

FCC Test Report

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FCC ID: ACQ-X5042

Test Model: X5042

Received Date: Dec. 03, 2019

Test Date: Dec. 20, 2019 ~ Mar. 17, 2020

Issued Date: Mar. 31, 2020

Applicant: ARRIS

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Table of Contents

Release Control Record	4
1 Certificate of Conformity.....	5
2 Summary of Test Results	6
2.1 Measurement Uncertainty	6
2.2 Modification Record	6
3 General Information.....	7
3.1 General Description of EUT	7
3.2 Description of Test Modes	10
3.2.1 Test Mode Applicability and Tested Channel Detail	12
3.3 Duty Cycle of Test Signal	16
3.4 Description of Support Units	17
3.4.1 Configuration of System under Test	17
3.5 General Description of Applied Standards and References	17
4 Test Types and Results	18
4.1 Radiated Emission and Bandedge Measurement.....	18
4.1.1 Limits of Radiated Emission and Bandedge Measurement	18
4.1.2 Test Instruments	19
4.1.3 Test Procedures.....	20
4.1.4 Deviation from Test Standard	21
4.1.5 Test Setup.....	21
4.1.6 EUT Operating Conditions.....	22
4.1.7 Test Results	23
4.2 Conducted Emission Measurement	69
4.2.1 Limits of Conducted Emission Measurement	69
4.2.2 Test Instruments	69
4.2.3 Test Procedures.....	70
4.2.4 Deviation from Test Standard	70
4.2.5 Test Setup.....	70
4.2.6 EUT Operating Conditions.....	70
4.2.7 Test Results	71
4.3 Transmit Power Measurement	73
4.3.1 Limits of Transmit Power Measurement	73
4.3.2 Test Setup.....	73
4.3.3 Test Instruments	74
4.3.4 Test Procedure	74
4.3.5 Deviation from Test Standard	74
4.3.6 EUT Operating Conditions.....	74
4.3.7 Test Result.....	75
4.4 Occupied Bandwidth Measurement	116
4.4.1 Test Setup.....	116
4.4.2 Test Instruments	116
4.4.3 Test Procedure	116
4.4.4 Test Result.....	117
4.5 Peak Power Spectral Density Measurement	125
4.5.1 Limits of Peak Power Spectral Density Measurement	125
4.5.2 Test Setup.....	125
4.5.3 Test Instruments	125
4.5.4 Test Procedures.....	126
4.5.5 Deviation from Test Standard	126
4.5.6 EUT Operating Conditions.....	126
4.5.7 Test Results	127
4.6 Frequency Stability.....	136
4.6.1 Limits of Frequency Stability Measurement	136

4.6.2	Test Setup	136
4.6.3	Test Instruments	136
4.6.4	Test Procedure	136
4.6.5	Deviation from Test Standard	137
4.6.6	EUT Operating Condition	137
4.6.7	Test Results	137
4.7	6dB Bandwidth Measurement	138
4.7.1	Limits of 6dB Bandwidth Measurement	138
4.7.2	Test Setup	138
4.7.3	Test Instruments	138
4.7.4	Test Procedure	138
4.7.5	Deviation from Test Standard	138
4.7.6	EUT Operating Condition	138
4.7.7	Test Results	139
5	Pictures of Test Arrangements	141
	Annex A- Radiated Out of Band Emission (OOBE) Measurement (For U-NII-3 band)	142
	Annex B- Band Edge Measurement	145
	Appendix – Information on the Testing Laboratories	159

Release Control Record

Issue No.	Description	Date Issued
RF191203C03-1	Original release.	Mar. 31, 2020

1 Certificate of Conformity

Product: WiFi extender

Brand: Arris

Test Model: X5042

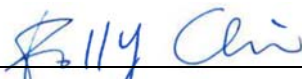
Sample Status: Engineering sample

Applicant: ARRIS

Test Date: Dec. 20, 2019 ~ Mar. 17, 2020

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 : , **Date:** Mar. 31, 2020
Polly Chien / Specialist

Approved by : , **Date:** Mar. 31, 2020
Bruce Chen / Senior Project Engineer

2 Summary of Test Results

47 CFR FCC Part 15, Subpart E (Section 15.407)			
FCC Clause	Test Item	Result	Remarks
15.407(b)(6)	AC Power Conducted Emissions	Pass	Meet the requirement of limit. Minimum passing margin is -11.02dB at 0.15000MHz.
15.407(b) (1/2/3/4(i/ii)/6)	Radiated Emissions & Band Edge Measurement	Pass	Meet the requirement of limit. Minimum passing margin is -1.0dB at 5725.00MHz.
15.407(a)(1/2/3)	Max Average Transmit Power	Pass	Meet the requirement of limit.
---	Occupied Bandwidth Measurement	Pass	Meet the requirement of limit.
15.407(a)(1/2/3)	Peak Power Spectral Density	Pass	Meet the requirement of limit. (U-NII-3 Band only)
15.407(e)	6dB bandwidth	Pass	Meet the requirement of limit.
15.407(g)	Frequency Stability	Pass	Meet the requirement of limit.
15.203	Antenna Requirement	Pass	Antenna connector is i-pex(MHF) not a standard connector.

Note:

1. For U-NII-3 band compliance with rule part 15.407(b)(4)(i), the OOB test plots were recorded in Annex A.
2. For U-NII-1, U-NII-2A, U-NII-2C 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	3.59 dB
	200MHz ~ 1000MHz	3.60 dB
Radiated Emissions above 1 GHz	1GHz ~ 18GHz	2.29 dB
	18GHz ~ 40GHz	2.29 dB

2.2 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT

Product	WiFi extender
Brand	Arris
Test Model	X5042
Sample Status	Engineering sample
Power Supply Rating	12Vdc from adapter
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK 1024QAM for OFDMA
Modulation Technology	OFDM, OFDMA
Transfer Rate	802.11a: 54/48/36/24/18/12/9/6Mbps 802.11n (HT20/40): up to MCS31 802.11ac (VHT20/40/80): up to MCS9 802.11ax: up to MCS11
Operating Frequency	5180~5240MHz, 5260~5320MHz, 5500~5720MHz, 5745~5825MHz 1024QAM for OFDMA
Number of Channel	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 5260~5320MHz: 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 5500~5720MHz: 802.11a, 802.11n (HT20), 802.11ac (VHT20), 802.11ax (HE20): 12 802.11n (HT40), 802.11ac (VHT40), 802.11ax (HE40): 6 802.11ac (VHT80), 802.11ax (HE80): 3 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 5150~5720MHz: 802.11ac (VHT160), 802.11ax (HE160): 3

Output Power	CDD mode: 5180~5240MHz: 592.687mW 5260~5320MHz: 240.097mW 5500~5720MHz: 233.346mW 5745~5825MHz: 607.936mW Beamforming mode: 5180~5240MHz: 568.031mW 5260~5320MHz: 182.150mW 5500~5720MHz: 194.141mW 5745~5825MHz: 545.867mW
Antenna Type	Refer to note
Antenna Connector	Refer to note
Accessory Device	Adapter
Cable Supplied	NA

Note:

1. The EUT incorporates a MIMO function. Physically, the EUT provides 4 completed transmitters and 4 receivers.

Modulation Mode	TX Function	Beamforming
802.11a	4TX	Not support
802.11n(HT20)	4TX	Support
802.11n(HT40)	4TX	Support
802.11ac(VHT20)	4TX	Support
802.11ac(VHT40)	4TX	Support
802.11ac(VHT80)	4TX	Support
802.11ac (VHT160)	4TX	Support
802.11ax(HE20)	4TX	Support
802.11ax(HE40)	4TX	Support
802.11ax(HE80)	4TX	Support
802.11ax (HE160)	4TX	Support

* The bandwidth and modulation are similar for HT20/HT40 on 802.11n mode and VHT20/VHT40 on 802.11n mode and HE20/HE40 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/ax, 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 uses following adapters. Adapter 2 is the worst case for final test.

Adapter 1	
Brand	NetBit
Model	NBS12F120100VU
Input Power	100-120Vac, 50/60Hz, 0.3A
Output Power	12.0Vdc, 1.0A
Power Cord	1.8m power cable without core attached on adapter

Adapter 2	
Brand	Asian Power Devices Inc.
Model	WB-12G12FU
Input Power	100-240Vac, 50-60Hz, 0.3A Max
Output Power	12Vdc, 1A
Power Cord	1.8m power cable with 1 core attached on adapter

3. The EUT uses following antenna.

Type	PCB					
Connector	i-pex(MHF)					
Antenna	Ant 0 (dBi)	Ant 1 (dBi)	Ant 2 (dBi)	Ant 3 (dBi)	Peak Gain(dBi) for each band	Directional Gain with correlated signal(dBi)
2.4G	3.72	3.33			3.72	5.95
5G B1	3.95	3.83	3.88	3.87	3.95	7.16
5G B2	4.35	3.92	3.78	4.21	4.35	7.39
5G B3	4.62	4	4	4.3	4.62	7.11
5G B4	4.44	4.41	3.59	4.09	4.44	6.71

4. WLAN 2.4GHz + WLAN 5GHz technologies can transmit at same time.

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

3.2 Description of Test Modes

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

5260~5320MHz:

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

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

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

Channel	Frequency	Channel	Frequency
54	5270 MHz	62	5310 MHz

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

Channel	Frequency
58	5290 MHz

5500~5720MHz:

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

Channel	Frequency	Channel	Frequency
100	5500 MHz	124	5620 MHz
104	5520 MHz	128	5640 MHz
108	5540 MHz	132	5660 MHz
112	5560 MHz	136	5680 MHz
116	5580 MHz	140	5700 MHz
120	5600 MHz	144	5720 MHz

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

Channel	Frequency	Channel	Frequency
102	5510 MHz	126	5630 MHz
110	5550 MHz	134	5670 MHz
118	5590 MHz	142	5710 MHz

3 channels are provided for 802.11ac (VHT80), 802.11ax (HE80):

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

5150~5720MHz:

3 channels are provided for 802.11ac (VHT160), 802.11ax (HE160):

Channel	Frequency
50 (for 5150~5250MHz)	5250 MHz
50 (for 5250~5350MHz)	5250 MHz
114	5570 MHz

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 $\geq$ 1G	RE<1G	PLC	APCM	
-	√	√	√	√	-

Where RE $\geq$ 1G: Radiated Emission above 1GHz & Bandedge Measurement
PLC: Power Line Conducted Emission

RE<1G: Radiated Emission below 1GHz
APCM: Antenna Port Conducted Measurement

Note:

- The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on Z-plane.
- Radiated emission test (below 1GHz) and power line conducted emission test items chosen the worst maximum power.

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
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0	-
-	802.11ax (HE20)		36 to 48	36, 40, 48	OFDM	MCS0	-
-	802.11ax (HE40)		38 to 46	38, 46	OFDM	MCS0	-
-	802.11ax (HE80)		42	42	OFDM	MCS0	-
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0	-
-	802.11ax (HE20)		52 to 64	52, 60, 64	OFDM	MCS0	-
-	802.11ax (HE40)		54 to 62	54, 62	OFDM	MCS0	-
-	802.11ax (HE80)		58	58	OFDM	MCS0	-
-	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0	-
-	802.11ax (HE20)		100 to 144	100, 116, 140, 144	OFDM	MCS0	-
-	802.11ax (HE40)		102 to 142	102, 110, 134, 142	OFDM	MCS0	-
-	802.11ax (HE80)		106 to 138	106, 122, 138	OFDM	MCS0	-
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0	-
-	802.11ax (HE20)		149 to 165	149, 157, 165	OFDM	MCS0	-
-	802.11ax (HE40)		151 to 159	151, 159	OFDM	MCS0	-
-	802.11ax (HE80)		155	155	OFDM	MCS0	-
-	802.11ax (HE160)	5180-5240 5260-5320 5500-5720	50, 114	50, 114	OFDM	MCS0	-

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
-	802.11a	5180-5240	36 to 48	149	OFDM	6.0	-
		5260-5320	52 to 64		OFDM	6.0	-
		5500-5720	100 to 144		OFDM	6.0	-
		5745-5825	149 to 165		OFDM	6.0	-

Power Line Conducted Emission Test:

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

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

Conducted Emission Measurement:

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0	-
-	802.11n (HT20)		36 to 48	36, 40, 48	OFDM	6.5	-
-	802.11n (HT40)		38 to 46	38, 46	OFDM	13.5	-
-	802.11ac (VHT20)		36 to 48	36, 40, 48	OFDM	7.2	-
-	802.11ac (VHT40)		38 to 46	38, 46	OFDM	15.0	-
-	802.11ac (VHT80)		42	42	OFDM	130.0	-
-	802.11ax (HE20)		36 to 48	36, 40, 48	OFDM	MCS0	-
-	802.11ax (HE40)		38 to 46	38, 46	OFDM	MCS0	-
-	802.11ax (HE80)		42	42	OFDM	MCS0	-
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0	-
-	802.11ac (VHT20)		52 to 64	52, 60, 64	OFDM	7.2	-
-	802.11ac (VHT40)		54 to 62	54, 62	OFDM	15.0	-
-	802.11ac (VHT80)		58	58	OFDM	130.0	-
-	802.11ax (HE20)		52 to 64	52, 60, 64	OFDM	MCS0	-
-	802.11ax (HE40)		54 to 62	54, 62	OFDM	MCS0	-
-	802.11ax (HE80)		58	58	OFDM	MCS0	-

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
-	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0	-
-	802.11n (HT20)		100 to 144	100, 116, 140, 144	OFDM	6.5	-
-	802.11n (HT40)		102 to 142	102, 110, 134, 142	OFDM	13.5	-
-	802.11ac (VHT20)		100 to 144	100, 116, 140, 144	OFDM	7.2	-
-	802.11ac (VHT40)		102 to 142	102, 110, 134, 142	OFDM	15.0	-
-	802.11ac (VHT80)		106 to 138	106, 122, 138	OFDM	130.0	-
-	802.11ax (HE20)		100 to 144	100, 116, 140, 144	OFDM	MCS0	-
-	802.11ax (HE40)		102 to 142	102, 110, 134, 142	OFDM	MCS0	-
-	802.11ax (HE80)		106 to 138	106, 122, 138	OFDM	MCS0	-
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0	-
-	802.11n (HT20)		149 to 165	149, 157, 165	OFDM	6.5	-
-	802.11n (HT40)		151 to 159	151, 159	OFDM	13.5	-
-	802.11ac (VHT20)		149 to 165	149, 157, 165	OFDM	7.2	-
-	802.11ac (VHT40)		151 to 159	151, 159	OFDM	15.0	-
-	802.11ac (VHT80)		155	155	OFDM	130.0	-
-	802.11ac (VHT160)	5180-5240 5260-5320 5500-5720	50, 114	50, 114	OFDM	130.0	-
-	802.11ax (HE20)	5745-5825	149 to 165	149, 157, 165	OFDM	MCS0	-
-	802.11ax (HE40)		151 to 159	151, 159	OFDM	MCS0	-
-	802.11ax (HE80)		155	155	OFDM	MCS0	-
-	802.11ax (HE160)	5180-5240 5260-5320 5500-5720	50, 114	50, 114	OFDM	MCS0	-

Antenna Port Conducted Measurement:

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

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
-	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0	-
-	802.11ax (HE20)		36 to 48	36, 40, 48	OFDM	MCS0	-
-	802.11ax (HE40)		38 to 46	38, 46	OFDM	MCS0	-
-	802.11ax (HE80)		42	42	OFDM	MCS0	-
-	802.11a	5260-5320	52 to 64	52, 60, 64	OFDM	6.0	-
-	802.11ax (HE20)		52 to 64	52, 60, 64	OFDM	MCS0	-
-	802.11ax (HE40)		54 to 62	54, 62	OFDM	MCS0	-
-	802.11ax (HE80)		58	58	OFDM	MCS0	-

EUT Configure Mode	Mode	Frequency Band (MHz)	Available Channel	Tested Channel	Modulation Technology	Data Rate (Mbps)	Remark
-	802.11a	5500-5720	100 to 144	100, 116, 140, 144	OFDM	6.0	-
-	802.11ax (HE20)		100 to 144	100, 116, 140, 144	OFDM	MCS0	-
-	802.11ax (HE40)		102 to 142	102, 110, 134, 142	OFDM	MCS0	-
-	802.11ax (HE80)		106 to 138	106, 122, 138	OFDM	MCS0	-
-	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0	-
-	802.11ax (HE20)		149 to 165	149, 157, 165	OFDM	MCS0	-
-	802.11ax (HE40)		151 to 159	151, 159	OFDM	MCS0	-
-	802.11ax (HE80)		155	155	OFDM	MCS0	-
-	802.11ax (HE160)	5180-5240 5260-5320 5500-5720	50, 114	50, 114	OFDM	MCS0	-

Test Condition:

Applicable to	Environmental Conditions	Input Power	Tested by
RE $\geq$ 1G	23 deg. C, 66% RH	120Vac, 60Hz	Titan Hsu
RE<1G	23 deg. C, 68% RH	120Vac, 60Hz	Titan Hsu
PLC	25 deg. C, 75% RH	120Vac, 60Hz	Jones Chang
APCM	25 deg. C, 60% RH	120Vac, 60Hz	Ivan Tseng

3.3 Duty Cycle of Test Signal

Duty cycle of test signal is < 98%, duty factor shall be considered.

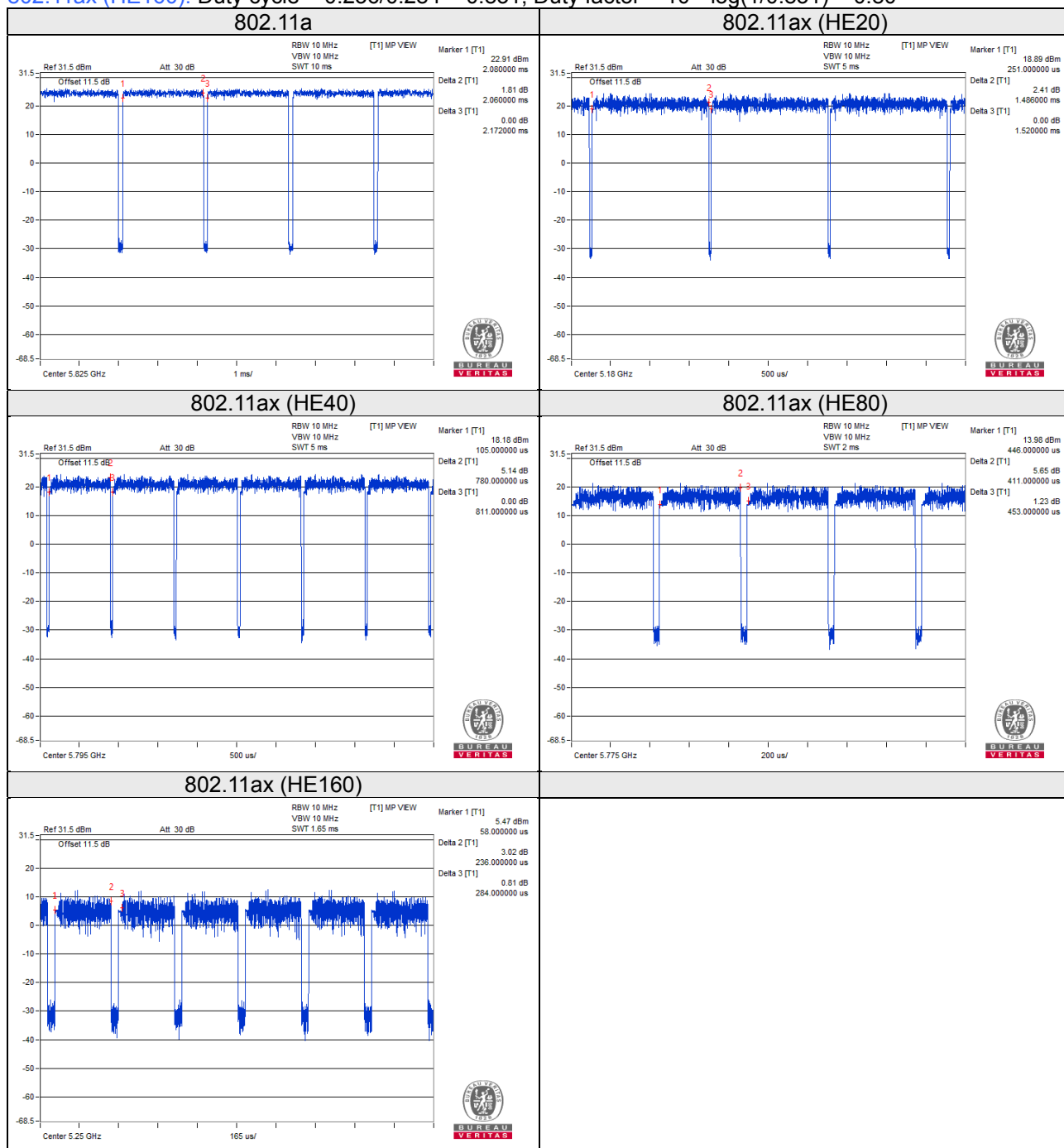
802.11a: Duty cycle = $2.060/2.172 = 0.948$, Duty factor = $10 * \log(1/0.948) = 0.23$

802.11ax (HE20): Duty cycle = $1.486/1.520 = 0.978$, Duty factor = $10 * \log(1/0.978) = 0.10$

802.11ax (HE40): Duty cycle = $0.780/0.811 = 0.962$, Duty factor = $10 * \log(1/0.962) = 0.17$

802.11ax (HE80): Duty cycle = $0.411/0.453 = 0.907$, Duty factor = $10 * \log(1/0.907) = 0.42$

802.11ax (HE160): Duty cycle = $0.236/0.284 = 0.831$, Duty factor = $10 * \log(1/0.831) = 0.80$



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.

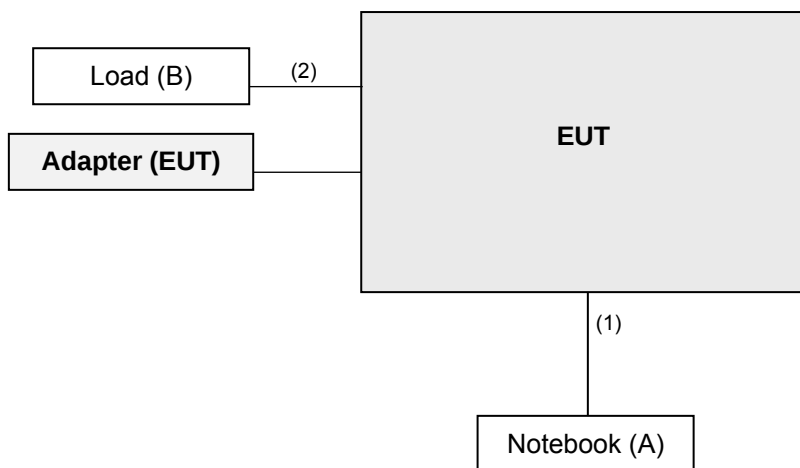
ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5410	1HC2XM1	FCC DoC Approved	Under the table
B.	Load	NA	NA	NA NA		-

Note:

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

ID	Cable Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	LAN cable	1	6	N	0	RJ45, Cat5e cable
2.	LAN cable	1	1.5	N	0	RJ45, Cat5e cable

3.4.1 Configuration of System under Test



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:

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

Limits of unwanted emission out of the restricted bands

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

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

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

4.1.2 Test Instruments

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESIB7	100187	May 30, 2019	May 29, 2020
BILOG Antenna SCHWARZBECK	VULB9168	9168-171	Nov. 11, 2019	Nov. 10, 2020
HORN Antenna SCHWARZBECK	9120D	209	Nov. 24, 2019	Nov. 23, 2020
HORN Antenna SCHWARZBECK	BBHA 9170	BBHA9170241	Nov. 24, 2019	Nov. 23, 2020
Loop Antenna TESEQ	HLA 6121	45745	Jul. 01, 2019	Jun. 30, 2020
Antenna Tower EMCO	2070/2080	512.835.4684	NA	NA
Turn Table EMCO	2087-2.03	NA	NA	NA
Antenna Tower & Turn BV ADT	AT100	AT93021705	NA	NA
Turn Table BV ADT	TT100	TT93021705	NA	NA
Preamplifier Agilent (Below 1GHz)	8447D	2944A10738	Aug. 20, 2019	Aug. 19, 2020
Preamplifier Agilent (Above 1GHz)	8449B	3008A02465	Mar. 27, 2019	Mar. 26, 2020
RF Coaxial Cable WOKEN With 5dB PAD	8D-FB	Cable-CH3-01	Aug. 20, 2019	Aug. 19, 2020
RF signal cable HUBER+SUHNER	SUCOFLEX 104	Cable-CH3-03 (223653/4)	Aug. 20, 2019	Aug. 19, 2020
RF signal cable HUBER+SUHNER& EMCI	SUCOFLEX 104&EMC104-SM-SM- 8000	Cable-CH3-03 (309224+170907)	Aug. 20, 2019	Aug. 19, 2020
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. 05, 2019	Sep. 04, 2020
USB Wideband Power Sensor KEYSIGHT	U2021XA	MY55050005/MY55190 004/MY55190007/MY55 210005	Jul. 15, 2019	Jul. 14, 2020

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

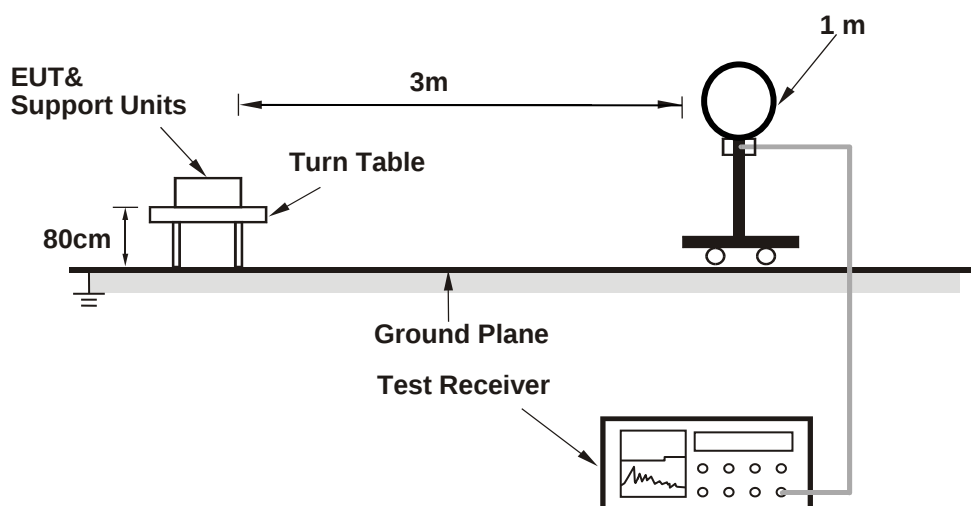
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle < 98%) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
(802.11a: RBW = 1MHz, VBW = 1kHz; 802.11ax (HE20): RBW = 1MHz, VBW = 1kHz; 802.11ax (HE40): RBW = 1MHz, VBW = 1kHz; 802.11ax (HE80): RBW = 1MHz, VBW = 1kHz; 802.11ax (HE160): RBW = 1MHz, VBW = 1kHz)
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 Deviation from Test Standard

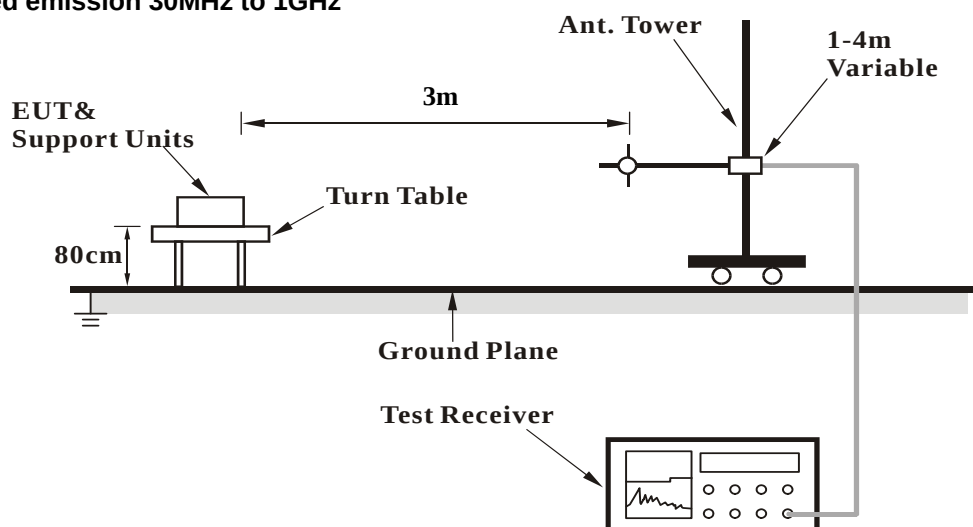
No deviation.

