

FCC Test Report

FCC ID : XU8TEW825DAP
Equipment : AC1750 Dual Band PoE Access Point
Model No. : TEW-825DAP
Multiple Listing : Refer to item 1.1.1 for more details
Brand Name : TRENDnet
Applicant : TRENDnet, Inc.
Address : 20675 Manhattan Place, Torrance, CA 90501,
USA
Standard : 47 CFR FCC Part 15.407
Received Date : Jan. 14, 2016
Tested Date : Jan. 27 ~ Jul. 06, 2016

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by:


Along Chen / Assistant Manager

Approved by:


Gary Chang / Manager



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Release Record

Report No.	Version	Description	Issued Date
FR621702AN	Rev. 01	Initial issue	Oct. 03, 2016
FR621702AN	Rev. 02	Modified KDB No. and FCC site registration No.	Dec. 21, 2016

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.300MHz 40.54 (Margin -9.70dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5150.00MHz 52.99 (Margin -1.01dB) – AV	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(e)	6dB bandwidth	Meet the requirement of limit	Pass
15.407(a)	RF Output Power	Max Power [dBm]: 5150-5250MHz: 27.94 5725-5850MHz: 27.55	Pass
15.407(a)	Peak Power Spectral Density	Meet the requirement of limit	Pass
15.407(g)	Frequency Stability	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

1 General Description

1.1 Information

1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
TRENDnet	TEW-825DAP	AC1750 Dual Band PoE Access Point	Main test model
	TEW-825DAP3K	AC1750 Dual Band PoE Preconfigured Access Point Kit	Marketing purpose
	TEW-825DAP2K	AC1750 Dual Band PoE Preconfigured Access Point Kit	
	TEW-825DAP3KAC	AC1750 Dual Band Wireless Controller Kit	
	TEW-825DAP2KAC	AC1750 Dual Band Wireless Controller Kit	
✦ All models are electrically identical, different model names are for marketing purpose.			

1.1.2 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	Data Rate / MCS
5150-5250	a	5180-5240	36-48 [4]	3	6-54 Mbps
5150-5250	n (HT20)	5180-5240	36-48 [4]	3	MCS 0-23
5150-5250	n (HT40)	5190-5230	38-46 [2]	3	MCS 0-23
5150-5250	ac (VHT20)	5180-5240	36-48 [4]	3	MCS 0-9
5150-5250	ac (VHT40)	5190-5230	38-46 [2]	3	MCS 0-9
5150-5250	ac (VHT80)	5210	42 [1]	3	MCS 0-9
Note 1: RF output power specifies that Maximum Conducted Output Power.					
Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.					

RF General Information					
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N _{TX})	Data Rate / MCS
5725-5850	a	5745-5825	149-165 [5]	3	6-54 Mbps
5725-5850	n (HT20)	5745-5825	149-165 [5]	3	MCS 0-23
5725-5850	n (HT40)	5755-5795	151-159 [2]	3	MCS 0-23
5725-5850	ac (VHT20)	5745-5825	149-165 [5]	3	MCS 0-9
5725-5850	ac (VHT40)	5755-5795	151-159 [2]	3	MCS 0-9
5725-5850	ac (VHT80)	5775	155 [1]	3	MCS 0-9
Note 1: RF output power specifies that Maximum Conducted Output Power.					
Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.					

1.1.3 Antenna Details

Ant. No.	Type	Connector	Antenna Gain (dBi)		
			2400~2483.5MHz	5150~5250 MHz	5725~5850 MHz
1	PIFA	N/A	4	4	4

1.1.4 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from AC adapter. 48Vdc from POE
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1.1.5 Accessories

Accessories		
No.	Equipment	Description
1	AC adapter 1	Brand Name: CWT Model Name: 2ABB018F US I/P: 100-240Vac, 50-60Hz, 0.6A O/P: 12Vdc, 1.5A DC 1.2m non-shielded cable w/o core
2	AC adapter 2	Brand Name: AMIGO Model Name: AMS115-1201500FU I/P: 100-240Vac, 50-60Hz, 0.8A O/P: 12Vdc, 1.5A DC 1.2m non-shielded cable w/o core

1.1.6 Channel List

For Frequency band 5150-5250 MHz			
802.11 a / HT20 / VHT20		HT40 / VHT40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
36	5180	38	5190
40	5200	46	5230
44	5220	VHT 80	
48	5240	42	5210

For Frequency band 5725~5850 MHz			
802.11 a / HT20 / VHT20		HT40 / VHT40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
149	5745	151	5755
153	5765	159	5795
157	5785	VHT80	
161	5805	155	5775
165	5825	---	---

1.1.7 Test Tool and Duty Cycle

Test Tool	ART2 Command, V4_9_815		
Duty Cycle and Duty Factor	Mode	Duty cycle (%)	Duty factor (dB)
	11a	95.33%	0.21
	VHT20	95.67%	0.19
	VHT40	94.80%	0.23
	VHT80	88.02%	0.55

1.1.8 Power Setting

For Frequency band 5150-5250 MHz		
Modulation Mode	Test Frequency (MHz)	Power Set
11a	5180	22
11a	5200	24
11a	5240	24
HT20	5180	21.5
HT20	5200	24
HT20	5240	24
HT40	5190	15
HT40	5230	25
VHT20	5180	21.5
VHT20	5200	24
VHT20	5240	24
VHT40	5190	15
VHT40	5230	25
VHT80	5210	13

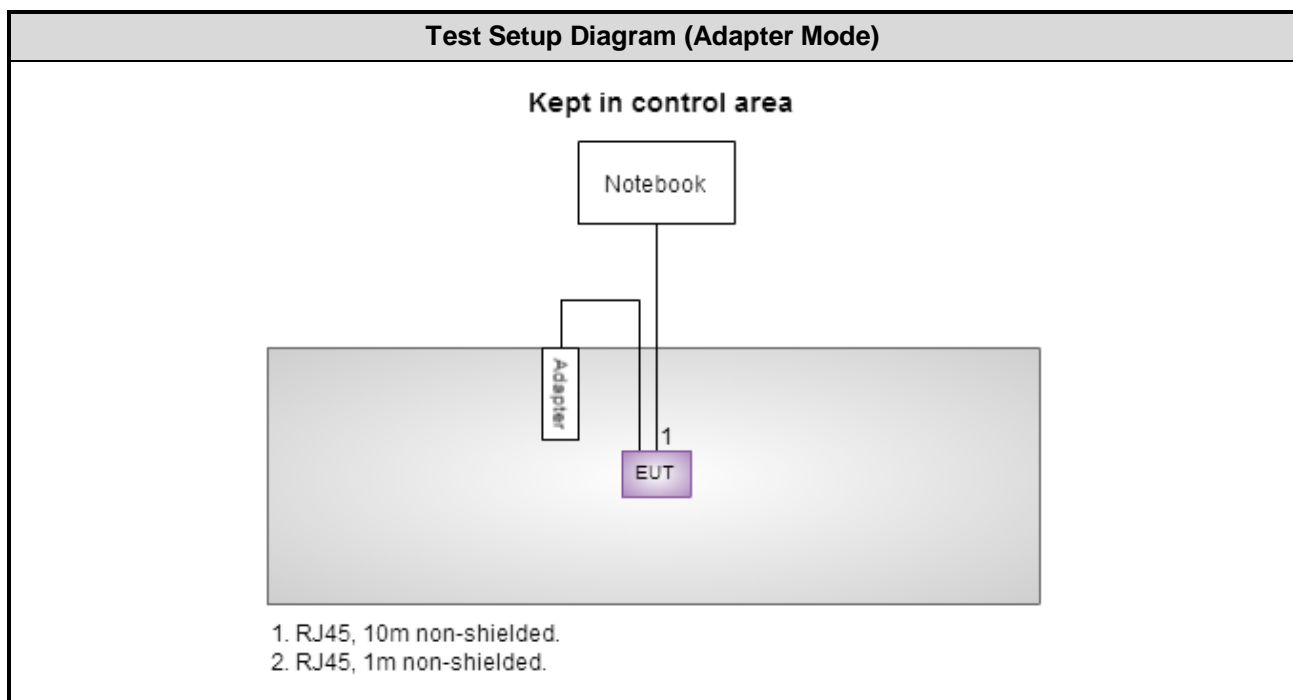
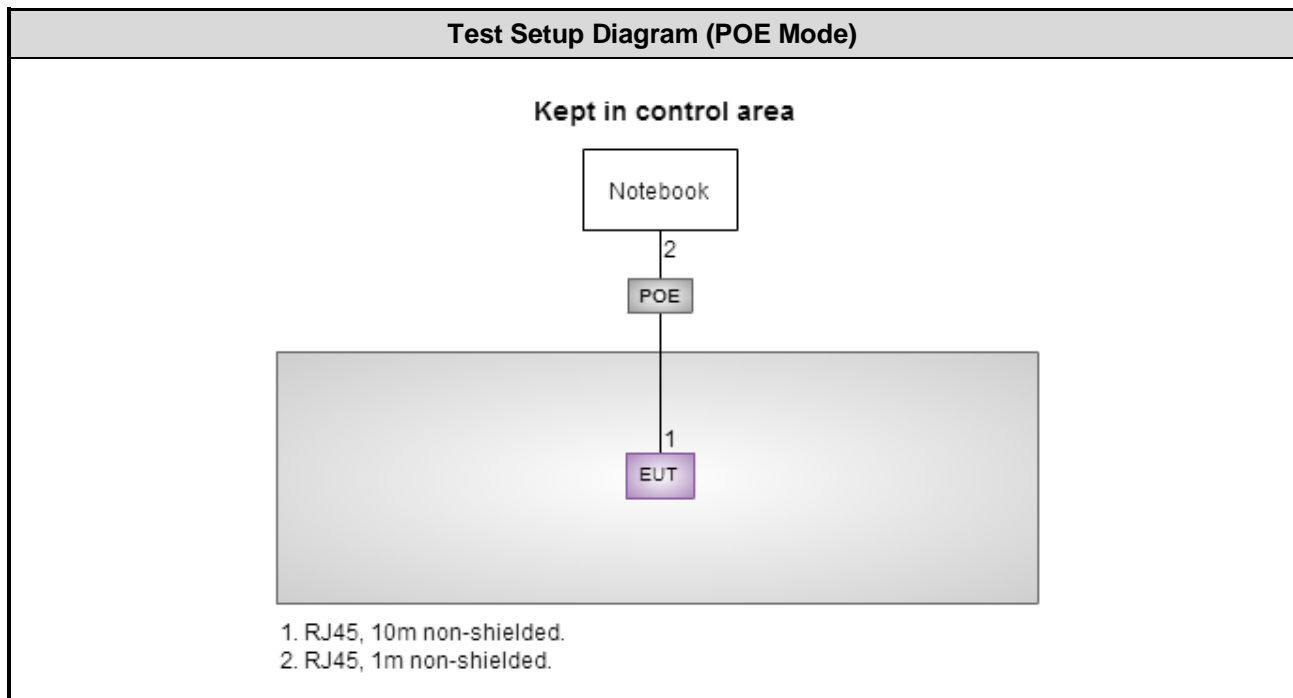
For Frequency band 5725~5850 MHz		
Modulation Mode	Test Frequency (MHz)	Power Set
11a	5745	27
11a	5785	27
11a	5825	27
HT20	5745	27
HT20	5785	27
HT20	5825	27
HT40	5755	25.5
HT40	5795	27
VHT20	5745	27
VHT20	5785	27
VHT20	5825	27
VHT40	5755	25.5
VHT40	5795	27
VHT80	5775	22

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Signal cable / Length (m)
1	Notebook	DELL	Latitude E5420	DoC	Adapter mode: RJ45, 10m non-shielded. POE mode: RJ45, 1m non-shielded.
2	POE	Allied Telesis	AT-GS950/10PS	---	RJ45, 10m non-shielded.

Note: No.2 was provided by applicant.

1.3 Test Setup Chart



1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
EMC Receiver	R&S	ESCS 30	100169	Oct. 21, 2015	Oct. 20, 2016
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 13, 2015	Nov. 12, 2016
RF Cable-CON	EMC	EMCCFD300-BM-BM-6000	50821	Dec. 21, 2015	Dec. 20, 2016
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber 2 / (03CH02-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101499	Dec. 17, 2015	Dec. 16, 2016
Receiver	R&S	ESR3	101657	Jan. 12, 2016	Jan. 11, 2017
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-523	Nov. 09, 2015	Nov. 08, 2016
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1095	Oct. 07, 2015	Oct. 06, 2016
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 04, 2015	Nov. 03, 2016
Loop Antenna	R&S	HFH2-Z2	11900	Nov. 16, 2015	Nov. 15, 2016
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Dec. 10, 2015	Dec. 09, 2016
Preamplifier	Burgeon	BPA-530	100218	Nov. 03, 2015	Nov. 02, 2016
Preamplifier	Agilent	83017A	MY39501309	Sep. 22, 2015	Sep. 21, 2016
Preamplifier	EMC	EMC184045B	980192	Sep. 01, 2015	Aug. 31, 2016
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16140/4	Dec. 10, 2015	Dec. 09, 2016
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16018/4	Dec. 10, 2015	Dec. 09, 2016
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16015/4	Dec. 10, 2015	Dec. 09, 2016
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-003	Dec. 10, 2015	Dec. 09, 2016
LF cable 10M	EMCC	CFD400-E	CFD400-001	Dec. 10, 2015	Dec. 09, 2016
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101498	Dec. 13, 2015	Dec. 12, 2016
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Nov. 27, 2015	Nov. 26, 2016
Power Meter	Anritsu	ML2495A	1241002	Sep. 21, 2015	Sep. 20, 2016
Power Sensor	Anritsu	MA2411B	1207366	Sep. 21, 2015	Sep. 20, 2016
Signal Generator	R&S	SMB100A	175727	Oct. 05, 2015	Oct. 04, 2016
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Testing Applied Standards

According to the specification of EUT, the EUT must comply with following standards and KDB documents.

47 CFR FCC Part 15.407

ANSI C63.10-2013

FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r03

FCC KDB 644545 D03 Guidance for IEEE 802.11ac New Rules v01

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

FCC KDB 412172 D01 Determining ERP and EIRP v01r01

1.6 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	±34.134 Hz
Conducted power	±0.808 dB
Frequency error	±34.134 Hz
Power density	±0.463 dB
Conducted emission	±2.670 dB
AC conducted emission	±2.90 dB
Radiated emission ≤ 1GHz	±3.87 dB
Radiated emission > 1GHz	±5.60 dB
Time	±0.1%
Temperature	±0.6 °C

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	18°C / 55%	Sky Huang
Radiated Emissions	03CH02-WS	19-21°C / 60-68%	Morgan Chen Vincent Yeh
RF Conducted	TH01-WS	21-22°C / 63-64%	Alex Huang

➤ FCC site registration No.: TW2732

➤ IC site registration No.: 10807A-1

2.2 The Worst Test Modes and Channel Details

For Frequency band 5150-5250 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate (Mbps) / MCS	Test Configuration
Conducted Emissions	VHT40	5230	MCS 0	1, 2
Radiated Emissions ≤1GHz	VHT40	5230	MCS 0	1, 2
RF Output Power	11a	5180 / 5200 / 5240	6 Mbps	1
	HT20	5180 / 5200 / 5240	MCS 0	
	HT40	5190 / 5230	MCS 0	
	VHT20	5180 / 5200 / 5240	MCS 0	
	VHT40	5190 / 5230	MCS 0	
	VHT80	5210	MCS 0	
Radiated Emissions >1GHz Emission Bandwidth Peak Power Spectral Density	11a	5180 / 5200 / 5240	6 Mbps	1
	VHT20	5180 / 5200 / 5240	MCS 0	
	VHT40	5190 / 5230	MCS 0	
	VHT80	5210	MCS 0	
Frequency Stability	Un-modulation	5200	---	1

NOTE:

- The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Z-plane** results were found as the worst case and were shown in this report.
- Adapter **CWT** and **AMIGO** had been covered during the pretest in the original report. The worst adapter is **CWT**.
- The EUT was pretested at power supplied by AC adapter and POE. The power supplied by POE was found to be the worst case and was selected for final testing as below test configurations.
- Test configurations are listed as below:
 - Configuration 1: POE mode
 - Configuration 2: adapter mode

For Frequency band 5725-5850 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate (Mbps) / MCS	Test Configuration
Conducted Emissions	VHT20	5785	MCS 0	1, 2
Radiated Emissions ≤ 1 GHz	VHT20	5785	MCS 0	1, 2
RF Output Power	11a	5745 / 5785 / 5825	6 Mbps	1
	HT20	5745 / 5785 / 5825	MCS 0	
	HT40	5755 / 5795	MCS 0	
	VHT20	5745 / 5785 / 5825	MCS 0	
	VHT40	5755 / 5795	MCS 0	
	VHT80	5775	MCS 0	
Radiated Emissions > 1 GHz	11a	5745 / 5785 / 5825	6 Mbps	1
Emission Bandwidth	VHT20	5745 / 5785 / 5825	MCS 0	
6dB bandwidth	VHT40	5755 / 5795	MCS 0	
Peak Power Spectral Density	VHT80	5775	MCS 0	
Frequency Stability	Un-modulation	5785	---	1
NOTE: <ol style="list-style-type: none"> The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The Z-plane results were found as the worst case and were shown in this report. Adapter CWT and AMIGO had been covered during the pretest in the original report. The worst adapter is CWT. The EUT was pretested at power supplied by AC adapter and POE. The power supplied by POE was found to be the worst case and was selected for final testing as below test configurations. Test configurations are listed as below: <ol style="list-style-type: none"> Configuration 1: POE mode Configuration 2: adapter mode 				

3 Transmitter Test Results

3.1 Conducted Emissions

3.1.1 Limit of Conducted Emissions

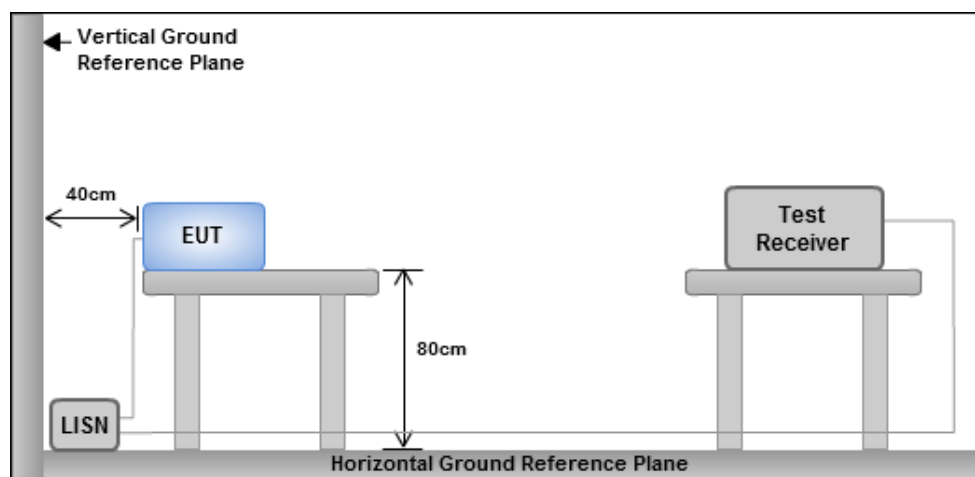
Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

Note 1: * Decreases with the logarithm of the frequency.

3.1.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V / 60Hz.

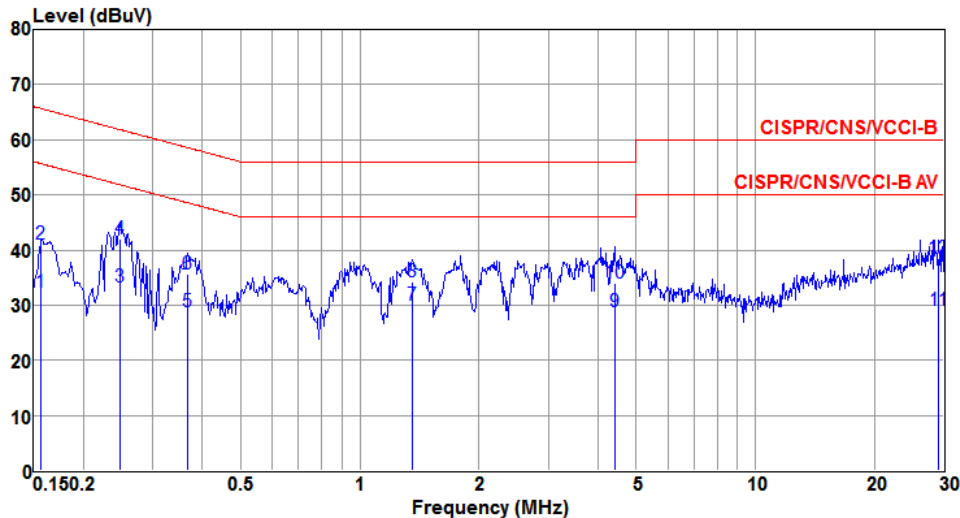
3.1.3 Test Setup



- Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

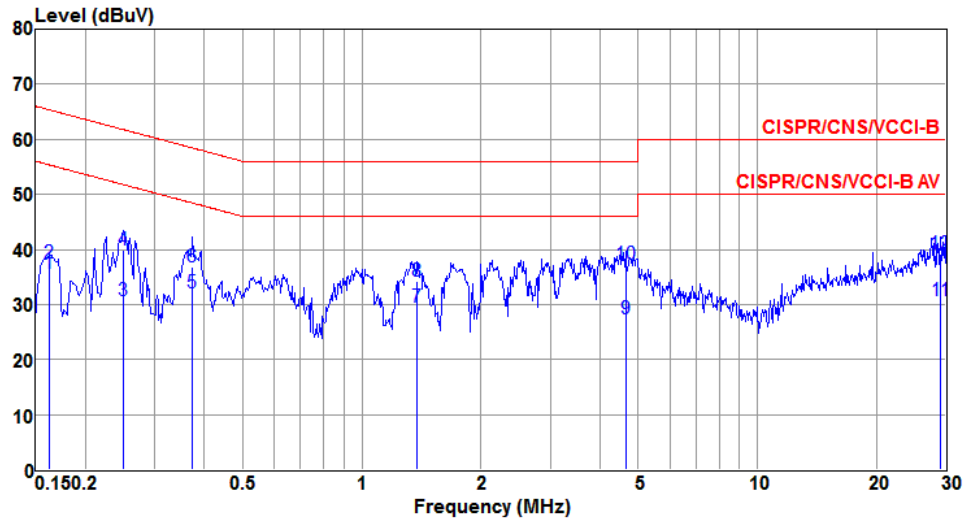
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Line	Test Configuration	1



	Freq	Level	Limit	Over	Read	LISN	cable	Remark
	MHz	dBuV	Line	Limit	Level	factor	loss	
			dBuV	dB	dBuV	dB	dB	
1	0.156	32.30	55.65	-23.35	31.46	0.82	0.02	Average
2	0.156	40.99	65.65	-24.66	40.15	0.82	0.02	QP
3	0.247	33.32	51.86	-18.54	33.07	0.23	0.02	Average
4	0.247	41.91	61.86	-19.95	41.66	0.23	0.02	QP
5	0.367	28.69	48.56	-19.87	28.47	0.19	0.03	Average
6	0.367	35.54	58.56	-23.02	35.32	0.19	0.03	QP
7	1.359	29.96	46.00	-16.04	29.56	0.33	0.07	Average
8	1.359	34.30	56.00	-21.70	33.90	0.33	0.07	QP
9	4.407	28.90	46.00	-17.10	28.48	0.30	0.12	Average
10	4.407	34.11	56.00	-21.89	33.69	0.30	0.12	QP
11	29.061	29.03	50.00	-20.97	27.71	1.09	0.23	Average
12	29.061	38.39	60.00	-21.61	37.07	1.09	0.23	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

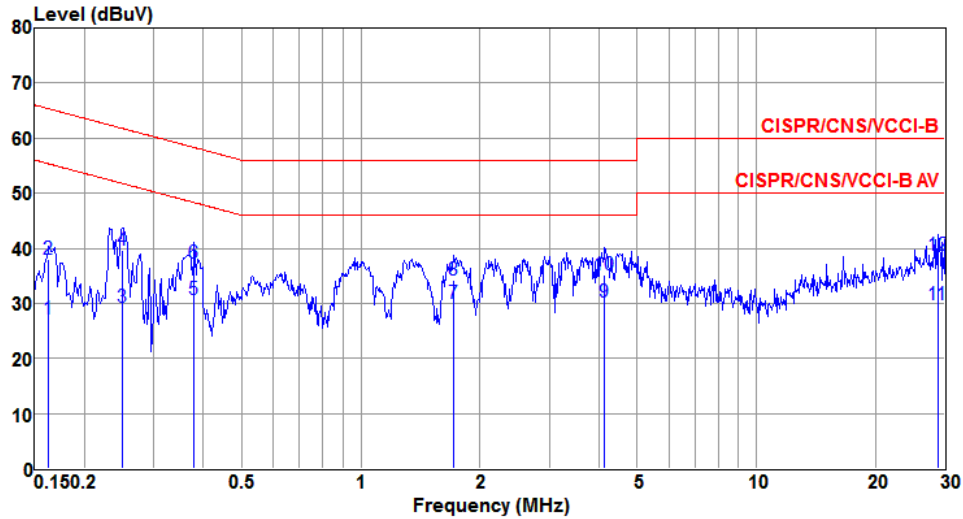
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Neutral	Test Configuration	1



