FCC PART 15E TEST REPORT FOR CERTIFICATION
On Behalf of

Naim Audio Limited

CI-Uniti 102

Model Number: CI-Uniti 102

FCC ID: 2ACUR-CIUNITI102

Applicant:	Naim Audio Limited
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Prepared By:	EST Technology Co., Ltd.
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Report Number:	ESTE-R2409250
Date of Test:	Aug. 29, 2024~ Sep. 27, 2024
Date of Report:	Sep. 29, 2024

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Manufacturer: **Address:**	Naim Audio Limited Southampton Road, Salisbury, SP1 2LN, United Kingdom
Factory: **Address:**	DONGGUAN TRISTAR ELECTRONIC CO., LTD. Building 1 & Building2, No. 196, Tangxia Dongxing Road, Tangxia Town, Dongguan City, Guangdong Province, China
E.U.T:	CI-Uniti 102
Model Number:	CI-Uniti 102
Power Supply:	AC 100-240V, 50/60Hz
Trade Name:	naim Serial No.: ------
Date of Receipt:	Aug. 29, 2024 Date of Test: Aug. 29, 2024~ Sep. 27, 2024
Test Specification:	FCC Part 15 Subpart E 15.407 ANSI C63.10:2013 FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01 FCC KDB 662911 D01 Multiple Transmitter Output v02r01
Test Result:	The device described above is tested by EST Technology Co., Ltd. The measurement results were contained in this test report and EST Technology Co., Ltd. was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the FCC Rules and Regulations Part 15 Subpart E requirements. This report applies to above tested sample only and shall not be reproduced in part without written approval of EST Technology Co., Ltd. **Date: Sep. 29, 2024**

Prepared by:	Reviewed by:	Approved by:
Ring Yang / Assistant	Seven Wang / Engineer	Iceman Hu / Manager

Other Aspects:

None.

Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested

This test report is based on a single evaluation of one sample of above mentioned products ,It is not permitted to be duplicated in extracts without written approval of EST Technology Co., Ltd.

1.GENERAL INFORMATION

1.1.Description of Device (EUT)

FCC ID	:	2ACUR-CIUNITI102
Product Name	:	CI-Uniti 102
Model Number	:	CI-Uniti 102
Software Version	:	N/A
Hardware Version	:	N/A
Operation frequency	:	U-NII-1: 5150 MHz~5250 MHz U-NII-2A: 5250 MHz~5350 MHz U-NII-2C: 5470 MHz~5725 MHz U-NII-3: 5725 MHz~5850 MHz
Number of channel	:	U-NII-1: IEEE 802.11a / n HT20 / ac VHT20/ ax HE20: 4 Channels; IEEE 802.11n HT40 / ac VHT40/ ax HE40: 2 Channels; IEEE 802.11ac VHT80/ ax HE80: 1 Channel. U-NII-2A: IEEE 802.11a / n HT20 / ac VHT20/ ax HE20: 4 Channels; IEEE 802.11n HT40 / ac VHT40/ ax HE40: 2 Channels; IEEE 802.11ac VHT80/ ax HE80: 1 Channel. U-NII-2C: IEEE 802.11a / n HT20 / ac VHT20/ ax HE20: 11 Channels; IEEE 802.11n HT40 / ac VHT40/ ax HE40: 5 Channels; IEEE 802.11ac VHT80/ ax HE80: 2 Channel. U-NII-3: IEEE 802.11a / n HT20 / ac VHT20/ ax HE20: 5 Channels; IEEE 802.11n HT40 / ac VHT40/ ax HE40: 2 Channels; IEEE 802.11ac VHT80/ ax HE80: 1 Channel.
Modulation	:	OFDM, OFDMA
Transmit Data Rate	:	IEEE 802.11a: 54, 48, 36, 24, 18, 12, 9, 6Mbps; IEEE 802.11n: up 300Mbps IEEE 802.11ac: up to 867Mbps IEEE 802.11ax: up to 1201Mbps
Channels Spacing	:	IEEE 802.11a: 20MHz; IEEE 802.11n HT20: 20MHz; IEEE 802.11n HT40: 40MHz; IEEE 802.11ac VHT20: 20MHz; IEEE 802.11ac VHT40: 40MHz; IEEE 802.11ac VHT80: 80MHz; IEEE 802.11ax HE20: 20MHz; IEEE 802.11ax HE40: 40MHz; IEEE 802.11ax HE80: 80MHz

Transmit Power	:	U-NII-1	IEEE 802.11a: 14.55dBm IEEE 802.11n HT20: 13.87dBm IEEE 802.11n HT40: 14.06dBm IEEE 802.11ac VHT20: 13.70dBm IEEE 802.11ac VHT40: 14.21dBm IEEE 802.11ac VHT80: 13.89 dBm IEEE 802.11ax HE20: 11.85dBm IEEE 802.11ax HE40: 14.03dBm IEEE 802.11ax HE80: 14.27dBm
		U-NII-2A	IEEE 802.11a: 13.86dBm IEEE 802.11n HT20: 12.90dBm IEEE 802.11n HT40:13.02 dBm IEEE 802.11ac VHT20: 12.82dBm IEEE 802.11ac VHT40: 13.10dBm IEEE 802.11ac VHT80: 12.85dBm IEEE 802.11ax HE20: 11.92dBm IEEE 802.11ax HE40: 13.23dBm IEEE 802.11ax HE80: 13.59dBm
		U-NII-2C	IEEE 802.11a: 15.50dBm IEEE 802.11n HT20: 14.35dBm IEEE 802.11n HT40: 14.63dBm IEEE 802.11ac VHT20: 14.20dBm IEEE 802.11ac VHT40: 14.55dBm IEEE 802.11ac VHT80: 13.85dBm IEEE 802.11ax HE20: 12.96dBm IEEE 802.11ax HE40: 14.91dBm IEEE 802.11ax HE80: 14.80dBm
		U-NII-3	IEEE 802.11a: 15.50dBm IEEE 802.11n HT20: 14.39dBm IEEE 802.11n HT40: 14.67dBm IEEE 802.11ac VHT20: 14.29dBm IEEE 802.11ac VHT40: 14.56dBm IEEE 802.11ac VHT80: 14.23dBm IEEE 802.11ax HE20: 13.19dBm IEEE 802.11ax HE40: 15.00dBm IEEE 802.11ax HE80: 15.70dBm
Sample Type	:	Prototype production	

Note: For a more detailed features description, please refer to the manufacturer’s specifications or the user's manual.

1.2.The antenna information for EUT

Ant No.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	-	-	Internal	-	4.47
2	-	-	Internal	-	4.47

Remark:

(1) The EUT can work as CDD mode in IEEE 802.11n, IEEE 802.11ac and IEEE 802.11ax, and can operate with one spatial stream.
According to KDB 662911 F 2) f) (i):
Directional gain=4.47dBi+10×log(2/1)dB=7.48dBi＞6dBi
So, the output power limit and power spectral density limit need to be reduced 1.48dB.

(2) After pre-test all antenna configurations,the worst case configuration as list below.

(3) The antenna gain is declared by the customer and the laboratory is not responsible for the accuracy of the antenna gain.

(4) The test results of this report only apply to the sample as received.

ANT No. / TX Mode	SISO Configuration	MIMO Configuration
IEEE 802.11a	ANT 1 and ANT 2	/
IEEE 802.11n HT20	/	ANT1+ANT2
IEEE 802.11n HT40	/	ANT1+ANT2
IEEE 802.11ac VHT20	/	ANT1+ANT2
IEEE 802.11ac VHT40	/	ANT1+ANT2
IEEE 802.11ac VHT80	/	ANT1+ANT2
IEEE 802.11ax HE20	/	ANT1+ANT2
IEEE 802.11ax HE40	/	ANT1+ANT2
IEEE 802.11ax HE80	/	ANT1+ANT2

1.3.Information of RF Cable

Cable Loss(dB)	Provided by
1.0	Naim Audio Limited

Note:
1.The customer declared the loss value of the RF Cable. and the test results of this report only apply to the sample as received.
2.The laboratory is not responsible for the accuracy of the cable loss.

2.SUMMARY OF TEST

2.1.Summary of test result

No.	Description of Test Item	FCC Standard Section	Results
1	6dB Bandwidth & 26dB Bandwidth & 99% Occupied Bandwidth	15.407(a) 15.407(e)	PASS
2	Maximum Conducted Output Power	15.407(a)	PASS
3	Peak Power Spectral Density	15.407(a)	PASS
4	Unwanted Emissions and Band Edge	15.205 15.209 15.407(b)	PASS
5	Frequency Stability	15.407(g)	PASS
6	AC Power Line Conducted Emissions	15.207 15.407(b)(9)	PASS
7	Antenna Requirement	15.203	PASS

Note:“N/A” denotes test is not applicable in this test report.

2.2.Test Facilities

EMC Lab	:	Accredited by CNAS, CHINA Registration No.: L5288 This Accreditation is valid until: November 12, 2029 Recognized by FCC, USA Designation Number: CN1215 This Recognition is valid until: January 31, 2026 Accredited by A2LA, USA Registration No.: 4366.01 This Accreditation is valid until: January 31, 2026 Recognized by Industry Canada CAB identifier No.: CN0035 This Recognition is valid until: January 31, 2026 Recognized by VCCI, Japan Registration No.:C-14103; T-20073; R-13663; R-20103; G-20097 Date of registration: Apr. 20, 2020 This Recognition is valid until: Apr. 19, 2026 Recognized by TUV Rheinland, Germany Registration No.: UA 50413872 0001 Date of registration: July 31, 2018 Recognized by Intertek Registration No.: 2011-RTL-L2-64 Date of registration: November 08, 2018
Name of Firm	:	EST Technology Co., Ltd.
Site Location	:	Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong, China

2.3.Measurement uncertainty for EST Technology Co., Ltd.

Test Item	Uncertainty
Uncertainty for Conduction emission test	2.54dB
Uncertainty for spurious emissions test (Below 30MHz)	±1.62 dB
Uncertainty for Radiation Emission test (30MHz-1GHz)	3.62
Uncertainty for Radiation Emission test (1GHz to 18GHz)	4.86
Uncertainty for spurious emissions test (18GHz to 40GHz)	4.67
Uncertainty for radio frequency	7×10-8
Uncertainty for conducted RF Power	1.08dB
Uncertainty for Power density test	0.26dB
Temperature	±0.6°C
Humidity	±4.0 %
Volatage DC	±1.0%
Volatage (AC, <10KHz)	±1.5%

Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

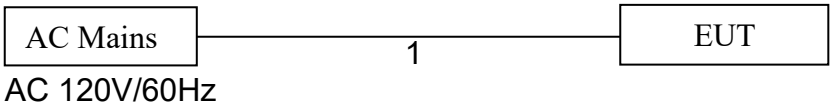
2.4.Assistant equipment used for test

Item	Equipment	Brand	Model Name/Type No.	FCC ID	Series No.
-	-	-	-	-	-

Item	Shielded Type	Ferrite Core	Length	Note
1	NO	NO	1.6m	AC Cable

2.5.Block Diagram

For radiated emissions test: EUT was placed on a turn table, which is 0.8 (or 1.5) meter high above ground.



AC 120V/60Hz

(EUT: CI-Uniti 102)

2.6.Test Mode

Pre-scan has been combined all possible modulations and date rates to determine the worst case test mode,the worst case test mode was selected for the final test as listed below.

Test Item	Test Mode	Channel	Modulation	Data rate
6dB Bandwidth	IEEE 802.11a	149/157/165	OFDM	6Mbps
	IEEE 802.11n HT20	149/157/165	OFDM	MCS0
	IEEE 802.11n HT40	151/159	OFDM	MCS0
	IEEE 802.11ac VHT20	149/157/165	OFDM	MCS0
	IEEE 802.11ac VHT40	151/159	OFDM	MCS0
	IEEE 802.11ac VHT80	155	OFDMA	MCS0
	IEEE 802.11ax HE20	149/157/165	OFDMA	MCS0
	IEEE 802.11ax HE40	151/159	OFDMA	MCS0
	IEEE 802.11ax HE80	155	OFDM	MCS0
26dB Bandwidth	IEEE 802.11a	36/40/48/52/60/64/100/116/140	OFDM	6Mbps
	IEEE 802.11n HT20	36/40/48/52/60/64/100/116/140	OFDM	MCS0
	IEEE 802.11n HT40	38/46/54/62/102/118/134	OFDM	MCS0
	IEEE 802.11ac VHT20	36/40/48/52/60/64/100/116/140	OFDM	MCS0
	IEEE 802.11ac VHT40	38/46/54/62/102/118/134	OFDM	MCS0
	IEEE 802.11ac VHT80	42/58/106/122	OFDM	MCS0
	IEEE 802.11ax HE20	36/40/48/52/60/64/100/116/140	OFDMA	MCS0
	IEEE 802.11ax HE40	38/46/54/62/102/118/134	OFDMA	MCS0
	IEEE 802.11ax HE80	42/58/106/122	OFDMA	MCS0
99% Occupied Bandwidth	IEEE 802.11a	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	6Mbps
	IEEE 802.11n HT20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	MCS0
	IEEE 802.11n HT40	38/46/54/62/102/118/134/151/159	OFDM	MCS0
	IEEE 802.11ac VHT20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	MCS0
	IEEE 802.11ac VHT40	38/46/54/62/102/118/134/151/ 159	OFDM	MCS0
	IEEE 802.11ac VHT80	42/58/106/122/155	OFDM	MCS0
	IEEE 802.11ax HE20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDMA	MCS0
	IEEE 802.11ax HE40	38/46/54/62/102/118/134/151/159	OFDMA	MCS0
	IEEE 802.11ax HE80	42/58/106/122/155	OFDMA	MCS0

Maximum Conducted Output Power	IEEE 802.11a	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	6Mbps
	IEEE 802.11n HT20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	MCS0
	IEEE 802.11n HT40	38/46/54/62/102/118/134/151/159	OFDM	MCS0
	IEEE 802.11ac VHT20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	MCS0
	IEEE 802.11ac VHT40	38/46/54/62/102/118/134/151/ 159	OFDM	MCS0
	IEEE 802.11ac VHT80	42/58/106/122/155	OFDM	MCS0
	IEEE 802.11ax HE20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDMA	MCS0
	IEEE 802.11ax HE40	38/46/54/62/102/118/134/151/ 159	OFDMA	MCS0
	IEEE 802.11ax HE80	42/58/106/122/155	OFDMA	MCS0
Peak Power Spectral Density	IEEE 802.11a	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	6Mbps
	IEEE 802.11n HT20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	MCS0
	IEEE 802.11n HT40	38/46/54/62/102/118/134/151/159	OFDM	MCS0
	IEEE 802.11ac VHT20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	MCS0
	IEEE 802.11ac VHT40	38/46/54/62/102/118/134/151/ 159	OFDM	MCS0
	IEEE 802.11ac VHT80	42/58/106/122/155	OFDM	MCS0
	IEEE 802.11ax HE20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDMA	MCS0
	IEEE 802.11ax HE40	38/46/54/62/102/118/134/151/159	OFDMA	MCS0
	IEEE 802.11ax HE80	42/58/106/122/155	OFDMA	MCS0
Unwanted Emissions and Band Edge(Above 1GHz)	IEEE 802.11a	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	6Mbps
	IEEE 802.11n HT20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	MCS0
	IEEE 802.11n HT40	38/46/54/62/102/118/134/151/159	OFDM	MCS0
	IEEE 802.11ac VHT20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDM	MCS0
	IEEE 802.11ac VHT40	38/46/54/62/102/118/134/151/ 159	OFDM	MCS0
	IEEE 802.11ac VHT80	42/58/106/122/155	OFDM	MCS0
	IEEE 802.11ax HE20	36/40/48/52/60/64/100/116/140/ 149/157/165	OFDMA	MCS0
	IEEE 802.11ax HE40	38/46/54/62/102/118/134/151/159	OFDMA	MCS0
	IEEE 802.11ax HE80	42/58/106/122/155	OFDMA	MCS0

