

FCC C2PC Test Report

FCC ID : SQG-MSD45N
Equipment : 45 Series Pluggable module
Model No. : MSD45N
Brand Name : Laird Technologies
Applicant : Laird Technologies
Address : 11160 Thompson Ave. / Lenexa, Kansas /
66219 / USA
Standard : 47 CFR FCC Part 15.407
Received Date : Jul. 29, 2015
Tested Date : Jul. 31 ~ Aug. 17, 2015

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.

Approved & Reviewed by:



Gary Chang / Manager



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Release Record

Report No.	Version	Description	Issued Date
FR371704-01AI	Rev. 01	Initial issue	Sep. 04, 2015

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.480MHz 30.46 (Margin -15.88dB) - AV	Pass
15.407(b)(4) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5725.00MHz 77.19 (Margin -1.01dB) - PK	Pass
15.407(a)(5)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(a)(3)	RF Output Power	Max Power [dBm]: 18.62	Pass
15.407(a)(3)	Peak Power Spectral Density	Meet the requirement of limit	Pass
15.407(e)	6dB Bandwidth	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

This report is prepared for FCC class II permissive change.

This report is issued as a supplementary report to original ICC report no. FR371704AI. The modification is concerned with following:

- ✧ Complying with New U-NII rule requirement.
- ✧ Additional Dipole antennas.

Therefore, all tests had been re-tested and presented in the following sections.

1.1.1 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
5725-5850	a	5745-5825	149-165 [5]	1	6-54 Mbps
5725-5850	n (HT20)	5745-5825	149-165 [5]	1	MCS 0-7
Note 1: RF output power specifies that Maximum Conducted Output Power. Note 2: 802.11a/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation. Note 3: 802.11n supports HT20 only.					

1.1.2 Antenna Details (The additional antennas were marked in boldface.)

Ant. No.	Brand /Model	Type	Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)				
				2400~2483.5	5150~5250	5250~5350	5470~5725	5725~5850
1	MAG.LAYERS EDA-1513-25GR2-B2-CY	Dipole	SMA Jack Reverse	2	2	2	2	2
2	MAG.LAYERS PCA-4606-2G4C1-A13-CY	PCB Dipole	UFL	2.21	2.21	2.21	2.21	2.21
3	Larid NanoBlade-IP04	PCB Dipole	UFL	2	3.9	3.9	4	4
4	Larid MAF95310 Mini NanoBlade Flex	PCB Dipole	UFL	2.79	3.38	3.38	3.38	3.38
5	Larid NanoBlue-IP04	PCB Dipole	UFL	2	---	---	---	---
6	Ethertronics WLAN_1000146	PIFA	UFL	2.5	3.5	3.5	3.5	3.5
7	SAA MG7018-41-000-R	Dipole	UFL	1.87	0.85	0.6	0.94	0.92
8	SAA MG7324-41-000-R	Dipole	UFL	1.32	1.04	1.6	2.75	2.24

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	3.3Vdc from host
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1.1.4 Accessories

N/A

1.1.5 Channel List

802.11 a / HT20	
Channel	Frequency(MHz)
149	5745
153	5765
157	5785
161	5805
165	5825

1.1.6 Test Tool and Duty Cycle

Test Tool	ART V0.2		
Duty Cycle and Duty Factor	Mode	Duty cycle (%)	Duty factor (dB)
	11a	99.30%	0.03
	HT20	99.62%	0.02

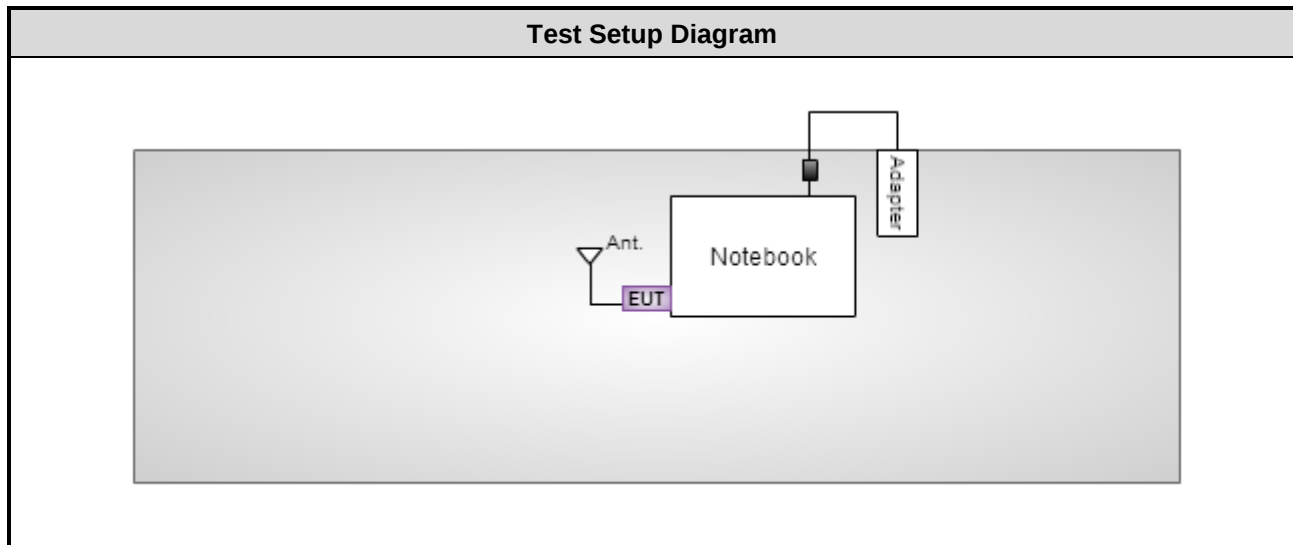
1.1.7 Power Setting

Modulation Mode	Test Frequency (MHz)	Power Set
11a	5745	18
11a	5785	20.5
11a	5825	22
HT20	5745	18
HT20	5785	21
HT20	5825	21

1.2 Local Support Equipment List

Support Equipment List					
No.	Equipment	Brand	Model	FCC ID	Signal cable / Length (m)
1	Notebook	DELL	Latitude E6430	F2JB4X1	---

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. 17, 2014	Oct. 16, 2015
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 17, 2014	Nov. 16, 2015
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Dec. 31, 2014	Dec. 30, 2015
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. 31, 2014	Dec. 30, 2015
Receiver	R&S	ESR3	101657	Jan. 15, 2015	Jan. 14, 2016
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-524	Oct. 16, 2014	Oct. 15, 2015
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1095	Oct. 14, 2014	Oct. 13, 2015
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 10, 2014	Nov. 09, 2015
Loop Antenna	R&S	HFH2-Z2	11900	Nov. 10, 2014	Nov. 09, 2015
Preamplifier	Burgeon	BPA-530	100218	Nov. 10, 2014	Nov. 09, 2015
Preamplifier	Agilent	83017A	MY39501309	Sep. 29, 2014	Sep. 28, 2015
Preamplifier	EMC	EMC184045B	980192	Aug. 26, 2014	Aug. 25, 2015
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16140/4	Dec. 16, 2014	Dec. 15, 2015
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16018/4	Dec. 16, 2014	Dec. 15, 2015
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16015/4	Dec. 16, 2014	Dec. 15, 2015
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-003	Dec. 16, 2014	Dec. 15, 2015
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-004	Dec. 16, 2014	Dec. 15, 2015
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	101063	Feb. 03, 2015	Feb. 02, 2016
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Dec. 03, 2014	Dec. 02, 2015
Power Meter	Anritsu	ML2495A	1241002	Sep. 29, 2014	Sep. 28, 2015
Power Sensor	Anritsu	MA2411B	1207366	Sep. 29, 2014	Sep. 28, 2015
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 v01

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

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	±2.92 dB
Radiated emission ≤ 1GHz	±3.62 dB
Radiated emission > 1GHz	±5.6 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	22°C / 65%	Kevin Ma
Radiated Emissions	03CH02-WS	21-25°C / 56-65%	Anderson Hung Aska Huang Morgan Chen
RF Conducted	TH01-WS	22°C / 63%	Felix Sung

➤ FCC site registration No.: 657002

➤ IC site registration No.: 10807A-2

2.2 The Worst Test Modes and Channel Details

For Frequency band 5725-5850 MHz					
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate (Mbps) / MCS	Test Configuration	
Conducted Emissions	11a	5825	6 Mbps	4	
Radiated Emissions ≤1GHz	11a	5825	6 Mbps	1, 2, 3, 4	
Radiated Emissions >1GHz	11a	5745 / 5785 / 5825	6 Mbps	1, 2, 3, 4	
	HT20	5745 / 5785 / 5825	MCS 0		
RF Output Power	11a	5745 / 5785 / 5825	6 Mbps	4	
Emission Bandwidth			MCS 0		
6dB bandwidth	HT20	5745 / 5785 / 5825			
Peak Power Spectral Density		MCS 0			
Frequency Stability	Un-modulation	5785	---	4	

NOTE:

- 3 types antenna are used for this device.
- For original antennas, the highest gain antenna of each type is selected to perform related test item as below test configuration.
- For additional antennas, the highest gain antenna is selected to perform all test items as configuration 4.
- Test configurations are listed as below:
 - Configuration 1: Dipole antenna with 2 dBi gain (Antenna No.1), Y-plane.
 - Configuration 2 : PCB Dipole antenna with 4 dBi gain (Antenna No.3) , Y-plane
 - Configuration 3 : PIFA antenna with 3.5 dBi gain (Antenna No.6) , Y-plane
 - Configuration 4 : Dipole antenna with 2.24 dBi gain (Antenna No.8) , Y-plane

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.

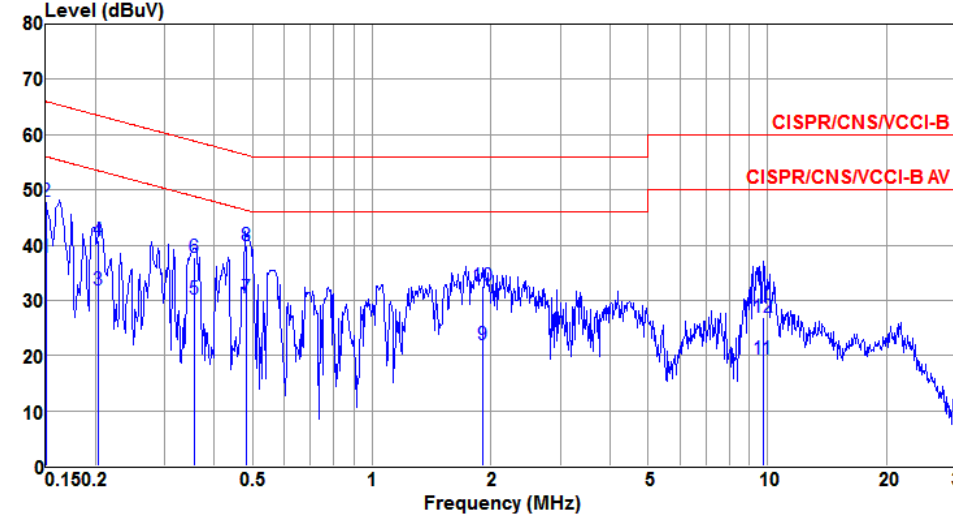
3.1.3 Test Setup



- 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

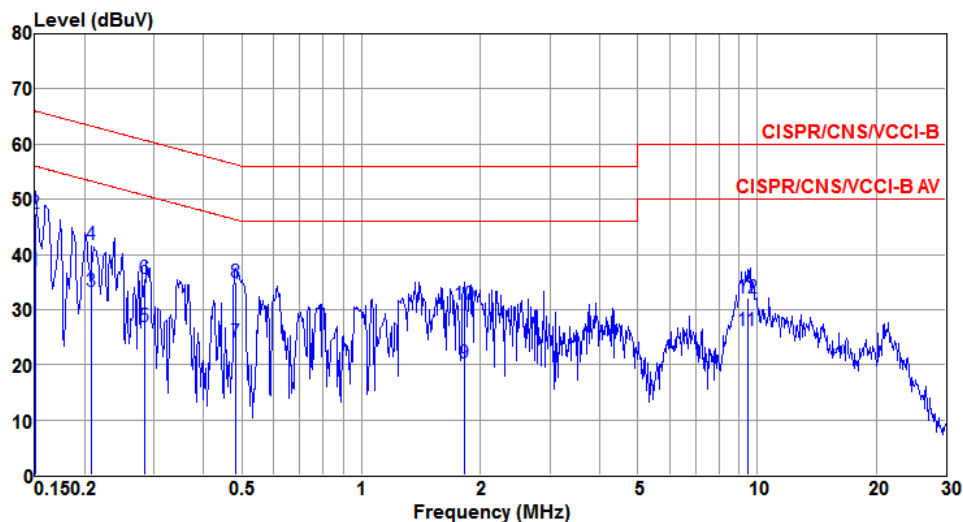
Modulation	11a	Test Freq. (MHz)	5825
Power Phase	Line	Test Configuration	4



	Freq MHz	Level dBuV	Limit Line dBuV	Over Limit dB	Read Level dBuV	LISN factor dB	cable loss dB	Remark
1	0.150	37.83	56.00	-18.17	37.68	0.07	0.08	Average
2	0.150	47.86	66.00	-18.14	47.71	0.07	0.08	QP
3	0.204	31.86	53.45	-21.59	31.70	0.07	0.09	Average
4	0.204	40.90	63.45	-22.55	40.74	0.07	0.09	QP
5	0.356	30.12	48.83	-18.71	29.94	0.07	0.11	Average
6	0.356	37.75	58.83	-21.08	37.57	0.07	0.11	QP
7*	0.480	30.46	46.34	-15.88	30.27	0.07	0.12	Average
8	0.480	39.90	56.34	-16.44	39.71	0.07	0.12	QP
9	1.908	21.84	46.00	-24.16	21.51	0.10	0.23	Average
10	1.908	32.65	56.00	-23.35	32.32	0.10	0.23	QP
11	9.757	19.25	50.00	-30.75	18.74	0.21	0.30	Average
12	9.757	26.87	60.00	-33.13	26.36	0.21	0.30	QP

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

Modulation	11a	Test Freq. (MHz)	5825
Power Phase	Neutral	Test Configuration	4



	Freq	Level	Limit	Over	Read	LISN	cable	
	MHz	dBuV	Line	Limit	Level	factor	loss	Remark
			dBuV	dB	dBuV	dB	dB	
1	0.150	37.12	56.00	-18.88	36.97	0.07	0.08	Average
2*	0.150	47.48	66.00	-18.52	47.33	0.07	0.08	QP
3	0.207	33.34	53.31	-19.97	33.18	0.07	0.09	Average
4	0.207	41.67	63.31	-21.64	41.51	0.07	0.09	QP
5	0.283	26.88	50.72	-23.84	26.71	0.07	0.10	Average
6	0.283	35.70	60.72	-25.02	35.53	0.07	0.10	QP
7	0.483	24.14	46.29	-22.15	23.95	0.07	0.12	Average
8	0.483	35.02	56.29	-21.27	34.83	0.07	0.12	QP
9	1.819	20.32	46.00	-25.68	19.99	0.10	0.23	Average
10	1.819	31.04	56.00	-24.96	30.71	0.10	0.23	QP
11	9.451	26.28	50.00	-23.72	25.76	0.22	0.30	Average
12	9.451	32.12	60.00	-27.88	31.60	0.22	0.30	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

The minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

3.2.2 Test Procedures

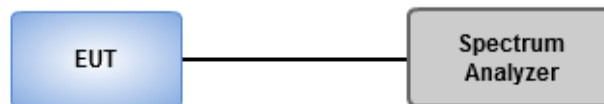
Occupied Bandwidth

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

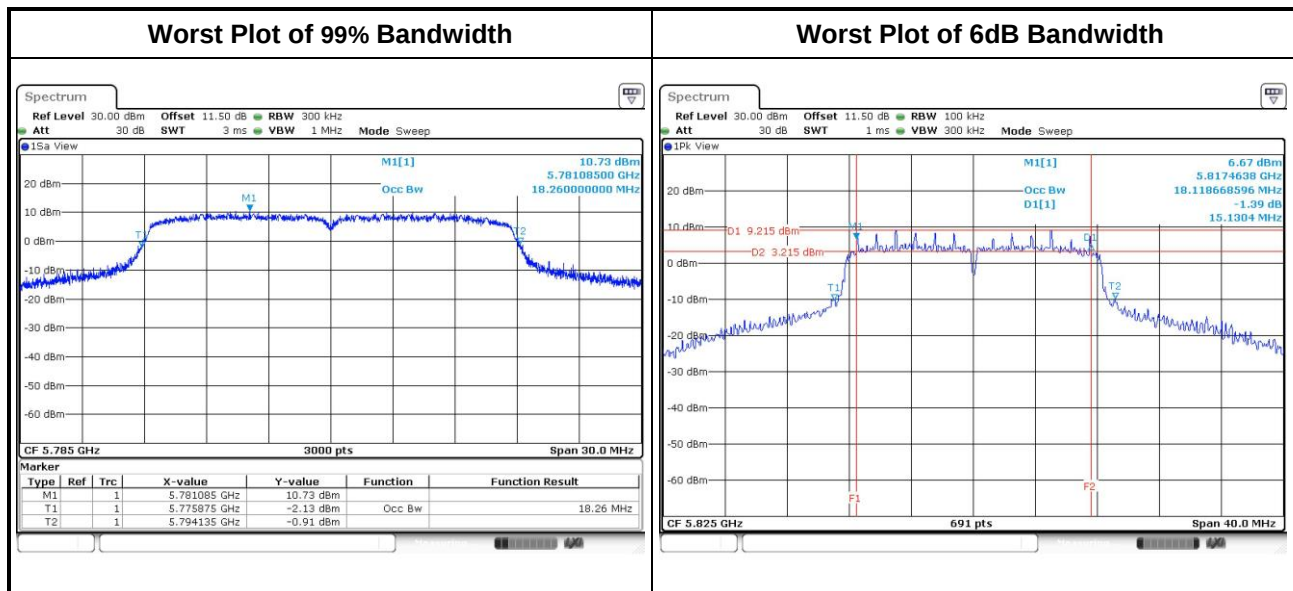
1. Set RBW = 100 kHz, video bandwidth = 300 kHz
2. Detector = Peak, Trace mode = max hold, Sweep = auto couple, Allow the trace to stabilize
3. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission

3.2.3 Test Setup



3.2.4 Test Result of Emission Bandwidth

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	1	5745	16.77	---	---	---	15.88	---	---	---	0.5
11a	1	5785	17.17	---	---	---	15.54	---	---	---	0.5
11a	1	5825	18.09	---	---	---	15.13	---	---	---	0.5
HT20	1	5745	17.78	---	---	---	16.64	---	---	---	0.5
HT20	1	5785	18.26	---	---	---	15.71	---	---	---	0.5
HT20	1	5825	18.09	---	---	---	15.71	---	---	---	0.5



3.3 RF Output Power

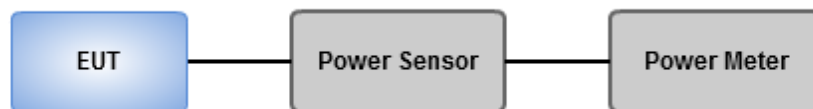
3.3.1 Limit of RF Output Power

The maximum conducted output power over the frequency band of operation shall not exceed 1 W

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

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	1	5745	15.89	---	---	---	38.815	15.89	30.00
11a	1	5785	18.45	---	---	---	69.984	18.45	30.00
11a	1	5825	18.62	---	---	---	72.778	18.62	30.00
HT20	1	5745	15.78	---	---	---	37.844	15.78	30.00
HT20	1	5785	18.58	---	---	---	72.111	18.58	30.00
HT20	1	5825	17.75	---	---	---	59.566	17.75	30.00

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

The maximum power spectral density shall not exceed 30 dBm in any 500 kHz band.