4.1.5 Test Setup

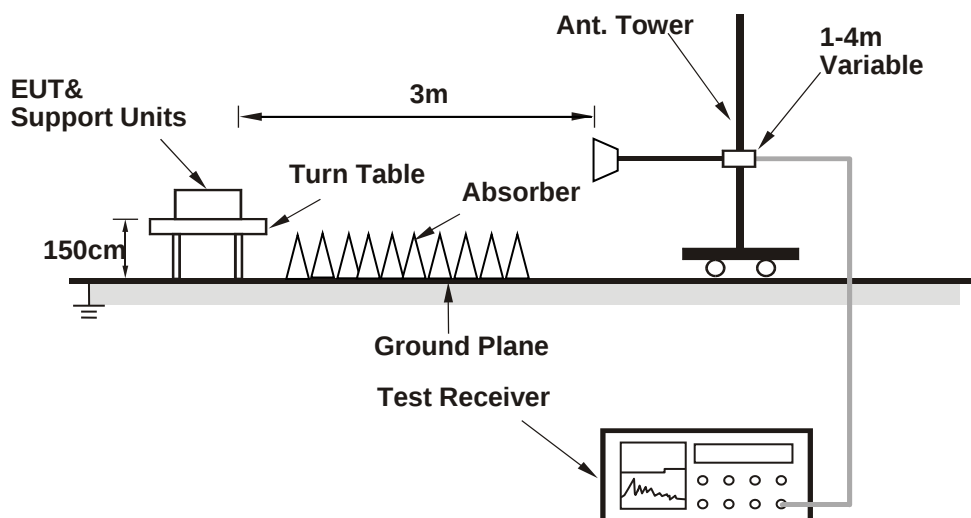
For Radiated emission below 30MHz



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

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

4.1.7 Test Results

Above 1GHz data:

802.11a

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	71.2 PK	74.0	-2.8	1.27 H	25	67.1	4.1
2	5150.00	52.7 AV	54.0	-1.3	1.27 H	25	48.6	4.1
3	*5180.00	114.7 PK			2.54 H	333	75.4	39.3
4	*5180.00	105.4 AV			2.54 H	333	66.1	39.3
5	#10360.00	58.7 PK	68.2	-9.5	3.02 H	143	41.5	17.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	69.1 PK	74.0	-4.9	2.07 V	250	65.0	4.1
2	5150.00	50.1 AV	54.0	-3.9	2.07 V	250	46.0	4.1
3	*5180.00	115.7 PK			2.22 V	175	76.4	39.3
4	*5180.00	105.8 AV			2.22 V	175	66.5	39.3
5	#10360.00	62.0 PK	68.2	-6.2	2.26 V	262	44.8	17.2

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	63.0 PK	74.0	-11.0	1.80 H	336	58.9	4.1
2	5150.00	44.3 AV	54.0	-9.7	1.80 H	336	40.2	4.1
3	*5200.00	117.2 PK			1.74 H	333	77.9	39.3
4	*5200.00	107.4 AV			1.74 H	333	68.1	39.3
5	#10400.00	59.4 PK	68.2	-8.8	3.12 H	146	42.0	17.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.4 PK	74.0	-12.6	1.90 V	177	57.3	4.1
2	5150.00	44.2 AV	54.0	-9.8	1.90 V	177	40.1	4.1
3	*5200.00	117.8 PK			1.86 V	175	78.5	39.3
4	*5200.00	108.0 AV			1.86 V	175	68.7	39.3
5	#10400.00	63.5 PK	68.2	-4.7	2.46 V	262	46.1	17.4

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	117.6 PK			3.01 H	125	78.5	39.1
2	*5240.00	108.1 AV			3.01 H	125	69.0	39.1
3	5350.00	57.9 PK	74.0	-16.1	3.12 H	129	53.8	4.1
4	5350.00	43.6 AV	54.0	-10.4	3.12 H	129	39.5	4.1
5	#10480.00	60.2 PK	68.2	-8.0	3.19 H	153	42.2	18.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	117.6 PK			1.76 V	168	78.5	39.1
2	*5240.00	107.7 AV			1.76 V	168	68.6	39.1
3	5350.00	57.5 PK	74.0	-16.5	1.80 V	171	53.4	4.1
4	5350.00	44.3 AV	54.0	-9.7	1.80 V	171	40.2	4.1
5	#10480.00	59.5 PK	68.2	-8.7	1.96 V	316	41.5	18.0

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.4 PK	74.0	-17.6	3.00 H	133	52.3	4.1
2	5150.00	43.6 AV	54.0	-10.4	3.00 H	133	39.5	4.1
3	*5260.00	112.8 PK			2.97 H	130	73.8	39.0
4	*5260.00	103.2 AV			2.97 H	130	64.2	39.0
5	#10520.00	60.3 PK	68.2	-7.9	3.22 H	149	42.0	18.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.6 PK	74.0	-18.4	1.48 V	145	51.5	4.1
2	5150.00	43.1 AV	54.0	-10.9	1.48 V	145	39.0	4.1
3	*5260.00	112.6 PK			1.46 V	143	73.6	39.0
4	*5260.00	103.1 AV			1.46 V	143	64.1	39.0
5	#10520.00	60.1 PK	68.2	-8.1	2.36 V	314	41.8	18.3

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	112.7 PK			2.82 H	123	73.6	39.1
2	*5300.00	103.3 AV			2.82 H	123	64.2	39.1
3	10600.00	61.0 PK	74.0	-13.0	3.25 H	153	42.1	18.9
4	10600.00	47.2 AV	54.0	-6.8	3.25 H	153	28.3	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	112.2 PK			1.47 V	158	73.1	39.1
2	*5300.00	102.1 AV			1.47 V	158	63.0	39.1
3	10600.00	60.8 PK	74.0	-13.2	2.29 V	320	41.9	18.9
4	10600.00	47.7 AV	54.0	-6.3	2.29 V	320	28.8	18.9

Remarks:

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

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	113.1 PK			2.78 H	118	73.9	39.2
2	*5320.00	103.4 AV			2.78 H	118	64.2	39.2
3	5350.00	63.4 PK	74.0	-10.6	2.88 H	162	59.3	4.1
4	5350.00	44.9 AV	54.0	-9.1	2.88 H	162	40.8	4.1
5	10640.00	60.7 PK	74.0	-13.3	3.25 H	153	42.1	18.6
6	10640.00	47.9 AV	54.0	-6.1	3.25 H	153	29.3	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	113.0 PK			1.36 V	147	73.8	39.2
2	*5320.00	103.3 AV			1.36 V	147	64.1	39.2
3	5350.00	63.3 PK	74.0	-10.7	1.36 V	156	59.2	4.1
4	5350.00	44.9 AV	54.0	-9.1	1.36 V	156	40.8	4.1
5	10640.00	60.8 PK	74.0	-13.2	2.39 V	318	42.2	18.6
6	10640.00	47.5 AV	54.0	-6.5	2.39 V	318	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	59.2 PK	74.0	-14.8	2.02 H	326	54.7	4.5
2	5460.00	43.9 AV	54.0	-10.1	2.02 H	326	39.4	4.5
3	#5470.00	59.5 PK	68.2	-8.7	2.04 H	327	55.0	4.5
4	*5500.00	111.4 PK			2.00 H	324	71.7	39.7
5	*5500.00	101.5 AV			2.00 H	324	61.8	39.7
6	11000.00	60.3 PK	74.0	-13.7	3.13 H	159	41.0	19.3
7	11000.00	46.5 AV	54.0	-7.5	3.13 H	159	27.2	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	60.0 PK	74.0	-14.0	2.03 V	235	55.5	4.5
2	5460.00	44.5 AV	54.0	-9.5	2.03 V	235	40.0	4.5
3	#5470.00	66.8 PK	68.2	-1.4	2.05 V	237	62.3	4.5
4	*5500.00	112.3 PK			2.01 V	232	72.6	39.7
5	*5500.00	102.2 AV			2.01 V	232	62.5	39.7
6	11100.00	60.1 PK	74.0	-13.9	2.48 V	335	41.5	18.6
7	11100.00	46.2 AV	54.0	-7.8	2.48 V	335	27.6	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	113.4 PK			1.97 H	320	73.7	39.7
2	*5580.00	103.8 AV			1.97 H	320	64.1	39.7
3	11160.00	60.7 PK	74.0	-13.3	3.19 H	162	42.1	18.6
4	11160.00	47.1 AV	54.0	-6.9	3.19 H	162	28.5	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	113.7 PK			2.04 V	238	74.0	39.7
2	*5580.00	104.2 AV			2.04 V	238	64.5	39.7
3	11160.00	60.4 PK	74.0	-13.6	2.44 V	331	41.8	18.6
4	11160.00	46.8 AV	54.0	-7.2	2.44 V	331	28.2	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	111.1 PK			2.12 H	326	71.3	39.8
2	*5700.00	101.6 AV			2.12 H	326	61.8	39.8
3	#5725.00	65.9 PK	68.2	-2.3	2.10 H	337	61.2	4.7
4	11400.00	61.0 PK	74.0	-13.0	3.22 H	165	42.5	18.5
5	11400.00	48.1 AV	54.0	-5.9	3.22 H	165	29.6	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	111.8 PK			2.03 V	233	72.0	39.8
2	*5700.00	101.8 AV			2.03 V	233	62.0	39.8
3	#5725.00	67.0 PK	68.2	-1.2	2.06 V	241	62.3	4.7
4	11400.00	60.7 PK	74.0	-13.3	1.76 V	43	42.2	18.5
5	11400.00	49.2 AV	54.0	-4.8	1.76 V	43	30.7	18.5

Remarks:

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

CHANNEL	TX Channel 144	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.2 PK	74.0	-17.8	2.20 H	322	51.7	4.5
2	5460.00	43.5 AV	54.0	-10.5	2.20 H	322	39.0	4.5
3	#5470.00	56.7 PK	68.2	-11.5	2.21 H	324	52.2	4.5
4	*5720.00	113.1 PK			2.22 H	321	73.1	40.0
5	*5720.00	103.2 AV			2.22 H	321	63.2	40.0
6	#5850.00	57.3 PK	68.2	-10.9	2.26 H	327	52.0	5.3
7	11440.00	61.6 PK	74.0	-12.4	3.29 H	169	43.0	18.6
8	11440.00	47.9 AV	54.0	-6.1	3.29 H	169	29.3	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.7 PK	74.0	-16.3	1.95 V	237	53.2	4.5
2	5460.00	43.7 AV	54.0	-10.3	1.95 V	237	39.2	4.5
3	#5470.00	57.0 PK	68.2	-11.2	1.96 V	239	52.5	4.5
4	*5720.00	115.0 PK			1.93 V	235	75.0	40.0
5	*5720.00	105.1 AV			1.93 V	235	65.1	40.0
6	#5850.00	57.7 PK	68.2	-10.5	2.00 V	241	52.4	5.3
7	11440.00	60.8 PK	74.0	-13.2	2.01 V	47	42.2	18.6
8	11440.00	49.4 AV	54.0	-4.6	2.01 V	47	30.8	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5609.60	57.2 PK	68.2	-11.0	1.49 H	342	52.7	4.5
2	*5745.00	119.0 PK			1.49 H	342	79.0	40.0
3	*5745.00	109.3 AV			1.49 H	342	69.3	40.0
4	#5964.80	57.9 PK	68.2	-10.3	1.49 H	342	52.6	5.3
5	11490.00	61.2 PK	74.0	-12.8	3.11 H	162	42.4	18.8
6	11490.00	48.4 AV	54.0	-5.6	3.11 H	162	29.6	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5628.80	57.2 PK	68.2	-11.0	1.98 V	235	52.7	4.5
2	*5745.00	119.4 PK			1.98 V	235	79.4	40.0
3	*5745.00	109.1 AV			1.98 V	235	69.1	40.0
4	#5925.60	57.9 PK	68.2	-10.3	1.98 V	235	52.6	5.3
5	11490.00	61.3 PK	74.0	-12.7	2.23 V	311	42.5	18.8
6	11490.00	48.4 AV	54.0	-5.6	2.23 V	311	29.6	18.8

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5614.40	57.4 PK	68.2	-10.8	1.58 H	328	52.9	4.5
2	*5785.00	119.1 PK			1.58 H	328	78.9	40.2
3	*5785.00	109.2 AV			1.58 H	328	69.0	40.2
4	#5978.40	57.8 PK	68.2	-10.4	1.58 H	328	52.5	5.3
5	11570.00	60.8 PK	74.0	-13.2	3.16 H	165	42.3	18.5
6	11570.00	48.0 AV	54.0	-6.0	3.16 H	165	29.5	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5636.00	57.9 PK	68.2	-10.3	1.95 V	234	53.4	4.5
2	*5785.00	119.0 PK			1.95 V	235	78.8	40.2
3	*5785.00	109.1 AV			1.95 V	235	68.9	40.2
4	#5945.60	57.4 PK	68.2	-10.8	1.95 V	234	52.1	5.3
5	11570.00	60.9 PK	74.0	-13.1	2.31 V	306	42.4	18.5
6	11570.00	48.3 AV	54.0	-5.7	2.31 V	306	29.8	18.5

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5617.60	56.8 PK	68.2	-11.4	1.47 H	334	52.3	4.5
2	*5825.00	118.7 PK			1.47 H	334	78.3	40.4
3	*5825.00	109.0 AV			1.47 H	334	68.6	40.4
4	#5934.40	57.7 PK	68.2	-10.5	1.47 H	334	52.4	5.3
5	11650.00	61.0 PK	74.0	-13.0	3.22 H	169	42.5	18.5
6	11650.00	48.2 AV	54.0	-5.8	3.22 H	169	29.7	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.00	56.8 PK	68.2	-11.4	1.92 V	235	52.3	4.5
2	*5825.00	119.0 PK			1.92 V	235	78.6	40.4
3	*5825.00	108.9 AV			1.92 V	235	68.5	40.4
4	#5947.20	57.9 PK	68.2	-10.3	1.92 V	235	52.6	5.3
5	11650.00	61.1 PK	74.0	-12.9	2.33 V	318	42.6	18.5
6	11650.00	48.3 AV	54.0	-5.7	2.33 V	318	29.8	18.5

Remarks:

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

802.11ax (HE20)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	70.9 PK	74.0	-3.1	1.45 H	322	66.8	4.1
2	5150.00	52.6 AV	54.0	-1.4	1.45 H	322	48.5	4.1
3	*5180.00	115.4 PK			1.69 H	326	76.1	39.3
4	*5180.00	103.7 AV			1.69 H	326	64.4	39.3
5	#10360.00	59.1 PK	68.2	-9.1	3.09 H	149	41.9	17.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	70.3 PK	74.0	-3.7	1.53 V	149	66.2	4.1
2	5150.00	50.3 AV	54.0	-3.7	1.53 V	149	46.2	4.1
3	*5180.00	115.0 PK			1.40 V	154	75.7	39.3
4	*5180.00	103.2 AV			1.40 V	154	63.9	39.3
5	#10360.00	59.0 PK	68.2	-9.2	2.11 V	320	41.8	17.2

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.4 PK	74.0	-11.6	1.69 H	329	58.3	4.1
2	5150.00	45.7 AV	54.0	-8.3	1.69 H	329	41.6	4.1
3	*5200.00	118.2 PK			1.64 H	325	78.9	39.3
4	*5200.00	106.2 AV			1.64 H	325	66.9	39.3
5	#10400.00	58.9 PK	68.2	-9.3	3.19 H	161	41.5	17.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.7 PK	74.0	-12.3	1.70 V	165	57.6	4.1
2	5150.00	45.1 AV	54.0	-8.9	1.70 V	165	41.0	4.1
3	*5200.00	118.4 PK			1.68 V	161	79.1	39.3
4	*5200.00	106.1 AV			1.68 V	161	66.8	39.3
5	#10400.00	59.4 PK	68.2	-8.8	2.03 V	316	42.0	17.4

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	118.4 PK			1.67 H	322	79.3	39.1
2	*5240.00	106.4 AV			1.67 H	322	67.3	39.1
3	5350.00	56.1 PK	74.0	-17.9	1.75 H	326	52.0	4.1
4	5350.00	43.6 AV	54.0	-10.4	1.75 H	326	39.5	4.1
5	#10480.00	59.6 PK	68.2	-8.6	3.07 H	144	41.6	18.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5240.00	117.2 PK			1.44 V	147	78.1	39.1
2	*5240.00	105.4 AV			1.44 V	147	66.3	39.1
3	5350.00	56.0 PK	74.0	-18.0	1.50 V	153	51.9	4.1
4	5350.00	43.5 AV	54.0	-10.5	1.50 V	153	39.4	4.1
5	#10480.00	60.2 PK	68.2	-8.0	1.86 V	303	42.2	18.0

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.5 PK	74.0	-17.5	2.92 H	132	52.4	4.1
2	5150.00	43.6 AV	54.0	-10.4	2.92 H	132	39.5	4.1
3	*5260.00	114.6 PK			2.88 H	130	75.6	39.0
4	*5260.00	101.6 AV			2.88 H	130	62.6	39.0
5	#10520.00	60.6 PK	68.2	-7.6	3.25 H	152	42.3	18.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.1 PK	74.0	-17.9	1.72 V	153	52.0	4.1
2	5150.00	43.3 AV	54.0	-10.7	1.72 V	153	39.2	4.1
3	*5260.00	113.2 PK			1.69 V	151	74.2	39.0
4	*5260.00	101.6 AV			1.69 V	151	62.6	39.0
5	#10520.00	61.5 PK	68.2	-6.7	2.19 V	308	43.2	18.3

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	114.2 PK			2.83 H	129	75.1	39.1
2	*5300.00	101.2 AV			2.83 H	129	62.1	39.1
3	10600.00	61.2 PK	74.0	-12.8	3.31 H	159	42.3	18.9
4	10600.00	47.1 AV	54.0	-6.9	3.31 H	159	28.2	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5300.00	113.2 PK			1.45 V	143	74.1	39.1
2	*5300.00	101.4 AV			1.45 V	143	62.3	39.1
3	10600.00	61.1 PK	74.0	-12.9	2.22 V	316	42.2	18.9
4	10600.00	48.0 AV	54.0	-6.0	2.22 V	316	29.1	18.9

Remarks:

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

CHANNEL	TX Channel 64	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	115.0 PK			2.53 H	109	75.8	39.2
2	*5320.00	101.8 AV			2.53 H	109	62.6	39.2
3	5350.00	66.0 PK	74.0	-8.0	2.93 H	164	61.9	4.1
4	5350.00	47.4 AV	54.0	-6.6	2.93 H	164	43.3	4.1
5	10640.00	60.7 PK	74.0	-13.3	3.32 H	158	42.1	18.6
6	10640.00	47.1 AV	54.0	-6.9	3.32 H	158	28.5	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5320.00	113.7 PK			1.35 V	158	74.5	39.2
2	*5320.00	101.9 AV			1.35 V	158	62.7	39.2
3	5350.00	64.2 PK	74.0	-9.8	1.42 V	159	60.1	4.1
4	5350.00	43.3 AV	54.0	-10.7	1.42 V	159	39.2	4.1
5	10640.00	60.5 PK	74.0	-13.5	2.26 V	318	41.9	18.6
6	10640.00	47.6 AV	54.0	-6.4	2.26 V	318	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.2 PK	74.0	-15.8	1.92 H	332	53.7	4.5
2	5460.00	44.0 AV	54.0	-10.0	1.92 H	332	39.5	4.5
3	#5470.00	64.7 PK	68.2	-3.5	1.95 H	335	60.2	4.5
4	*5500.00	115.7 PK			1.90 H	331	76.0	39.7
5	*5500.00	103.2 AV			1.90 H	331	63.5	39.7
6	11000.00	61.3 PK	74.0	-12.7	3.16 H	162	42.0	19.3
7	11000.00	47.6 AV	54.0	-6.4	3.16 H	162	28.3	19.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.8 PK	74.0	-15.2	1.97 V	214	54.3	4.5
2	5460.00	44.5 AV	54.0	-9.5	1.97 V	214	40.0	4.5
3	#5470.00	66.8 PK	68.2	-1.4	1.99 V	216	62.3	4.5
4	*5500.00	115.5 PK			1.99 V	235	75.8	39.7
5	*5500.00	102.6 AV			1.99 V	235	62.9	39.7
6	11000.00	61.2 PK	74.0	-12.8	2.57 V	336	41.9	19.3
7	11000.00	47.4 AV	54.0	-6.6	2.57 V	336	28.1	19.3

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	114.7 PK			1.80 H	325	75.0	39.7
2	*5580.00	103.0 AV			1.80 H	325	63.3	39.7
3	11160.00	60.8 PK	74.0	-13.2	3.22 H	165	42.2	18.6
4	11160.00	47.2 AV	54.0	-6.8	3.22 H	165	28.6	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5580.00	115.7 PK			1.96 V	241	76.0	39.7
2	*5580.00	103.5 AV			1.96 V	241	63.8	39.7
3	11160.00	60.0 PK	74.0	-14.0	2.63 V	335	41.4	18.6
4	11160.00	45.6 AV	54.0	-8.4	2.63 V	335	27.0	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	111.3 PK			1.79 H	330	71.5	39.8
2	*5700.00	98.9 AV			1.79 H	330	59.1	39.8
3	#5725.00	67.2 PK	68.2	-1.0	1.81 H	332	62.5	4.7
4	11400.00	61.6 PK	74.0	-12.4	3.32 H	172	43.1	18.5
5	11400.00	48.0 AV	54.0	-6.0	3.32 H	172	29.5	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5700.00	111.1 PK			1.94 V	239	71.3	39.8
2	*5700.00	98.8 AV			1.94 V	239	59.0	39.8
3	#5725.00	64.7 PK	68.2	-3.5	1.81 V	212	60.0	4.7
4	11400.00	60.5 PK	74.0	-13.5	2.04 V	45	42.0	18.5
5	11400.00	49.2 AV	54.0	-4.8	2.04 V	45	30.7	18.5

Remarks:

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

CHANNEL	TX Channel 144	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.3 PK	74.0	-17.7	1.79 H	329	51.8	4.5
2	5460.00	43.1 AV	54.0	-10.9	1.79 H	329	38.6	4.5
3	#5470.00	56.5 PK	68.2	-11.7	1.81 H	330	52.0	4.5
4	*5720.00	115.9 PK			1.77 H	327	75.9	40.0
5	*5720.00	103.9 AV			1.77 H	327	63.9	40.0
6	#5850.00	57.9 PK	68.2	-10.3	1.83 H	335	52.6	5.3
7	11440.00	61.9 PK	74.0	-12.1	3.33 H	176	43.3	18.6
8	11440.00	48.2 AV	54.0	-5.8	3.33 H	176	29.6	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.9 PK	74.0	-17.1	2.07 V	241	52.4	4.5
2	5460.00	43.6 AV	54.0	-10.4	2.07 V	241	39.1	4.5
3	#5470.00	56.8 PK	68.2	-11.4	2.09 V	242	52.3	4.5
4	*5720.00	115.2 PK			2.05 V	240	75.2	40.0
5	*5720.00	103.8 AV			2.05 V	240	63.8	40.0
6	#5850.00	57.7 PK	68.2	-10.5	2.10 V	245	52.4	5.3
7	11440.00	61.3 PK	74.0	-12.7	2.05 V	45	42.7	18.6
8	11440.00	49.4 AV	54.0	-4.6	2.05 V	45	30.8	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5634.40	58.8 PK	68.2	-9.4	1.68 H	330	54.3	4.5
2	*5745.00	119.5 PK			1.68 H	330	79.5	40.0
3	*5745.00	107.8 AV			1.68 H	330	67.8	40.0
4	#5928.80	58.6 PK	68.2	-9.6	1.68 H	330	53.3	5.3
5	11490.00	60.3 PK	74.0	-13.7	3.13 H	165	41.5	18.8
6	11490.00	47.4 AV	54.0	-6.6	3.13 H	165	28.6	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5634.40	56.9 PK	68.2	-11.3	1.91 V	236	52.4	4.5
2	*5745.00	118.6 PK			1.91 V	236	78.6	40.0
3	*5745.00	107.1 AV			1.91 V	236	67.1	40.0
4	#5940.00	57.2 PK	68.2	-11.0	1.91 V	236	51.9	5.3
5	11490.00	61.1 PK	74.0	-12.9	2.32 V	316	42.3	18.8
6	11490.00	48.2 AV	54.0	-5.8	2.32 V	316	29.4	18.8

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5609.60	56.1 PK	68.2	-12.1	1.62 H	330	51.6	4.5
2	*5785.00	119.6 PK			1.62 H	330	79.4	40.2
3	*5785.00	107.9 AV			1.62 H	330	67.7	40.2
4	#5985.60	57.8 PK	68.2	-10.4	1.62 H	330	52.4	5.4
5	11570.00	60.1 PK	74.0	-13.9	3.22 H	171	41.6	18.5
6	11570.00	46.9 AV	54.0	-7.1	3.22 H	171	28.4	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5620.00	56.8 PK	68.2	-11.4	1.96 V	233	52.3	4.5
2	*5785.00	119.6 PK			1.96 V	233	79.4	40.2
3	*5785.00	107.4 AV			1.96 V	233	67.2	40.2
4	#5971.20	57.4 PK	68.2	-10.8	1.96 V	233	52.1	5.3
5	11570.00	60.5 PK	74.0	-13.5	2.36 V	319	42.0	18.5
6	11570.00	47.8 AV	54.0	-6.2	2.36 V	319	29.3	18.5

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5626.40	56.5 PK	68.2	-11.7	1.58 H	331	52.0	4.5
2	*5825.00	120.0 PK			1.58 H	331	79.6	40.4
3	*5825.00	108.0 AV			1.58 H	331	67.6	40.4
4	#5991.20	57.8 PK	68.2	-10.4	1.58 H	331	52.4	5.4
5	11650.00	61.2 PK	74.0	-12.8	3.26 H	172	42.7	18.5
6	11650.00	47.6 AV	54.0	-6.4	3.26 H	172	29.1	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5612.80	56.8 PK	68.2	-11.4	1.83 V	235	52.3	4.5
2	*5825.00	118.7 PK			1.83 V	235	78.3	40.4
3	*5825.00	107.4 AV			1.83 V	235	67.0	40.4
4	#5924.80	57.0 PK	68.3	-11.3	1.83 V	235	51.7	5.3
5	11650.00	61.5 PK	74.0	-12.5	2.29 V	321	43.0	18.5
6	11650.00	48.3 AV	54.0	-5.7	2.29 V	321	29.8	18.5

Remarks:

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

802.11ax (HE40)

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	68.8 PK	74.0	-5.2	1.58 H	326	64.7	4.1
2	5150.00	52.7 AV	54.0	-1.3	1.58 H	326	48.6	4.1
3	*5190.00	111.3 PK			1.78 H	327	72.0	39.3
4	*5190.00	99.5 AV			1.78 H	327	60.2	39.3
5	#10380.00	58.7 PK	68.2	-9.5	2.92 H	139	41.3	17.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.8 PK	74.0	-8.2	1.28 V	144	61.7	4.1
2	5150.00	52.2 AV	54.0	-1.8	1.28 V	144	48.1	4.1
3	*5190.00	111.2 PK			1.69 V	164	71.9	39.3
4	*5190.00	99.4 AV			1.69 V	164	60.1	39.3
5	#10380.00	58.9 PK	68.2	-9.3	2.06 V	316	41.5	17.4

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	65.1 PK	74.0	-8.9	1.57 H	321	61.0	4.1
2	5150.00	48.6 AV	54.0	-5.4	1.57 H	321	44.5	4.1
3	*5230.00	115.0 PK			1.58 H	326	75.9	39.1
4	*5230.00	103.4 AV			1.58 H	326	64.3	39.1
5	5350.00	57.1 PK	74.0	-16.9	1.55 H	325	53.0	4.1
6	5350.00	44.1 AV	54.0	-9.9	1.55 H	325	40.0	4.1
7	#10460.00	59.2 PK	68.2	-9.0	3.00 H	155	41.4	17.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	64.3 PK	74.0	-9.7	1.70 V	165	60.2	4.1
2	5150.00	48.1 AV	54.0	-5.9	1.70 V	165	44.0	4.1
3	*5230.00	115.1 PK			1.66 V	163	76.0	39.1
4	*5230.00	103.4 AV			1.66 V	163	64.3	39.1
5	5350.00	56.7 PK	74.0	-17.3	1.68 V	167	52.6	4.1
6	5350.00	44.1 AV	54.0	-9.9	1.68 V	167	40.0	4.1
7	#10460.00	59.0 PK	68.2	-9.2	2.02 V	311	41.2	17.8

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.4 PK	74.0	-17.6	1.72 H	326	52.3	4.1
2	5150.00	43.3 AV	54.0	-10.7	1.72 H	326	39.2	4.1
3	*5270.00	111.4 PK			1.69 H	324	72.3	39.1
4	*5270.00	98.8 AV			1.69 H	324	59.7	39.1
5	#10540.00	60.8 PK	68.2	-7.4	3.32 H	159	42.3	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	55.6 PK	74.0	-18.4	1.70 V	161	51.5	4.1
2	5150.00	43.1 AV	54.0	-10.9	1.70 V	161	39.0	4.1
3	*5270.00	110.7 PK			1.67 V	156	71.6	39.1
4	*5270.00	98.8 AV			1.67 V	156	59.7	39.1
5	#10540.00	61.0 PK	68.2	-7.2	2.23 V	319	42.5	18.5

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	111.4 PK			1.92 H	327	72.2	39.2
2	*5310.00	98.8 AV			1.92 H	327	59.6	39.2
3	5350.00	69.7 PK	74.0	-4.3	2.47 H	327	65.6	4.1
4	5350.00	52.6 AV	54.0	-1.4	2.47 H	327	48.5	4.1
5	10620.00	61.1 PK	74.0	-12.9	3.29 H	163	42.3	18.8
6	10620.00	47.8 AV	54.0	-6.2	3.29 H	163	29.0	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5310.00	110.2 PK			1.22 V	100	71.0	39.2
2	*5310.00	98.2 AV			1.22 V	100	59.0	39.2
3	5350.00	68.7 PK	74.0	-5.3	1.21 V	99	64.6	4.1
4	5350.00	51.9 AV	54.0	-2.1	1.21 V	99	47.8	4.1
5	10620.00	61.1 PK	74.0	-12.9	2.11 V	313	42.3	18.8
6	10620.00	47.8 AV	54.0	-6.2	2.11 V	313	29.0	18.8

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.7 PK	74.0	-10.3	2.03 H	329	59.2	4.5
2	5460.00	46.6 AV	54.0	-7.4	2.03 H	329	42.1	4.5
3	#5470.00	66.9 PK	68.2	-1.3	2.05 H	330	62.4	4.5
4	*5510.00	111.3 PK			2.06 H	327	71.6	39.7
5	*5510.00	99.7 AV			2.06 H	327	60.0	39.7
6	11020.00	60.3 PK	74.0	-13.7	3.22 H	169	41.2	19.1
7	11020.00	47.4 AV	54.0	-6.6	3.22 H	169	28.3	19.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	61.5 PK	74.0	-12.5	2.00 V	208	57.0	4.5
2	5460.00	46.4 AV	54.0	-7.6	2.00 V	208	41.9	4.5
3	#5470.00	65.5 PK	68.2	-2.7	1.99 V	207	61.0	4.5
4	*5510.00	111.3 PK			2.04 V	228	71.6	39.7
5	*5510.00	98.5 AV			2.04 V	228	58.8	39.7
6	11020.00	60.6 PK	74.0	-13.4	2.61 V	332	41.5	19.1
7	11020.00	47.3 AV	54.0	-6.7	2.61 V	332	28.2	19.1

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	114.0 PK			2.07 H	327	74.3	39.7
2	*5550.00	102.0 AV			2.07 H	327	62.3	39.7
3	11100.00	60.1 PK	74.0	-13.9	3.26 H	173	41.5	18.6
4	11100.00	47.3 AV	54.0	-6.7	3.26 H	173	28.7	18.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5550.00	112.3 PK			2.01 V	232	72.6	39.7
2	*5550.00	100.6 AV			2.01 V	232	60.9	39.7
3	11100.00	60.5 PK	74.0	-13.5	2.52 V	329	41.9	18.6
4	11100.00	47.2 AV	54.0	-6.8	2.52 V	329	28.6	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	114.4 PK			1.80 H	326	74.6	39.8
2	*5670.00	101.6 AV			1.80 H	326	61.8	39.8
3	#5725.00	66.9 PK	68.2	-1.3	1.63 H	322	62.2	4.7
4	11340.00	60.9 PK	74.0	-13.1	3.22 H	165	42.2	18.7
5	11340.00	47.2 AV	54.0	-6.8	3.22 H	165	28.5	18.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*5670.00	112.9 PK			1.94 V	238	73.1	39.8
2	*5670.00	100.4 AV			1.94 V	238	60.6	39.8
3	#5725.00	65.9 PK	68.2	-2.3	1.94 V	211	61.2	4.7
4	11340.00	60.8 PK	74.0	-13.2	2.51 V	326	42.1	18.7
5	11340.00	47.4 AV	54.0	-6.6	2.51 V	326	28.7	18.7

Remarks:

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

CHANNEL	TX Channel 142	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.0 PK	74.0	-17.0	1.85 H	329	52.5	4.5
2	5460.00	44.0 AV	54.0	-10.0	1.85 H	329	39.5	4.5
3	#5470.00	57.1 PK	68.2	-11.1	1.86 H	330	52.6	4.5
4	*5710.00	113.8 PK			1.82 H	327	73.8	40.0
5	*5710.00	102.3 AV			1.82 H	327	62.3	40.0
6	#5850.00	57.9 PK	68.2	-10.3	1.88 H	329	52.6	5.3
7	11420.00	60.7 PK	74.0	-13.3	3.28 H	164	42.2	18.5
8	11420.00	47.5 AV	54.0	-6.5	3.28 H	164	29.0	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	56.7 PK	74.0	-17.3	2.18 V	240	52.2	4.5
2	5460.00	43.7 AV	54.0	-10.3	2.18 V	240	39.2	4.5
3	#5470.00	57.2 PK	68.2	-11.0	2.20 V	241	52.7	4.5
4	*5710.00	113.7 PK			2.16 V	238	73.7	40.0
5	*5710.00	101.5 AV			2.16 V	238	61.5	40.0
6	#5850.00	58.8 PK	68.2	-9.4	2.21 V	242	53.5	5.3
7	11420.00	60.9 PK	74.0	-13.1	2.48 V	330	42.4	18.5
8	11420.00	48.0 AV	54.0	-6.0	2.48 V	330	29.5	18.5

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5645.60	57.8 PK	68.2	-10.4	1.52 H	327	53.3	4.5
2	#5650.00	59.6 PK	68.2	-8.6	1.94 H	335	55.2	4.4
3	*5755.00	116.9 PK			1.52 H	327	76.9	40.0
4	*5755.00	105.6 AV			1.52 H	327	65.6	40.0
5	#5934.40	56.7 PK	68.2	-11.5	1.52 H	327	51.4	5.3
6	11510.00	60.9 PK	74.0	-13.1	3.15 H	166	42.0	18.9
7	11510.00	47.1 AV	54.0	-6.9	3.15 H	166	28.2	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5647.20	58.3 PK	68.2	-9.9	1.89 V	236	53.8	4.5
2	#5650.00	61.0 PK	68.2	-7.2	1.80 V	216	56.6	4.4
3	*5755.00	116.8 PK			1.89 V	236	76.8	40.0
4	*5755.00	104.5 AV			1.89 V	236	64.5	40.0
5	#5928.00	57.7 PK	68.2	-10.5	1.89 V	236	52.4	5.3
6	11510.00	61.3 PK	74.0	-12.7	2.23 V	309	42.4	18.9
7	11510.00	47.9 AV	54.0	-6.1	2.23 V	309	29.0	18.9

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5644.80	56.3 PK	68.2	-11.9	1.65 H	331	51.8	4.5
2	*5795.00	117.4 PK			1.65 H	331	77.1	40.3
3	*5795.00	105.3 AV			1.65 H	331	65.0	40.3
4	#5925.00	59.3 PK	68.2	-8.9	1.90 H	333	54.0	5.3
5	#5936.80	58.4 PK	68.2	-9.8	1.65 H	331	53.1	5.3
6	11590.00	60.4 PK	74.0	-13.6	3.21 H	177	42.0	18.4
7	11590.00	47.0 AV	54.0	-7.0	3.21 H	177	28.6	18.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5640.00	58.3 PK	68.2	-9.9	1.58 V	239	53.8	4.5
2	*5795.00	116.8 PK			1.58 V	239	76.5	40.3
3	*5795.00	104.1 AV			1.58 V	239	63.8	40.3
4	#5925.00	58.5 PK	68.2	-9.7	1.87 V	239	53.2	5.3
5	#5932.00	58.0 PK	68.2	-10.2	1.58 V	239	52.7	5.3
6	11590.00	60.7 PK	74.0	-13.3	2.17 V	308	42.3	18.4
7	11590.00	48.4 AV	54.0	-5.6	2.17 V	308	30.0	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	63.1 PK	74.0	-10.9	1.48 H	14	59.0	4.1
2	5150.00	52.0 AV	54.0	-2.0	1.48 H	14	47.9	4.1
3	*5210.00	107.2 PK			1.58 H	327	68.0	39.2
4	*5210.00	95.7 AV			1.58 H	327	56.5	39.2
5	5350.00	51.2 PK	74.0	-22.8	1.52 H	332	47.1	4.1
6	5350.00	40.2 AV	54.0	-13.8	1.52 H	332	36.1	4.1
7	#10420.00	59.2 PK	68.2	-9.0	3.21 H	153	41.6	17.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	63.5 PK	74.0	-10.5	1.45 V	156	59.4	4.1
2	5150.00	52.6 AV	54.0	-1.4	1.45 V	156	48.5	4.1
3	*5210.00	106.3 PK			1.68 V	145	67.1	39.2
4	*5210.00	95.2 AV			1.68 V	145	56.0	39.2
5	5350.00	51.1 PK	74.0	-22.9	1.50 V	149	47.0	4.1
6	5350.00	42.5 AV	54.0	-11.5	1.50 V	149	38.4	4.1
7	#10420.00	58.8 PK	68.2	-9.4	1.92 V	306	41.2	17.6