Unwanted Emissions Below 1GHz	IEEE 802.11a	100	OFDM	6Mbps
Frequency Stability	Unmodulation	36/52/100/149	N/A	N/A
AC Power Line Conducted Emissions	IEEE 802.11a	100	OFDM	6Mbps

Note: In radiated measurement,the EUT had been pre-scan on the positioned of each 3 axis(X,Y,Z), the worst case was found when positioned on **X-plane.**

2.7.Channel List

Band	Mode	Channel	Frequency (MHz)
U-NII-1	IEEE 802.11a & n HT20 & ac VHT20 & ax HE20	36	5180
		40	5200
		44	5220
		48	5240
	IEEE 802.11n HT40 & ac VHT40 & ax HE40	38	5190
		46	5230
	IEEE 802.11ac VHT80 & IEEE 802.11ax HE80	42	5210
U-NII-2A	IEEE 802.11a & n HT20 & ac VHT20 & ax HE20	52	5260
		56	5280
		60	5300
		64	5320
	IEEE 802.11n HT40 & ac VHT40 & ax HE40	54	5270
		62	5310
	IEEE 802.11ac VHT80 & IEEE 802.11ax HE80	58	5290
U-NII-2C	IEEE 802.11a & n HT20 & ac VHT20 & ax HE20	100	5500
		104	5520
		108	5540
		112	5560
		116	5580
		120	5600
		124	5620
		128	5640
		132	5660
		136	5680
		140	5700
	IEEE 802.11n HT40 & ac VHT40 & ax HE40	102	5510
		110	5550
		118	5590
		126	5630
		134	5670
	IEEE 802.11ac VHT80 & IEEE 802.11ax HE80	106	5530
		122	5610
U-NII-3	IEEE 802.11a & n HT20 & ac VHT20 & ax HE20	149	5745
		153	5765
		157	5785
		161	5805
		165	5825
	IEEE 802.11n HT40 & ac VHT40 & ax HE40	151	5755
		159	5795
	IEEE 802.11ac VHT80 & IEEE 802.11ax HE80	155	5775

2.8.Power Setting of Test Software

Software Name	PUTTY		
U-NII-1			
Frequency(MHz)	5180	5200	5240
IEEE 802.11a Setting	55,55	55,55	55,55
IEEE 802.11n HT20 Setting	45,45	45,45	45,45
IEEE 802.11ac VHT20 Setting	45,45	45,45	45,45
IEEE 802.11ax HE20 Setting	45,45	45,45	45,45
Frequency(MHz)	5190	5230	
IEEE 802.11n HT40 Setting	45,45	45,45	
IEEE 802.11ac VHT40 Setting	45,45	45,45	
IEEE 802.11ax HE40 Setting	45,45	45,45	
Frequency(MHz)	5210		
IEEE 802.11ac VHT80 Setting	45,45		
IEEE 802.11ax HE80 Setting	45,45		
U-NII-2A			
Frequency(MHz)	5260	5300	5320
IEEE 802.11a Setting	55,55	55,55	55,55
IEEE 802.11n HT20 Setting	45,45	45,45	45,45
IEEE 802.11ac VHT20 Setting	45,45	45,45	45,45
IEEE 802.11ax HE20 Setting	45,45	45,45	45,45
Frequency(MHz)	5270	5310	
IEEE 802.11n HT40 Setting	45,45	45,45	
IEEE 802.11ac VHT40 Setting	45,45	45,45	
IEEE 802.11ax HE40 Setting	45,45	45,45	
Frequency(MHz)	5290		
IEEE 802.11ac VHT80 Setting	45,45		
IEEE 802.11ax HE80 Setting	45,45		
U-NII-2C			
Frequency(MHz)	5500	5580	5700
IEEE 802.11a Setting	55,55	55,55	55,55
IEEE 802.11n HT20 Setting	45,45	45,45	45,45
IEEE 802.11ac VHT20 Setting	45,45	45,45	45,45
IEEE 802.11ax HE20 Setting	45,45	45,45	45,45
Frequency(MHz)	5510	5590	5670
IEEE 802.11n HT40 Setting	45,45	45,45	45,45
IEEE 802.11ac VHT40 Setting	45,45	45,45	45,45
IEEE 802.11ax HE40 Setting	45,45	45,45	45,45
Frequency(MHz)	5530	5610	
IEEE 802.11ac VHT80 Setting	45,45	45,45	
IEEE 802.11ax HE80 Setting	45,45	45,45	

U-NII-3			
Frequency(MHz)	5745	5785	5825
IEEE 802.11a Setting	55,55	55,55	55,55
IEEE 802.11n HT20 Setting	45,45	45,45	45,45
IEEE 802.11ac VHT20 Setting	45,45	45,45	45,45
IEEE 802.11ax HE20 Setting	45,45	45,45	45,45
Frequency(MHz)	5755	5795	
IEEE 802.11n HT40 Setting	45,45	45,45	
IEEE 802.11ac VHT40 Setting	45,45	45,45	
IEEE 802.11ax HE40 Setting	45,45	45,45	
Frequency(MHz)	5775		
IEEE 802.11ac VHT80 Setting	45,45		
IEEE 802.11ax HE80 Setting	45,45		

Note: This information is provided by the applicant.

2.9.Duty Cycle of Test Signal

Refer to section 10: Appendix B

Note:

1. Duty Cycle=On Time/Total Time×100%.
2. Duty Factor=10×LOG(1/Duty Cycle).
3. If duty cycle <98 %, the conducted average output power and average power spectral density should be add duty factor.
4. If duty cycle≥98 %,the EUT is consider to be transmitting continuously,the conducted average output power and average power spectral density no need to add duty factor.
5. The on-time time is transmission duration(T).
6. The VBW Setting is use for RMS measurement in Unwanted Emissions and Band Edge(Above 1GHz) Test.

2.10. Test Equipment List

For conducted emission test						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESRP3	EST-E070	LISAI	June 11,24	June 10,25
Artificial Mains Network	Rohde & Schwarz	ENV216	EST-E048	LISAI	June 11,24	June 10,25
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	EST-E078	LISAI	June 11,24	June 10,25
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A

For radiated emission test(9kHz-30MHz)						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESR7	EST-E047	LISAI	June 11,24	June 10,25
Active Loop Antenna	SCHWAREBECK	FMZB 1519B	EST-E054	LISAI	June 11,24	June 10,25
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A
9kHz-30MHz Cable	N/A	EST-001	N/A	N/A	N/A	N/A

For radiated emissions test (30MHz-1000MHz)						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESR7	EST-E047	LISAI	June 11,24	June 10,25
Bilog Antenna	Teseq	CBL 6111D	EST-E034	LISAI	June 11,24	June 10,25
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A
30-1000MHz Cable	N/A	EST-002	N/A	N/A	N/A	N/A

For radiated emission test(Above 1000MHz)						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
Horn Antenna	SCHWARZBECK	BBHA9120D	EST-E144	LISAI	June 11,24	June 10,25
Horn Antenna	Com-Power	AHA-840	EST-E133	LISAI	June 11,24	June 10,25
Low Noise Amplifier	RF	TRLA-010180G45N	EST-E142	LISAI	June 11,24	June 10,25
Spectrum Analyzer	Rohde &Schwarz	FSV40	EST-E069	LISAI	June 11,24	June 10,25
Test Software	Audix	e3-6.111221a	N/A	N/A	N/A	N/A
Above 1GHz Cable	N/A	EST-003	N/A	N/A	N/A	N/A

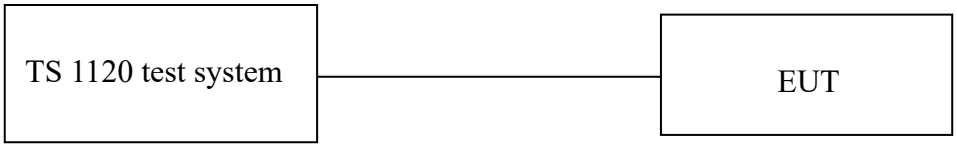
For connect EUT antenna terminal test						
Equipment	Manufacturer	Model No.	Serial No.	Calibration Body	Last Cal.	Next Cal.
TS 1120	Tonscend	/	/	/	/	/
Test Software	Tonscend	TS1120-3	3.3.38	/	/	/
RF Control Unit	Tonscend	JS0806-2	EST-E134	LISAI	June 11,24	June 10,25
Signal and Spectrum Analyzer	Keysight	N9010B	EST-E141	LISAI	June 11,24	June 10,25

3.6dB Bandwidth &26dB Bandwidth & 99% Occupied Bandwidth

3.1.Limit

Band	Frequency (MHz)	Test Item	Limit
U-NII-1	5150-5250	26dB Bandwidth&99% Occupied Bandwidth	N/A
U-NII-2A	5250-5350	26dB Bandwidth&99% Occupied Bandwidth	N/A
U-NII-2C	5470-5725	26dB Bandwidth&99% Occupied Bandwidth	N/A
U-NII-3	5725-5850	6dB Bandwidth&99% Occupied Bandwidth	6dB Bandwidth≥500KHz

3.2.Test Setup



3.3.Spectrum Analyzer Setting

6dB Bandwidth	
Spectrum Parameters	Setting
RBW	100KHz
VBW	300KHz
Span	40MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

26dB Bandwidth	
Spectrum Parameters	Setting
RBW	approximately 1% of the emission bandwidth
VBW	＞RBW
Span	40MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

99% Occupied Bandwidth	
Spectrum Parameters	Setting
RBW	1% to 5% of the OBW
VBW	approximately three times the RBW
Span	between 1.5 times and 5.0 times the OBW
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

3.4.Test Procedure

For 26dB Bandwidth Measurement :

a. Connect EUT antenna terminal to the spectrum analyzer with RF cable.
b. Spectrum analyzer setting parameters in accordance with section 3.3.
c. Set the EUT transmit continuously with maximum output power.
d. Allow trace to stabilize, measure the maximum width of the emission that is 26 dB down from the peak of the emission.Compare this with the RBW setting of the instrument. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
e. Repeat above procedures until all modes and channels were measured.
f. Record the results in the test report.

For 6dB Bandwidth Measurement :

a. Connect EUT antenna terminal to the spectrum analyzer with RF cable.
b. Spectrum analyzer setting parameters in accordance with section 3.3.
c. Set the EUT transmit continuously with maximum output power.
d. Allow trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.
e. Repeat above procedures until all modes and channels were measured.
f. Record the results in the test report.

For 99% Occupied Bandwidth Measurement :

a. Connect EUT antenna terminal to the spectrum analyzer with RF cable.
b. Spectrum analyzer setting parameters in accordance with section 3.3.
c. Set the EUT transmit continuously with maximum output power.
d. Allow trace to stabilize, use the 99% power bandwidth function to measure bandwidth.
e. Repeat above procedures until all modes and channels were measured.
f. Record the results in the test report.

3.5.Test Result

Refer to section 10: Appendix A1/A2/A3

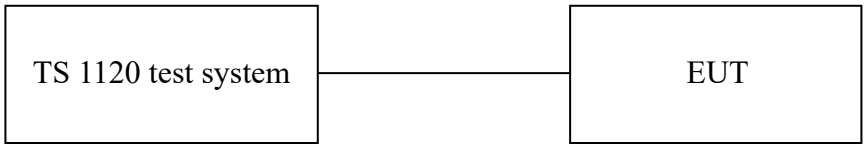
4.MAXIMUM CONDUCTED OUTPUT POWER

4.1.Limit

Band	EUT Type	Limit
U-NII-1	Outdoor Access Point	1W(30dBm) (Max. e.i.r.p≦ 125mW at any elevation angle above 30 degrees as measured from the horizon)
	Indoor Access Point	1W(30dBm)
	Fixed point-to-point Access Point	1W(30dBm)
	Mobile and Portable Client Device	250mW(23.98dBm)
U-NII-2A	All Device	250mW(23.98dBm) or 11dBm+10 log B,Which is lesser. (B is 26dB Bandwidth in MHz)
U-NII-2C	All Device	250mW(23.98dBm) or 11dBm+10 log B,Which is lesser. (B is 26dB Bandwidth in MHz)
U-NII-3	All Device	1W(30dBm)

Note: For the Band U-NII-2A and U-NII-2C,the maximum conducted output power limit calculate result refer to section 3.5.

4.2.Test Setup



4.3.Spectrum Analyzer Setting

Spectrum Parameters	Setting
RBW	1MHz
VBW	3MHz
Span	40MHz(20MHz Bandwidth mode) 80MHz(40MHz Bandwidth mode) 160MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	RMS
Trace Mode	Max Hold

4.4.Test Procedure

a. Connect EUT antenna terminal to the spectrum analyzer with RF cable.
b. Spectrum analyzer setting parameters in accordance with section 4.3.
c. Set the EUT transmit continuously with maximum output power.
d. Use the channel power function to measure maximum peak output power, allow trace to stabilize,
save test pictures.
e. Repeat above procedures until all modes and channels were measured.
f. Record the results in the test report.

4.5.Test Result

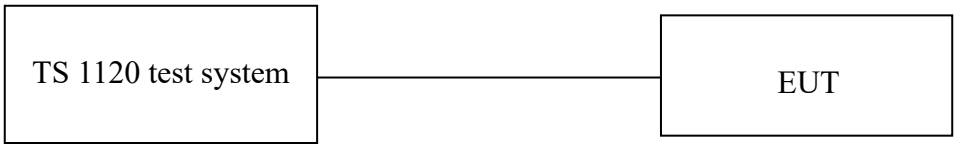
Refer to section 10: Appendix C

5.PEAK POWER SPECTRAL DENSITY

5.1.Limit

Band	EUT Type	Limit
U-NII-1	Outdoor Access Point	17dBm/MHz
	Indoor Access Point	17dBm/MHz
	Fixed point-to-point Access Point	17dBm/MHz
	Mobile and Portable Client Device	11dBm/MHz
U-NII-2A	All Device	11dBm/MHz
U-NII-2C	All Device	11dBm/MHz
U-NII-3	All Device	30dBm/500KHz

5.2.Test Setup



5.3.Spectrum Analyzer Setting

Spectrum Parameters	Setting
RBW	1MHz(For U-NII-1&U-NII-2A&U-NII-2C) 500KHz(For U-NII-3)
VBW	3MHz(For U-NII-1&U-NII-2A&U-NII-2C) 2MHz(For U-NII-3)
Span	encompass the entire 26 dB EBW or 99% OBW of the signal
Sweep Time	Auto
Number of Sweep Point	≥2×SPAN/RBW
Detector	RMS(power averaging)
Trace Average	≥100 traces

5.4.Test Procedure

a. Connect EUT antenna terminal to the spectrum analyzer with RF cable.
b. Spectrum analyzer setting parameters in accordance with section 5.3.
c. Set the EUT transmit continuously with maximum output power.
d. Allow trace to stabilize, use the marker-to-peak function to set the marker to the average of the emission.
e. If the duty cycle of test siganl＜98%,the result=max measured value+10×log(1/duty cycle); If the duty cycle of test siganl≥98%,the esult=max measured value.
f. Repeat above procedures until all modes and channels were measured.
g. Record the results in the test report.