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.162	35.60	55.34	-19.74	34.90	0.68	0.02	Average
2	0.162	37.55	65.34	-27.79	36.85	0.68	0.02	QP
3	0.249	30.71	51.78	-21.07	30.49	0.20	0.02	Average
4	0.249	39.79	61.78	-21.99	39.57	0.20	0.02	QP
5@	0.373	32.05	48.43	-16.38	31.88	0.14	0.03	Average
6	0.373	36.89	58.43	-21.54	36.72	0.14	0.03	QP
7	1.381	29.50	46.00	-16.50	29.18	0.25	0.07	Average
8	1.381	34.15	56.00	-21.85	33.83	0.25	0.07	QP
9	4.647	27.42	46.00	-18.58	26.59	0.70	0.13	Average
10	4.647	37.28	56.00	-18.72	36.45	0.70	0.13	QP
11	29.061	30.74	50.00	-19.26	29.27	1.24	0.23	Average
12	29.061	39.10	60.00	-20.90	37.63	1.24	0.23	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

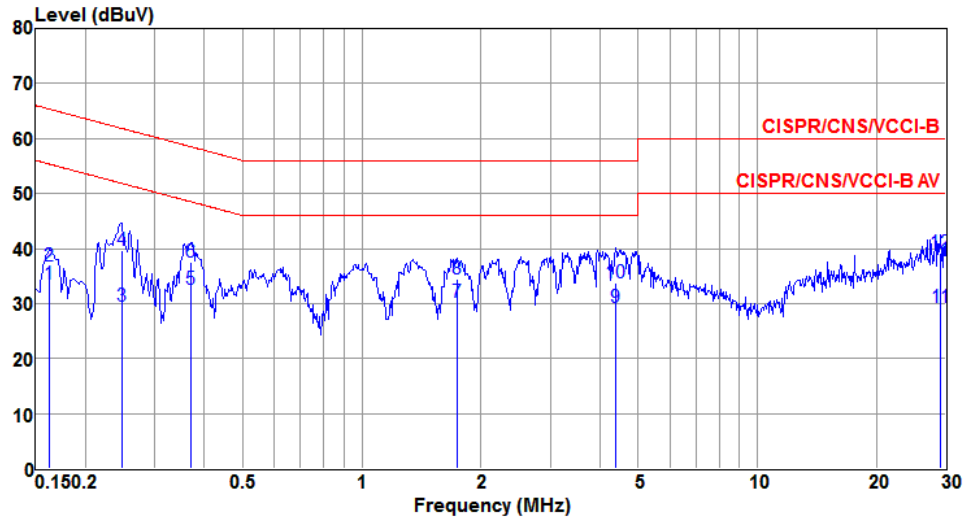
Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Line	Test Configuration	1



	Freq	Level	Limit	Over	Read	LISN	cable	Remark
	MHz	dBuV	Line	Limit	Level	factor	loss	
			dBuV	dB	dBuV	dB	dB	
1	0.162	27.13	55.34	-28.21	26.38	0.73	0.02	Average
2	0.162	38.09	65.34	-27.25	37.34	0.73	0.02	QP
3	0.249	29.36	51.78	-22.42	29.11	0.23	0.02	Average
4	0.249	39.67	61.78	-22.11	39.42	0.23	0.02	QP
5	0.379	30.76	48.30	-17.54	30.54	0.19	0.03	Average
6	0.379	37.31	58.30	-20.99	37.09	0.19	0.03	QP
7	1.716	30.01	46.00	-15.99	29.42	0.51	0.08	Average
8	1.716	34.23	56.00	-21.77	33.64	0.51	0.08	QP
9@	4.136	30.28	46.00	-15.72	29.89	0.27	0.12	Average
10	4.136	35.29	56.00	-20.71	34.90	0.27	0.12	QP
11	28.755	29.77	50.00	-20.23	28.45	1.09	0.23	Average
12	28.755	38.69	60.00	-21.31	37.37	1.09	0.23	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

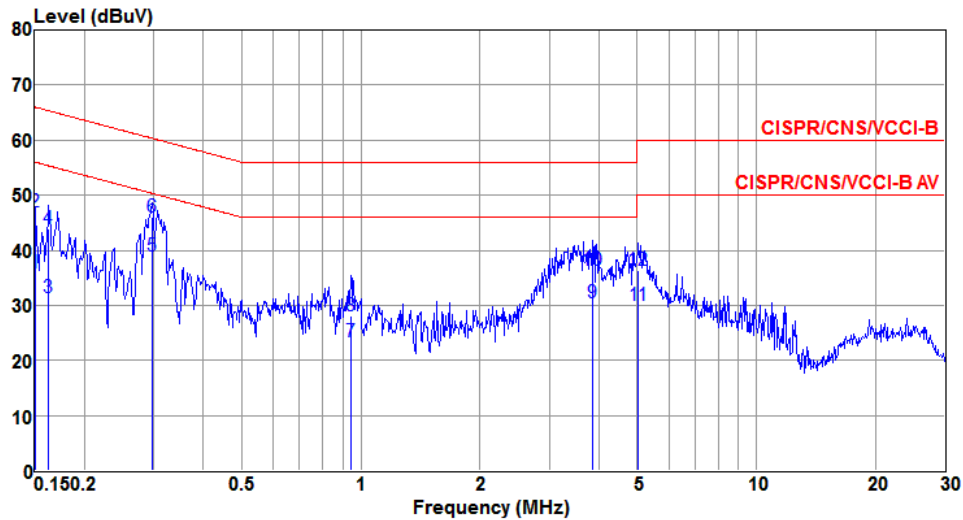
Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Neutral	Test Configuration	1



	Freq	Level	Limit	Over	Read	LISN	cable	Remark
	MHz	dBuV	Line	Limit	Level	factor	loss	
			dBuV	dB	dBuV	dB	dB	
1	0.162	33.47	55.34	-21.87	32.77	0.68	0.02	Average
2	0.162	36.84	65.34	-28.50	36.14	0.68	0.02	QP
3	0.247	29.55	51.86	-22.31	29.32	0.21	0.02	Average
4	0.247	39.62	61.86	-22.24	39.39	0.21	0.02	QP
5	0.369	32.65	48.52	-15.87	32.48	0.14	0.03	Average
6	0.369	37.57	58.52	-20.95	37.40	0.14	0.03	QP
7@	1.744	30.27	46.00	-15.73	29.96	0.23	0.08	Average
8	1.744	34.50	56.00	-21.50	34.19	0.23	0.08	QP
9	4.384	29.35	46.00	-16.65	28.51	0.72	0.12	Average
10	4.384	33.82	56.00	-22.18	32.98	0.72	0.12	QP
11	29.061	29.17	50.00	-20.83	27.70	1.24	0.23	Average
12	29.061	39.08	60.00	-20.92	37.61	1.24	0.23	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

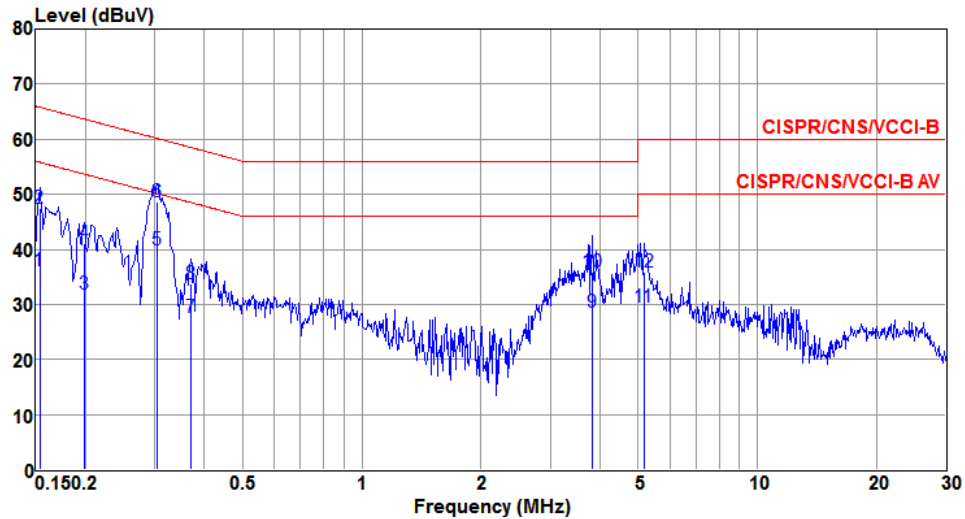
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Line	Test Configuration	2



	Freq	Level	Limit	Over	Read	LISN	cable	Remark
	MHz	dBuV	dBuV	Limit	Level	factor	loss	
				dB	dBuV	dB	dB	
1	0.150	35.98	56.00	-20.02	35.04	0.92	0.02	Average
2	0.150	46.88	66.00	-19.12	45.94	0.92	0.02	QP
3	0.162	31.32	55.34	-24.02	30.57	0.73	0.02	Average
4	0.162	43.95	65.34	-21.39	43.20	0.73	0.02	QP
5	0.297	38.87	50.32	-11.45	38.63	0.21	0.03	Average
6	0.297	46.07	60.32	-14.25	45.83	0.21	0.03	QP
7	0.943	23.32	46.00	-22.68	23.16	0.10	0.06	Average
8	0.943	28.18	56.00	-27.82	28.02	0.10	0.06	QP
9	3.840	30.48	46.00	-15.52	30.08	0.28	0.12	Average
10	3.840	36.31	56.00	-19.69	35.91	0.28	0.12	QP
11	5.031	29.91	50.00	-20.09	29.42	0.36	0.13	Average
12	5.031	36.36	60.00	-23.64	35.87	0.36	0.13	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

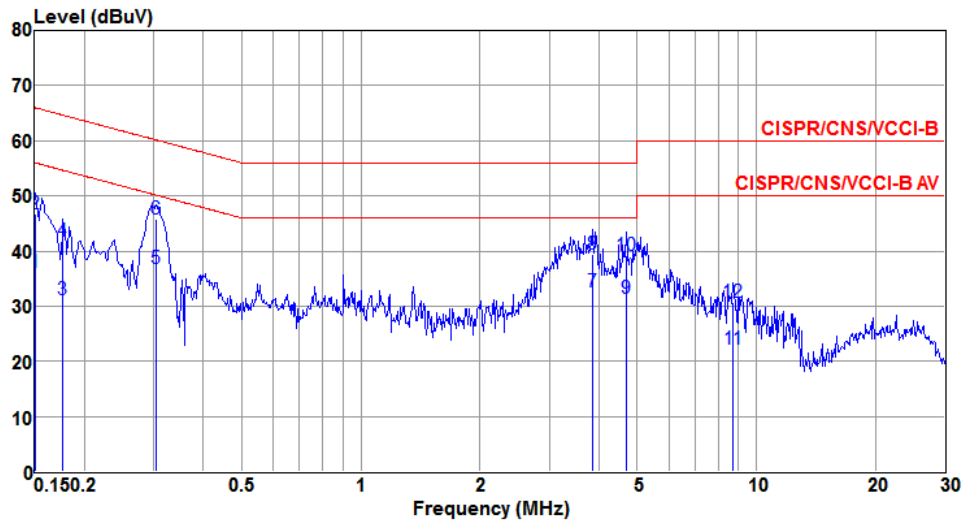
Modulation	VHT40	Test Freq. (MHz)	5230
Power Phase	Neutral	Test Configuration	2



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line dBuV	Limit dB	Level dBuV	factor dB	loss dB	Remark
1	0.153	36.23	55.82	-19.59	35.39	0.82	0.02	Average
2	0.153	47.49	65.82	-18.33	46.65	0.82	0.02	QP
3	0.199	31.97	53.67	-21.70	31.69	0.26	0.02	Average
4	0.199	41.14	63.67	-22.53	40.86	0.26	0.02	QP
5	0.303	39.79	50.15	-10.36	39.59	0.17	0.03	Average
6	0.303	48.63	60.15	-11.52	48.43	0.17	0.03	QP
7	0.369	27.56	48.52	-20.96	27.39	0.14	0.03	Average
8	0.369	33.79	58.52	-24.73	33.62	0.14	0.03	QP
9	3.820	28.47	46.00	-17.53	27.65	0.70	0.12	Average
10	3.820	35.89	56.00	-20.11	35.07	0.70	0.12	QP
11	5.166	29.41	50.00	-20.59	28.60	0.68	0.13	Average
12	5.166	35.91	60.00	-24.09	35.10	0.68	0.13	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

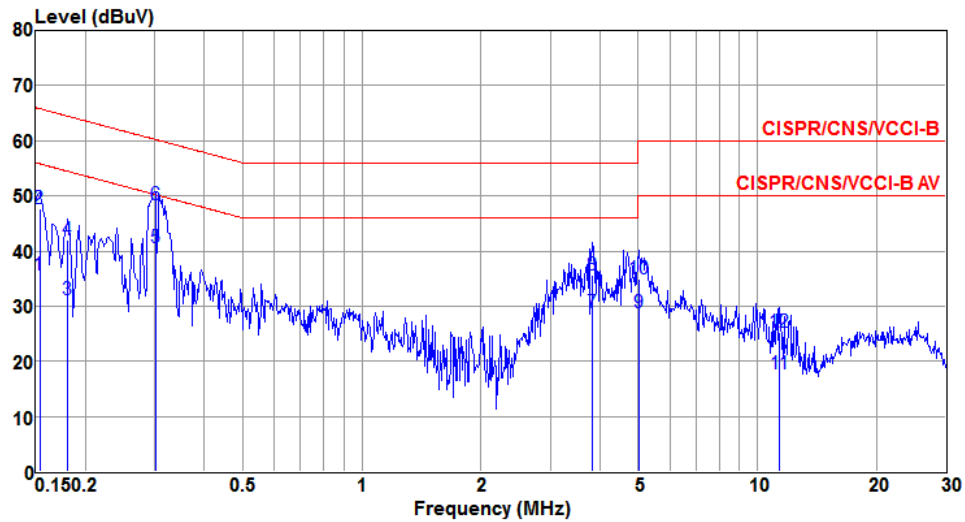
Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Line	Test Configuration	2



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.150	36.18	56.00	-19.82	35.24	0.92	0.02	Average
2	0.150	46.82	66.00	-19.18	45.88	0.92	0.02	QP
3	0.177	31.13	54.64	-23.51	30.57	0.54	0.02	Average
4	0.177	41.74	64.64	-22.90	41.18	0.54	0.02	QP
5	0.303	36.77	50.15	-13.38	36.53	0.21	0.03	Average
6	0.303	45.78	60.15	-14.37	45.54	0.21	0.03	QP
7	3.840	32.57	46.00	-13.43	32.17	0.28	0.12	Average
8	3.840	39.33	56.00	-16.67	38.93	0.28	0.12	QP
9	4.696	31.31	46.00	-14.69	30.85	0.33	0.13	Average
10	4.696	39.12	56.00	-16.88	38.66	0.33	0.13	QP
11	8.729	22.11	50.00	-27.89	21.35	0.61	0.15	Average
12	8.729	30.69	60.00	-29.31	29.93	0.61	0.15	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	VHT20	Test Freq. (MHz)	5785
Power Phase	Neutral	Test Configuration	2



	Freq	Level	Limit	Over	Read	LISN	cable	Remark
	MHz	dBuV	Line	Limit	Level	factor	loss	
			dBuV	dB	dBuV	dB	dB	
1	0.153	35.71	55.82	-20.11	34.87	0.82	0.02	Average
2	0.153	47.71	65.82	-18.11	46.87	0.82	0.02	QP
3	0.181	31.18	54.46	-23.28	30.71	0.45	0.02	Average
4	0.181	42.07	64.46	-22.39	41.60	0.45	0.02	QP
5@	0.300	40.54	50.24	-9.70	40.33	0.18	0.03	Average
6	0.300	48.32	60.24	-11.92	48.11	0.18	0.03	QP
7	3.820	28.78	46.00	-17.22	27.96	0.70	0.12	Average
8	3.820	35.73	56.00	-20.27	34.91	0.70	0.12	QP
9	5.031	28.92	50.00	-21.08	28.10	0.69	0.13	Average
10	5.031	35.05	60.00	-24.95	34.23	0.69	0.13	QP
11	11.377	17.80	50.00	-32.20	17.07	0.56	0.17	Average
12	11.377	25.24	60.00	-34.76	24.51	0.56	0.17	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
 2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

3.2 Emission Bandwidth

3.2.1 Limit of Emission bandwidth

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

3.2.2 Test Procedures

26dB Bandwidth

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW, Detector = Peak.
3. Trace mode = max hold.
4. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

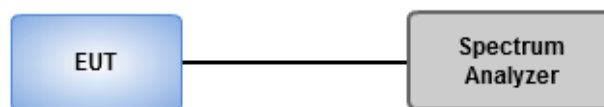
Occupied Bandwidth

1. Set RBW = 1 % to 5 % of the OBW
2. Set VBW \geq 3 RBW
3. Sample detection and single sweep mode shall be used
4. Use the 99 % power bandwidth function of the instrument

6dB Bandwidth

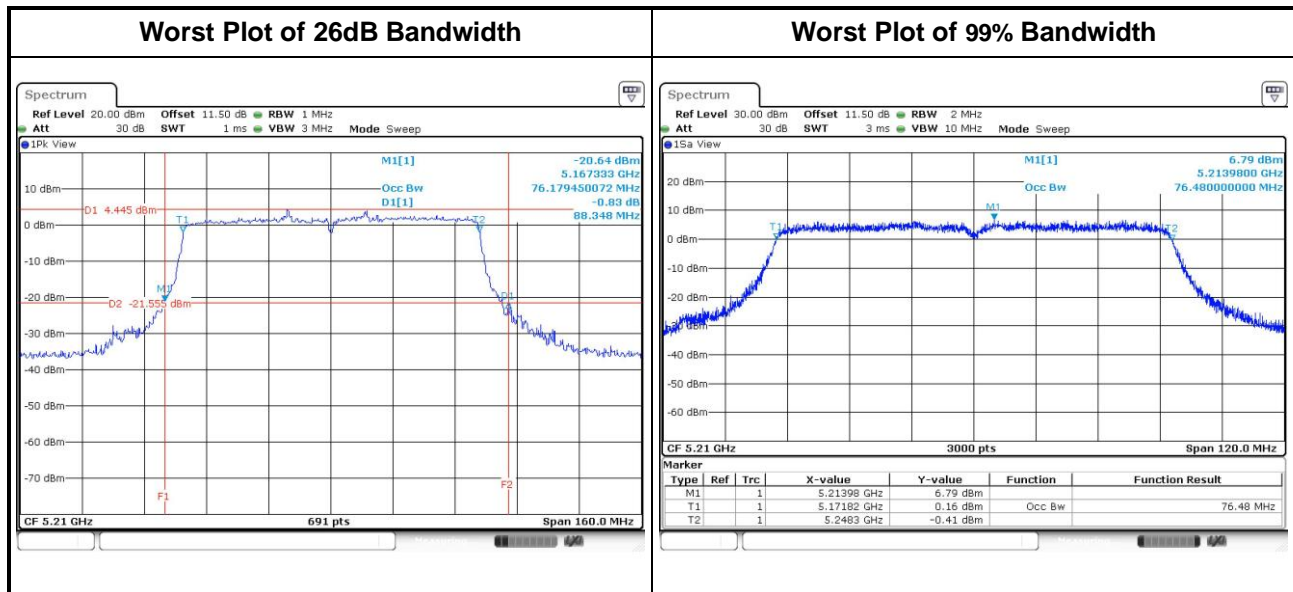
1. Set RBW = 100kHz, VBW = 300kHz
2. Detector = Peak, Trace mode = max hold.
3. Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

3.2.3 Test Setup



3.2.4 Test Result of Emission Bandwidth

For Frequency band 5150-5250 MHz										
Emission Bandwidth										
Mode	N _{TX}	Freq. (MHz)	26dB Bandwidth (MHz)				99% Bandwidth (MHz)			
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3
11a	3	5180	22.90	22.61	22.14	---	16.78	16.73	16.72	---
11a	3	5200	23.71	24.41	23.65	---	16.84	16.75	16.71	---
11a	3	5240	23.36	23.54	23.19	---	16.83	16.75	16.72	---
VHT20	3	5180	22.61	23.65	22.84	---	17.86	17.90	17.87	---
VHT20	3	5200	24.00	24.29	25.04	---	17.99	17.89	17.92	---
VHT20	3	5240	23.59	24.93	24.41	---	17.87	17.94	17.91	---
VHT40	3	5190	47.19	45.57	45.57	---	36.96	36.72	36.78	---
VHT40	3	5230	48.12	47.19	45.91	---	37.06	36.84	36.82	---
VHT80	3	5210	86.26	88.35	86.03	---	76.48	76.48	76.32	---

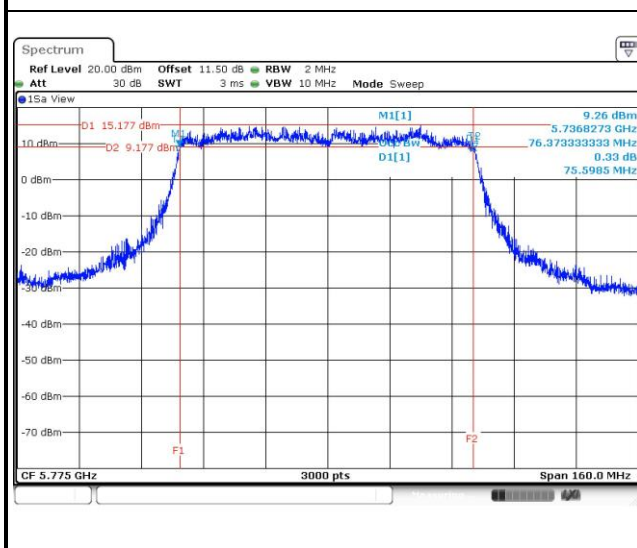


For Frequency band 5725-5850 MHz

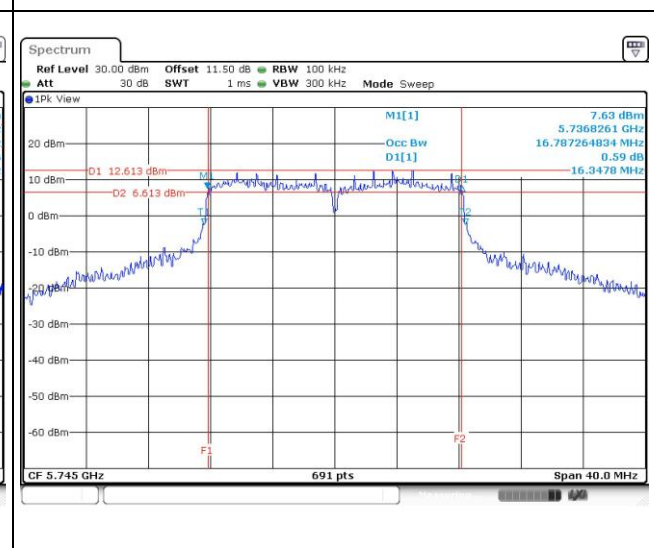
Emission Bandwidth

Mode	N _{TX}	Freq. (MHz)	OBW Bandwidth (MHz)				6dB Bandwidth (MHz)				
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3	6dB BW Limit (MHz)
11a	3	5745	17.31	16.95	18.09	---	16.35	16.35	16.35	---	0.5
11a	3	5785	17.36	16.96	17.37	---	16.35	16.35	16.35	---	0.5
11a	3	5825	17.21	16.95	17.09	---	16.35	16.35	16.35	---	0.5
VHT20	3	5745	18.52	18.08	18.29	---	17.28	17.62	17.57	---	0.5
VHT20	3	5785	18.15	18.07	18.41	---	17.57	17.57	17.57	---	0.5
VHT20	3	5825	18.33	18.01	18.00	---	16.93	17.57	17.57	---	0.5
VHT40	3	5755	36.99	36.88	36.96	---	35.83	35.83	36.41	---	0.5
VHT40	3	5795	36.77	36.83	36.88	---	35.83	36.17	36.41	---	0.5
VHT80	3	5775	76.37	76.32	76.32	---	76.29	75.83	76.29	---	0.5

Worst Plot of 99% Bandwidth



Worst Plot of 6dB Bandwidth



3.3 RF Output Power

3.3.1 Limit of RF Output Power

Frequency band 5150-5250 MHz		
Operating Mode		Limit
<input type="checkbox"/>	Outdoor access point	Conducted Power: 1 W The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm)
<input checked="" type="checkbox"/>	Indoor access point	Conducted Power: 1 W
<input type="checkbox"/>	Fixed point-to-point access points	Conducted Power: 1 W
<input type="checkbox"/>	Mobile and portable client devices	Conducted Power: 250 mW

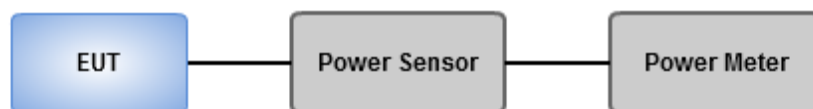
Frequency Band (MHz)		Limit
<input type="checkbox"/>	5250 ~ 5350	250mW or 11dBm+10 log B
<input type="checkbox"/>	5470 ~ 5725	250mW or 11dBm+10 log B
<input checked="" type="checkbox"/>	5725 ~ 5850	1 W

Note: "B" is the 26dB emission bandwidth in MHz.