3.4.2 Test Procedures

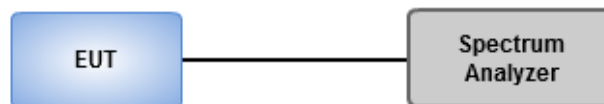
☒ Method SA-1

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.

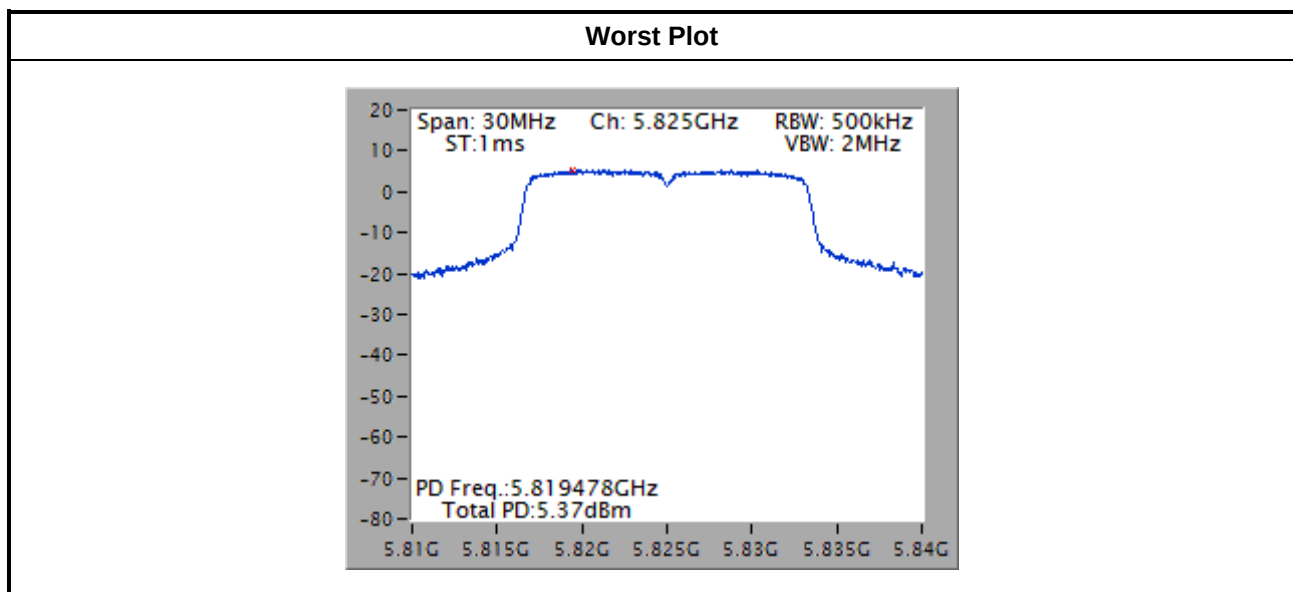
3.4.3 Test Setup



3.4.4 Test Result of Peak Power Spectral Density

Condition			Peak Power Spectral Density (dBm/500kHz)	
Modulation Mode	N _{TX}	Freq. (MHz)	PPSD w/o D.F (dBm/500kHz)	PPSD Limit (dBm/500kHz)
11a	1	5745	1.26	30.00
11a	1	5785	4.72	30.00
11a	1	5825	5.37	30.00
HT20	1	5745	1.47	30.00
HT20	1	5785	4.54	30.00
HT20	1	5825	4.87	30.00

Note: D.F is 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]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.850 GHz	5.715 5.725 GHz: e.i.r.p. -17 dBm [78.2 dBuV/m@3m] 5.850 5.860 GHz: e.i.r.p. -17 dBm [78.2 dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

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

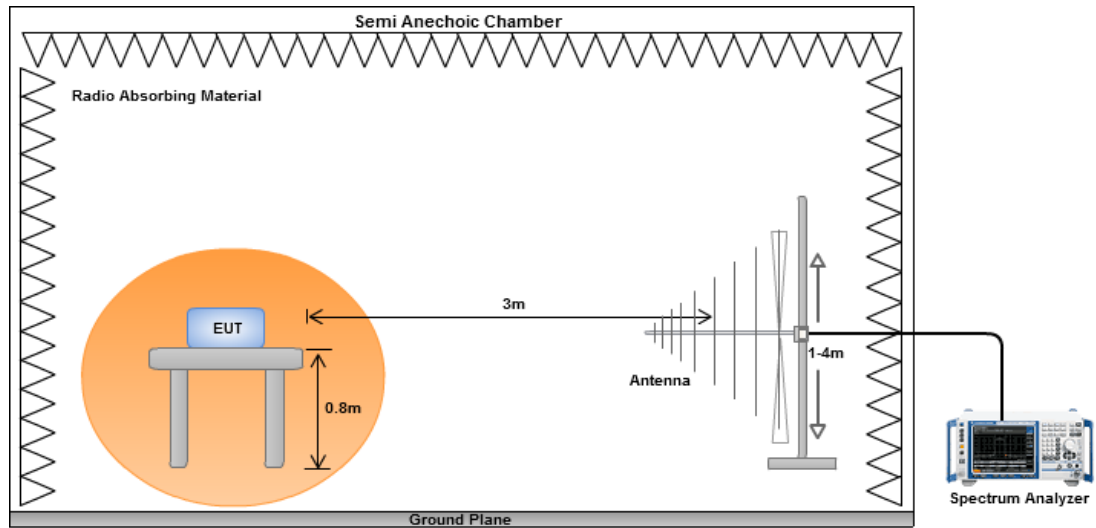
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360° . A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission 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:

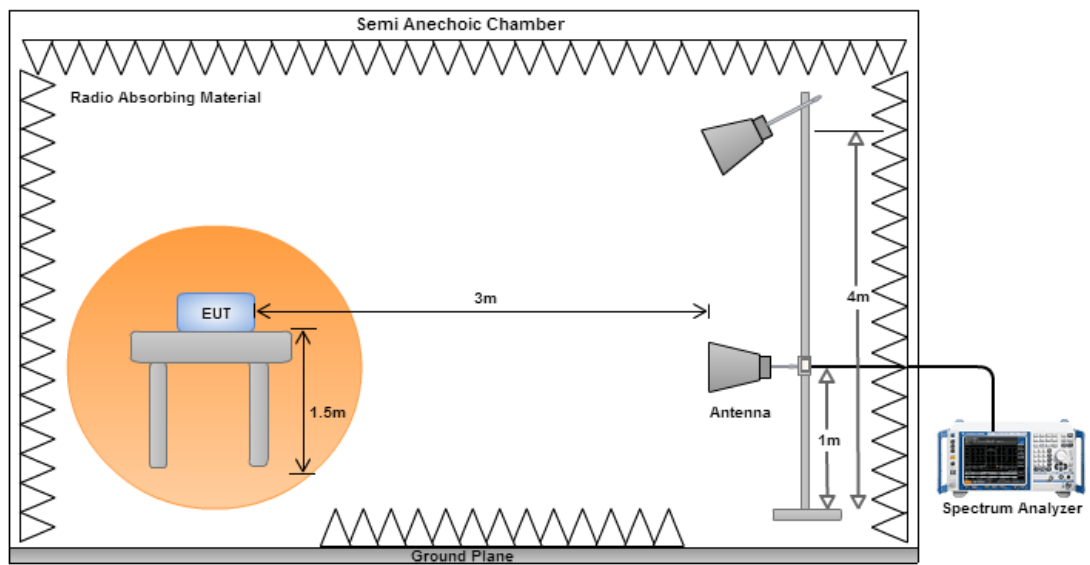
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz

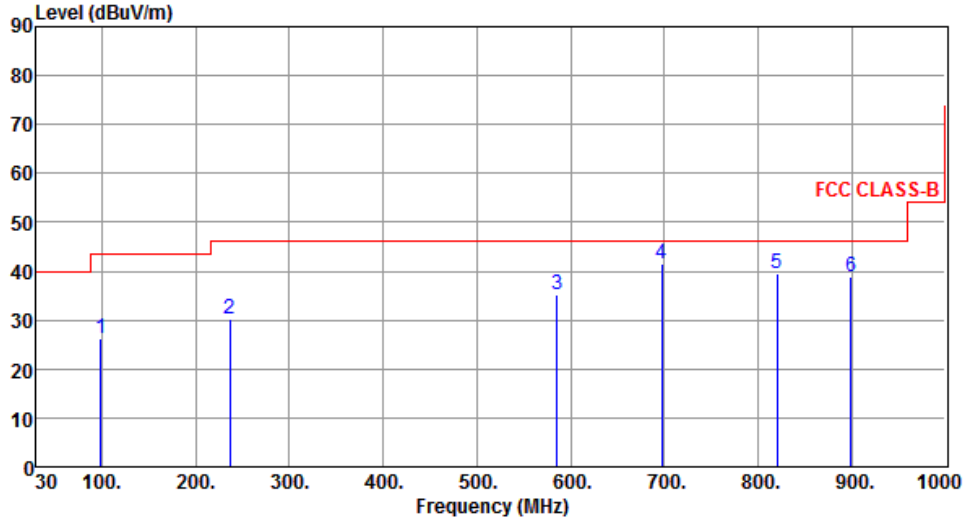


Radiated Emissions above 1 GHz



3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

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

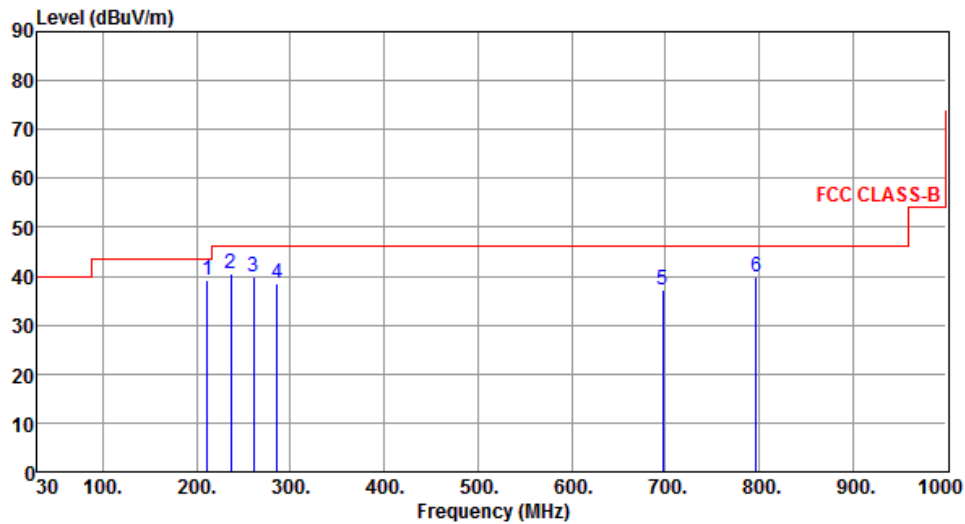


The graph displays the radiated unwanted emissions for a transmitter. The y-axis represents the Level in dBuV/m, ranging from 0 to 90. The x-axis represents the Frequency in MHz, ranging from 30 to 1000. A red line indicates the FCC CLASS-B limit, which is 40 dBuV/m from 30 MHz to 100 MHz, 45 dBuV/m from 100 MHz to 1000 MHz, and 55 dBuV/m from 1000 MHz to 1100 MHz. Six measured peaks are shown as blue vertical lines, labeled 1 through 6. The peak levels are: 1 (98.87 MHz, 26.36 dBuV/m), 2 (236.61 MHz, 30.11 dBuV/m), 3 (585.81 MHz, 35.29 dBuV/m), 4 (697.36 MHz, 41.36 dBuV/m), 5 (820.55 MHz, 39.36 dBuV/m), and 6 (899.12 MHz, 38.87 dBuV/m). All measured peaks are well below the FCC CLASS-B limit.

	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	98.87	26.36	43.50	-17.14	48.43	-22.07	Peak	---	---
2	236.61	30.11	46.00	-15.89	48.39	-18.28	Peak	---	---
3	585.81	35.29	46.00	-10.71	45.12	-9.83	Peak	---	---
4	697.36	41.36	46.00	-4.64	49.64	-8.28	Peak	---	---
5	820.55	39.36	46.00	-6.64	45.92	-6.56	Peak	---	---
6	899.12	38.87	46.00	-7.13	44.09	-5.22	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	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	211.39	39.13	43.50	-4.37	58.53	-19.40	Peak	---	---
2	236.61	40.40	46.00	-5.60	58.68	-18.28	Peak	---	---
3	260.86	39.84	46.00	-6.16	57.33	-17.49	Peak	---	---
4	286.08	38.58	46.00	-7.42	55.13	-16.55	Peak	---	---
5	697.36	37.31	46.00	-8.69	45.59	-8.28	Peak	---	---
6	797.27	39.79	46.00	-6.21	46.73	-6.94	Peak	---	---

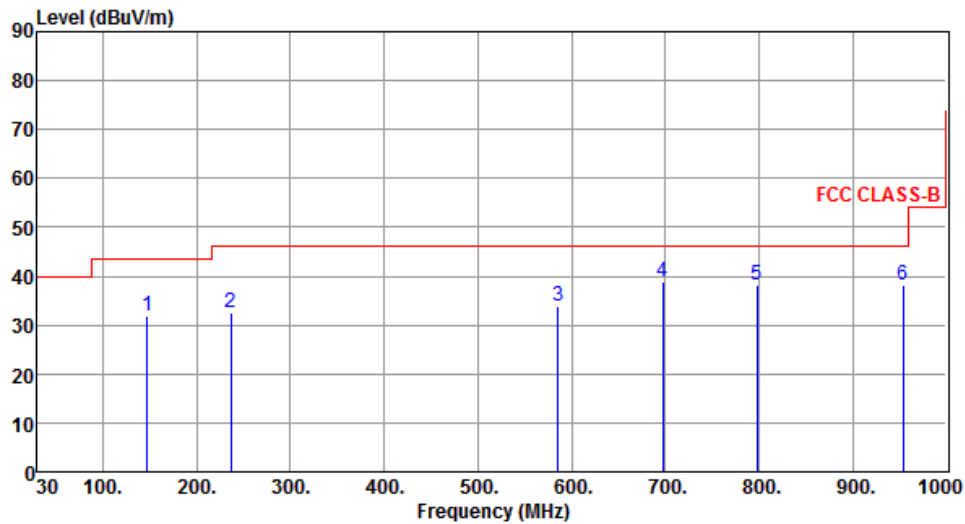
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*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	11a	Test Freq. (MHz)	5825
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	147.37	32.00	43.50	-11.50	49.04	-17.04	Peak	---	---
2	236.61	32.68	46.00	-13.32	50.96	-18.28	Peak	---	---
3	585.81	33.96	46.00	-12.04	43.79	-9.83	Peak	---	---
4	697.36	38.92	46.00	-7.08	47.20	-8.28	Peak	---	---
5	798.24	38.27	46.00	-7.73	45.20	-6.93	Peak	---	---
6	953.44	38.35	46.00	-7.65	43.10	-4.75	Peak	---	---

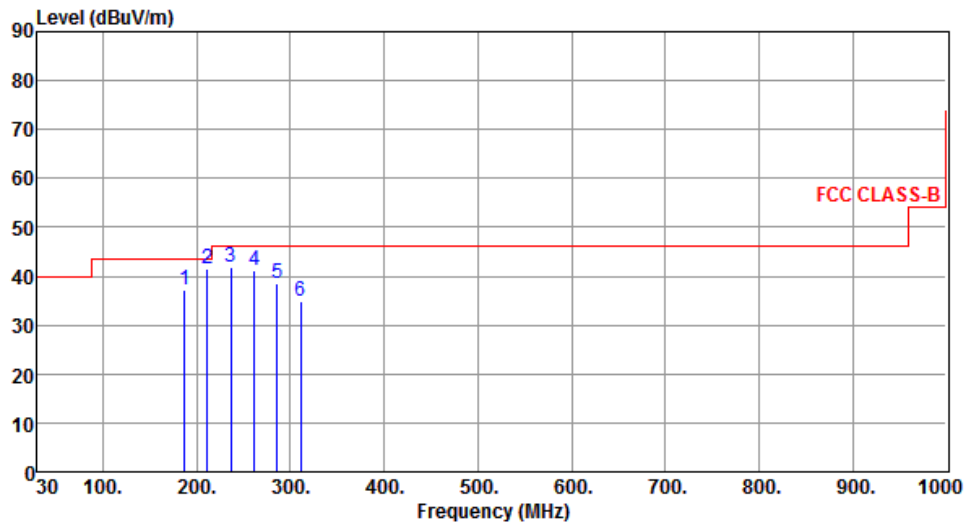
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*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	11a	Test Freq. (MHz)	5825
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	187.14	37.28	43.50	-6.22	56.41	-19.13	Peak	---	---
2	211.39	41.44	43.50	-2.06	60.84	-19.40	Peak	---	---
3	236.61	41.88	46.00	-4.12	60.16	-18.28	Peak	---	---
4	261.83	41.25	46.00	-4.75	58.72	-17.47	Peak	---	---
5	286.08	38.38	46.00	-7.62	54.93	-16.55	Peak	---	---
6	311.30	34.76	46.00	-11.24	50.59	-15.83	Peak	---	---