5.5.Test Result

Refer to section 10: Appendix D

6.UNWANTED EMISSIONS AND BAND EDGE

6.1.Limit

The maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

The unwanted emissions which fall in Restricted bands shall not exceed the field strength levels specified in the following table:

15.209 Radiated emission limits

Frequency (MHz)	Field Strength(μV/m)	Distance(m)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

15.205 Restricted frequency band

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])

Note：

1. dBμV/m=20Log(μV/m)
2. Above 1GHz the formula is used to convert the EIRP to field strength

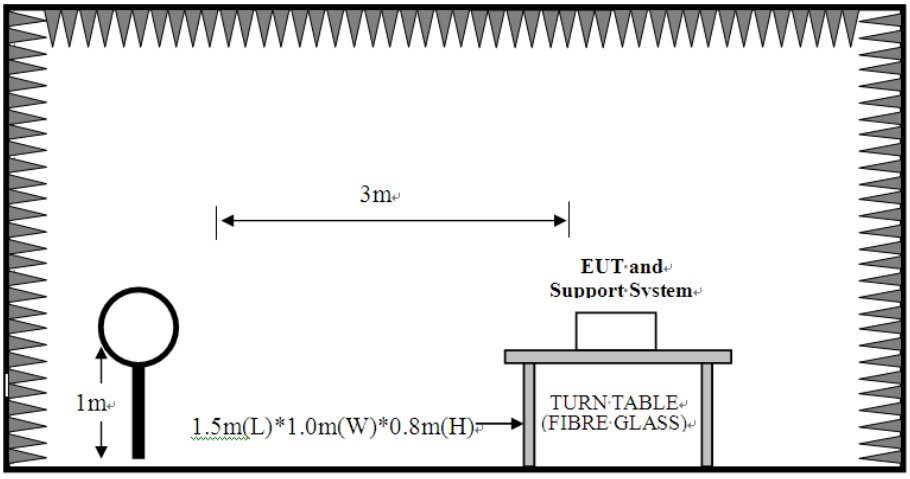
   $E[\text{dBμV/m}] = \text{EIRP}[\text{dBm}] - 20 \log (d[\text{m}]) + 104.77$

   where E is field strength and d is distance at which the field strength limit is specified in the applicable requirements.

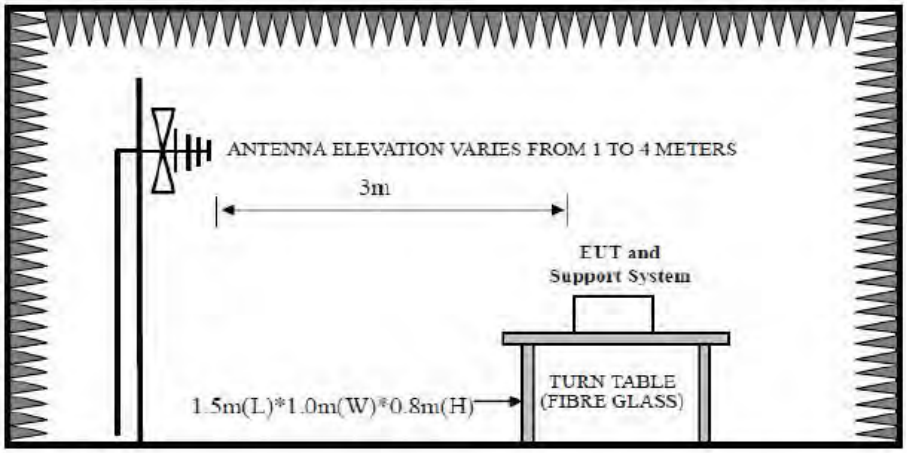
   for example,3m field strength(dBμV/m)=EIRP-20log(3)+104.77=EIRP+95.2

6.2.Test Setup

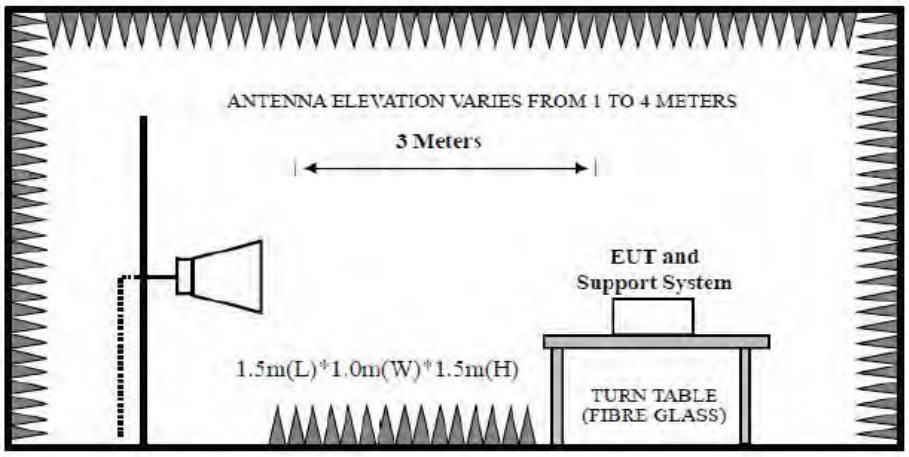
9kHz~30MHz



30~1000MHz



Above 1GHz



6.3.Spectrum Analyzer Setting

For 9KHz-150KHz

Spectrum Parameters	Setting
RBW	300Hz(for Peak&AVG)/CISPR 200Hz(for QP)
VBW	300Hz(for Peak&AVG)/CISPR 200Hz(for QP)
Start frequency	9KHz
Stop frequency	150KHz
Sweep Time	Auto
Detector	PEAK/QP/AVG
Trace Mode	Max Hold

Note : For 9KHz-90KHz&110KHz-150KHz,the detector is average,other frequency is CISPR QP detector.

For 150KHz-30MHz

Spectrum Parameters	Setting
RBW	9KHz
VBW	9KHz
Start frequency	150KHz
Stop frequency	30MHz
Sweep Time	Auto
Detector	QP
Trace Mode	Max Hold

Note : For 150KHz-490KHz,the detector is average,other frequency is CISPR QP detector.

For 30MHz-1GHz

Spectrum Parameters	Setting
RBW	120KHz
VBW	300KHz
Start frequency	30MHz
Stop frequency	1GHz
Sweep Time	Auto
Detector	QP
Trace Mode	Max Hold

For Above 1GHz

Spectrum Parameters	Setting	
RBW	1MHz	
VBW	PEAK Measurement	AVG Measurement
	3MHz	Duty cycle≥98%,VBW=10Hz Duty cycle＜98%,VBW≥1/T Video bandwidth mode=RMS (power averaging)
Start frequency	1GHz	
Stop frequency	40GHz	
Sweep Time	Auto	
Detector	PEAK	
Trace Mode	Max Hold	

Note : T is the on-time time of the duty cycle,when EUT transmit continuously with maximum output power,unit is seconds. reference section 2.7 for the on-time time.

6.4.Test Procedure

a. EUT was placed on a turn table, which is 0.8 meter high above ground for below 1GHz test, and which is 1.5 meter high above ground for above 1GHz test.
b. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower.
c. Set the EUT transmit continuously with maximum output power.
d. The turn table can rotate 360 degrees to determine the position of the maximum emission level.
e. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test.
f. Spectrum analyzer setting parameters in accordance with section 6.3.
g. Repeat above procedures until all channels were measured.
h. Record the results in the test report.
i. IEEE 802.11a, IEEE 802.11n HT20, IEEE 802.11n HT40, IEEE 802.11ac VHT20, IEEE 802.11ac VHT40, IEEE 802.11ac VHT80, IEEE 802.11ax HE20, IEEE 802.11ax HE40, IEEE 802.11ax HE80 all have been tested, only worst case IEEE 802.11n HT20 is recorded.

6.5.Test Result

Radiated Emissions Below 1GHz

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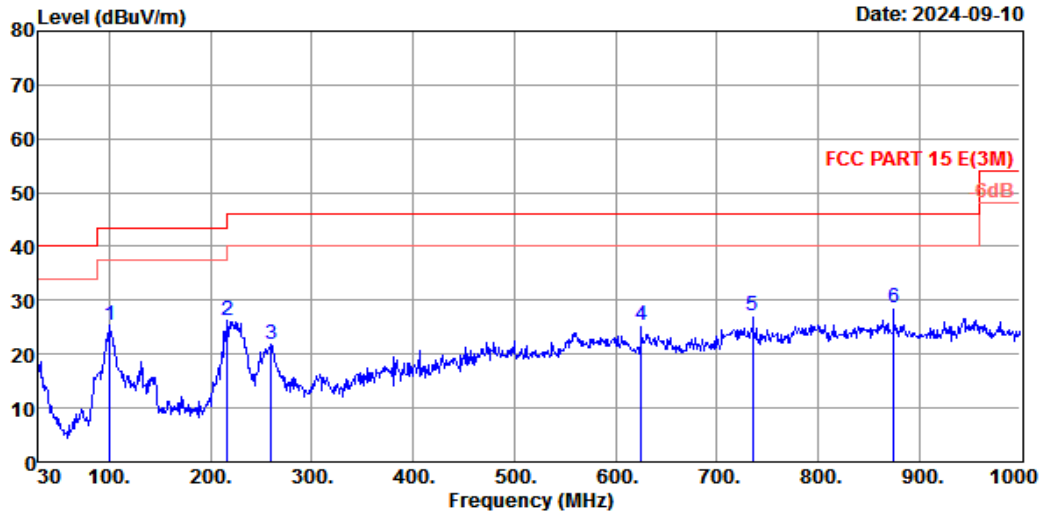
Data: 43 File: \\EMC-966-5\Test Data\2024\RF\T\Ting Feng\CI-Uniti 102.EM6 (44)



Site no. : 5# 966 Chamber Data no. : 43
Dis. / Ant. : 3m 54681 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 E(3M)
Env. / Ins. : Temp:23℃;Humi:54%:;Prwss:101.1kPa
Engineer : Aikun
EUT : CI-Uniti 102
Power : AC 120V/60Hz
M/N : CI-Uniti 102
Test Mode : TX Mode

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	100.81	10.40	1.18	13.78	25.36	43.50	18.14	QP
2	216.24	9.16	2.54	14.61	26.31	46.00	19.69	QP
3	259.89	14.40	2.80	4.60	21.80	46.00	24.20	QP
4	625.58	20.30	4.49	0.61	25.40	46.00	20.60	QP
5	735.19	21.60	4.90	0.76	27.26	46.00	18.74	QP
6	874.87	22.70	5.39	0.47	28.56	46.00	17.44	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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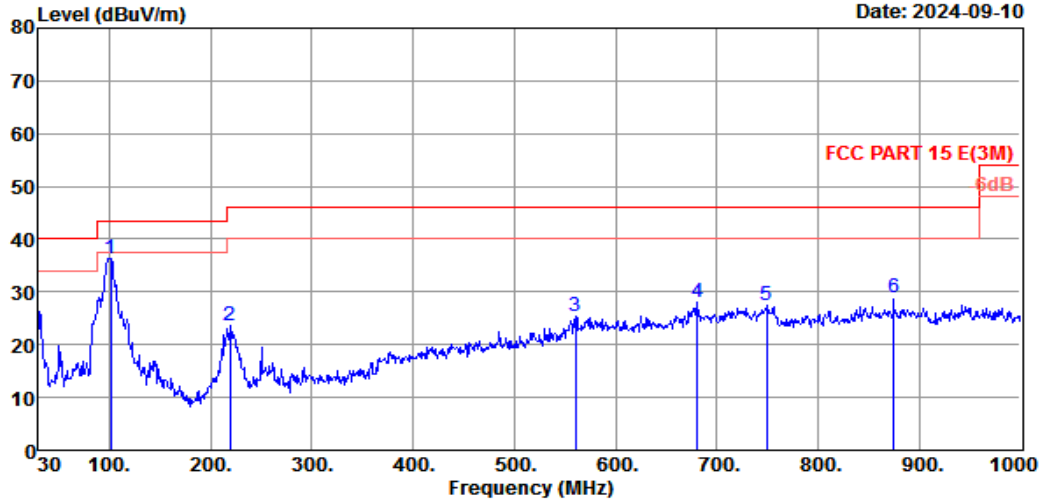
Data: 44 File: \\EMC-966-5\Test Data\2024\RF\T\Ting Feng\CI-Uniti 102.EM6 (44)



Site no. : 5# 966 Chamber Data no. : 44
Dis. / Ant. : 3m 54681 Ant. pol. : VERTICAL
Limit : FCC PART 15 E(3M)
Env. / Ins. : Temp:23℃;Humi:54%:;Prwss:101.1kPa
Engineer : Aikun
EUT : CI-Uniti 102
Power : AC 120V/60Hz
M/N : CI-Uniti 102
Test Mode : TX Mode

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	101.78	10.60	1.20	24.57	36.37	43.50	7.13	QP
2	219.15	9.34	2.56	11.67	23.57	46.00	22.43	QP
3	560.59	20.35	4.23	0.71	25.29	46.00	20.71	QP
4	680.87	20.68	4.70	2.57	27.95	46.00	18.05	QP
5	749.74	22.00	4.95	0.48	27.43	46.00	18.57	QP
6	874.87	22.70	5.39	0.73	28.82	46.00	17.18	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

Note:

1. The amplitude of 9KHz to 30MHz spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.
2. All channels had been pre-test,only the worst case was reported.

