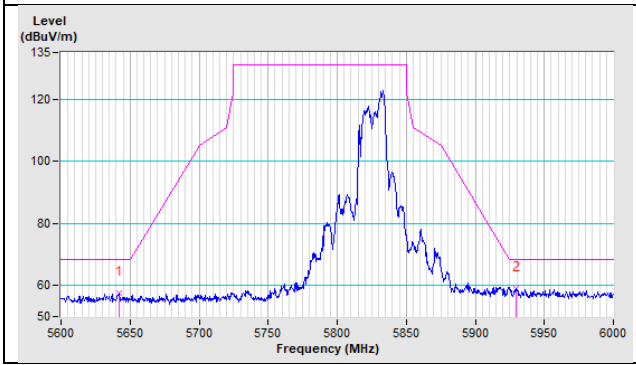
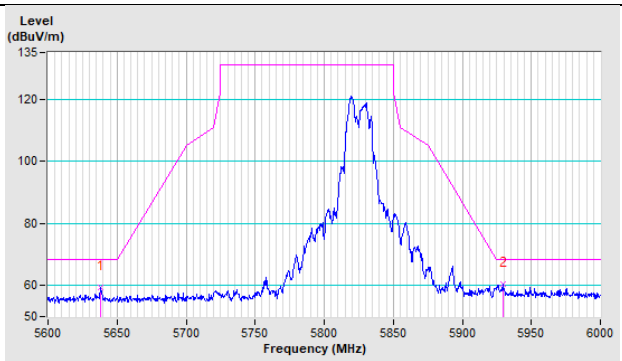
802.11ax (HE20) CH 149：5745 MHz

Horizontal	Vertical
	

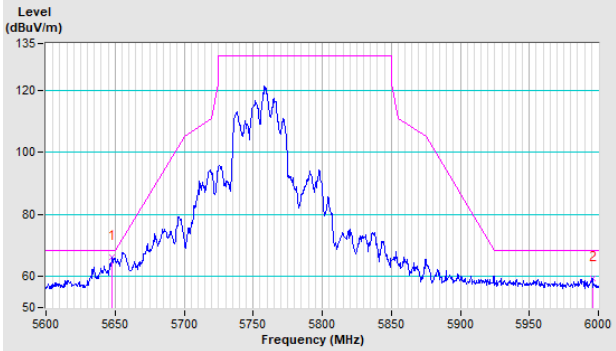
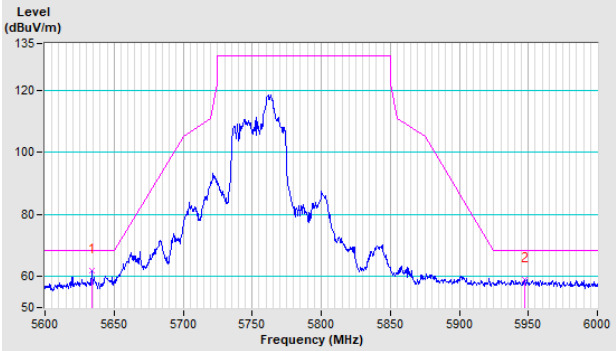
802.11ax (HE20) CH 157：5785 MHz

Horizontal	Vertical
	

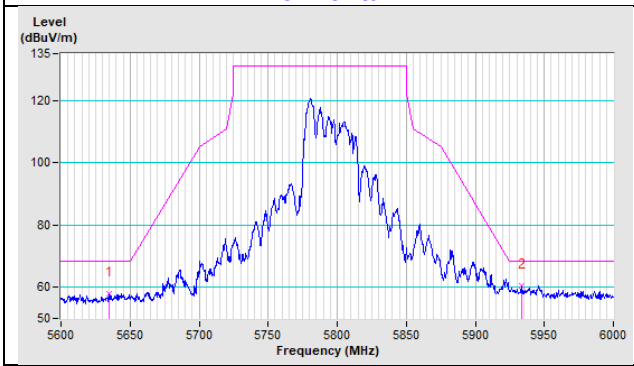
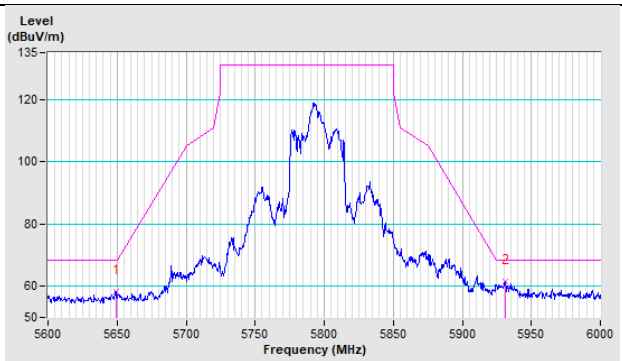
802.11ax (HE20) CH 165：5825 MHz

Horizontal	Vertical
	

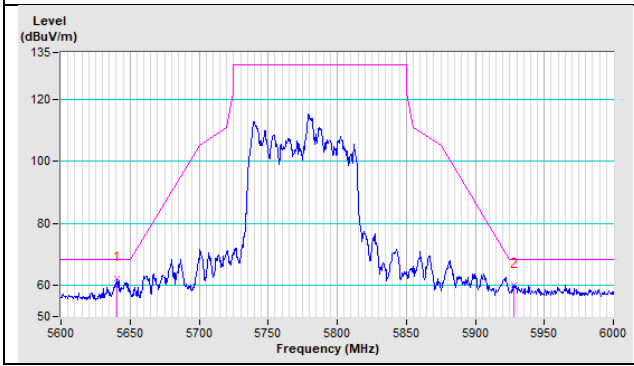
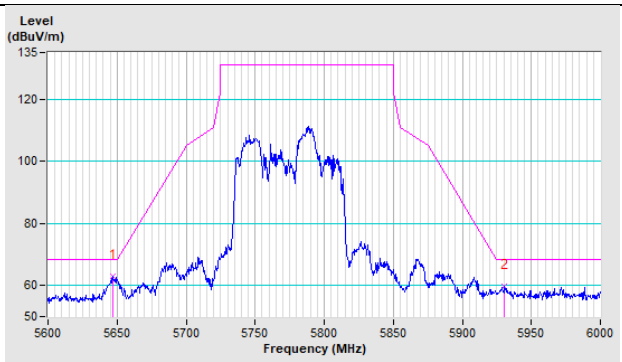
802.11ax (HE40) CH 151：5755 MHz

Horizontal	Vertical
	

802.11ax (HE40) CH 159：5795 MHz

Horizontal	Vertical
	

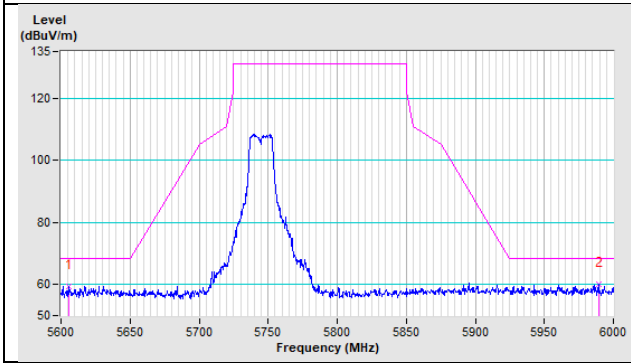
802.11ax (HE80) CH 155：5775 MHz

Horizontal	Vertical
	

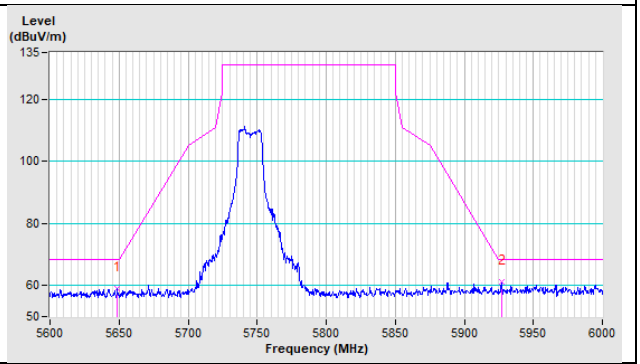
Scanning radio (Radio 3)