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.6 PK	74.0	-17.4	1.49 H	322	52.5	4.1
2	5150.00	44.4 AV	54.0	-9.6	1.49 H	322	40.3	4.1
3	*5290.00	105.4 PK			1.45 H	320	66.3	39.1
4	*5290.00	93.8 AV			1.45 H	320	54.7	39.1
5	5350.00	62.9 PK	74.0	-11.1	2.43 H	328	58.8	4.1
6	5350.00	52.1 AV	54.0	-1.9	2.43 H	328	48.0	4.1
7	#10580.00	60.8 PK	68.2	-7.4	3.29 H	173	42.0	18.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	56.3 PK	74.0	-17.7	1.53 V	156	52.2	4.1
2	5150.00	44.3 AV	54.0	-9.7	1.53 V	156	40.2	4.1
3	*5290.00	106.5 PK			1.49 V	144	67.4	39.1
4	*5290.00	94.4 AV			1.49 V	144	55.3	39.1
5	5350.00	64.5 PK	74.0	-9.5	2.36 V	166	60.4	4.1
6	5350.00	52.8 AV	54.0	-1.2	2.36 V	166	48.7	4.1
7	#10580.00	61.0 PK	68.2	-7.2	2.02 V	309	42.2	18.8

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	64.5 PK	74.0	-9.5	1.63 H	323	60.0	4.5
2	5460.00	52.1 AV	54.0	-1.9	1.63 H	323	47.6	4.5
3	#5470.00	66.9 PK	68.2	-1.3	1.56 H	326	62.4	4.5
4	*5530.00	108.2 PK			1.74 H	328	68.5	39.7
5	*5530.00	96.9 AV			1.74 H	328	57.2	39.7
6	#5725.00	57.3 PK	68.2	-10.9	1.66 H	330	52.6	4.7
7	11060.00	60.5 PK	74.0	-13.5	3.31 H	171	41.6	18.9
8	11060.00	48.4 AV	54.0	-5.6	3.31 H	171	29.5	18.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.5 PK	74.0	-10.5	2.08 V	214	59.0	4.5
2	5460.00	51.2 AV	54.0	-2.8	2.08 V	214	46.7	4.5
3	#5470.00	64.3 PK	68.2	-3.9	2.03 V	216	59.8	4.5
4	*5530.00	107.8 PK			1.95 V	231	68.1	39.7
5	*5530.00	96.0 AV			1.95 V	231	56.3	39.7
6	#5725.00	58.2 PK	68.2	-10.0	2.11 V	220	53.5	4.7
7	11060.00	60.4 PK	74.0	-13.6	2.55 V	326	41.5	18.9
8	11060.00	48.1 AV	54.0	-5.9	2.55 V	326	29.2	18.9

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.5 PK	74.0	-16.5	1.80 H	334	53.0	4.5
2	5460.00	45.5 AV	54.0	-8.5	1.80 H	334	41.0	4.5
3	#5470.00	58.5 PK	68.2	-9.7	1.82 H	335	54.0	4.5
4	*5610.00	110.6 PK			2.04 H	327	70.8	39.8
5	*5610.00	99.3 AV			2.04 H	327	59.5	39.8
6	#5725.00	63.6 PK	68.2	-4.6	1.73 H	329	58.9	4.7
7	11220.00	60.8 PK	74.0	-13.2	3.24 H	164	42.1	18.7
8	11220.00	48.2 AV	54.0	-5.8	3.24 H	164	29.5	18.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	58.0 PK	74.0	-16.0	1.95 V	238	53.5	4.5
2	5460.00	45.7 AV	54.0	-8.3	1.95 V	238	41.2	4.5
3	#5470.00	59.1 PK	68.2	-9.1	1.96 V	240	54.6	4.5
4	*5610.00	108.9 PK			1.80 V	245	69.1	39.8
5	*5610.00	98.0 AV			1.80 V	245	58.2	39.8
6	#5725.00	63.1 PK	68.2	-5.1	1.99 V	216	58.4	4.7
7	11220.00	60.4 PK	74.0	-13.6	2.51 V	323	41.7	18.7
8	11220.00	48.0 AV	54.0	-6.0	2.51 V	323	29.3	18.7

Remarks:

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

CHANNEL	TX Channel 138	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.9 PK	74.0	-16.1	1.86 H	328	53.4	4.5
2	5460.00	44.8 AV	54.0	-9.2	1.86 H	328	40.3	4.5
3	#5470.00	57.5 PK	68.2	-10.7	1.88 H	329	53.0	4.5
4	*5690.00	109.8 PK			1.84 H	327	70.0	39.8
5	*5690.00	98.8 AV			1.84 H	327	59.0	39.8
6	#5850.00	58.3 PK	68.2	-9.9	1.90 H	330	53.0	5.3
7	11380.00	61.8 PK	74.0	-12.2	3.31 H	172	43.3	18.5
8	11380.00	48.5 AV	54.0	-5.5	3.31 H	172	30.0	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	57.3 PK	74.0	-16.7	1.95 V	250	52.8	4.5
2	5460.00	44.7 AV	54.0	-9.3	1.95 V	250	40.2	4.5
3	#5470.00	57.0 PK	68.2	-11.2	1.98 V	251	52.5	4.5
4	*5690.00	109.4 PK			1.94 V	248	69.6	39.8
5	*5690.00	98.4 AV			1.94 V	248	58.6	39.8
6	#5850.00	58.6 PK	68.2	-9.6	1.99 V	253	53.3	5.3
7	11380.00	60.7 PK	74.0	-13.3	2.44 V	321	42.2	18.5
8	11380.00	48.1 AV	54.0	-5.9	2.44 V	321	29.6	18.5

Remarks:

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

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

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5649.60	64.2 PK	68.2	-4.0	1.50 H	331	59.7	4.5
2	#5650.00	66.8 PK	68.2	-1.4	2.00 H	329	62.4	4.4
3	*5775.00	112.9 PK			1.50 H	331	72.8	40.1
4	*5775.00	102.0 AV			1.50 H	331	61.9	40.1
5	#5925.00	66.0 PK	68.2	-2.2	1.56 H	338	60.7	5.3
6	#5925.60	63.0 PK	68.2	-5.2	1.50 H	331	57.7	5.3
7	11550.00	60.8 PK	74.0	-13.2	3.29 H	167	42.1	18.7
8	11550.00	48.3 AV	54.0	-5.7	3.29 H	167	29.6	18.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#5637.60	64.6 PK	68.2	-3.6	1.90 V	238	60.1	4.5
2	#5650.00	67.1 PK	68.2	-1.1	1.78 V	238	62.7	4.4
3	*5775.00	113.5 PK			1.90 V	238	73.4	40.1
4	*5775.00	101.5 AV			1.90 V	238	61.4	40.1
5	#5925.00	64.0 PK	68.2	-4.2	1.89 V	236	58.7	5.3
6	#5928.00	63.2 PK	68.2	-5.0	1.90 V	238	57.9	5.3
7	11550.00	60.9 PK	74.0	-13.1	2.23 V	306	42.2	18.7
8	11550.00	48.4 AV	54.0	-5.6	2.23 V	306	29.7	18.7

Remarks:

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

802.11ax (HE160)

CHANNEL	TX Channel 50	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	61.3 PK	74.0	-12.7	1.43 H	330	57.2	4.1
2	5150.00	52.3 AV	54.0	-1.7	1.43 H	330	48.2	4.1
3	*5250.00	101.6 PK			1.61 H	320	62.6	39.0
4	*5250.00	91.9 AV			1.61 H	320	52.9	39.0
5	5350.00	62.5 PK	74.0	-11.5	1.66 H	323	58.4	4.1
6	5350.00	51.7 AV	54.0	-2.3	1.66 H	323	47.6	4.1
7	#10500.00	61.3 PK	68.2	-6.9	3.22 H	159	43.1	18.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5150.00	62.5 PK	74.0	-11.5	1.94 V	153	58.4	4.1
2	5150.00	52.7 AV	54.0	-1.3	1.94 V	153	48.6	4.1
3	*5250.00	101.9 PK			1.61 V	159	62.9	39.0
4	*5250.00	91.7 AV			1.61 V	159	52.7	39.0
5	5350.00	60.7 PK	74.0	-13.3	2.11 V	171	56.6	4.1
6	5350.00	50.4 AV	54.0	-3.6	2.11 V	171	46.3	4.1
7	#10500.00	60.2 PK	68.2	-8.0	2.43 V	318	42.0	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. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency.
6. " # ": The radiated frequency is out of the restricted band.

CHANNEL	TX Channel 114	DETECTOR FUNCTION	Peak (PK)
FREQUENCY RANGE	1GHz ~ 40GHz		Average (AV)

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.4 PK	74.0	-10.6	1.61 H	328	58.9	4.5
2	5460.00	49.9 AV	54.0	-4.1	1.61 H	328	45.4	4.5
3	#5470.00	63.7 PK	68.2	-4.5	1.63 H	330	59.2	4.5
4	*5570.00	104.8 PK			1.92 H	327	65.1	39.7
5	*5570.00	94.8 AV			1.92 H	327	55.1	39.7
6	#5725.00	61.2 PK	68.2	-7.0	1.87 H	331	56.5	4.7
7	11140.00	60.8 PK	74.0	-13.2	3.26 H	163	42.3	18.5
8	11140.00	48.7 AV	54.0	-5.3	3.26 H	163	30.2	18.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	5460.00	63.8 PK	74.0	-10.2	2.02 V	212	59.3	4.5
2	5460.00	52.5 AV	54.0	-1.5	2.02 V	212	48.0	4.5
3	#5470.00	66.9 PK	68.2	-1.3	2.00 V	211	62.4	4.5
4	*5570.00	104.3 PK			2.04 V	233	64.6	39.7
5	*5570.00	94.1 AV			2.04 V	233	54.4	39.7
6	#5725.00	63.9 PK	68.2	-4.3	1.98 V	232	59.2	4.7
7	11140.00	60.7 PK	74.0	-13.3	2.52 V	322	42.2	18.5
8	11140.00	48.9 AV	54.0	-5.1	2.52 V	322	30.4	18.5

Remarks:

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

Below 1GHz worst-case data:

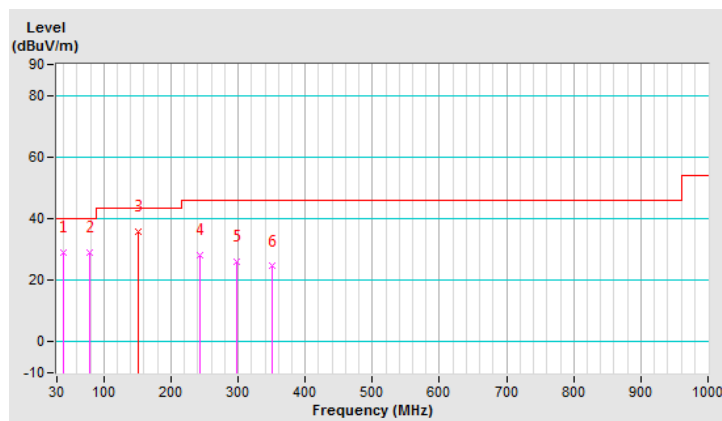
802.11a

CHANNEL	TX Channel 149	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	39.84	28.9 QP	40.0	-11.1	2.00 H	57	38.4	-9.5
2	79.20	29.1 QP	40.0	-10.9	1.01 H	37	42.1	-13.0
3	151.96	35.7 QP	43.5	-7.8	2.00 H	239	44.3	-8.6
4	242.28	28.3 QP	46.0	-17.7	1.01 H	229	38.1	-9.8
5	297.10	26.2 QP	46.0	-19.8	1.51 H	334	33.8	-7.6
6	350.52	24.5 QP	46.0	-21.5	1.01 H	124	30.7	-6.2

Remarks:

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

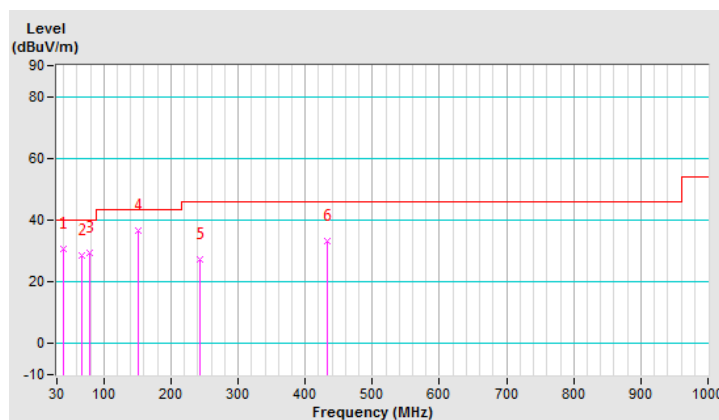


CHANNEL	TX Channel 149	DETECTOR FUNCTION	Quasi-Peak (QP)
FREQUENCY RANGE	9kHz ~ 1GHz		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	39.84	30.5 QP	40.0	-9.5	1.00 V	141	40.0	-9.5
2	66.55	28.7 QP	40.0	-11.3	1.50 V	111	38.7	-10.0
3	79.20	29.2 QP	40.0	-10.8	1.00 V	207	42.2	-13.0
4	150.90	36.7 QP	43.5	-6.8	1.99 V	3	45.3	-8.6
5	242.28	27.5 QP	46.0	-18.5	1.00 V	196	37.3	-9.8
6	432.06	33.4 QP	46.0	-12.6	1.99 V	202	36.5	-3.1

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 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

Tested date: Dec. 31, 2019

Description & Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due
Test Receiver ROHDE & SCHWARZ	ESCI	100613	Dec. 11, 2019	Dec. 10, 2020
RF signal cable Woken	5D-FB	Cable-cond1-01	Sep. 05, 2019	Sep. 04, 2020
LISN ROHDE & SCHWARZ (EUT)	ENV216	101826	Feb. 21, 2019	Feb. 20, 2020
LISN ROHDE & SCHWARZ (Peripheral)	ESH3-Z5	100311	Aug. 22, 2019	Aug. 21, 2020
Software ADT	BV ADT_Conf_ 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 1.

3. The VCCI Site Registration No. is C-12040.

4.2.3 Test Procedures

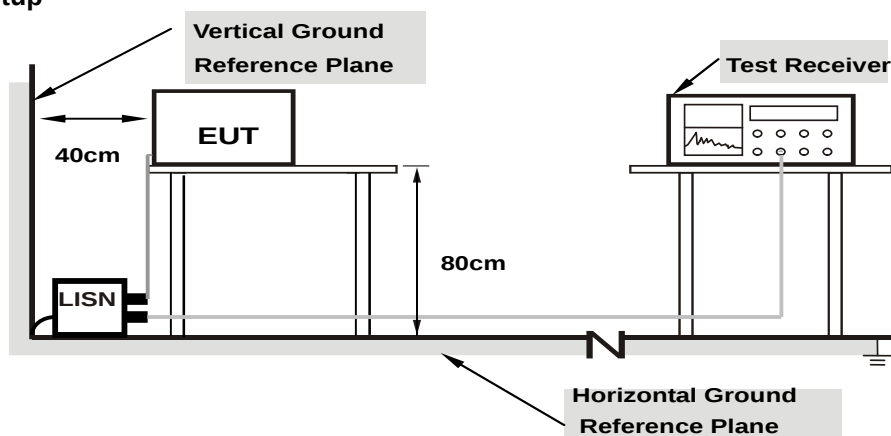
- The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance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

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

4.2.4 Deviation from Test Standard

No deviation.

4.2.5 Test Setup



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

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

4.2.6 EUT Operating Conditions

Same as item 4.1.6.

4.2.7 Test Results

Worst-case data:

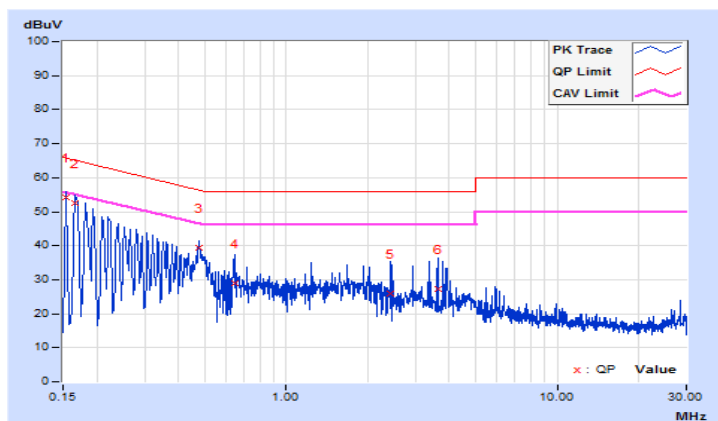
802.11a

Channel	TX Channel 149	Detector Function	Quasi-Peak (QP) / Average (AV)
Phase	Line (L)		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value		Emission Level		Limit		Margin	
			[dB (uV)]		[dB (uV)]		[dB (uV)]		(dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15391	9.71	44.57	30.82	54.28	40.53	65.79	55.79	-11.51	-15.26
2	0.16564	9.73	42.76	29.12	52.49	38.85	65.18	55.18	-12.69	-16.33
3	0.47453	9.91	29.44	22.05	39.35	31.96	56.43	46.43	-17.08	-14.47
4	0.64266	9.95	19.02	10.84	28.97	20.79	56.00	46.00	-27.03	-25.21
5	2.42953	10.11	15.85	4.91	25.96	15.02	56.00	46.00	-30.04	-30.98
6	3.62208	10.17	17.02	5.21	27.19	15.38	56.00	46.00	-28.81	-30.62

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.

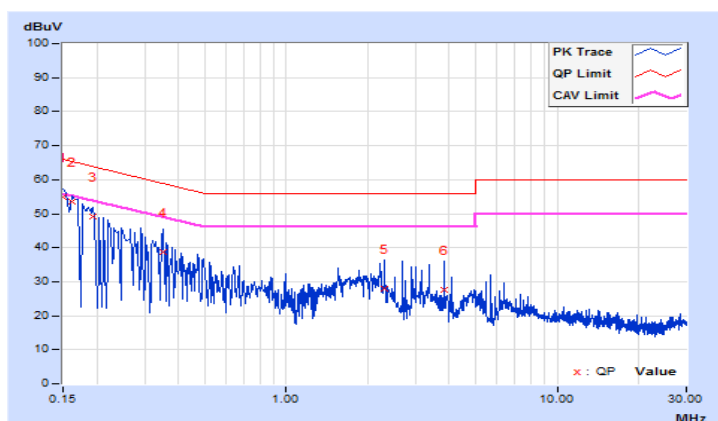


Channel	TX Channel 149	Detector Function	Quasi-Peak (QP) / Average (AV)
Phase	Line (L)		

No	Freq. [MHz]	Corr. Factor (dB)	Reading Value [dB (uV)]		Emission Level [dB (uV)]		Limit [dB (uV)]		Margin (dB)	
			Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
1	0.15000	9.68	45.30	31.49	54.98	41.17	66.00	56.00	-11.02	-14.83
2	0.16173	9.71	43.69	29.98	53.40	39.69	65.37	55.37	-11.97	-15.68
3	0.19255	9.78	39.40	25.83	49.18	35.61	63.93	53.93	-14.75	-18.32
4	0.34941	9.84	28.85	15.67	38.69	25.51	58.98	48.98	-20.29	-23.47
5	2.29659	10.05	18.00	8.10	28.05	18.15	56.00	46.00	-27.95	-27.85
6	3.83713	10.12	17.35	6.28	27.47	16.40	56.00	46.00	-28.53	-29.60

REMARKS:

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



4.3 Transmit Power Measurement

4.3.1 Limits of Transmit Power Measurement

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

*B is the 26 dB emission bandwidth in megahertz

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

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

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

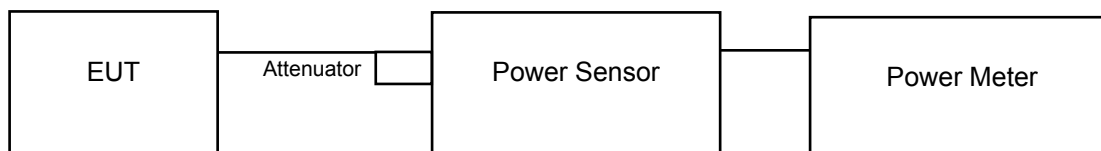
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

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

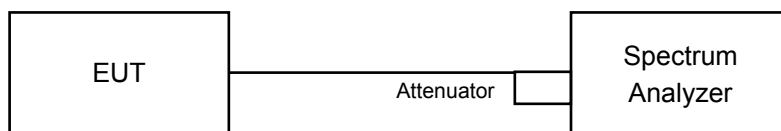
4.3.2 Test Setup

For Power Output

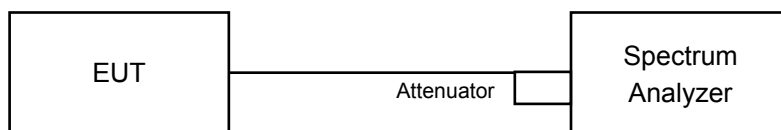
802.11a, 802.11ac (VHT20), 802.11ac (VHT40), 802.11ax (HE20), 802.11ax (HE40)



802.11ac (VHT80), 802.11ac (VHT160), 802.11ax (HE80), 802.11ax (HE160)



For Bandwidth



4.3.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.3.4 Test Procedure

For Average Power Measurement

802.11a, 802.11ac (VHT20), 802.11ac (VHT40), 802.11ax (HE20), 802.11ax (HE40)

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

802.11ac (VHT80), 802.11ac (VHT160), 802.11ax (HE80), 802.11ax (HE160)

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

For 26dB Bandwidth

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

4.3.5 Deviation from Test Standard

No deviation.

4.3.6 EUT Operating Conditions

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

4.3.7 Test Result

Power Output:

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				
36	5180	19.92	20.15	20.43	20.34	420.240	26.23	30.00	Pass
40	5200	21.75	21.71	21.65	21.72	592.687	27.73	30.00	Pass
48	5240	21.53	21.65	21.66	21.77	585.320	27.67	30.00	Pass
52	5260	16.68	17.03	17.08	17.09	199.243	22.99	24.00	Pass
60	5300	16.72	16.74	17.09	16.94	194.795	22.90	24.00	Pass
64	5320	16.65	16.97	17.09	17.03	197.646	22.96	24.00	Pass
100	5500	15.45	15.51	15.29	15.49	139.845	21.46	24.00	Pass
116	5580	17.06	16.72	16.67	16.88	193.010	22.86	24.00	Pass
140	5700	14.78	14.89	14.81	14.85	121.711	20.85	24.00	Pass
144	5720 For 5500~5720MHz	12.81	13.08	12.10	12.93	75.274	18.77	22.98	Pass
144	5720 For 5745~5825MHz	6.37	6.13	6.37	6.14	16.884	12.27	30.00	Pass
149	5745	21.85	21.88	21.71	21.83	607.936	27.84	30.00	Pass
157	5785	21.72	21.75	21.73	21.79	598.161	27.77	30.00	Pass
165	5825	21.77	21.59	21.57	21.73	587.011	27.69	30.00	Pass

Note:

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.62) = 24.34 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.68) = 24.36 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.60) = 24.34 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.66) = 24.35 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.64) = 24.35 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.21) = 22.98 < 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(21.72) = 24.36 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.68) = 24.36 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.72) = 24.36 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.79) = 24.38 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.75) = 24.37 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.13) = 23.00 < 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(21.75) = 24.37 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.81) = 24.38 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.71) = 24.36 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.81) = 24.38 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.85) = 24.39 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.03) = 23.03 < 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(21.61) = 24.34 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.59) = 24.34 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.66) = 24.35 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.61) = 24.34 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.59) = 24.34 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.63) = 24.35 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.22) = 22.98 < 24\text{dBm}$

802.11n (HT20)

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				
36	5180	19.09	19.18	19.33	19.21	332.962	25.22	30.00	Pass
40	5200	21.38	21.54	21.43	21.38	556.364	27.45	30.00	Pass
48	5240	21.25	21.49	21.35	21.37	547.828	27.39	30.00	Pass
52	5260	17.43	17.49	17.57	17.61	226.264	23.55	24.00	Pass
60	5300	17.39	17.55	17.68	17.53	226.951	23.56	24.00	Pass
64	5320	17.43	17.61	17.70	17.47	227.743	23.57	24.00	Pass
100	5500	17.08	17.18	16.98	17.27	206.512	23.15	24.00	Pass
116	5580	17.71	17.37	17.48	17.32	223.523	23.49	24.00	Pass
140	5700	12.72	12.77	12.81	12.81	75.827	18.80	24.00	Pass
144	5720 For 5500~5720MHz	11.50	11.83	11.47	11.15	56.426	17.51	22.97	Pass
144	5720 For 5745~5825MHz	5.78	5.82	6.12	5.43	15.188	11.82	30.00	Pass
149	5745	21.18	21.29	21.11	21.22	527.362	27.22	30.00	Pass
157	5785	21.22	21.25	20.90	21.20	520.639	27.17	30.00	Pass
165	5825	21.33	21.31	21.24	21.35	540.542	27.33	30.00	Pass

Note:

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(21.79) = 24.38 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.76) = 24.37 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.85) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.00) = 23.04 < 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.88) = 24.40 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.68) = 24.36 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.83) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.64) = 24.35 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.24) = 22.97 < 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.89) = 24.40 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.88) = 24.40 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.82) = 24.38 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.08) = 23.01 < 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(21.98) = 24.42 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.84) = 24.39 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(22.18) = 24.45 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.86) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.89) = 24.40 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.10) = 23.01 < 24\text{dBm}$

802.11n (HT40)

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				
38	5190	17.37	17.41	17.38	17.39	219.186	23.41	30.00	Pass
46	5230	20.57	20.97	20.89	20.77	481.194	26.82	30.00	Pass
54	5270	17.61	17.69	17.77	17.81	236.662	23.74	24.00	Pass
62	5310	17.33	17.35	17.39	17.33	217.304	23.37	24.00	Pass
102	5510	15.85	15.77	15.69	15.87	151.921	21.82	24.00	Pass
110	5550	17.71	17.61	17.41	17.69	230.526	23.63	24.00	Pass
134	5670	17.29	17.35	17.33	17.31	215.807	23.34	24.00	Pass
142	5710 For 5500~5720MHz	14.22	14.43	14.42	13.83	105.981	20.25	24.00	Pass
142	5710 For 5745~5825MHz	4.41	4.78	5.70	3.02	11.486	10.60	30.00	Pass
151	5755	20.77	21.11	20.49	20.97	485.490	26.86	30.00	Pass
159	5795	21.01	21.17	20.79	21.04	504.108	27.03	30.00	Pass

Note:

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(41.25) = 27.15 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.32) = 27.16 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.33) = 27.16 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.35) = 27.16 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.33) = 27.16 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5689.43) = 26.51 > 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(41.07) = 27.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.06) = 27.13 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.06) = 27.13 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.06) = 27.13 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.12) = 27.14 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5689.50) = 26.50 > 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(41.07) = 27.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.13) = 27.14 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.23) = 27.15 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.15) = 27.14 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5689.45) = 26.50 > 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.03) = 27.13 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.21) = 27.15 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.08) = 27.13 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.21) = 27.15 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5686.58) = 26.84 > 24\text{dBm}$

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				
36	5180	19.05	19.15	19.29	19.19	330.480	25.19	30.00	Pass
40	5200	21.41	21.59	21.55	21.47	565.739	27.53	30.00	Pass
48	5240	21.31	21.54	21.46	21.51	559.306	27.48	30.00	Pass
52	5260	17.45	17.54	17.62	17.65	228.365	23.59	24.00	Pass
60	5300	17.44	17.59	17.71	17.55	228.780	23.59	24.00	Pass
64	5320	17.49	17.65	17.73	17.49	229.712	23.61	24.00	Pass
100	5500	17.13	17.22	17.01	17.30	208.302	23.19	24.00	Pass
116	5580	17.74	17.43	17.52	17.38	225.960	23.54	24.00	Pass
140	5700	12.76	12.81	12.85	12.87	76.618	18.84	24.00	Pass
144	5720 For 5500~5720MHz	11.52	11.86	11.51	11.25	57.030	17.56	22.97	Pass
144	5720 For 5745~5825MHz	5.83	5.89	6.14	5.49	15.361	11.86	30.00	Pass
149	5745	21.15	21.26	21.08	21.17	523.127	27.19	30.00	Pass
157	5785	21.20	21.20	20.88	21.17	517.031	27.14	30.00	Pass
165	5825	21.30	21.26	20.84	21.28	524.171	27.19	30.00	Pass

Note:

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(21.79) = 24.38 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.76) = 24.37 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.85) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.00) = 23.04 < 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.88) = 24.40 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.68) = 24.36 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.83) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.64) = 24.35 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.24) = 22.97 < 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.89) = 24.40 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.88) = 24.40 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.82) = 24.38 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.08) = 23.01 < 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(21.98) = 24.42 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.84) = 24.39 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(22.18) = 24.45 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.86) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.89) = 24.40 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.10) = 23.01 < 24\text{dBm}$

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				
38	5190	17.33	17.38	17.31	17.32	216.555	23.36	30.00	Pass
46	5230	20.54	20.91	20.88	20.75	477.862	26.79	30.00	Pass
54	5270	17.57	17.61	17.70	17.74	233.138	23.68	24.00	Pass
62	5310	17.30	17.31	17.32	17.30	215.184	23.33	24.00	Pass
102	5510	15.80	15.71	15.61	15.82	149.844	21.76	24.00	Pass
110	5550	17.66	17.54	17.35	17.28	222.880	23.48	24.00	Pass
134	5670	17.25	17.30	17.30	17.28	213.951	23.30	24.00	Pass
142	5710 For 5500~5720MHz	14.06	14.45	14.21	13.75	103.407	20.15	24.00	Pass
142	5710 For 5745~5825MHz	4.20	4.56	5.51	2.92	11.003	10.42	30.00	Pass
151	5755	20.78	21.12	20.47	20.89	483.267	26.84	30.00	Pass
159	5795	21.03	21.15	20.82	21.18	509.083	27.07	30.00	Pass

Note:

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(41.25) = 27.15 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.32) = 27.16 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.33) = 27.16 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.35) = 27.16 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.33) = 27.16 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5689.43) = 26.51 > 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(41.07) = 27.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.06) = 27.13 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.06) = 27.13 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.06) = 27.13 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.12) = 27.14 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5689.50) = 26.50 > 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(41.07) = 27.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.13) = 27.14 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.23) = 27.15 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.15) = 27.14 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5689.45) = 26.50 > 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.03) = 27.13 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.21) = 27.15 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.08) = 27.13 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.21) = 27.15 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5686.58) = 26.84 > 24\text{dBm}$

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				
42	5210	15.47	15.51	15.55	15.62	143.168	21.56	30.00	Pass
58	5290	15.40	15.44	15.51	15.59	141.456	21.51	24.00	Pass
106	5530	15.69	15.75	15.67	15.71	148.789	21.73	24.00	Pass
122	5610	17.31	17.47	17.54	17.64	224.505	23.51	24.00	Pass
138	5690 For 5500~5720MHz	13.02	13.25	13.15	12.98	81.694	19.12	24.00	Pass
138	5690 For 5745~5825MHz	-0.07	1.15	-0.34	-0.75	4.053	6.08	30.00	Pass
155	5775	20.45	20.77	20.41	20.41	450.117	26.53	30.00	Pass

Note:

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(81.89) = 30.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(81.90) = 30.13 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(81.91) = 30.13 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(5725.00 - 5649.23) = 29.79 > 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(81.65) = 30.11 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(81.75) = 30.12 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(81.79) = 30.12 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(5725.00 - 5649.13) = 29.80 > 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(81.95) = 30.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(82.04) = 30.14 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(82.04) = 30.14 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(5725.00 - 5648.82) = 29.81 > 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(82.27) = 30.15 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(82.07) = 30.14 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(82.34) = 30.15 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(5725.00 - 5648.79) = 29.82 > 24\text{dBm}$

802.11ac (VHT160)

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				
50	5250 For 5150~5250MHz	8.10	7.88	7.92	7.96	25.040	13.99	30.00	Pass
50	5250 For 5250~5350MHz	7.67	7.32	7.40	7.39	22.221	13.47	24.00	Pass
114	5570	15.55	15.37	15.57	15.12	138.894	21.43	24.00	Pass

Note:

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(81.52) = 30.11 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(163.24) = 33.12 > 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(81.69) = 30.12 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(163.41) = 33.13 > 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(81.52) = 30.11 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(163.59) = 33.13 > 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(81.54) = 30.11 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(163.40) = 33.13 > 24\text{dBm}$

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				
36	5180	19.13	19.21	19.37	19.25	335.851	25.26	30.00	Pass
40	5200	21.42	21.61	21.57	21.49	568.031	27.54	30.00	Pass
48	5240	21.33	21.56	21.47	21.52	561.237	27.49	30.00	Pass
52	5260	17.47	17.56	17.63	17.66	229.151	23.60	24.00	Pass
60	5300	17.45	17.61	17.72	17.57	229.571	23.61	24.00	Pass
64	5320	17.50	17.66	17.74	17.51	230.372	23.62	24.00	Pass
100	5500	17.14	17.23	17.03	17.31	208.898	23.20	24.00	Pass
116	5580	17.75	17.45	17.53	17.39	226.608	23.55	24.00	Pass
140	5700	12.77	12.83	12.87	12.89	76.928	18.86	24.00	Pass
144	5720 For 5500~5720MHz	11.60	11.94	11.56	11.33	57.991	17.63	22.97	Pass
144	5720 For 5745~5825MHz	5.99	6.05	6.30	5.56	15.862	12.00	30.00	Pass
149	5745	21.21	21.32	21.15	21.26	531.625	27.26	30.00	Pass
157	5785	21.24	21.29	20.91	21.23	523.681	27.19	30.00	Pass
165	5825	21.36	21.37	21.27	21.40	545.867	27.37	30.00	Pass

Note:

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(21.79) = 24.38 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.76) = 24.37 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.85) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.00) = 23.04 < 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.88) = 24.40 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.68) = 24.36 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.83) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.64) = 24.35 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.24) = 22.97 < 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.89) = 24.40 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.88) = 24.40 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.82) = 24.38 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.08) = 23.01 < 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(21.98) = 24.42 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.84) = 24.39 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(22.18) = 24.45 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.86) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.89) = 24.40 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.10) = 23.01 < 24\text{dBm}$