Radiated Emissions Above 1G

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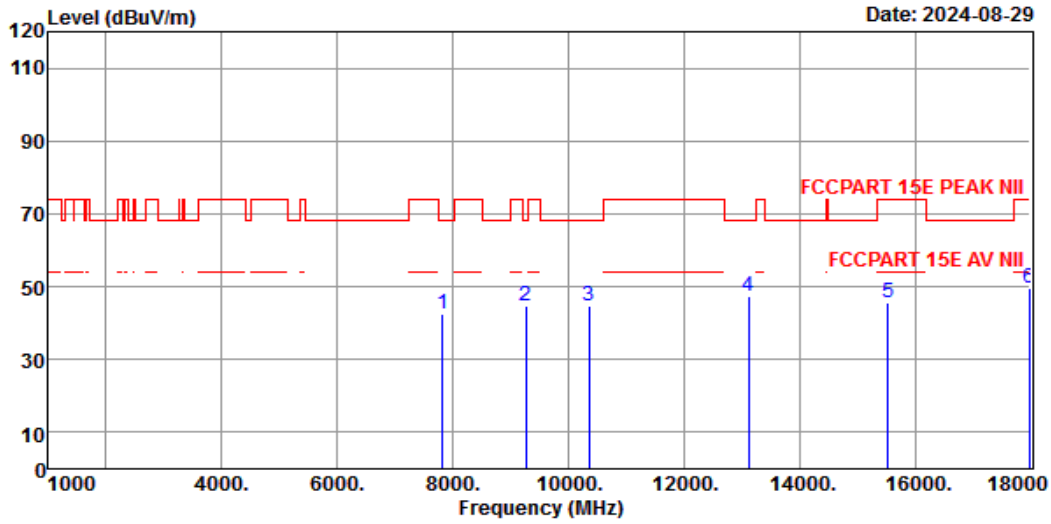
Data: 139 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 139
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5180MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	7817.00	36.65	6.86	44.02	43.06	42.55	68.20	25.65	Peak
2	9262.00	38.05	7.78	43.50	42.46	44.79	68.20	23.41	Peak
3	10360.00	38.45	7.95	43.50	42.00	44.90	68.20	23.30	Peak
4	13121.00	39.74	9.32	40.80	39.08	47.34	68.20	20.86	Peak
5	15540.00	38.58	10.46	43.73	40.27	45.58	74.00	28.42	Peak
6	17983.00	41.54	12.44	42.73	38.50	49.75	74.00	24.25	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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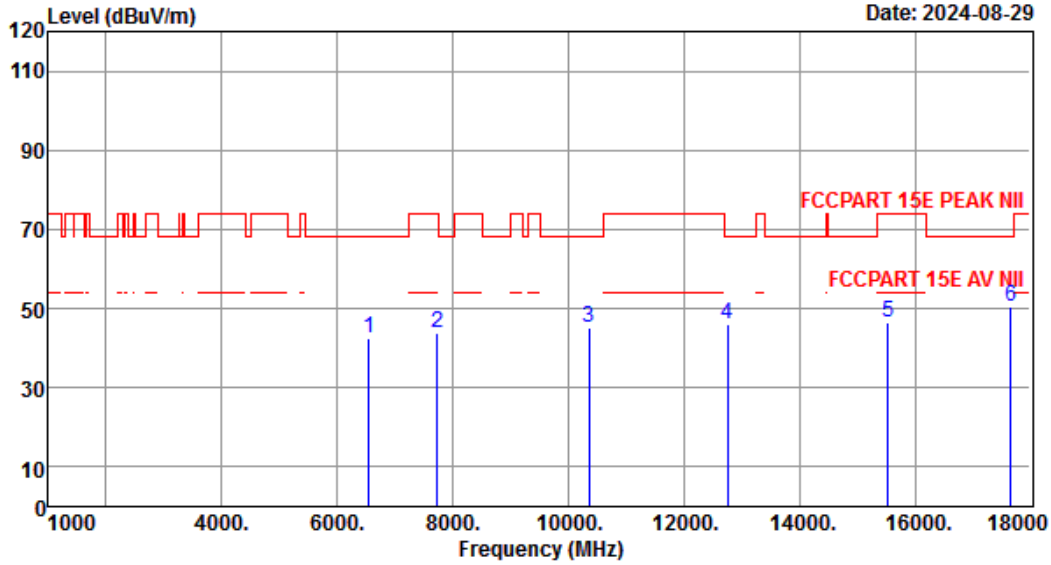
Data: 140 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 140
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5180MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	6542.00	35.04	6.40	44.10	45.26	42.60	68.20	25.60	Peak
2	7732.00	36.59	6.83	44.03	44.25	43.64	74.00	30.36	Peak
3	10360.00	38.45	7.95	43.50	42.26	45.16	68.20	23.04	Peak
4	12764.00	39.49	9.16	41.13	38.43	45.95	68.20	22.25	Peak
5	15540.00	38.58	10.46	43.73	41.12	46.43	74.00	27.57	Peak
6	17660.00	40.48	12.15	43.21	41.18	50.60	68.20	17.60	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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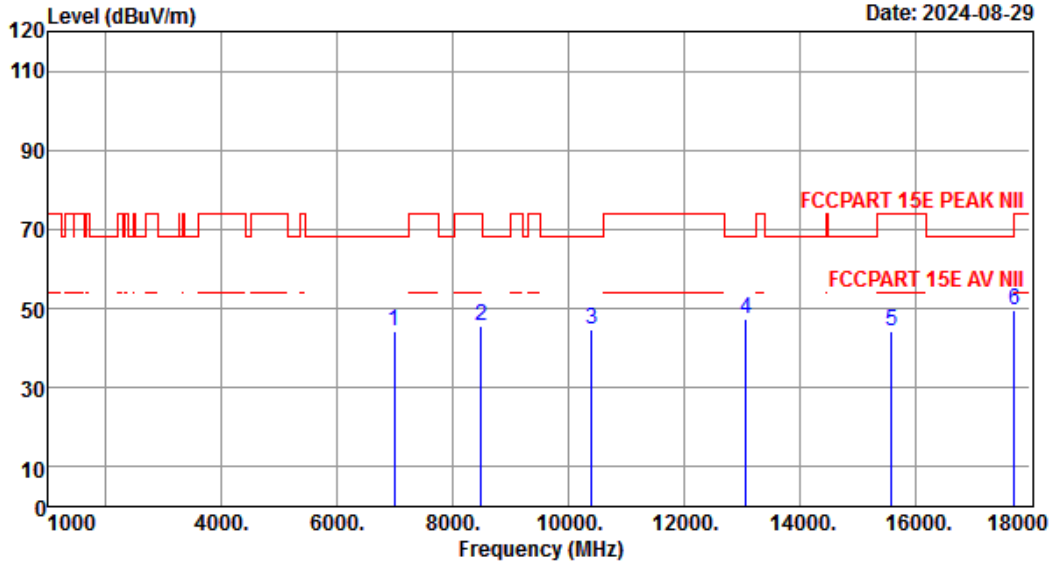
Data: 141 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 141
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5200MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	6984.00	35.97	6.59	44.10	45.70	44.16	68.20	24.04	Peak
2	8497.00	37.40	7.34	43.71	44.77	45.80	74.00	28.20	Peak
3	10400.00	38.48	7.97	43.47	41.66	44.64	68.20	23.56	Peak
4	13070.00	39.72	9.29	40.80	39.31	47.52	68.20	20.68	Peak
5	15600.00	38.48	10.49	43.78	39.16	44.35	74.00	29.65	Peak
6	17728.00	40.70	12.21	43.11	39.60	49.40	74.00	24.60	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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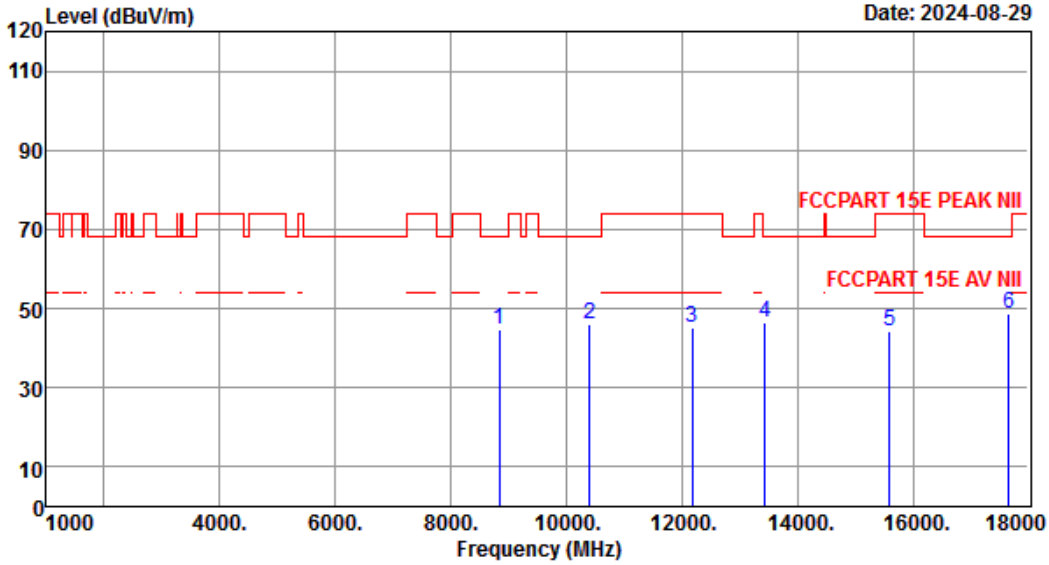
Data: 142 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 142
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5200MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	8837.00	37.80	7.63	43.50	42.84	44.77	68.20	23.43	Peak
2	10400.00	38.48	7.97	43.47	42.97	45.95	68.20	22.25	Peak
3	12186.00	38.97	8.91	41.94	39.25	45.19	74.00	28.81	Peak
4	13444.00	39.83	9.48	40.80	37.95	46.46	68.20	21.74	Peak
5	15600.00	38.48	10.49	43.78	39.20	44.39	74.00	29.61	Peak
6	17660.00	40.48	12.15	43.21	39.44	48.86	68.20	19.34	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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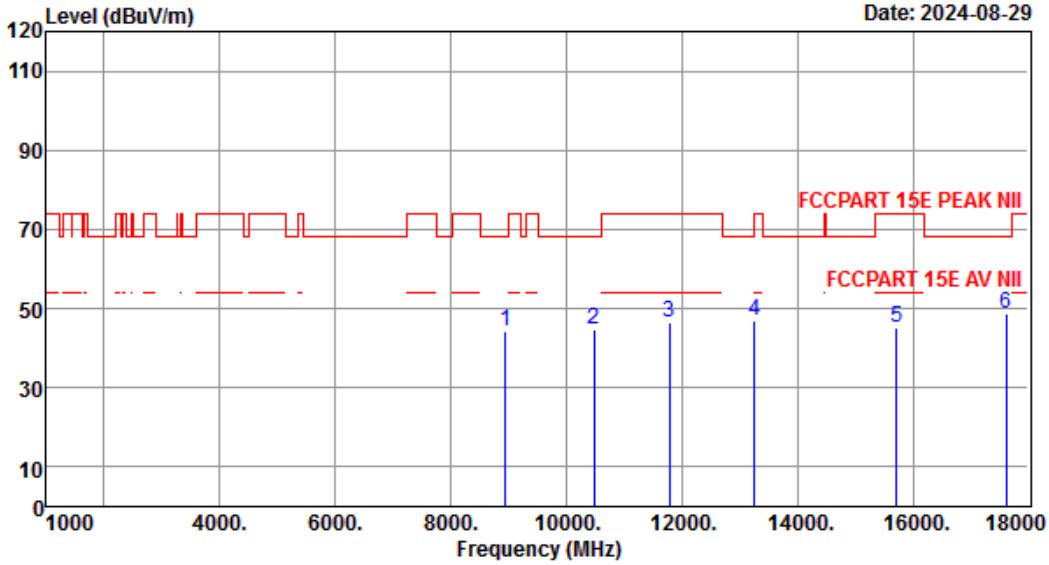
Data: 143 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 143
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5240MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	8939.00	37.93	7.72	43.44	42.08	44.29	68.20	23.91	Peak
2	10480.00	38.54	8.01	43.41	41.66	44.80	68.20	23.40	Peak
3	11778.00	38.82	8.70	42.38	41.47	46.61	74.00	27.39	Peak
4	13257.00	39.78	9.39	40.80	38.68	47.05	74.00	26.95	Peak
5	15720.00	38.28	10.53	43.88	40.35	45.28	74.00	28.72	Peak
6	17609.00	40.31	12.11	43.28	39.49	48.63	68.20	19.57	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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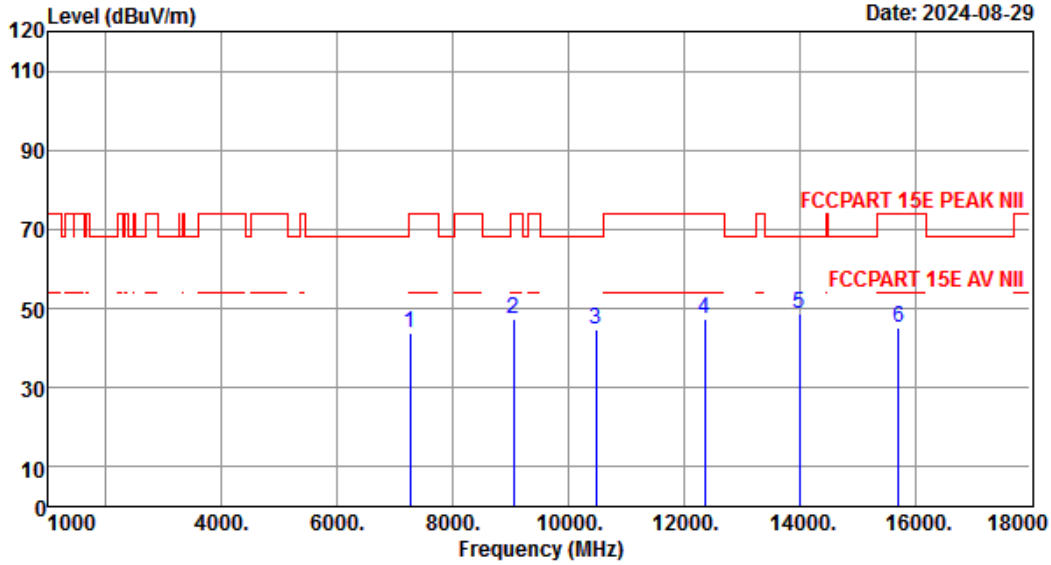
Data: 144 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 144
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5240MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	7256.00	36.20	6.68	44.07	45.18	43.99	74.00	30.01	Peak
2	9058.00	38.01	7.78	43.42	45.22	47.59	74.00	26.41	Peak
3	10480.00	38.54	8.01	43.41	41.73	44.87	68.20	23.33	Peak
4	12356.00	39.12	8.98	41.70	41.09	47.49	74.00	26.51	Peak
5	14005.00	40.00	9.77	40.80	39.52	48.49	68.20	19.71	Peak