802.11a CH 149：5745 MHz

Horizontal

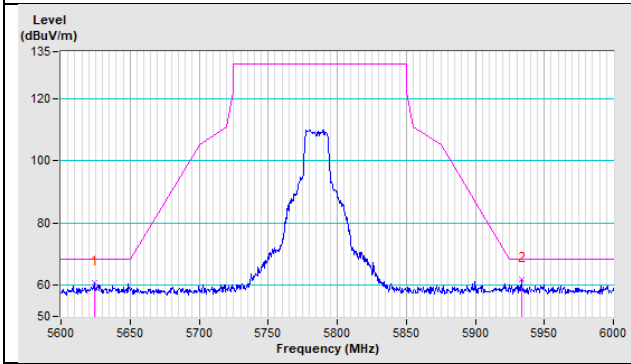


Vertical

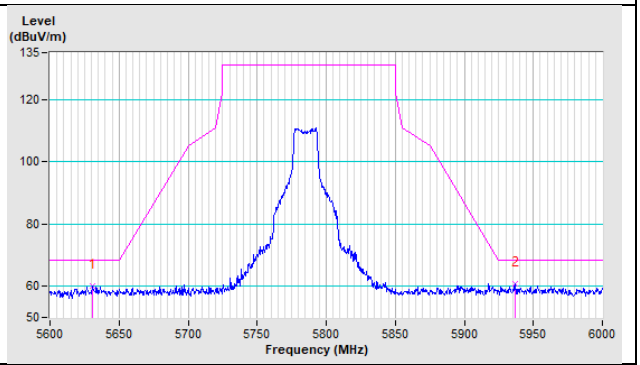


802.11a CH 157：5785 MHz

Horizontal

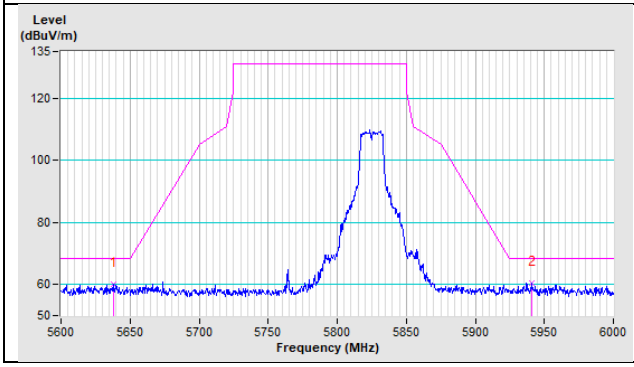


Vertical

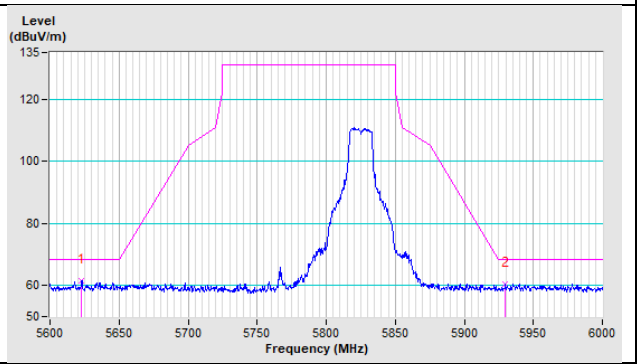


802.11a CH 165：5825 MHz

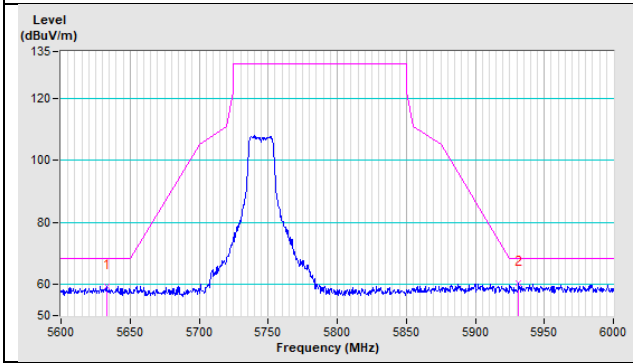
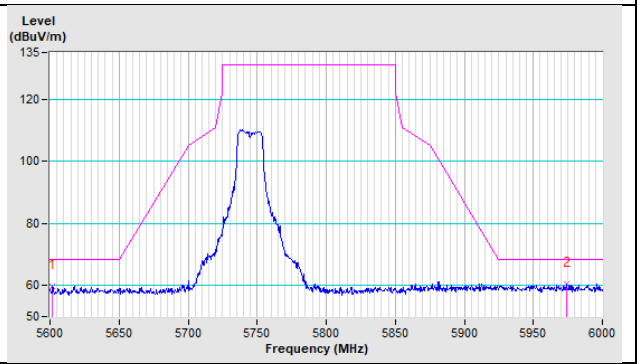
Horizontal



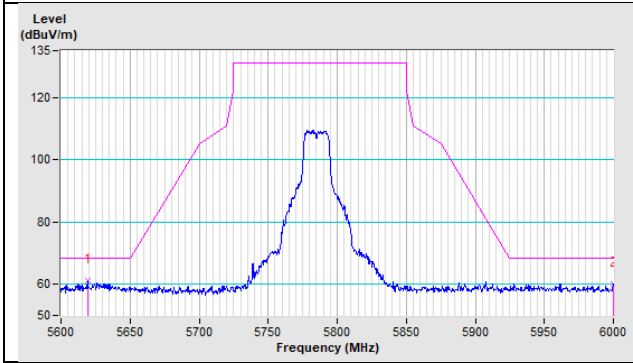
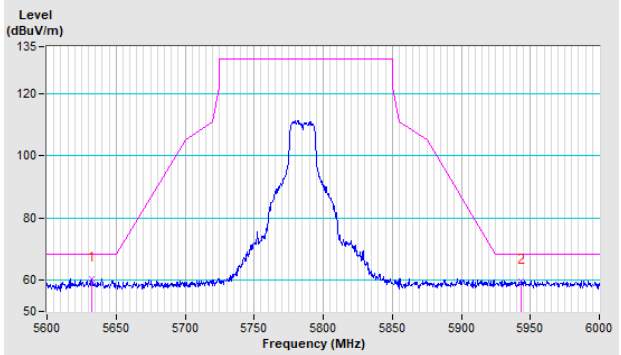
Vertical



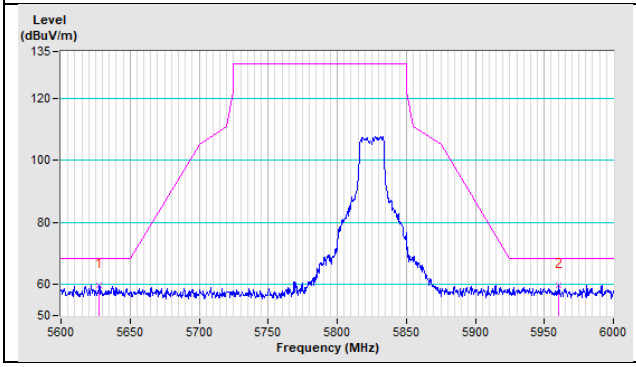
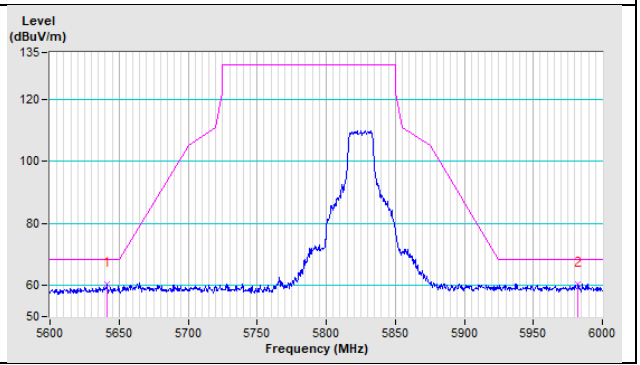
802.11ac (VHT20) CH 149：5745 MHz

Horizontal	Vertical
	

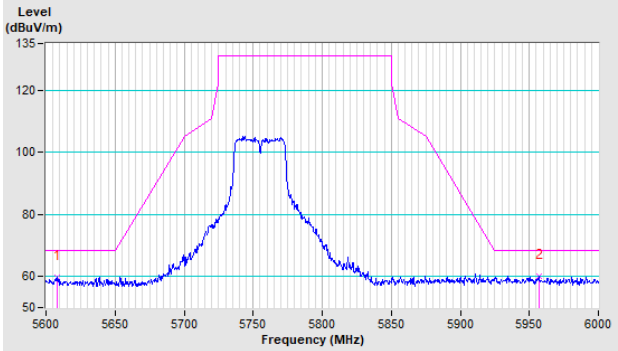
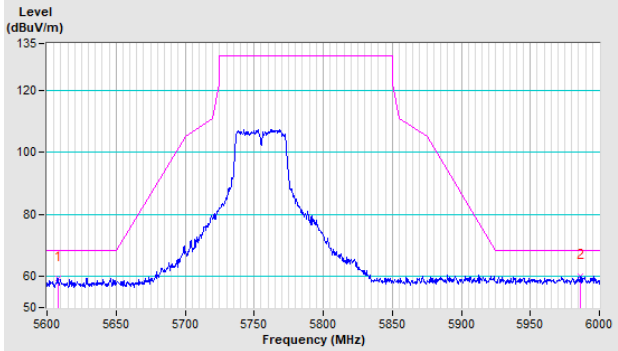
802.11ac (VHT20) CH 157：5785 MHz

