

 Remark: 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor 2. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported. 3. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
Above 1GHz: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
 e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel, the middle channel, the Highest
 g. Test the LOT in the lowest channel, the middle channel, the highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete. Remark: 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor.
 2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported. 3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission about the maximum permitted everage limits aposified
 above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report. 4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

6.8.1 E.U.T. Operation:

Operating Environment:



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Temperature: 34.4 °C	Humidity: 44.6 %	Atmospheric Pressure:	100 kPa
Pre test mode:	Mode1, Mode2, Mode3		
Final test mode:	All of the listed pre-test mode w (Mode1) is recorded in the repo	ere tested, only the data or rt	of the worst mode

6.8.2 Test Setup Diagram:





6.8.3 Test Data:

TX U-NII-1:







<u>U-NII-3:</u>







6.9 Undesirable emission limits (above 1GHz)

Test Requirement:	47 CFR Part 15.407(47 CFR Part 15.407(47 CFR Part 15.407(b)(1) b)(4) b)(10)		
Test Limit:	For transmitters oper of the 5.15-5.35 GHz	ating in the 5.15-5.2 band shall not exce	5 GHz band: All ed an e.i.r.p. of	emissions outside −27 dBm/MHz.
	For transmitters oper of the 5.15-5.35 GHz	rating in the 5.25-5.3 band shall not exce	5 GHz band: All ed an e.i.r.p. of	emissions outside −27 dBm/MHz.
	For transmitters oper of the 5.47-5.725 GH	ating in the 5.47-5.7 Iz band shall not exc	25 GHz band: A eed an e.i.r.p. o	ll emissions outside f −27 dBm/MHz.
	For transmitters oper All emissions shall be above or below the b above or below the b edge increasing linea the band edge, and f linearly to a level of 2	ating solely in the 5. e limited to a level of and edge increasing and edge, and from arly to a level of 15.6 from 5 MHz above or 27 dBm/MHz at the b	725-5.850 GHz -27 dBm/MHz linearly to 10 d 25 MHz above dBm/MHz at 5 below the band and edge.	band: at 75 MHz or more Bm/MHz at 25 MHz or below the band MHz above or below d edge increasing
	MHz	MHz	MHz	GHz
	0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
	¹ 0.495-0.505	16.69475- 16.69525	608-614	5.35-5.46
	2.1735-2.1905	16.80425- 16.80475	960-1240	7.25-7.75
	4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
	4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
	4.20725-4.20775	73-74.6	1645.5- 1646.5	9.3-9.5
	6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
	6.26775-6.26825	108-121.94	1718.8- 1722.2	13.25-13.4
	6.31175-6.31225	123-138	2200-2300	14.47-14.5
	8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
	8.362-8.366	156.52475- 156.52525	2483.5-2500	17.7-21.4
	8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
	8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
	12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
	12.51975- 12.52025	240-285	3345.8-3358	36.43-36.5
	12.57675- 12.57725	322-335.4	3600-4400	(²)
	13.36-13.41			
	¹ Until February 1, 19 ²	99, this restricted ba	nd shall be 0.49	90-0.510 MHz.
	The field strength of not exceed the limits	emissions appearing shown in § 15.209. /	within these fre	equency bands shall equal to or less than
	1000 MHz, compliant measurement instrum Above 1000 MHz, co	ce with the limits in § nentation employing mpliance with the er	a CISPR quasi nission limits in	demonstrated using -peak detector. § 15.209shall be



demonstrated based on the average value of the measured emissions. The provisions in § 15.35apply to these measurements.

Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz) Field strength (microvolts/meter) Measurement (distance (meters) 0.009-0.490 2400/F(kHz) 300 0.490-1.705 24000/F(kHz) 30 1.705-530.0 30 30-88 100 ** 3 3 88-216 150 ** 3 Above 960 500 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MLZ, 76-88 MLZ, 174-216 MLZ or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §\$ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Above 1GHz: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interferece-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of		Tenething table!								
Image: Second		Frequency (MHz)	Field strength (microvolts/meter)	Measuremen t distance						
Image: style				(meters)						
0.490-1.705 24000/F(kHz) 30 1.705-30.0 30 30 30-88 100 ** 3 88-216 150 ** 3 216-960 200 ** 3 Above 960 500 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands sector shall not be located in the sections of this part, e.g., §§ 15.231 and 15.241. In the emission lable above, the tighter limit applies at the band edges. The emission lable above, the tighter limit applies at the band sector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Test Method: ANSI C63.10-2013, section 12.7.4, 12.7.6, 12.7.7 Procedure: Above 1GHz: a. Grabove 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna ares to make the measurement. d. For each suspected emission, the EUT was a		0.009-0.490	2400/F(kHz)	300						
1.705-30.0 30 30 30-88 100 ** 3 38-216 150 ** 3 216-960 200 ** 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 KHz, 110-490 KHz and above 1000 MHz. Radiated emission limits in three three bands are based on measurements employing an average detector. Test Method: ANSI C63.10-2013, section 12.7.4, 12.7.6, 12.7.7 Procedure: Above 1GHz; the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to		0.490-1.705	24000/F(kHz)	30						
30-88 100 ** 3 88-216 150 ** 3 216-960 200 ** 3 Above 960 500 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §\$ 15.241. In the emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 KHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Test Method: ANSI C63.10-2013, section 12.7.4, 12.7.6, 12.7.7 Procedure: Above 1GHz: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna ares tuned to heights 1 meter) and the rotatale polarizations of the antenna ares to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna		1.705-30.0	30	30						
88-216 150 ** 3 216-960 200 ** 3 Above 960 500 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-86 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-900 KHz, 110-490 KHz and above 1000 MHZ. Radiated emission limits in these three bands are based on measurements employing an average detector. Test Method: ANSI C63.10-2013, section 12.7.4, 12.7.6, 12.7.7 Procedure: A. For above 1GHz: a. For above 1GHz: a. For above 1GHz: bett was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For above 300MHz, the antenna are set to adde to heights 1 meter) and the notable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The attenna was tuned to heights 1 meter) and then the antenna was tuned to heights 1 meter) and		30-88	100 **	3						
216-960 200 ** 3 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission lable above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Test Method: ANSI C63.10-2013, section 12.7.4, 12.7.6, 12.7.7 Procedure: Above 1GHz: a. For above 1GHz. a. For above 1GHz. the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights form 1 meter (at meter) and the rotatable table was turned from 0 degrees to 360 degrees to		88-216	150 **	3						
Above 960 500 3 *** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Test Method: ANSI C63.10-2013, section 12.7.4, 12.7.6, 12.7.7 Procedure: Above 1GHz; a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak m		216-960 200 ** 3								
 ** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission lable above, the tighter limit applies at the band edges. The emission lable above, the tighter limit applies at the band edges. The emission lable above, the detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. Test Method: ANSI C63.10-2013, section 12.7.4, 12.7.6, 12.7.7 Procedure: Above 1GHz: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel, the middle channel, the Highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for 		Above 960	500	3						
Test Method: ANSI C63.10-2013, section 12.7.4, 12.7.6, 12.7.7 Procedure: Above 1GHz: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 1. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel, the middle channel, the Highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for		 intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241. In the emission table above, the tighter limit applies at the band edges. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these 								
Procedure: Above 1GHz: a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel, the middle channel, the Highest channel. h. The radiation measurements are performed in X, Y, Z axis positioning for	Test Method:	ANSI C63.10-2013, section 12.7.4, 12.7.6, 12.7.7								
I ransmitting mode, and found the X axis positioning which it is the worst case.	Procedure:	Above 1GHz: a. For above 1GHz, the El meters above the ground a rotated 360 degrees to def b. The EUT was set 3 met which was mounted on the c. The antenna height is va ground to determine the m and vertical polarizations of d. For each suspected em then the antenna was tune frequency of below 30MHz the rotatable table was tur maximum reading. e. The test-receiver syster Bandwidth with Maximum f. If the emission level of the specified, then testing cour would be reported. Otherwa would be re-tested one by and then reported in a data g. Test the EUT in the lower channel. h. The radiation measurem Transmitting mode, and for case. i. Repeat above procedure	UT was placed on the top of a at a 3 meter fully-anechoic cha termine the position of the high ers away from the interference e top of a variable-height anter aried from one meter to four m naximum value of the field stren of the antenna are set to make ission, the EUT was arranged ed to heights from 1 meter to 4 z, the antenna was tuned to he ned from 0 degrees to 360 deg m was set to Peak Detect Fund Hold Mode. he EUT in peak mode was 10d ld be stopped and the peak va vise the emissions that did not one using peak or average me a sheet. est channel, the middle channel nents are performed in X, Y, Z and the X axis positioning which es until all frequencies measure	rotating table 1.5 mber. The table was lest radiation. -receiving antenna, ina tower. eters above the ngth. Both horizontal the measurement. to its worst case and meters (for the test ights 1 meter) and grees to find the tion and Specified B lower than the limit lues of the EUT have 10dB margin ethod as specified el, the Highest axis positioning for ch it is the worst						
Remark: 1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor		Remark: 1. Level= Read Level+ Ca	ble Loss+ Antenna Factor- Pre	amp Factor						