6	15720.00	38.28	10.53	43.88	40.04	44.97	74.00	29.03	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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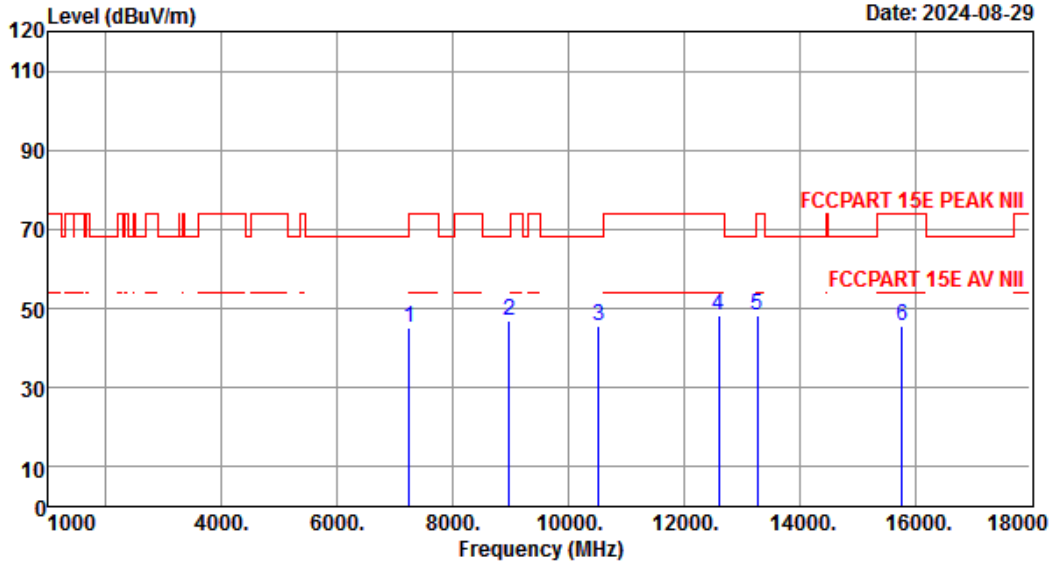
Data: 145 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 145
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5260MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	7239.00	36.19	6.68	44.08	46.59	45.38	68.20	22.82	Peak
2	8973.00	37.97	7.75	43.42	44.67	46.97	68.20	21.23	Peak
3	10520.00	38.56	8.03	43.38	42.42	45.63	68.20	22.57	Peak
4	12611.00	39.35	9.09	41.35	41.24	48.33	74.00	25.67	Peak
5	13274.00	39.78	9.40	40.80	40.01	48.39	74.00	25.61	Peak
6	15780.00	38.17	10.55	43.92	40.64	45.44	74.00	28.56	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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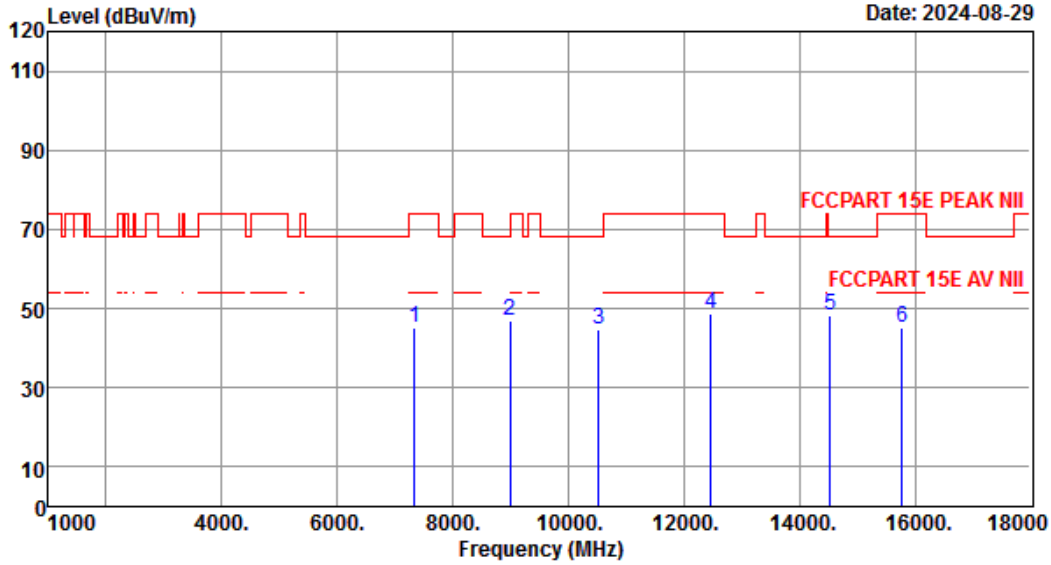
Data: 146 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 146
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5260MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	7341.00	36.27	6.71	44.07	46.18	45.09	74.00	28.91	Peak
2	8990.00	37.99	7.77	43.41	44.48	46.83	68.20	21.37	Peak
3	10520.00	38.56	8.03	43.38	41.44	44.65	68.20	23.55	Peak
4	12475.00	39.23	9.03	41.54	41.94	48.66	74.00	25.34	Peak
5	14532.00	39.73	10.02	42.11	40.73	48.37	68.20	19.83	Peak
6	15780.00	38.17	10.55	43.92	40.18	44.98	74.00	29.02	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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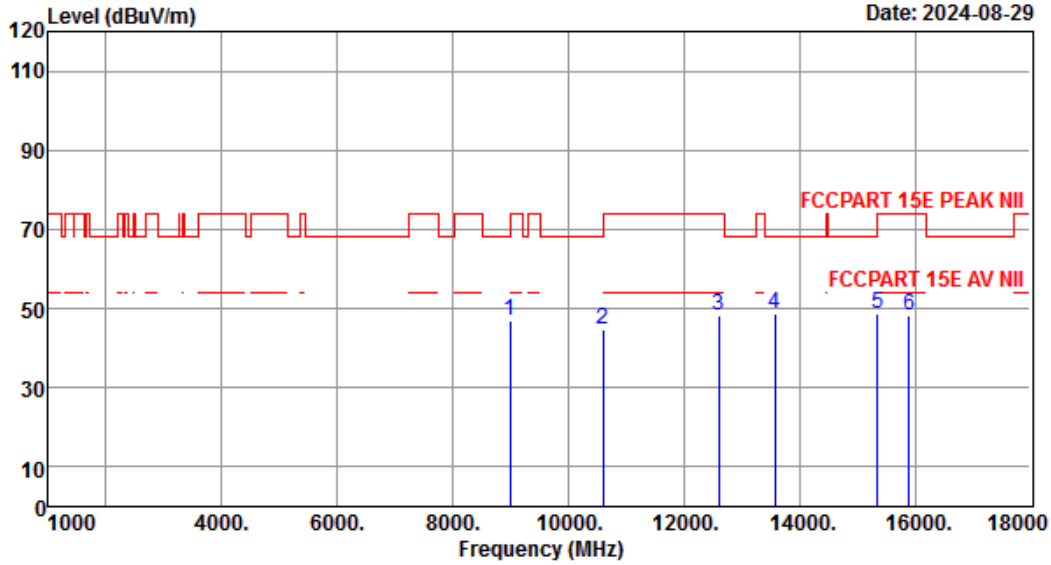
Data: 147 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 147
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5300MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	8990.00	37.99	7.77	43.41	44.81	47.16	68.20	21.04	Peak
2	10600.00	38.62	8.07	43.31	41.40	44.78	68.20	23.42	Peak
3	12611.00	39.35	9.09	41.35	41.09	48.18	74.00	25.82	Peak
4	13580.00	39.87	9.55	40.80	40.19	48.81	68.20	19.39	Peak
5	15348.00	38.91	10.38	43.58	42.88	48.59	68.20	19.61	Peak
6	15900.00	37.97	10.60	44.02	43.84	48.39	74.00	25.61	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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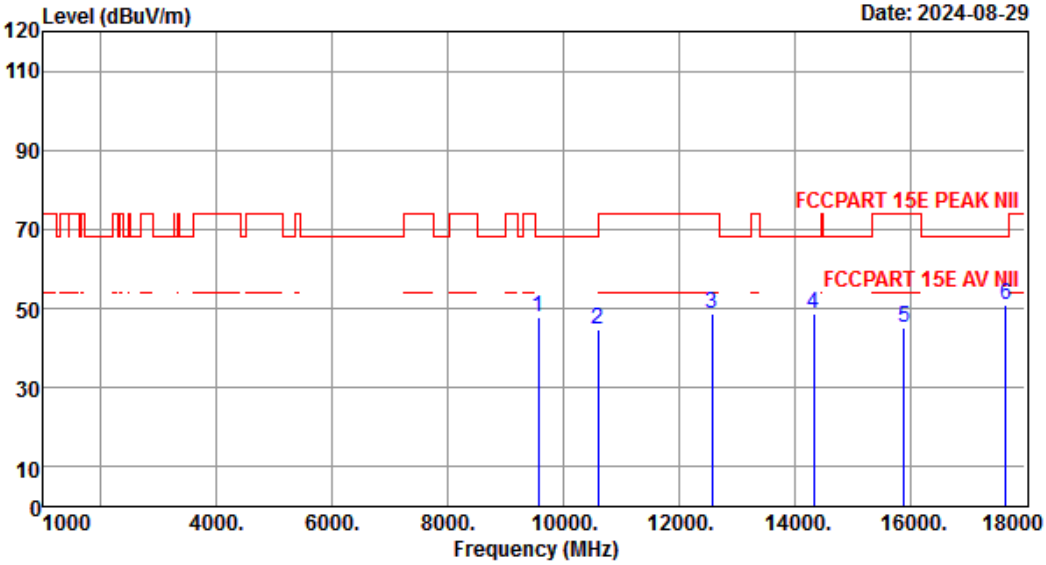
Data: 148 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 148
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5300MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	9568.00	38.11	7.77	43.63	45.75	48.00	68.20	20.20	Peak
2	10600.00	38.62	8.07	43.31	41.41	44.79	68.20	23.41	Peak
3	12577.00	39.32	9.08	41.39	41.52	48.53	74.00	25.47	Peak
4	14328.00	39.84	9.92	41.61	40.65	48.80	68.20	19.40	Peak
5	15900.00	37.97	10.60	44.02	40.69	45.24	74.00	28.76	Peak
6	17660.00	40.48	12.15	43.21	41.43	50.85	68.20	17.35	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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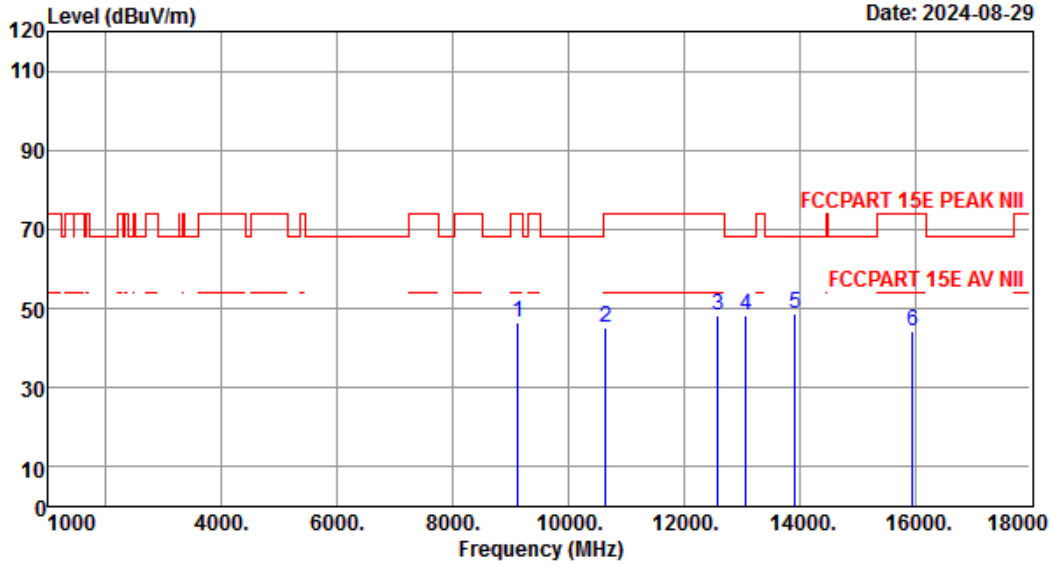
Data: 149 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 149
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5320MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	9126.00	38.03	7.78	43.45	44.35	46.71	74.00	27.29	Peak
2	10640.00	38.65	8.09	43.28	41.84	45.30	74.00	28.70	Peak
3	12594.00	39.33	9.09	41.37	41.17	48.22	74.00	25.78	Peak
4	13070.00	39.72	9.29	40.80	40.07	48.28	68.20	19.92	Peak
5	13920.00	39.98	9.73	40.80	39.72	48.63	68.20	19.57	Peak
6	15960.00	37.87	10.63	44.07	40.05	44.48	74.00	29.52	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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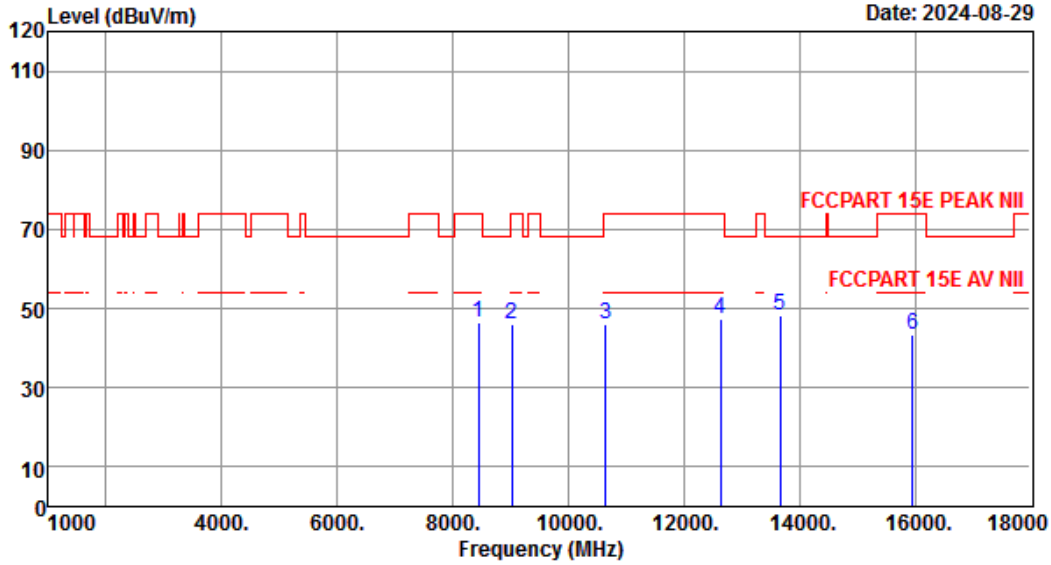
Data: 150 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 150
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5320MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	8446.00	37.34	7.30	43.74	45.43	46.33	74.00	27.67	Peak
2	9024.00	38.00	7.78	43.41	43.86	46.23	74.00	27.77	Peak
3	10640.00	38.65	8.09	43.28	42.69	46.15	74.00	27.85	Peak
4	12628.00	39.37	9.10	41.32	40.38	47.53	74.00	26.47	Peak
5	13665.00	39.90	9.60	40.80	39.36	48.06	68.20	20.14	Peak