Horizontal	Vertical
	

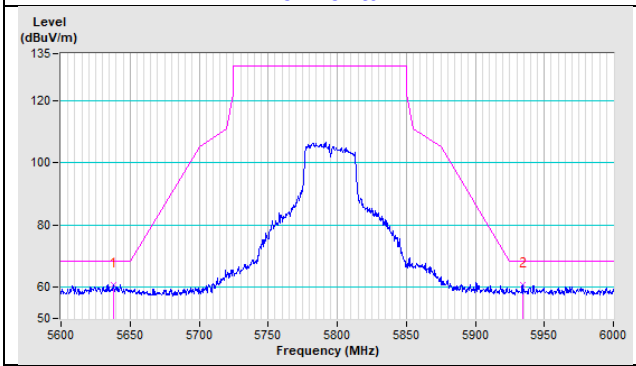
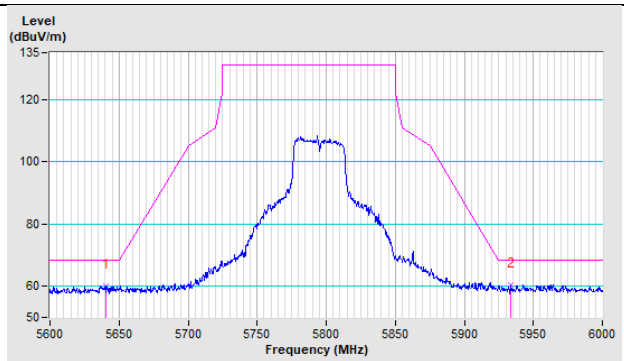
802.11ac (VHT20) CH 165：5825 MHz

Horizontal	Vertical
	

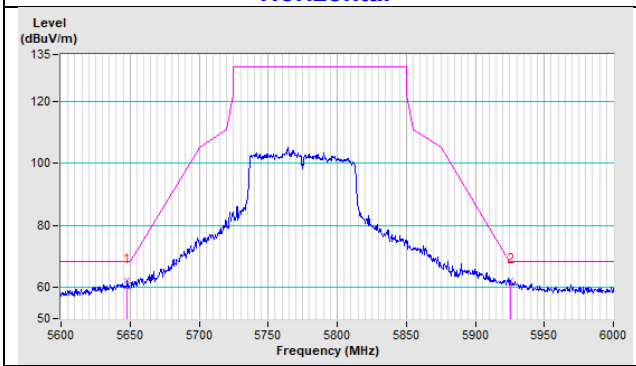
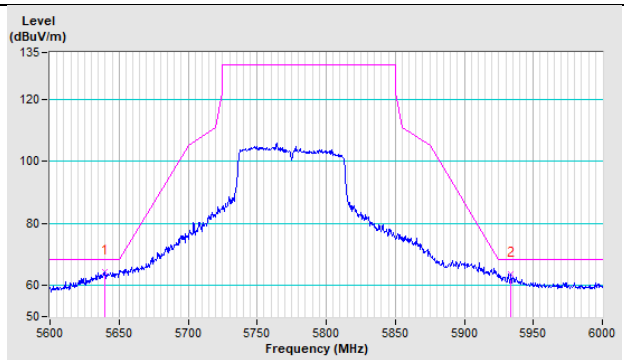
802.11ac (VHT40) CH 151：5755 MHz

Horizontal	Vertical
	

802.11ac (VHT40) CH 159：5795 MHz

Horizontal	Vertical
	

802.11ac (VHT80) CH 155：5775 MHz

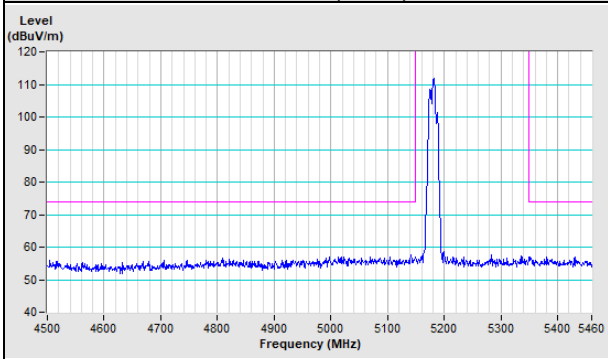
Horizontal	Vertical
	

Annex B - Band Edge Measurement

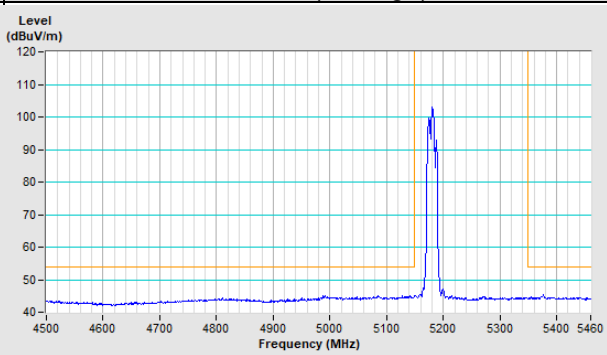
5G traffic radio (Radio 1)

802.11a Channel 36

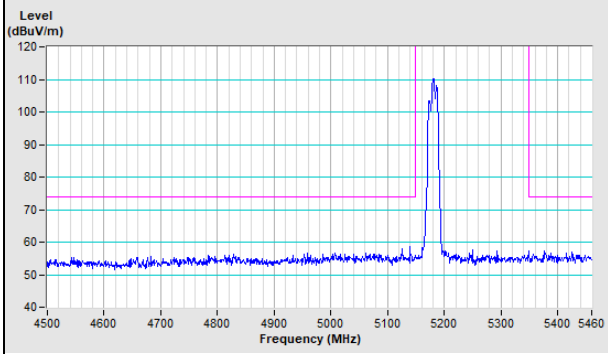
Horizontal (Peak)



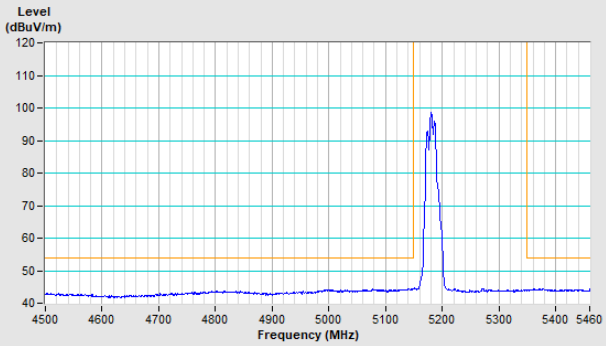
Horizontal (Average)



Vertical (Peak)

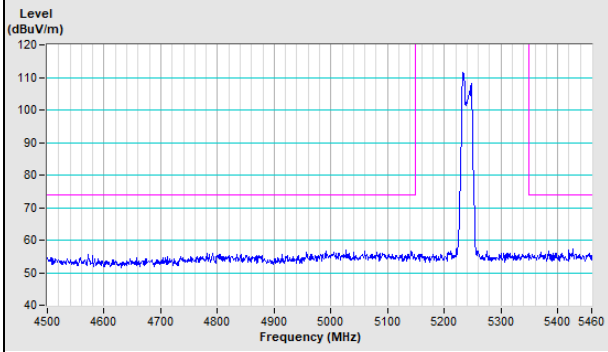


Vertical (Average)