2. Scan from 18GHz to 40GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB
below the limit need not be reported.
3. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.
4. The disturbance above 18GHz were very low and the harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

6.9.1 E.U.T. Operation:

Operating Environment:										
Temperature: 24.7 °C Humidity: 32.6 % Atmospheric Pressure: 100 kPa										
Pre test mode: Mode1, Mode2, Mode3										
Final test mode	e:	All of (Mod	the listed p le1) is recor	re-test mode w ded in the repo	vere tested, only the data ort	of the worst mode				



6.9.2 Test Data:

U-NII 1:

Mode1 / Polarization: Horizontal / CH: L

viouc												
	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over				
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector			
	1	1	10360.000	49.20	3.46	52.66	74.00	-21.34	peak			
	2	1	10360.000	38.90	3.46	42.36	54.00	-11.64	AVG			
	3	1	15540.000	7.01	47.26	54.27	74.00	-19.73	peak			
	4	* 1	15540.000	-3.01	47.26	44.25	54.00	-9.75	AVG			

Mode	de1 / Polarization: Vertical / CH: L												
-	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over					
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector				
-	1		10360.000	47.44	3.46	50.90	74.00	-23.10	peak				
-	2		10360.000	37.39	3.46	40.85	54.00	-13.15	AVG				
-	3		15540.000	7.18	47.26	54.44	74.00	-19.56	peak				
-	4	*	15540.000	-2.94	47.26	44.32	54.00	-9.68	AVG				



Mode1 / Polarization: Horizontal / CH: M

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	1	0400.000	48.91	3.13	52.04	74.00	-21.96	peak
2	1	0400.000	39.23	3.13	42.36	54.00	-11.64	AVG
3	1	5600.000	6.83	46.52	53.35	74.00	-20.65	peak
4	* 1	5600.000	-3.40	46.52	43.12	54.00	-10.88	AVG

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	1	0400.000	50.12	3.13	53.25	74.00	-20.75	peak
2	1	0400.000	40.11	3.13	43.24	54.00	-10.76	AVG
3	1	5600.000	7.04	46.52	53.56	74.00	-20.44	peak
4	* 1	5600.000	-3.26	46.52	43.26	54.00	-10.74	AVG



Mode1 / Polarization: Horizontal / CH: H

No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		10480.000	48.00	3.56	51.56	74.00	-22.44	peak
2		10480.000	37.80	3.56	41.36	54.00	-12.64	AVG
3		15720.000	6.66	46.46	53.12	74.00	-20.88	peak
4	*	15720.000	-3.20	46.46	43.26	54.00	-10.74	AVG

Mode1 / Polarization: Vertical / CH: H

No. I	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	10	480.000	48.93	3.56	52.49	74.00	-21.51	peak
2	10	480.000	39.09	3.56	42.65	54.00	-11.35	AVG
3	15	720.000	6.66	46.46	53.12	74.00	-20.88	peak
4	* 15	720.000	-3.21	46.46	43.25	54.00	-10.75	AVG



U-NII 2A:

Mode1 / Polarization: Horizontal / CH: L

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		10520.000	48.30	3.75	52.05	74.00	-21.95	peak
2		10520.000	38.37	3.75	42.12	54.00	-11.88	AVG
3		15780.000	7.81	46.56	54.37	74.00	-19.63	peak
4	*	15780.000	-2.24	46.56	44.32	54.00	-9.68	AVG

No.	М	c. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		10520.000	48.33	3.75	52.08	74.00	-21.92	peak
2		10520.000	38.37	3.75	42.12	54.00	-11.88	AVG
3		15780.000	8.65	46.56	55.21	74.00	-18.79	peak
4	*	15780.000	-1.24	46.56	45.32	54.00	-8.68	AVG



Mode1 / Polarization: Horizontal / CH: M

No.	M	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		10560.000	49.54	3.93	53.47	74.00	-20.53	peak
2	*	10560.000	39.69	3.93	43.62	54.00	-10.38	AVG
3		15840.000	7.28	46.39	53.67	74.00	-20.33	peak
4		15840.000	-2.85	46.39	43.54	54.00	-10.46	AVG