6	15960.00	37.87	10.63	44.07	38.88	43.31	74.00	30.69	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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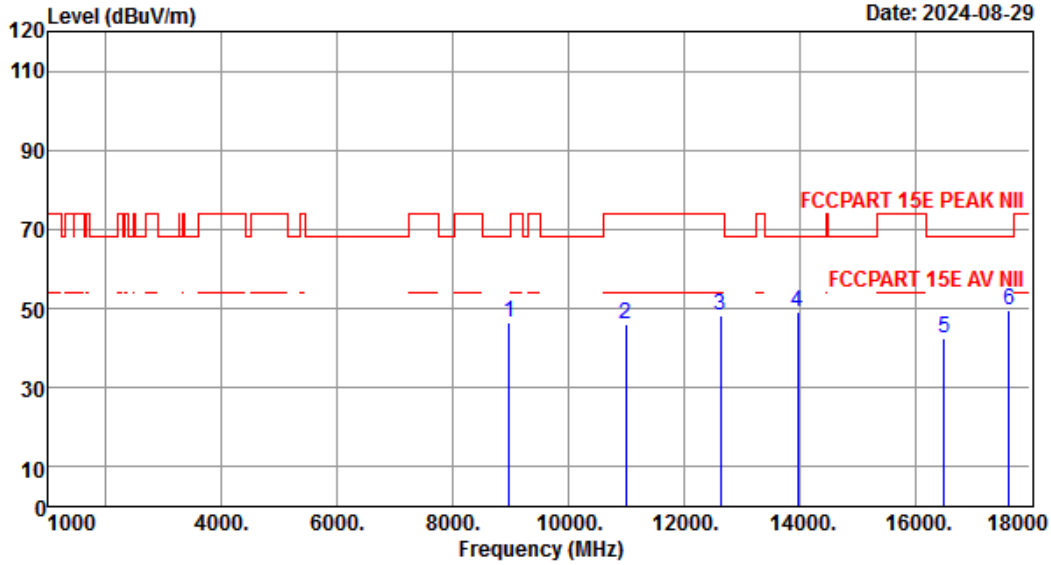
Data: 151 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 151
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5500MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	8973.00	37.97	7.75	43.42	44.01	46.31	68.20	21.89	Peak
2	11000.00	38.90	8.26	43.00	41.82	45.98	74.00	28.02	Peak
3	12628.00	39.37	9.10	41.32	40.90	48.05	74.00	25.95	Peak
4	13971.00	39.99	9.75	40.80	40.12	49.06	68.20	19.14	Peak
5	16500.00	38.05	11.11	44.15	37.47	42.48	68.20	25.72	Peak
6	17626.00	40.37	12.12	43.26	40.22	49.45	68.20	18.75	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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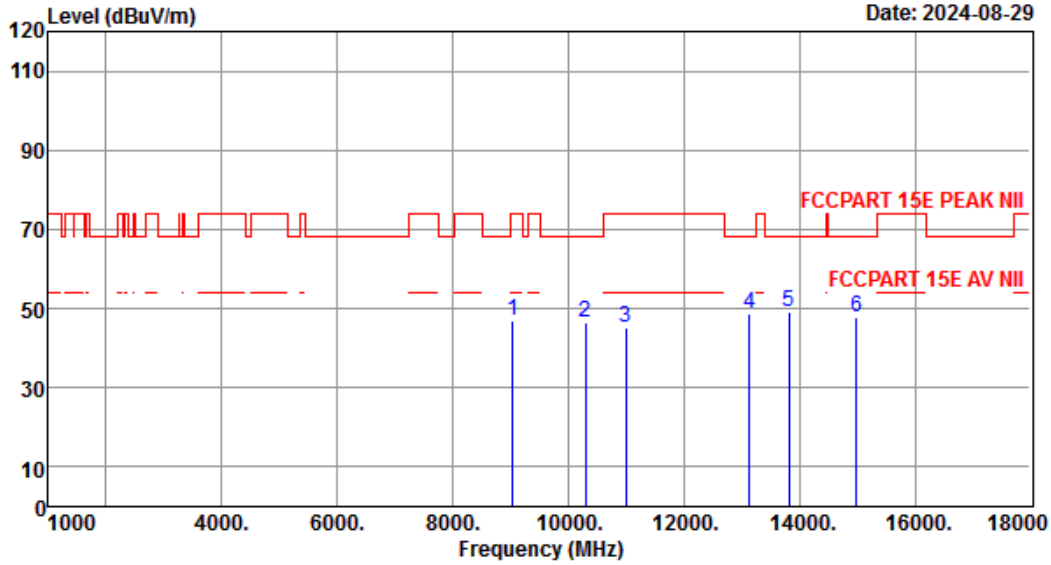
Data: 152 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 152
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5500MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	9041.00	38.01	7.78	43.41	44.72	47.10	74.00	26.90	Peak
2	10299.00	38.41	7.92	43.56	43.63	46.40	68.20	21.80	Peak
3	11000.00	38.90	8.26	43.00	41.08	45.24	74.00	28.76	Peak
4	13138.00	39.74	9.33	40.80	40.26	48.53	68.20	19.67	Peak
5	13818.00	39.95	9.67	40.80	40.31	49.13	68.20	19.07	Peak
6	14991.00	39.50	10.24	43.26	41.42	47.90	68.20	20.30	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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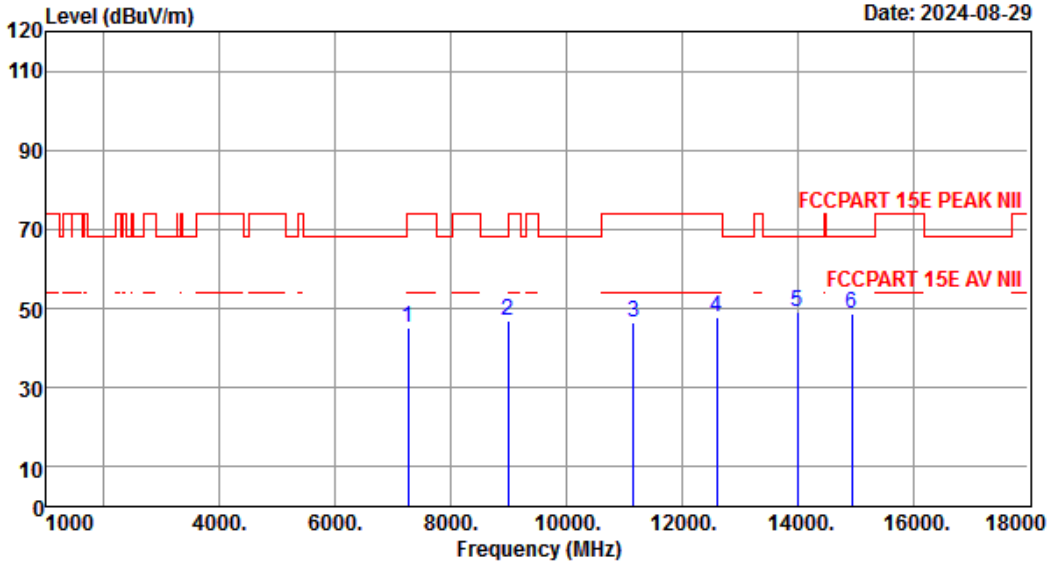
Data: 153 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 153
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5580MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	7256.00	36.20	6.68	44.07	46.29	45.10	74.00	28.90	Peak
2	8990.00	37.99	7.77	43.41	44.61	46.96	68.20	21.24	Peak
3	11166.00	38.88	8.36	42.86	42.12	46.50	74.00	27.50	Peak
4	12611.00	39.35	9.09	41.35	40.73	47.82	74.00	26.18	Peak
5	14005.00	40.00	9.77	40.80	40.03	49.00	68.20	19.20	Peak
6	14940.00	39.53	10.22	43.13	42.12	48.74	68.20	19.46	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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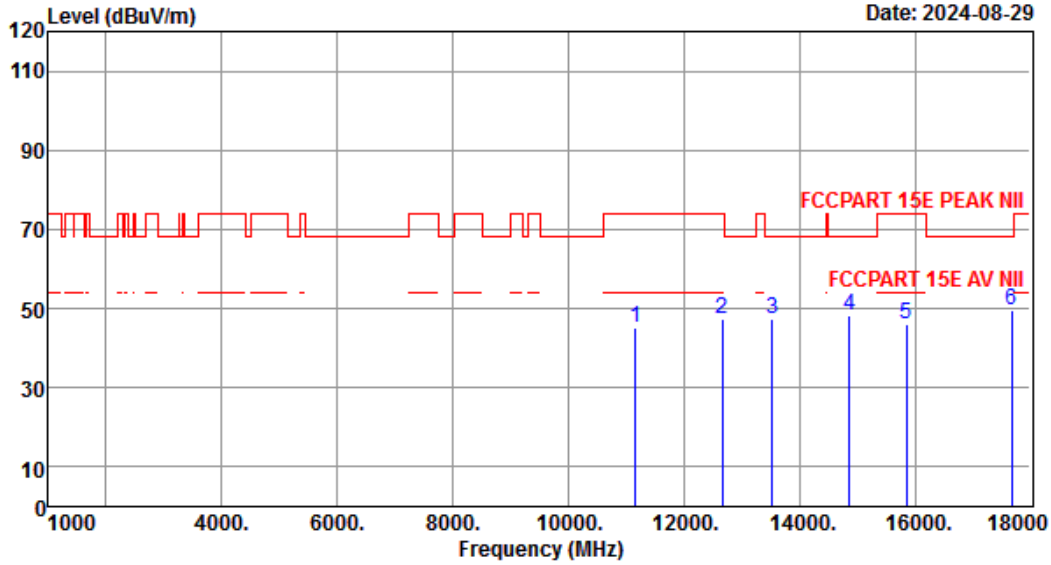
Data: 154 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 154
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5580MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	11160.00	38.88	8.36	42.86	40.92	45.30	74.00	28.70	Peak
2	12662.00	39.40	9.11	41.27	39.95	47.19	74.00	26.81	Peak
3	13529.00	39.86	9.53	40.80	38.93	47.52	68.20	20.68	Peak
4	14872.00	39.56	10.18	42.96	41.33	48.11	68.20	20.09	Peak
5	15858.00	38.04	10.59	43.99	41.29	45.93	74.00	28.07	Peak
6	17677.00	40.53	12.17	43.18	39.87	49.39	68.20	18.81	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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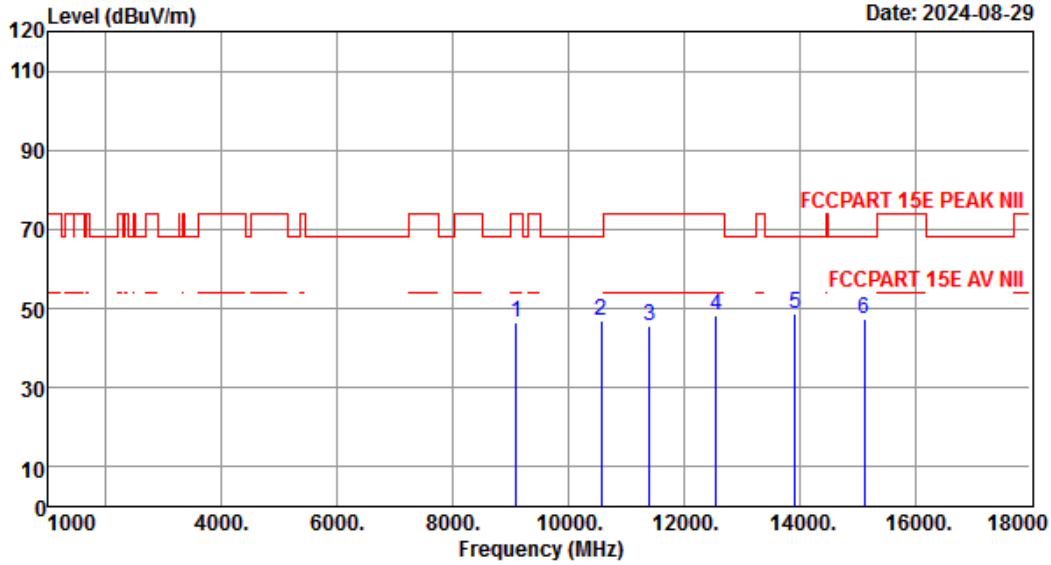
Data: 155 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 155
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5700MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	9092.00	38.02	7.78	43.43	44.29	46.66	74.00	27.34	Peak
2	10571.00	38.60	8.05	43.34	43.67	46.98	68.20	21.22	Peak
3	11400.00	38.86	8.49	42.67	40.85	45.53	74.00	28.47	Peak
4	12560.00	39.30	9.07	41.42	41.13	48.08	74.00	25.92	Peak
5	13920.00	39.98	9.73	40.80	39.72	48.63	68.20	19.57	Peak
6	15127.00	39.28	10.30	43.40	41.35	47.53	68.20	20.67	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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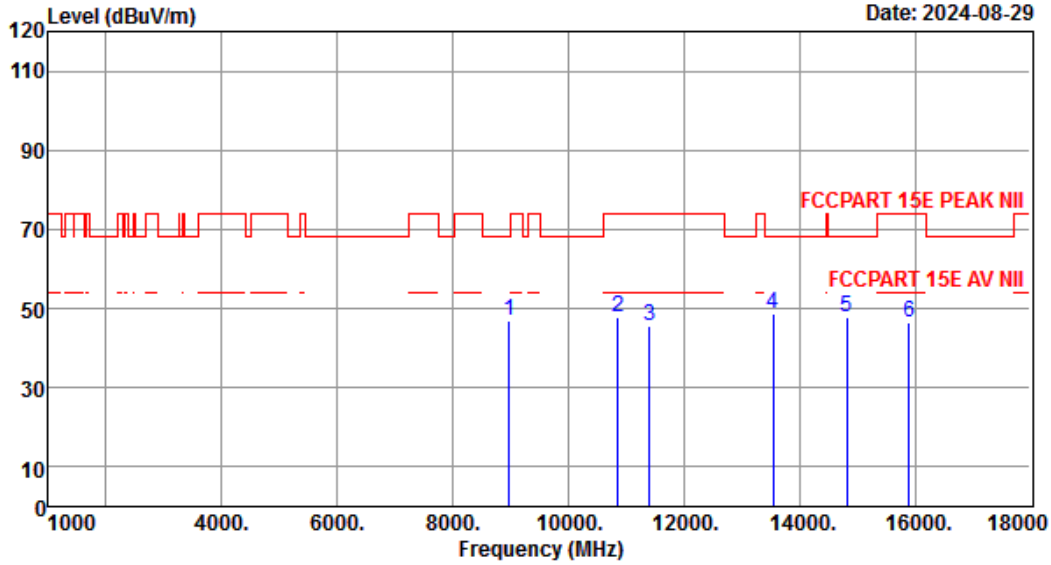
Data: 156 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 156
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5700MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	8973.00	37.97	7.75	43.42	44.66	46.96	68.20	21.24	Peak
2	10860.00	38.80	8.19	43.11	43.78	47.66	74.00	26.34	Peak
3	11400.00	38.86	8.49	42.67	41.05	45.73	74.00	28.27	Peak
4	13546.00	39.86	9.54	40.80	39.97	48.57	68.20	19.63	Peak
5	14821.00	39.59	10.16	42.83	40.76	47.68	68.20	20.52	Peak
6	15892.00	37.98	10.60	44.02	41.86	46.42	74.00	27.58	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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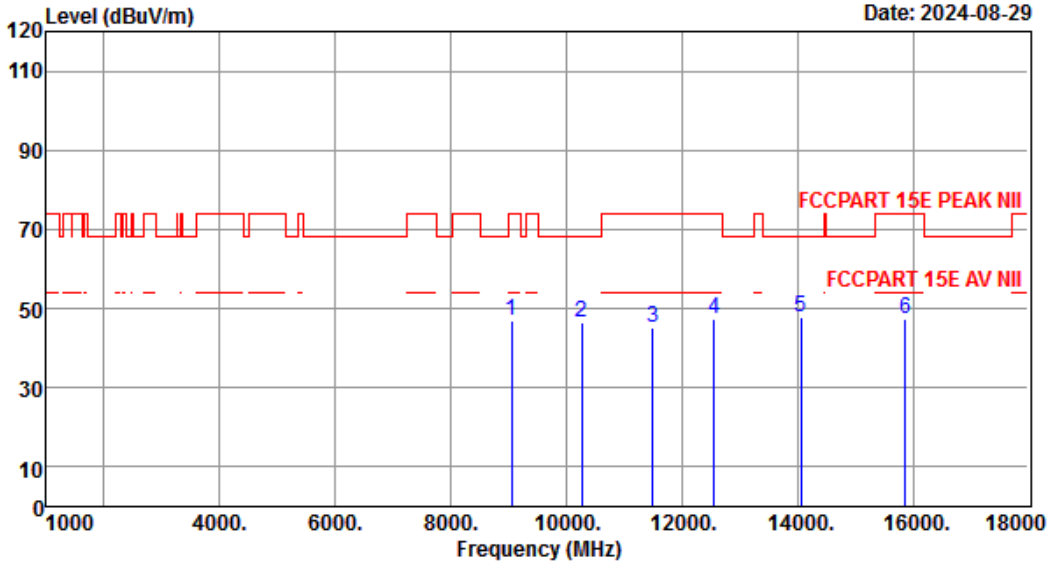