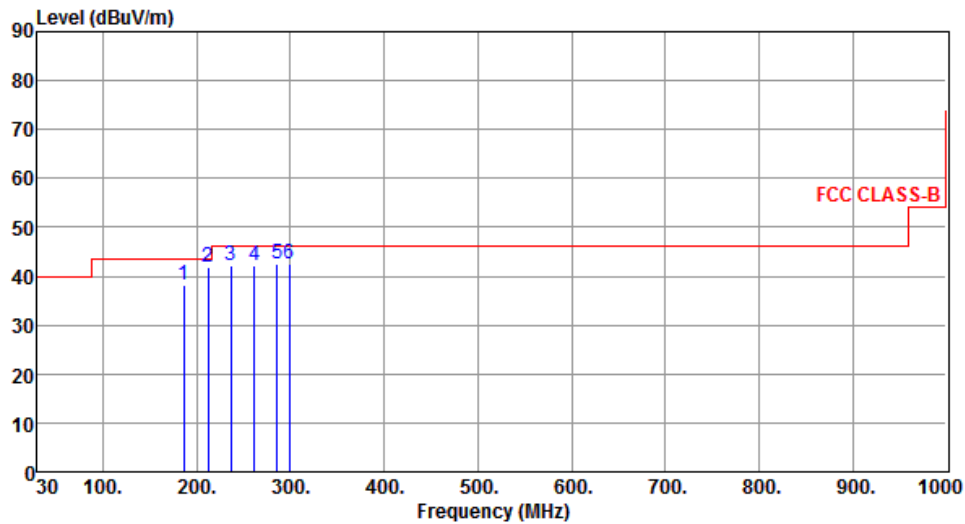
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*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	11a	Test Freq. (MHz)	5825
Polarization	Horizontal	Test Configuration	3



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	186.17	38.19	43.50	-5.31	57.25	-19.06	Peak	---	---
2	212.01	41.73	43.50	-1.77	61.13	-19.40	QP	149	290
3	236.61	42.19	46.00	-3.81	60.47	-18.28	Peak	---	---
4	261.83	42.03	46.00	-3.97	59.50	-17.47	Peak	---	---
5	286.08	42.50	46.00	-3.50	59.05	-16.55	Peak	---	---
6	298.69	42.50	46.00	-3.50	58.61	-16.11	Peak	---	---

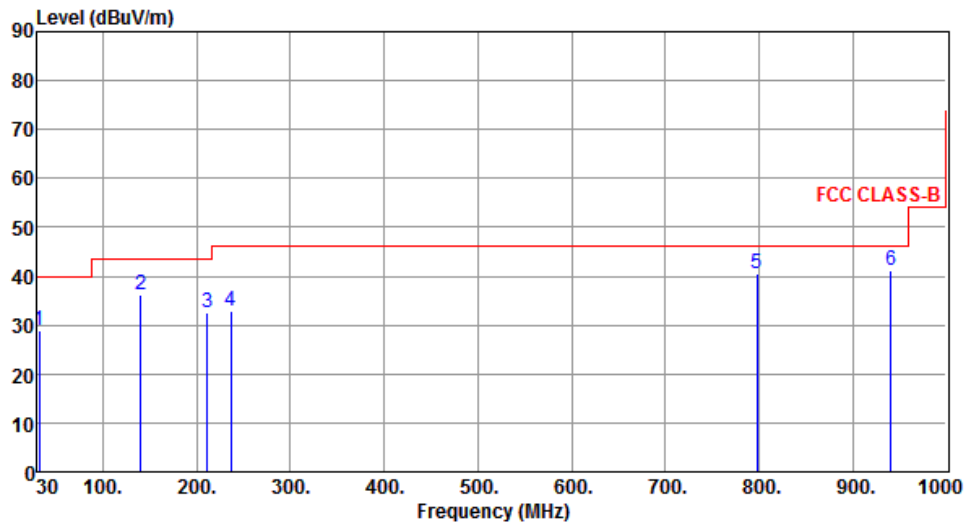
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*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	11a	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	3



	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	31.94	28.99	40.00	-11.01	46.74	-17.75	Peak	---	---
2	140.58	36.33	43.50	-7.17	53.74	-17.41	Peak	---	---
3	211.39	32.53	43.50	-10.97	51.93	-19.40	Peak	---	---
4	236.61	32.79	46.00	-13.21	51.07	-18.28	Peak	---	---
5	798.24	40.68	46.00	-5.32	47.61	-6.93	Peak	---	---
6	940.83	41.13	46.00	-4.87	45.97	-4.84	Peak	---	---

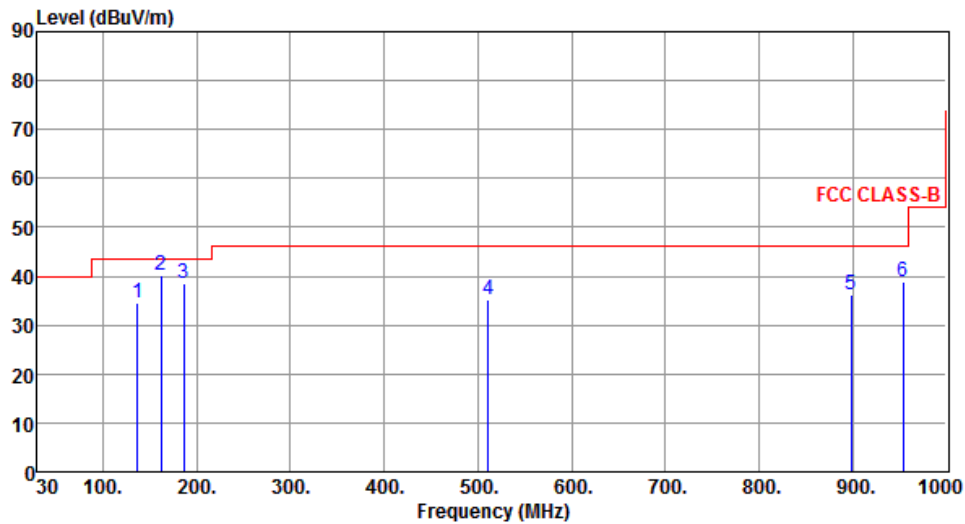
Note 1: Emission Level (dBUV/m) = SA Reading (dBUV/m) + Factor* (dB)

*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	11a	Test Freq. (MHz)	5825
Polarization	Horizontal	Test Configuration	4



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	136.76	34.47	43.50	-9.03	52.28	-17.81	Peak	---	---
2	161.88	40.26	43.50	-3.24	57.32	-17.06	Peak	---	---
3	186.24	38.52	43.50	-4.98	57.59	-19.07	Peak	---	---
4	511.19	35.15	46.00	-10.85	46.63	-11.48	Peak	---	---
5	898.24	36.14	46.00	-9.86	41.37	-5.23	Peak	---	---
6	953.42	38.78	46.00	-7.22	43.53	-4.75	Peak	---	---

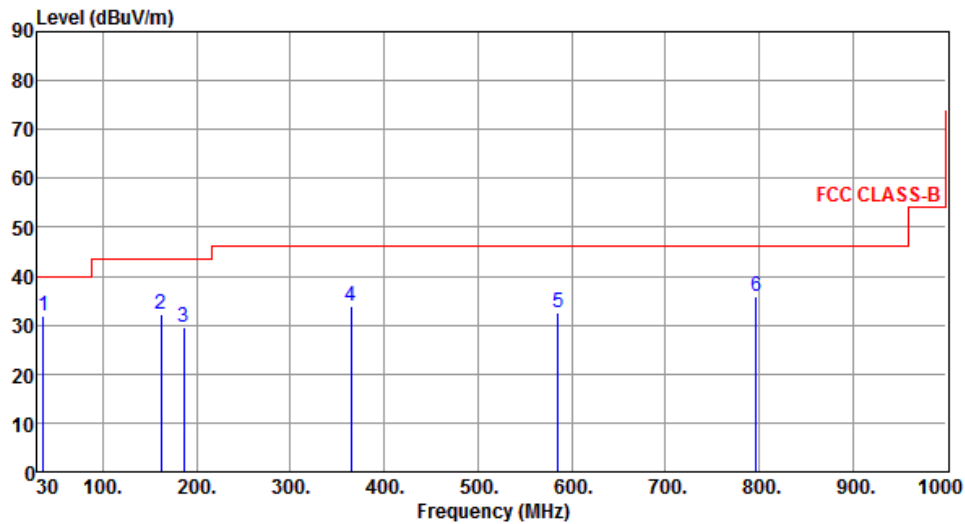
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*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	11a	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	4



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	36.75	31.75	40.00	-8.25	49.25	-17.50	Peak	---	---
2	161.83	32.33	43.50	-11.17	49.39	-17.06	Peak	---	---
3	186.13	29.64	43.50	-13.86	48.70	-19.06	Peak	---	---
4	364.62	33.92	46.00	-12.08	48.52	-14.60	Peak	---	---
5	585.83	32.60	46.00	-13.40	42.43	-9.83	Peak	---	---
6	797.27	35.96	46.00	-10.04	42.90	-6.94	Peak	---	---

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

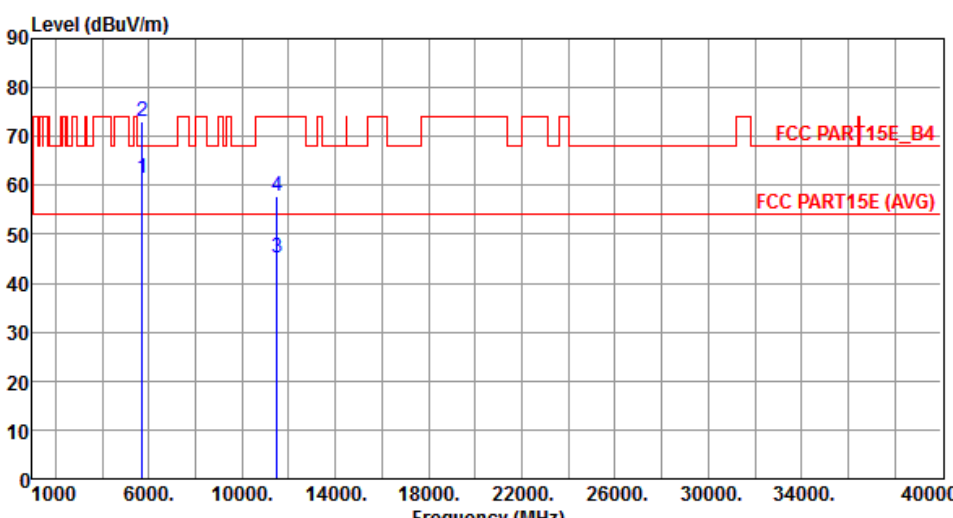
*Factor includes antenna factor , cable loss and amplifier gain

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

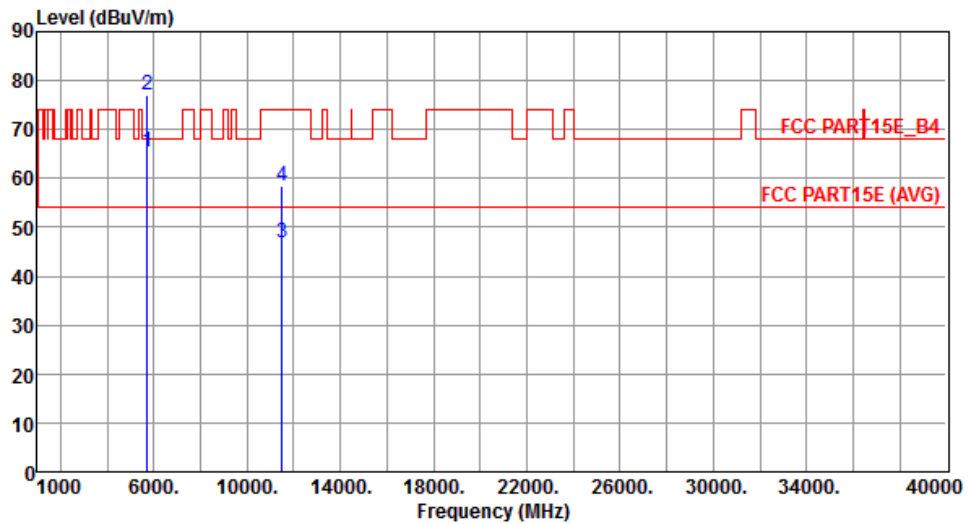
Modulation	11a	Test Freq. (MHz)	5745
Polarization	Horizontal	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	61.28	68.20	-6.92	54.58	6.70	Peak	100	70
2	5725.00	72.94	78.20	-5.26	66.23	6.71	Peak	100	70
3	11490.00	45.22	54.00	-8.78	29.00	16.22	Average	230	146
4	11490.00	57.62	74.00	-16.38	41.40	16.22	Peak	230	146

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



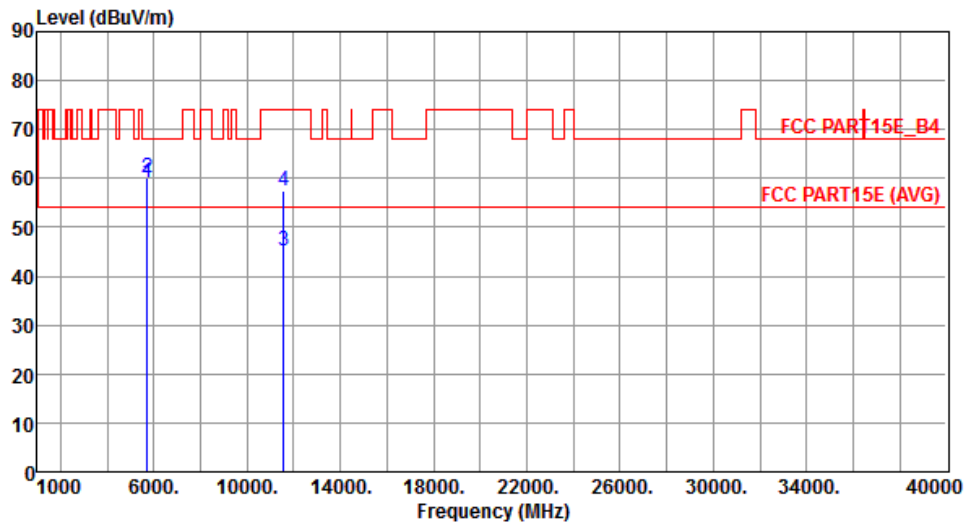
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	65.39	68.20	-2.81	58.69	6.70	Peak	339	95
2	5725.00	77.01	78.20	-1.19	70.30	6.71	Peak	339	95
3	11490.00	46.69	54.00	-7.31	30.47	16.22	Average	290	88
4	11490.00	58.59	74.00	-15.41	42.37	16.22	Peak	290	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	11a	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	1



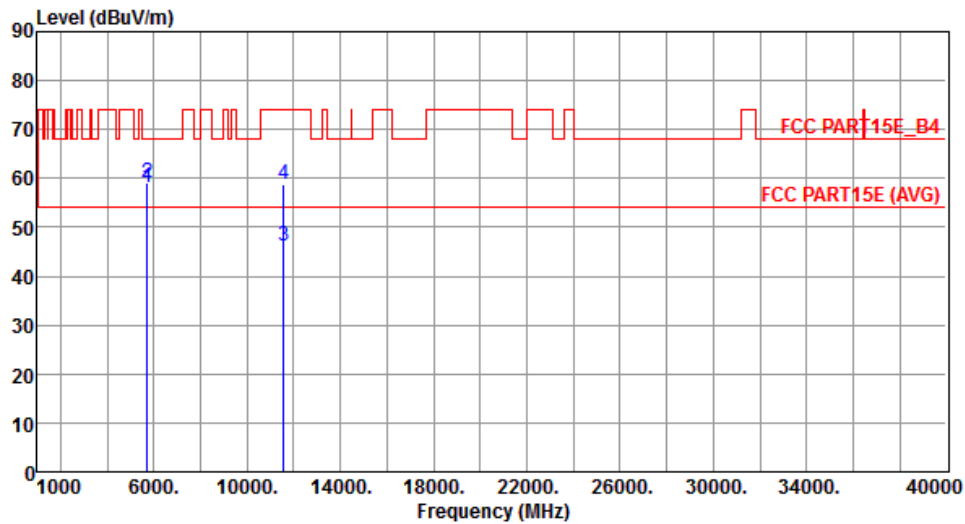
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	59.13	68.20	-9.07	52.43	6.70	Peak	100	58
2	5725.00	60.12	78.20	-18.08	53.41	6.71	Peak	100	58
3	11570.00	45.17	54.00	-8.83	29.05	16.12	Average	245	169
4	11570.00	57.33	74.00	-16.67	41.21	16.12	Peak	245	169

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



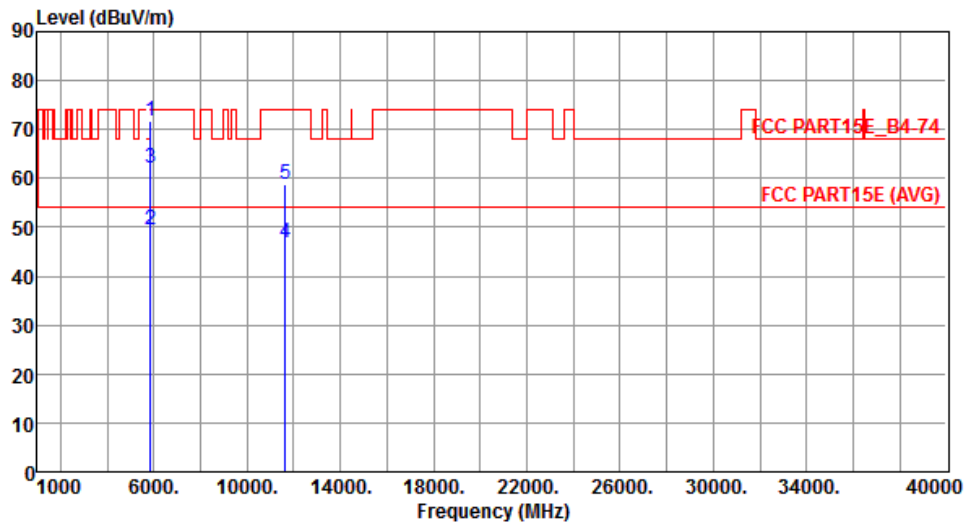
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	58.21	68.20	-9.99	51.51	6.70	Peak	330	79
2	5725.00	59.14	78.20	-19.06	52.43	6.71	Peak	330	79
3	11570.00	46.27	54.00	-7.73	30.15	16.12	Average	296	56
4	11570.00	58.71	74.00	-15.29	42.59	16.12	Peak	296	56