Mode1 / Polarization: Vertical / CH: M

No. I	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	10	560.000	48.44	3.93	52.37	74.00	-21.63	peak
2	10	560.000	38.33	3.93	42.26	54.00	-11.74	AVG
3	158	840.000	7.86	46.39	54.25	74.00	-19.75	peak
4	* 158	840.000	-2.07	46.39	44.32	54.00	-9.68	AVG



Mode1 / Polarization: Horizontal / CH: H

No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		10640.000	49.37	4.38	53.75	74.00	-20.25	peak
2	*	10640.000	38.87	4.38	43.25	54.00	-10.75	AVG
3		15960.000	6.47	46.36	52.83	74.00	-21.17	peak
4		15960.000	-3.52	46.36	42.84	54.00	-11.16	AVG

Mode1 / Polarization: Vertical / CH: H

No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		10640.000	49.52	4.38	53.90	74.00	-20.10	peak
2		10640.000	39.30	4.38	43.68	54.00	-10.32	AVG
3		15960.000	10.89	46.36	57.25	74.00	-16.75	peak
4	*	15960.000	1.32	46.36	47.68	54.00	-6.32	AVG



U-NII 2C:

de1	/ Pola	ariza	ation:	Horizonta	al / CH: L					
_	No.	М	k.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
_				MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
_	1		110	000.00	48.52	5.30	53.82	74.00	-20.18	peak
_	2		110	00.000	37.95	5.30	43.25	54.00	-10.75	AVG
_	3		165	00.000	7.85	47.06	54.91	74.00	-19.09	peak
-	4	*	165	00.000	-2.22	47.06	44.84	54.00	-9.16	AVG
_										

No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		11000.000	47.41	5.30	52.71	74.00	-21.29	peak
2		11000.000	37.35	5.30	42.65	54.00	-11.35	AVG
3		16500.000	8.00	47.06	55.06	74.00	-18.94	peak
4	*	16500.000	-1.94	47.06	45.12	54.00	-8.88	AVG



Mode1 / Polarization: Horizontal / CH: M

No.	M	۲.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		11	160.000	6.87	47.69	54.56	74.00	-19.44	peak
2		11	160.000	-3.43	47.69	44.26	54.00	-9.74	AVG
3		16	740.000	10.04	47.49	57.53	74.00	-16.47	peak
4	*	16	740.000	0.09	47.49	47.58	54.00	-6.42	AVG

Mode1 / Polarization: Vertical / CH: M

No. N	lk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	11	160.000	6.29	47.69	53.98	74.00	-20.02	peak
2	11	160.000	-3.85	47.69	43.84	54.00	-10.16	AVG
3	16	740.000	8.27	47.49	55.76	74.00	-18.24	peak
4 *	16	740.000	-1.84	47.49	45.65	54.00	-8.35	AVG



Mode1 / Polarization: Horizontal / CH: H

No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		11400.000	6.55	48.00	54.55	74.00	-19.45	peak
2		11400.000	-3.37	48.00	44.63	54.00	-9.37	AVG
3		17100.000	12.43	47.87	60.30	74.00	-13.70	peak
4	*	17100.000	2.47	47.87	50.34	54.00	-3.66	AVG

Mode	1 / Pola	ariza	ation: Vertical	/ CH: H						
-	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	
-	1		11400.000	7.23	48.00	55.23	74.00	-18.77	peak	
-	2		11400.000	-2.43	48.00	45.57	54.00	-8.43	AVG	
-	3		17100.000	12.86	47.87	60.73	74.00	-13.27	peak	
-	4	*	17100.000	2.75	47.87	50.62	54.00	-3.38	AVG	



U-NII 3:

Mode1 / Polarization: Horizontal / CH: L

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	11	490.000	7.17	47.90	55.07	74.00	-18.93	peak
2	11	490.000	-2.78	47.90	45.12	54.00	-8.88	AVG
3	17	235.000	8.01	47.93	55.94	74.00	-18.06	peak
4	* 17	235.000	-2.26	47.93	45.67	54.00	-8.33	AVG

M	ode1 /	Polariz	ation: Vertica	I / CH: L					
-	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
	1	11	1490.000	6.22	47.90	54.12	74.00	-19.88	peak
_	2	11	1490.000	-3.88	47.90	44.02	54.00	-9.98	AVG
_	3	1	7235.000	8.08	47.93	56.01	74.00	-17.99	peak
_	4	* 1	7235.000	-1.61	47.93	46.32	54.00	-7.68	AVG