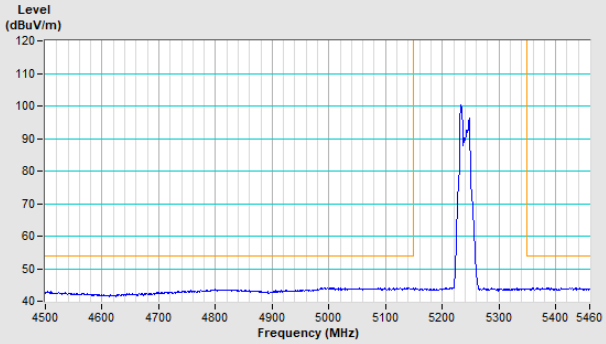


802.11a Channel 48

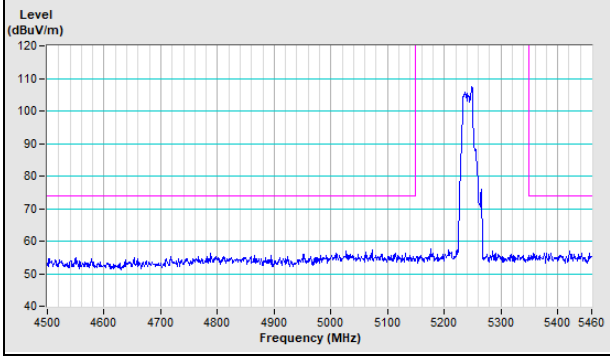
Horizontal (Peak)



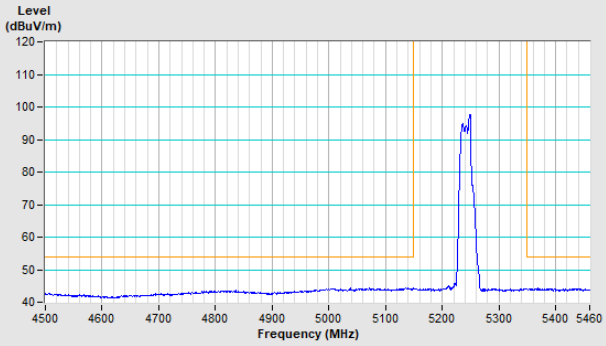
Horizontal (Average)



Vertical (Peak)

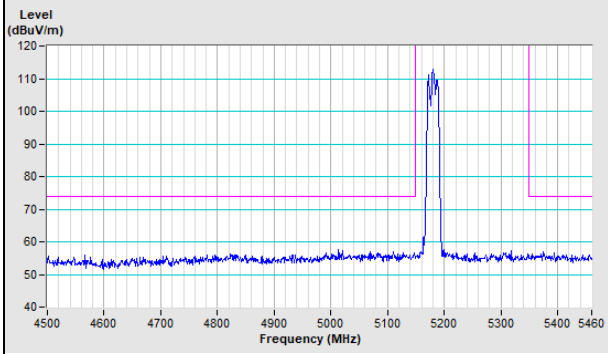


Vertical (Average)

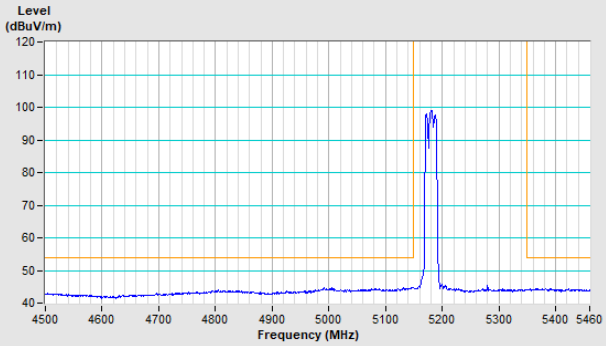


802.11ax (HE20) Channel 36

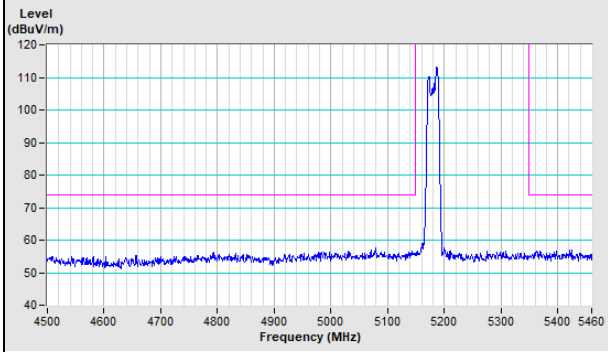
Horizontal (Peak)



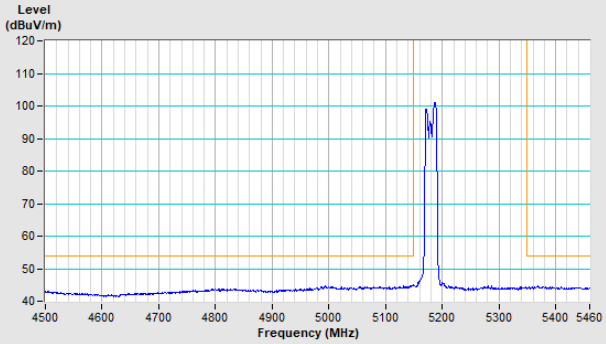
Horizontal (Average)



Vertical (Peak)

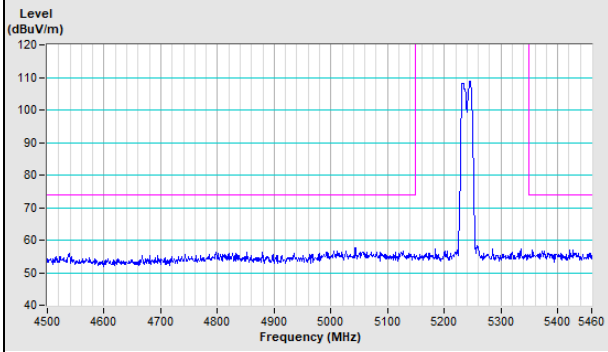


Vertical (Average)

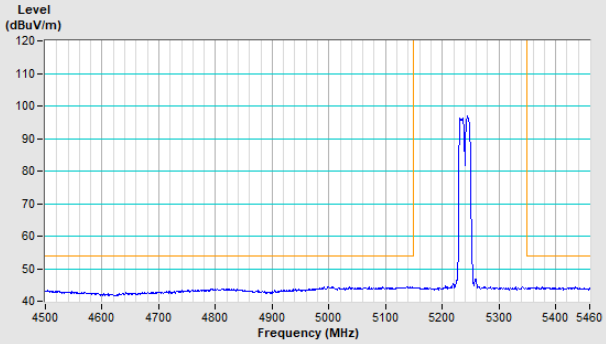


802.11ax (HE20) Channel 48

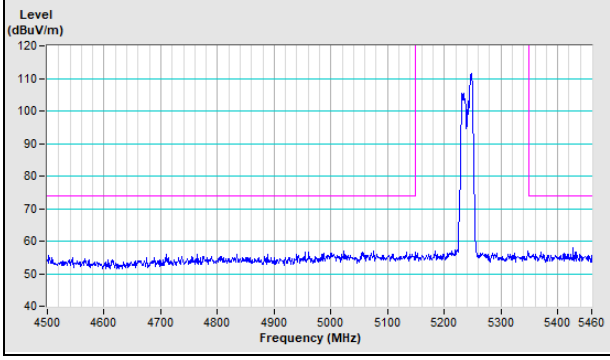
Horizontal (Peak)



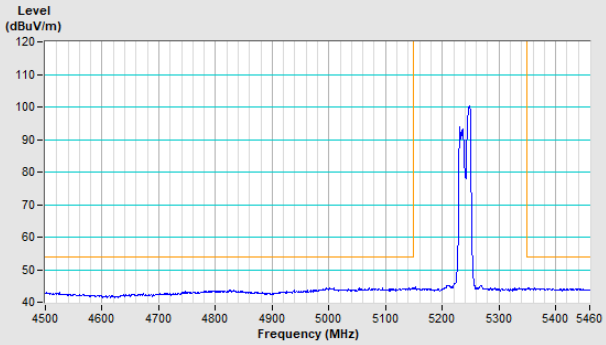
Horizontal (Average)