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				
38	5190	17.41	17.45	17.42	17.45	221.469	23.45	30.00	Pass
46	5230	20.61	21.01	20.97	20.81	486.821	26.87	30.00	Pass
54	5270	17.67	17.75	17.82	17.89	240.097	23.80	24.00	Pass
62	5310	17.34	17.41	17.42	17.39	219.316	23.41	24.00	Pass
102	5510	15.91	15.83	15.77	15.93	154.208	21.88	24.00	Pass
110	5550	17.78	17.65	17.45	17.75	233.346	23.68	24.00	Pass
134	5670	17.33	17.41	17.38	17.35	218.183	23.39	24.00	Pass
142	5710 For 5500~5720MHz	14.34	14.71	14.47	14.03	110.027	20.41	24.00	Pass
142	5710 For 5745~5825MHz	4.45	4.81	5.76	3.17	11.655	10.67	30.00	Pass
151	5755	20.88	21.17	20.57	21.01	493.588	26.93	30.00	Pass
159	5795	21.01	21.17	20.79	21.21	509.180	27.07	30.00	Pass

Note:

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(41.25) = 27.15 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.32) = 27.16 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.33) = 27.16 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.35) = 27.16 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.33) = 27.16 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5689.43) = 26.51 > 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(41.07) = 27.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.06) = 27.13 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.06) = 27.13 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.06) = 27.13 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.12) = 27.14 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5689.50) = 26.50 > 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(41.07) = 27.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.13) = 27.14 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.23) = 27.15 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.15) = 27.14 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5689.45) = 26.50 > 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.03) = 27.13 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.21) = 27.15 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.08) = 27.13 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.21) = 27.15 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5686.58) = 26.84 > 24\text{dBm}$

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				
42	5210	15.52	15.57	15.61	15.74	145.592	21.63	30.00	Pass
58	5290	15.45	15.53	15.59	15.66	143.840	21.58	24.00	Pass
106	5530	15.77	15.82	15.73	15.79	151.294	21.80	24.00	Pass
122	5610	17.37	17.53	17.62	17.71	228.029	23.58	24.00	Pass
138	5690 For 5500~5720MHz	13.13	13.37	13.22	13.01	83.274	19.21	24.00	Pass
138	5690 For 5745~5825MHz	0.02	1.36	-0.28	-0.65	4.171	6.20	30.00	Pass
155	5775	20.57	20.83	20.47	20.53	459.494	26.62	30.00	Pass

Note:

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(81.89) = 30.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(81.90) = 30.13 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(81.91) = 30.13 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(5725.00 - 5649.23) = 29.79 > 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(81.65) = 30.11 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(81.75) = 30.12 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(81.79) = 30.12 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(5725.00 - 5649.13) = 29.80 > 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(81.95) = 30.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(82.04) = 30.14 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(82.04) = 30.14 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(5725.00 - 5648.82) = 29.81 > 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(82.27) = 30.15 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(82.07) = 30.14 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(82.34) = 30.15 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(5725.00 - 5648.79) = 29.82 > 24\text{dBm}$

802.11ax (HE160)

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				
50	5250 For 5150~5250MHz	8.19	7.97	8.01	8.05	25.565	14.08	30.00	Pass
50	5250 For 5250~5350MHz	7.73	7.38	7.46	7.45	22.530	13.53	24.00	Pass
114	5570	15.65	15.48	15.75	15.26	143.204	21.56	24.00	Pass

Note:

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(81.52) = 30.11 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(163.24) = 33.12 > 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(81.69) = 30.12 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(163.41) = 33.13 > 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(81.52) = 30.11 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(163.59) = 33.13 > 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(81.54) = 30.11 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(163.40) = 33.13 > 24\text{dBm}$

Beamforming Mode

802.11n (HT20)

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				
36	5180	19.09	19.18	19.33	19.21	332.962	25.22	28.84	Pass
40	5200	21.38	21.54	21.42	21.38	556.045	27.45	28.84	Pass
48	5240	21.25	21.49	21.38	21.41	550.042	27.40	28.84	Pass
52	5260	16.31	16.41	16.51	16.59	176.884	22.48	22.61	Pass
60	5300	16.31	16.29	16.52	16.34	173.243	22.39	22.61	Pass
64	5320	16.21	16.42	16.59	16.38	174.691	22.42	22.61	Pass
100	5500	16.41	16.53	16.38	16.61	177.995	22.50	22.89	Pass
116	5580	16.56	16.37	16.32	16.26	173.763	22.40	22.89	Pass
140	5700	12.72	12.77	12.81	12.81	75.827	18.80	22.89	Pass
144	5720 For 5500~5720MHz	10.46	10.62	10.38	10.12	43.846	16.42	22.89	Pass
144	5720 For 5745~5825MHz	4.88	4.90	5.08	4.42	12.154	10.85	28.89	Pass
149	5745	21.18	21.29	21.11	21.22	527.362	27.22	29.29	Pass
157	5785	21.22	21.25	20.90	21.20	520.639	27.17	29.29	Pass
165	5825	21.33	21.31	21.24	21.35	540.542	27.33	29.29	Pass

Note:

5180~5240MHz Directional Gain = 7.16dBi > 6dBi, so the limit shall be reduced to $30-(7.16-6) = 28.84$ dBm.

5260~5320MHz Directional Gain = 7.39dBi > 6dBi, so the limit shall be reduced to $24-(7.39-6) = 22.61$ dBm.

5500~5720MHz Directional Gain = 7.11dBi > 6dBi, so the limit shall be reduced to $24-(7.11-6) = 22.89$ dBm.

5745~5825MHz Directional Gain = 6.71dBi > 6dBi, so the limit shall be reduced to $30-(6.71-6) = 29.29$ dBm.

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(21.79) = 24.38 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.76) = 24.37 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.85) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.00) = 23.04 < 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.88) = 24.40 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.68) = 24.36 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.83) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.64) = 24.35 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.24) = 22.97 < 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.89) = 24.40 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.88) = 24.40 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.82) = 24.38 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.08) = 23.01 < 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(21.98) = 24.42 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.84) = 24.39 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(22.18) = 24.45 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.86) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.89) = 24.40 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.10) = 23.01 < 24\text{dBm}$

802.11n (HT40)

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				
38	5190	17.37	17.41	17.38	17.39	219.186	23.41	28.84	Pass
46	5230	20.57	20.97	20.89	20.77	481.194	26.82	28.84	Pass
54	5270	16.32	16.33	16.48	16.59	175.875	22.45	22.61	Pass
62	5310	16.31	16.28	16.38	16.21	170.452	22.32	22.61	Pass
102	5510	15.82	15.73	15.67	15.84	150.874	21.79	22.89	Pass
110	5550	16.52	16.34	16.31	16.59	176.287	22.46	22.89	Pass
134	5670	16.63	16.71	16.75	16.68	186.781	22.71	22.89	Pass
142	5710 For 5500~5720MHz	13.00	14.27	14.05	13.60	95.001	19.78	22.89	Pass
142	5710 For 5745~5825MHz	2.95	3.30	4.38	1.75	8.348	9.22	28.89	Pass
151	5755	20.74	21.08	20.43	20.91	480.528	26.82	29.29	Pass
159	5795	21.01	21.17	20.79	21.04	504.108	27.03	29.29	Pass

Note:

5180~5240MHz Directional Gain = 7.16dBi > 6dBi, so the limit shall be reduced to 30-(7.16-6) = 28.84dBm.

5260~5320MHz Directional Gain = 7.39dBi > 6dBi, so the limit shall be reduced to 24-(7.39-6) = 22.61dBm.

5500~5720MHz Directional Gain = 7.11dBi > 6dBi, so the limit shall be reduced to 24-(7.11-6) = 22.89dBm.

5745~5825MHz Directional Gain = 6.71dBi > 6dBi, so the limit shall be reduced to 30-(6.71-6) = 29.29dBm.

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. 11dBm + 10log (41.25) = 27.15 > 24dBm
2. 11dBm + 10log (41.32) = 27.16 > 24dBm
3. 11dBm + 10log (41.33) = 27.16 > 24dBm
4. 11dBm + 10log (41.35) = 27.16 > 24dBm
5. 11dBm + 10log (41.33) = 27.16 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.43) = 26.51 > 24dBm

Chain 1

1. 11dBm + 10log (41.07) = 27.13 > 24dBm
2. 11dBm + 10log (41.06) = 27.13 > 24dBm
3. 11dBm + 10log (41.06) = 27.13 > 24dBm
4. 11dBm + 10log (41.06) = 27.13 > 24dBm
5. 11dBm + 10log (41.12) = 27.14 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.50) = 26.50 > 24dBm

Chain 2

1. $11\text{dBm} + 10\log(41.07) = 27.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.13) = 27.14 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.23) = 27.15 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.15) = 27.14 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5689.45) = 26.50 > 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.03) = 27.13 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.21) = 27.15 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.08) = 27.13 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.21) = 27.15 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5686.58) = 26.84 > 24\text{dBm}$

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				
36	5180	19.05	19.15	19.29	19.19	330.480	25.19	28.84	Pass
40	5200	21.41	21.59	21.55	21.47	565.739	27.53	28.84	Pass
48	5240	21.31	21.54	21.46	21.51	559.306	27.48	28.84	Pass
52	5260	16.38	16.48	16.59	16.62	179.438	22.54	22.61	Pass
60	5300	16.39	16.43	16.55	16.48	177.154	22.48	22.61	Pass
64	5320	16.31	16.54	16.61	16.43	177.606	22.49	22.61	Pass
100	5500	16.54	16.61	16.45	16.62	180.973	22.58	22.89	Pass
116	5580	16.62	16.34	16.42	16.34	175.878	22.45	22.89	Pass
140	5700	12.76	12.81	12.85	12.87	76.618	18.84	22.89	Pass
144	5720 For 5500~5720MHz	10.52	10.78	10.45	10.22	44.851	16.52	22.89	Pass
144	5720 For 5745~5825MHz	4.94	4.95	5.13	4.47	12.302	10.90	28.89	Pass
149	5745	21.15	21.26	21.08	21.17	523.127	27.19	29.29	Pass
157	5785	21.20	21.20	20.88	21.17	517.031	27.14	29.29	Pass
165	5825	21.30	21.26	20.84	21.28	524.171	27.19	29.29	Pass

Note:

5180~5240MHz Directional Gain = 7.16dBi > 6dBi, so the limit shall be reduced to $30-(7.16-6) = 28.84\text{dBm}$.

5260~5320MHz Directional Gain = 7.39dBi > 6dBi, so the limit shall be reduced to $24-(7.39-6) = 22.61\text{dBm}$.

5500~5720MHz Directional Gain = 7.11dBi > 6dBi, so the limit shall be reduced to $24-(7.11-6) = 22.89\text{dBm}$.

5745~5825MHz Directional Gain = 6.71dBi > 6dBi, so the limit shall be reduced to $30-(6.71-6) = 29.29\text{dBm}$.

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(21.79) = 24.38 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.76) = 24.37 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.85) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.00) = 23.04 < 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.88) = 24.40 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.68) = 24.36 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.83) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.64) = 24.35 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.24) = 22.97 < 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.89) = 24.40 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.88) = 24.40 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.82) = 24.38 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.08) = 23.01 < 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(21.98) = 24.42 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.84) = 24.39 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(22.18) = 24.45 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.86) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.89) = 24.40 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.10) = 23.01 < 24\text{dBm}$

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				
38	5190	17.33	17.38	17.31	17.32	216.555	23.36	28.84	Pass
46	5230	20.54	20.91	20.88	20.75	477.862	26.79	28.84	Pass
54	5270	16.38	16.45	16.59	16.61	179.026	22.53	22.61	Pass
62	5310	16.37	16.36	16.42	16.29	173.015	22.38	22.61	Pass
102	5510	15.88	15.79	15.71	15.91	152.891	21.84	22.89	Pass
110	5550	16.65	16.49	16.42	16.62	180.577	22.57	22.89	Pass
134	5670	16.72	16.79	16.81	16.73	189.813	22.78	22.89	Pass
142	5710 For 5500~5720MHz	13.02	14.38	14.15	13.69	96.850	19.86	22.89	Pass
142	5710 For 5745~5825MHz	3.05	3.40	4.42	1.88	8.515	9.30	28.89	Pass
151	5755	20.78	21.12	20.47	20.89	483.267	26.84	29.29	Pass
159	5795	21.03	21.15	20.82	21.07	505.801	27.04	29.29	Pass

Note:

5180~5240MHz Directional Gain = 7.16dBi > 6dBi, so the limit shall be reduced to 30-(7.16-6) = 28.84dBm.

5260~5320MHz Directional Gain = 7.39dBi > 6dBi, so the limit shall be reduced to 24-(7.39-6) = 22.61dBm.

5500~5720MHz Directional Gain = 7.11dBi > 6dBi, so the limit shall be reduced to 24-(7.11-6) = 22.89dBm.

5745~5825MHz Directional Gain = 6.71dBi > 6dBi, so the limit shall be reduced to 30-(6.71-6) = 29.29dBm.

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. 11dBm + 10log (41.25) = 27.15 > 24dBm
2. 11dBm + 10log (41.32) = 27.16 > 24dBm
3. 11dBm + 10log (41.33) = 27.16 > 24dBm
4. 11dBm + 10log (41.35) = 27.16 > 24dBm
5. 11dBm + 10log (41.33) = 27.16 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.43) = 26.51 > 24dBm

Chain 1

1. 11dBm + 10log (41.07) = 27.13 > 24dBm
2. 11dBm + 10log (41.06) = 27.13 > 24dBm
3. 11dBm + 10log (41.06) = 27.13 > 24dBm
4. 11dBm + 10log (41.06) = 27.13 > 24dBm
5. 11dBm + 10log (41.12) = 27.14 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.50) = 26.50 > 24dBm

Chain 2

1. $11\text{dBm} + 10\log(41.07) = 27.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.13) = 27.14 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.23) = 27.15 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.15) = 27.14 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5689.45) = 26.50 > 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.03) = 27.13 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.21) = 27.15 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.08) = 27.13 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.21) = 27.15 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5686.58) = 26.84 > 24\text{dBm}$

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				
42	5210	15.47	15.51	15.55	15.62	143.168	21.56	28.84	Pass
58	5290	15.43	15.47	15.52	15.61	142.188	21.53	22.61	Pass
106	5530	15.69	15.75	15.67	15.71	148.789	21.73	22.89	Pass
122	5610	16.56	16.73	16.84	16.82	188.777	22.76	22.89	Pass
138	5690 For 5500~5720MHz	12.25	12.47	12.43	12.21	68.581	18.36	22.89	Pass
138	5690 For 5745~5825MHz	-0.85	0.37	-1.12	-1.54	3.385	5.30	28.89	Pass
155	5775	20.45	20.77	20.41	20.41	450.117	26.53	29.29	Pass

Note:

5180~5240MHz Directional Gain = 7.16dBi > 6dBi, so the limit shall be reduced to 30-(7.16-6) = 28.84dBm.
5260~5320MHz Directional Gain = 7.39dBi > 6dBi, so the limit shall be reduced to 24-(7.39-6) = 22.61dBm.
5500~5720MHz Directional Gain = 7.11dBi > 6dBi, so the limit shall be reduced to 24-(7.11-6) = 22.89dBm.
5745~5825MHz Directional Gain = 6.71dBi > 6dBi, so the limit shall be reduced to 30-(6.71-6) = 29.29dBm.

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. 11dBm + 10log (81.89) = 30.13 > 24dBm
2. 11dBm + 10log (81.90) = 30.13 > 24dBm
3. 11dBm + 10log (81.91) = 30.13 > 24dBm
4. 11dBm + 10log (5725.00 - 5649.23) = 29.79 > 24dBm

Chain 1

1. 11dBm + 10log (81.65) = 30.11 > 24dBm
2. 11dBm + 10log (81.75) = 30.12 > 24dBm
3. 11dBm + 10log (81.79) = 30.12 > 24dBm
4. 11dBm + 10log (5725.00 - 5649.13) = 29.80 > 24dBm

Chain 2

1. 11dBm + 10log (81.95) = 30.13 > 24dBm
2. 11dBm + 10log (82.04) = 30.14 > 24dBm
3. 11dBm + 10log (82.04) = 30.14 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.82) = 29.81 > 24dBm

Chain 3

1. 11dBm + 10log (82.27) = 30.15 > 24dBm
2. 11dBm + 10log (82.07) = 30.14 > 24dBm
3. 11dBm + 10log (82.34) = 30.15 > 24dBm
4. 11dBm + 10log (5725.00 - 5648.79) = 29.82 > 24dBm

802.11ac (VHT160)

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				
50	5250 For 5150~5250MHz	8.10	7.88	7.92	7.96	25.040	13.99	28.84	Pass
50	5250 For 5250~5350MHz	7.67	7.32	7.40	7.39	22.221	13.47	22.61	Pass
114	5570	15.55	15.37	15.57	15.12	138.894	21.43	22.89	Pass

Note:

5180~5240MHz Directional Gain = 7.16dBi > 6dBi, so the limit shall be reduced to 30-(7.16-6) = 28.84dBm.

5260~5320MHz Directional Gain = 7.39dBi > 6dBi, so the limit shall be reduced to 24-(7.39-6) = 22.61dBm.

5500~5720MHz Directional Gain = 7.11dBi > 6dBi, so the limit shall be reduced to 24-(7.11-6) = 22.89dBm.

5745~5825MHz Directional Gain = 6.71dBi > 6dBi, so the limit shall be reduced to 30-(6.71-6) = 29.29dBm.

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. 11dBm + 10log (81.52) = 30.11 > 24dBm

2. 11dBm + 10log (163.24) = 33.12 > 24dBm

Chain 1

1. 11dBm + 10log (81.69) = 30.12 > 24dBm

2. 11dBm + 10log (163.41) = 33.13 > 24dBm

Chain 2

1. 11dBm + 10log (81.52) = 30.11 > 24dBm

2. 11dBm + 10log (163.59) = 33.13 > 24dBm

Chain 3

1. 11dBm + 10log (81.54) = 30.11 > 24dBm

2. 11dBm + 10log (163.40) = 33.13 > 24dBm

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				
36	5180	19.13	19.21	19.37	19.25	335.851	25.26	28.84	Pass
40	5200	21.42	21.61	21.57	21.49	568.031	27.54	28.84	Pass
48	5240	21.33	21.56	21.47	21.52	561.237	27.49	28.84	Pass
52	5260	16.42	16.54	16.67	16.65	181.624	22.59	22.61	Pass
60	5300	16.42	16.58	16.64	16.55	180.669	22.57	22.61	Pass
64	5320	16.45	16.63	16.72	16.53	182.150	22.60	22.61	Pass
100	5500	16.60	16.72	16.57	16.73	185.190	22.68	22.89	Pass
116	5580	16.73	16.48	16.57	16.42	180.808	22.57	22.89	Pass
140	5700	12.77	12.83	12.87	12.89	76.928	18.86	22.89	Pass
144	5720 For 5500~5720MHz	10.57	10.89	10.57	10.31	45.819	16.61	21.86	Pass
144	5720 For 5745~5825MHz	5.01	5.06	5.29	4.52	12.588	11.00	28.89	Pass
149	5745	21.21	21.32	21.15	21.26	531.625	27.26	29.29	Pass
157	5785	21.24	21.29	20.91	21.23	523.681	27.19	29.29	Pass
165	5825	21.36	21.37	21.27	21.40	545.867	27.37	29.29	Pass

Note:

5180~5240MHz Directional Gain = 7.16dBi > 6dBi, so the limit shall be reduced to 30-(7.16-6) = 28.84dBm.
5260~5320MHz Directional Gain = 7.39dBi > 6dBi, so the limit shall be reduced to 24-(7.39-6) = 22.61dBm.
5500~5720MHz Directional Gain = 7.11dBi > 6dBi, so the limit shall be reduced to 24-(7.11-6) = 22.89dBm.
5745~5825MHz Directional Gain = 6.71dBi > 6dBi, so the limit shall be reduced to 30-(6.71-6) = 29.29dBm.

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(21.79) = 24.38 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.76) = 24.37 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.85) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.80) = 24.38 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.00) = 23.04 < 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(21.67) = 24.35 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.88) = 24.40 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.68) = 24.36 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.83) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.64) = 24.35 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.24) = 22.97 < 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(21.74) = 24.37 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.89) = 24.40 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.88) = 24.40 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.82) = 24.38 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.08) = 23.01 < 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(21.98) = 24.42 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(21.84) = 24.39 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(22.18) = 24.45 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(21.87) = 24.39 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(21.86) = 24.39 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(21.89) = 24.40 > 24\text{dBm}$
7. $11\text{dBm} + 10\log(5725.00 - 5709.10) = 23.01 < 24\text{dBm}$

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				
38	5190	17.41	17.45	17.42	17.45	221.469	23.45	28.84	Pass
46	5230	20.61	21.01	20.97	20.81	486.821	26.87	28.84	Pass
54	5270	16.45	16.51	16.63	16.64	181.086	22.58	22.61	Pass
62	5310	16.35	16.43	16.48	16.37	174.920	22.43	22.61	Pass
102	5510	15.91	15.83	15.77	15.93	154.208	21.88	22.89	Pass
110	5550	16.75	16.68	16.47	16.73	185.332	22.68	22.89	Pass
134	5670	16.76	16.94	16.91	16.83	194.141	22.88	22.89	Pass
142	5710 For 5500~5720MHz	13.32	13.67	13.42	13.02	86.783	19.38	22.89	Pass
142	5710 For 5745~5825MHz	3.41	3.77	4.70	2.11	9.152	9.62	28.89	Pass
151	5755	20.88	21.17	20.57	21.01	493.588	26.93	29.29	Pass
159	5795	21.01	21.17	20.79	21.21	509.180	27.07	29.29	Pass

Note:

5180~5240MHz Directional Gain = 7.16dBi > 6dBi, so the limit shall be reduced to 30-(7.16-6) = 28.84dBm.
5260~5320MHz Directional Gain = 7.39dBi > 6dBi, so the limit shall be reduced to 24-(7.39-6) = 22.61dBm.
5500~5720MHz Directional Gain = 7.11dBi > 6dBi, so the limit shall be reduced to 24-(7.11-6) = 22.89dBm.
5745~5825MHz Directional Gain = 6.71dBi > 6dBi, so the limit shall be reduced to 30-(6.71-6) = 29.29dBm.

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. 11dBm + 10log (41.25) = 27.15 > 24dBm
2. 11dBm + 10log (41.32) = 27.16 > 24dBm
3. 11dBm + 10log (41.33) = 27.16 > 24dBm
4. 11dBm + 10log (41.35) = 27.16 > 24dBm
5. 11dBm + 10log (41.33) = 27.16 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.43) = 26.51 > 24dBm

Chain 1

1. 11dBm + 10log (41.07) = 27.13 > 24dBm
2. 11dBm + 10log (41.06) = 27.13 > 24dBm
3. 11dBm + 10log (41.06) = 27.13 > 24dBm
4. 11dBm + 10log (41.06) = 27.13 > 24dBm
5. 11dBm + 10log (41.12) = 27.14 > 24dBm
6. 11dBm + 10log (5725.00 - 5689.50) = 26.50 > 24dBm

Chain 2

1. $11\text{dBm} + 10\log(41.07) = 27.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.13) = 27.14 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.23) = 27.15 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.15) = 27.14 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5689.45) = 26.50 > 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(41.24) = 27.15 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(41.03) = 27.13 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(41.21) = 27.15 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(41.08) = 27.13 > 24\text{dBm}$
5. $11\text{dBm} + 10\log(41.21) = 27.15 > 24\text{dBm}$
6. $11\text{dBm} + 10\log(5725.00 - 5686.58) = 26.84 > 24\text{dBm}$

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				
42	5210	15.52	15.57	15.61	15.74	145.592	21.63	28.84	Pass
58	5290	15.45	15.53	15.59	15.66	143.840	21.58	22.61	Pass
106	5530	15.77	15.82	15.73	15.79	151.294	21.80	22.89	Pass
122	5610	16.65	16.83	16.91	16.97	193.297	22.86	22.89	Pass
138	5690 For 5500~5720MHz	12.41	12.54	12.45	12.22	69.617	18.43	22.89	Pass
138	5690 For 5745~5825MHz	-0.69	0.67	-1.05	-1.41	3.528	5.48	28.89	Pass
155	5775	20.57	20.83	20.47	20.53	459.494	26.62	29.29	Pass

Note:

5180~5240MHz Directional Gain = 7.16dBi > 6dBi, so the limit shall be reduced to $30 - (7.16 - 6) = 28.84$ dBm.
5260~5320MHz Directional Gain = 7.39dBi > 6dBi, so the limit shall be reduced to $24 - (7.39 - 6) = 22.61$ dBm.
5500~5720MHz Directional Gain = 7.11dBi > 6dBi, so the limit shall be reduced to $24 - (7.11 - 6) = 22.89$ dBm.
5745~5825MHz Directional Gain = 6.71dBi > 6dBi, so the limit shall be reduced to $30 - (6.71 - 6) = 29.29$ dBm.

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. $11\text{dBm} + 10\log(81.89) = 30.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(81.90) = 30.13 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(81.91) = 30.13 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(5725.00 - 5649.23) = 29.79 > 24\text{dBm}$

Chain 1

1. $11\text{dBm} + 10\log(81.65) = 30.11 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(81.75) = 30.12 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(81.79) = 30.12 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(5725.00 - 5649.13) = 29.80 > 24\text{dBm}$

Chain 2

1. $11\text{dBm} + 10\log(81.95) = 30.13 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(82.04) = 30.14 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(82.04) = 30.14 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(5725.00 - 5648.82) = 29.81 > 24\text{dBm}$

Chain 3

1. $11\text{dBm} + 10\log(82.27) = 30.15 > 24\text{dBm}$
2. $11\text{dBm} + 10\log(82.07) = 30.14 > 24\text{dBm}$
3. $11\text{dBm} + 10\log(82.34) = 30.15 > 24\text{dBm}$
4. $11\text{dBm} + 10\log(5725.00 - 5648.79) = 29.82 > 24\text{dBm}$

802.11ax (HE160)

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				
50	5250 For 5150~5250MHz	8.19	7.97	8.01	8.05	25.565	14.08	28.84	Pass
50	5250 For 5250~5350MHz	7.73	7.38	7.46	7.45	22.530	13.53	22.61	Pass
114	5570	15.65	15.48	15.75	15.26	143.204	21.56	22.89	Pass

Note:

5180~5240MHz Directional Gain = 7.16dBi > 6dBi, so the limit shall be reduced to 30-(7.16-6) = 28.84dBm.

5260~5320MHz Directional Gain = 7.39dBi > 6dBi, so the limit shall be reduced to 24-(7.39-6) = 22.61dBm.

5500~5720MHz Directional Gain = 7.11dBi > 6dBi, so the limit shall be reduced to 24-(7.11-6) = 22.89dBm.

For 5260~5320MHz, 5500~5720MHz

Chain 0

1. 11dBm + 10log (81.52) = 30.11 > 24dBm

2. 11dBm + 10log (163.24) = 33.12 > 24dBm

Chain 1

1. 11dBm + 10log (81.69) = 30.12 > 24dBm

2. 11dBm + 10log (163.41) = 33.13 > 24dBm

Chain 2

1. 11dBm + 10log (81.52) = 30.11 > 24dBm

2. 11dBm + 10log (163.59) = 33.13 > 24dBm

Chain 3

1. 11dBm + 10log (81.54) = 30.11 > 24dBm

2. 11dBm + 10log (163.40) = 33.13 > 24dBm

26dB Bandwidth:
802.11a

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	21.76	27.44	27.24	26.61
40	5200	21.92	27.36	22.67	27.16
48	5240	21.82	27.39	26.72	26.66
52	5260	21.67	21.72	21.75	21.61
60	5300	21.62	21.68	21.81	21.59
64	5320	21.68	21.72	21.71	21.66
100	5500	21.60	21.67	21.81	21.61
116	5580	21.66	21.79	21.74	21.59
140	5700	21.64	21.75	21.85	21.63
144	5720 For 5500~5720MHz	15.79	15.87	15.97	15.78
144	5720 For 5745~5825MHz	5.94	5.90	5.88	5.83

802.11ax (HE20)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	21.70	23.43	23.23	23.06
40	5200	23.37	29.01	24.55	24.50
48	5240	24.97	25.42	26.59	26.26
52	5260	21.79	21.67	21.74	21.98
60	5300	21.76	21.88	21.87	21.84
64	5320	21.80	21.74	21.87	22.18
100	5500	21.67	21.68	21.89	21.87
116	5580	21.85	21.83	21.88	21.86
140	5700	21.80	21.64	21.82	21.89
144	5720 For 5500~5720MHz	16.00	15.76	15.92	15.90
144	5720 For 5745~5825MHz	5.81	5.90	5.88	5.99

802.11ax (HE40)

Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
38	5190	41.33	41.08	41.08	41.20
46	5230	47.15	76.05	64.48	65.54
54	5270	41.25	41.07	41.07	41.24
62	5310	41.32	41.06	41.24	41.03
102	5510	41.33	41.06	41.13	41.21
110	5550	41.35	41.06	41.23	41.08
134	5670	41.33	41.12	41.15	41.21
142	5710 For 5500~5720MHz	35.57	35.50	35.55	38.42
142	5710 For 5745~5825MHz	5.55	5.51	5.61	5.55

802.11ax (HE80)

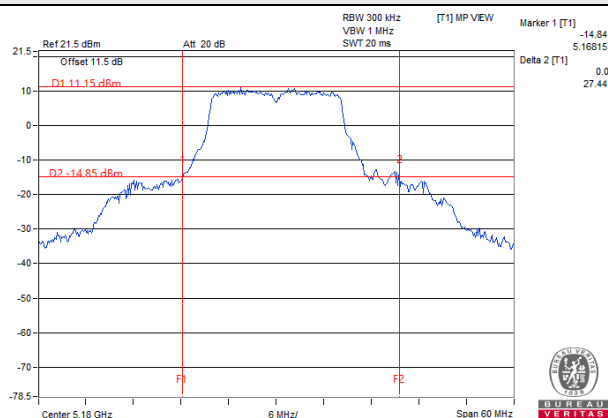
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	81.90	81.62	81.80	82.25
58	5290	81.89	81.65	81.95	82.27
106	5530	81.90	81.75	82.04	82.07
122	5610	81.91	81.79	82.04	82.34
138	5690 For 5500~5720MHz	75.77	75.87	76.18	76.21
138	5690 For 5745~5825MHz	6.10	5.80	5.91	6.20

802.11ax (HE160)

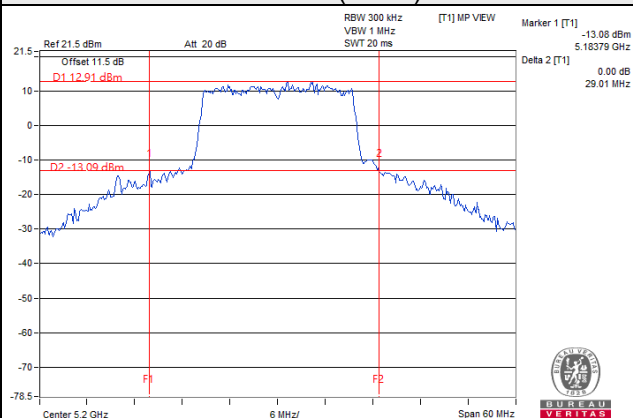
Channel	Frequency (MHz)	26dBc Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
50	5250 For 5150~5250MHz	81.86	81.89	81.80	81.82
50	5250 For 5250~5350MHz	81.52	81.69	81.52	81.54
114	5570	163.24	163.41	163.59	163.40

Spectrum Plot of Worst Value

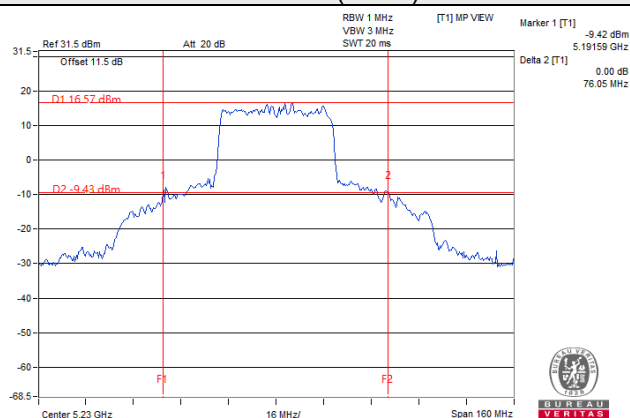
802.11a



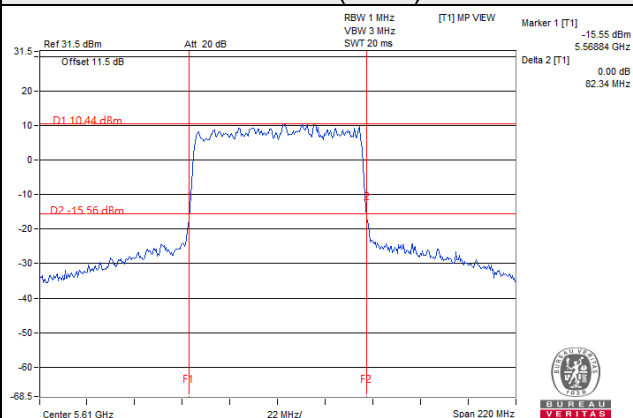
802.11ax (HE20)