3.3.2 Test Procedures

- ☒ **Method PM-G (Measurement using a gated RF average power meter)**
 - ☒ Measurements may is performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

3.3.3 Test Setup



3.3.4 Test Result of Maximum Conducted Output Power

For Frequency band 5150-5250 MHz									
Mode	N _{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
11a	3	5180	21.15	21.43	21.45	---	408.949	26.12	30.00
11a	3	5200	22.53	23.32	22.51	---	572.082	27.57	30.00
11a	3	5240	22.42	23.29	22.53	---	566.947	27.54	30.00
HT20	3	5180	20.78	20.98	20.70	---	362.478	25.59	30.00
HT20	3	5200	22.29	23.08	22.47	---	549.273	27.40	30.00
HT20	3	5240	22.09	23.05	22.70	---	549.853	27.40	30.00
HT40	3	5190	13.41	13.55	13.46	---	66.756	18.24	30.00
HT40	3	5230	22.84	23.47	23.04	---	616.013	27.90	30.00
VHT20	3	5180	20.82	21.01	20.72	---	364.996	25.62	30.00
VHT20	3	5200	22.32	23.11	22.51	---	553.491	27.43	30.00
VHT20	3	5240	22.11	23.09	22.74	---	554.191	27.44	30.00
VHT40	3	5190	13.45	13.61	13.51	---	67.531	18.30	30.00
VHT40	3	5230	22.88	23.51	23.08	---	621.712	27.94	30.00
VHT80	3	5210	11.25	11.31	10.55	---	38.206	15.82	30.00

For Frequency band 5725-5850 MHz									
Mode	N _{TX}	Freq. (MHz)	Conducted Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
11a	3	5745	23.01	22.63	22.54	---	562.691	27.50	30.00
11a	3	5785	23.11	22.57	22.59	---	566.913	27.54	30.00
11a	3	5825	23.06	22.47	22.48	---	555.917	27.45	30.00
HT20	3	5745	23.08	22.47	22.48	---	556.850	27.46	30.00
HT20	3	5785	23.08	22.60	22.51	---	563.444	27.51	30.00
HT20	3	5825	22.99	22.44	22.43	---	549.440	27.40	30.00
HT40	3	5755	21.73	21.22	21.47	---	421.652	26.25	30.00
HT40	3	5795	21.6	22.24	22.42	---	486.620	26.87	30.00
VHT20	3	5745	23.11	22.53	22.62	---	566.515	27.53	30.00
VHT20	3	5785	23.13	22.65	22.54	---	569.140	27.55	30.00
VHT20	3	5825	23.06	22.49	22.47	---	556.325	27.45	30.00
VHT40	3	5755	21.78	21.25	21.51	---	425.592	26.29	30.00
VHT40	3	5795	21.63	22.27	22.47	---	490.805	26.91	30.00
VHT80	3	5775	19.24	19.21	19.03	---	247.298	23.93	30.00

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

Frequency band 5150-5250 MHz		
Operating Mode		Limit
<input type="checkbox"/>	Outdoor access point	17 dBm / MHz
<input checked="" type="checkbox"/>	Indoor access point	17 dBm / MHz
<input type="checkbox"/>	Fixed point-to-point access points	17 dBm / MHz
<input type="checkbox"/>	Mobile and portable client devices	11 dBm / MHz

Frequency Band (MHz)		Limit
<input type="checkbox"/>	5250 ~ 5350	11 dBm / MHz
<input type="checkbox"/>	5470 ~ 5725	11 dBm / MHz
<input checked="" type="checkbox"/>	5725 ~ 5850	30 dBm / 500 kHz

3.4.2 Test Procedures

For 5150 ~ 5250 MHz

☐ Method SA-1

1. Set RBW = 1 MHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level.

☒ Method SA-2 Alternative

1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time $\geq 10 * (\text{number of points in sweep}) * (\text{total on/off period of the transmitted signal})$.
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add $10 \log(1/x)$, where x is the duty cycle.

For 5725 ~ 5850 MHz

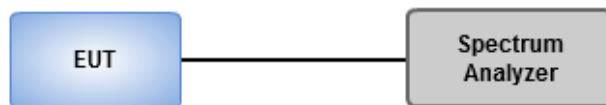
☐ Method SA-1

1. Set RBW = 500 kHz, VBW = 2 MHz, Sweep time = auto, Detector = RMS.
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level.

☒ Method SA-2 Alternative

1. Set RBW = 500 kHz, VBW = 2 MHz, Detector = RMS.
2. Set sweep time $\geq 10 * (\text{number of points in sweep}) * (\text{total on/off period of the transmitted signal})$.
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add $10 \log(1/x)$, where x is the duty cycle.

3.4.3 Test Setup

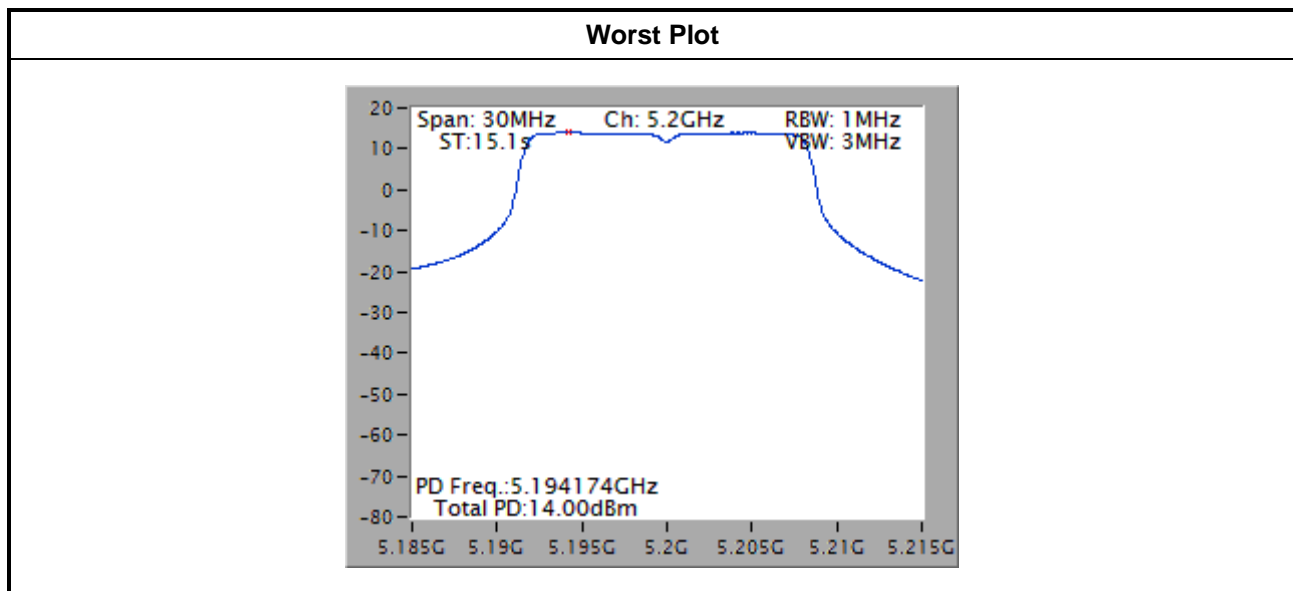


3.4.4 Test Result of Peak Power Spectral Density

For Frequency band 5150-5250 MHz						
Condition			Peak Power Spectral Density (dBm/MHz)			
Modulation Mode	N _{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/MHz)	Duty Factor (dB)	PPSD with D.F (dBm/MHz)	PPSD Limit (dBm/MHz)
11a	3	5180	12.08	0.21	12.29	14.23
11a	3	5200	14.00	0.21	14.21	14.23
11a	3	5240	13.85	0.21	14.06	14.23
VHT20	3	5180	11.33	0.19	11.52	14.23
VHT20	3	5200	13.84	0.19	14.03	14.23
VHT20	3	5240	14.01	0.19	14.20	14.23
VHT40	3	5190	0.82	0.23	1.05	14.23
VHT40	3	5230	11.28	0.23	11.51	14.23
VHT80	3	5210	-5.11	0.55	-4.56	14.23

Note:

1. D.F is duty factor.
2. Test results for VHT20 / VHT40 / VHT80 are bin-by-bin summing measured value of each TX port.
3. Directional gain = $4 + 10 \cdot \log(3/1) = 8.77 \text{ dBi} > 6 \text{ dBi}$.
Limit shall be reduced to $17 \text{ dBm} - (8.77 \text{ dBi} - 6 \text{ dBi}) = 14.23 \text{ dBm}$.

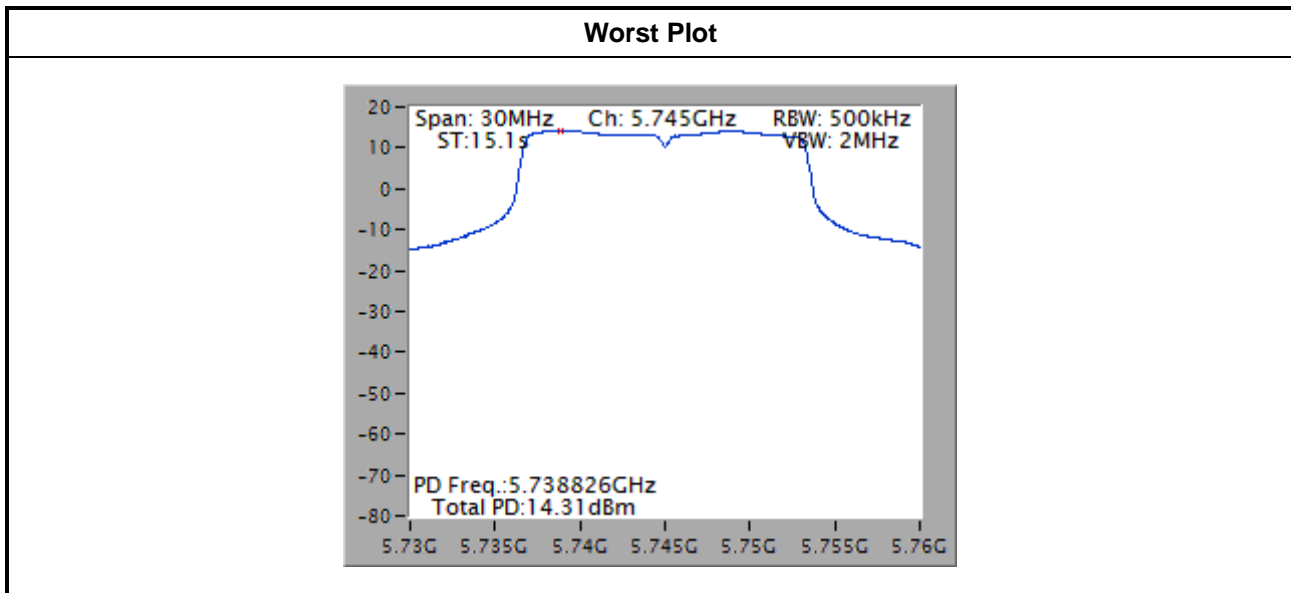


Note: The plot without duty factor

For Frequency band 5725-5850 MHz						
Condition			Peak Power Spectral Density (dBm/500kHz)			
Modulation Mode	N _{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/500kHz)	Duty Factor (dB)	PPSD with D.F (dBm/500kHz)	PPSD Limit (dBm/500kHz)
11a	3	5745	14.31	0.21	14.52	27.23
11a	3	5785	13.87	0.21	14.08	27.23
11a	3	5825	13.09	0.21	13.30	27.23
VHT20	3	5745	13.85	0.19	14.04	27.23
VHT20	3	5785	13.24	0.19	13.43	27.23
VHT20	3	5825	13.28	0.19	13.47	27.23
VHT40	3	5755	8.54	0.23	8.77	27.23
VHT40	3	5795	8.41	0.23	8.64	27.23
VHT80	3	5775	3.24	0.55	3.79	27.23

Note:

1. D.F is duty factor.
2. Test results for VHT20 / VHT40 / VHT80 are bin-by-bin summing measured value of each TX port.
3. Directional gain = $4 + 10 \cdot \log(3/1) = 8.77 \text{ dBi} > 6 \text{ dBi}$.
Limit shall be reduced to $30 \text{ dBm} - (8.77 \text{ dBi} - 6 \text{ dBi}) = 27.23 \text{ dBm}$.



Note: The plot without duty factor

3.5 Transmitter Radiated and Band Edge Emissions

3.5.1 Limit of Transmitter Radiated and Band Edge Emissions

Restricted Band Emissions Limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1:
Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit

Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

Un-restricted band emissions above 1GHz Limit		
Operating Band	Limit	
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]	
5.725 - 5.850 GHz	<input type="checkbox"/>	15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
	<input checked="" type="checkbox"/>	15.407(b)(4)(ii) ,compliance with the emission limits in § 15.247(d) Shall be at least 30dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power,. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see § 15.205(c))

Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

3.5.2 Test Procedures

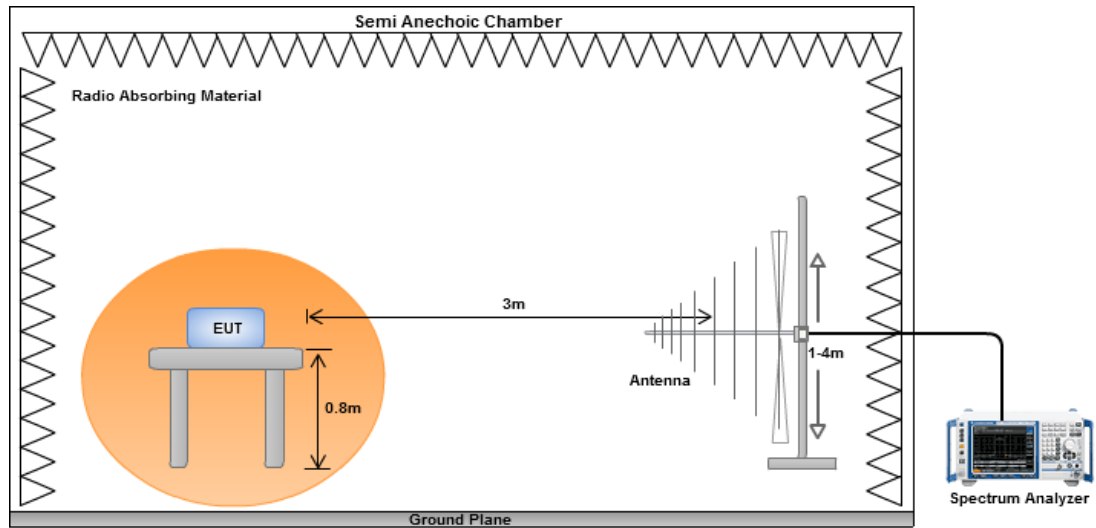
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360° . A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360° , the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

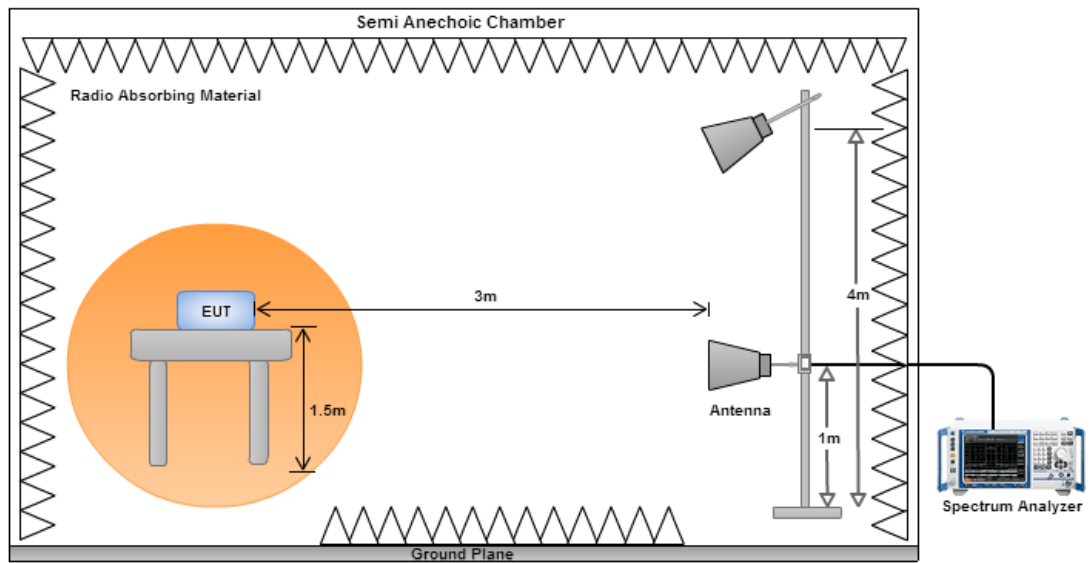
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

3.5.3 Test Setup

Radiated Emissions below 1 GHz

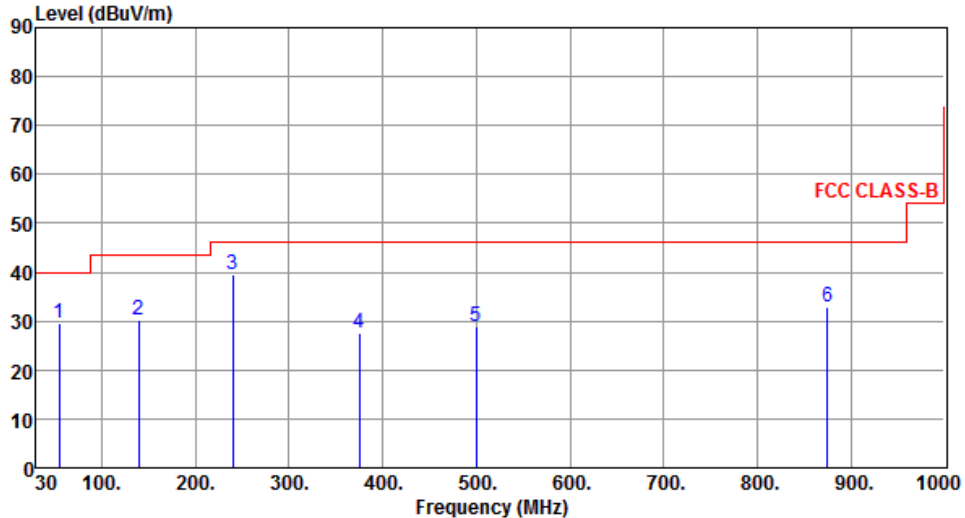


Radiated Emissions above 1 GHz



3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal	Test Configuration	1

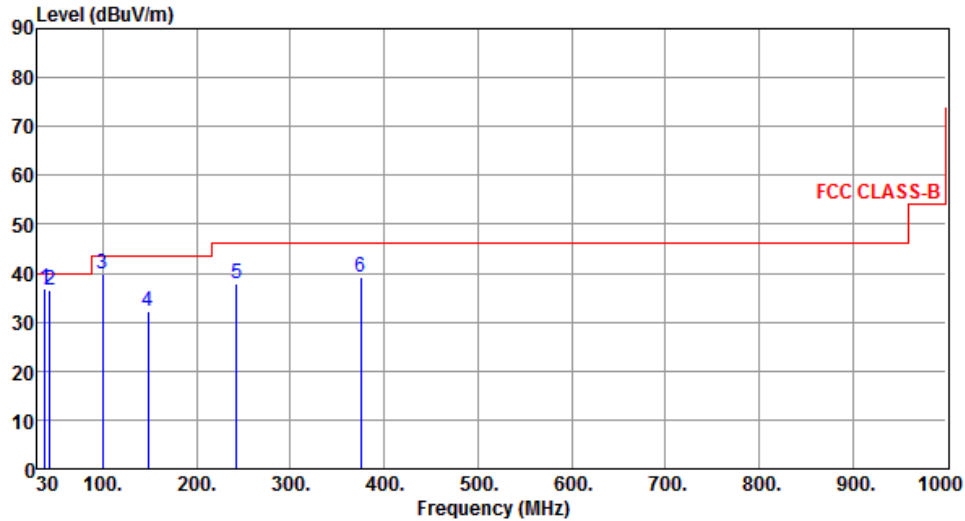


The graph displays the radiated unwanted emissions for a transmitter. The y-axis represents the Level in dBuV/m, ranging from 0 to 90. The x-axis represents the Frequency in MHz, ranging from 30 to 1000. A red line indicates the FCC CLASS-B limit, which is 40 dBuV/m from 30 MHz to 100 MHz, 45 dBuV/m from 100 MHz to 200 MHz, and 55 dBuV/m from 200 MHz to 1000 MHz. Six emission peaks are identified and labeled with numbers 1 through 6. The data for these peaks is provided in the table below.

	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	54.26	29.54	40.00	-10.46	41.68	-12.14	Peak	---	---
2	139.52	30.15	43.50	-13.35	42.45	-12.30	Peak	---	---
3	240.38	39.68	46.00	-6.32	52.67	-12.99	Peak	---	---
4	375.28	27.63	46.00	-18.37	36.96	-9.33	Peak	---	---
5	500.16	28.73	46.00	-17.27	35.24	-6.51	Peak	---	---
6	875.26	32.76	46.00	-13.24	33.68	-0.92	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
 *Factor includes antenna factor , cable loss and amplifier gain
 Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
 Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical	Test Configuration	1



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	38.41	36.81	40.00	-3.19	48.82	-12.01	QP	116	21
2	43.44	36.55	40.00	-3.45	48.23	-11.68	QP	100	253
3	99.56	39.80	43.50	-3.70	56.51	-16.71	Peak	---	---
4	148.50	32.37	43.50	-11.13	44.35	-11.98	Peak	---	---
5	242.55	37.81	46.00	-8.19	50.76	-12.95	Peak	---	---
6	375.16	39.30	46.00	-6.70	48.64	-9.34	Peak	---	---

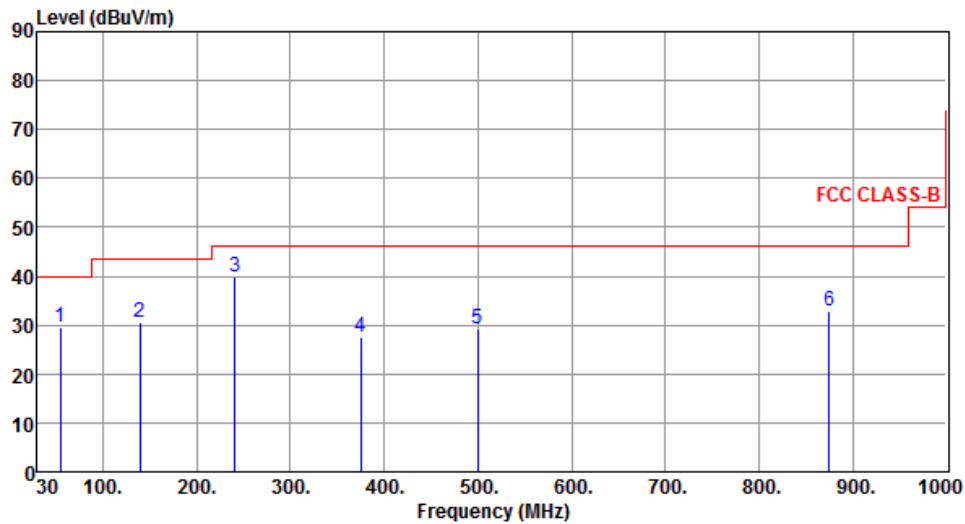
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	54.38	29.40	40.00	-10.60	41.55	-12.15	Peak	---	---
2	139.62	30.53	43.50	-12.97	42.83	-12.30	Peak	---	---
3	240.42	39.96	46.00	-6.04	52.95	-12.99	Peak	---	---
4	375.16	27.52	46.00	-18.48	36.86	-9.34	Peak	---	---
5	500.24	29.17	46.00	-16.83	35.68	-6.51	Peak	---	---
6	875.16	32.93	46.00	-13.07	33.85	-0.92	Peak	---	---

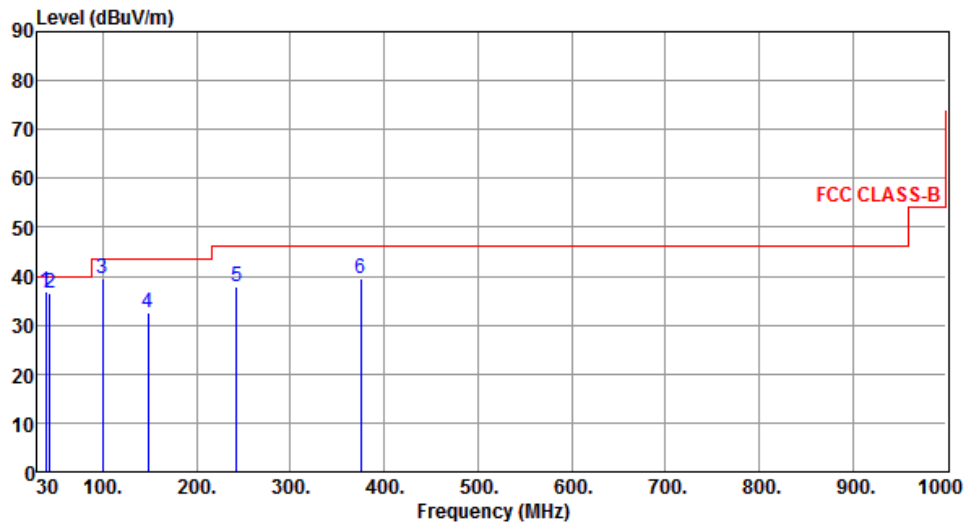
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	38.62	36.73	40.00	-3.27	48.72	-11.99	QP	110	16
2	43.44	36.47	40.00	-3.53	48.15	-11.68	QP	100	251
3	99.72	39.63	43.50	-3.87	56.32	-16.69	Peak	---	---
4	148.56	32.56	43.50	-10.94	44.53	-11.97	Peak	---	---
5	242.36	37.87	46.00	-8.13	50.82	-12.95	Peak	---	---
6	375.21	39.42	46.00	-6.58	48.75	-9.33	Peak	---	---