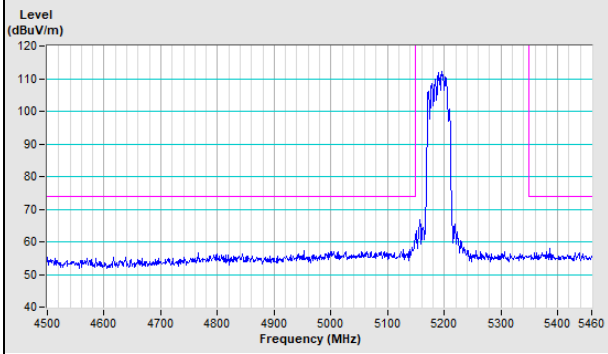
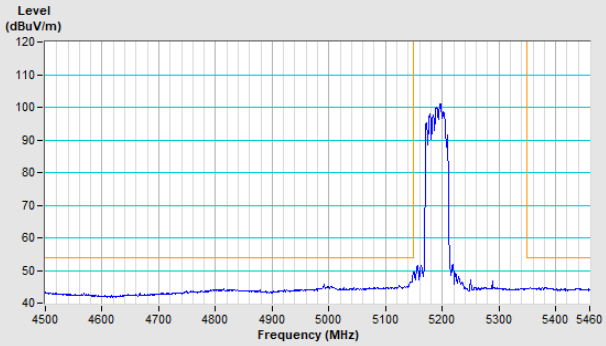
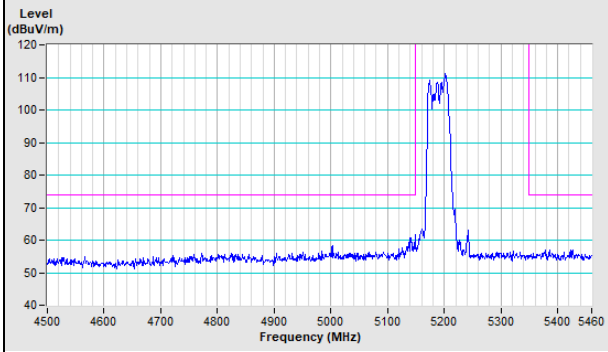
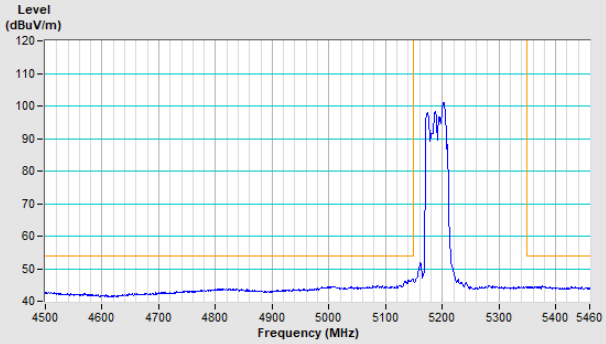


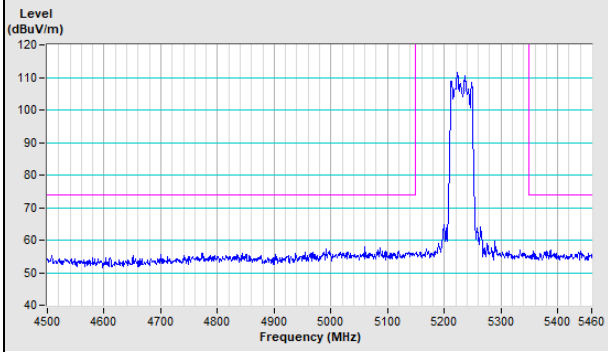
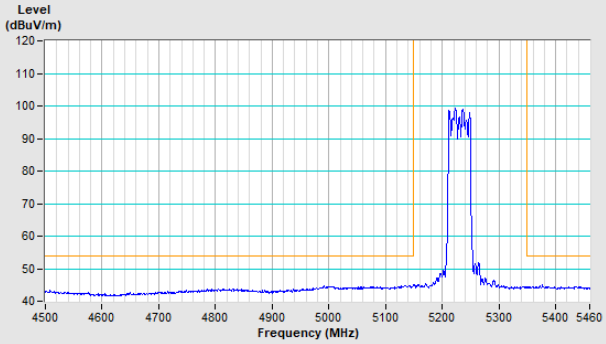
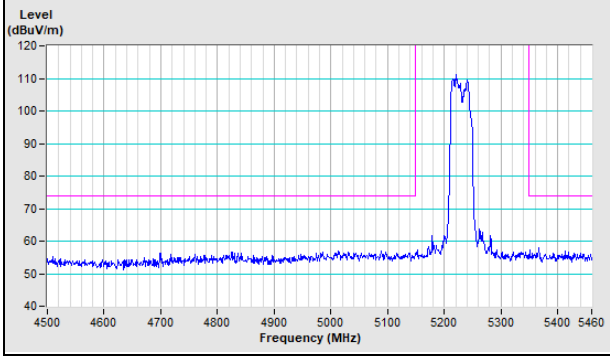
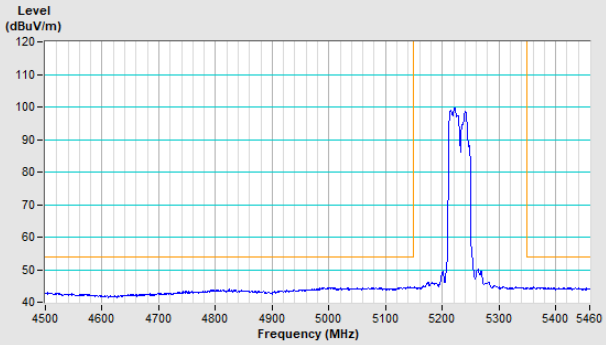
Vertical (Peak)

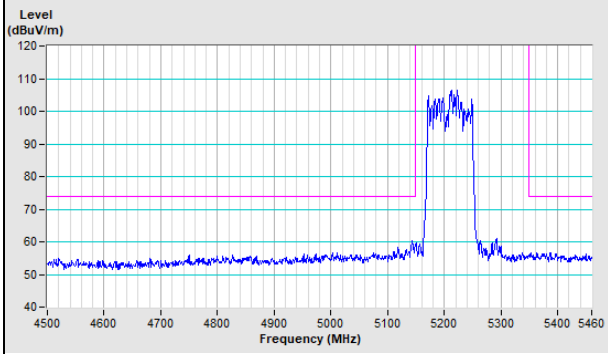
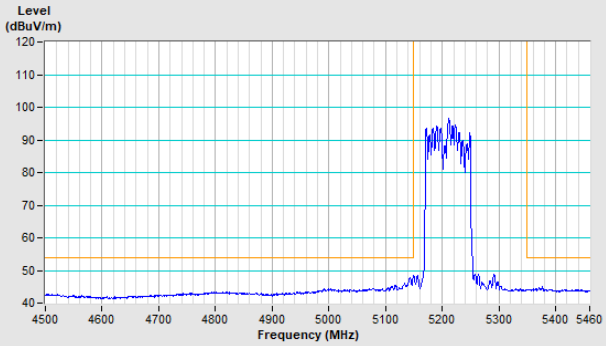
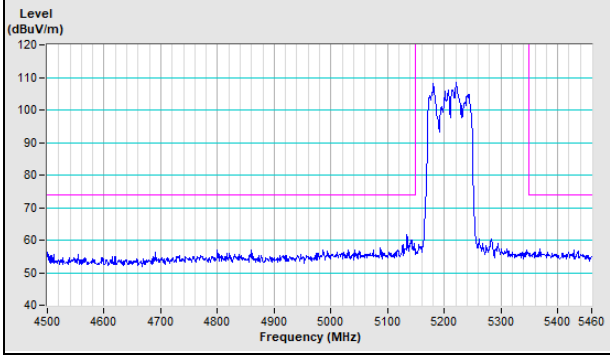
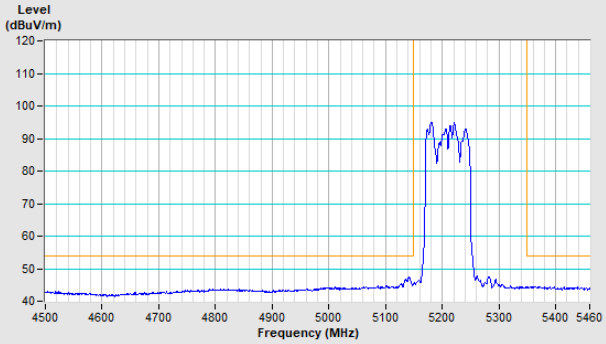


Vertical (Average)