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



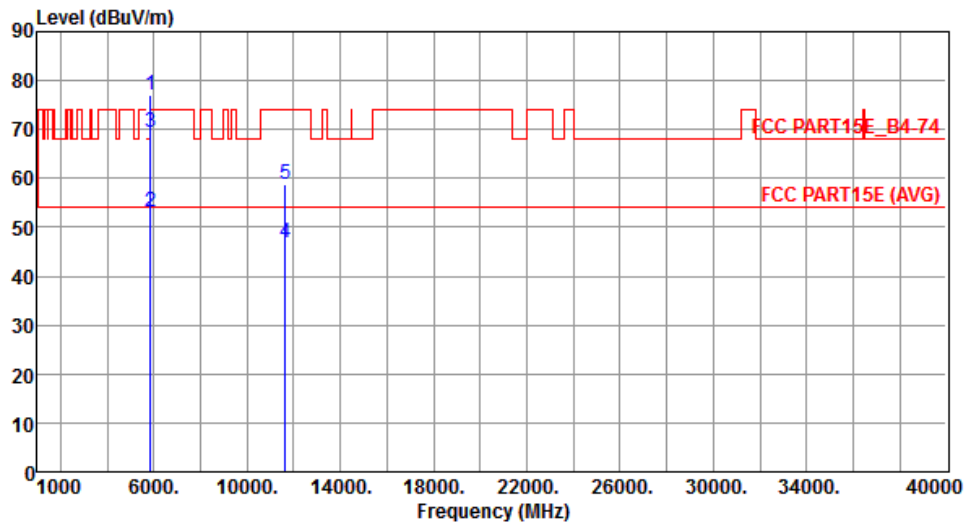
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	71.89	78.20	-6.31	64.94	6.95	Peak	110	64
2	5860.00	49.33	54.00	-4.67	42.38	6.95	Average	110	64
3	5860.00	62.12	74.00	-11.88	55.17	6.95	Peak	110	64
4	11650.00	46.76	54.00	-7.24	30.74	16.02	Average	110	64
5	11650.00	58.81	74.00	-15.19	42.79	16.02	Peak	110	64

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



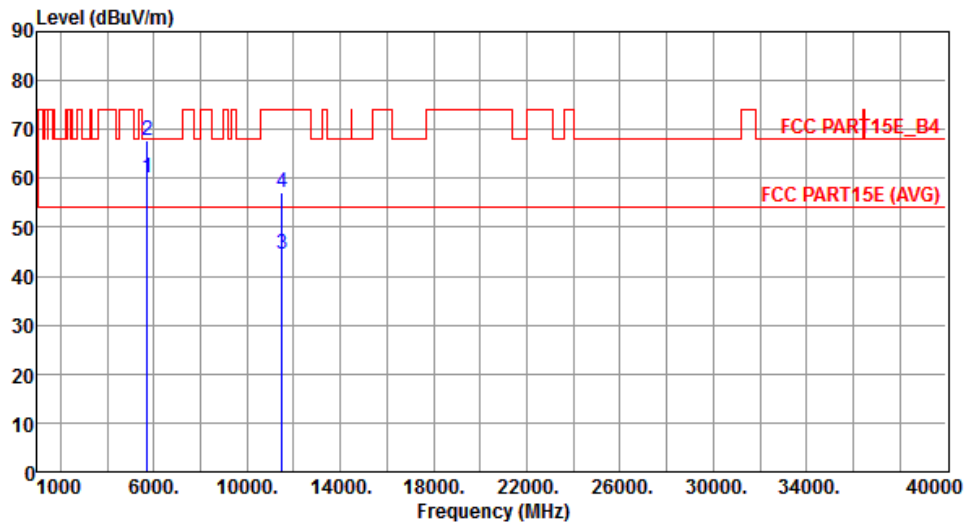
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	77.09	78.20	-1.11	70.14	6.95	Peak	338	89
2	5860.00	52.98	54.00	-1.02	46.03	6.95	Average	338	89
3	5860.00	69.57	74.00	-4.43	62.62	6.95	Peak	338	89
4	11650.00	46.97	54.00	-7.03	30.95	16.02	Average	255	39
5	11650.00	58.69	74.00	-15.31	42.67	16.02	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	2



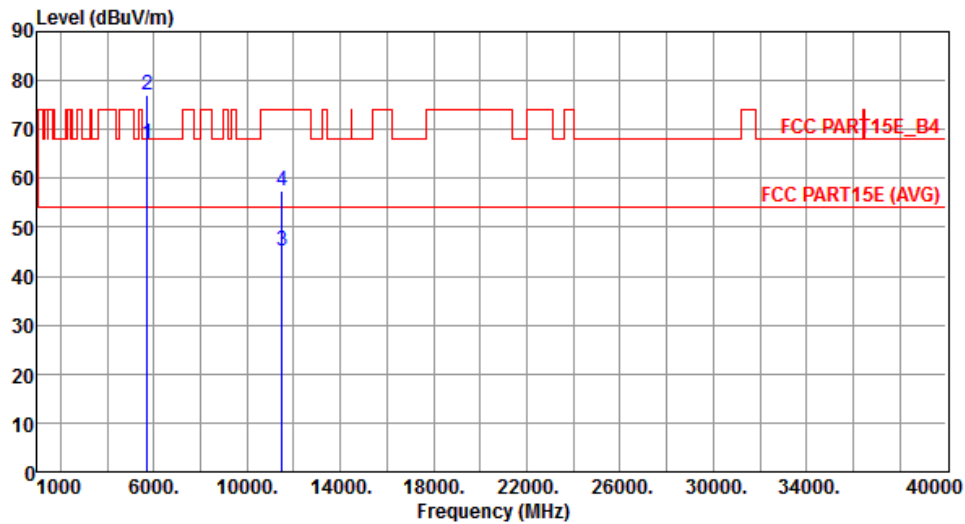
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	60.12	68.20	-8.08	53.42	6.70	Peak	245	279
2	5725.00	67.88	78.20	-10.32	61.17	6.71	Peak	245	279
3	11490.00	44.56	54.00	-9.44	28.34	16.22	Average	210	163
4	11490.00	57.29	74.00	-16.71	41.07	16.22	Peak	210	163

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	2



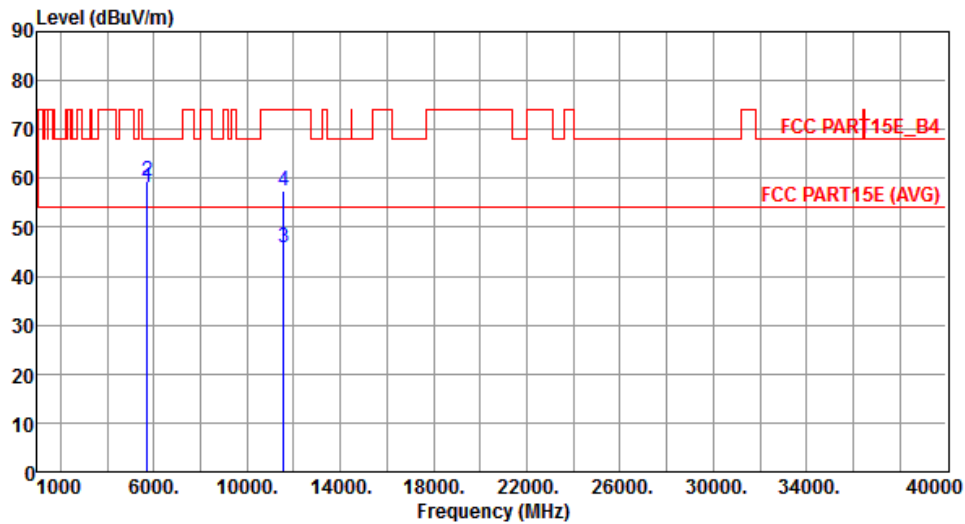
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	67.09	68.20	-1.11	60.39	6.70	Peak	200	22
2	5725.00	77.19	78.20	-1.01	70.48	6.71	Peak	200	22
3	11490.00	45.12	54.00	-8.88	28.90	16.22	Average	200	22
4	11490.00	57.58	74.00	-16.42	41.36	16.22	Peak	200	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	11a	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	2



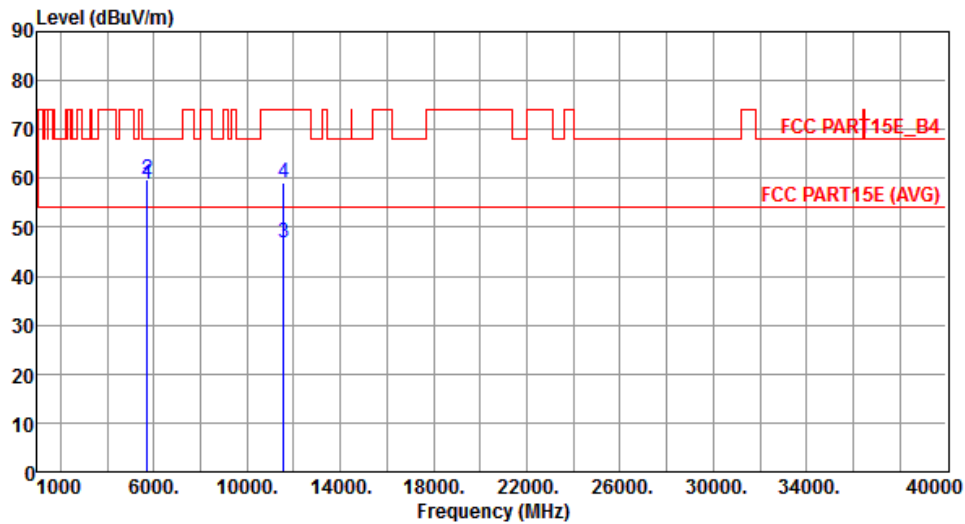
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	58.13	68.20	-10.07	51.43	6.70	Peak	260	291
2	5725.00	59.46	78.20	-18.74	52.75	6.71	Peak	260	291
3	11570.00	45.76	54.00	-8.24	29.64	16.12	Average	175	338
4	11570.00	57.40	74.00	-16.60	41.28	16.12	Peak	175	338

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	2



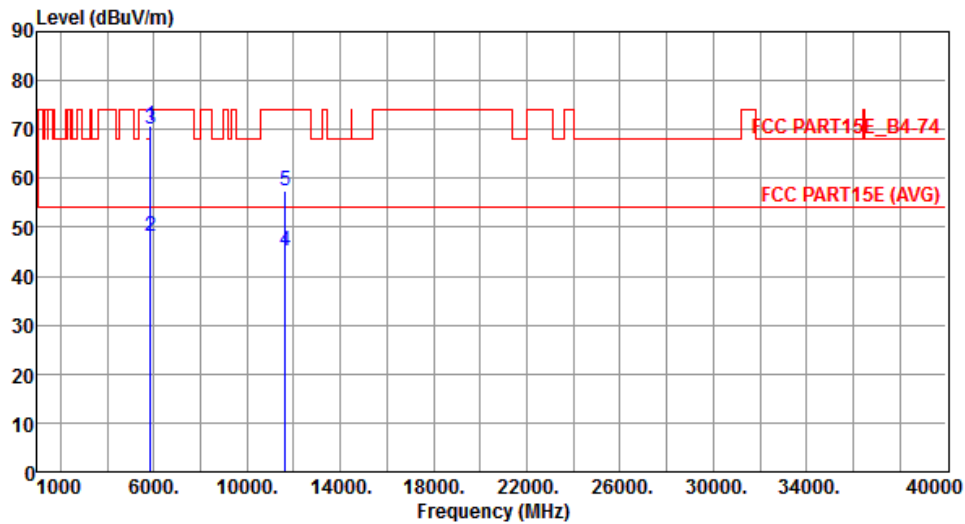
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	58.76	68.20	-9.44	52.06	6.70	Peak	196	85
2	5725.00	59.91	78.20	-18.29	53.20	6.71	Peak	196	85
3	11570.00	46.97	54.00	-7.03	30.85	16.12	Average	273	96
4	11570.00	59.12	74.00	-14.88	43.00	16.12	Peak	273	96

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	2



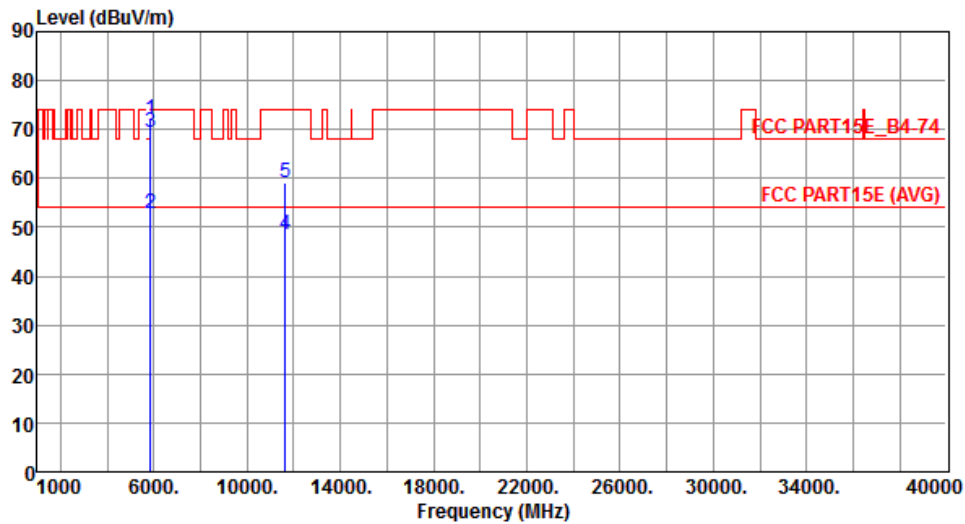
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	70.87	78.20	-7.33	63.92	6.95	Peak	260	280
2	5860.00	48.32	54.00	-5.68	41.37	6.95	Average	260	280
3	5860.00	69.96	74.00	-4.04	63.01	6.95	Peak	260	280
4	11650.00	45.12	54.00	-8.88	29.10	16.02	Average	221	166
5	11650.00	57.53	74.00	-16.47	41.51	16.02	Peak	221	166

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	2



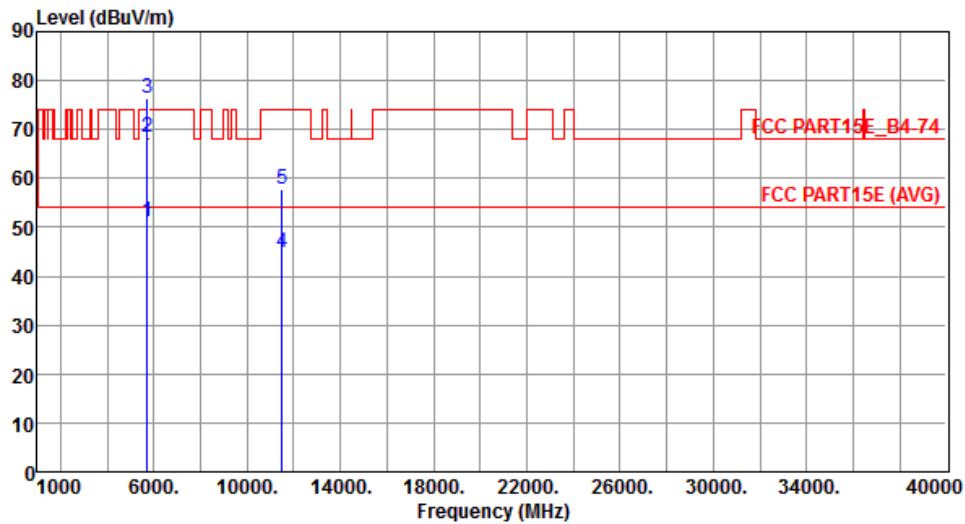
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	71.94	78.20	-6.26	64.99	6.95	Peak	185	66
2	5860.00	52.96	54.00	-1.04	46.01	6.95	Average	185	66
3	5860.00	69.57	74.00	-4.43	62.62	6.95	Peak	185	66
4	11650.00	48.39	54.00	-5.61	32.37	16.02	Average	290	36
5	11650.00	58.97	74.00	-15.03	42.95	16.02	Peak	290	36

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	3



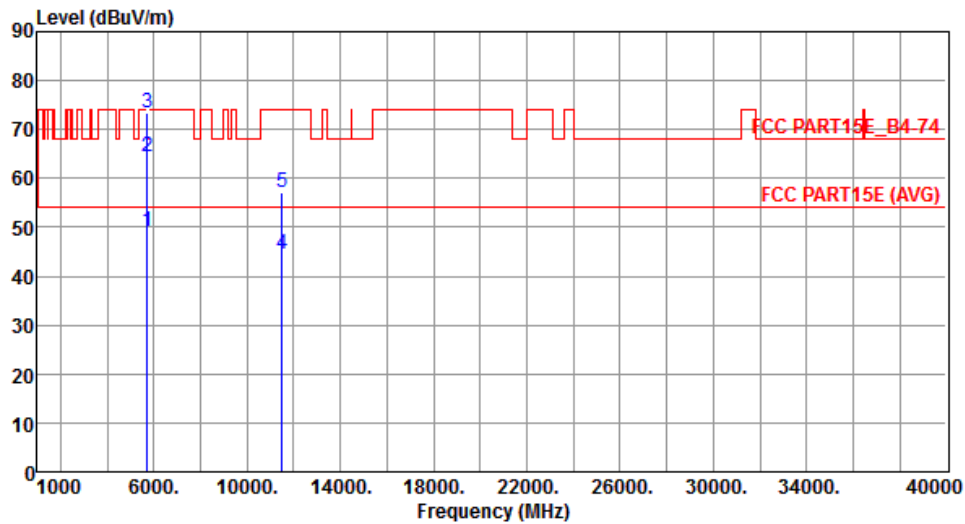
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	51.29	54.00	-2.71	44.59	6.70	Average	101	259
2	5715.00	68.28	74.00	-5.72	61.58	6.70	Peak	101	259
3	5725.00	76.37	78.20	-1.83	69.66	6.71	Peak	101	259
4	11490.00	44.89	54.00	-9.11	28.67	16.22	Average	281	146
5	11490.00	57.73	74.00	-16.27	41.51	16.22	Peak	281	146