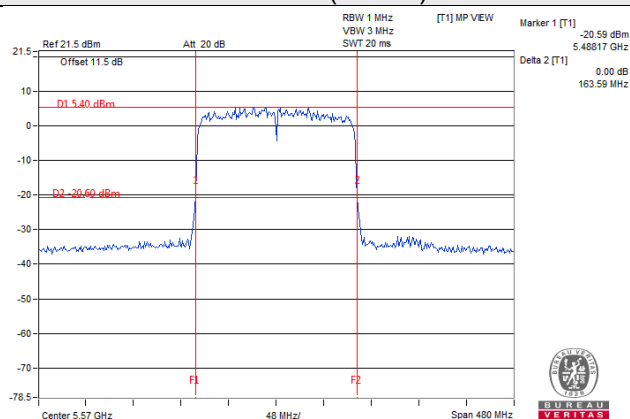
802.11ax (HE40)



802.11ax (HE80)



802.11ax (HE160)



EUT Maximum Conducted Power

CDD Mode

802.11a

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	199.243	22.99
5470~5725	193.010	22.86

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	227.743	23.57
5470~5725	223.523	23.49

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	236.662	23.74
5470~5725	230.526	23.63

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	229.712	23.61
5470~5725	225.960	23.54

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	233.138	23.68
5470~5725	222.880	23.48

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	141.456	21.51
5470~5725	224.505	23.51

802.11ac (VHT160)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	22.221	13.47
5470~5725	138.894	21.43

802.11ax (HE20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	230.372	23.62
5470~5725	226.608	23.55

802.11ax (HE40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	240.097	23.80
5470~5725	233.346	23.68

802.11ax (HE80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	143.840	21.58
5470~5725	228.029	23.58

802.11ax (HE160)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	22.530	13.53
5470~5725	143.204	21.56

Beamforming Mode

802.11n (HT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	176.884	22.48
5470~5725	177.995	22.50

802.11n (HT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	175.875	22.45
5470~5725	186.781	22.71

802.11ac (VHT20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	179.438	22.54
5470~5725	180.973	22.58

802.11ac (VHT40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	179.026	22.53
5470~5725	189.813	22.78

802.11ac (VHT80)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	142.188	21.53
5470~5725	188.777	22.76

802.11ac (VHT160)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	22.221	13.47
5470~5725	138.894	21.43

802.11ax (HE20)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	182.150	22.60
5470~5725	185.190	22.68

802.11ax (HE40)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	181.086	22.58
5470~5725	194.141	22.88

802.11ax (HE80)

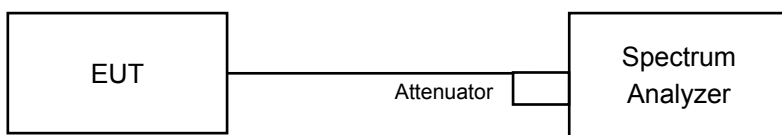
Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	143.840	21.58
5470~5725	193.297	22.86

802.11ax (HE160)

Frequency Band (MHz)	Max. Power	
	Output Power (mW)	Output Power (dBm)
5250~5350	22.530	13.53
5470~5725	143.204	21.56

4.4 Occupied Bandwidth Measurement

4.4.1 Test Setup



4.4.2 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.4.3 Test Procedure

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

4.4.4 Test Result

802.11a

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	17.04	17.40	17.28	17.16
40	5200	17.04	17.28	17.16	17.16
48	5240	17.04	17.52	17.28	17.16
52	5260	17.04	17.04	16.92	16.92
60	5300	17.04	17.04	16.92	16.92
64	5320	17.04	17.16	16.92	16.92
100	5500	17.04	17.16	17.04	16.80
116	5580	17.04	17.04	17.16	16.80
140	5700	17.04	17.04	17.16	16.80
144	5720 For 5500~5720MHz	13.28	13.28	13.28	13.28
144	5720 For 5745~5825MHz	3.16	3.28	3.16	3.16
149	5745	18.24	18.96	18.12	18.60
157	5785	18.00	18.84	18.12	18.72
165	5825	17.88	18.84	18.00	18.60

802.11ax (HE20)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
36	5180	19.08	19.20	19.32	19.20
40	5200	19.08	19.32	19.20	19.32
48	5240	19.08	19.20	19.32	19.44
52	5260	19.08	19.20	19.08	19.32
60	5300	19.08	19.20	19.20	19.20
64	5320	19.08	19.20	19.20	19.32
100	5500	19.08	19.20	19.20	19.20
116	5580	19.08	19.20	19.20	19.20
140	5700	19.08	19.20	19.20	19.20
144	5720 For 5500~5720MHz	14.60	14.60	14.60	14.48
144	5720 For 5745~5825MHz	4.36	4.48	4.48	4.48
149	5745	19.32	19.32	19.44	19.44
157	5785	19.32	19.44	19.32	19.44
165	5825	19.32	19.44	19.44	19.68

802.11ax (HE40)

Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
38	5190	37.80	37.80	37.80	37.80
46	5230	37.92	38.04	38.04	38.04
54	5270	37.68	37.68	37.68	37.80
62	5310	37.80	37.80	37.80	37.80
102	5510	37.68	37.80	37.68	37.68
110	5550	37.68	37.80	37.80	37.80
134	5670	37.80	37.80	37.80	37.80
142	5710 For 5500~5720MHz	33.96	33.96	33.96	33.96
142	5710 For 5745~5825MHz	3.84	3.84	3.84	3.84
151	5755	38.04	38.04	37.92	38.04
159	5795	38.04	38.04	37.92	38.04

802.11ax (HE80)

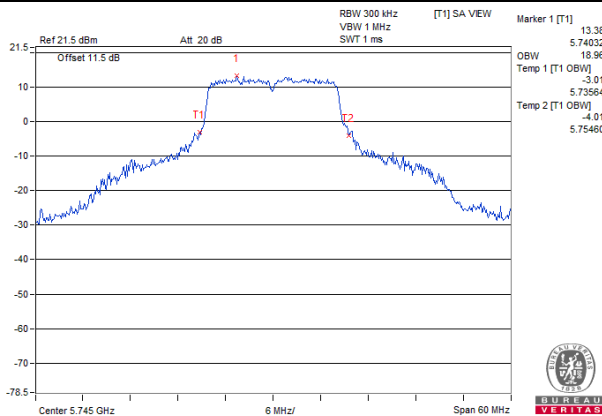
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
42	5210	77.04	76.80	77.04	77.04
58	5290	77.04	76.80	76.80	77.04
106	5530	77.04	76.80	76.80	76.80
122	5610	76.80	76.80	77.04	76.80
138	5690 For 5500~5720MHz	73.40	73.40	73.40	73.40
138	5690 For 5745~5825MHz	3.40	3.40	3.40	3.40
155	5775	77.28	77.04	77.28	77.28

802.11ax (HE160)

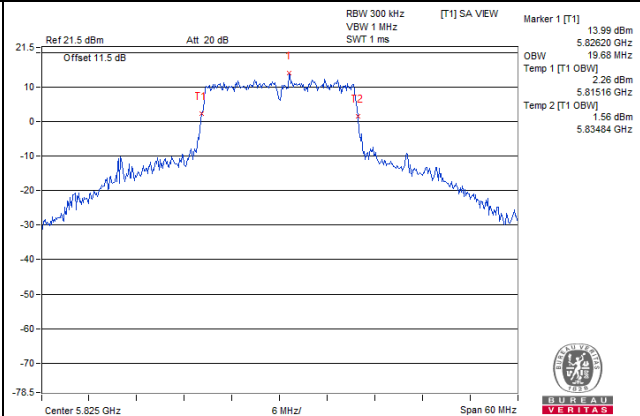
Channel	Frequency (MHz)	Occupied Bandwidth (MHz)			
		Chain 0	Chain 1	Chain 2	Chain 3
50	5250 For 5150~5250MHz	78.72	78.72	78.72	78.72
50	5250 For 5250~5350MHz	77.76	76.80	77.76	77.76
114	5570	154.56	155.52	154.56	155.52

Spectrum Plot of Worst Value

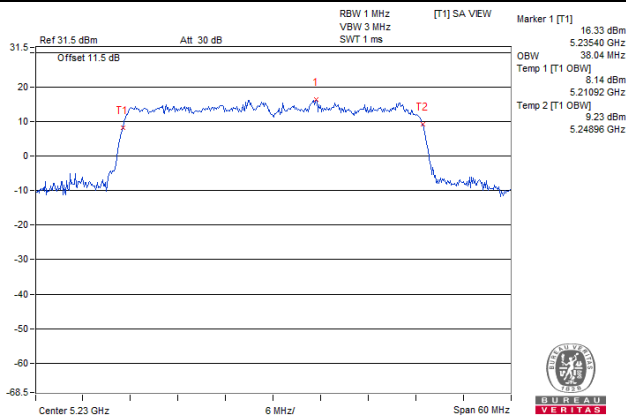
802.11a



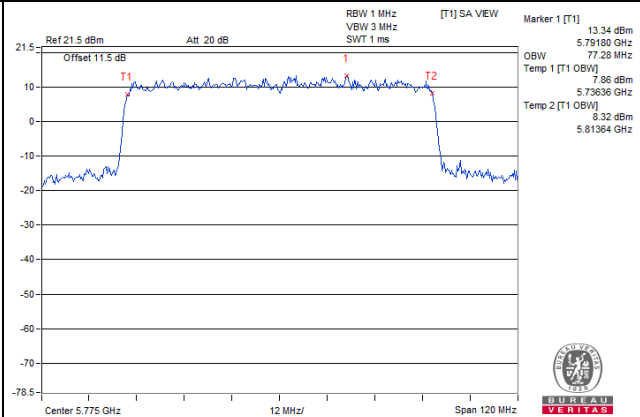
802.11ax (HE20)



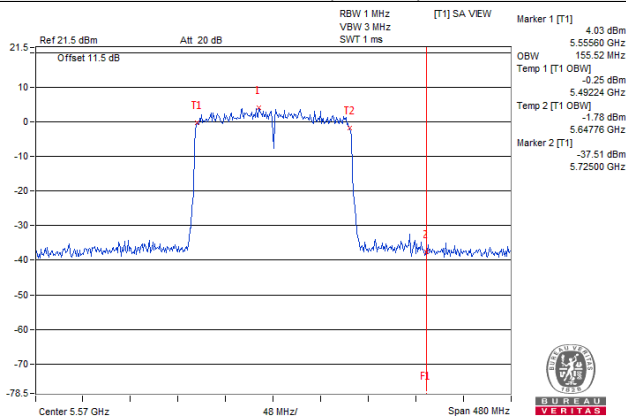
802.11ax (HE40)



802.11ax (HE80)

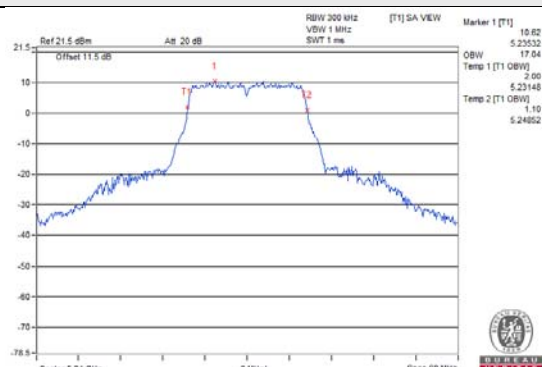


802.11ax (HE160)

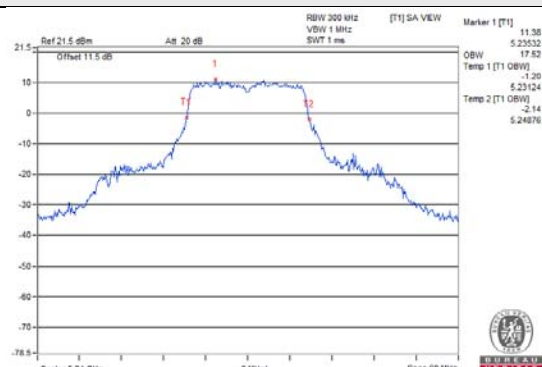


Spectrum Plot for near By DFS Band

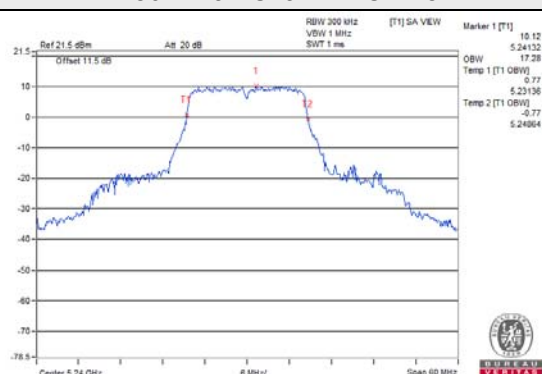
802.11a / Chain 0 / CH 48



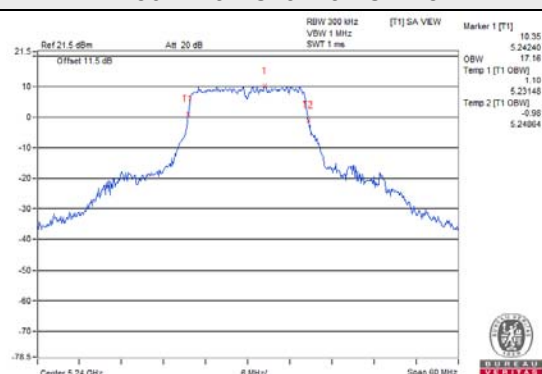
802.11a / Chain 1 / CH 48



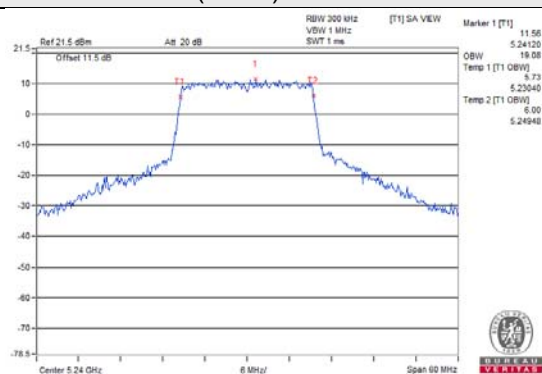
802.11a / Chain 2 / CH 48



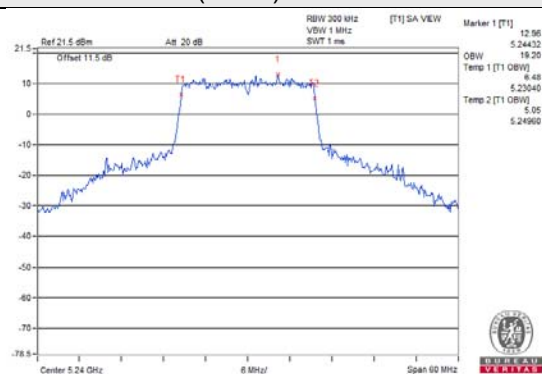
802.11a / Chain 3 / CH 48



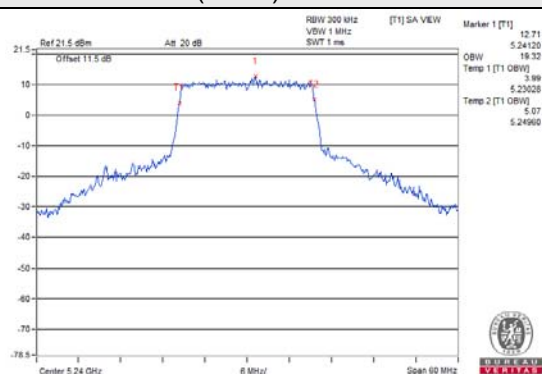
802.11ax (HE20) / Chain 0 / CH 48



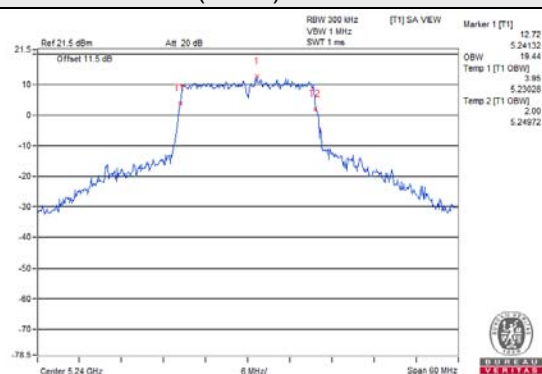
802.11ax (HE20) / Chain 1 / CH 48



802.11ax (HE20) / Chain 2 / CH 48

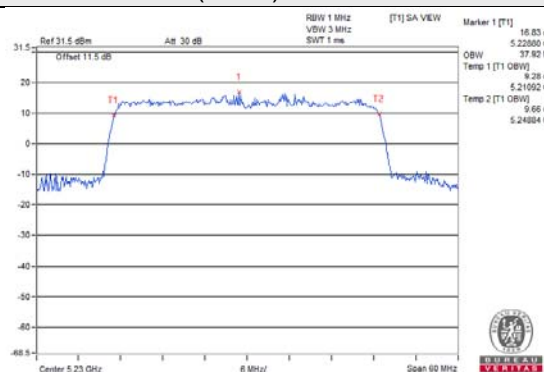


802.11ax (HE20) / Chain 3 / CH 48

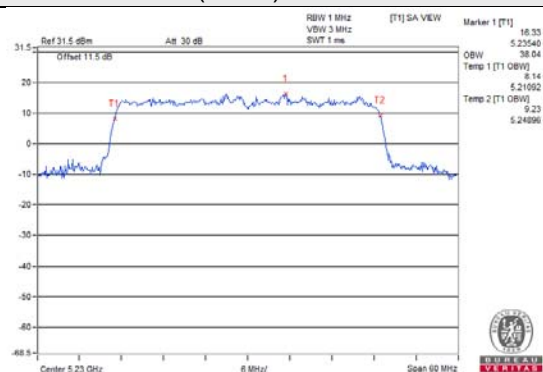


Spectrum Plot for near By DFS Band

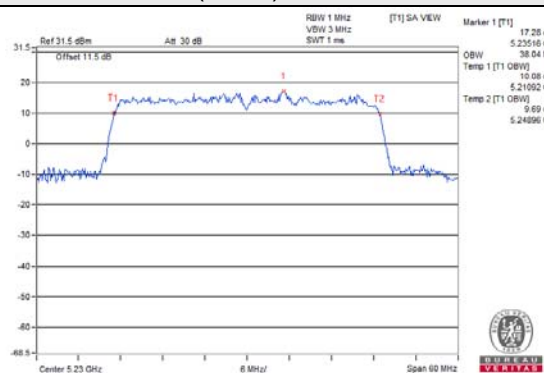
802.11ax (HE40) / Chain 0 / CH 46



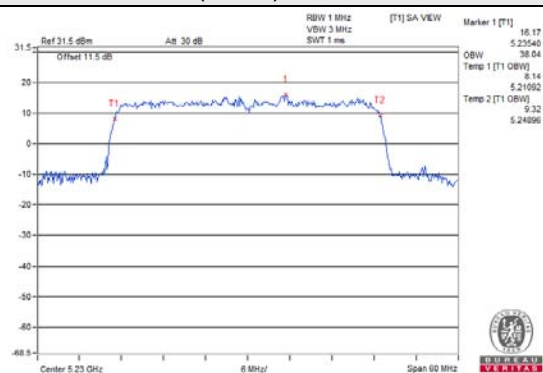
802.11ax (HE40) / Chain 1 / CH 46



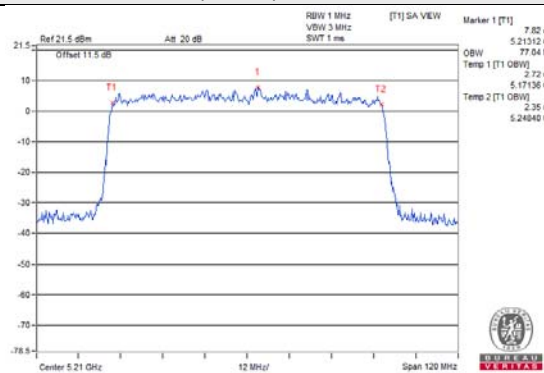
802.11ax (HE40) / Chain 2 / CH 46



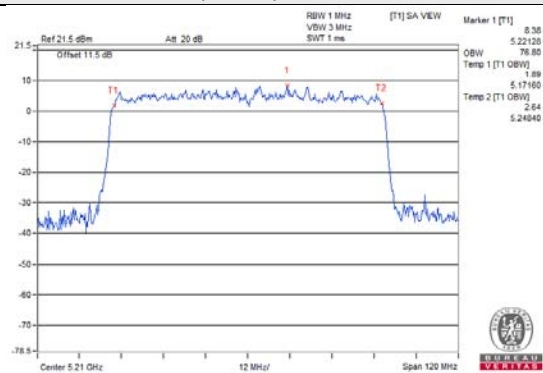
802.11ax (HE40) / Chain 3 / CH 46



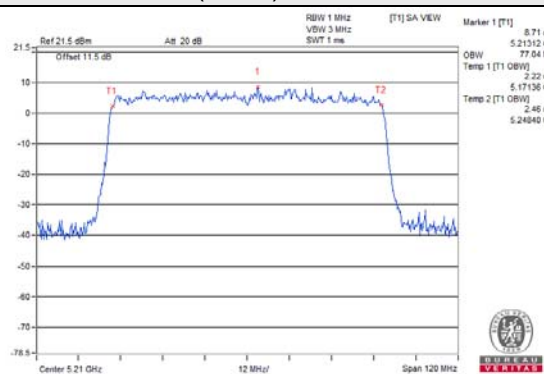
802.11ax (HE80) / Chain 0 / CH 42



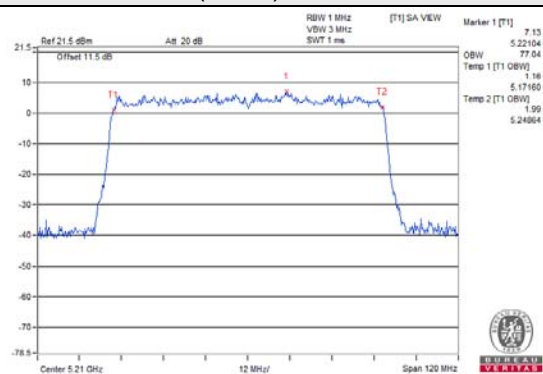
802.11ax (HE80) / Chain 1 / CH 42



802.11ax (HE80) / Chain 2 / CH 42

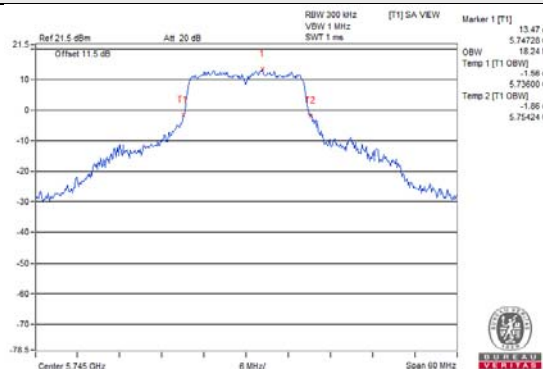


802.11ax (HE80) / Chain 3 / CH 42

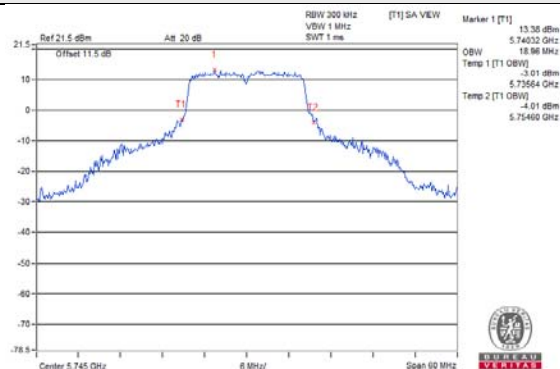


Spectrum Plot for near By DFS Band

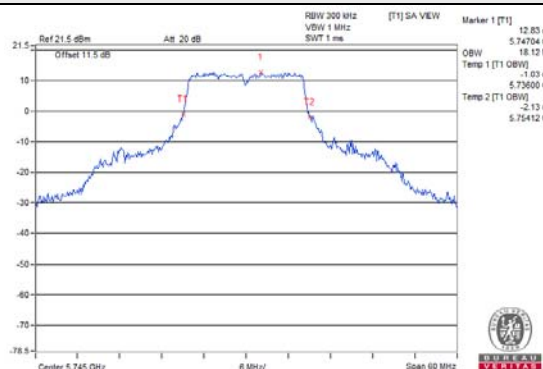
802.11a / Chain 0 / CH 149



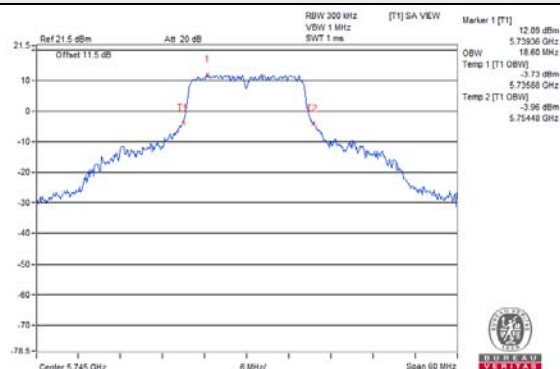
802.11a / Chain 1 / CH 149



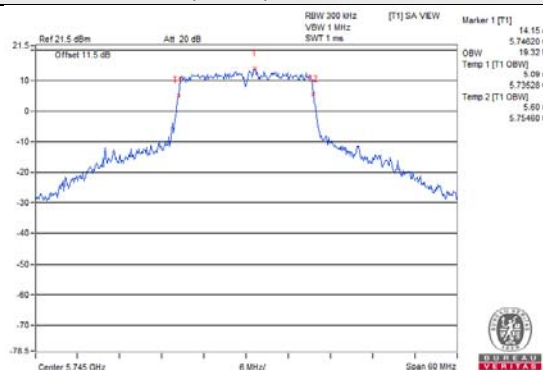
802.11a / Chain 2 / CH 149



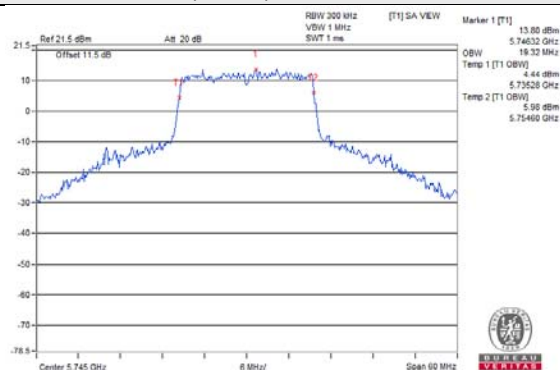
802.11a / Chain 3 / CH 149



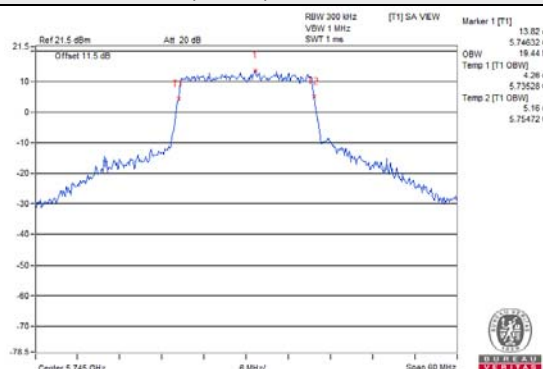
802.11ax (HE20) / Chain 0 / CH 149



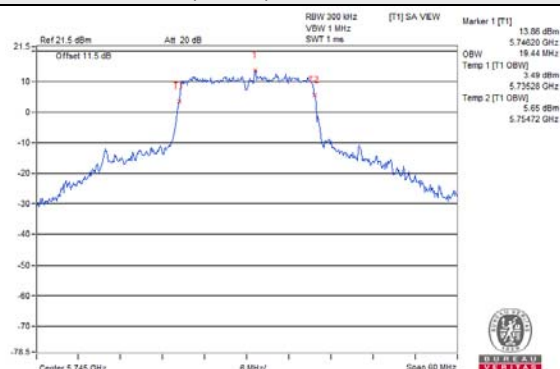
802.11ax (HE20) / Chain 1 / CH 149



802.11ax (HE20) / Chain 2 / CH 149

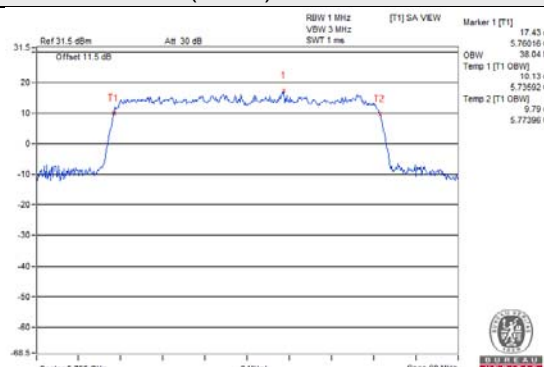


802.11ax (HE20) / Chain 3 / CH 149

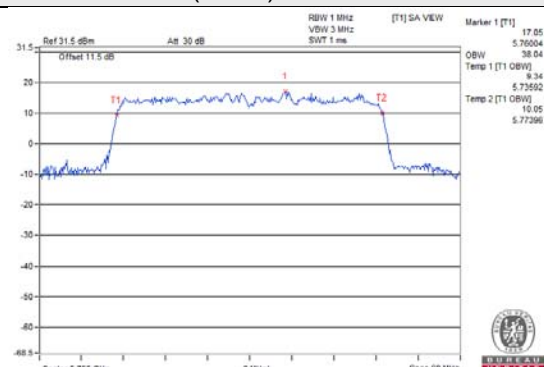


Spectrum Plot for near By DFS Band

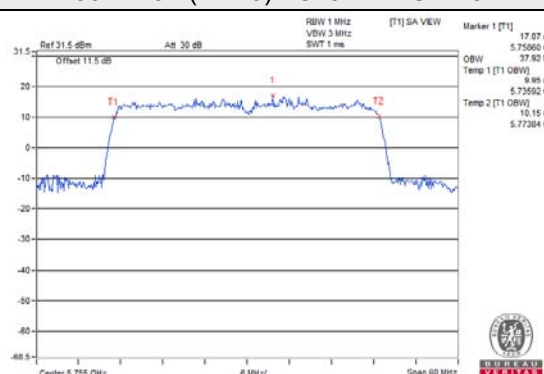
802.11ax (HE40) / Chain 0 / CH 151



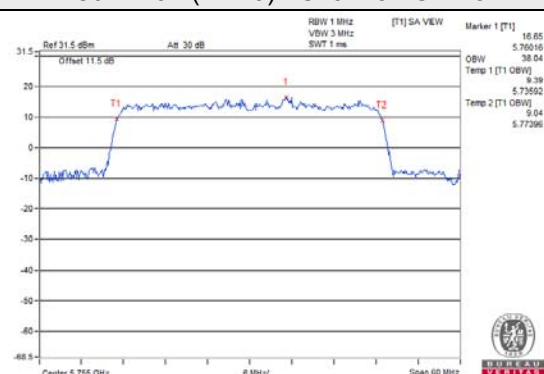
802.11ax (HE40) / Chain 1 / CH 151



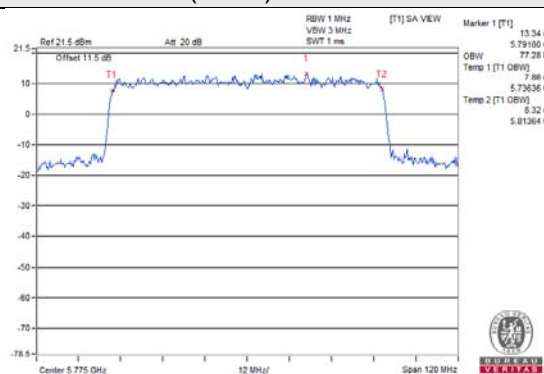
802.11ax (HE40) / Chain 2 / CH 151



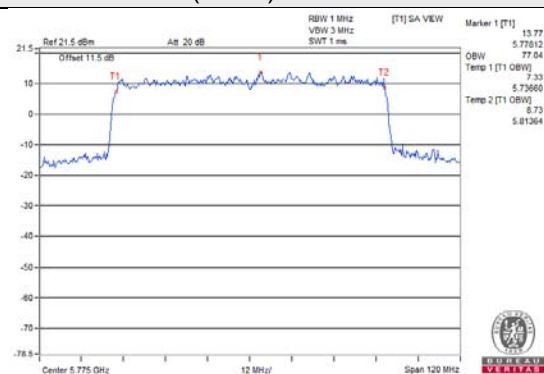
802.11ax (HE40) / Chain 3 / CH 151



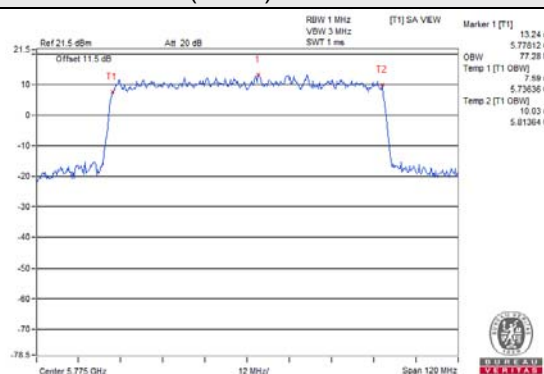
802.11ax (HE80) / Chain 0 / CH 155



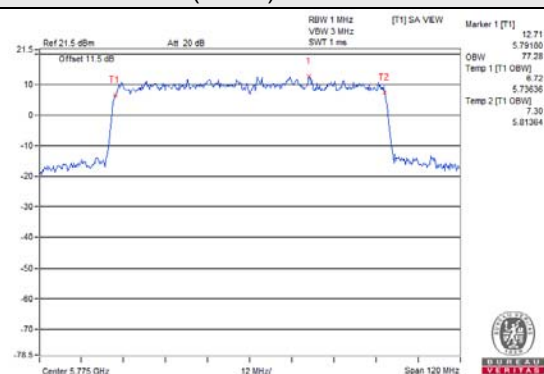
802.11ax (HE80) / Chain 1 / CH 155



802.11ax (HE80) / Chain 2 / CH 155



802.11ax (HE80) / Chain 3 / CH 155

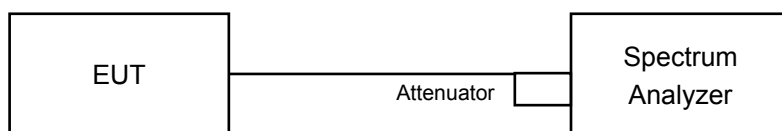


4.5 Peak Power Spectral Density Measurement

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, U-NII-2A, U-NII-2C band

Duty cycle of test signal is $\geq 98\%$

Using method SA-1

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

Duty cycle of test signal is $< 98\%$

Using method SA-2

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

For U-NII-3 band

Duty cycle $\geq 98\%$

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

Duty cycle $< 98\%$

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

4.5.5 Deviation from Test Standard

No deviation.