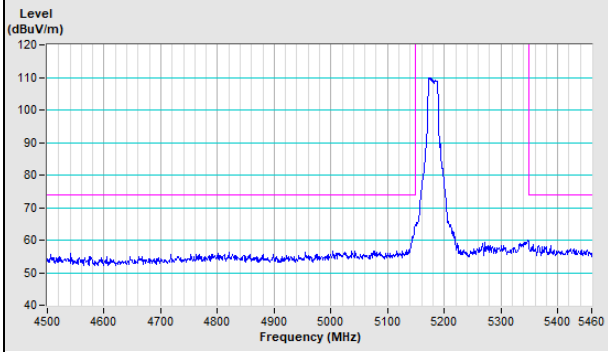
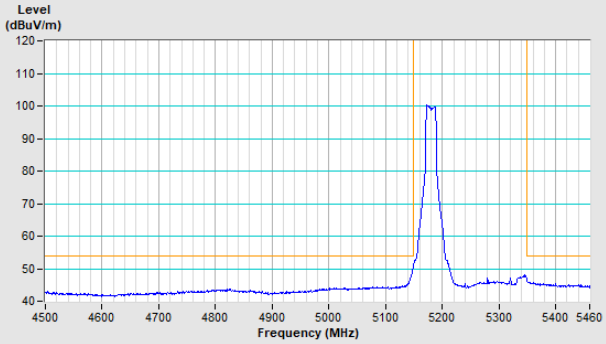
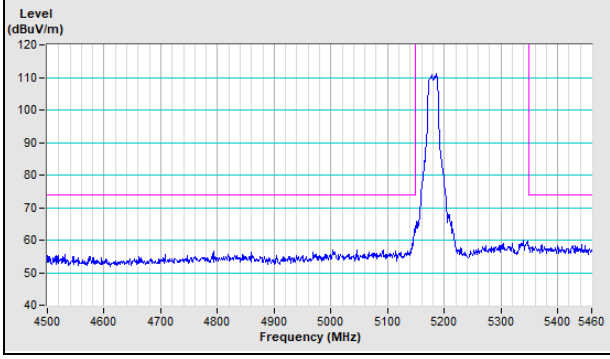
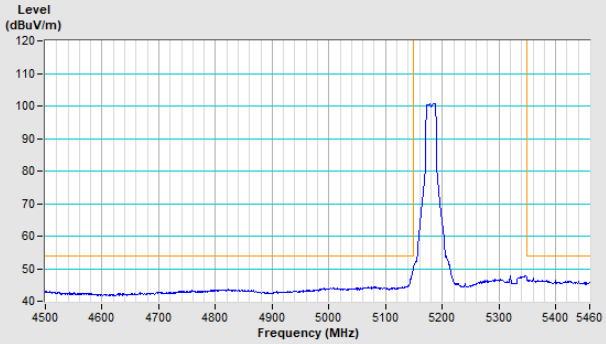


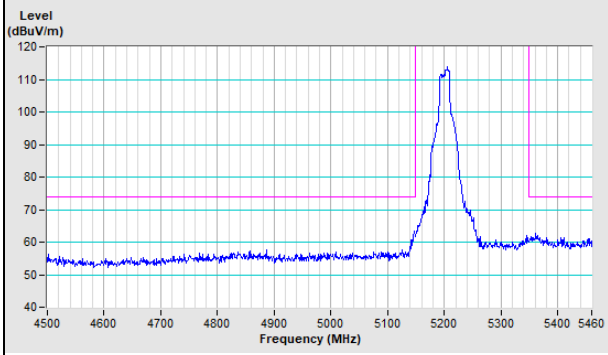
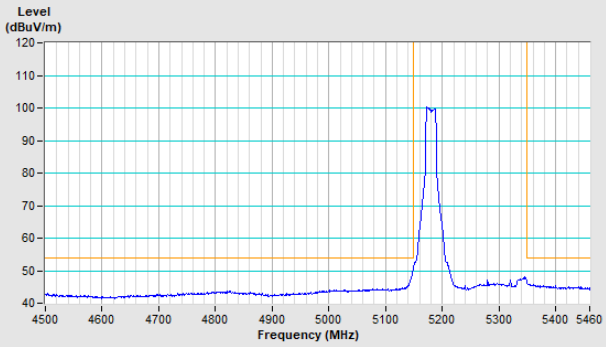
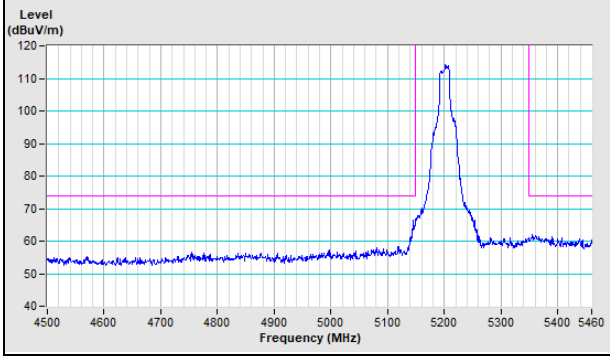
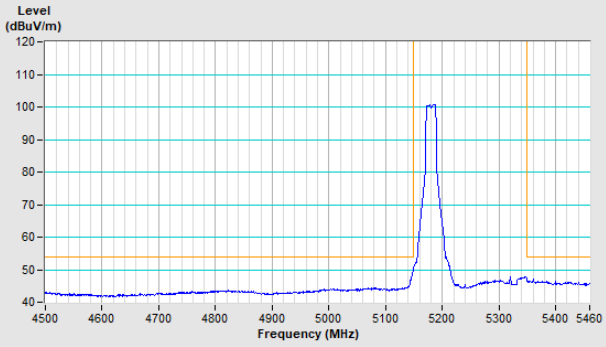
802.11ax (HE40) Channel 38	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

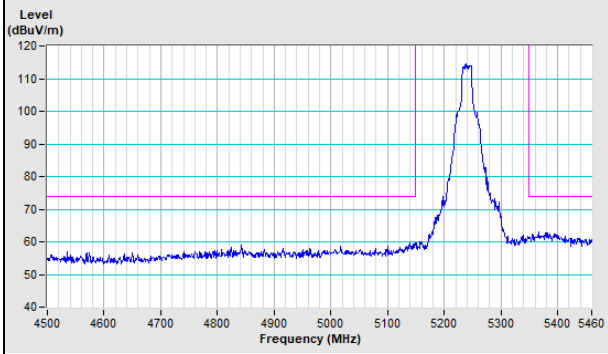
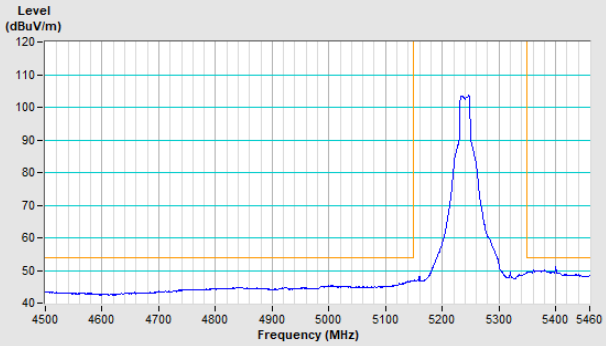
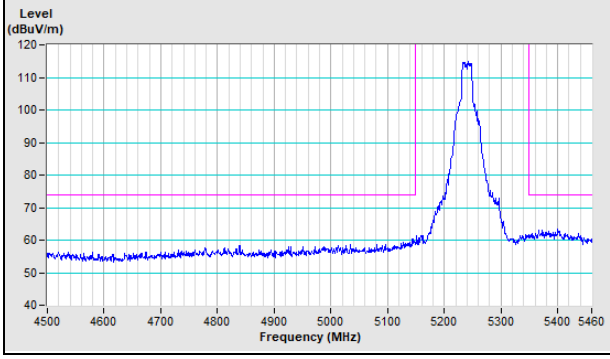
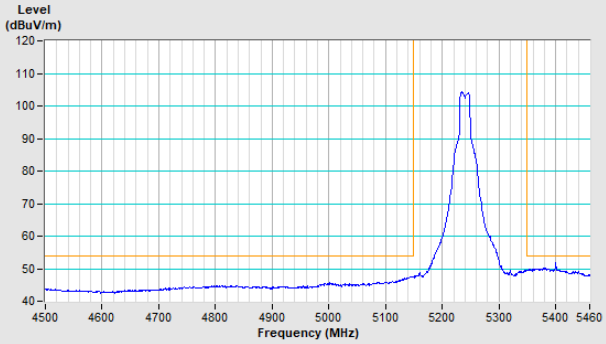
802.11ax (HE40) Channel 46	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