Data: 157 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 157
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5745MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	9058.00	38.01	7.78	43.42	44.58	46.95	74.00	27.05	Peak
2	10265.00	38.39	7.90	43.58	43.58	46.29	68.20	21.91	Peak
3	11490.00	38.85	8.54	42.61	40.35	45.13	74.00	28.87	Peak
4	12560.00	39.30	9.07	41.42	40.58	47.53	74.00	26.47	Peak
5	14056.00	39.97	9.79	40.93	39.09	47.92	68.20	20.28	Peak
6	15875.00	38.01	10.59	44.00	42.83	47.43	74.00	26.57	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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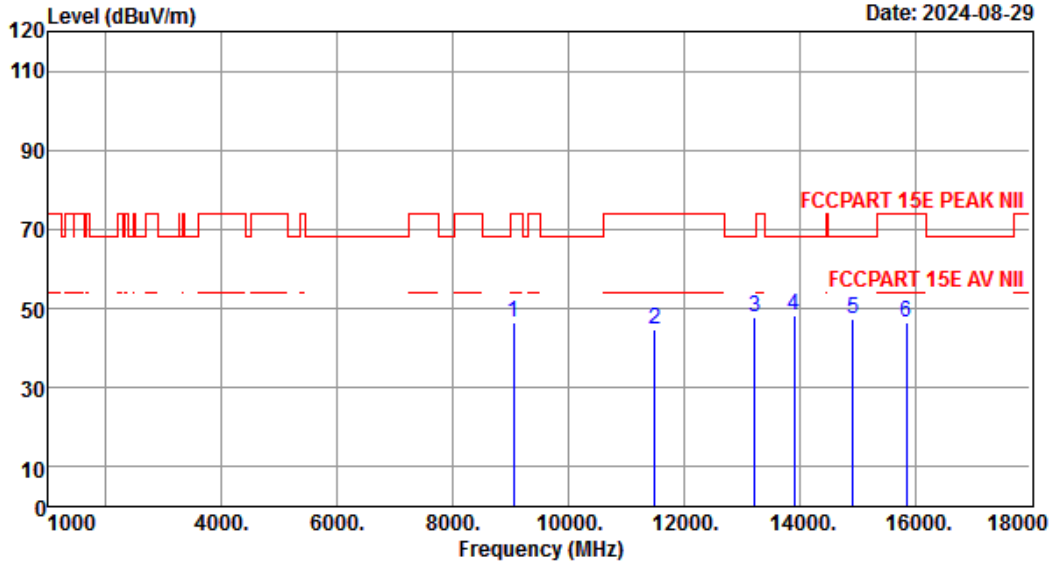
Data: 158 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 158
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5745MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	9058.00	38.01	7.78	43.42	44.07	46.44	74.00	27.56	Peak
2	11490.00	38.85	8.54	42.61	39.85	44.63	74.00	29.37	Peak
3	13223.00	39.77	9.37	40.80	39.52	47.86	68.20	20.34	Peak
4	13903.00	39.97	9.72	40.80	39.45	48.34	68.20	19.86	Peak
5	14923.00	39.54	10.21	43.09	40.83	47.49	68.20	20.71	Peak
6	15858.00	38.04	10.59	43.99	41.66	46.30	74.00	27.70	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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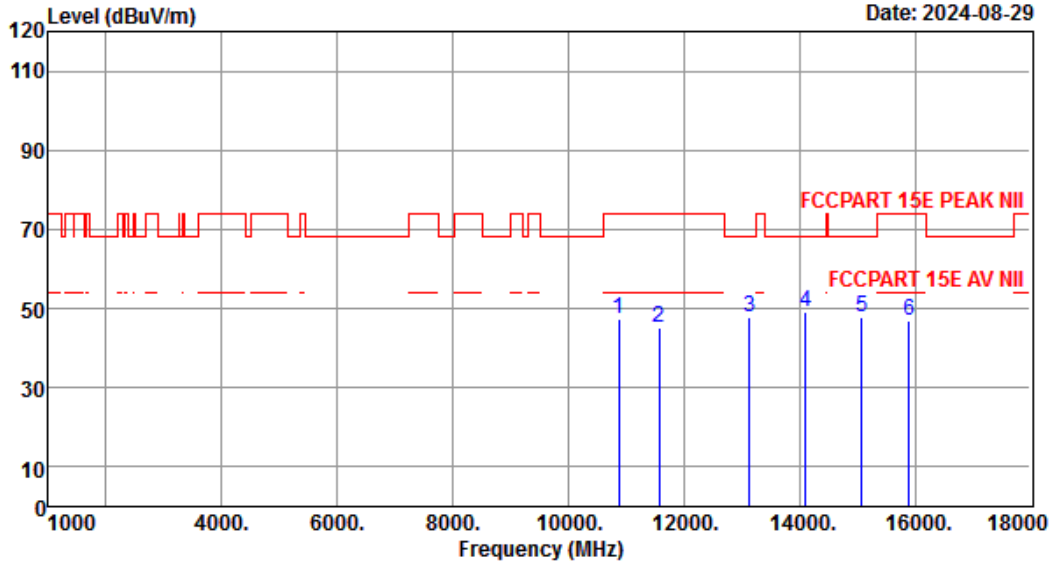
Data: 159 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 159
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5785MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	10877.00	38.81	8.20	43.09	43.28	47.20	74.00	26.80	Peak
2	11570.00	38.84	8.59	42.54	40.38	45.27	74.00	28.73	Peak
3	13138.00	39.74	9.33	40.80	39.52	47.79	68.20	20.41	Peak
4	14107.00	39.95	9.82	41.05	40.23	48.95	68.20	19.25	Peak
5	15076.00	39.37	10.28	43.36	41.72	48.01	68.20	20.19	Peak
6	15892.00	37.98	10.60	44.02	42.39	46.95	74.00	27.05	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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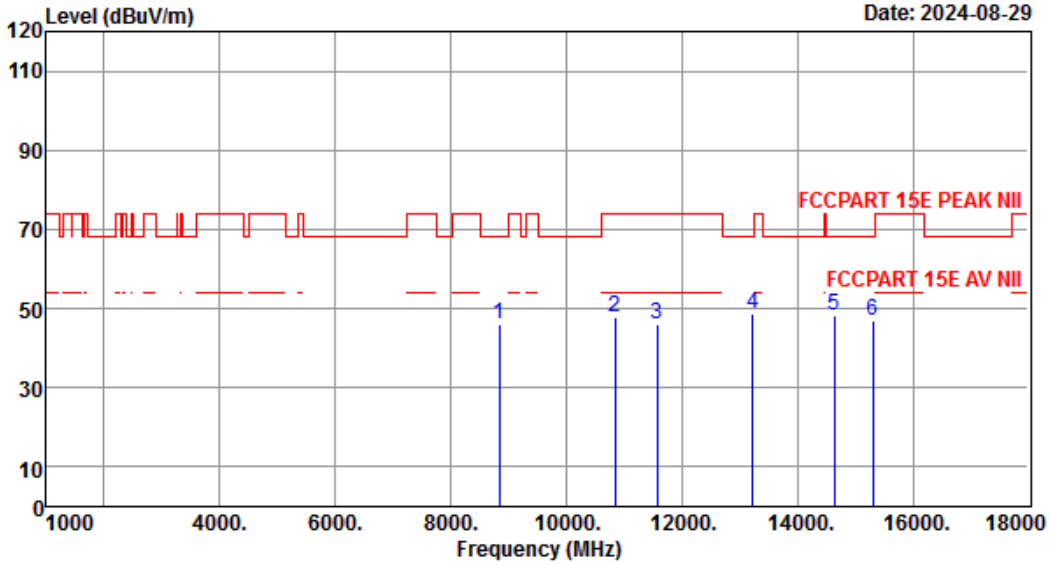
Data: 160 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 160
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5785MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	8837.00	37.80	7.63	43.50	44.24	46.17	68.20	22.03	Peak
2	10843.00	38.79	8.19	43.12	43.78	47.64	74.00	26.36	Peak
3	11574.00	38.84	8.59	42.54	41.35	46.24	74.00	27.76	Peak
4	13223.00	39.77	9.37	40.80	40.43	48.77	68.20	19.43	Peak
5	14634.00	39.68	10.07	42.37	40.68	48.06	68.20	20.14	Peak
6	15314.00	38.97	10.37	43.55	41.28	47.07	68.20	21.13	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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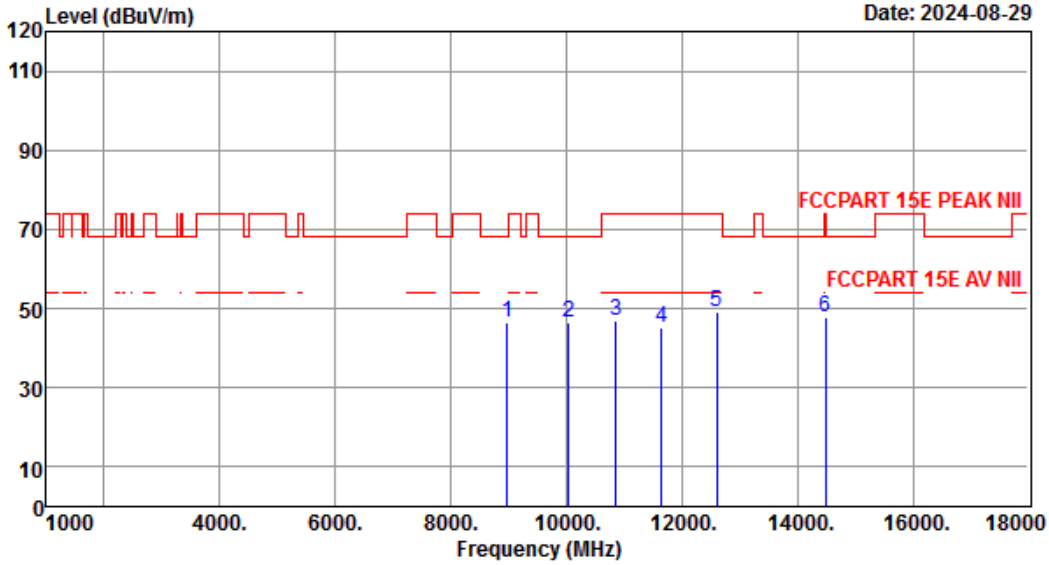
Data: 161 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 161
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5825MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	8973.00	37.97	7.75	43.42	43.98	46.28	68.20	21.92	Peak
2	10044.00	38.23	7.79	43.76	44.29	46.55	68.20	21.65	Peak
3	10860.00	38.80	8.19	43.11	43.25	47.13	74.00	26.87	Peak
4	11650.00	38.83	8.63	42.48	40.24	45.22	74.00	28.78	Peak
5	12611.00	39.35	9.09	41.35	42.01	49.10	74.00	24.90	Peak
6	14481.00	39.76	10.00	41.99	40.19	47.96	74.00	26.04	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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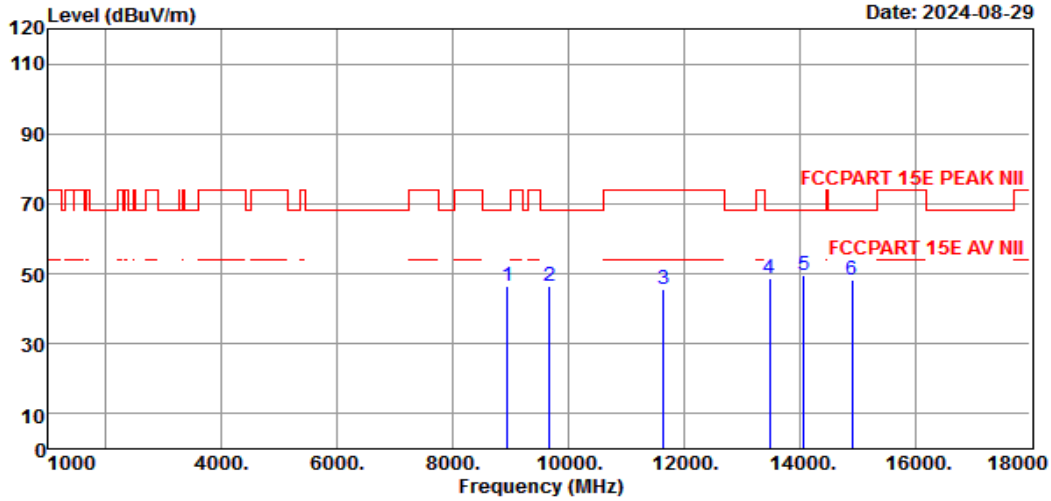
Data: 162 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 162
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5825MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	8939.00	37.93	7.72	43.44	44.24	46.45	68.20	21.75	Peak
2	9670.00	38.13	7.77	43.67	44.15	46.38	68.20	21.82	Peak
3	11642.00	38.84	8.63	42.48	40.71	45.70	74.00	28.30	Peak
4	13478.00	39.84	9.50	40.80	40.21	48.75	68.20	19.45	Peak
5	14073.00	39.96	9.80	40.97	40.91	49.70	68.20	18.50	Peak
6	14906.00	39.55	10.20	43.05	41.52	48.22	68.20	19.98	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