4.5.6 EUT Operating Conditions

Same as item 4.3.6.

4.5.7 Test Results

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

802.11a

Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
36	5180	5.84	6.00	7.12	5.84	0.23	12.26	15.84	Pass
40	5200	8.04	8.03	8.12	8.25	0.23	14.13	15.84	Pass
48	5240	7.96	8.13	8.20	8.15	0.23	14.13	15.84	Pass
52	5260	3.25	3.35	3.29	3.23	0.23	9.30	9.61	Pass
60	5300	3.33	3.40	3.26	3.18	0.23	9.31	9.61	Pass
64	5320	3.00	3.30	3.24	3.17	0.23	9.20	9.61	Pass
100	5500	2.62	2.67	2.52	2.53	0.23	8.61	9.89	Pass
116	5580	3.42	3.39	3.37	3.33	0.23	9.40	9.89	Pass
140	5700	1.78	1.70	1.70	1.65	0.23	7.73	9.89	Pass
144	5720 For 5500~5720MHz	3.38	3.53	3.43	3.31	0.23	9.43	9.89	Pass

Note:

- 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.
- 5180~5240MHz Directional gain = 7.16dBi > 6dBi, so the power density limit shall be reduced to 17-(7.16-6) = 15.84dBm.
5260~5320MHz Directional gain = 7.39dBi > 6dBi, so the power density limit shall be reduced to 11-(7.39-6) = 9.61dBm.
5500~5720MHz Directional gain = 7.11dBi > 6dBi, so the power density limit shall be reduced to 11-(7.11-6) = 9.89dBm.
- 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				
36	5180	6.05	5.95	5.65	6.04	0.10	11.95	15.84	Pass
40	5200	8.20	8.21	8.17	8.16	0.10	14.21	15.84	Pass
48	5240	8.15	8.13	8.13	8.10	0.10	14.15	15.84	Pass
52	5260	3.37	3.15	3.43	3.47	0.10	9.38	9.61	Pass
60	5300	3.39	3.26	3.25	3.27	0.10	9.31	9.61	Pass
64	5320	3.65	3.24	3.70	3.58	0.10	9.57	9.61	Pass
100	5500	3.55	3.44	3.53	3.55	0.10	9.54	9.89	Pass
116	5580	3.36	3.11	3.32	3.36	0.10	9.31	9.89	Pass
140	5700	-0.55	-1.03	-0.96	-0.89	0.10	5.17	9.89	Pass
144	5720 For 5500~5720MHz	0.46	0.47	0.51	0.48	0.10	6.50	9.89	Pass

Note:

- 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.
- 5180~5240MHz Directional gain = 7.16dBi > 6dBi, so the power density limit shall be reduced to 17-(7.16-6) = 15.84dBm.
5260~5320MHz Directional gain = 7.39dBi > 6dBi, so the power density limit shall be reduced to 11-(7.39-6) = 9.61dBm.
5500~5720MHz Directional gain = 7.11dBi > 6dBi, so the power density limit shall be reduced to 11-(7.11-6) = 9.89dBm.
- 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				
38	5190	-0.28	0.03	0.87	-0.15	0.17	6.16	15.84	Pass
46	5230	3.60	4.04	4.89	3.68	0.17	10.10	15.84	Pass
54	5270	0.12	0.22	0.69	0.04	0.17	6.30	9.61	Pass
62	5310	-0.29	-0.04	0.39	-0.23	0.17	5.99	9.61	Pass
102	5510	-1.44	-1.57	-1.62	-1.97	0.17	4.37	9.89	Pass
110	5550	0.55	0.16	0.16	-0.27	0.17	6.18	9.89	Pass
134	5670	0.06	0.46	0.13	-0.05	0.17	6.17	9.89	Pass
142	5710 For 5500~5720MHz	0.55	0.66	0.71	0.18	0.17	6.55	9.89	Pass

Note:

- 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.
- 5180~5240MHz Directional gain = 7.16dBi > 6dBi, so the power density limit shall be reduced to 17-(7.16-6) = 15.84dBm.
5260~5320MHz Directional gain = 7.39dBi > 6dBi, so the power density limit shall be reduced to 11-(7.39-6) = 9.61dBm.
5500~5720MHz Directional gain = 7.11dBi > 6dBi, so the power density limit shall be reduced to 11-(7.11-6) = 9.89dBm.
- 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				
42	5210	-4.67	-4.17	-3.63	-4.55	0.42	1.78	15.84	Pass
58	5290	-4.99	-4.14	-4.41	-4.64	0.42	1.49	9.61	Pass
106	5530	-4.36	-4.21	-4.48	-4.69	0.42	1.59	9.89	Pass
122	5610	-2.69	-1.90	-2.48	-2.46	0.42	3.65	9.89	Pass
138	5690 For 5500~5720MHz	-2.79	-2.01	-2.32	-2.58	0.42	3.61	9.89	Pass

Note:

- 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.
- 5180~5240MHz Directional gain = 7.16dBi > 6dBi, so the power density limit shall be reduced to 17-(7.16-6) = 15.84dBm.
5260~5320MHz Directional gain = 7.39dBi > 6dBi, so the power density limit shall be reduced to 11-(7.39-6) = 9.61dBm.
5500~5720MHz Directional gain = 7.11dBi > 6dBi, so the power density limit shall be reduced to 11-(7.11-6) = 9.89dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE160)

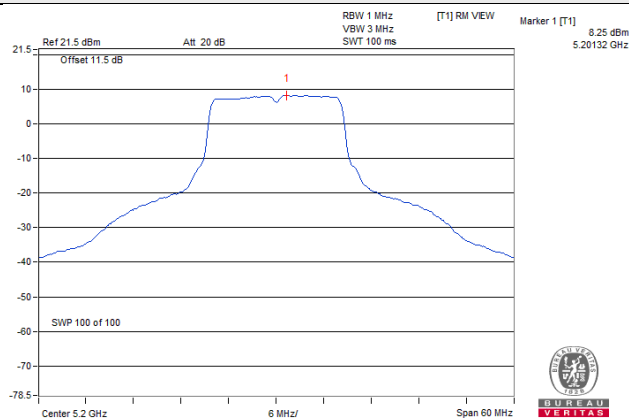
Chan.	Freq. (MHz)	PSD W/O Duty Factor (dBm/MHz)				Duty Factor (dB)	Total PSD With Duty Factor (dBm/MHz)	Max. Limit (dBm/MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3				
50	5250 For 5150~5250MHz	-8.26	-8.21	-8.53	-8.28	0.80	-2.30	15.84	Pass
50	5250 For 5250~5350MHz	-8.29	-8.36	-8.72	-8.50	0.80	-2.44	9.61	Pass
114	5570	-6.87	-7.10	-7.20	-7.13	0.80	-1.05	9.89	Pass

Note:

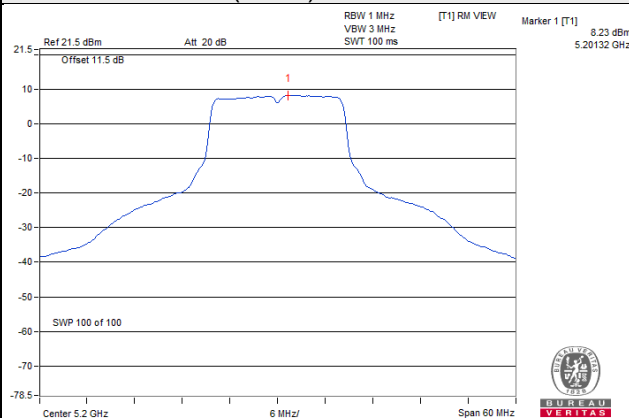
- Method E) 2) a) of power density measurement of KDB 662911 is using for calculating total power density. Total power density is summing entire spectra across corresponding frequency bins on the various outputs by computer.
- 5180~5240MHz Directional gain = 7.16dBi > 6dBi, so the power density limit shall be reduced to 17-(7.16-6) = 15.84dBm.
5260~5320MHz Directional gain = 7.39dBi > 6dBi, so the power density limit shall be reduced to 11-(7.39-6) = 9.61dBm.
5500~5720MHz Directional gain = 7.11dBi > 6dBi, so the power density limit shall be reduced to 11-(7.11-6) = 9.89dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

Spectrum Plot of Worst Value

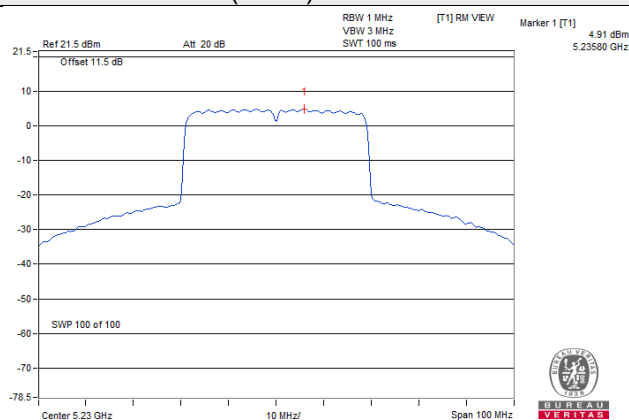
802.11a / Chain 3 / CH 40



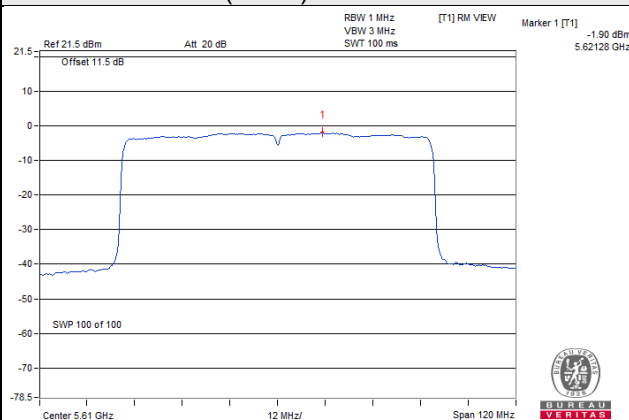
802.11ax (HE20) / Chain 1 / CH 40



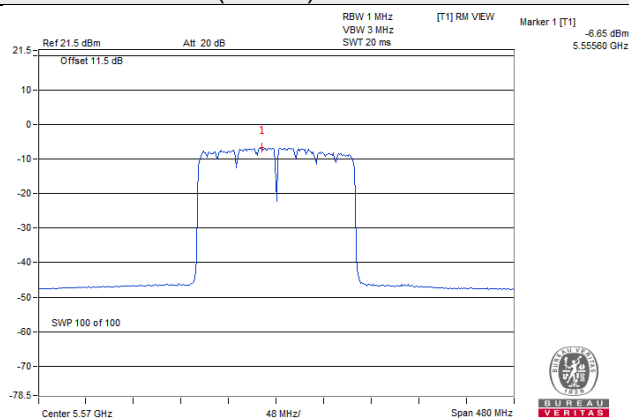
802.11ax (HE40) / Chain 2 / CH 46



802.11ax (HE80) / Chain 1 / CH 122



802.11ax (HE160) / Chain 0 / CH 114



For U-NII-3 band
802.11a

TX chain	Channel	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/ 500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/ 300kHz)	(dBm/ 500kHz)					
0	144	5720 For 5745~5825MHz	-7.51	-5.29	6.02	0.23	0.96	29.29	Pass
	149	5745	0.63	2.85	6.02	0.23	9.10	29.29	Pass
	157	5785	0.36	2.58	6.02	0.23	8.83	29.29	Pass
	165	5825	-0.1	2.12	6.02	0.23	8.37	29.29	Pass
1	144	5720 For 5745~5825MHz	-7.69	-5.47	6.02	0.23	0.78	29.29	Pass
	149	5745	0.37	2.59	6.02	0.23	8.84	29.29	Pass
	157	5785	0.29	2.51	6.02	0.23	8.76	29.29	Pass
	165	5825	0.29	2.51	6.02	0.23	8.76	29.29	Pass
2	144	5720 For 5745~5825MHz	-7.69	-5.47	6.02	0.23	0.78	29.29	Pass
	149	5745	0.44	2.66	6.02	0.23	8.91	29.29	Pass
	157	5785	0.27	2.49	6.02	0.23	8.74	29.29	Pass
	165	5825	0.37	2.59	6.02	0.23	8.84	29.29	Pass
3	144	5720 For 5745~5825MHz	-8.45	-6.23	6.02	0.23	0.02	29.29	Pass
	149	5745	-0.44	1.78	6.02	0.23	8.03	29.29	Pass
	157	5785	-0.59	1.63	6.02	0.23	7.88	29.29	Pass
	165	5825	-0.75	1.47	6.02	0.23	7.72	29.29	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. 5745~5825MHz Directional gain 6.71dBi > 6dBi, so the power density limit shall be reduced to 30-(6.71-6) = 29.29dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE20)

TX chain	Channel	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/ 500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/ 300kHz)	(dBm/ 500kHz)					
0	144	5720 For 5745~5825MHz	-8.43	-6.21	6.02	0.10	-0.09	29.29	Pass
	149	5745	-1.25	0.97	6.02	0.10	7.09	29.29	Pass
	157	5785	-1.53	0.69	6.02	0.10	6.81	29.29	Pass
	165	5825	-1.29	0.93	6.02	0.10	7.05	29.29	Pass
1	144	5720 For 5745~5825MHz	-8.02	-5.80	6.02	0.10	0.32	29.29	Pass
	149	5745	-1.51	0.71	6.02	0.10	6.83	29.29	Pass
	157	5785	-1.58	0.64	6.02	0.10	6.76	29.29	Pass
	165	5825	-1.39	0.83	6.02	0.10	6.95	29.29	Pass
2	144	5720 For 5745~5825MHz	-8.27	-6.05	6.02	0.10	0.07	29.29	Pass
	149	5745	-1.56	0.66	6.02	0.10	6.78	29.29	Pass
	157	5785	-1.57	0.65	6.02	0.10	6.77	29.29	Pass
	165	5825	-1.17	1.05	6.02	0.10	7.17	29.29	Pass
3	144	5720 For 5745~5825MHz	-8.64	-6.42	6.02	0.10	-0.30	29.29	Pass
	149	5745	-2.20	0.02	6.02	0.10	6.14	29.29	Pass
	157	5785	-2.49	-0.27	6.02	0.10	5.85	29.29	Pass
	165	5825	-2.19	0.03	6.02	0.10	6.15	29.29	Pass

Note:

- Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
- 5745~5825MHz Directional gain 6.71dBi > 6dBi, so the power density limit shall be reduced to 30-(6.71-6) = 29.29dBm.
- Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE40)

TX chain	Channel	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/ 500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/ 300kHz)	(dBm/ 500kHz)					
0	142	5710 For 5745~5825MHz	-8.93	-6.71	6.02	0.17	-0.52	29.29	Pass
	151	5755	-4.27	-2.05	6.02	0.17	4.14	29.29	Pass
	159	5795	-4.08	-1.86	6.02	0.17	4.33	29.29	Pass
1	142	5710 For 5745~5825MHz	-8.69	-6.47	6.02	0.17	-0.28	29.29	Pass
	151	5755	-4.09	-1.87	6.02	0.17	4.32	29.29	Pass
	159	5795	-4.10	-1.88	6.02	0.17	4.31	29.29	Pass
2	142	5710 For 5745~5825MHz	-9.01	-6.79	6.02	0.17	-0.60	29.29	Pass
	151	5755	-4.76	-2.54	6.02	0.17	3.65	29.29	Pass
	159	5795	-4.44	-2.22	6.02	0.17	3.97	29.29	Pass
3	142	5710 For 5745~5825MHz	-9.19	-6.97	6.02	0.17	-0.78	29.29	Pass
	151	5755	-4.91	-2.69	6.02	0.17	3.50	29.29	Pass
	159	5795	-4.85	-2.63	6.02	0.17	3.56	29.29	Pass

Note:

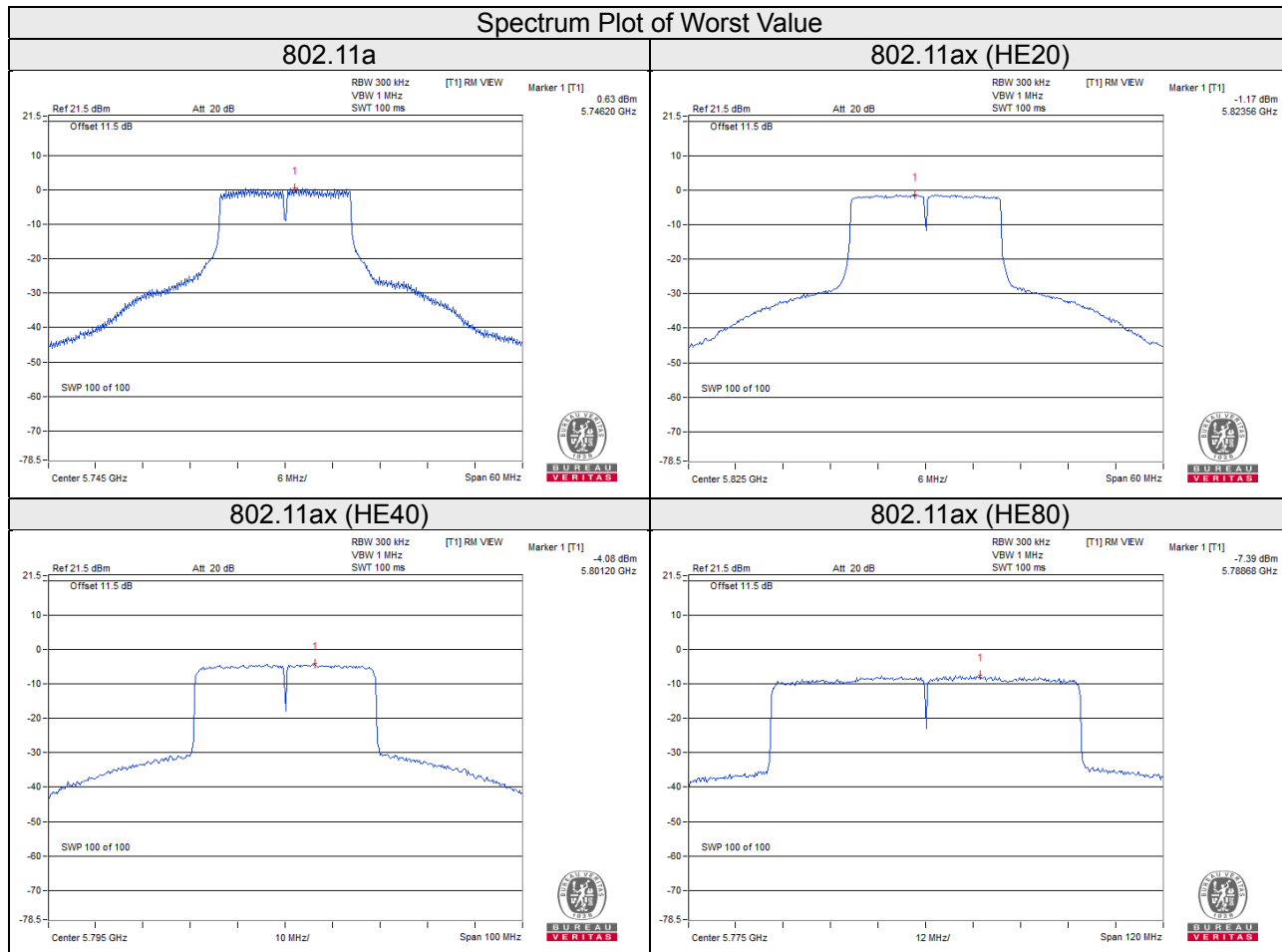
1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. 5745~5825MHz Directional gain 6.71dBi > 6dBi, so the power density limit shall be reduced to 30-(6.71-6) = 29.29dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

802.11ax (HE80)

TX chain	Channel	Chan. Freq. (MHz)	PSD W/O Duty Factor		10 log (N=4) dB	Duty Factor (dB)	Total PSD With Duty Factor (dBm/ 500kHz)	Limit (dBm/ 500kHz)	Pass / Fail
			(dBm/ 300kHz)	(dBm/ 500kHz)					
0	138	5690 For 5745~5825MHz	-13.02	-10.80	6.02	0.42	-4.36	29.29	Pass
	155	5775	-7.50	-5.28	6.02	0.42	1.16	29.29	Pass
1	138	5690 For 5745~5825MHz	-12.17	-9.95	6.02	0.42	-3.51	29.29	Pass
	155	5775	-7.39	-5.17	6.02	0.42	1.27	29.29	Pass
2	138	5690 For 5745~5825MHz	-12.88	-10.66	6.02	0.42	-4.22	29.29	Pass
	155	5775	-7.68	-5.46	6.02	0.42	0.98	29.29	Pass
3	138	5690 For 5745~5825MHz	-12.54	-10.32	6.02	0.42	-3.88	29.29	Pass
	155	5775	-8.50	-6.28	6.02	0.42	0.16	29.29	Pass

Note:

1. Method E) 2) c) of power density measurement of KDB 662911 is using for calculating total power density, Measure and add 10 log (N_{ANT}) dB.
2. 5745~5825MHz Directional gain 6.71dBi > 6dBi, so the power density limit shall be reduced to 30-(6.71-6) = 29.29dBm.
3. Refer to section 3.3 for duty cycle spectrum plot.

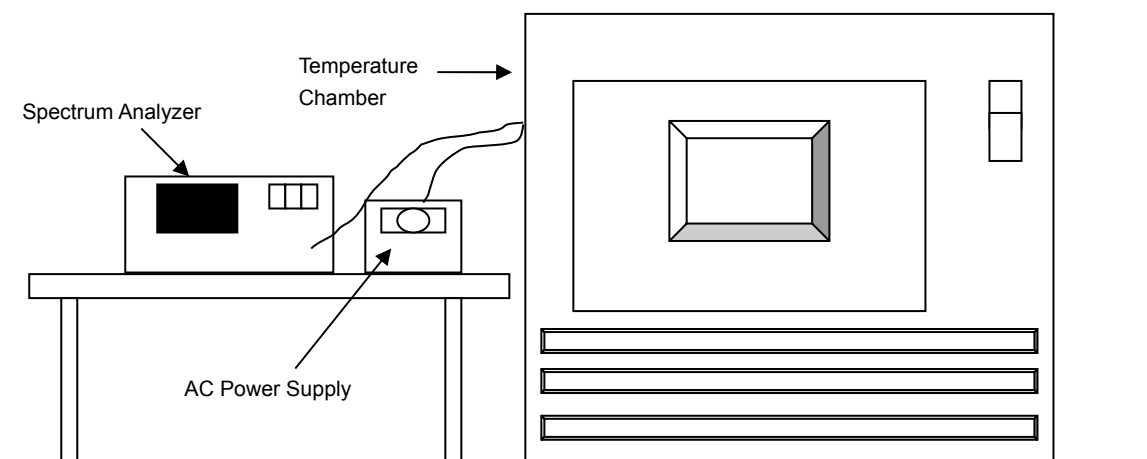


4.6 Frequency Stability

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, 2019	Jun. 11, 2020
WIT Standard Temperature And Humidity Chamber	TH-4S-C	W981030	Jun. 03, 2019	Jun. 02, 2020
Digital Multimeter Fluke	87-III	70360742	Jun. 27, 2019	Jun. 26, 2020
AC Power Supply Extech	CFW-105	E000603	NA	NA

4.6.4 Test Procedure

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

4.6.5 Deviation from Test Standard

No deviation.

4.6.6 EUT Operating Condition

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

4.6.7 Test Results

Frequency Stability Versus Temp.									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (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	5180.0001	Pass	5179.9966	Pass	5179.9998	Pass	5180.0000	Pass
30	120	5180.0242	Pass	5180.0214	Pass	5180.0250	Pass	5180.0235	Pass
20	120	5179.9918	Pass	5179.9887	Pass	5179.9929	Pass	5179.9910	Pass
10	120	5180.0094	Pass	5180.0099	Pass	5180.0094	Pass	5180.0100	Pass
0	120	5179.9977	Pass	5179.9948	Pass	5179.9989	Pass	5179.9983	Pass

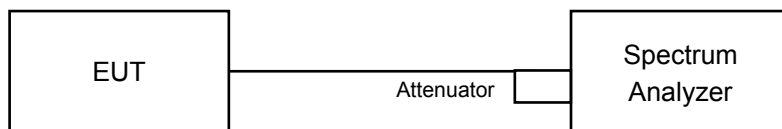
Frequency Stability Versus Voltage									
Operating Frequency: 5180MHz									
Temp. (°C)	Power Supply (Vac)	0 Minute		2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result	Measured Frequency (MHz)	Result
20	138	5179.9913	Pass	5179.9884	Pass	5179.9931	Pass	5179.9917	Pass
	120	5179.9918	Pass	5179.9887	Pass	5179.9929	Pass	5179.9910	Pass
	102	5179.9909	Pass	5179.9877	Pass	5179.9922	Pass	5179.9908	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

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

4.7.5 Deviation from Test Standard

No deviation.

4.7.6 EUT Operating Condition

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

4.7.7 Test Results

802.11a

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
144	5720 For 5745~5825MHz	3.18	3.17	3.18	3.18	0.5	Pass
149	5745	16.38	16.38	16.41	16.39	0.5	Pass
157	5785	16.38	16.38	16.42	16.40	0.5	Pass
165	5825	16.39	16.39	16.41	16.40	0.5	Pass

802.11ax (HE20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
144	5720 For 5745~5825MHz	4.50	4.51	4.47	4.55	0.5	Pass
149	5745	19.00	18.95	18.91	18.99	0.5	Pass
157	5785	18.99	19.01	18.84	18.89	0.5	Pass
165	5825	19.03	18.82	18.94	19.00	0.5	Pass

802.11ax (HE40)

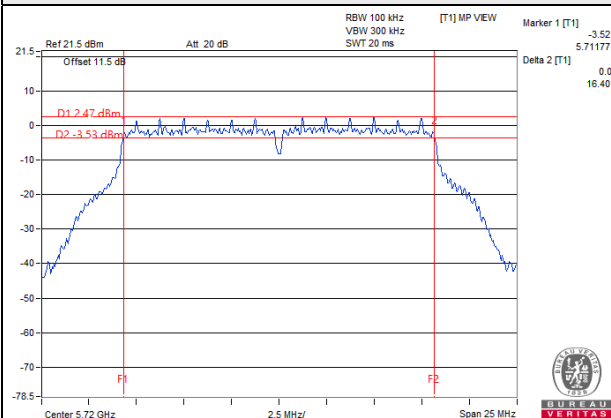
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
142	5710 For 5745~5825MHz	3.82	3.82	3.85	3.65	0.5	Pass
151	5755	37.75	37.00	37.72	37.53	0.5	Pass
159	5795	37.79	37.19	37.69	37.54	0.5	Pass

802.11ax (HE80)

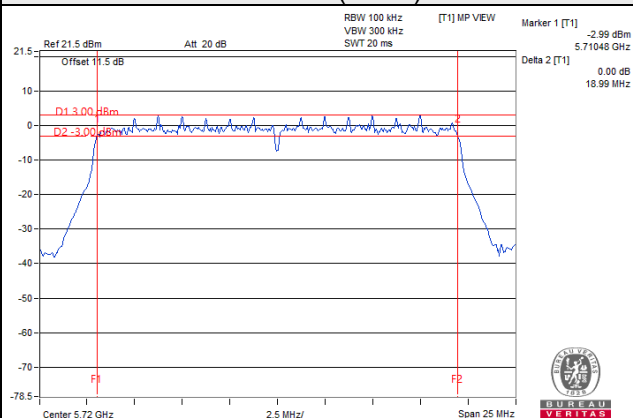
Channel	Frequency (MHz)	6dB Bandwidth (MHz)				Minimum Limit (MHz)	Pass / Fail
		Chain 0	Chain 1	Chain 2	Chain 3		
138	5690 For 5745~5825MHz	3.81	3.60	3.81	3.19	0.5	Pass
155	5775	76.56	75.61	75.95	75.58	0.5	Pass

Spectrum Plot of Worst Value

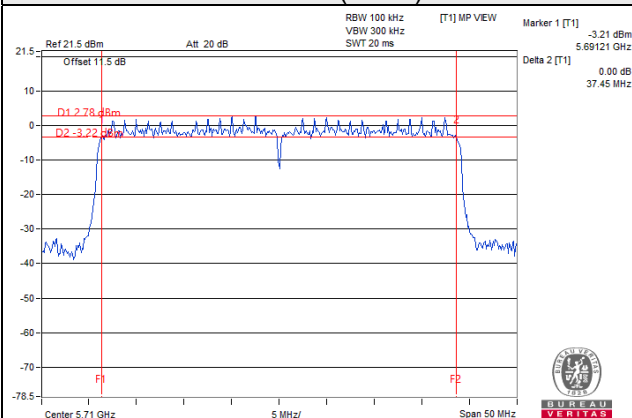
802.11a



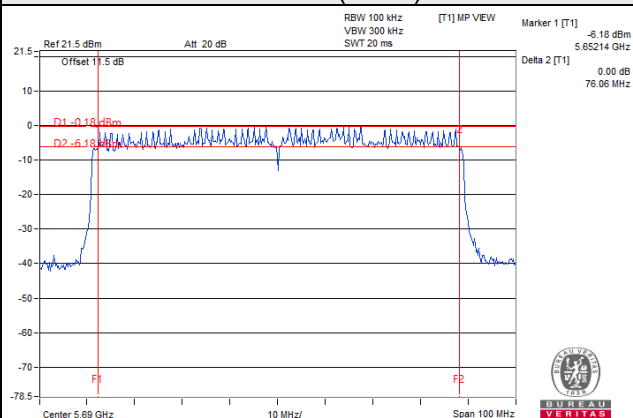
802.11ax (HE20)



802.11ax (HE40)



802.11ax (HE80)



Note:

For CH144 (UNII-3 Band): The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

For CH142 (UNII-3 Band): The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

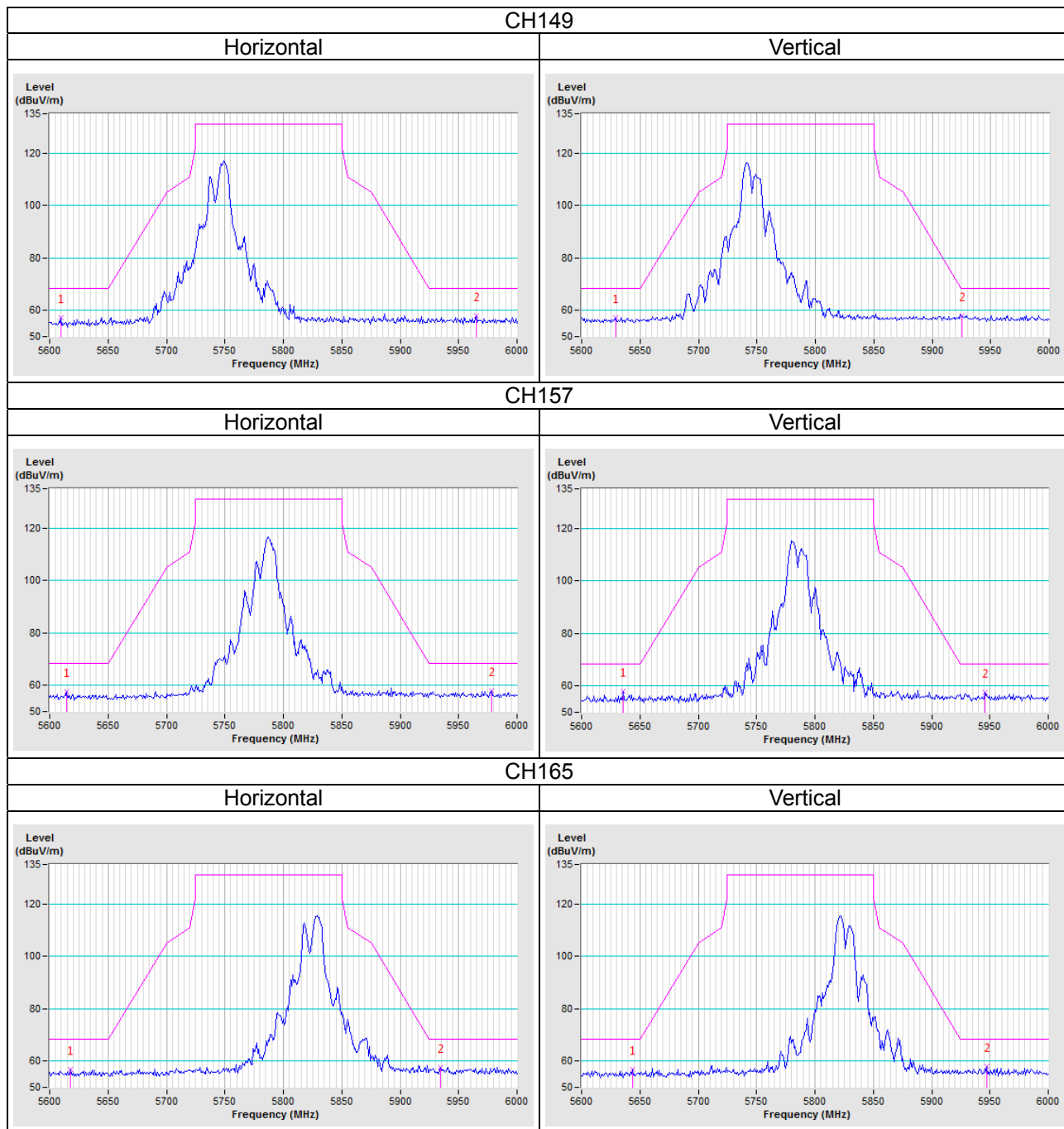
For CH138 (UNII-3 Band): The 6dB bandwidth above 5725MHz = Marker 1 + Delta 2 - 5725MHz

5 Pictures of Test Arrangements

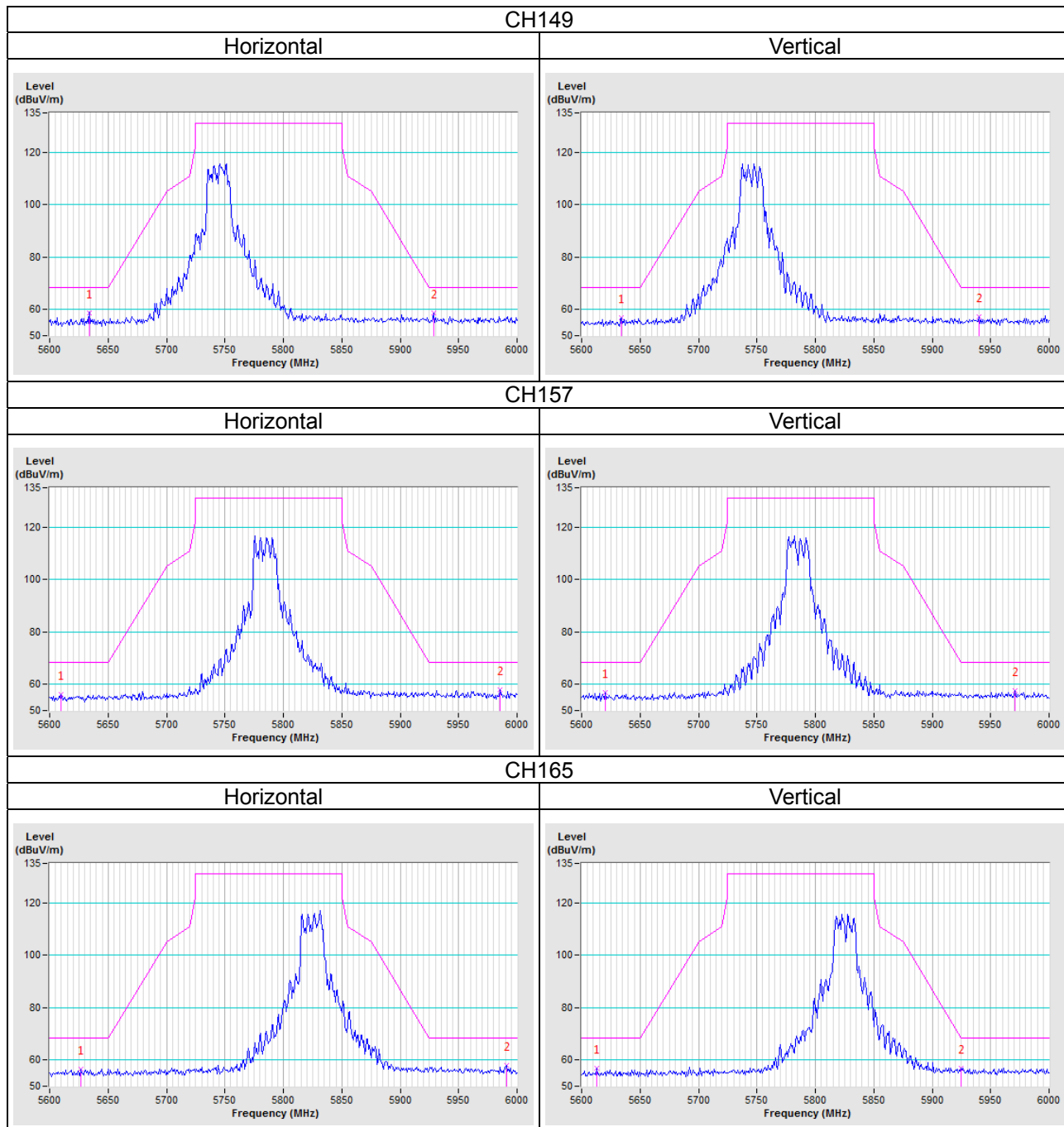
Please refer to the attached file (Test Setup Photo).