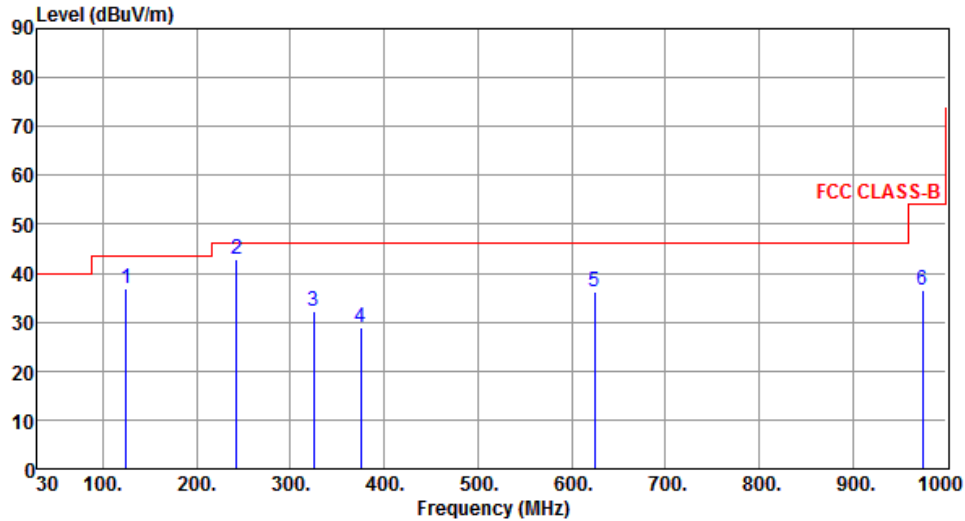
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5230
Polarization	Horizontal	Test Configuration	2



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	125.06	36.95	43.50	-6.55	50.52	-13.57	Peak	---	---
2	242.43	42.78	46.00	-3.22	55.73	-12.95	QP	111	278
3	324.88	32.15	46.00	-13.85	42.72	-10.57	Peak	---	---
4	375.32	28.94	46.00	-17.06	38.27	-9.33	Peak	---	---
5	624.61	36.27	46.00	-9.73	40.56	-4.29	Peak	---	---
6	974.78	36.63	54.00	-17.37	36.27	0.36	Peak	---	---

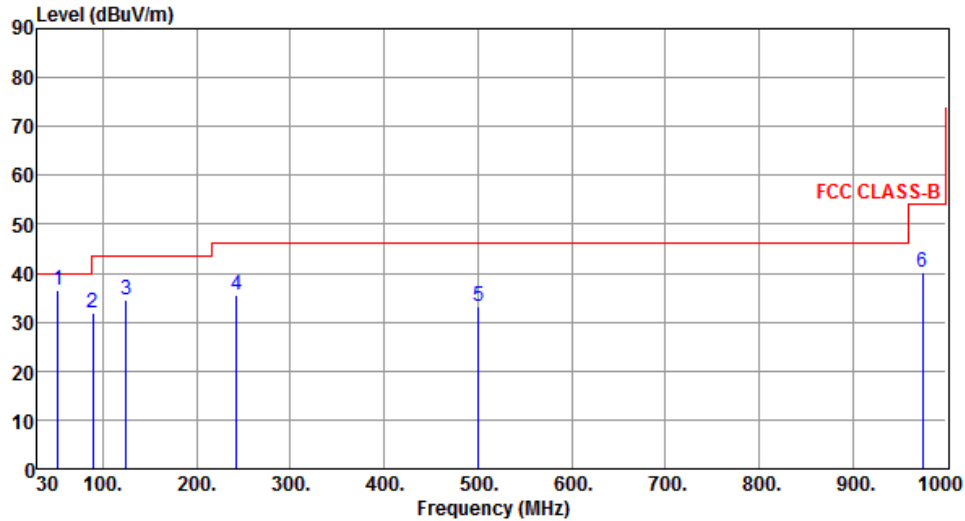
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5230
Polarization	Vertical	Test Configuration	2



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	52.31	36.51	40.00	-3.49	48.44	-11.93	Peak	---	---
2	89.17	31.72	43.50	-11.78	49.65	-17.93	Peak	---	---
3	125.06	34.61	43.50	-8.89	48.18	-13.57	Peak	---	---
4	242.43	35.40	46.00	-10.60	48.35	-12.95	Peak	---	---
5	500.45	33.07	46.00	-12.93	39.57	-6.50	Peak	---	---
6	974.78	40.31	54.00	-13.69	39.95	0.36	Peak	---	---

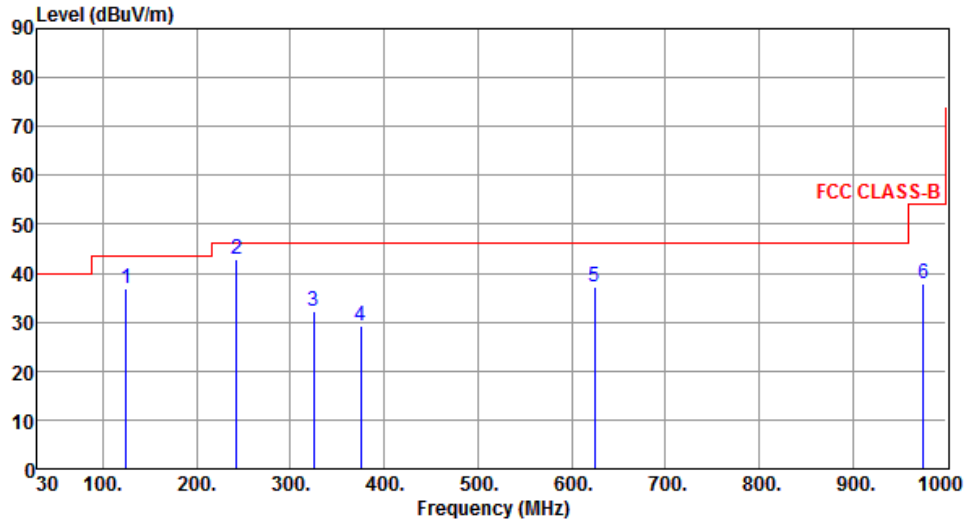
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	2



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	125.06	36.94	43.50	-6.56	50.51	-13.57	Peak	---	---
2	242.16	42.70	46.00	-3.30	55.66	-12.96	QP	105	275
3	324.96	32.15	46.00	-13.85	42.72	-10.57	Peak	---	---
4	375.32	29.32	46.00	-16.68	38.65	-9.33	Peak	---	---
5	624.91	37.05	46.00	-8.95	41.34	-4.29	Peak	---	---
6	975.12	37.90	54.00	-16.10	37.54	0.36	Peak	---	---

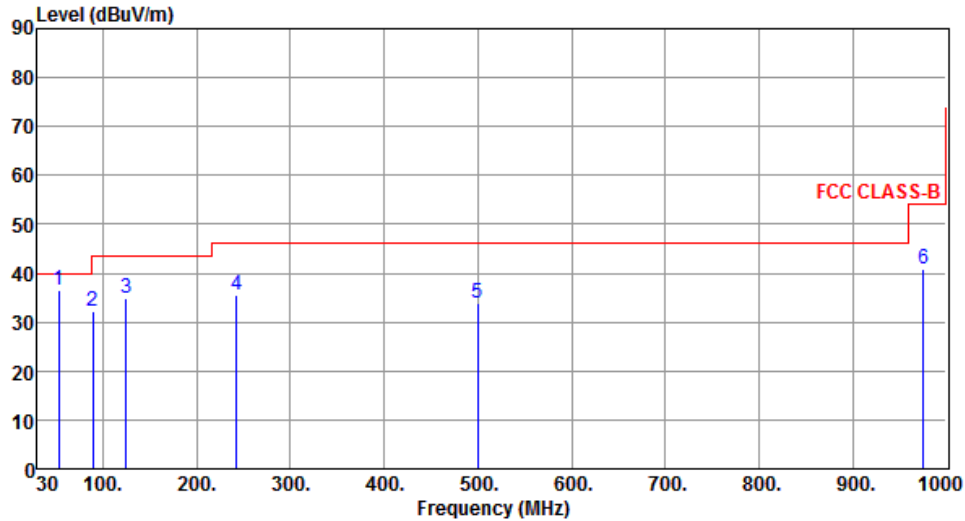
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	2



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	52.44	36.62	40.00	-3.38	48.57	-11.95	Peak	---	---
2	89.25	32.18	43.50	-11.32	50.13	-17.95	Peak	---	---
3	125.11	34.87	43.50	-8.63	48.44	-13.57	Peak	---	---
4	242.33	35.59	46.00	-10.41	48.54	-12.95	Peak	---	---
5	500.26	33.91	46.00	-12.09	40.42	-6.51	Peak	---	---
6	975.16	40.78	54.00	-13.22	40.42	0.36	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

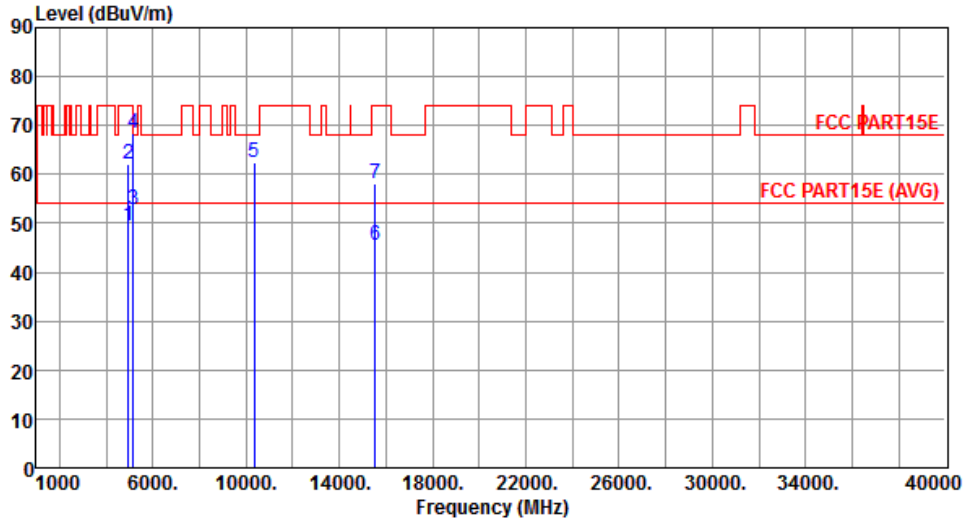
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

3.5.5 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11a

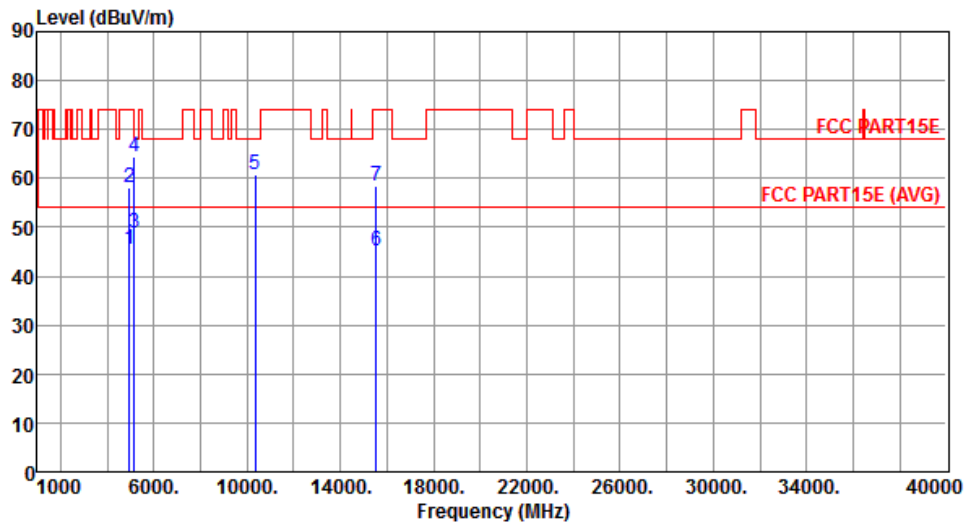
Modulation	11a	Test Freq. (MHz)	5180
Polarization	Horizontal	Test Configuration	1



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	49.63	54.00	-4.37	45.01	4.62	Average	227	231
2	4960.00	62.17	74.00	-11.83	57.55	4.62	Peak	227	231
3	5150.00	52.78	54.00	-1.22	47.88	4.90	Average	217	223
4	5150.00	68.45	74.00	-5.55	63.55	4.90	Peak	217	223
5	10360.00	62.43	68.20	-5.77	48.76	13.67	Peak	207	8
6	15540.00	45.50	54.00	-8.50	29.78	15.72	Average	189	355
7	15540.00	58.24	74.00	-15.76	42.52	15.72	Peak	189	355

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)
 *Factor includes antenna factor , cable loss and amplifier gain
 Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Modulation	11a	Test Freq. (MHz)	5180
Polarization	Vertical	Test Configuration	1



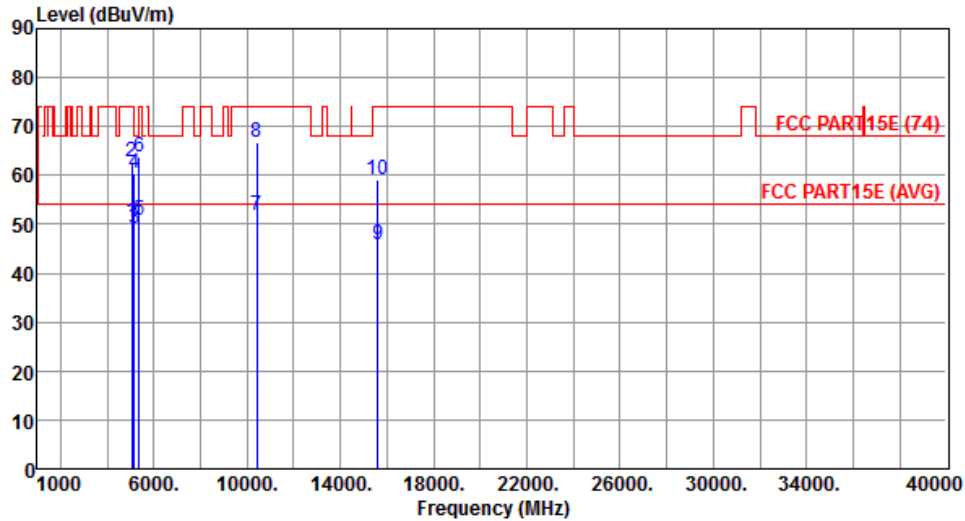
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	45.51	54.00	-8.49	40.89	4.62	Average	215	222
2	4960.00	58.22	74.00	-15.78	53.60	4.62	Peak	215	222
3	5150.00	48.78	54.00	-5.22	43.88	4.90	Average	233	266
4	5150.00	64.45	74.00	-9.55	59.55	4.90	Peak	233	266
5	10360.00	60.92	68.20	-7.28	47.25	13.67	Peak	189	322
6	15540.00	45.01	54.00	-8.99	29.29	15.72	Average	200	296
7	15540.00	58.30	74.00	-15.70	42.58	15.72	Peak	200	296

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Horizontal	Test Configuration	1



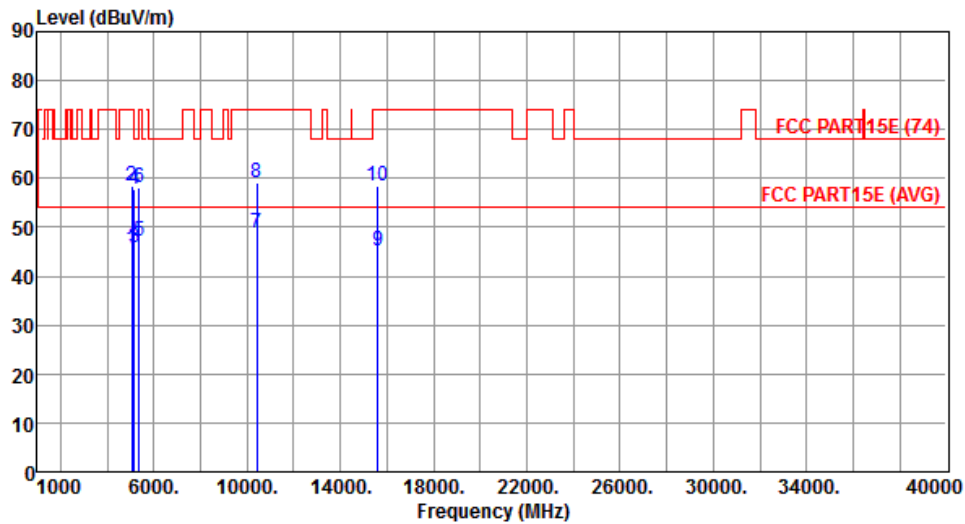
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5038.00	50.33	54.00	-3.67	45.56	4.77	Average	215	222
2	5038.00	62.86	74.00	-11.14	58.09	4.77	Peak	215	222
3	5150.00	49.23	54.00	-4.77	44.33	4.90	Average	216	225
4	5150.00	60.52	74.00	-13.48	55.62	4.90	Peak	216	225
5	5350.00	50.73	54.00	-3.27	45.60	5.13	Average	217	219
6	5350.00	63.83	74.00	-10.17	58.70	5.13	Peak	215	225
7	10400.00	51.71	54.00	-2.29	37.96	13.75	Average	184	20
8	10400.00	66.75	74.00	-7.25	53.00	13.75	Peak	184	20
9	15600.00	45.86	54.00	-8.14	30.25	15.61	Average	228	63
10	15600.00	59.11	74.00	-14.89	43.50	15.61	Peak	228	63

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11a	Test Freq. (MHz)	5200
Polarization	Vertical	Test Configuration	1



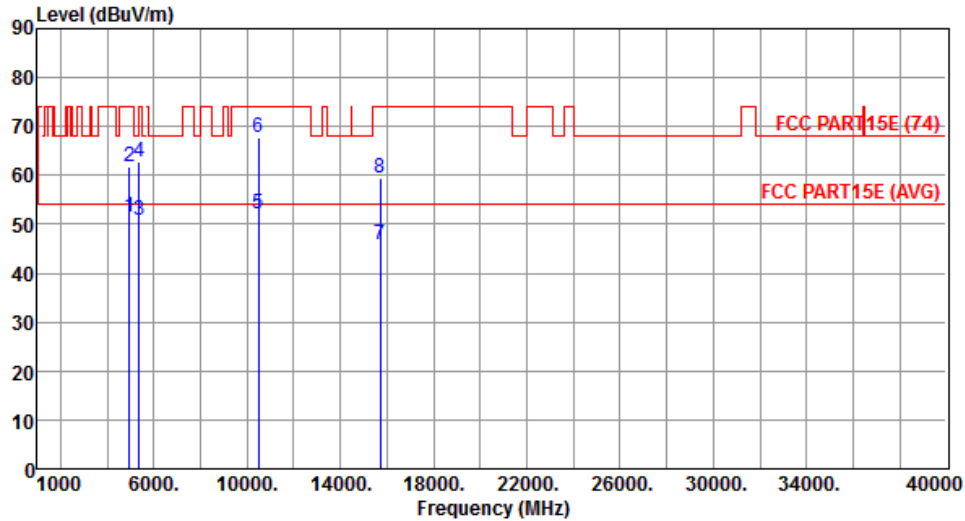
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5038.00	45.46	54.00	-8.54	40.69	4.77	Average	211	220
2	5038.00	58.38	74.00	-15.62	53.61	4.77	Peak	211	220
3	5150.00	45.78	54.00	-8.22	40.88	4.90	Average	225	232
4	5150.00	57.89	74.00	-16.11	52.99	4.90	Peak	225	232
5	5350.00	47.00	54.00	-7.00	41.87	5.13	Average	225	232
6	5350.00	58.12	74.00	-15.88	52.99	5.13	Peak	225	232
7	10400.00	48.80	54.00	-5.20	35.05	13.75	Average	212	292
8	10400.00	59.26	74.00	-14.74	45.51	13.75	Peak	212	292
9	15600.00	45.30	54.00	-8.70	29.69	15.61	Average	247	89
10	15600.00	58.46	74.00	-15.54	42.85	15.61	Peak	247	89

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Horizontal	Test Configuration	1



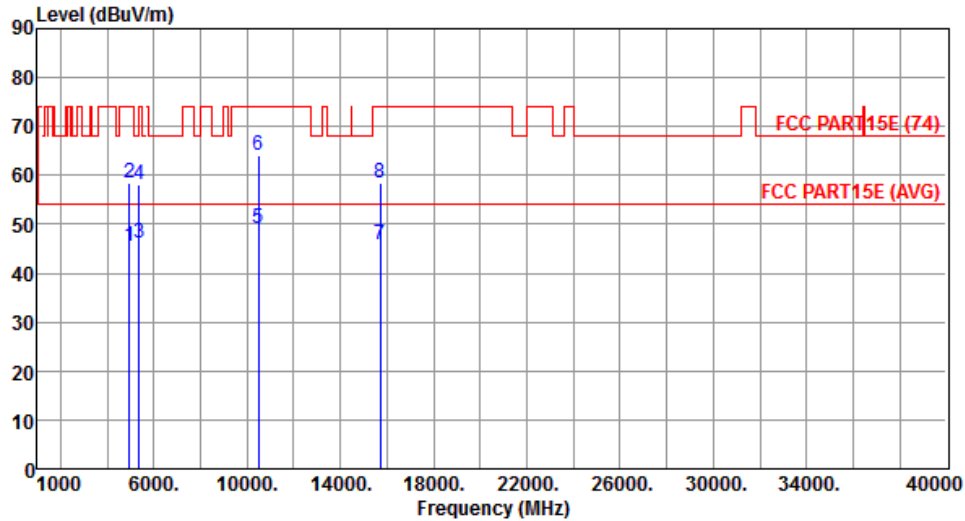
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	51.61	54.00	-2.39	46.99	4.62	Average	233	332
2	4960.00	61.88	74.00	-12.12	57.26	4.62	Peak	233	332
3	5350.00	50.68	54.00	-3.32	45.55	5.13	Average	230	224
4	5350.00	62.82	74.00	-11.18	57.69	5.13	Peak	230	224
5	10480.00	52.19	54.00	-1.81	38.29	13.90	Average	206	321
6	10480.00	67.59	74.00	-6.41	53.69	13.90	Peak	206	321
7	15720.00	45.77	54.00	-8.23	30.38	15.39	Average	200	333
8	15720.00	59.38	74.00	-14.62	43.99	15.39	Peak	200	333

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11a	Test Freq. (MHz)	5240
Polarization	Vertical	Test Configuration	1



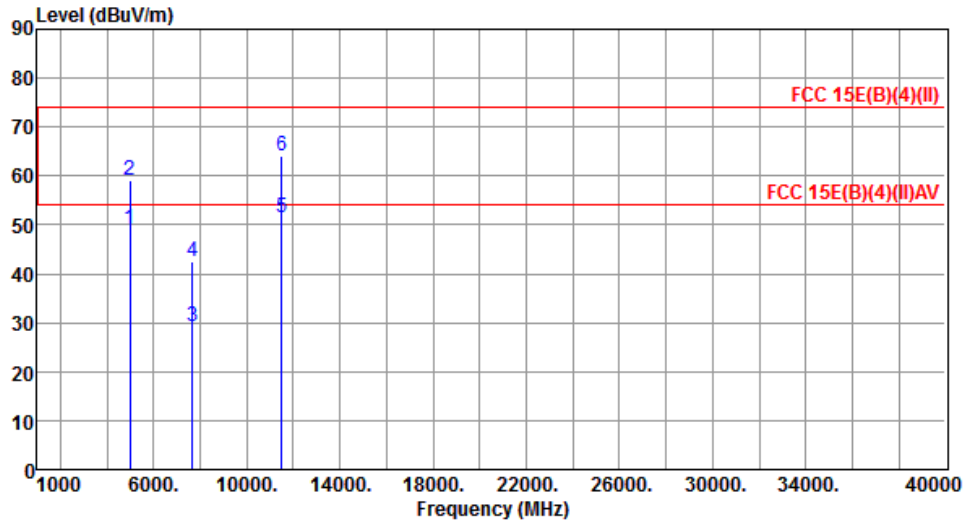
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	45.52	54.00	-8.48	40.90	4.62	Average	241	226
2	4960.00	58.41	74.00	-15.59	53.79	4.62	Peak	241	226
3	5350.00	46.01	54.00	-7.99	40.88	5.13	Average	225	212
4	5350.00	57.98	74.00	-16.02	52.85	5.13	Peak	225	212
5	10480.00	49.24	54.00	-4.76	35.34	13.90	Average	322	39
6	10480.00	64.21	74.00	-9.79	50.31	13.90	Peak	322	39
7	15720.00	45.76	54.00	-8.24	30.37	15.39	Average	255	39
8	15720.00	58.49	74.00	-15.51	43.10	15.39	Peak	255	39

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal	Test Configuration	1



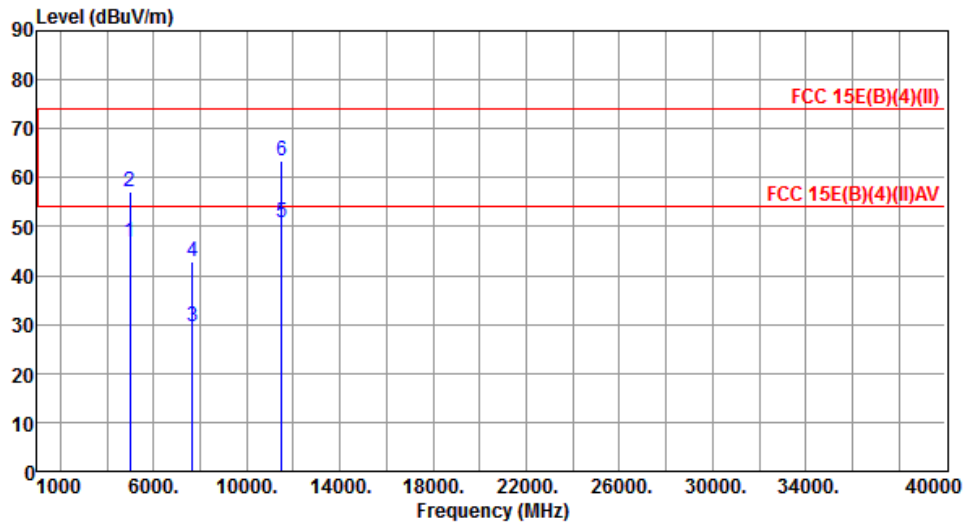
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	49.07	54.00	-4.93	44.33	4.74	Average	201	335
2	5000.00	59.00	74.00	-15.00	54.26	4.74	Peak	201	335
3	7660.00	29.36	54.00	-24.64	19.64	9.72	Average	305	215
4	7660.00	42.64	74.00	-31.36	32.92	9.72	Peak	305	215
5	11490.00	51.46	54.00	-2.54	36.84	14.62	Average	182	95
6	11490.00	63.95	74.00	-10.05	49.33	14.62	Peak	182	95