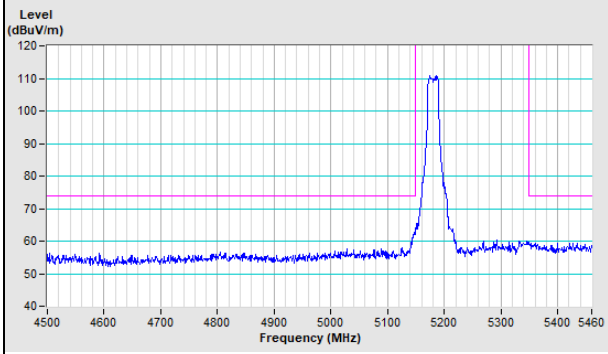
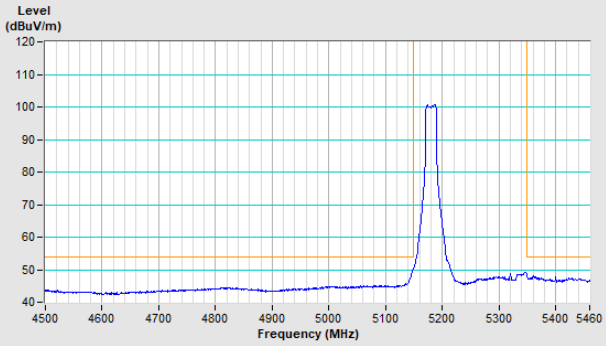
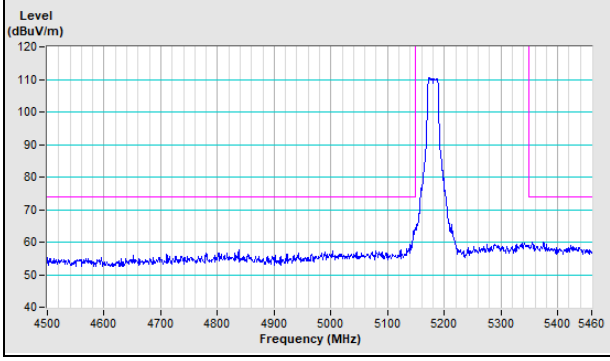
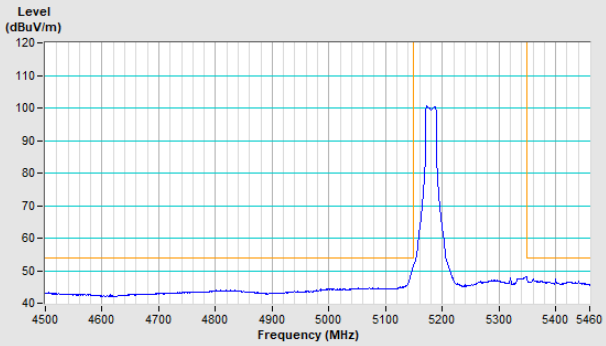
802.11ax (HE80) Channel 42	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

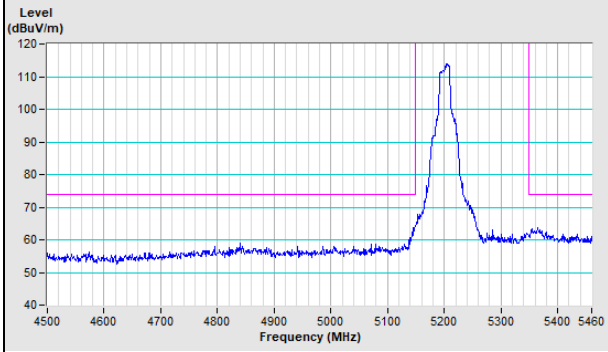
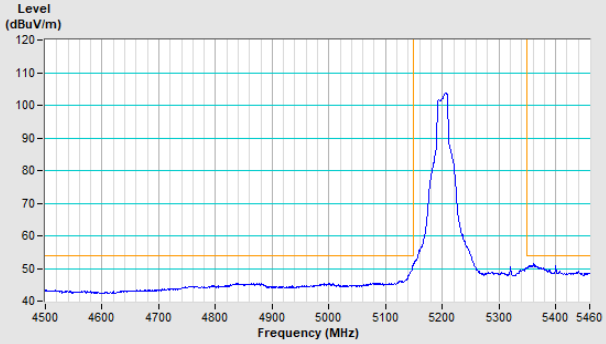
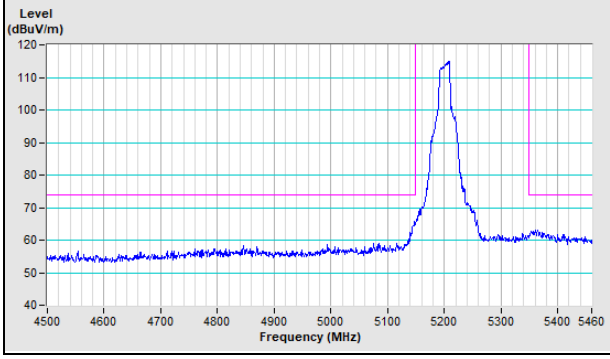
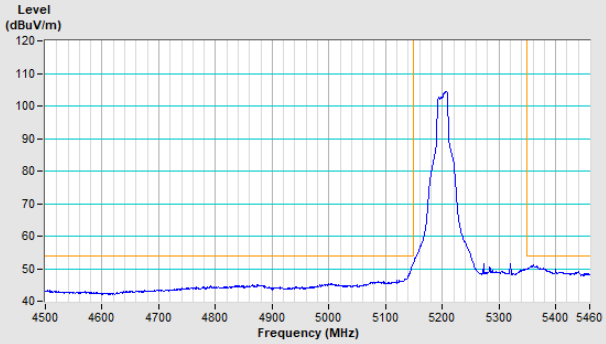
Scanning radio (Radio 3)

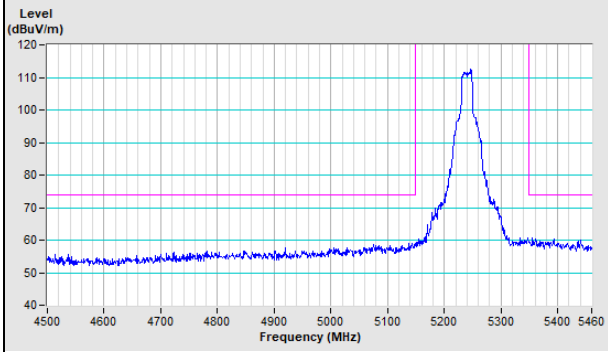
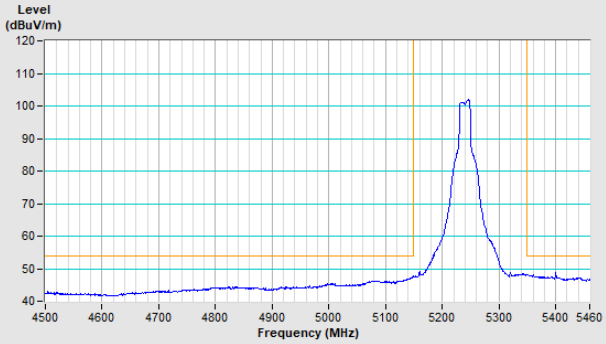
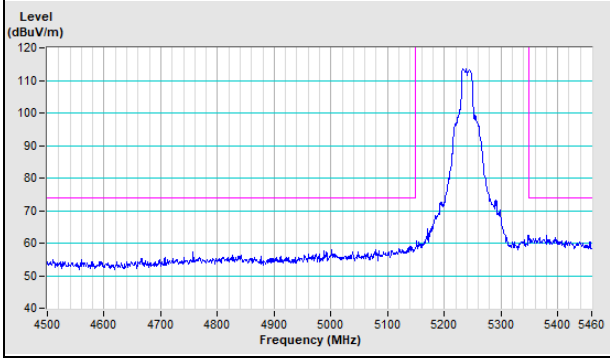
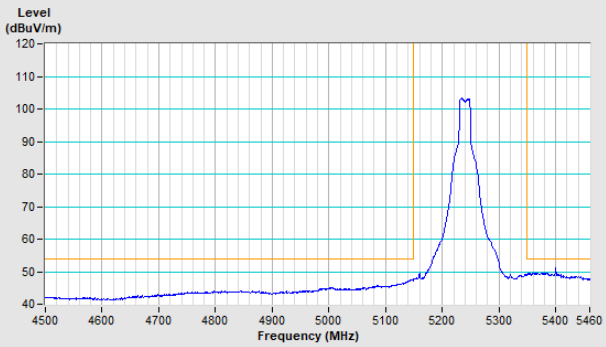
802.11a Channel 36	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11a Channel 40	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11a Channel 48	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

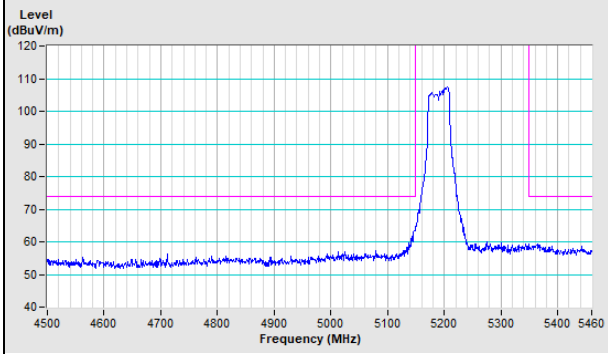
802.11ac (VHT20) Channel 36	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT20) Channel 40	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