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

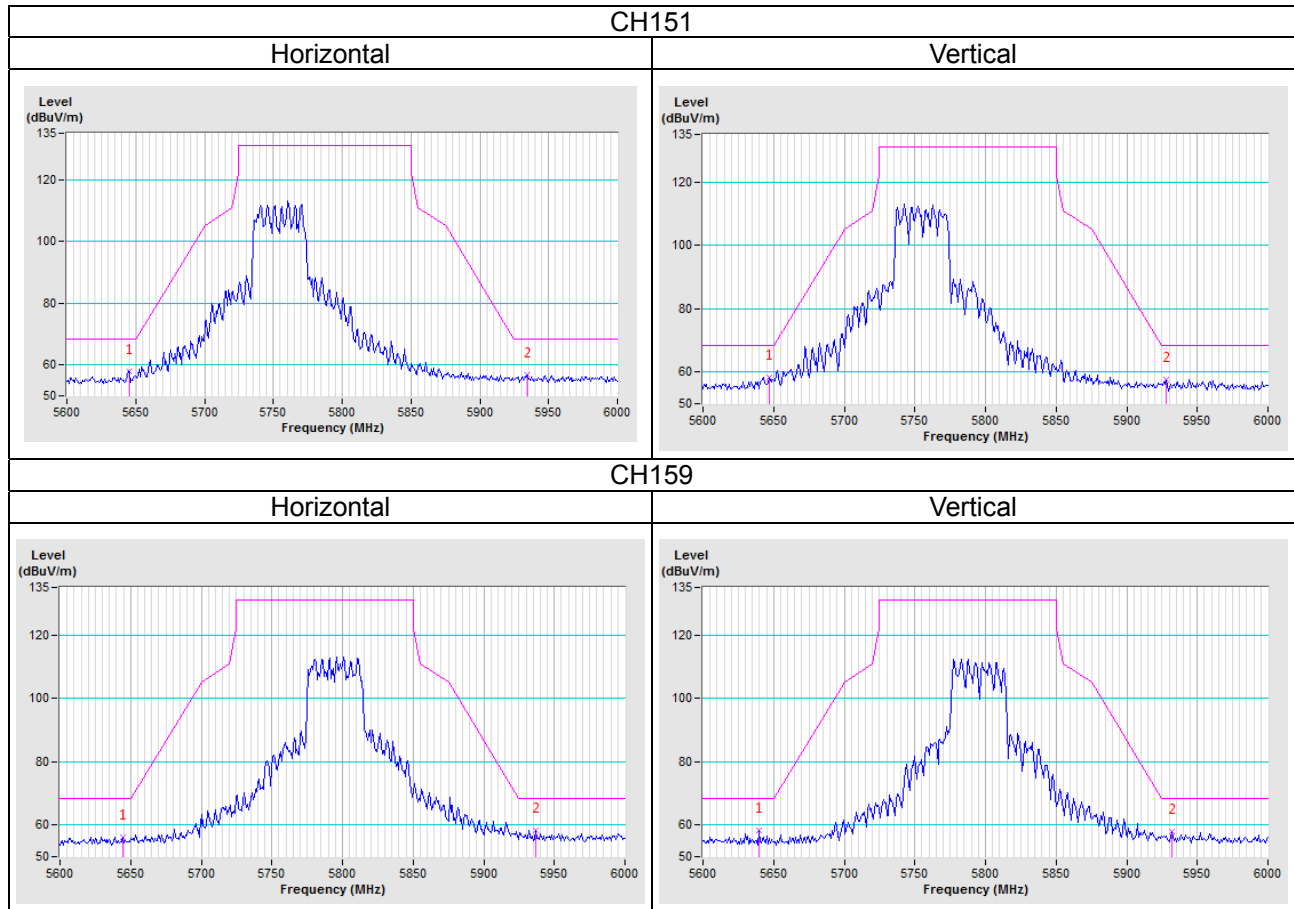
802.11a



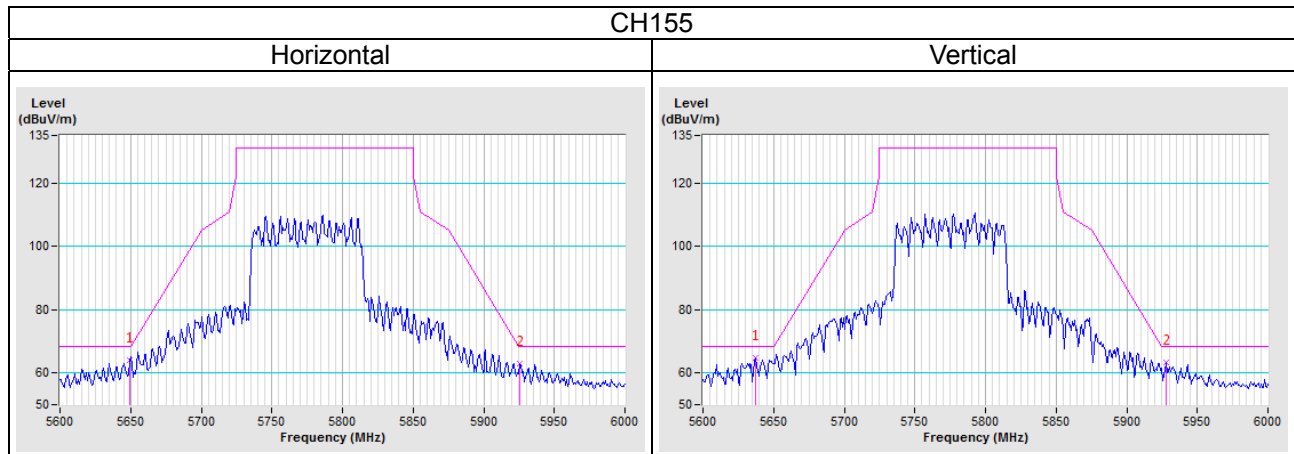
802.11ax (HE20)



802.11ax (HE40)

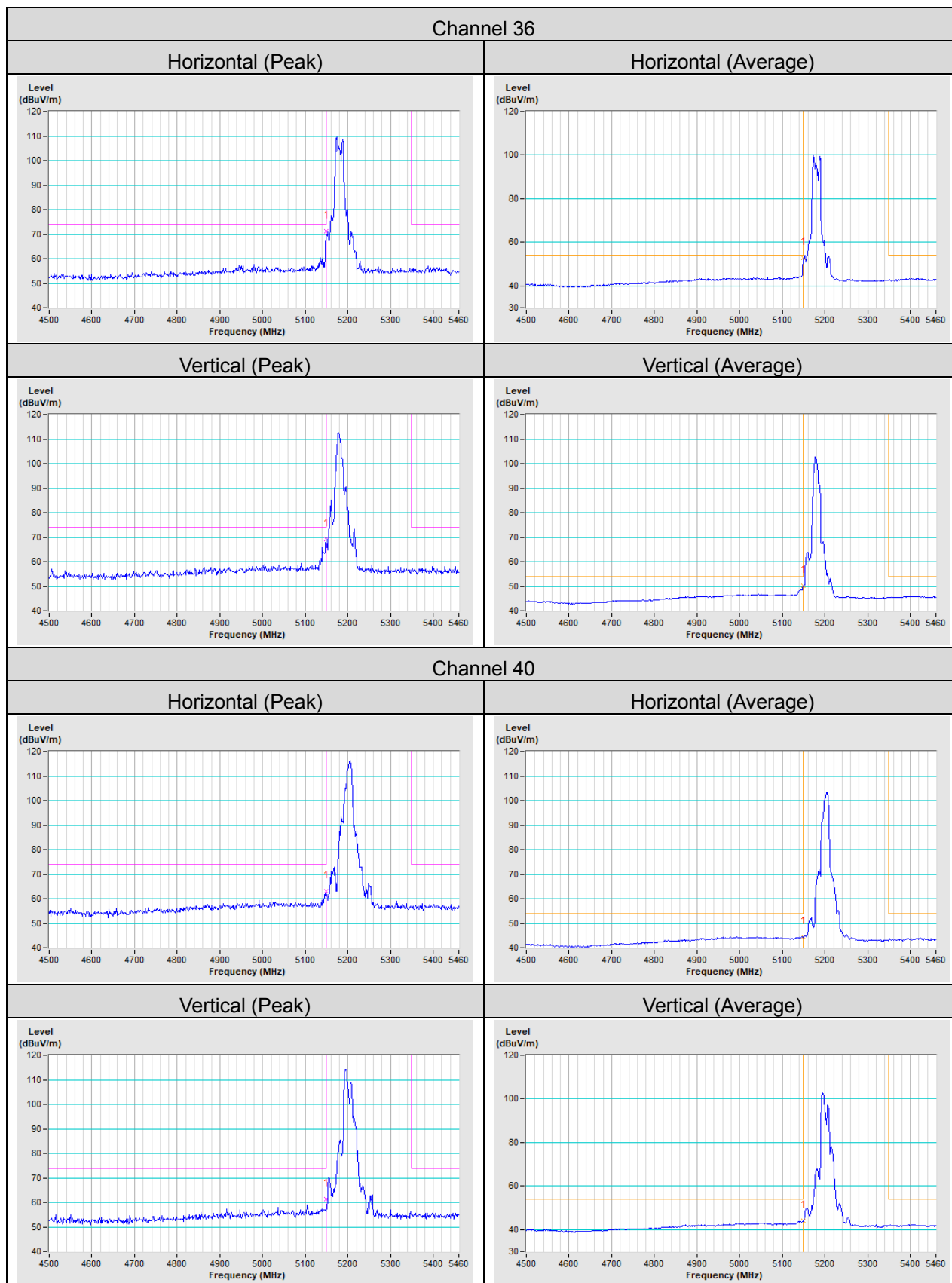


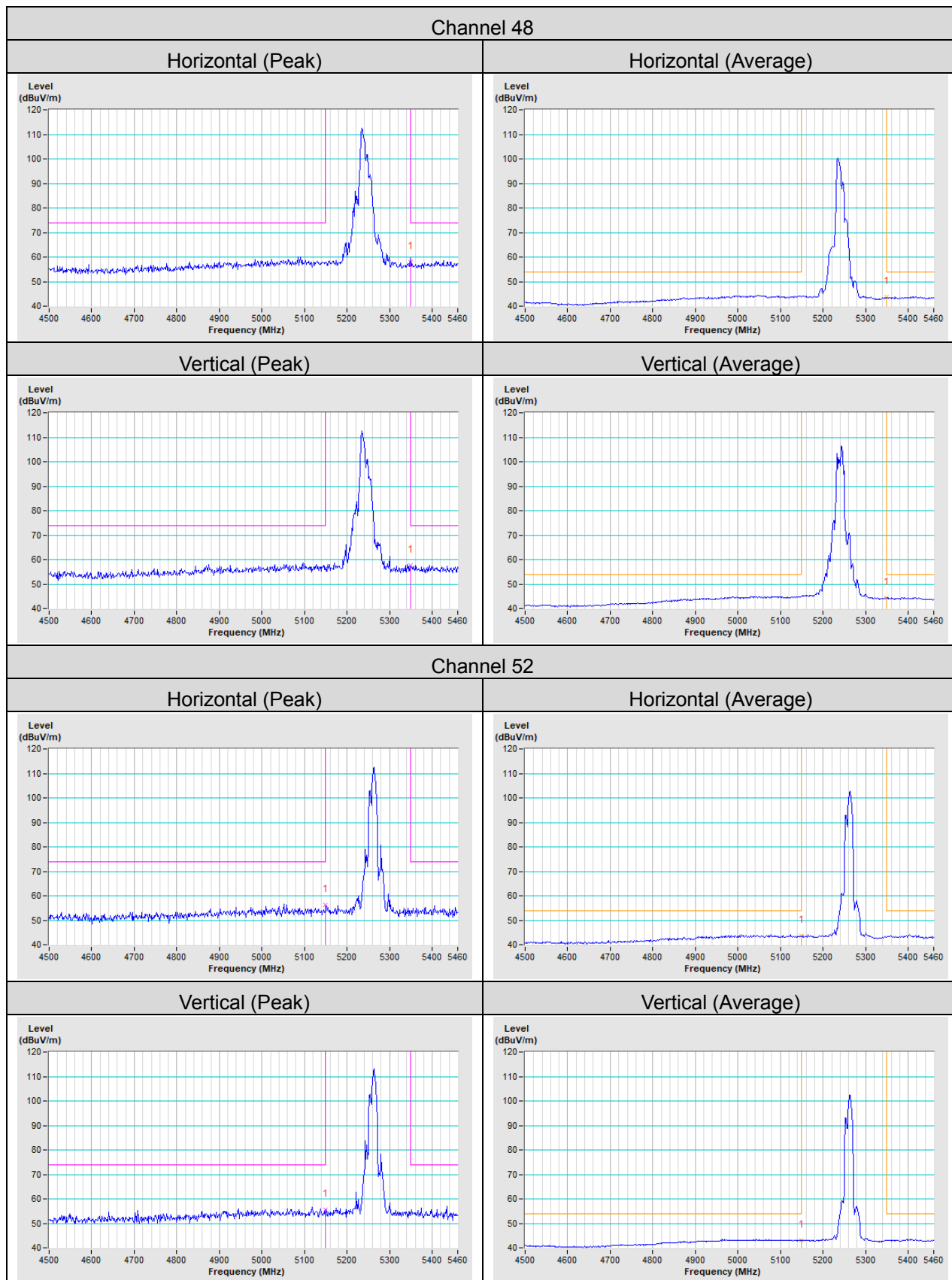
802.11ax (HE80)



Annex B- Band Edge Measurement

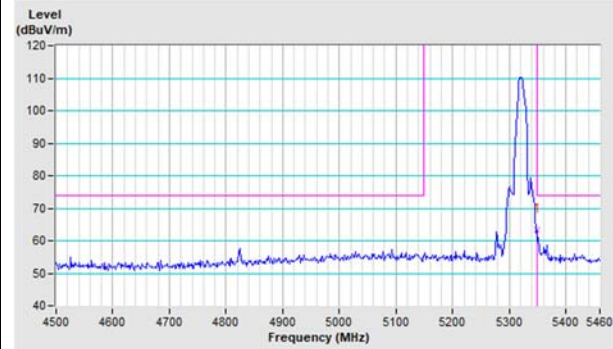
802.11a



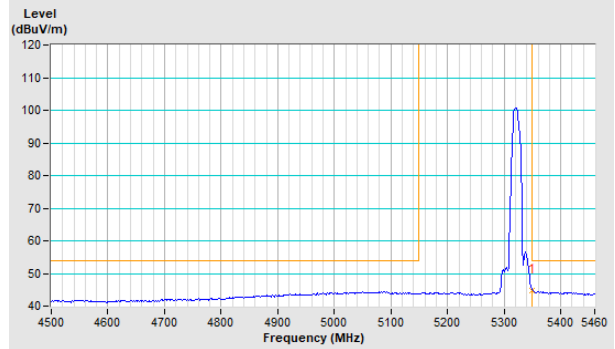


Channel 64

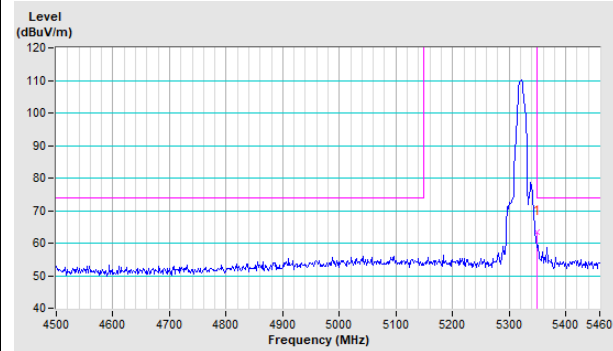
Horizontal (Peak)



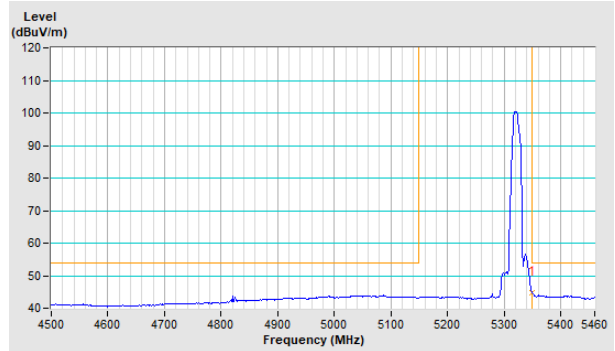
Horizontal (Average)



Vertical (Peak)

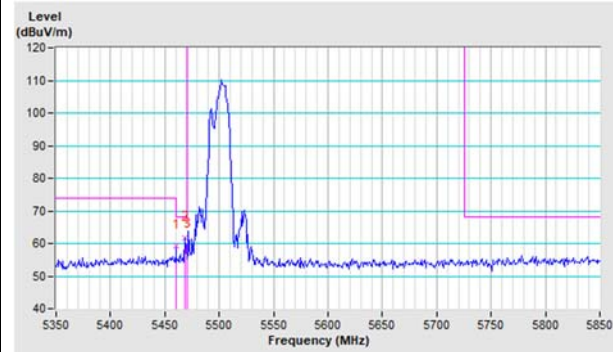


Vertical (Average)

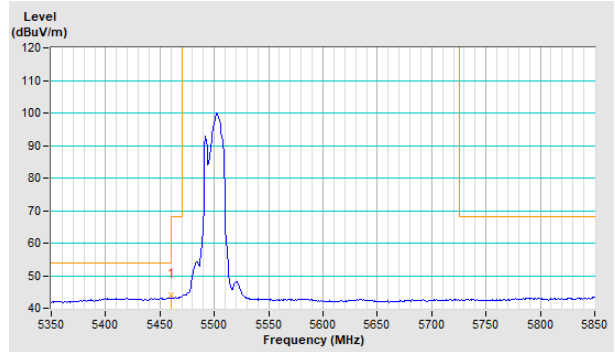


Channel 100

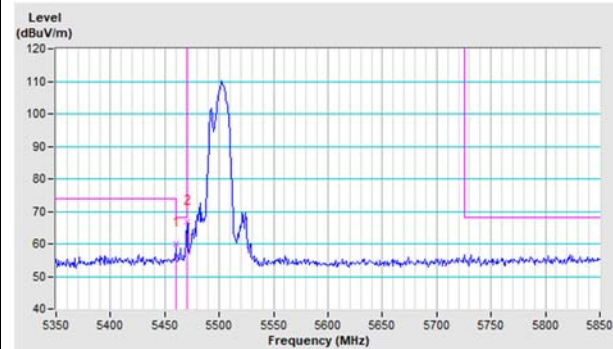
Horizontal (Peak)



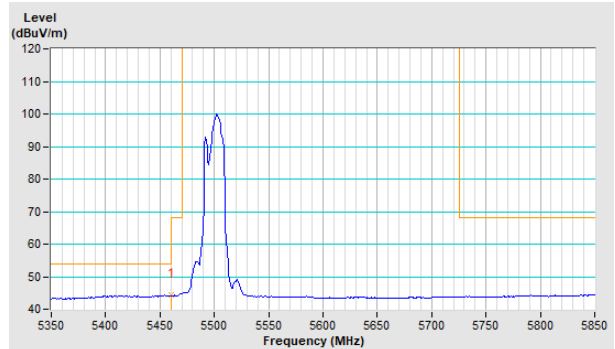
Horizontal (Average)

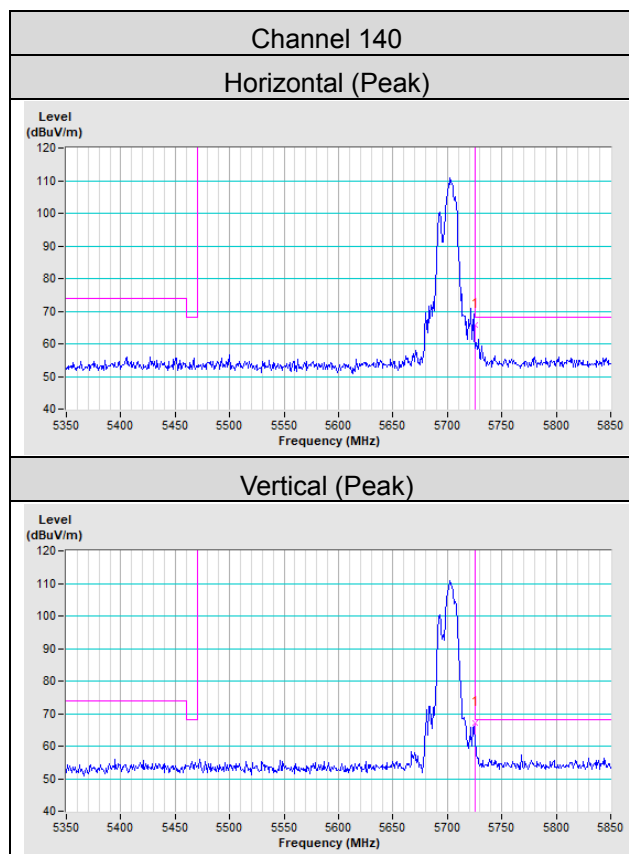


Vertical (Peak)

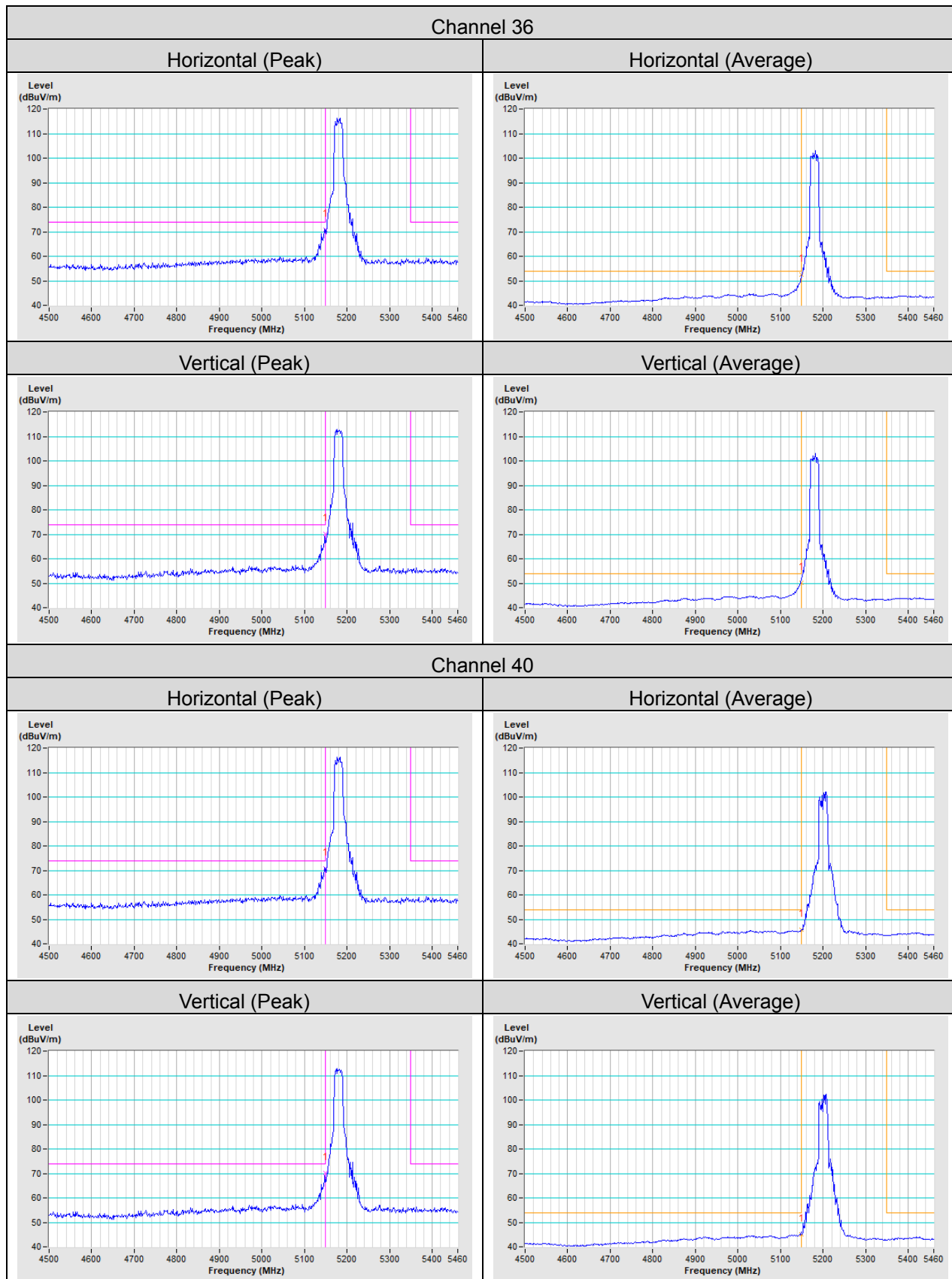


Vertical (Average)



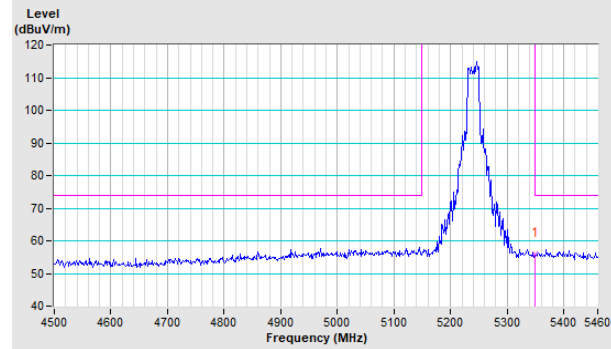


802.11ax (HE20)

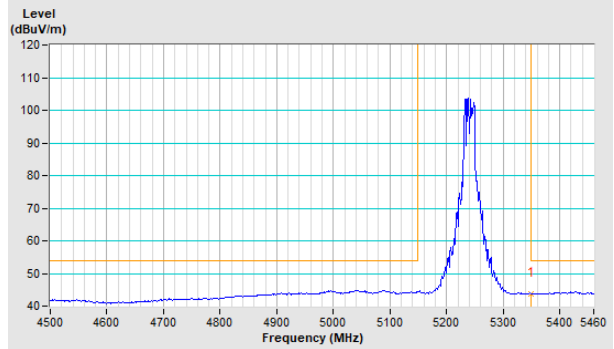


Channel 48

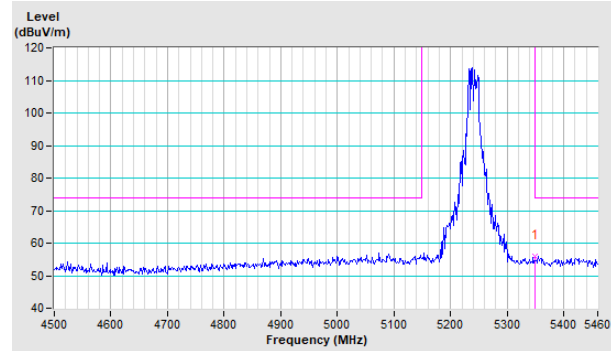
Horizontal (Peak)



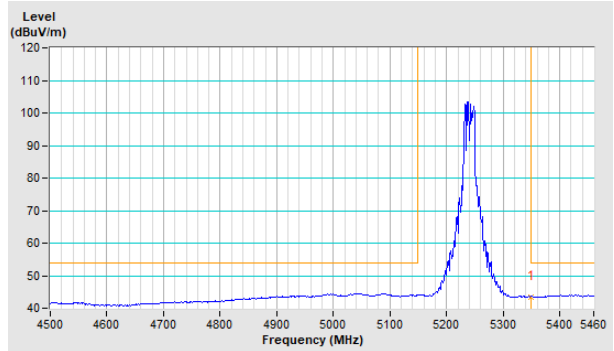
Horizontal (Average)



Vertical (Peak)

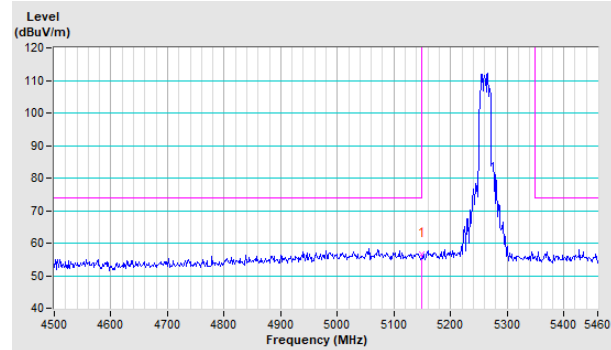


Vertical (Average)