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11a	Test Freq. (MHz)	5745
Polarization	Vertical	Test Configuration	1



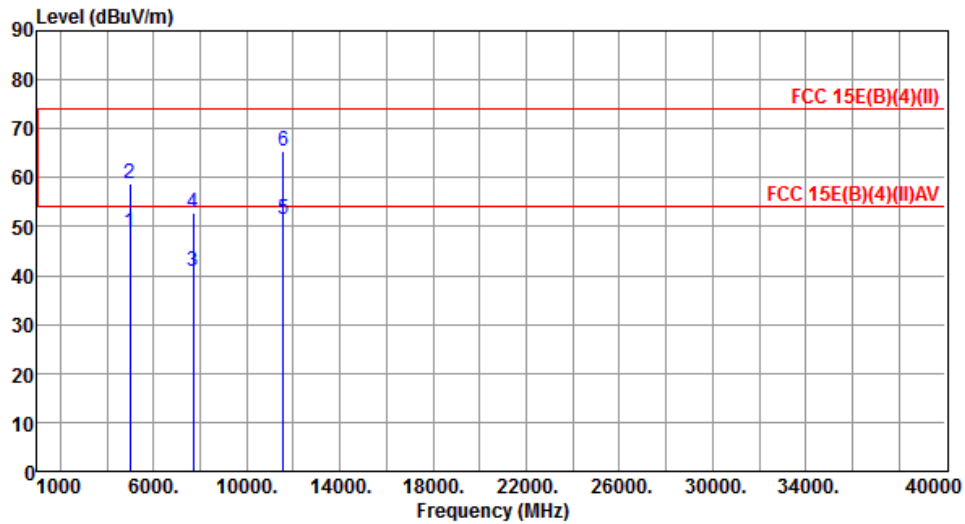
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	46.77	54.00	-7.23	42.03	4.74	Average	196	274
2	5000.00	57.00	74.00	-17.00	52.26	4.74	Peak	196	274
3	7660.00	29.45	54.00	-24.55	19.73	9.72	Average	157	157
4	7660.00	42.69	74.00	-31.31	32.97	9.72	Peak	157	157
5	11490.00	50.96	54.00	-3.04	36.34	14.62	Average	198	33
6	11490.00	63.60	74.00	-10.40	48.98	14.62	Peak	198	33

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	1



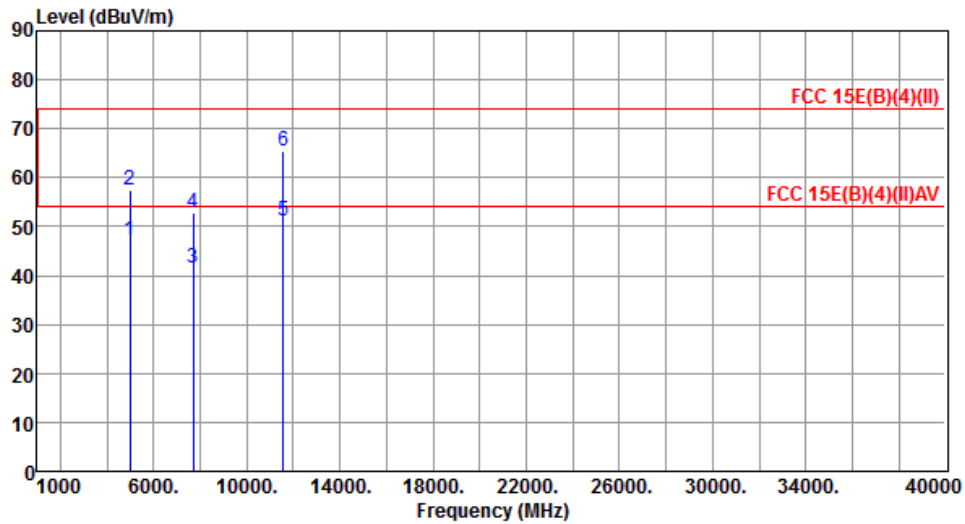
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	48.84	54.00	-5.16	44.10	4.74	Average	215	327
2	5000.00	58.84	74.00	-15.16	54.10	4.74	Peak	215	327
3	7713.00	40.83	54.00	-13.17	31.07	9.76	Average	264	0
4	7713.00	52.80	74.00	-21.20	43.04	9.76	Peak	264	0
5	11570.00	51.35	54.00	-2.65	36.83	14.52	Average	208	85
6	11570.00	65.43	74.00	-8.57	50.91	14.52	Peak	208	85

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11a	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	1



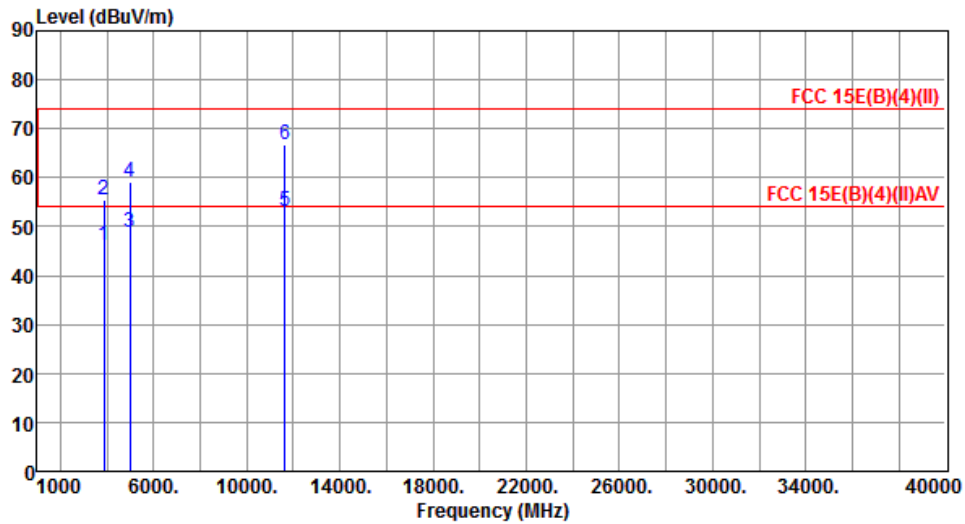
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	47.04	54.00	-6.96	42.30	4.74	Average	179	281
2	5000.00	57.51	74.00	-16.49	52.77	4.74	Peak	179	281
3	7713.00	41.50	54.00	-12.50	31.74	9.76	Average	100	342
4	7713.00	52.89	74.00	-21.11	43.13	9.76	Peak	100	342
5	11570.00	51.12	54.00	-2.88	36.60	14.52	Average	206	32
6	11570.00	65.50	74.00	-8.50	50.98	14.52	Peak	206	32

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Horizontal	Test Configuration	1



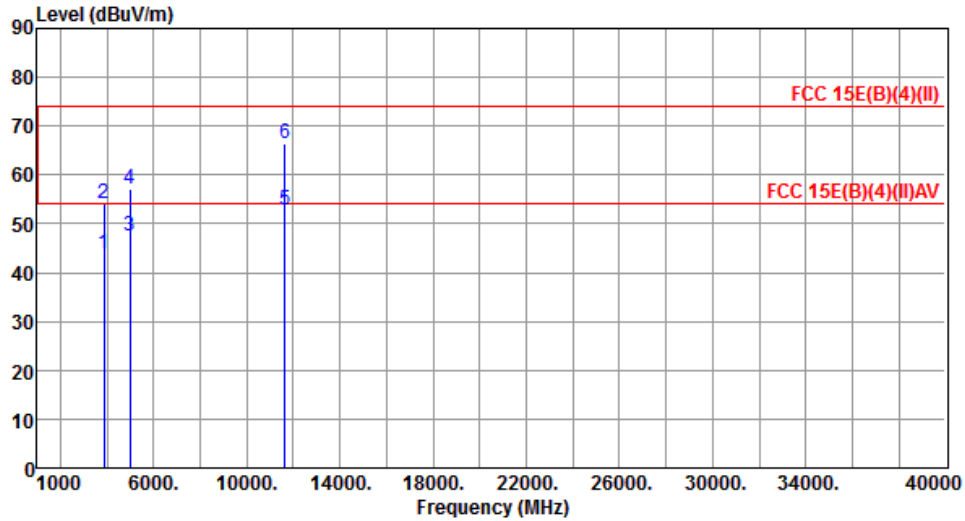
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	46.04	54.00	-7.96	44.68	1.36	Average	244	157
2	3883.33	55.62	74.00	-18.38	54.26	1.36	Peak	244	157
3	5000.00	48.92	54.00	-5.08	44.18	4.74	Average	234	345
4	5000.00	59.04	74.00	-14.96	54.30	4.74	Peak	234	345
5	11650.00	52.98	54.00	-1.02	38.58	14.40	Average	353	78
6	11650.00	66.85	74.00	-7.15	52.45	14.40	Peak	353	78

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Modulation	11a	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	43.72	54.00	-10.28	42.36	1.36	Average	262	55
2	3883.33	54.02	74.00	-19.98	52.66	1.36	Peak	262	55
3	5000.00	47.40	54.00	-6.60	42.66	4.74	Average	187	280
4	5000.00	57.10	74.00	-16.90	52.36	4.74	Peak	187	280
5	11650.00	52.67	54.00	-1.33	38.27	14.40	Average	357	0
6	11650.00	66.38	74.00	-7.62	51.98	14.40	Peak	357	0

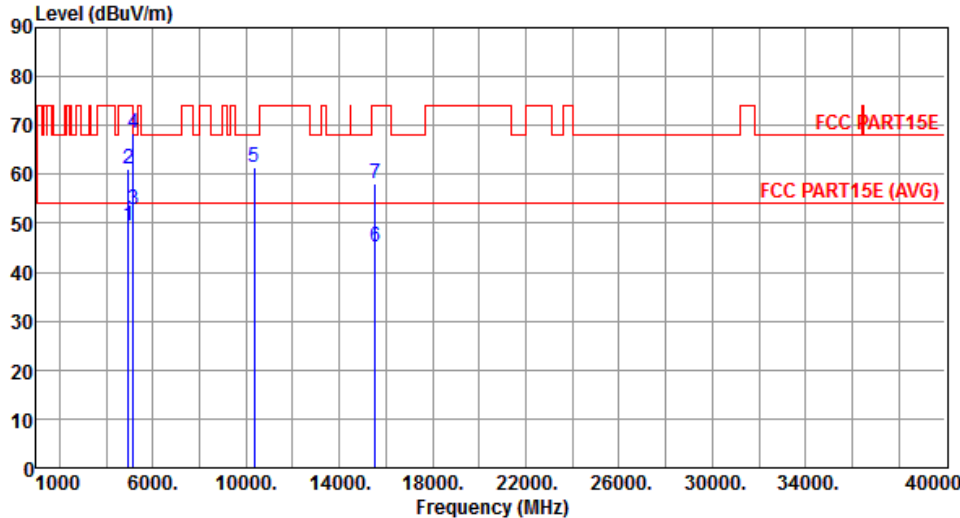
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT20

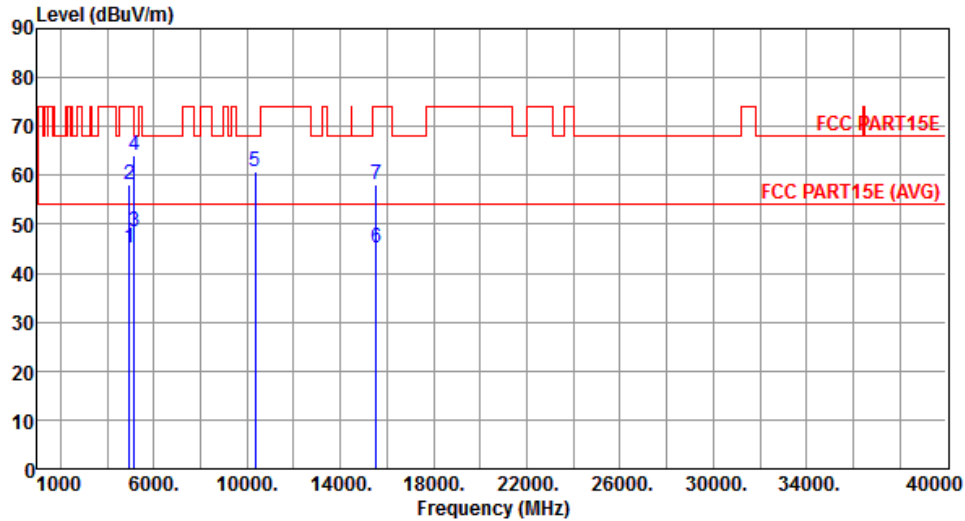
Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Horizontal	Test Configuration	1



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	49.48	54.00	-4.52	44.86	4.62	Average	195	223
2	4960.00	60.96	74.00	-13.04	56.34	4.62	Peak	195	223
3	5150.00	52.92	54.00	-1.08	48.02	4.90	Average	195	228
4	5150.00	68.56	74.00	-5.44	63.66	4.90	Peak	195	228
5	10360.00	61.33	68.20	-6.87	47.66	13.67	Peak	225	352
6	15540.00	45.12	54.00	-8.88	29.40	15.72	Average	177	5
7	15540.00	58.12	74.00	-15.88	42.40	15.72	Peak	177	5

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)
 *Factor includes antenna factor , cable loss and amplifier gain
 Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Modulation	VHT20	Test Freq. (MHz)	5180
Polarization	Vertical	Test Configuration	1



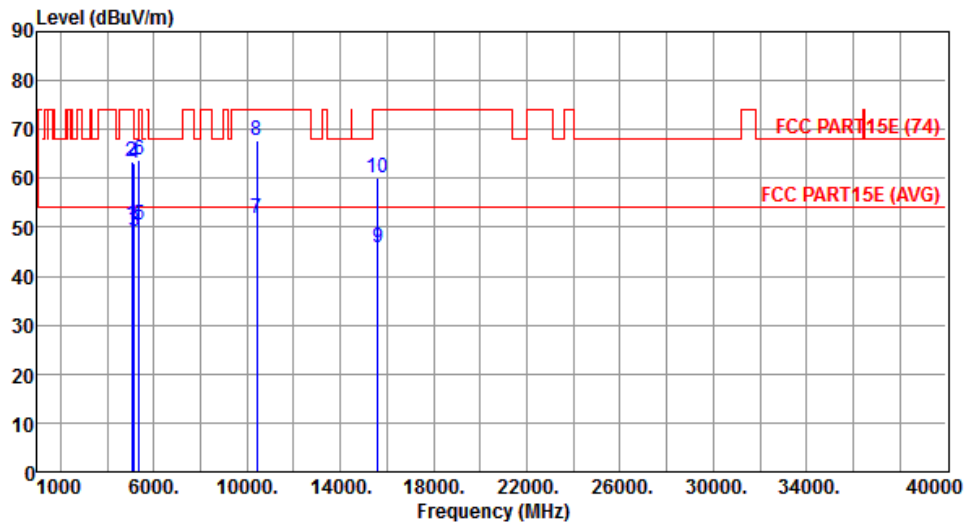
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	45.12	54.00	-8.88	40.50	4.62	Average	200	200
2	4960.00	58.02	74.00	-15.98	53.40	4.62	Peak	200	200
3	5150.00	48.63	54.00	-5.37	43.73	4.90	Average	216	331
4	5150.00	64.23	74.00	-9.77	59.33	4.90	Peak	216	331
5	10360.00	60.81	68.20	-7.39	47.14	13.67	Peak	200	236
6	15540.00	45.22	54.00	-8.78	29.50	15.72	Average	200	236
7	15540.00	58.12	74.00	-15.88	42.40	15.72	Peak	200	236

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Horizontal	Test Configuration	1



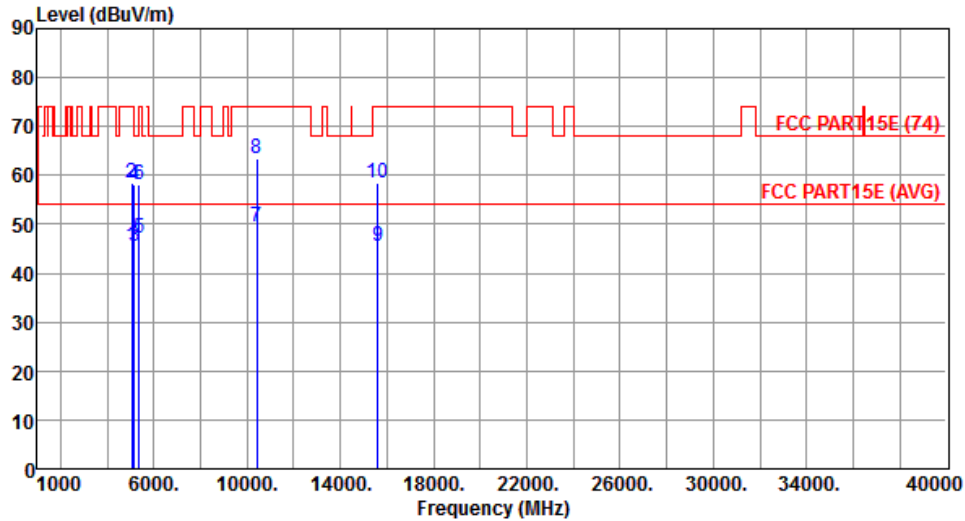
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5038.00	50.36	54.00	-3.64	45.59	4.77	Average	244	233
2	5038.00	63.48	74.00	-10.52	58.71	4.77	Peak	244	233
3	5150.00	49.02	54.00	-4.98	44.12	4.90	Average	243	231
4	5150.00	63.20	74.00	-10.80	58.30	4.90	Peak	243	231
5	5350.00	50.59	54.00	-3.41	45.46	5.13	Average	240	250
6	5350.00	63.78	74.00	-10.22	58.65	5.13	Peak	240	250
7	10400.00	51.76	54.00	-2.24	38.01	13.75	Average	200	341
8	10400.00	67.85	74.00	-6.15	54.10	13.75	Peak	200	341
9	15600.00	45.77	54.00	-8.23	30.16	15.61	Average	258	345
10	15600.00	59.96	74.00	-14.04	44.35	15.61	Peak	258	345

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT20	Test Freq. (MHz)	5200
Polarization	Vertical	Test Configuration	1



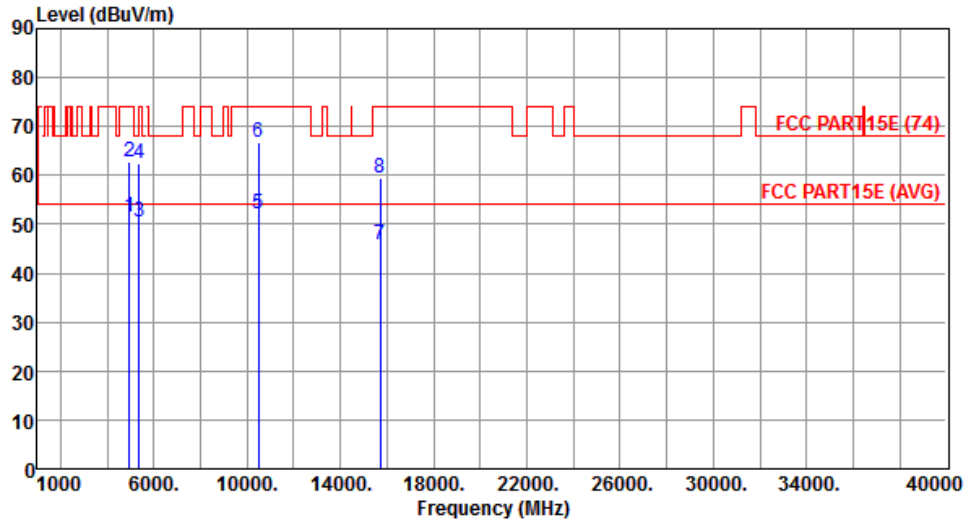
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5038.00	45.41	54.00	-8.59	40.64	4.77	Average	199	225
2	5038.00	58.41	74.00	-15.59	53.64	4.77	Peak	199	225
3	5150.00	45.65	54.00	-8.35	40.75	4.90	Average	215	258
4	5150.00	58.21	74.00	-15.79	53.31	4.90	Peak	215	258
5	5350.00	47.12	54.00	-6.88	41.99	5.13	Average	200	229
6	5350.00	58.25	74.00	-15.75	53.12	5.13	Peak	200	229
7	10400.00	49.33	54.00	-4.67	35.58	13.75	Average	220	302
8	10400.00	63.39	74.00	-10.61	49.64	13.75	Peak	220	302
9	15600.00	45.55	54.00	-8.45	29.94	15.61	Average	255	277
10	15600.00	58.51	74.00	-15.49	42.90	15.61	Peak	255	277

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Horizontal	Test Configuration	1



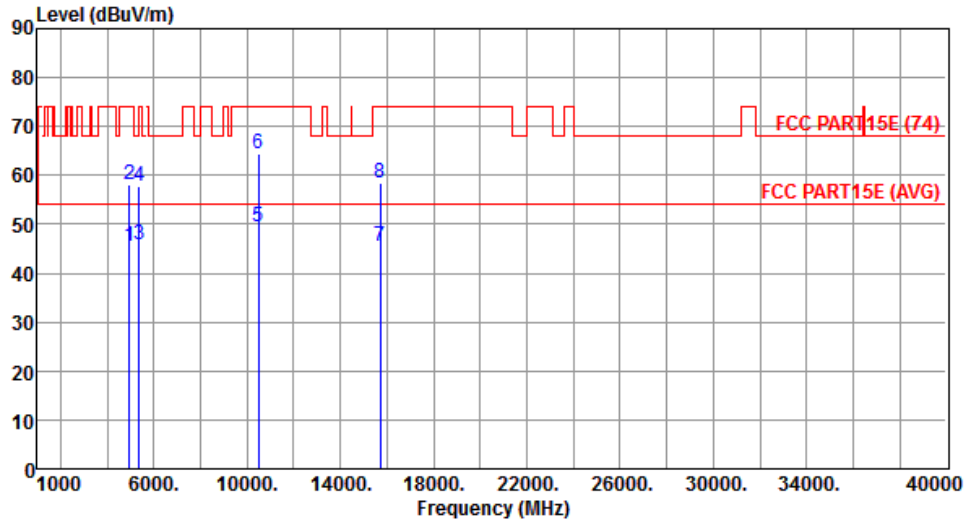
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	51.51	54.00	-2.49	46.89	4.62	Average	244	220
2	4960.00	62.88	74.00	-11.12	58.26	4.62	Peak	244	220
3	5350.00	50.48	54.00	-3.52	45.35	5.13	Average	250	228
4	5350.00	62.57	74.00	-11.43	57.44	5.13	Peak	251	227
5	10480.00	52.08	54.00	-1.92	38.18	13.90	Average	223	335
6	10480.00	66.75	74.00	-7.25	52.85	13.90	Peak	223	335
7	15720.00	45.85	54.00	-8.15	30.46	15.39	Average	199	349
8	15720.00	59.45	74.00	-14.55	44.06	15.39	Peak	199	349

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT20	Test Freq. (MHz)	5240
Polarization	Vertical	Test Configuration	1



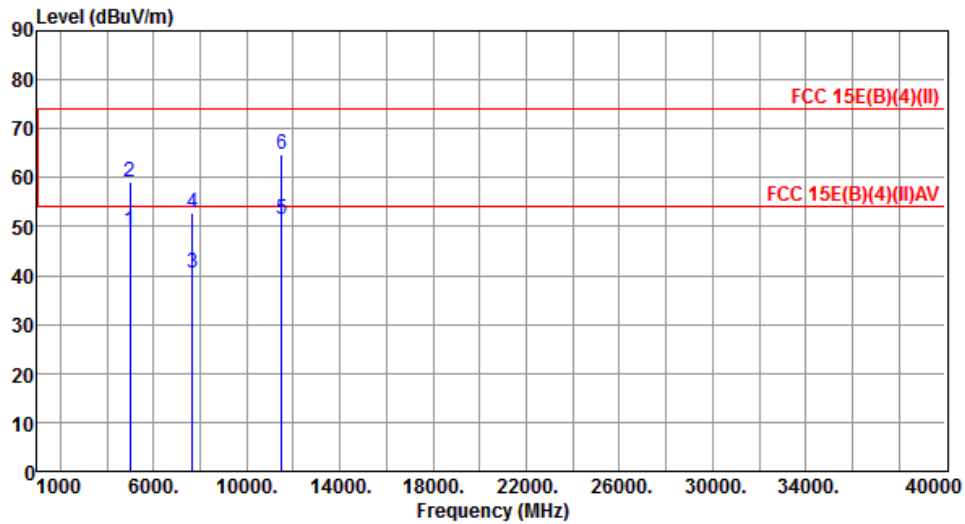
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	45.45	54.00	-8.55	40.83	4.62	Average	236	203
2	4960.00	58.22	74.00	-15.78	53.60	4.62	Peak	236	203
3	5350.00	45.90	54.00	-8.10	40.77	5.13	Average	212	200
4	5350.00	57.65	74.00	-16.35	52.52	5.13	Peak	212	200
5	10480.00	49.35	54.00	-4.65	35.45	13.90	Average	311	55
6	10480.00	64.35	74.00	-9.65	50.45	13.90	Peak	311	55
7	15720.00	45.65	54.00	-8.35	30.26	15.39	Average	243	352
8	15720.00	58.59	74.00	-15.41	43.20	15.39	Peak	243	352