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	3



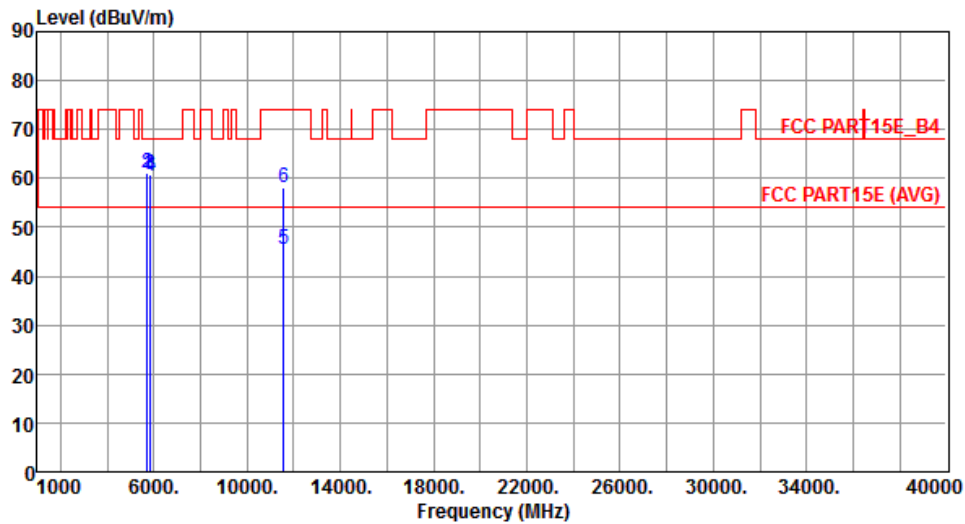
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	49.02	54.00	-4.98	42.32	6.70	Average	245	278
2	5715.00	64.32	74.00	-9.68	57.62	6.70	Peak	245	278
3	5725.00	73.39	78.20	-4.81	66.68	6.71	Peak	245	278
4	11490.00	44.43	54.00	-9.57	28.21	16.22	Average	263	302
5	11490.00	57.05	74.00	-16.95	40.83	16.22	Peak	263	302

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	3



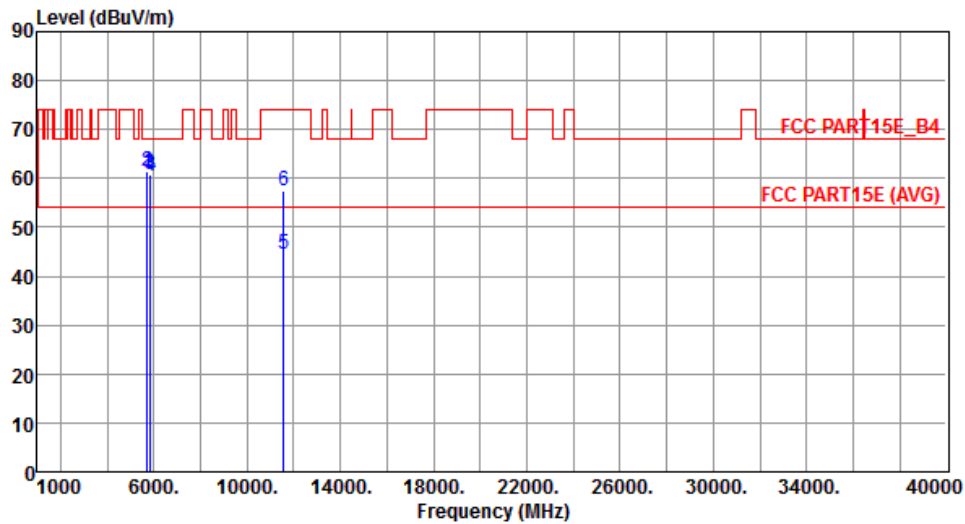
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	60.92	68.20	-7.28	54.22	6.70	Peak	103	155
2	5725.00	61.09	78.20	-17.11	54.38	6.71	Peak	103	155
3	5850.00	60.82	78.20	-17.38	53.87	6.95	Peak	103	155
4	5860.00	60.43	68.20	-7.77	53.48	6.95	Peak	103	155
5	11570.00	45.45	54.00	-8.55	29.33	16.12	Average	285	152
6	11570.00	58.11	74.00	-15.89	41.99	16.12	Peak	285	152

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	3



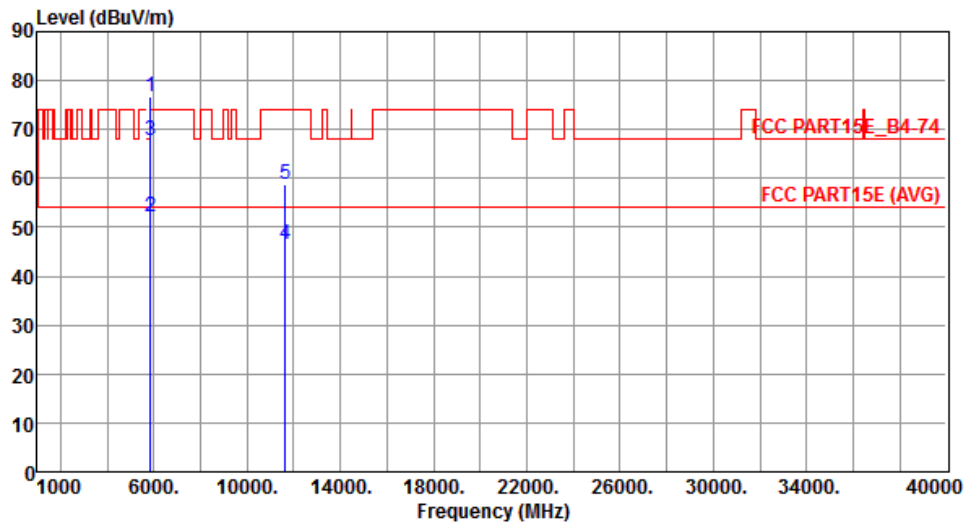
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	61.06	68.20	-7.14	54.36	6.70	Peak	205	281
2	5725.00	61.38	78.20	-16.82	54.67	6.71	Peak	205	281
3	5850.00	60.92	78.20	-17.28	53.97	6.95	Peak	205	281
4	5860.00	60.59	68.20	-7.61	53.64	6.95	Peak	205	281
5	11570.00	44.55	54.00	-9.45	28.43	16.12	Average	270	301
6	11570.00	57.32	74.00	-16.68	41.20	16.12	Peak	270	301

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	3



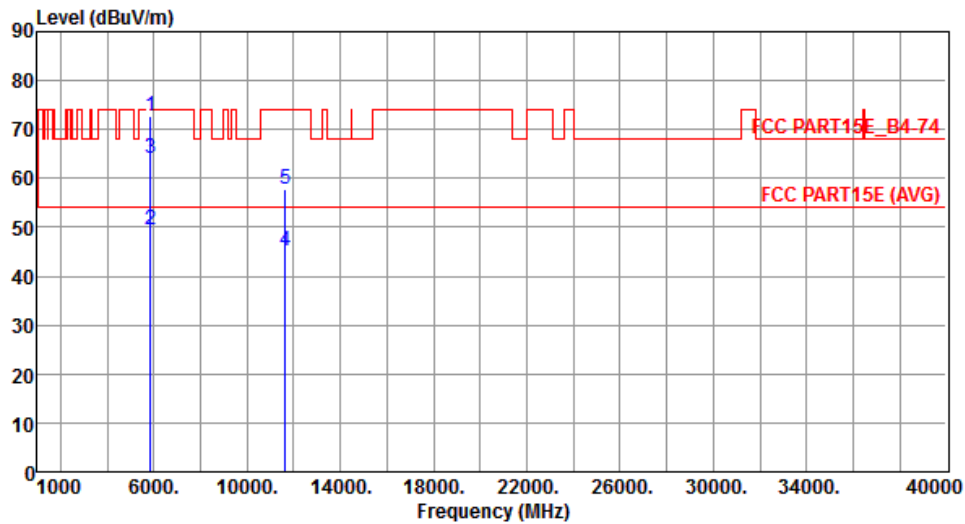
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	76.72	78.20	-1.48	69.77	6.95	Peak	100	155
2	5860.00	52.20	54.00	-1.80	45.25	6.95	Average	100	155
3	5860.00	67.76	74.00	-6.24	60.81	6.95	Peak	100	155
4	11650.00	46.33	54.00	-7.67	30.31	16.02	Average	281	160
5	11650.00	58.79	74.00	-15.21	42.77	16.02	Peak	281	160

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	3



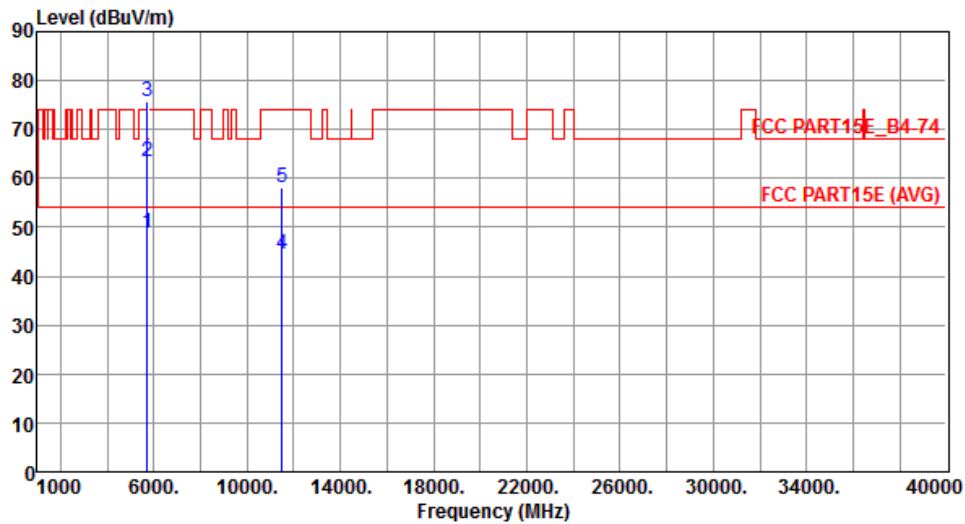
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	72.85	78.20	-5.35	65.90	6.95	Peak	224	280
2	5860.00	49.57	54.00	-4.43	42.62	6.95	Average	224	280
3	5860.00	64.06	74.00	-9.94	57.11	6.95	Peak	224	280
4	11650.00	45.03	54.00	-8.97	29.01	16.02	Average	261	308
5	11650.00	57.92	74.00	-16.08	41.90	16.02	Peak	261	308

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	4



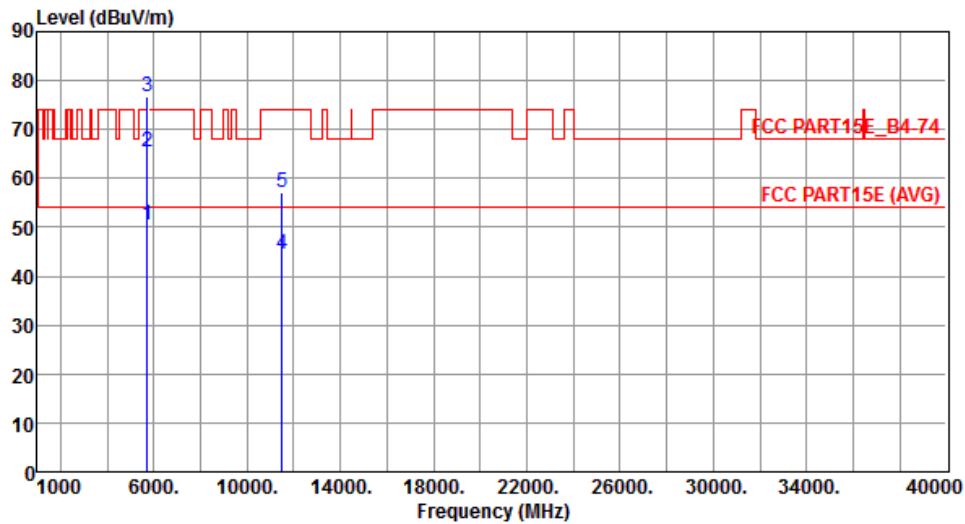
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	48.82	54.00	-5.18	42.12	6.70	Average	100	145
2	5715.00	63.46	74.00	-10.54	56.76	6.70	Peak	100	145
3	5725.00	75.78	78.20	-2.42	69.07	6.71	Peak	100	145
4	11490.00	44.45	54.00	-9.55	28.23	16.22	Average	231	155
5	11490.00	58.23	74.00	-15.77	42.01	16.22	Peak	231	155

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	4



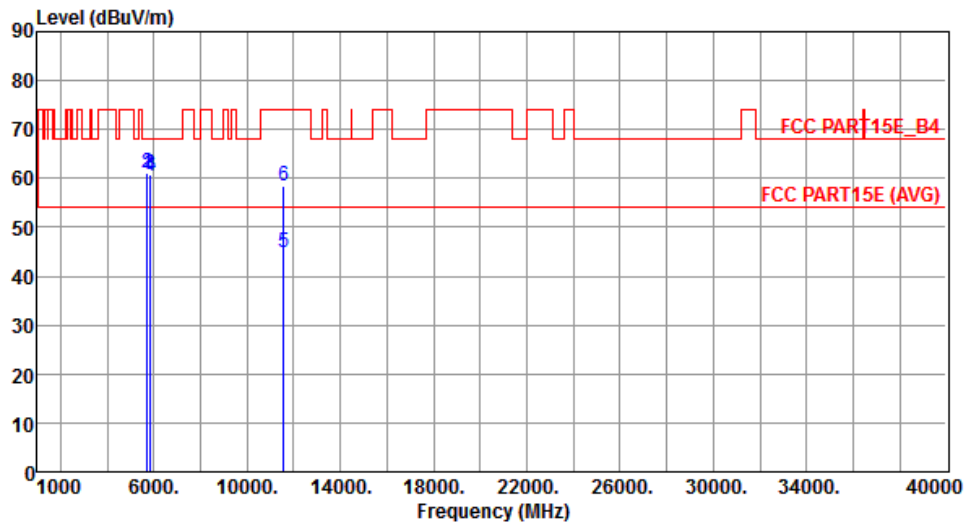
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	50.54	54.00	-3.46	43.84	6.70	Average	266	148
2	5715.00	65.46	74.00	-8.54	58.76	6.70	Peak	266	148
3	5725.00	76.82	78.20	-1.38	70.11	6.71	Peak	266	148
4	11490.00	44.43	54.00	-9.57	28.21	16.22	Average	267	52
5	11490.00	57.12	74.00	-16.88	40.90	16.22	Peak	267	52

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	4



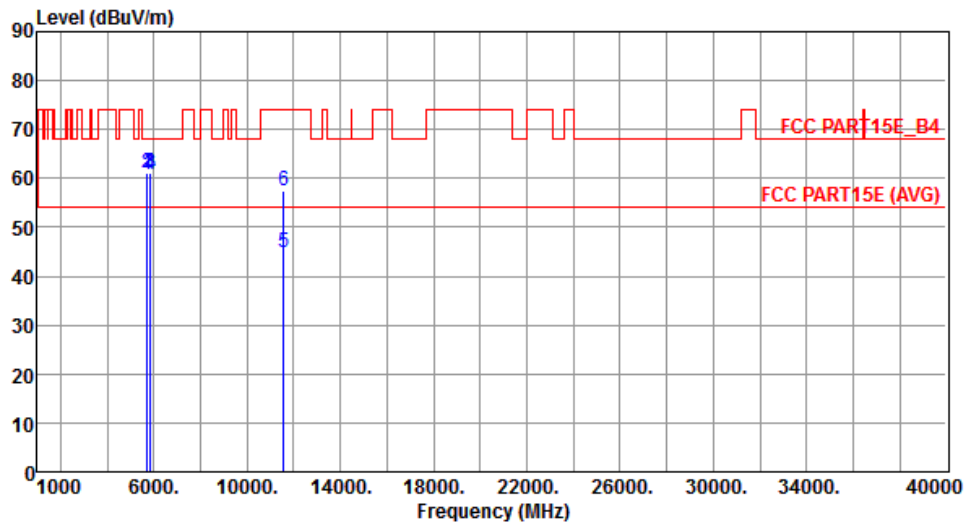
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	60.91	68.20	-7.29	54.21	6.70	Peak	100	147
2	5725.00	61.12	78.20	-17.08	54.41	6.71	Peak	100	147
3	5850.00	60.64	78.20	-17.56	53.69	6.95	Peak	100	147
4	5860.00	60.41	68.20	-7.79	53.46	6.95	Peak	100	147
5	11570.00	44.76	54.00	-9.24	28.64	16.12	Average	236	158
6	11570.00	58.52	74.00	-15.48	42.40	16.12	Peak	236	158

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	4



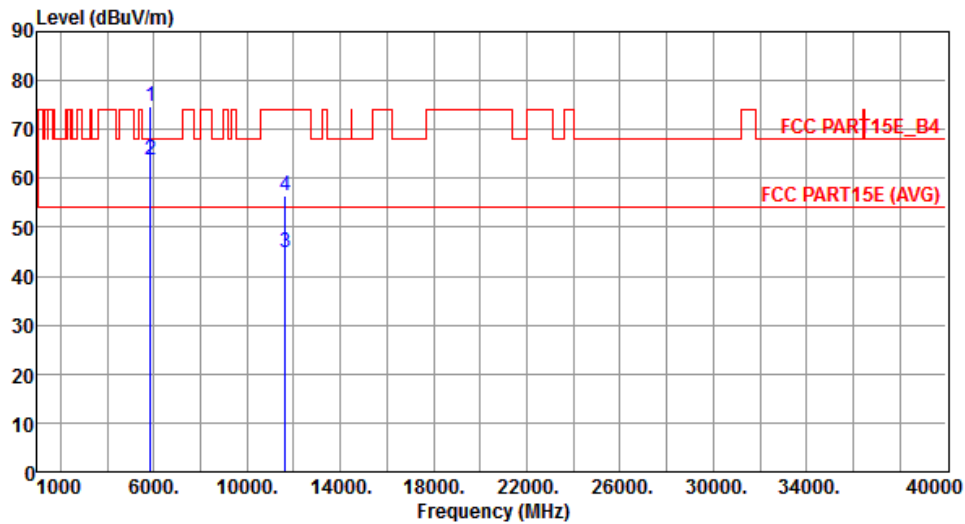
	Freq. MHz	Emission level dBUV/m	Limit dBUV/m	Margin dB	SA reading dBUV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	60.93	68.20	-7.27	54.23	6.70	Peak	227	104
2	5725.00	61.26	78.20	-16.94	54.55	6.71	Peak	227	104
3	5850.00	61.02	78.20	-17.18	54.07	6.95	Peak	227	104
4	5860.00	60.90	68.20	-7.30	53.95	6.95	Peak	227	104
5	11570.00	44.83	54.00	-9.17	28.71	16.12	Average	287	47
6	11570.00	57.50	74.00	-16.50	41.38	16.12	Peak	287	47