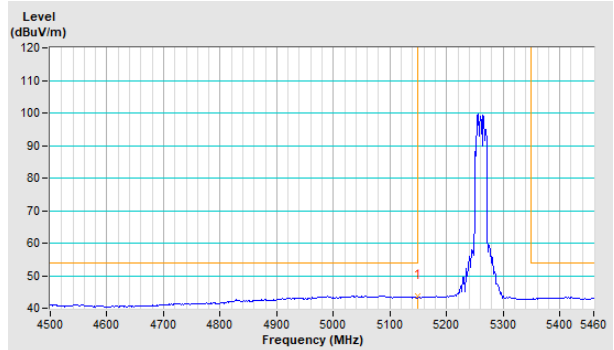


Channel 52

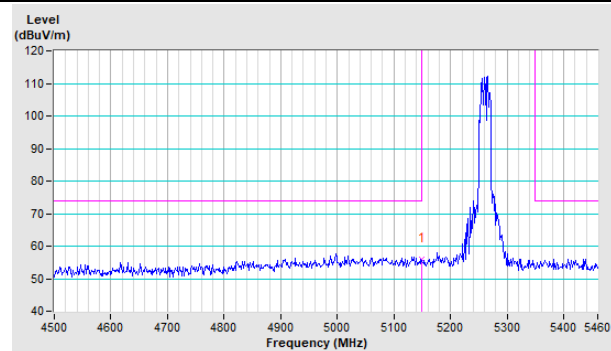
Horizontal (Peak)



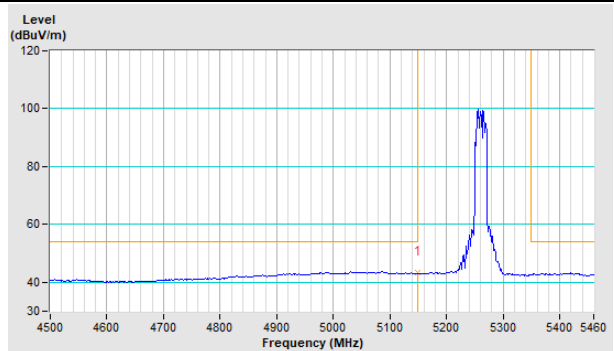
Horizontal (Average)

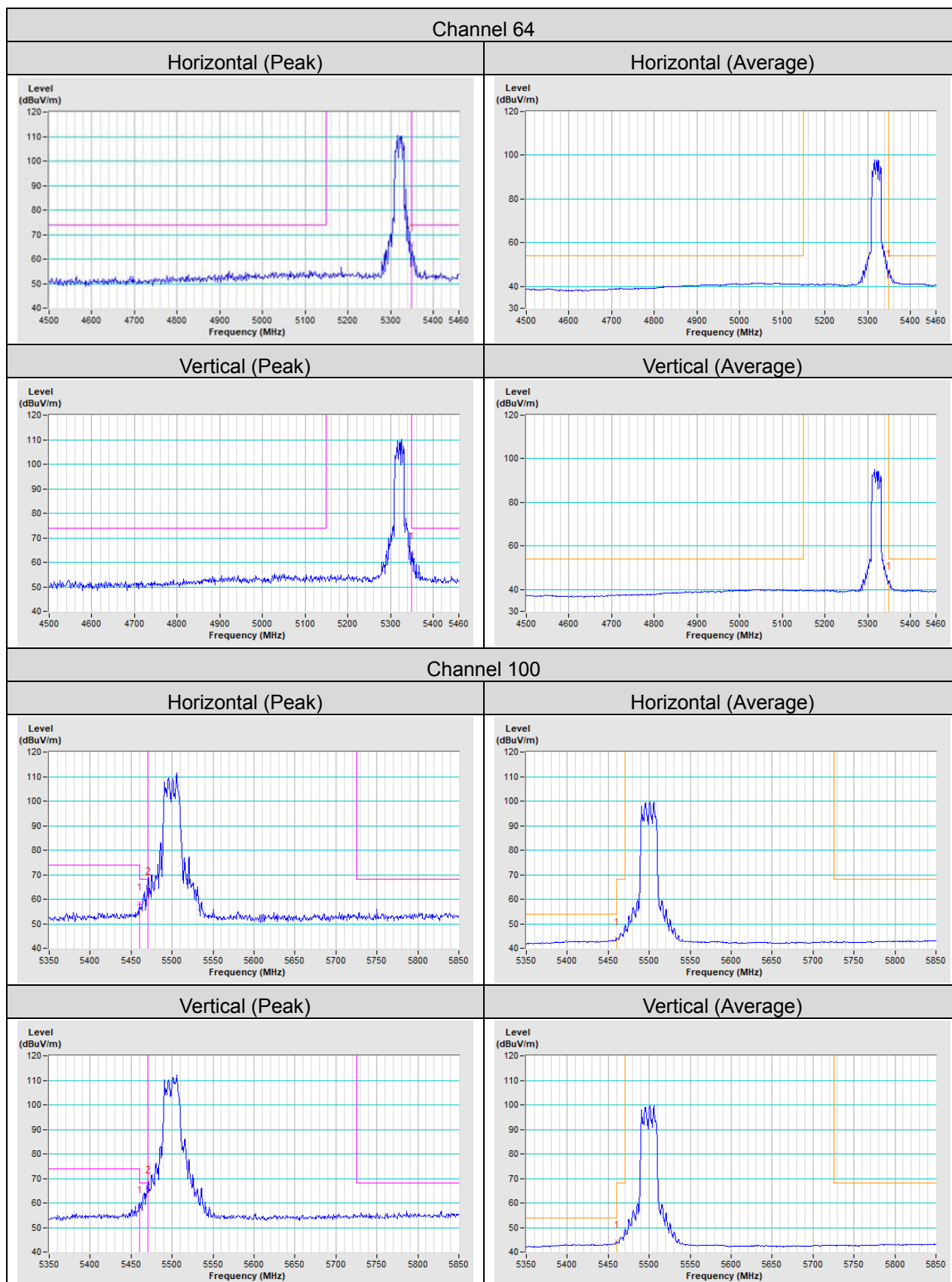


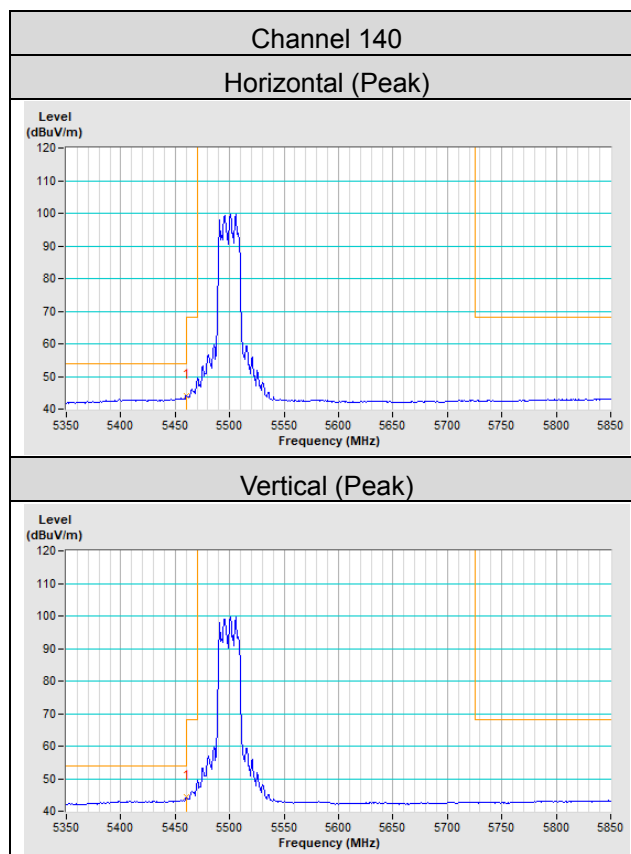
Vertical (Peak)



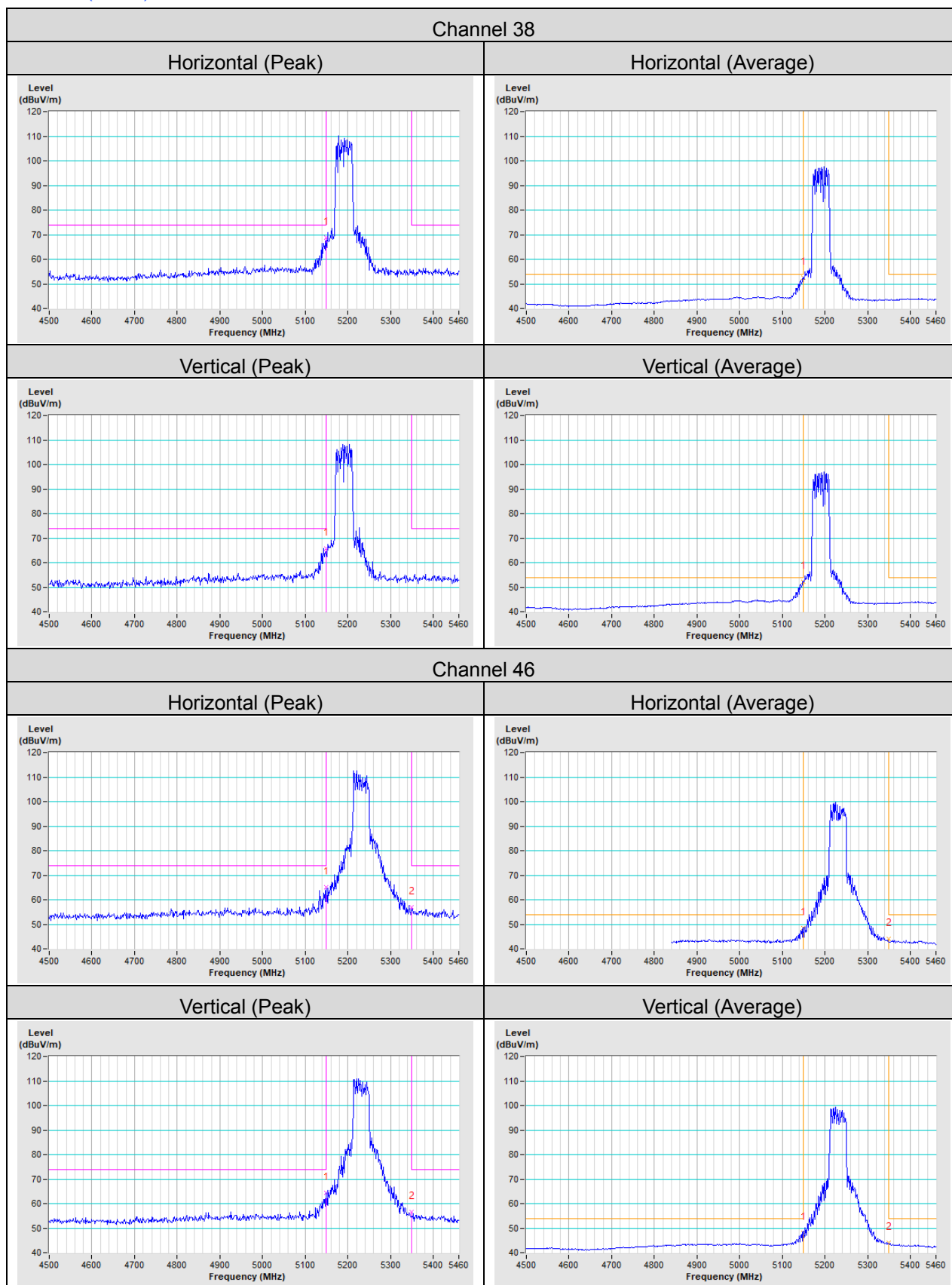
Vertical (Average)

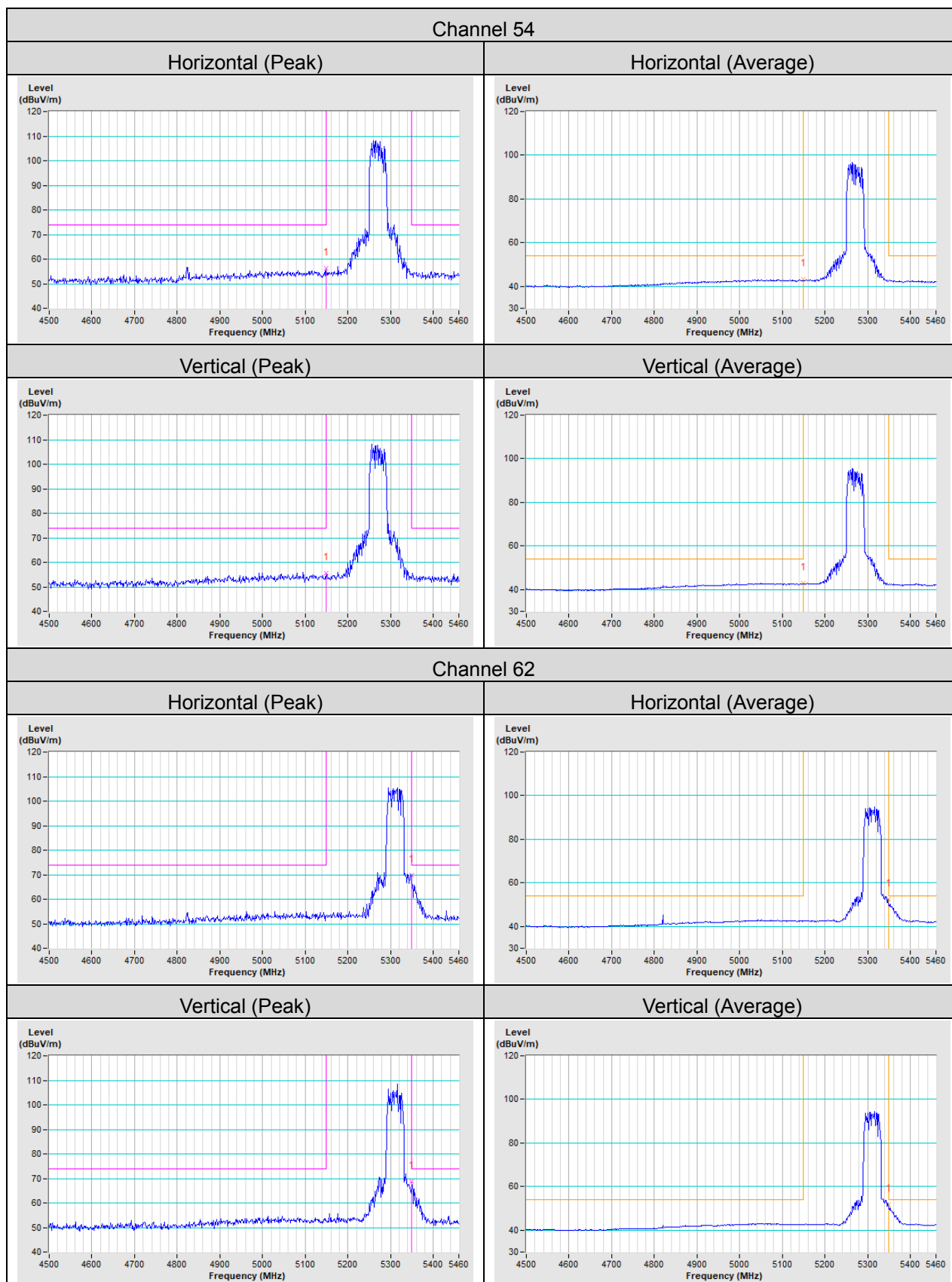


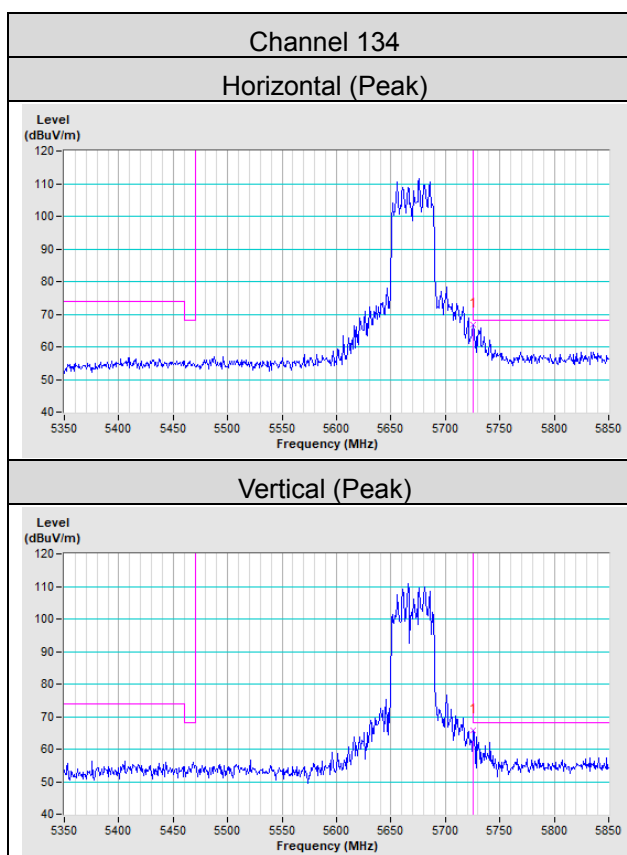
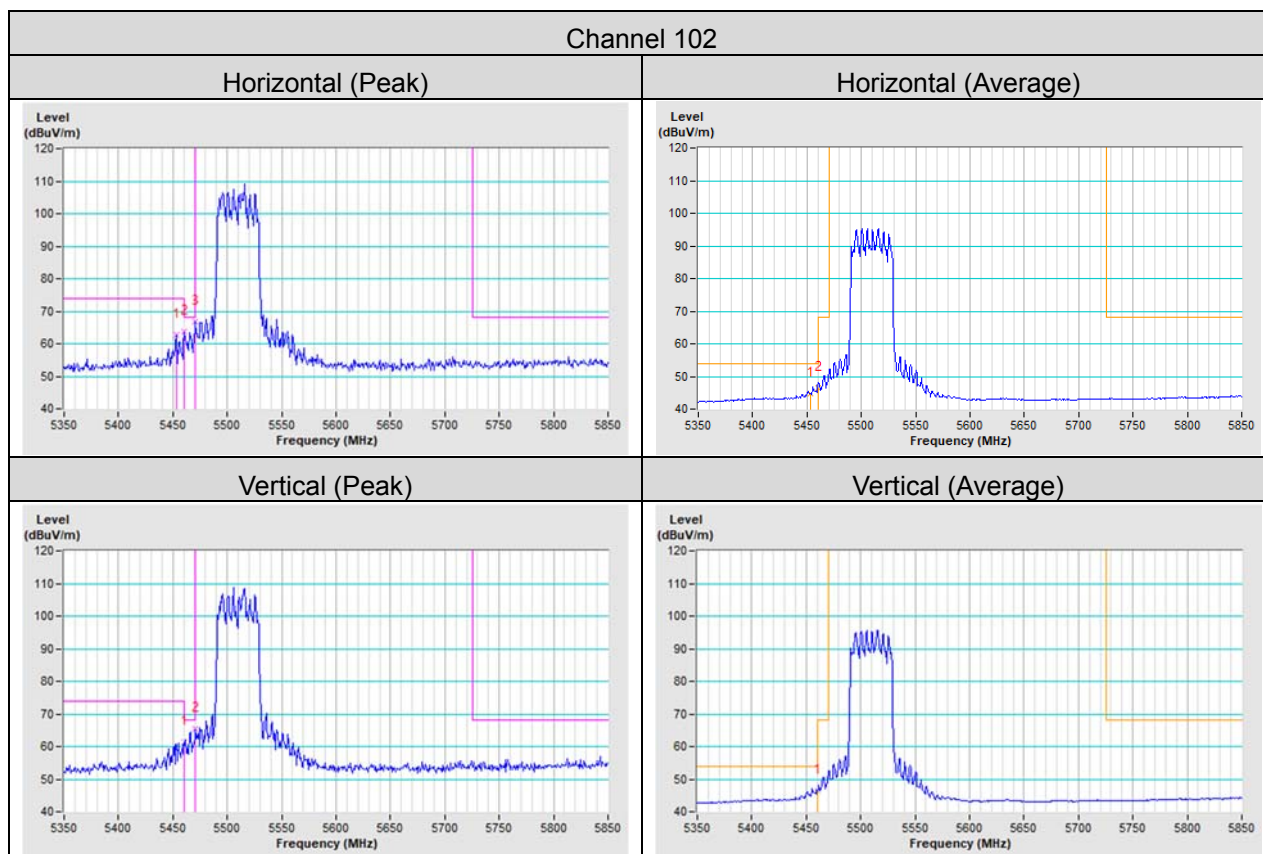




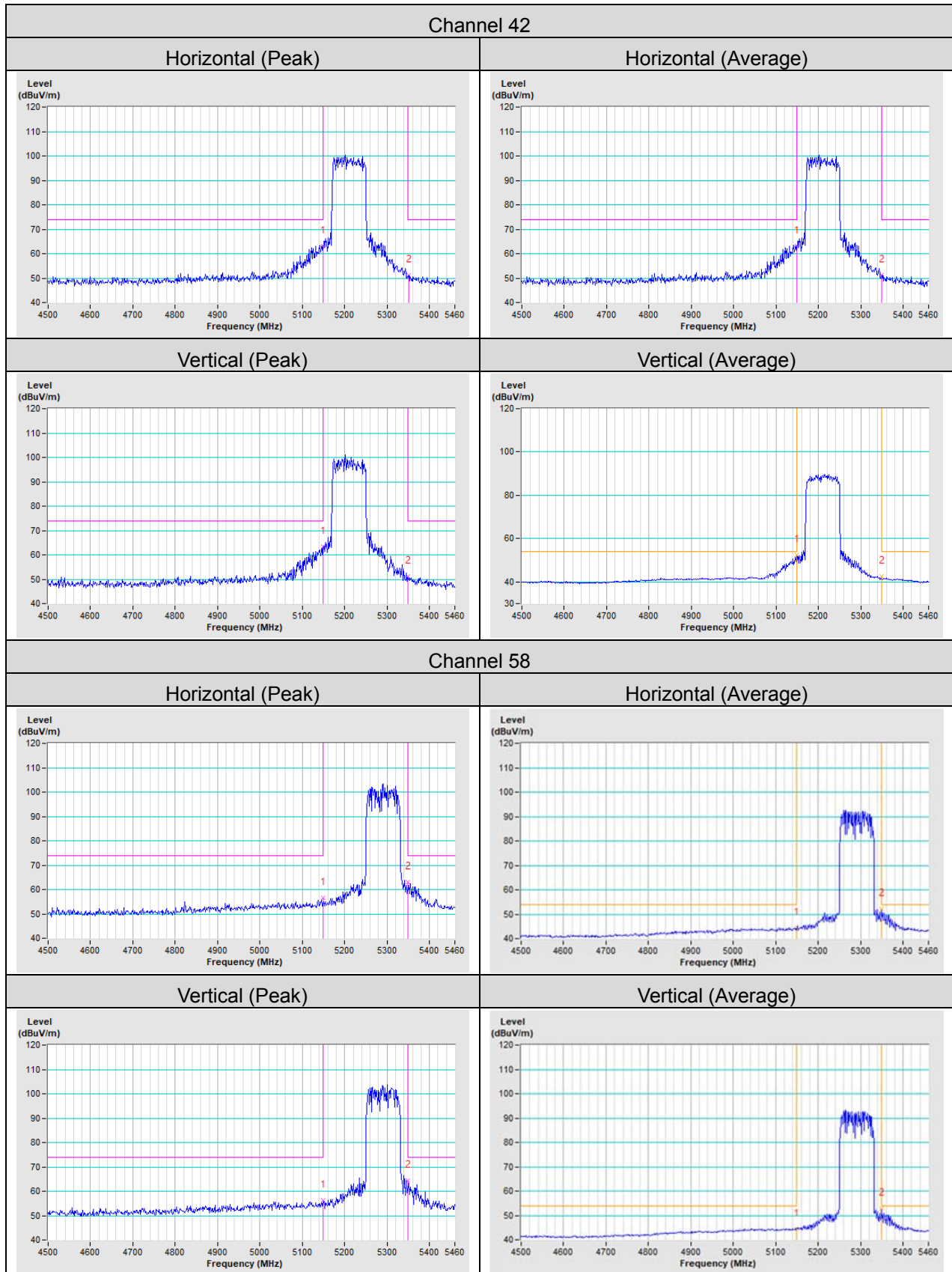
802.11ax (HE40)





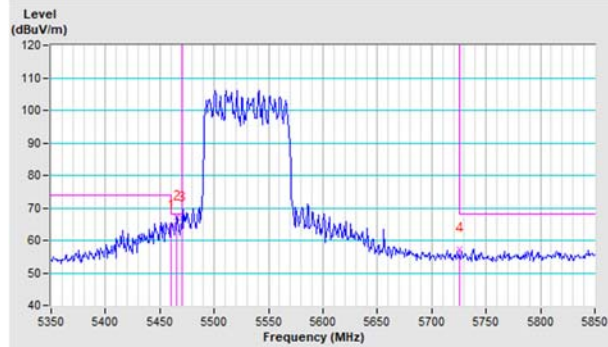


802.11ax (HE80)

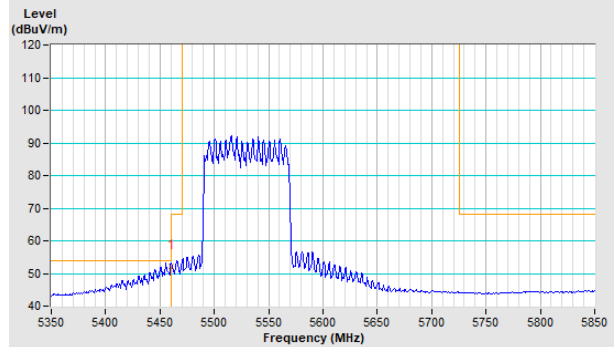


Channel 106

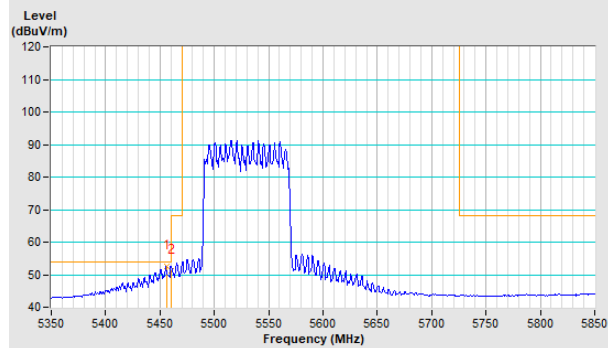
Horizontal (Peak)



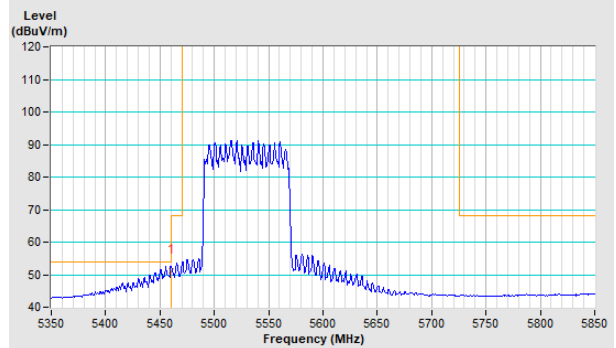
Horizontal (Average)



Vertical (Peak)

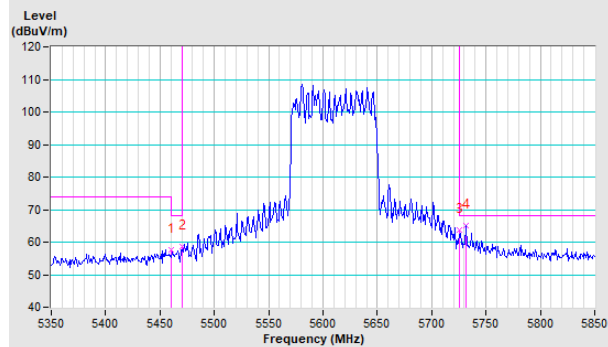


Vertical (Average)

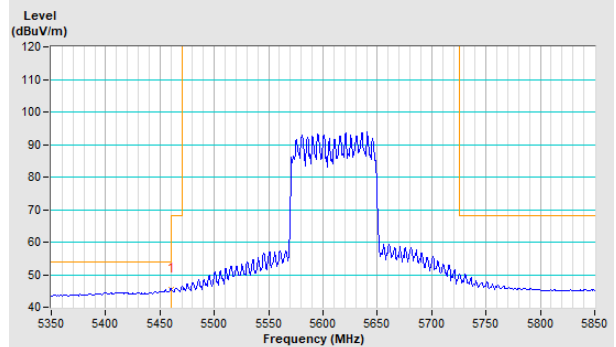


Channel 122

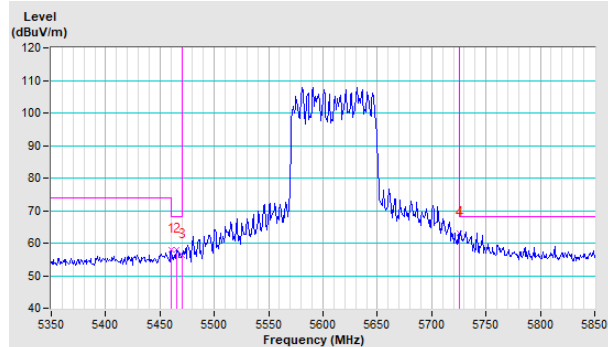
Horizontal (Peak)



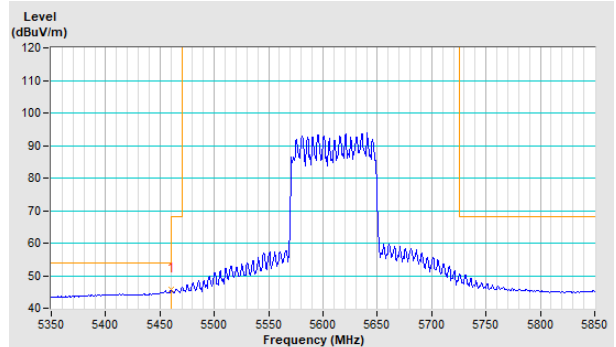
Horizontal (Average)



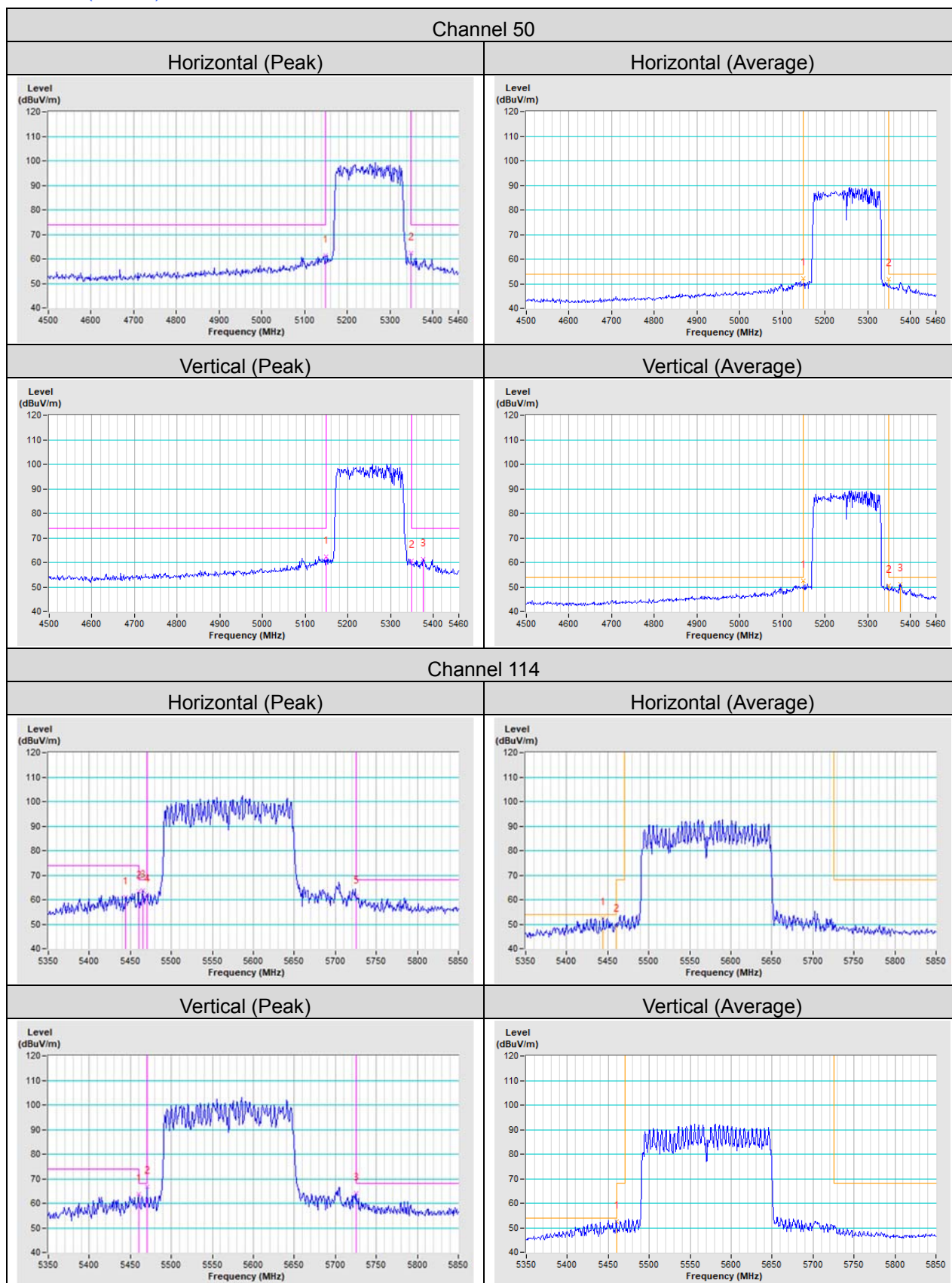
Vertical (Peak)



Vertical (Average)



802.11ax (HE160)



Appendix – Information on the Testing Laboratories

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

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Web Site: www.bureauveritas-adt.com

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

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