Mode1 / Polarization: Horizontal / CH: M

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	11	1570.000	7.04	47.76	54.80	74.00	-19.20	peak
2	11	1570.000	-3.18	47.76	44.58	54.00	-9.42	AVG
3	17	7355.000	7.77	48.04	55.81	74.00	-18.19	peak
4	* 17	7355.000	-2.68	48.04	45.36	54.00	-8.64	AVG

M	ode1 / I	Polariza	ation: Vertica	I / CH: M					
-	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
-	1	11	570.000	6.06	47.76	53.82	74.00	-20.18	peak
-	2	11	570.000	-4.40	47.76	43.36	54.00	-10.64	AVG
-	3	17	355.000	7.28	48.04	55.32	74.00	-18.68	peak
_	4	* 17	355.000	-2.78	48.04	45.26	54.00	-8.74	AVG



Mode1	/ Pola	arization: Horizo	ontal / CH: H					
No.	M	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		11650.000	6.11	47.48	53.59	74.00	-20.41	peak
2		11650.000	-3.83	47.48	43.65	54.00	-10.35	AVG
3		17475.000	10.26	48.56	58.82	74.00	-15.18	peak
4	*	17475.000	-0.30	48.56	48.26	54.00	-5.74	AVG

Mode1 / Polarization: Vertical / CH: H

	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
_	1	1	11650.000	5.28	47.48	52.76	74.00	-21.24	peak
	2		11650.000	-5.12	47.48	42.36	54.00	-11.64	AVG
	3		17475.000	7.49	48.56	56.05	74.00	-17.95	peak
	4	* *	17475.000	-2.44	48.56	46.12	54.00	-7.88	AVG



Photographs of the test setup

Refer to Appendix - Test Setup Photos



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Photographs of the EUT

Refer to Appendix - EUT Photos



Appendix

6.10 Appendix A1: Emission Bandwidth

6.10.1 Test Result

TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]
		5180	28.360	5166.160	5194.520
		5200	25.720	5187.720	5213.440
		5240	30.120	5226.120	5256.240
		5260	29.960	5245.520	5275.480
		5280	27.360	5268.000	5295.360
11 A	Apt1	5320	26.120	5307.200	5333.320
IIA	Anti	5500	21.800	5488.160	5509.960
		5580	33.640	5563.720	5597.360
		5700	36.840	5681.560	5718.400
		5745	30.320	5727.480	5757.800
		5785	38.800	5765.200	5804.000
		5825	38.640	5805.400	5844.040
		5180	28.240	5165.680	5193.920
		5200	29.880	5185.240	5215.120
		5240	28.560	5225.680	5254.240
		5260	38.040	5240.320	5278.360
	A pt1	5280	21.000	5269.800	5290.800
111/205150		5320	23.440	5309.800	5333.240
1111203130	Anti	5500	20.400	5489.880	5510.280
		5580	32.680	5563.400	5596.080
		5700	23.760	5686.880	5710.640
		5745	26.320	5731.400	5757.720
		5785	33.200	5767.440	5800.640
		5825	35.640	5807.240	5842.880
		5190	64.000	5160.000	5224.000
		5230	47.200	5209.600	5256.800
		5270	53.680	5242.400	5296.080
		5310	55.440	5275.440	5330.880
11N40SISO	Ant1	5510	41.040	5489.440	5530.480
		5550	72.560	5514.560	5587.120
		5670	77.440	5630.240	5707.680
		5755	74.080	5718.040	5792.120
		5795	71.040	5760.280	5831.320