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	4



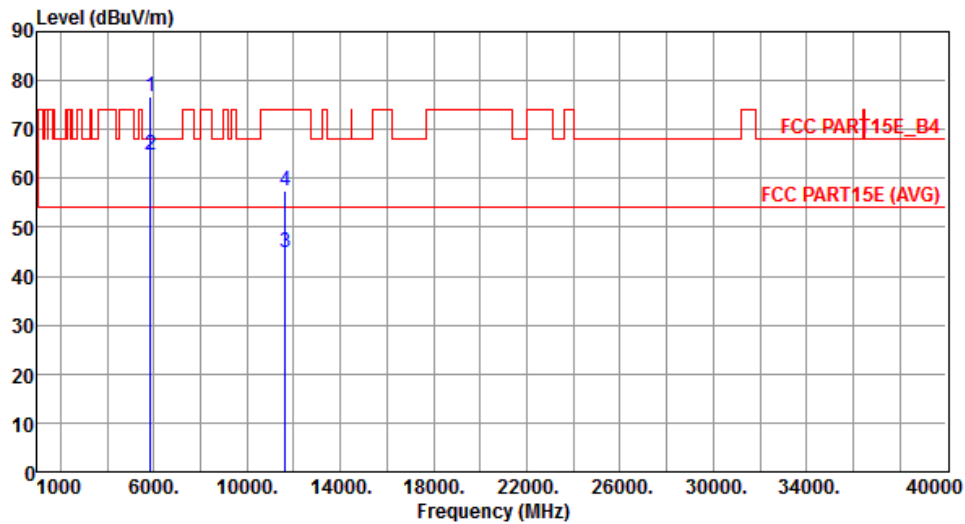
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	74.68	78.20	-3.52	67.73	6.95	Peak	100	145
2	5860.00	63.76	68.20	-4.44	56.81	6.95	Peak	100	145
3	11650.00	44.67	54.00	-9.33	28.65	16.02	Average	100	145
4	11650.00	56.62	74.00	-17.38	40.60	16.02	Peak	100	145

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	4



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	76.86	78.20	-1.34	69.91	6.95	Peak	226	130
2	5860.00	64.81	68.20	-3.39	57.86	6.95	Peak	226	130
3	11650.00	44.83	54.00	-9.17	28.81	16.02	Average	287	47
4	11650.00	57.50	74.00	-16.50	41.48	16.02	Peak	287	47

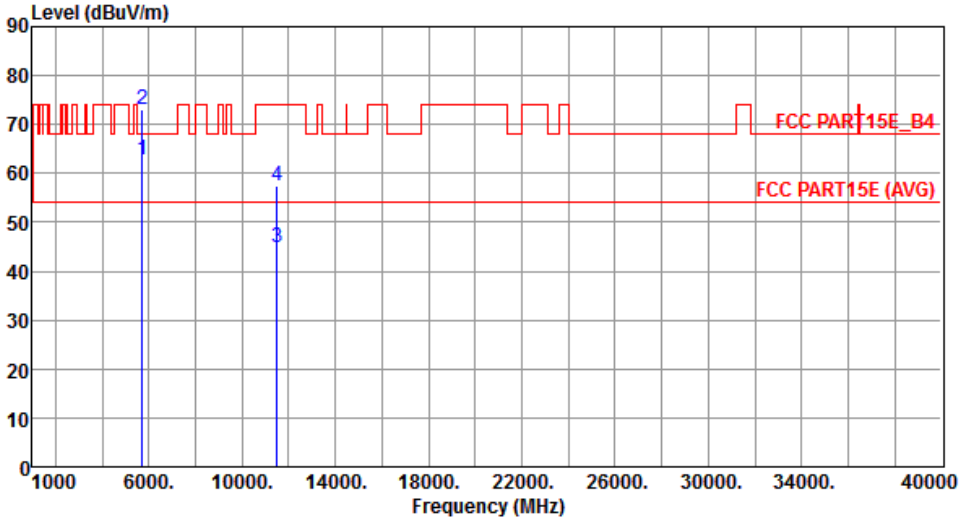
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*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 HT20

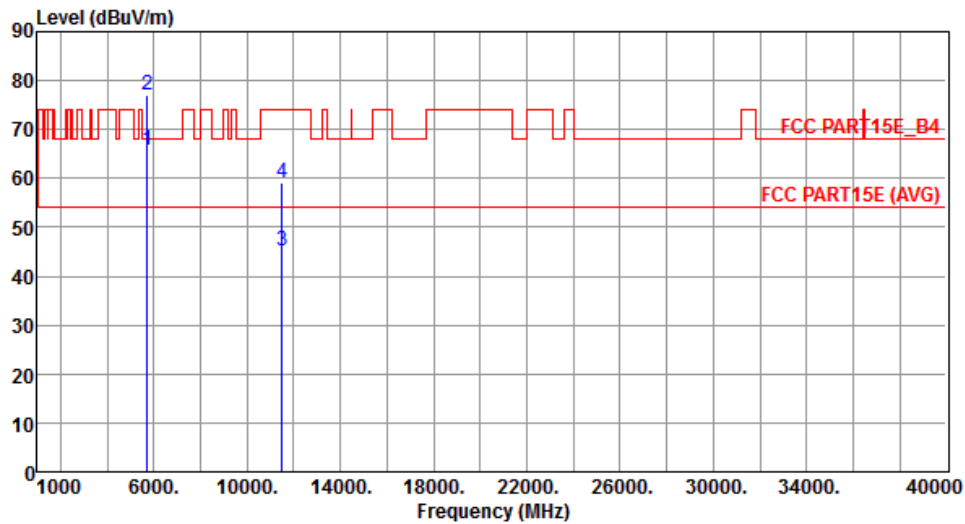
Modulation	HT20	Test Freq. (MHz)	5745
Polarization	Horizontal	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	62.84	68.20	-5.36	56.14	6.70	Peak	100	44
2	5725.00	73.18	78.20	-5.02	66.47	6.71	Peak	100	44
3	11490.00	44.97	54.00	-9.03	28.75	16.22	Average	240	166
4	11490.00	57.32	74.00	-16.68	41.10	16.22	Peak	240	166

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	HT20	Test Freq. (MHz)	5745
Polarization	Vertical	Test Configuration	1



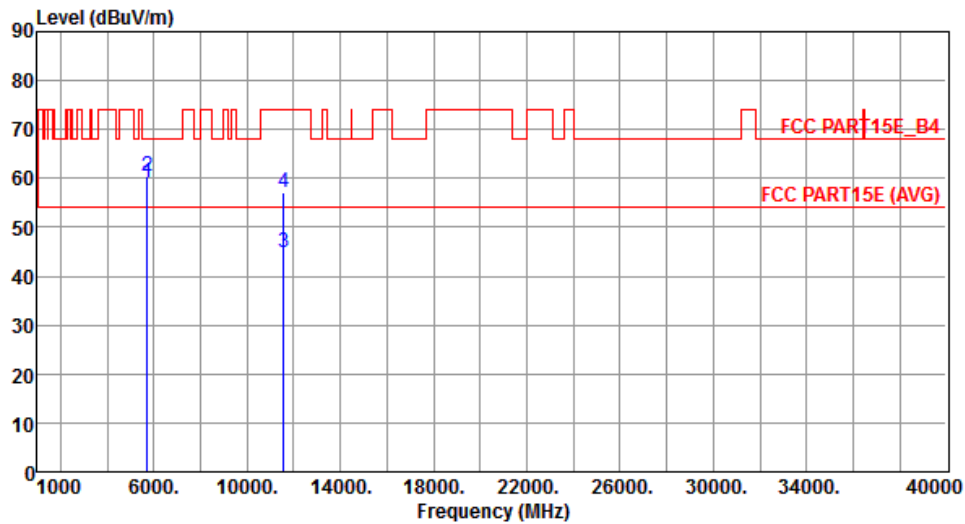
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	65.77	68.20	-2.43	59.07	6.70	Peak	336	89
2	5725.00	77.11	78.20	-1.09	70.40	6.71	Peak	336	89
3	11490.00	45.12	54.00	-8.88	28.90	16.22	Average	320	51
4	11490.00	58.98	74.00	-15.02	42.76	16.22	Peak	320	51

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	HT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	1



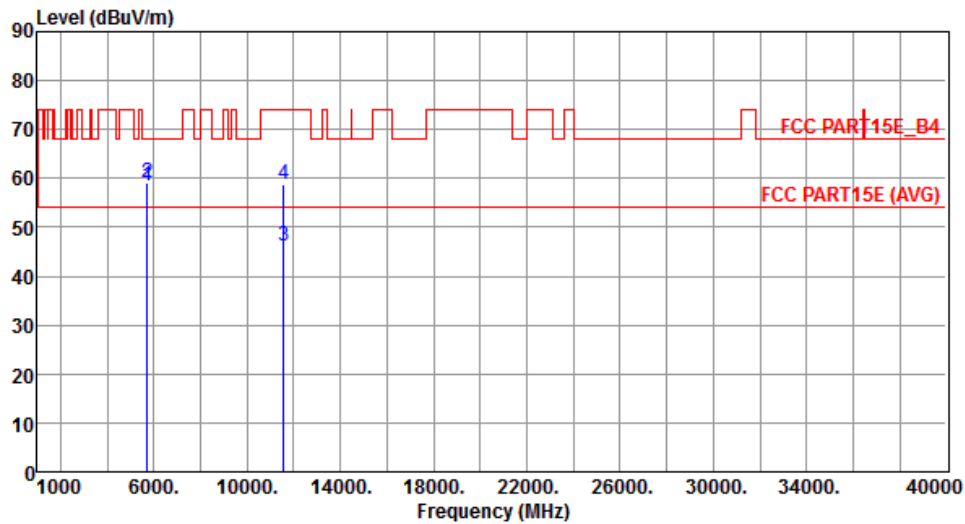
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	59.28	68.20	-8.92	52.58	6.70	Peak	100	41
2	5725.00	60.32	78.20	-17.88	53.61	6.71	Peak	100	41
3	11570.00	44.98	54.00	-9.02	28.86	16.12	Average	258	200
4	11570.00	57.12	74.00	-16.88	41.00	16.12	Peak	258	200

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	HT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	1



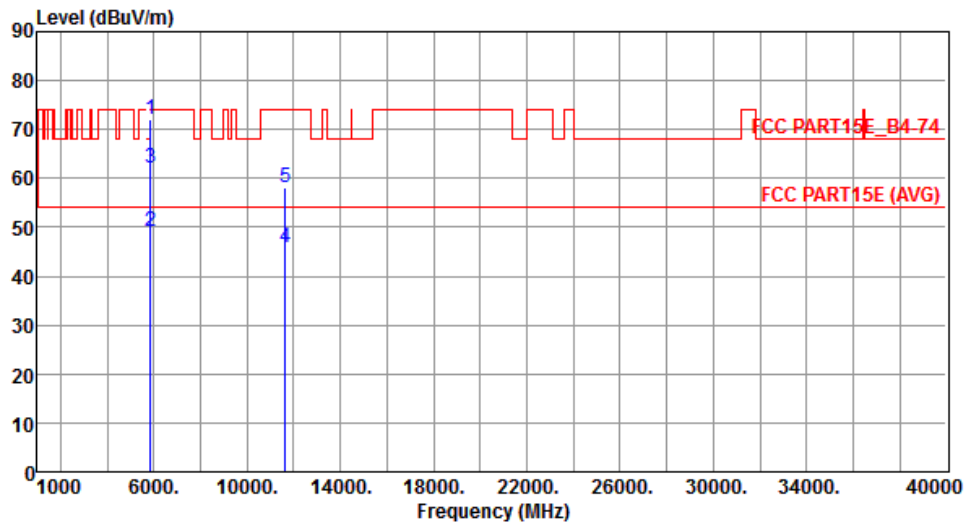
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	58.38	68.20	-9.82	51.68	6.70	Peak	336	68
2	5725.00	59.28	78.20	-18.92	52.57	6.71	Peak	336	68
3	11570.00	46.15	54.00	-7.85	30.03	16.12	Average	227	69
4	11570.00	58.87	74.00	-15.13	42.75	16.12	Peak	227	69

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	HT20	Test Freq. (MHz)	5825
Polarization	Horizontal	Test Configuration	1



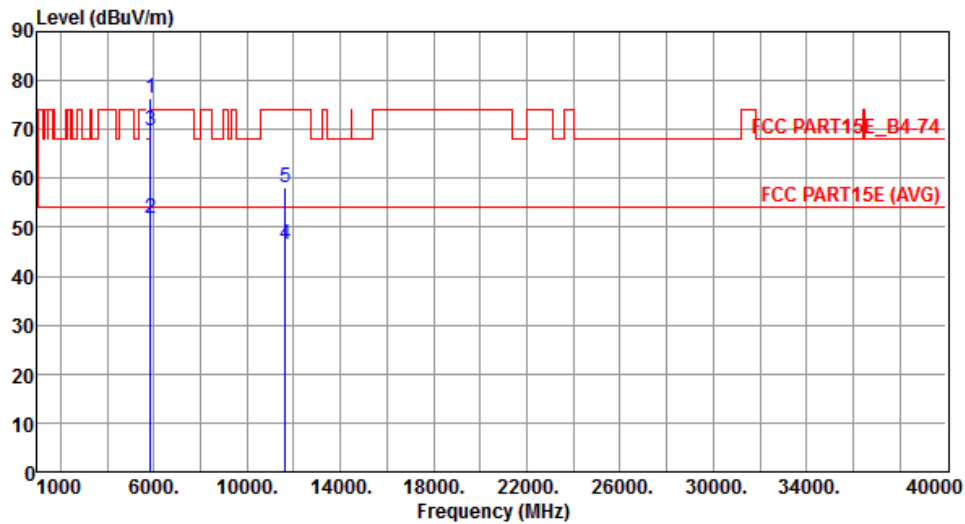
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	71.93	78.20	-6.27	64.98	6.95	Peak	104	43
2	5860.00	49.28	54.00	-4.72	42.33	6.95	Average	104	43
3	5860.00	61.96	74.00	-12.04	55.01	6.95	Peak	104	43
4	11650.00	45.97	54.00	-8.03	29.95	16.02	Average	222	166
5	11650.00	58.19	74.00	-15.81	42.17	16.02	Peak	222	166

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	HT20	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	1



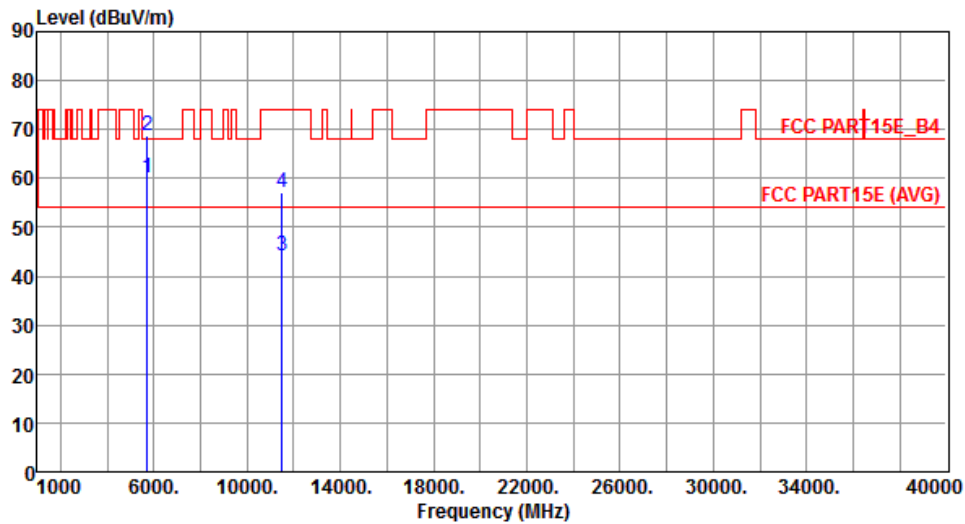
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	76.36	78.20	-1.84	69.41	6.95	Peak	336	94
2	5860.00	51.84	54.00	-2.16	44.89	6.95	Average	336	94
3	5860.00	69.64	74.00	-4.36	62.69	6.95	Peak	336	94
4	11650.00	46.36	54.00	-7.64	30.34	16.02	Average	245	51
5	11650.00	58.11	74.00	-15.89	42.09	16.02	Peak	245	51

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	HT20	Test Freq. (MHz)	5745
Polarization	Horizontal	Test Configuration	2



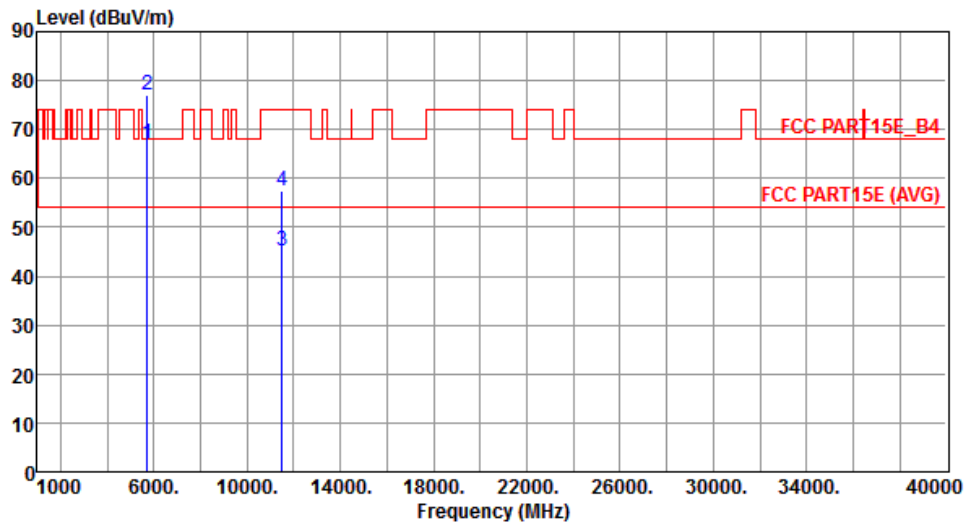
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	60.00	68.20	-8.20	53.30	6.70	Peak	250	288
2	5725.00	68.67	78.20	-9.53	61.96	6.71	Peak	250	288
3	11490.00	44.20	54.00	-9.80	27.98	16.22	Average	178	350
4	11490.00	57.09	74.00	-16.91	40.87	16.22	Peak	178	350