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Horizontal	Test Configuration	1



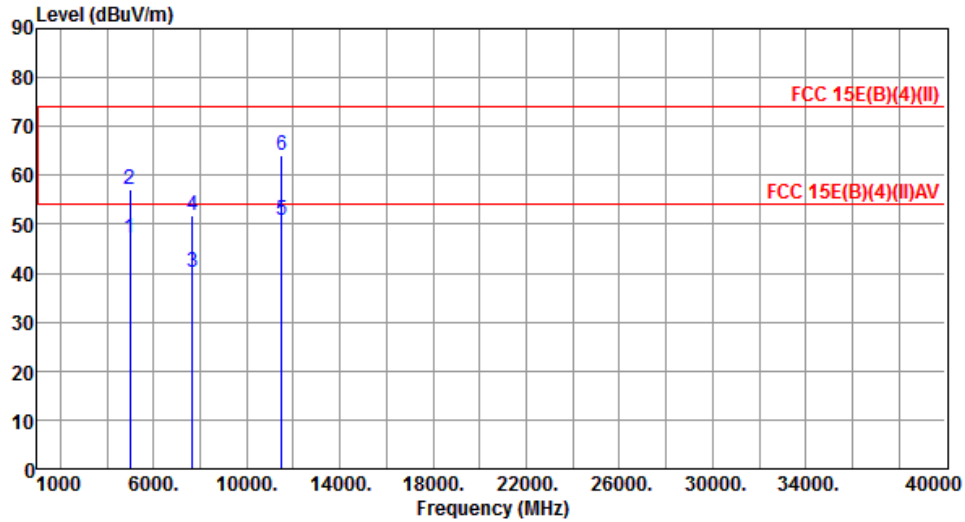
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	49.25	54.00	-4.75	44.51	4.74	Average	233	324
2	5000.00	59.10	74.00	-14.90	54.36	4.74	Peak	233	324
3	7660.00	40.64	54.00	-13.36	30.92	9.72	Average	100	41
4	7660.00	52.64	74.00	-21.36	42.92	9.72	Peak	100	41
5	11490.00	51.42	54.00	-2.58	36.80	14.62	Average	204	88
6	11490.00	64.69	74.00	-9.31	50.07	14.62	Peak	204	88

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT20	Test Freq. (MHz)	5745
Polarization	Vertical	Test Configuration	1



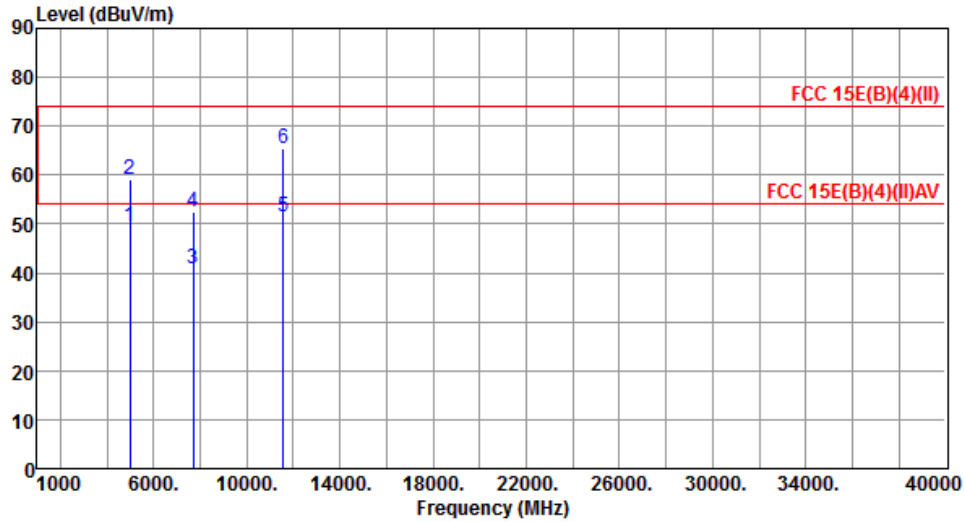
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	47.10	54.00	-6.90	42.36	4.74	Average	172	281
2	5000.00	57.07	74.00	-16.93	52.33	4.74	Peak	172	281
3	7660.00	40.04	54.00	-13.96	30.32	9.72	Average	100	313
4	7660.00	51.83	74.00	-22.17	42.11	9.72	Peak	100	313
5	11490.00	50.81	54.00	-3.19	36.19	14.62	Average	211	33
6	11490.00	63.99	74.00	-10.01	49.37	14.62	Peak	211	33

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	1



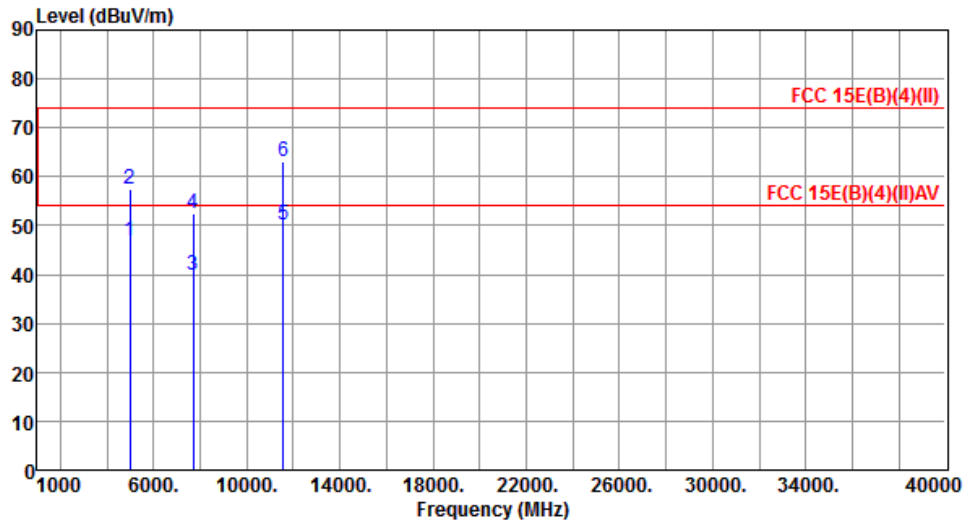
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	49.55	54.00	-4.45	44.81	4.74	Average	221	329
2	5000.00	59.02	74.00	-14.98	54.28	4.74	Peak	221	329
3	7713.00	40.70	54.00	-13.30	30.94	9.76	Average	100	0
4	7713.00	52.63	74.00	-21.37	42.87	9.76	Peak	100	0
5	11570.00	51.42	54.00	-2.58	36.90	14.52	Average	204	85
6	11570.00	65.42	74.00	-8.58	50.90	14.52	Peak	204	85

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	1



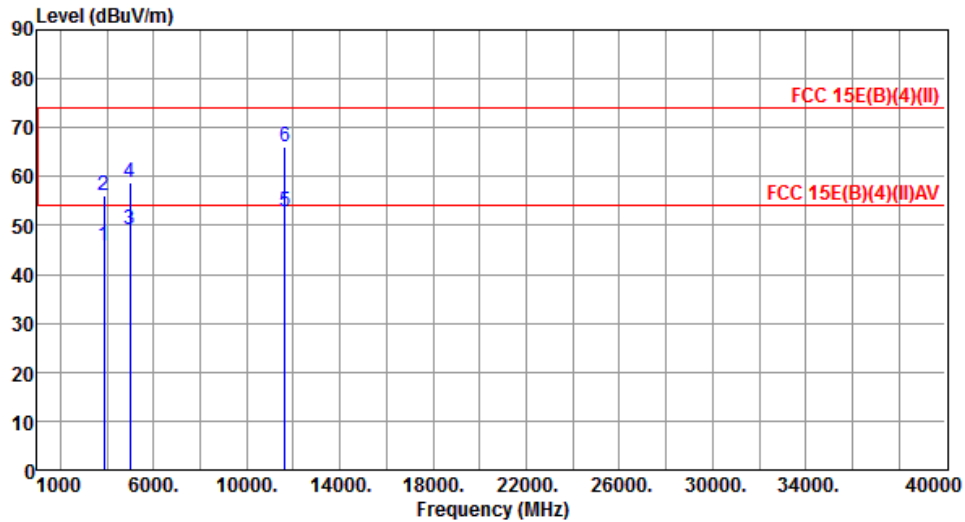
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	46.83	54.00	-7.17	42.09	4.74	Average	157	285
2	5000.00	57.34	74.00	-16.66	52.60	4.74	Peak	157	285
3	7713.00	39.89	54.00	-14.11	30.13	9.76	Average	100	188
4	7713.00	52.63	74.00	-21.37	42.87	9.76	Peak	100	188
5	11570.00	50.15	54.00	-3.85	35.63	14.52	Average	238	35
6	11570.00	63.21	74.00	-10.79	48.69	14.52	Peak	238	35

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Horizontal	Test Configuration	1



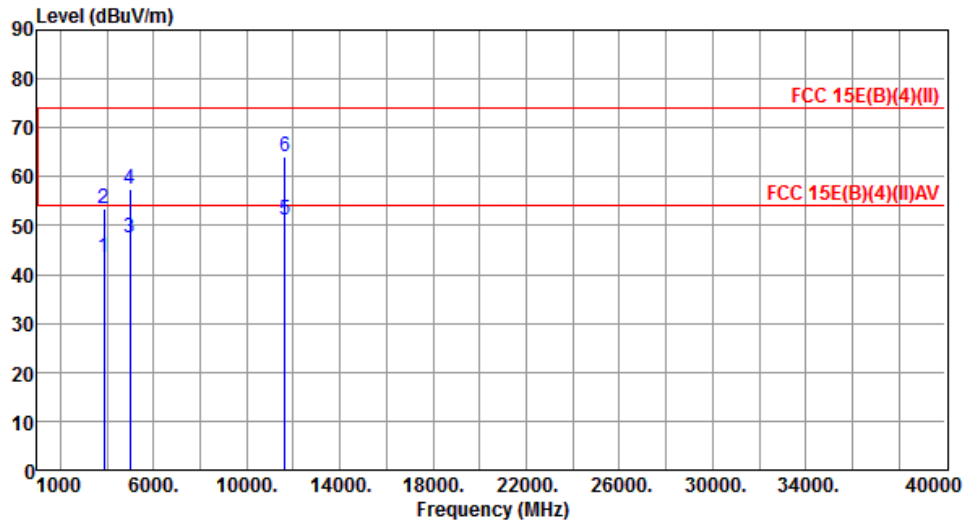
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	45.72	54.00	-8.28	44.36	1.36	Average	157	135
2	3883.33	56.02	74.00	-17.98	54.66	1.36	Peak	157	135
3	5000.00	49.01	54.00	-4.99	44.27	4.74	Average	209	329
4	5000.00	58.93	74.00	-15.07	54.19	4.74	Peak	209	329
5	11650.00	52.71	54.00	-1.29	38.31	14.40	Average	269	93
6	11650.00	66.03	74.00	-7.97	51.63	14.40	Peak	269	93

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT20	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	3883.33	43.62	54.00	-10.38	42.26	1.36	Average	195	225
2	3883.33	53.62	74.00	-20.38	52.26	1.36	Peak	195	225
3	5000.00	47.64	54.00	-6.36	42.90	4.74	Average	175	267
4	5000.00	57.44	74.00	-16.56	52.70	4.74	Peak	175	267
5	11650.00	51.10	54.00	-2.90	36.70	14.40	Average	200	218
6	11650.00	64.25	74.00	-9.75	49.85	14.40	Peak	200	218

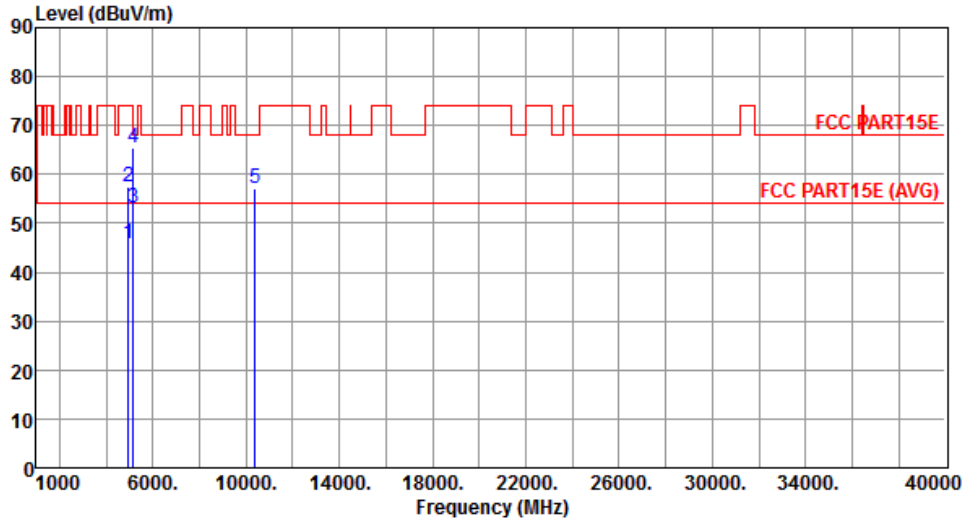
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT40

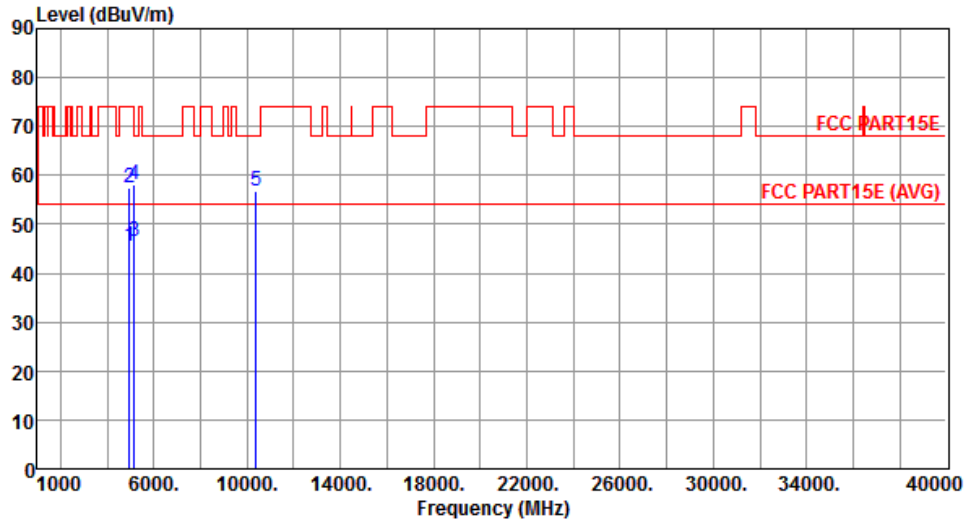
Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Horizontal	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	45.85	54.00	-8.15	41.23	4.62	Average	195	325
2	4960.00	57.51	74.00	-16.49	52.89	4.62	Peak	195	325
3	5150.00	52.99	54.00	-1.01	48.09	4.90	Average	194	314
4	5150.00	65.33	74.00	-8.67	60.43	4.90	Peak	194	314
5	10380.00	57.26	68.20	-10.94	43.55	13.71	Peak	225	341

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
 *Factor includes antenna factor , cable loss and amplifier gain
 Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT40	Test Freq. (MHz)	5190
Polarization	Vertical	Test Configuration	1



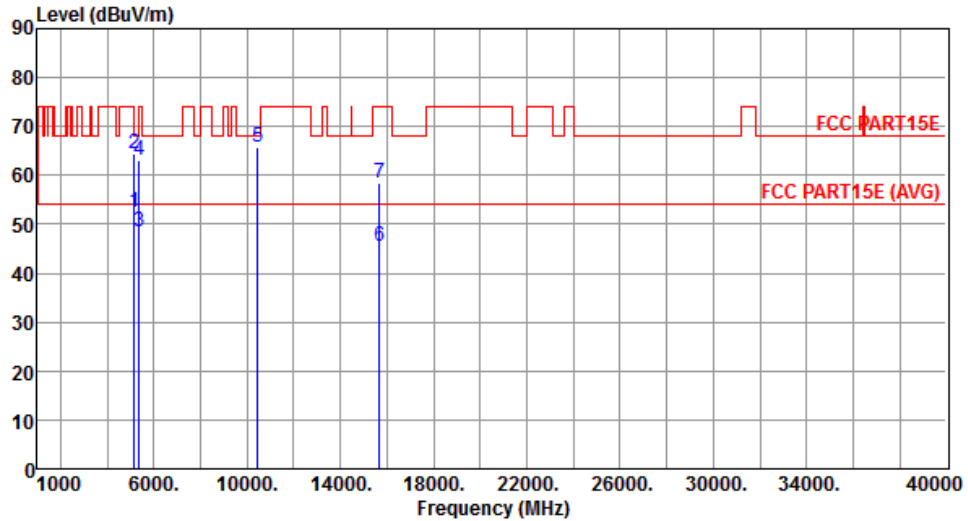
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	4960.00	45.48	54.00	-8.52	40.86	4.62	Average	179	355
2	4960.00	57.37	74.00	-16.63	52.75	4.62	Peak	179	355
3	5150.00	46.45	54.00	-7.55	41.55	4.90	Average	179	355
4	5150.00	58.12	74.00	-15.88	53.22	4.90	Peak	179	355
5	10380.00	56.69	68.20	-11.51	42.98	13.71	Peak	185	22

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Horizontal	Test Configuration	1



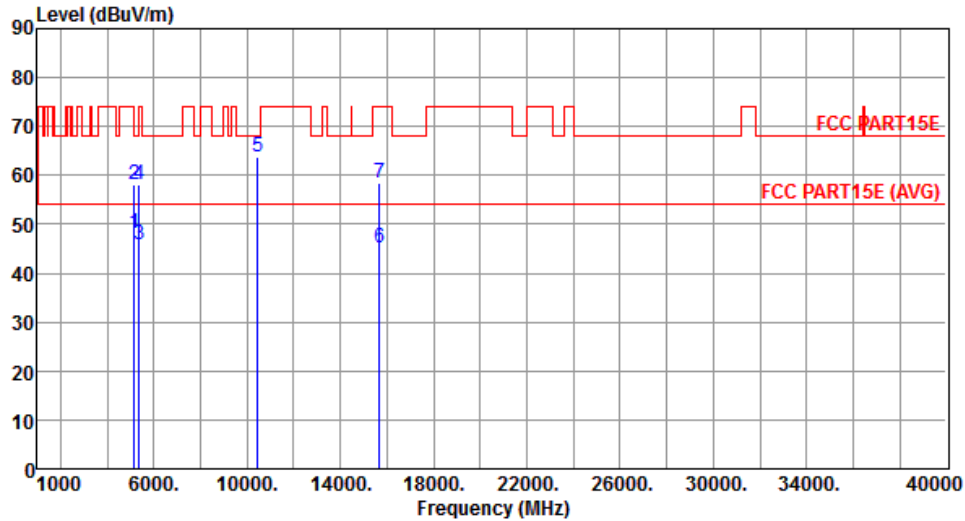
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.40	54.00	-1.60	47.50	4.90	Average	194	226
2	5150.00	64.56	74.00	-9.44	59.66	4.90	Peak	194	226
3	5350.00	48.57	54.00	-5.43	43.44	5.13	Average	194	226
4	5350.00	63.25	74.00	-10.75	58.12	5.13	Peak	194	226
5	10460.00	65.71	68.20	-2.49	51.85	13.86	Peak	165	339
6	15690.00	45.46	54.00	-8.54	30.03	15.43	Average	177	196
7	15690.00	58.56	74.00	-15.44	43.13	15.43	Peak	177	196

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Modulation	VHT40	Test Freq. (MHz)	5230
Polarization	Vertical	Test Configuration	1



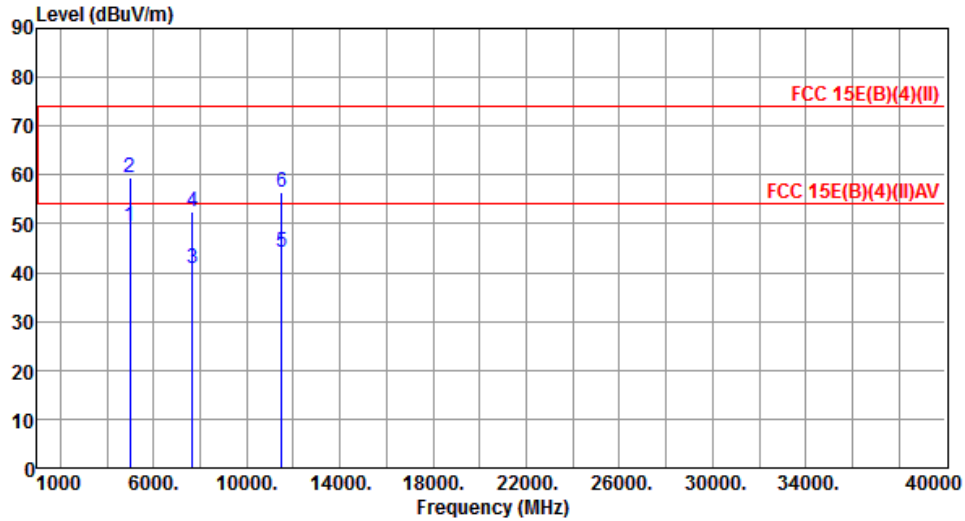
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	48.15	54.00	-5.85	43.25	4.90	Average	230	341
2	5150.00	58.02	74.00	-15.98	53.12	4.90	Peak	230	341
3	5350.00	45.94	54.00	-8.06	40.81	5.13	Average	233	344
4	5350.00	57.98	74.00	-16.02	52.85	5.13	Peak	233	344
5	10460.00	63.61	68.20	-4.59	49.75	13.86	Peak	185	229
6	15690.00	45.09	54.00	-8.91	29.66	15.43	Average	220	252
7	15690.00	58.29	74.00	-15.71	42.86	15.43	Peak	220	252

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Horizontal	Test Configuration	1



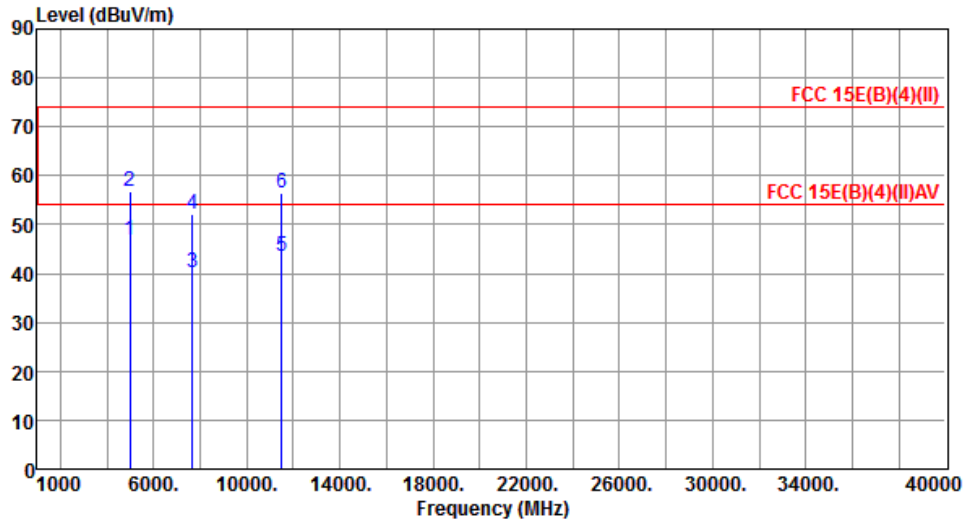
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	49.48	54.00	-4.52	44.74	4.74	Average	171	269
2	5000.00	59.33	74.00	-14.67	54.59	4.74	Peak	171	269
3	7673.00	40.71	54.00	-13.29	30.99	9.72	Average	100	297
4	7673.00	52.61	74.00	-21.39	42.89	9.72	Peak	100	297
5	11510.00	44.10	54.00	-9.90	29.48	14.62	Average	100	68
6	11510.00	56.50	74.00	-17.50	41.88	14.62	Peak	100	68

Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBUV/m) – Limit (dBUV/m).