6.10.2 Test Graphs













































6.11 Appendix A2: Occupied channel bandwidth

6.11.1 Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]
		5180	17.568	5171.1904	5188.7584
		5200	17.555	5191.2554	5208.8104
		5240	18.070	5231.0473	5249.1173
		5260	17.670	5251.2044	5268.8744
		5280	17.512	5271.2938	5288.8058
11A	A pt1	5320	17.587	5311.2020	5328.7890
	Anti	5500	17.397	5491.2212	5508.6182
		5580	18.632	5570.8147	5589.4467
		5700	21.146	5689.4439	5710.5899
		5745	18.027	5735.8704	5753.8974
		5785	25.537	5772.0146	5797.5516
		5825	24.122	5812.8180	5836.9400
		5180	17.581	5171.2377	5188.8187
		5200	17.403	5191.3767	5208.7797
		5240	17.536	5231.3114	5248.8474
		5260	19.501	5250.4023	5269.9033
		5280	18.162	5270.9309	5289.0929
111/209190	Ant1	5320	18.197	5310.9026	5329.0996
1111203130	Anti	5500	18.173	5490.8035	5508.9765
		5580	18.624	5570.8304	5589.4544
		5700	18.305	5690.8842	5709.1892
		5745	17.584	5736.1921	5753.7761
		5785	19.149	5775.2217	5794.3707
		5825	18.759	5815.3555	5834.1145
		5190	36.879	5171.6562	5208.5352
		5230	36.941	5211.5834	5248.5244
		5270	36.939	5251.6329	5288.5719
		5310	36.885	5291.6269	5328.5119
11N40SISO	Ant1	5510	36.667	5491.6943	5528.3613
		5550	37.946	5531.2326	5569.1786
		5670	39.936	5650.1837	5690.1197
		5755	37.685	5736.2212	5773.9062
		5795	37.418	5776.3586	5813.7766



6.11.2 Test Graphs

	11A_Ant1_518	30		
Aleiden Spectrum Analyzer - Occupied BW D. BLaw - Berger - Decoded - Decode	SDREPULS Center Freg 5.18000000 GHz → Trig: Free Run Avg Hold #Atten: 30 dB	ALISNAUTO 06:25:28 PM Agr 09, 2024 Radio Std: None Radio Std: None Radio Device: BTS Mkr1 5.17356 GHz 6.1056 dBm	Frequency	
100		hand a start and a start and a start a sta	Center Freq 5.180000000 GHz	
Center 5.18 GHz #Res BW 430 kHz	#VBW 1.3 MHz	Span 40 MHz Sweep 1 ms	CF Step 4.000000 MHz	
Occupied Bandwidth	Total Power	19.5 dBm	<u>Auto</u> Man	
17.368 Transmit Freq Error -25.64 x dB Bandwidth 33.9	NTTZ 48 kHz OBW Power 17 MHz x dB	99.00 % -26.00 dB	Freq Offset 0 Hz	
MSG	11A Apt1 520			
Agilent Spectrum Analyzer - Occupied BW				
Center Freq 5.20000000 GHz	SBNSEPULSE Center Freq: 5.20000000 GHz Trig: Free Run Avg Hold #Atten: 30 dB	ALIISNAUTO 06:27:15 PMApr 09, 2024 Radio Std: None Radio Device: BTS Mkr1 5.1978 GH2	Frequency	
10 dB/div Ref 20.00 dBm	anon anno anno	6.1495 dBm	Center Freq 5.20000000 GHz	
0.00 50.0 50.0 50.0 50.0		and a second and a s		
Center 5.2 GHz #Res BW 430 kHz	#VBW 1.3 MHz	Span 40 MHz Sweep 1 ms	CF Step 4.000000 MHz	
Occupied Bandwidth	Total Power	20.2 dBm	<u>Auto</u> Man	
Transmit Freq Error 32.93 x dB Bandwidth 31.9	0 MHz OBW Power 0 MHz x dB	99.00 % -26.00 dB	Freq Offset 0 Hz	
MSG		STATUS		
Agilent Spectrum Analyzer - Occupied BW	11A_Ant1_524	łU		
Center Freq 5.240000000 GHz	Center Freq: 5.240000000 GHz Trig: Free Run Avg Hold #Atten: 30 dB	ALIGNAUTO 06:29:43 PMApr 09, 2024 Radio Std: None Radio Device: BTS Mkr1 5.24372 GHz	Frequency	
10 dB/div Ref 20.00 dBm	Breek Marcel Ageneration Street Marcel and Party Street Street Street Street Street Street Street Street Street	7.4876 dBm	Center Freq 5.24000000 GHz	
100 200 6 - 10 (10 (10 (10 - 10 - 10 - 10 - 10 - 		and a second s		
#Res BW 430 kHz	#VBW 1.3 MHz	Span 40 MHz Sweep 1 ms	CF Step 4.000000 MHz Auto Man	
Occupied Bandwidth 18.070	Total Power MHZ	21.4 dBm	Freq Offset	
Transmit Freq Error 82.37 x dB Bandwidth 39.2	11 kHz OBW Power 9 MHz x dB	99.00 % -26.00 dB	0 Hz	
 MSG		STATUS		
	11A Ant1 526	60		