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	HT20	Test Freq. (MHz)	5745
Polarization	Vertical	Test Configuration	2



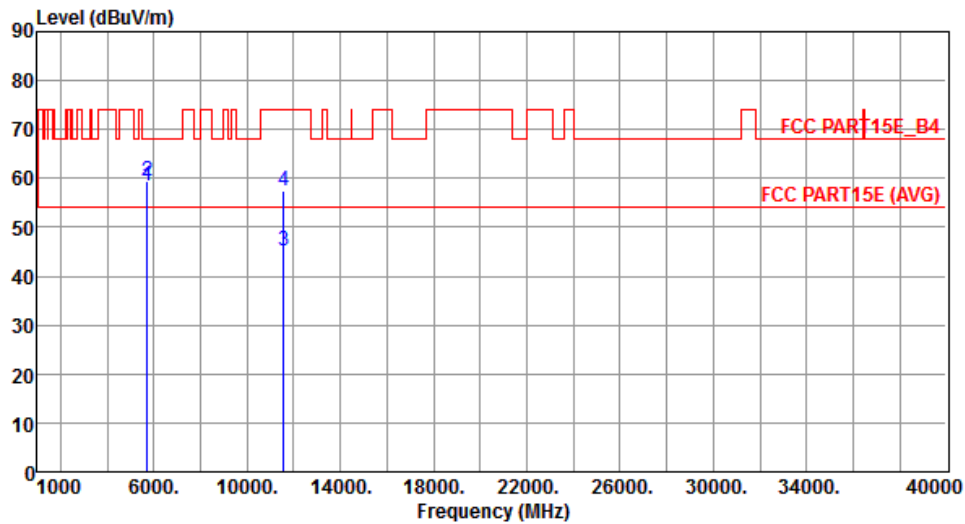
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	66.98	68.20	-1.22	60.28	6.70	Peak	195	19
2	5725.00	77.12	78.20	-1.08	70.41	6.71	Peak	195	19
3	11490.00	45.04	54.00	-8.96	28.82	16.22	Average	200	22
4	11490.00	57.47	74.00	-16.53	41.25	16.22	Peak	200	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	HT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	2



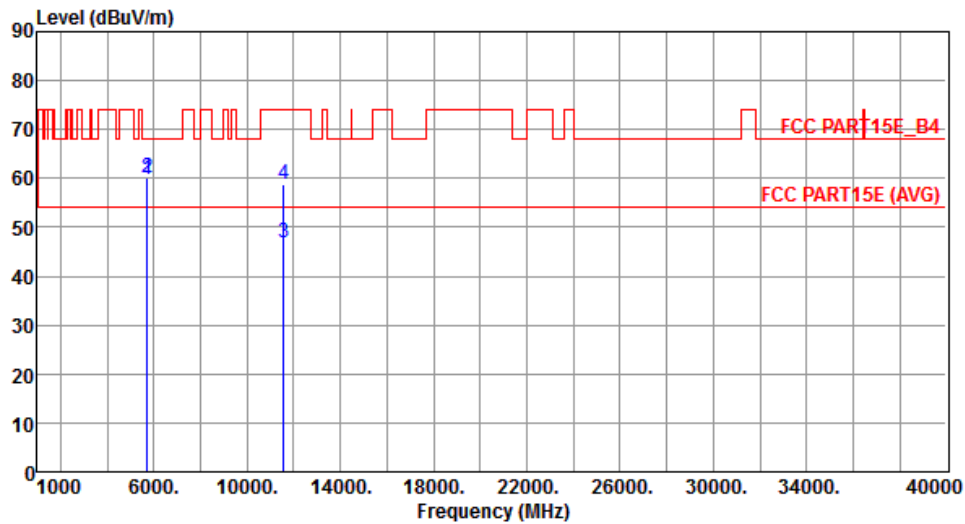
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	58.40	68.20	-9.80	51.70	6.70	Peak	251	282
2	5725.00	59.37	78.20	-18.83	52.66	6.71	Peak	251	282
3	11570.00	45.19	54.00	-8.81	29.07	16.12	Average	269	179
4	11570.00	57.39	74.00	-16.61	41.27	16.12	Peak	269	179

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	HT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	2



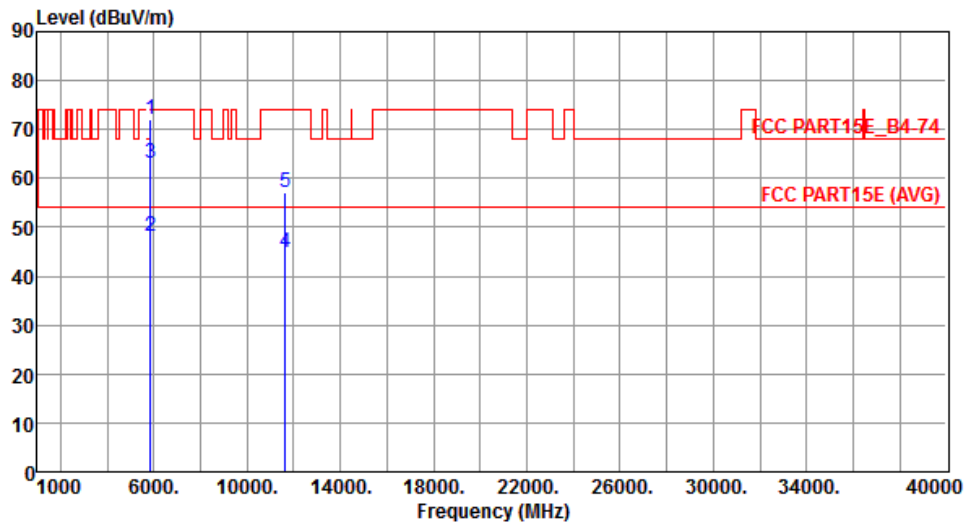
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	59.87	68.20	-8.33	53.17	6.70	Peak	186	57
2	5725.00	60.09	78.20	-18.11	53.38	6.71	Peak	186	57
3	11570.00	46.76	54.00	-7.24	30.64	16.12	Average	176	342
4	11570.00	58.87	74.00	-15.13	42.75	16.12	Peak	176	342

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	HT20	Test Freq. (MHz)	5825
Polarization	Horizontal	Test Configuration	2



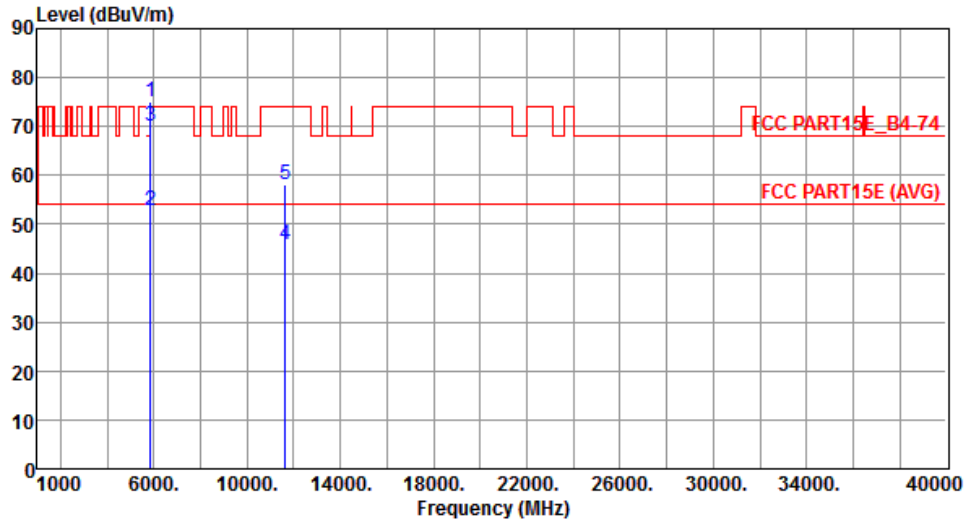
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	72.12	78.20	-6.08	65.17	6.95	Peak	262	279
2	5860.00	48.06	54.00	-5.94	41.11	6.95	Average	262	279
3	5860.00	63.13	74.00	-10.87	56.18	6.95	Peak	262	279
4	11650.00	44.89	54.00	-9.11	28.87	16.02	Average	220	161
5	11650.00	57.18	74.00	-16.82	41.16	16.02	Peak	220	161

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	HT20	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	2



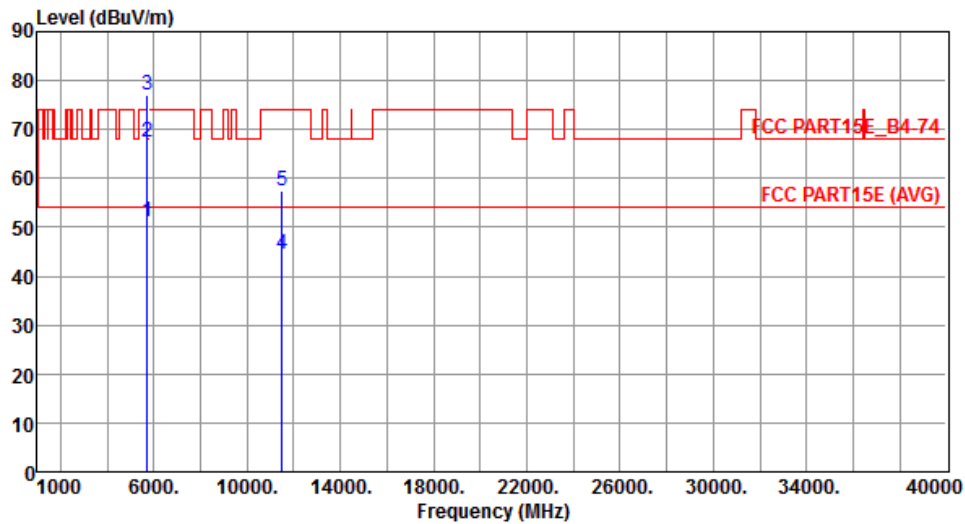
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	75.13	78.20	-3.07	68.18	6.95	Peak	184	65
2	5860.00	52.64	54.00	-1.36	45.69	6.95	Average	184	65
3	5860.00	70.12	74.00	-3.88	63.17	6.95	Peak	184	65
4	11650.00	45.67	54.00	-8.33	29.65	16.02	Average	297	333
5	11650.00	58.11	74.00	-15.89	42.09	16.02	Peak	297	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	HT20	Test Freq. (MHz)	5745
Polarization	Horizontal	Test Configuration	3



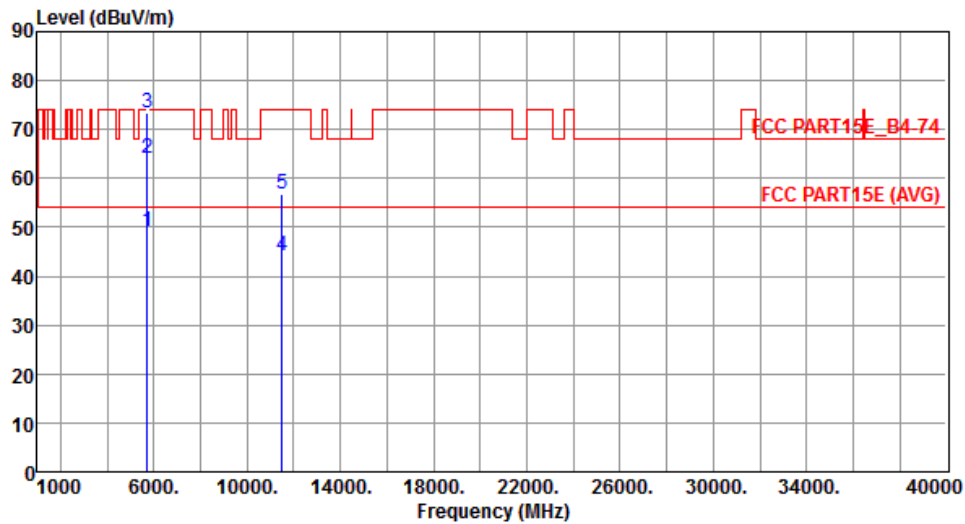
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	51.04	54.00	-2.96	44.34	6.70	Average	100	259
2	5715.00	67.41	74.00	-6.59	60.71	6.70	Peak	100	259
3	5725.00	76.93	78.20	-1.27	70.22	6.71	Peak	100	259
4	11490.00	44.42	54.00	-9.58	28.20	16.22	Average	276	144
5	11490.00	57.51	74.00	-16.49	41.29	16.22	Peak	276	144

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	HT20	Test Freq. (MHz)	5745
Polarization	Vertical	Test Configuration	3



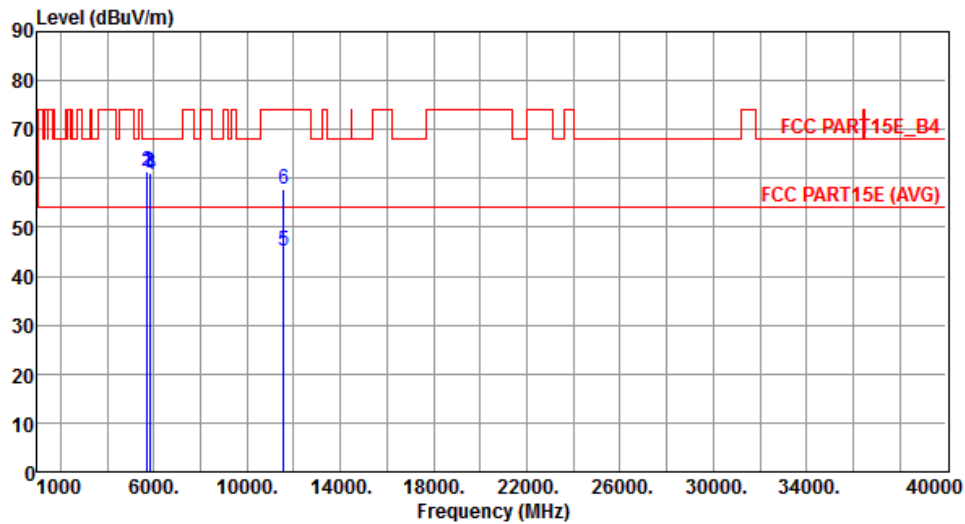
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	49.24	54.00	-4.76	42.54	6.70	Average	241	273
2	5715.00	64.08	74.00	-9.92	57.38	6.70	Peak	241	273
3	5725.00	73.48	78.20	-4.72	66.77	6.71	Peak	241	273
4	11490.00	44.29	54.00	-9.71	28.07	16.22	Average	265	309
5	11490.00	56.88	74.00	-17.12	40.66	16.22	Peak	265	309

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	HT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	3



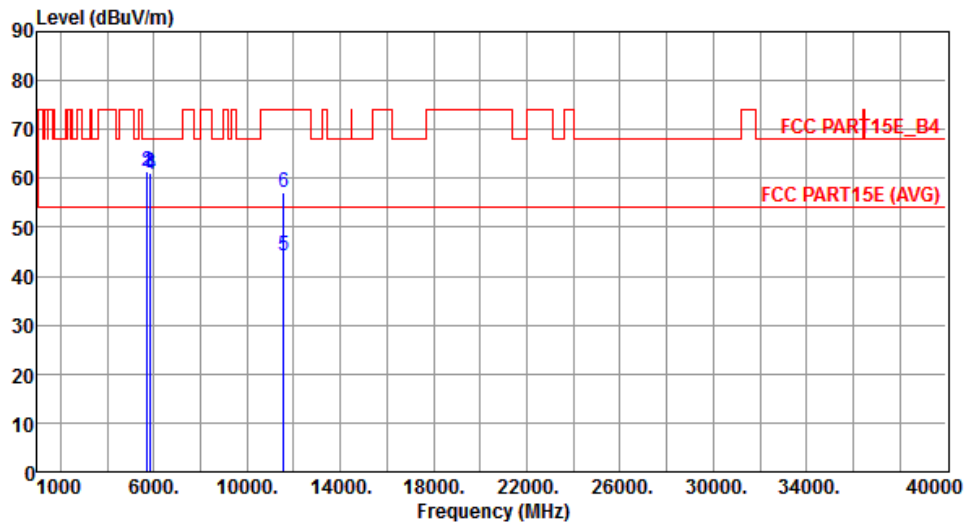
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	61.38	68.20	-6.82	54.68	6.70	Peak	105	163
2	5725.00	61.51	78.20	-16.69	54.80	6.71	Peak	105	163
3	5850.00	61.24	78.20	-16.96	54.29	6.95	Peak	105	163
4	5860.00	60.72	68.20	-7.48	53.77	6.95	Peak	105	163
5	11570.00	45.12	54.00	-8.88	29.00	16.12	Average	279	158
6	11570.00	57.74	74.00	-16.26	41.62	16.12	Peak	279	158

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	HT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	3



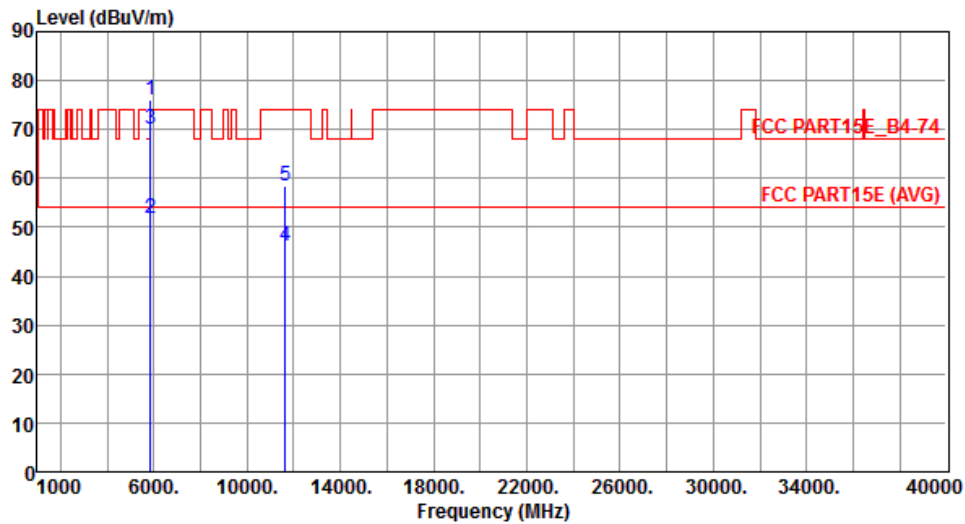
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	61.20	68.20	-7.00	54.50	6.70	Peak	196	287
2	5725.00	61.60	78.20	-16.60	54.89	6.71	Peak	196	287
3	5850.00	61.14	78.20	-17.06	54.19	6.95	Peak	196	287
4	5860.00	60.80	68.20	-7.40	53.85	6.95	Peak	196	287
5	11570.00	44.21	54.00	-9.79	28.09	16.12	Average	270	313
6	11570.00	57.06	74.00	-16.94	40.94	16.12	Peak	270	313