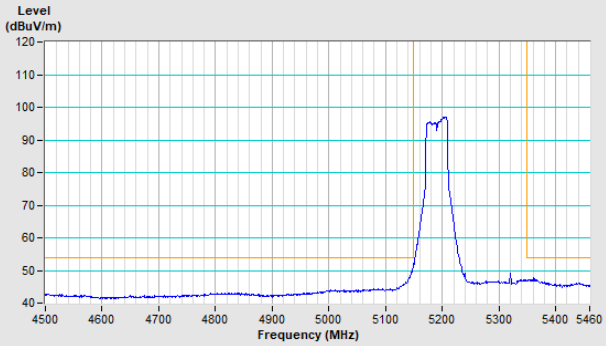
802.11ac (VHT20) Channel 48	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

802.11ac (VHT40) Channel 38

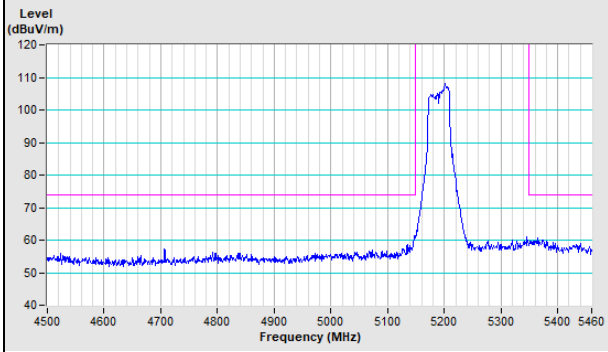
Horizontal (Peak)



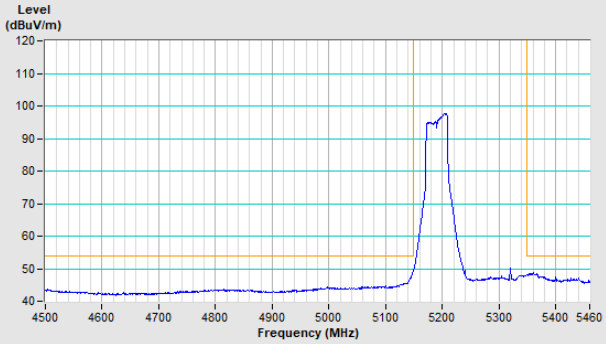
Horizontal (Average)



Vertical (Peak)

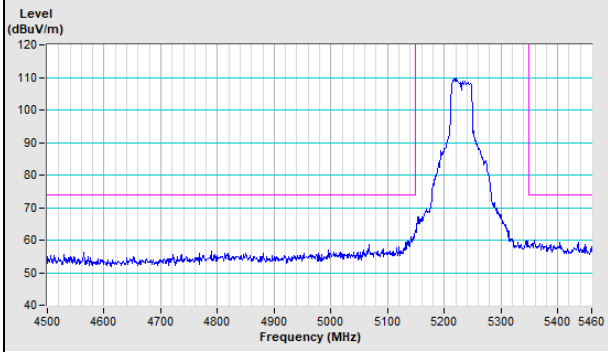


Vertical (Average)

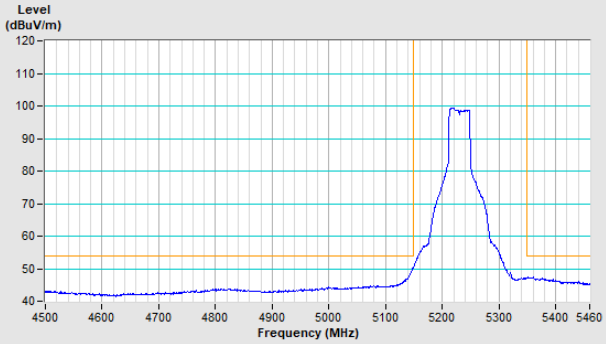


802.11ac (VHT40) Channel 46

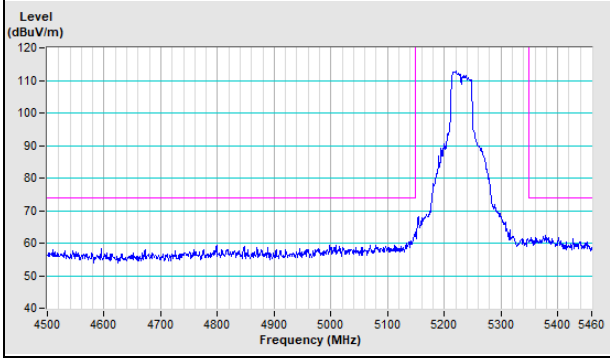
Horizontal (Peak)



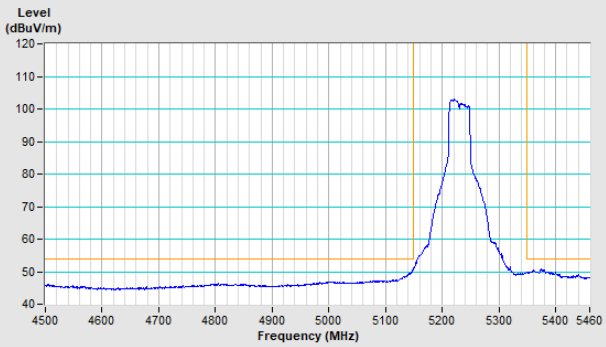
Horizontal (Average)

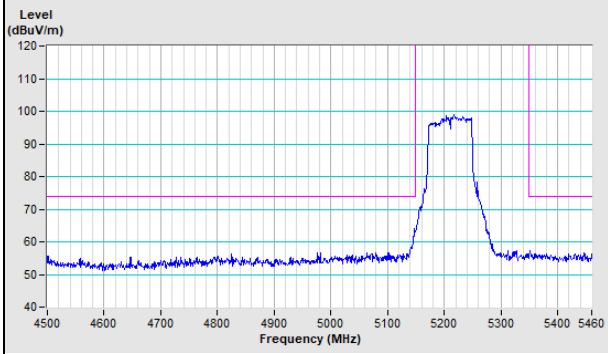
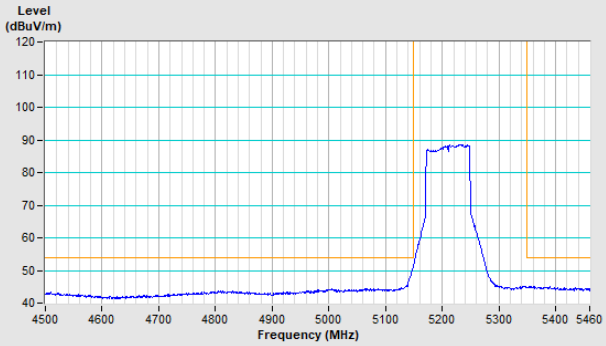
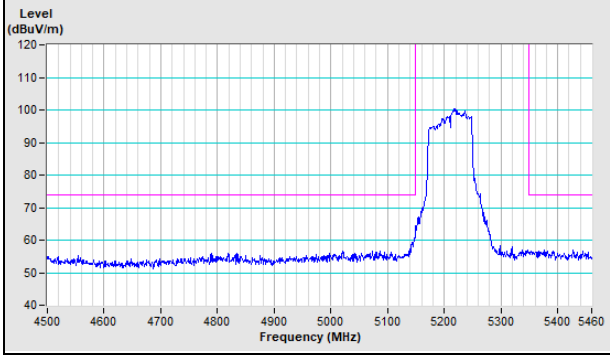
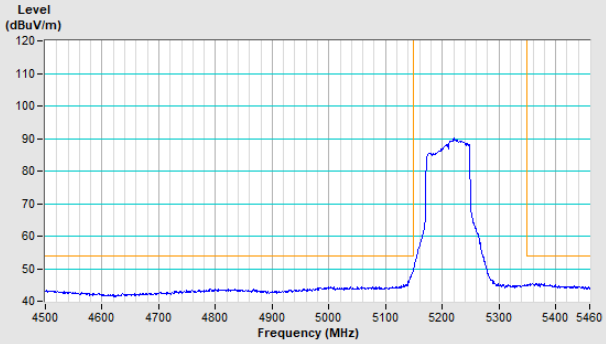


Vertical (Peak)



Vertical (Average)



802.11ac (VHT80) Channel 42	
Horizontal (Peak)	Horizontal (Average)
	
Vertical (Peak)	Vertical (Average)
	

Appendix – Information of the Testing Laboratories

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

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Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

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

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