Modulation	VHT40	Test Freq. (MHz)	5755
Polarization	Vertical	Test Configuration	1



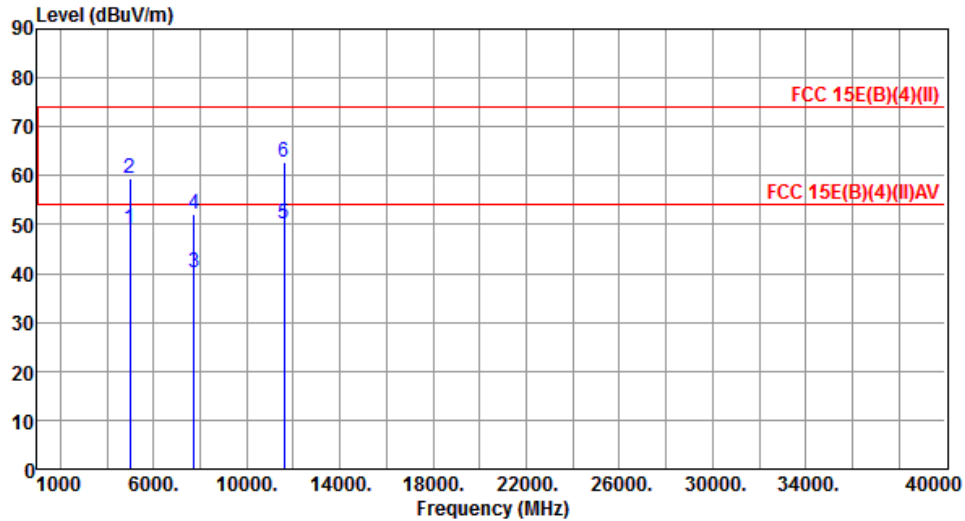
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	46.82	54.00	-7.18	42.08	4.74	Average	156	290
2	5000.00	56.93	74.00	-17.07	52.19	4.74	Peak	156	290
3	7673.00	40.04	54.00	-13.96	30.32	9.72	Average	100	43
4	7673.00	52.07	74.00	-21.93	42.35	9.72	Peak	100	43
5	11510.00	43.58	54.00	-10.42	28.96	14.62	Average	100	344
6	11510.00	56.35	74.00	-17.65	41.73	14.62	Peak	100	344

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Horizontal	Test Configuration	1



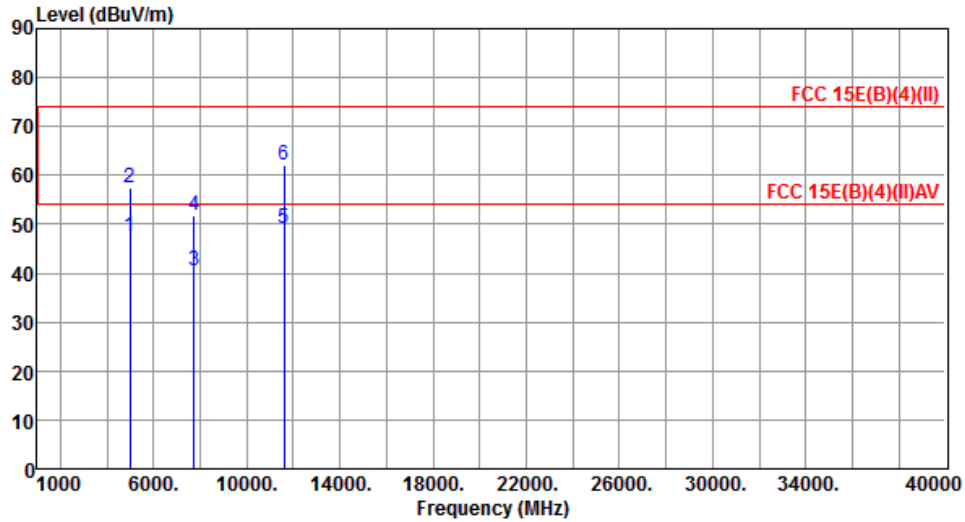
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	49.03	54.00	-4.97	44.29	4.74	Average	201	325
2	5000.00	59.36	74.00	-14.64	54.62	4.74	Peak	201	325
3	7726.00	40.35	54.00	-13.65	30.57	9.78	Average	100	283
4	7726.00	52.13	74.00	-21.87	42.35	9.78	Peak	100	283
5	11590.00	50.31	54.00	-3.69	35.81	14.50	Average	364	79
6	11590.00	62.72	74.00	-11.28	48.22	14.50	Peak	364	79

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT40	Test Freq. (MHz)	5795
Polarization	Vertical	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	47.43	54.00	-6.57	42.69	4.74	Average	187	256
2	5000.00	57.40	74.00	-16.60	52.66	4.74	Peak	187	256
3	7726.00	40.66	54.00	-13.34	30.88	9.78	Average	100	339
4	7726.00	51.78	74.00	-22.22	42.00	9.78	Peak	100	339
5	11590.00	49.22	54.00	-4.78	34.72	14.50	Average	215	357
6	11590.00	62.15	74.00	-11.85	47.65	14.50	Peak	215	357

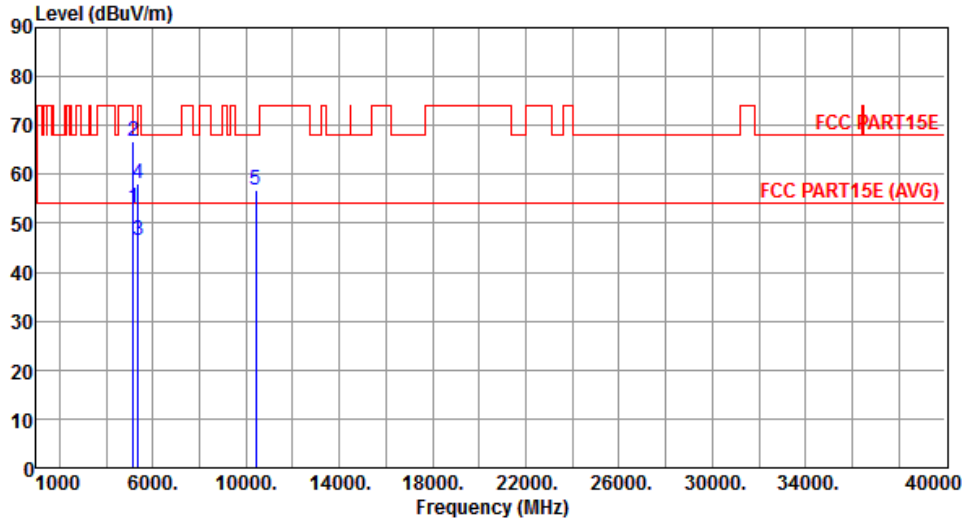
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.8 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT80

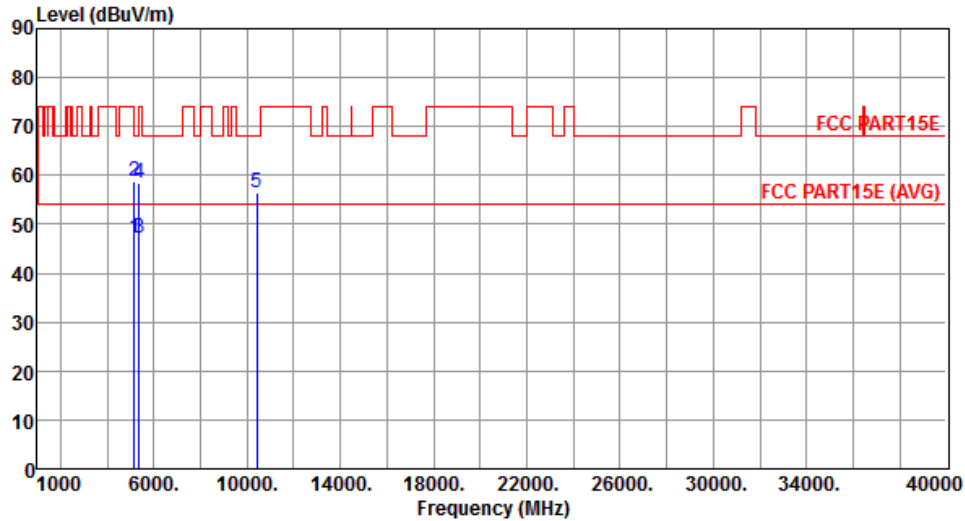
Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Horizontal	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.98	54.00	-1.02	48.08	4.90	Average	227	221
2	5150.00	66.89	74.00	-7.11	61.99	4.90	Peak	227	221
3	5350.00	46.48	54.00	-7.52	41.35	5.13	Average	225	233
4	5350.00	58.12	74.00	-15.88	52.99	5.13	Peak	225	233
5	10420.00	56.66	68.20	-11.54	42.88	13.78	Peak	212	296

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT80	Test Freq. (MHz)	5210
Polarization	Vertical	Test Configuration	1



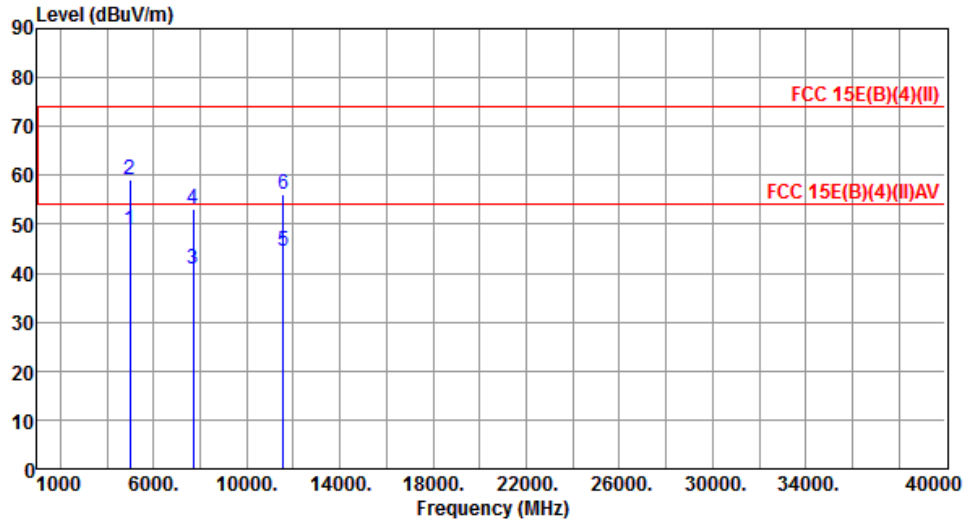
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	47.26	54.00	-6.74	42.36	4.90	Average	198	333
2	5150.00	58.88	74.00	-15.12	53.98	4.90	Peak	198	333
3	5350.00	47.15	54.00	-6.85	42.02	5.13	Average	195	329
4	5350.00	58.38	74.00	-15.62	53.25	5.13	Peak	195	329
5	10420.00	56.41	68.20	-11.79	42.63	13.78	Peak	228	21

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Horizontal	Test Configuration	1



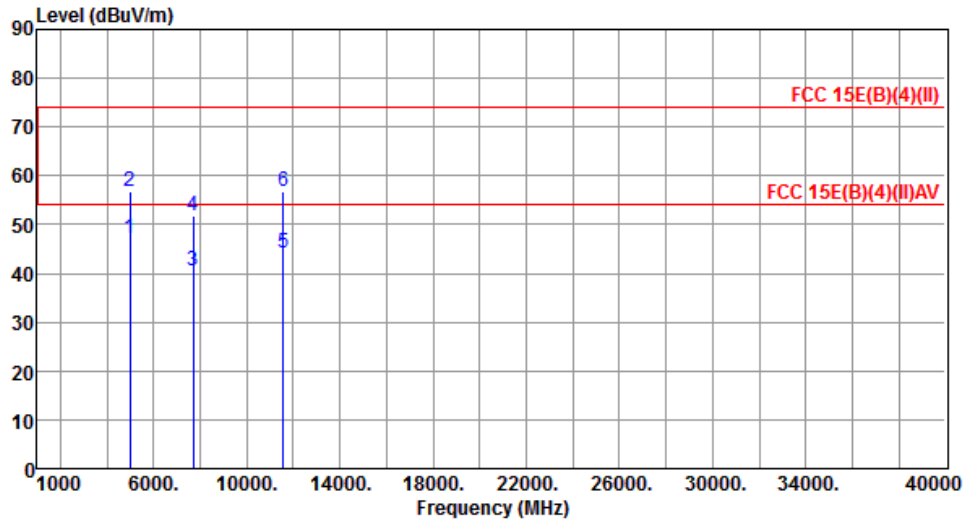
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	48.93	54.00	-5.07	44.19	4.74	Average	202	301
2	5000.00	59.07	74.00	-14.93	54.33	4.74	Peak	202	301
3	7700.00	40.89	54.00	-13.11	31.14	9.75	Average	100	145
4	7700.00	53.01	74.00	-20.99	43.26	9.75	Peak	100	145
5	11550.00	44.53	54.00	-9.47	29.98	14.55	Average	100	55
6	11550.00	56.12	74.00	-17.88	41.57	14.55	Peak	100	55

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	VHT80	Test Freq. (MHz)	5775
Polarization	Vertical	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5000.00	47.00	54.00	-7.00	42.26	4.74	Average	175	281
2	5000.00	56.84	74.00	-17.16	52.10	4.74	Peak	175	281
3	7700.00	40.40	54.00	-13.60	30.65	9.75	Average	100	318
4	7700.00	51.67	74.00	-22.33	41.92	9.75	Peak	100	318
5	11550.00	44.10	54.00	-9.90	29.55	14.55	Average	100	206
6	11550.00	56.69	74.00	-17.31	42.14	14.55	Peak	100	206

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.6 Emissions in Non-Restricted Frequency Bands

3.6.1 Emissions in Non-Restricted Frequency Bands Limit

This test is for transmitters operating in the 5.725 - 5.850 GHz band only.
Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz

3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

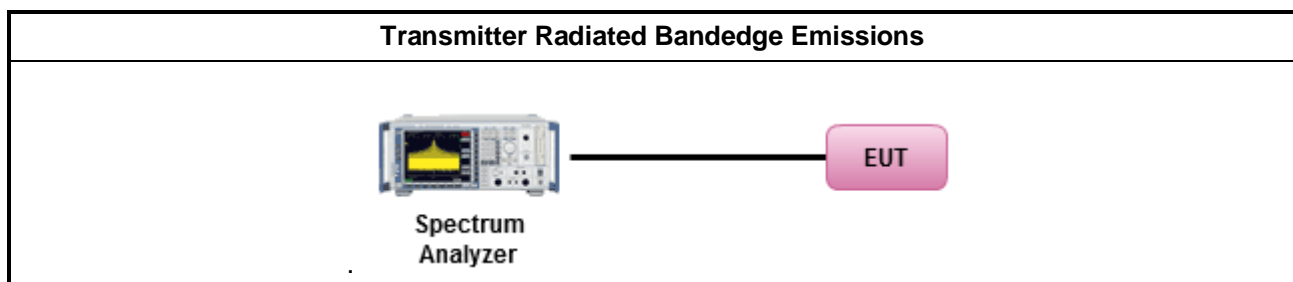
Reference level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Use the peak marker function to determine the maximum PSD level

Emission level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Scan Frequency range is up to 40GHz
4. Use the peak marker function to determine the maximum amplitude level

3.6.4 Test Setup

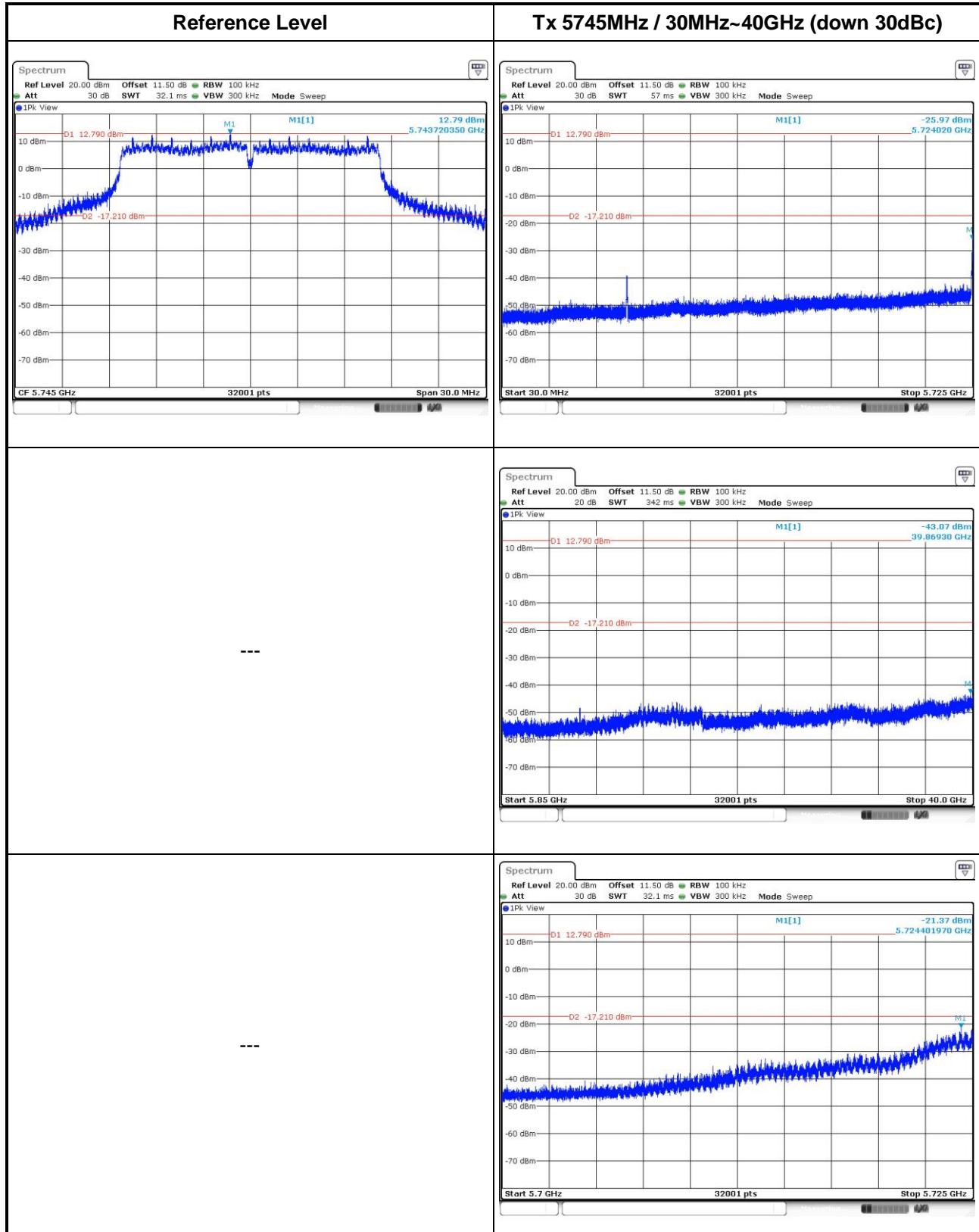


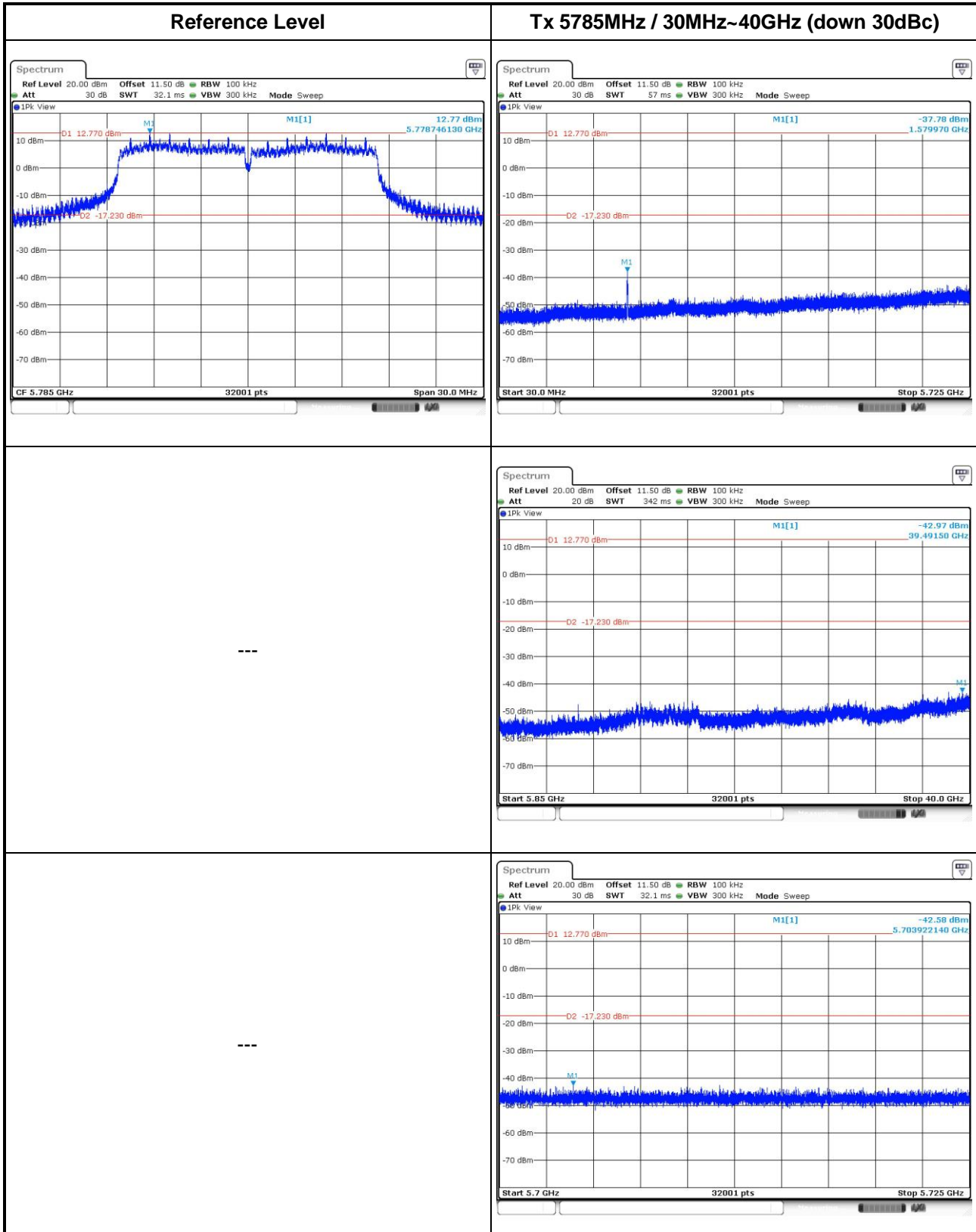
3.6.5 Test Result of Emissions in non-restricted frequency bands

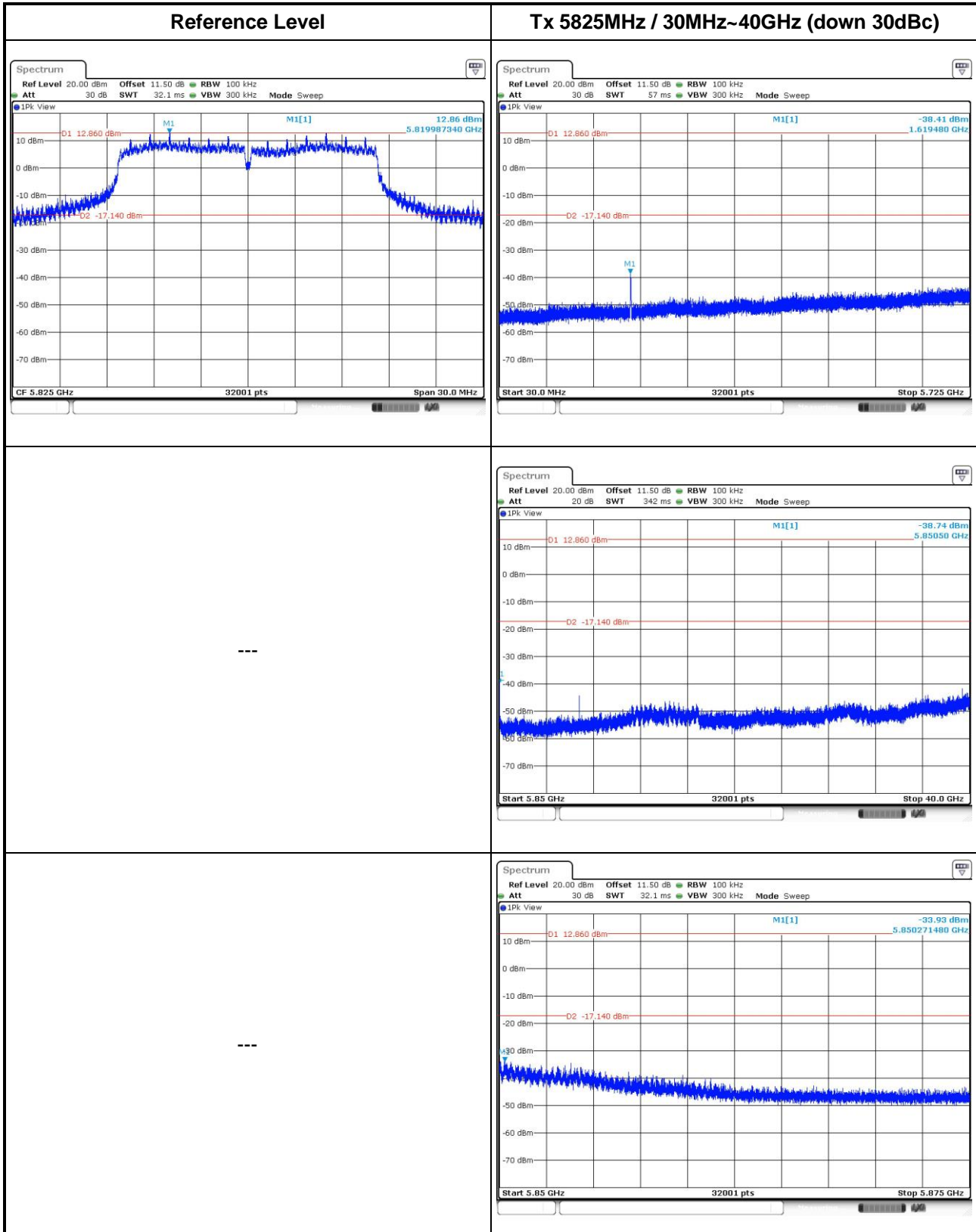
This test item is performed on each TX output individually without summing or adding $10 \log(N_{ANT})$ since measurements are made relative to the in-band emissions on the individual outputs. Only worst test result of each operating mode is presented.