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	HT20	Test Freq. (MHz)	5825
Polarization	Horizontal	Test Configuration	3



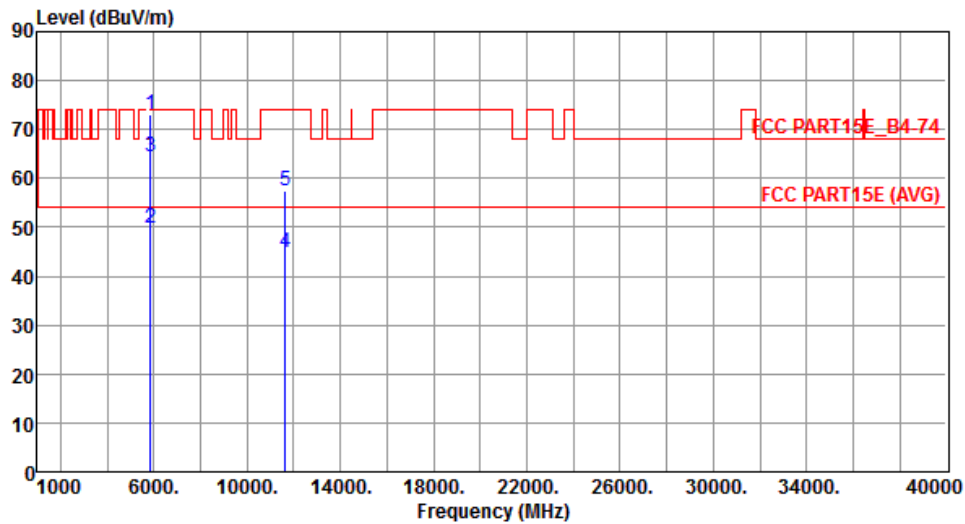
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	76.11	78.20	-2.09	69.16	6.95	Peak	100	156
2	5860.00	51.92	54.00	-2.08	44.97	6.95	Average	100	156
3	5860.00	69.99	74.00	-4.01	63.04	6.95	Peak	100	156
4	11650.00	46.02	54.00	-7.98	30.00	16.02	Average	283	157
5	11650.00	58.42	74.00	-15.58	42.40	16.02	Peak	283	157

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	HT20	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	3



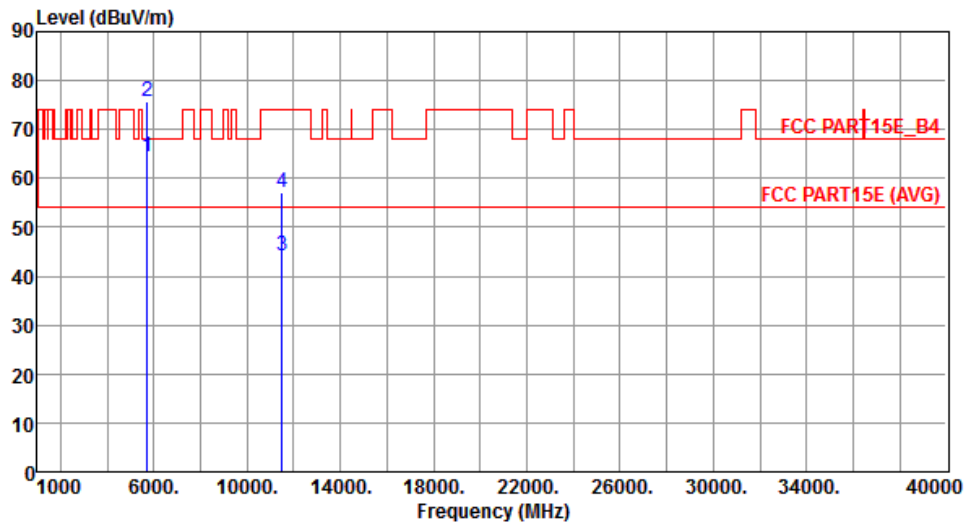
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	73.14	78.20	-5.06	66.19	6.95	Peak	221	275
2	5860.00	49.89	54.00	-4.11	42.94	6.95	Average	221	275
3	5860.00	64.49	74.00	-9.51	57.54	6.95	Peak	221	275
4	11650.00	44.87	54.00	-9.13	28.85	16.02	Average	253	291
5	11650.00	57.60	74.00	-16.40	41.58	16.02	Peak	253	291

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	HT20	Test Freq. (MHz)	5745
Polarization	Horizontal	Test Configuration	4



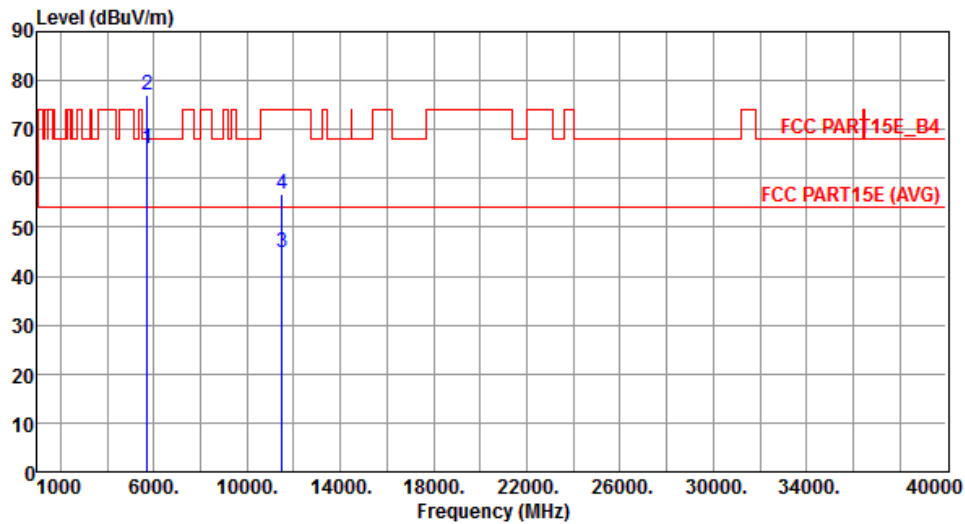
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	64.40	68.20	-3.80	57.70	6.70	Peak	101	148
2	5725.00	75.68	78.20	-2.52	68.97	6.71	Peak	101	148
3	11490.00	44.33	54.00	-9.67	28.11	16.22	Average	101	148
4	11490.00	56.99	74.00	-17.01	40.77	16.22	Peak	101	148

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	HT20	Test Freq. (MHz)	5745
Polarization	Vertical	Test Configuration	4



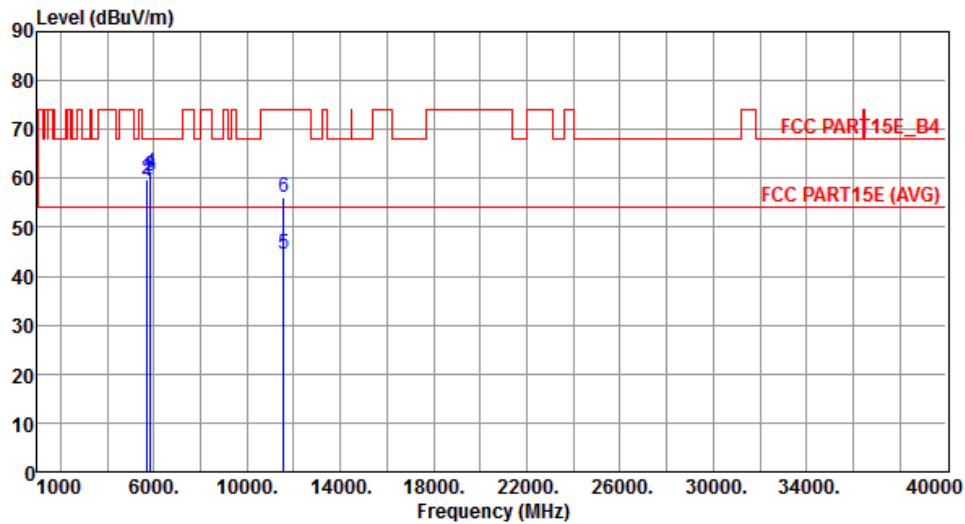
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	66.20	68.20	-2.00	59.50	6.70	Peak	226	129
2	5725.00	77.18	78.20	-1.02	70.47	6.71	Peak	226	129
3	11490.00	44.76	54.00	-9.24	28.54	16.22	Average	226	129
4	11490.00	56.79	74.00	-17.21	40.57	16.22	Peak	226	129

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	HT20	Test Freq. (MHz)	5785
Polarization	Horizontal	Test Configuration	4



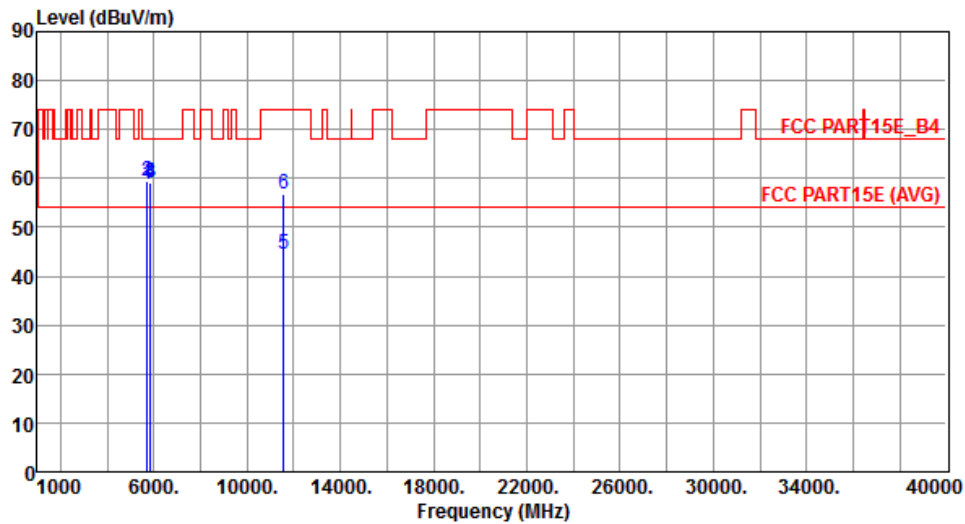
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	59.38	68.20	-8.82	52.68	6.70	Peak	100	174
2	5725.00	59.70	78.20	-18.50	52.99	6.71	Peak	100	174
3	5850.00	60.30	78.20	-17.90	53.35	6.95	Peak	100	174
4	5860.00	60.97	68.20	-7.23	54.02	6.95	Peak	100	174
5	11570.00	44.59	54.00	-9.41	28.47	16.12	Average	241	163
6	11570.00	56.02	74.00	-17.98	39.90	16.12	Peak	241	163

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	HT20	Test Freq. (MHz)	5785
Polarization	Vertical	Test Configuration	4



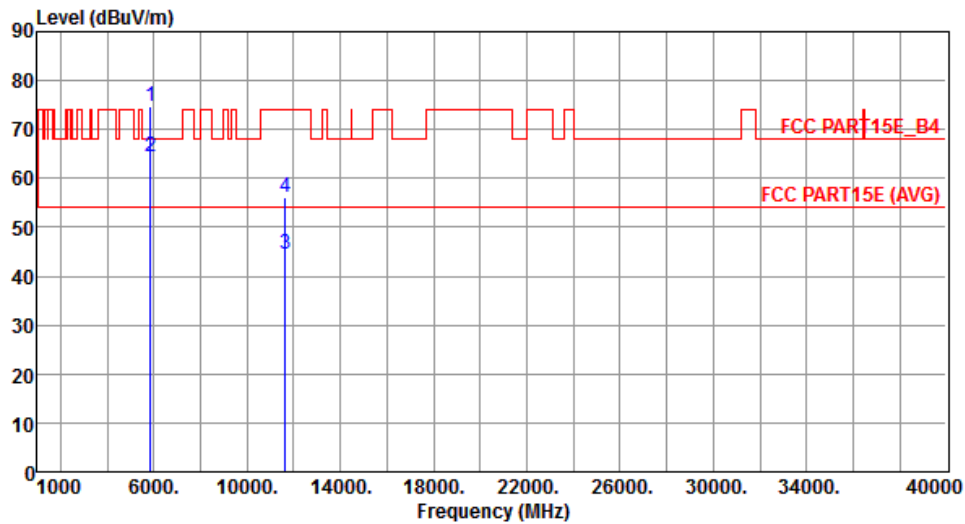
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5715.00	58.81	68.20	-9.39	52.11	6.70	Peak	226	111
2	5725.00	59.41	78.20	-18.79	52.70	6.71	Peak	226	111
3	5850.00	59.16	78.20	-19.04	52.21	6.95	Peak	226	111
4	5860.00	58.96	68.20	-9.24	52.01	6.95	Peak	226	111
5	11570.00	44.35	54.00	-9.65	28.23	16.12	Average	295	66
6	11570.00	56.71	74.00	-17.29	40.59	16.12	Peak	295	66

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	HT20	Test Freq. (MHz)	5825
Polarization	Horizontal	Test Configuration	4



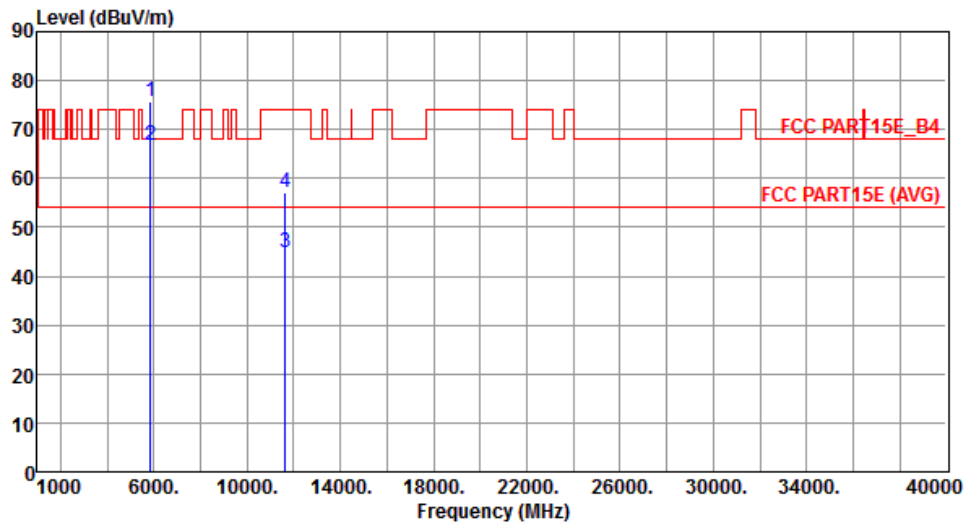
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	74.83	78.20	-3.37	67.88	6.95	Peak	100	147
2	5860.00	64.29	68.20	-3.91	57.34	6.95	Peak	100	147
3	11650.00	44.51	54.00	-9.49	28.49	16.02	Average	230	155
4	11650.00	56.12	74.00	-17.88	40.10	16.02	Peak	230	155

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	HT20	Test Freq. (MHz)	5825
Polarization	Vertical	Test Configuration	4



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5850.00	75.69	78.20	-2.51	68.74	6.95	Peak	237	131
2	5860.00	66.76	68.20	-1.44	59.81	6.95	Peak	237	131
3	11650.00	44.72	54.00	-9.28	28.70	16.02	Average	289	50
4	11650.00	57.12	74.00	-16.88	41.10	16.02	Peak	289	50

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 Frequency Stability

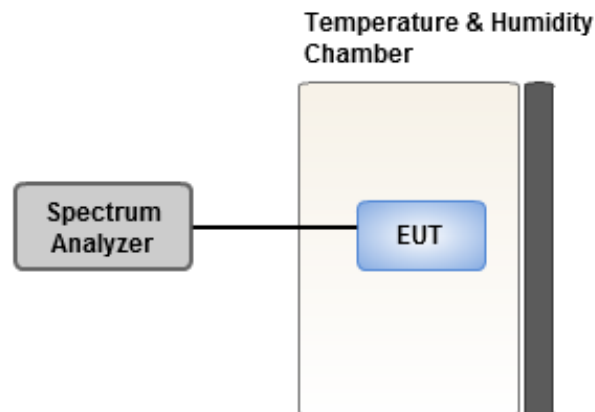
3.6.1 Limit of Frequency Stability

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.

3.6.2 Test Procedures

1. The EUT is installed in an environment test chamber with external power source.
2. Set the chamber to operate at 20 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 70 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.

3.6.3 Test Setup



3.6.4 Test Result of Frequency Stability

Frequency: 5785 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°C Vmax	2.25	3.30	2.64	2.40
T20°C Vmin	3.42	2.94	2.74	3.10
T70°C Vnom	1.67	2.07	1.83	2.00
T60°C Vnom	1.44	1.20	1.69	1.82
T50°C Vnom	2.88	2.46	2.77	2.27
T40°C Vnom	5.00	4.66	4.97	4.91
T30°C Vnom	1.45	2.10	1.52	1.83
T20°C Vnom	3.72	3.48	3.69	3.57
T10°C Vnom	5.90	6.32	6.10	6.29
T0°C Vnom	4.54	4.22	4.16	3.87
T-10°C Vnom	4.52	4.60	4.67	4.41
T-20°C Vnom	5.29	5.36	4.73	4.83
T-30°C Vnom	5.13	5.23	5.02	4.43
Vnom [Vac]: 120	Vmax [Vac]: 138		Vmin [Vac]: 102	
Tnom [°C]: 20	Tmax [°C]: 70		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, 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

Tel: 886-2-2601-1640

No. 30-2, Ding Fwu Tsuen, Lin Kou
District, New Taipei City, Taiwan,
R.O.C.

Kwei Shan

Tel: 886-3-271-8666

No. 3-1, Lane 6, Wen San 3rd
St., Kwei Shan Hsiang, Tao Yuan
Hsien 333, Taiwan, R.O.C.

Kwei Shan Site II

Tel: 886-3-271-8640

No. 14-1, Lane 19, Wen San 3rd
St., Kwei Shan Hsiang, Tao Yuan
Hsien 333, Taiwan, R.O.C.

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

Tel: 886-3-271-8666

Fax: 886-3-318-0155

Email: ICC_Service@icertifi.com.tw

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