3.6.6 Unwanted Emissions into Non-Restricted Frequency Bands

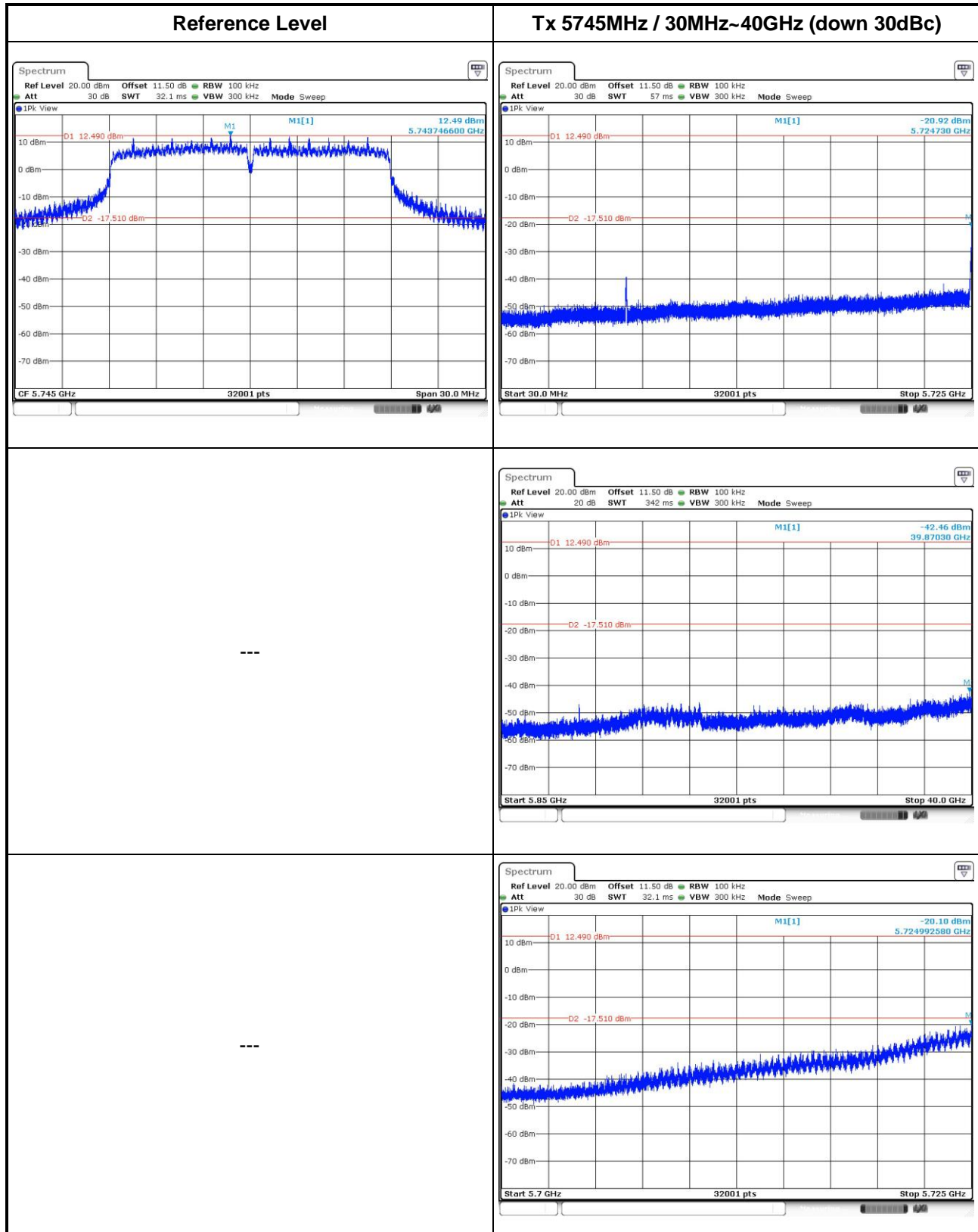
802.11a

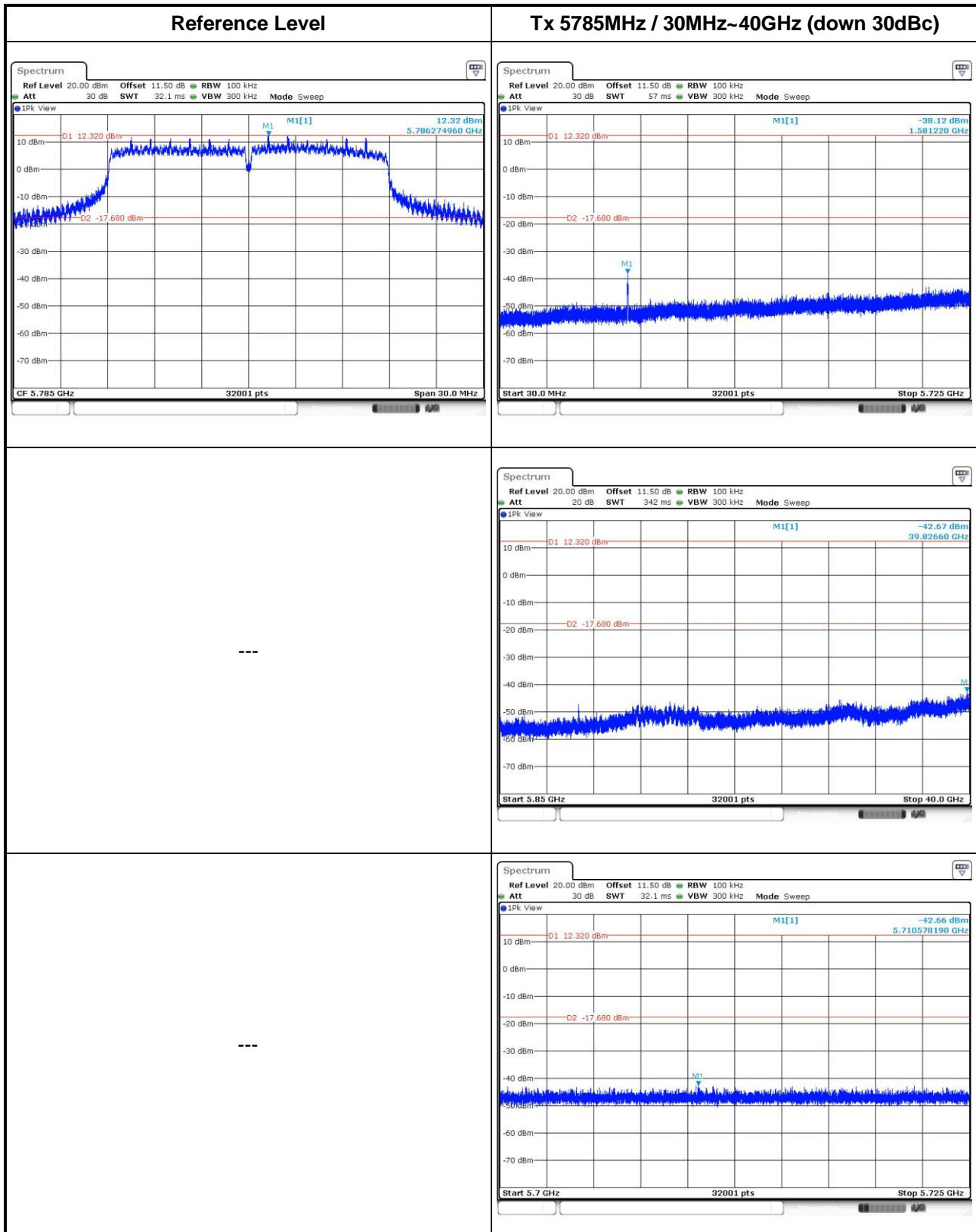


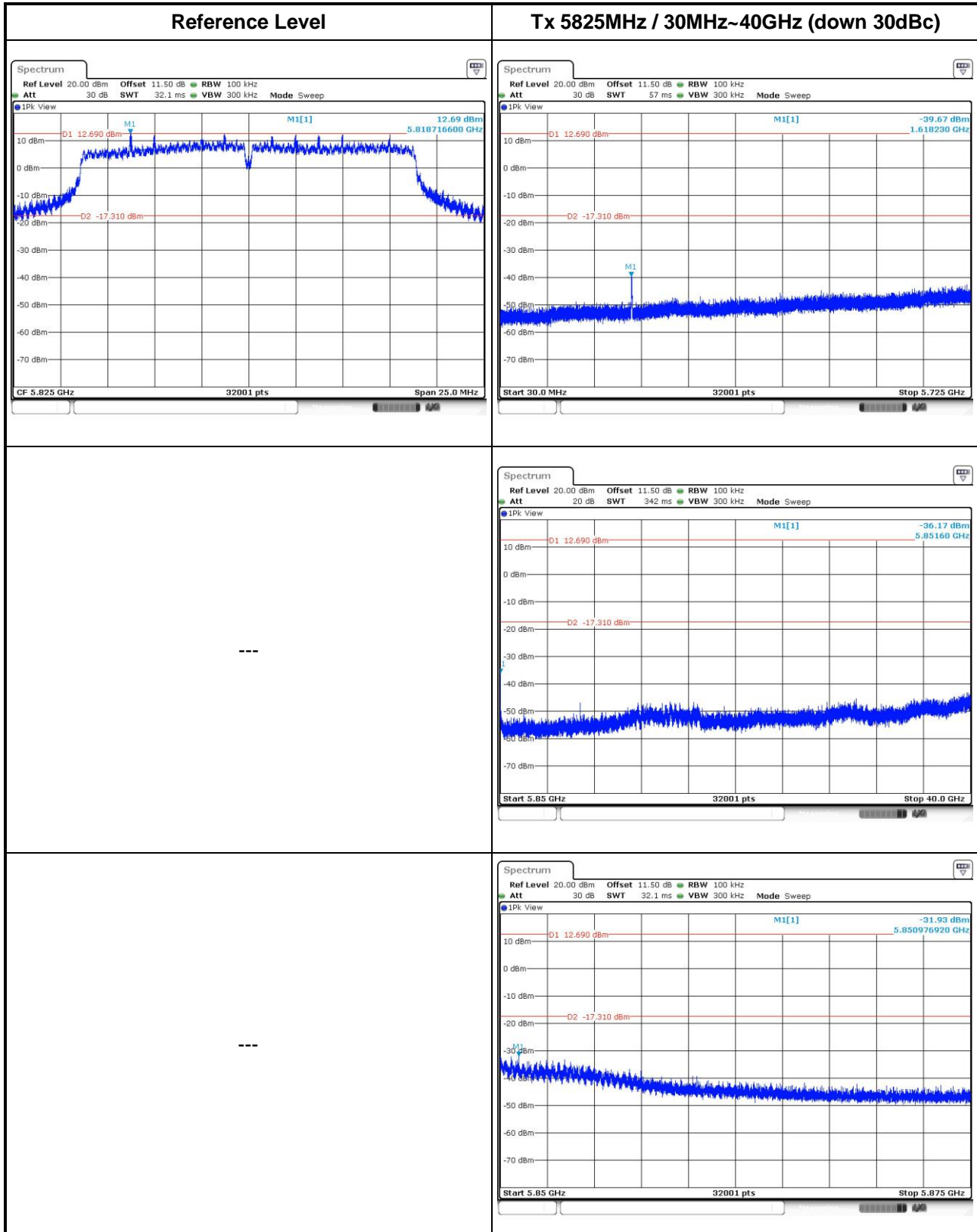




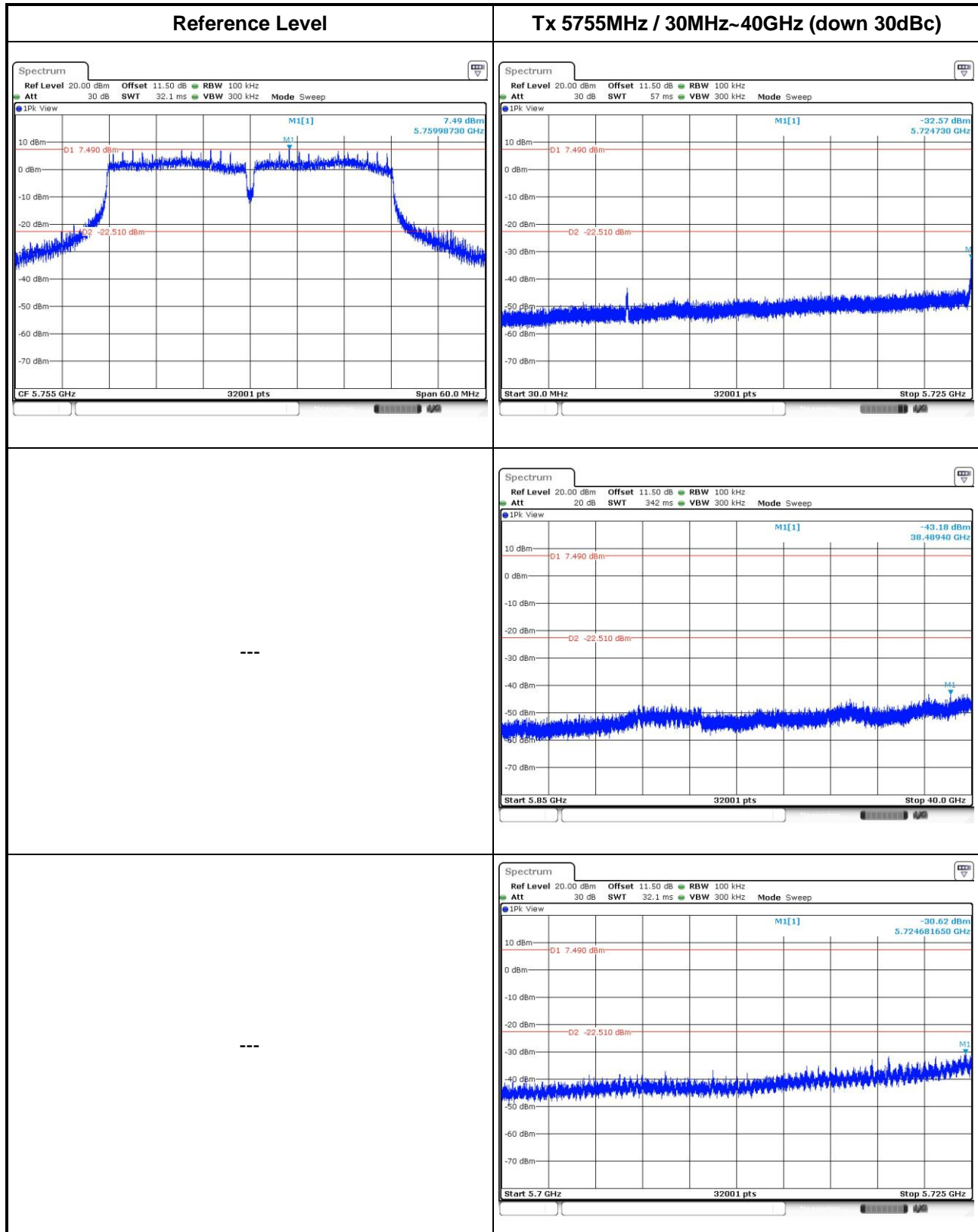
VHT20

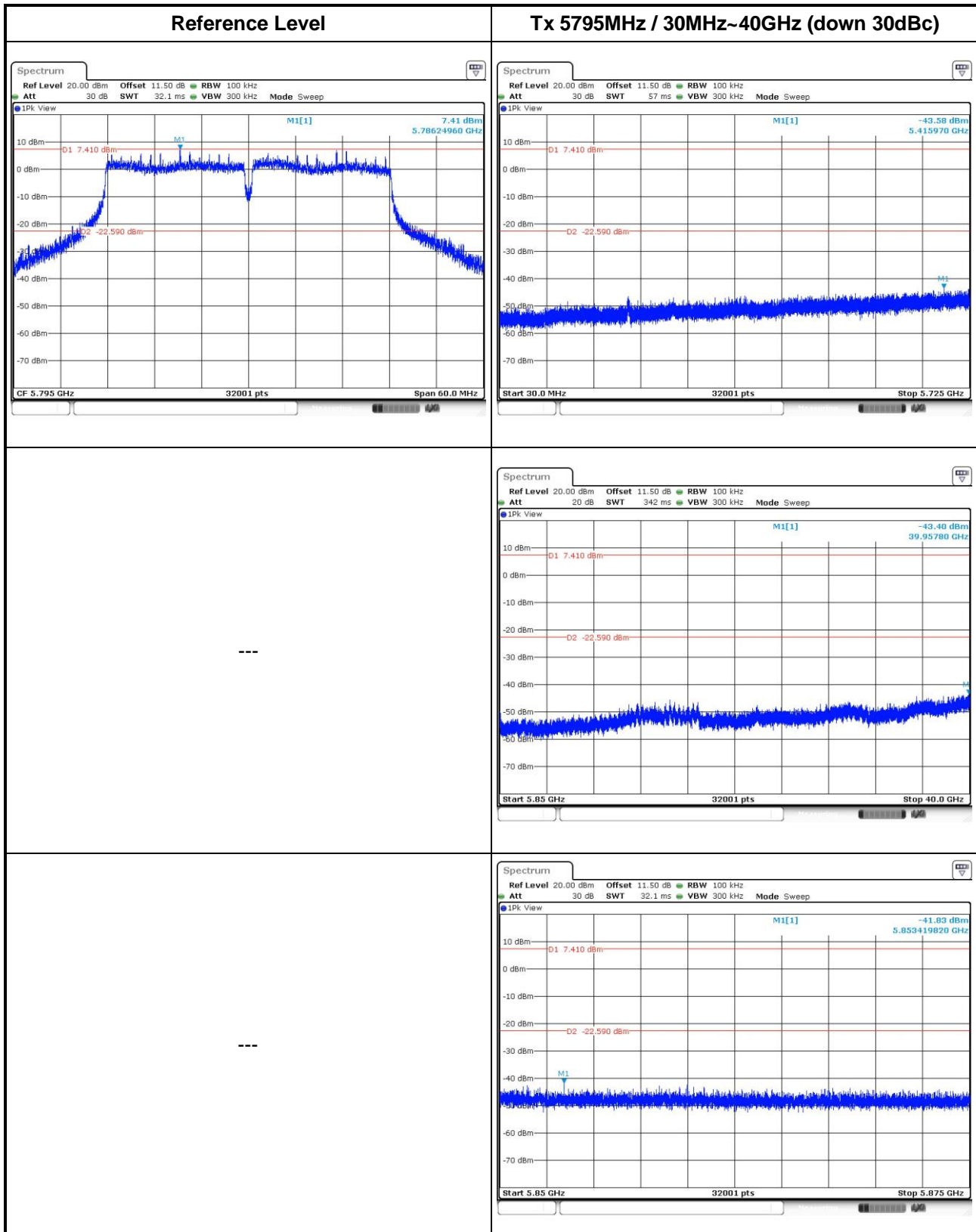




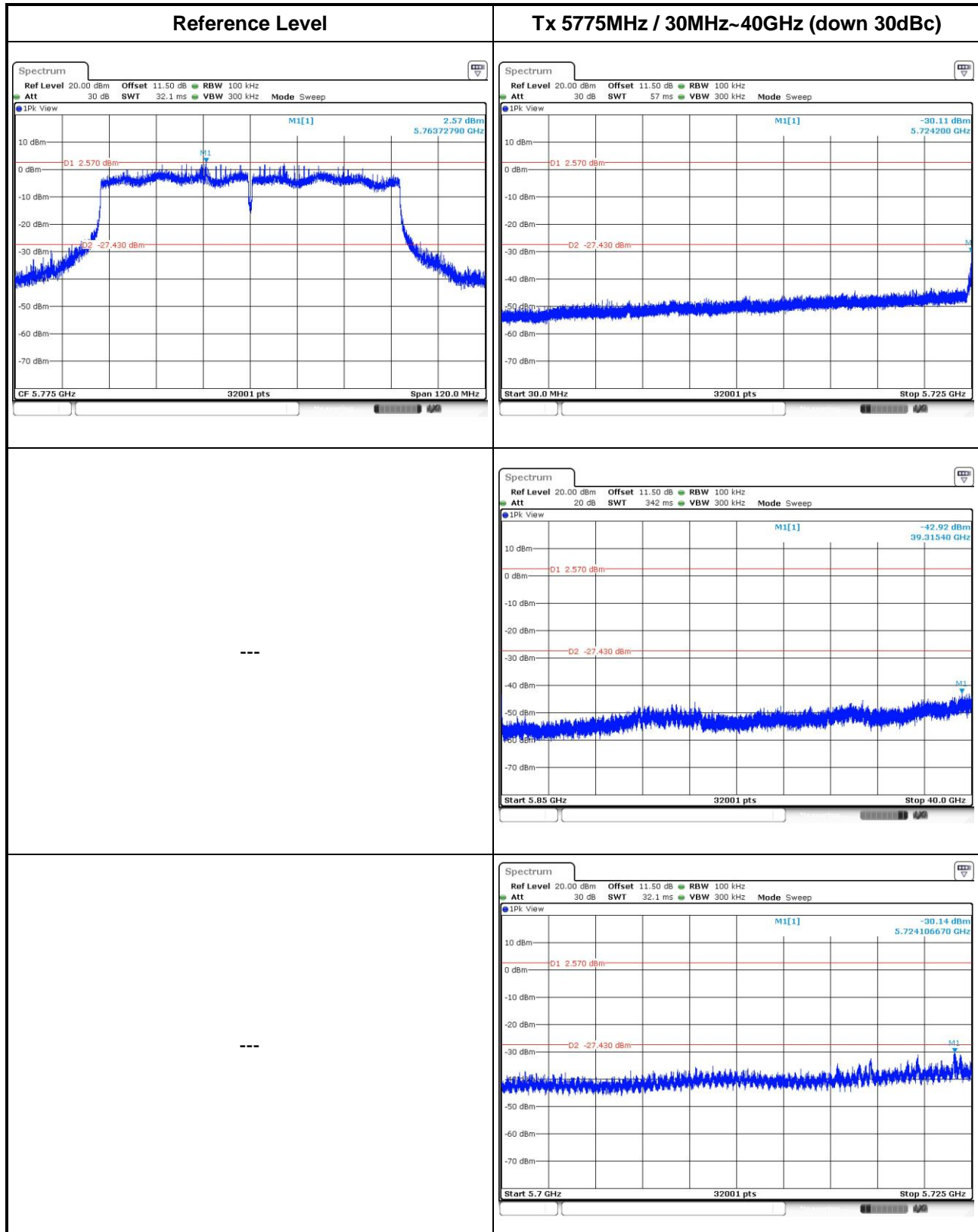


VHT40





VHT80



3.7 Frequency Stability

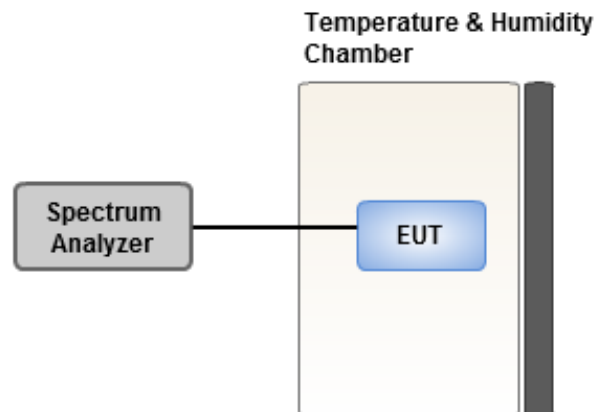
3.7.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

3.7.2 Test Procedures

1. The EUT is installed in an environment test chamber with external power source.
2. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.
3. A sufficient stabilization period at each temperature is used prior to each frequency measurement.
4. When temperature is stabled, measure the frequency stability.
5. The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.

3.7.3 Test Setup



3.7.4 Test Result of Frequency Stability

Frequency: 5200 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°C Vmax	0.34	0.63	0.11	0.26
T20°C Vmin	-0.05	-0.07	-0.04	0.58
T50°C Vnom	1.03	1.06	0.97	1.66
T40°C Vnom	-0.60	-0.66	0.19	-0.85
T30°C Vnom	0.18	0.54	0.57	-0.10
T20°C Vnom	-0.18	-0.20	-0.48	0.26
T10°C Vnom	0.40	-0.12	0.52	0.45
T0°C Vnom	0.53	0.96	0.47	0.56
T-10°C Vnom	-0.08	-0.01	-0.08	0.24
T-20°C Vnom	0.13	0.41	0.60	0.33
T-30°C Vnom	-0.25	0.33	-0.34	0.12
Vnom [Vac]: 120		Vmax [Vac]: 138		Vmin [Vac]: 102
Tnom [°C]: 20		Tmax [°C]: 50		Tmin [°C]: -30

Frequency: 5785 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°C Vmax	0.63	0.64	1.06	1.27
T20°C Vmin	0.55	0.75	1.24	0.52
T50°C Vnom	3.47	4.19	3.44	3.90
T40°C Vnom	1.73	1.69	1.62	1.92
T30°C Vnom	1.61	1.75	1.29	1.85
T20°C Vnom	3.65	3.21	3.35	3.95
T10°C Vnom	2.42	2.42	2.95	2.85
T0°C Vnom	3.80	3.75	3.66	3.77
T-10°C Vnom	2.45	2.21	2.47	2.52
T-20°C Vnom	1.92	2.11	2.03	2.32
T-30°C Vnom	1.65	2.13	1.99	1.20
Vnom [Vac]: 120		Vmax [Vac]: 138		Vmin [Vac]: 102
Tnom [°C]: 20		Tmax [°C]: 50		Tmin [°C]: -30

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan Hsiang. Location map can be found on our website <http://www.icertifi.com.tw>.

Linkou

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If you have any suggestion, please feel free to contact us as below information.

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