Note:

1. The amplitude of 18GHz to 40GHz spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.
2. All test mode had been pre-test, only Low/Middle/High Channel of the worst case modulation mode was reported

Band Edge

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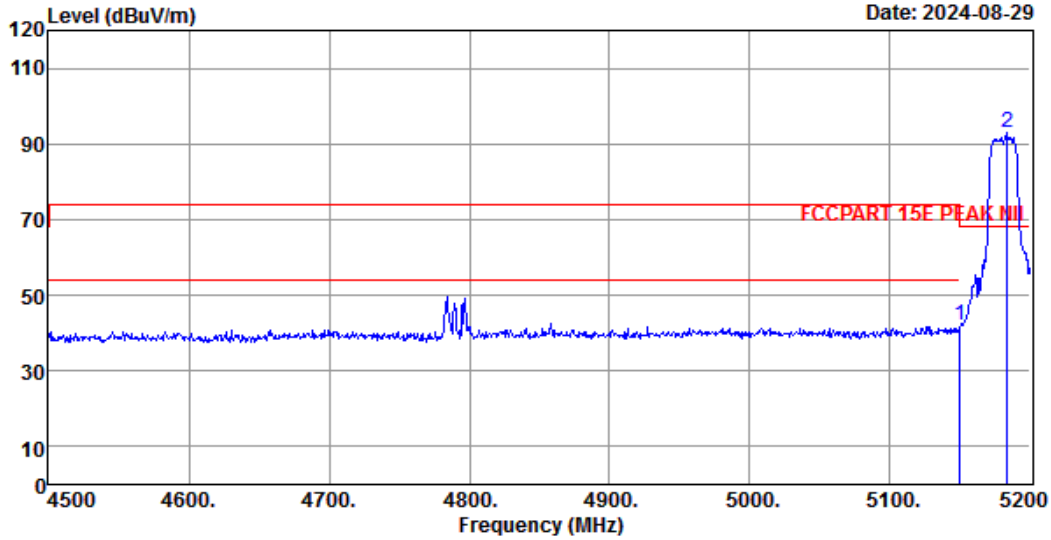
Data: 175 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 175
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5180MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	32.97	5.52	44.27	47.90	42.12	68.20	26.08	Peak
2	5183.20	33.00	5.55	44.26	98.59	92.88	68.20	-24.68	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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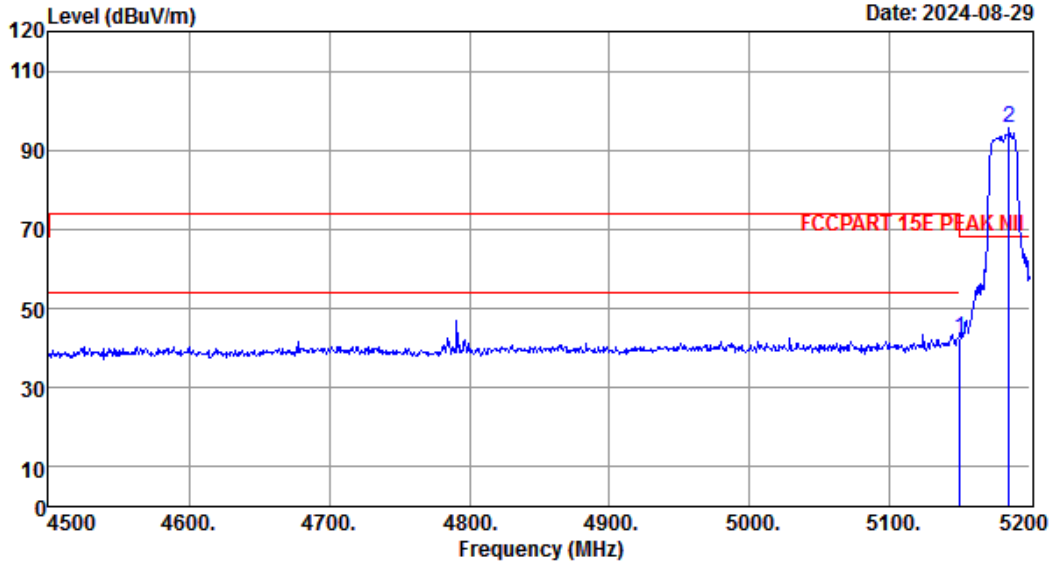
Data: 176 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 176
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5180MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5150.00	32.97	5.52	44.27	48.27	42.49	68.20	25.71	Peak
2	5184.60	33.00	5.55	44.26	101.16	95.45	68.20	-27.25	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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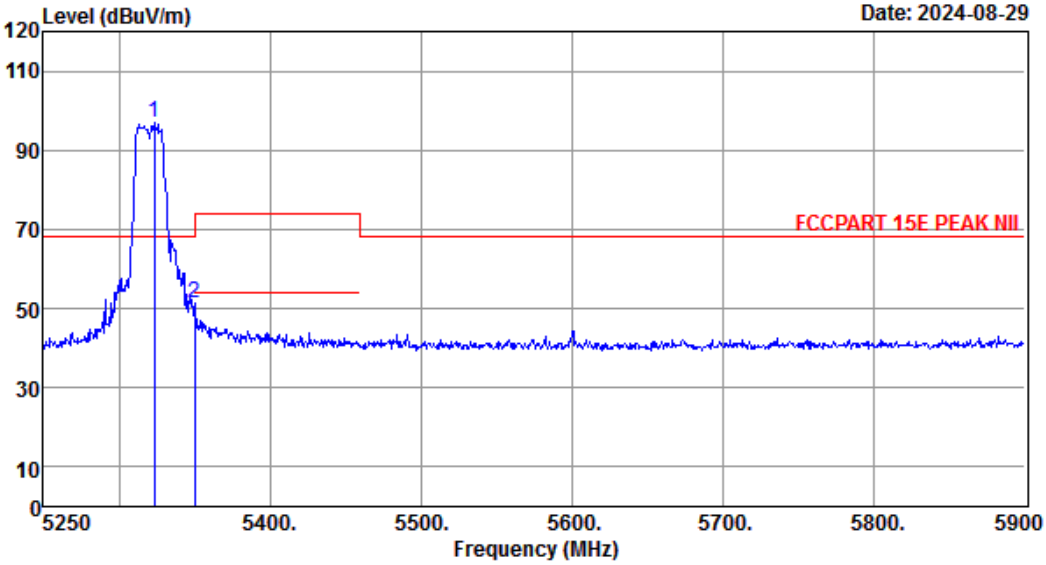
Data: 177 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 177
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5320MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5323.45	33.16	5.65	44.24	102.26	96.83	68.20	-28.63	Peak
2	5350.00	33.19	5.68	44.23	56.70	51.34	68.20	16.86	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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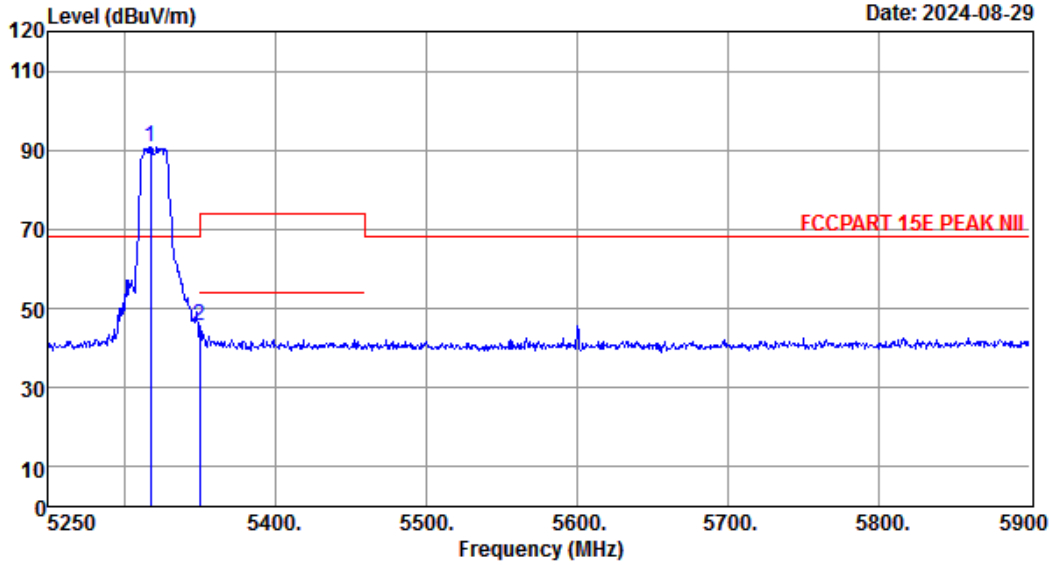
Data: 178 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 178
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5320MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5317.60	33.15	5.65	44.24	96.16	90.72	68.20	-22.52	Peak
2	5350.00	33.19	5.68	44.23	50.84	45.48	68.20	22.72	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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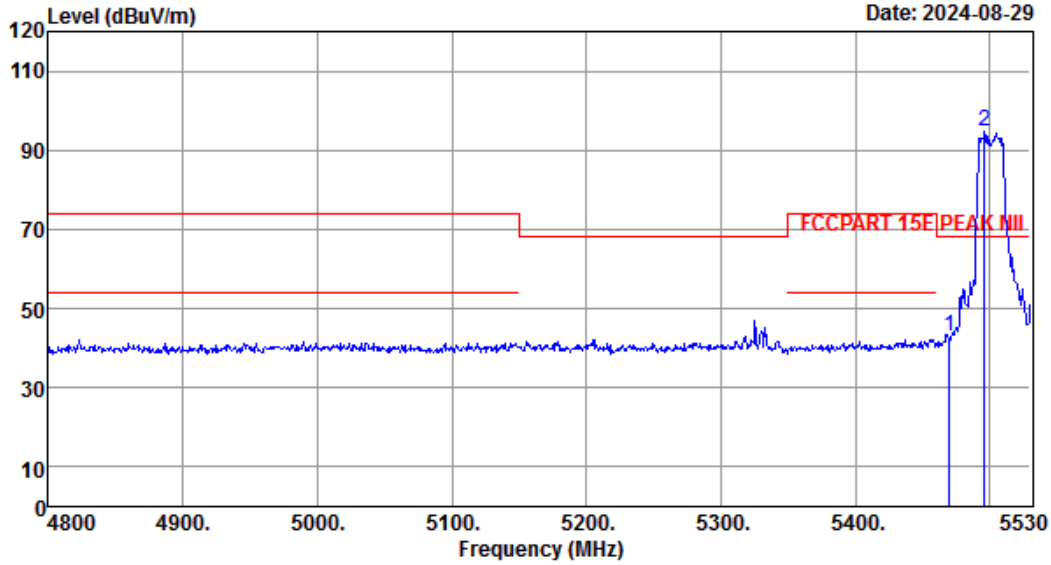
Data: 179 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 179
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5500MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5470.00	33.32	5.77	44.21	48.06	42.94	68.20	25.26	Peak
2	5495.69	33.35	5.78	44.20	99.77	94.70	68.20	-26.50	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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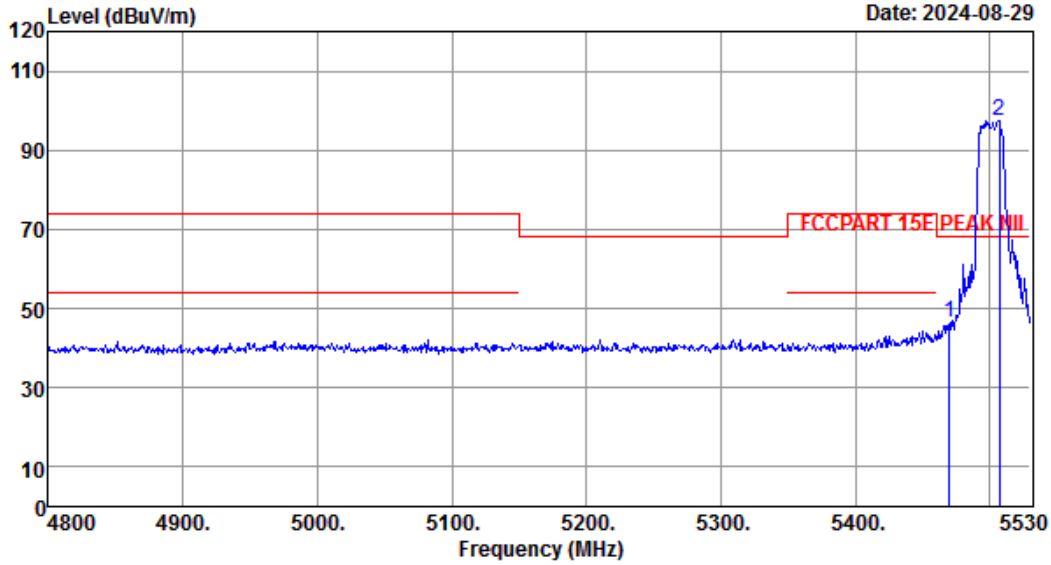
Data: 180 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 180
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5500MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5470.00	33.32	5.77	44.21	51.42	46.30	68.20	21.90	Peak
2	5506.64	33.36	5.79	44.20	102.51	97.46	68.20	-29.26	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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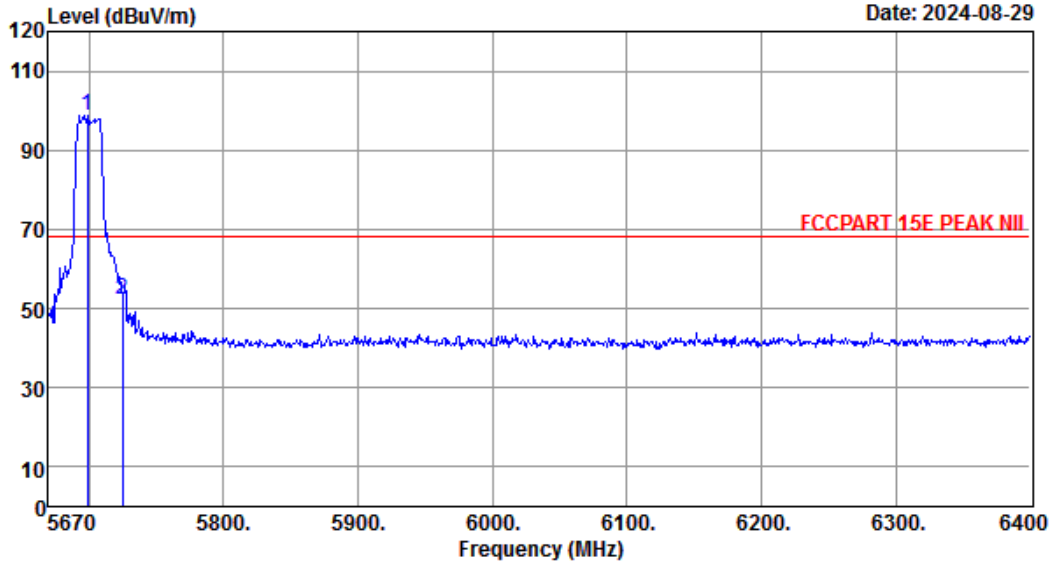
Data: 181 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 181
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : HORIZONTAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5700MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5699.20	33.57	5.93	44.16	103.23	98.57	68.20	-30.37	Peak
2	5725.00	33.60	5.96	44.15	56.69	52.10	68.20	16.10	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

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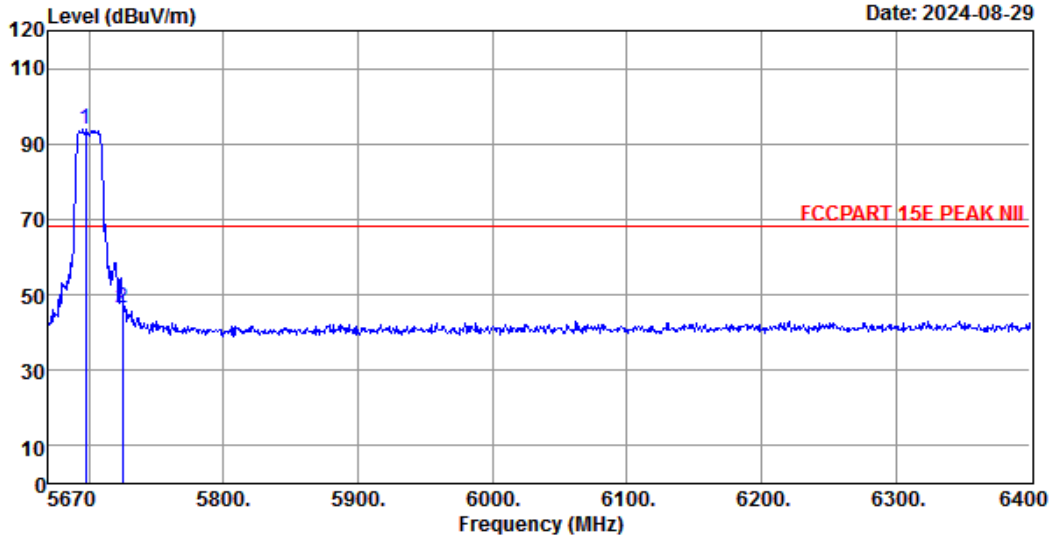
Data: 182 File: \\EMC-966-1\test data\2024\RF\T\Ting Feng\Cl-Uniti 102 FCC.EM6 (202)



Site no. : 1# 966 Chamber Data no. : 182
Dis. / Ant. : 3m BBHA9120D-2667 Ant. pol. : VERTICAL
Limit : FCCPART 15E PEAK NII
Env. / Ins. : Temp:19.5℃;Humi:51%;Press:101.52kPa
Engineer : Aron
EUT : Cl-Uniti 102
Power : AC 120V/60Hz
M/N : Cl-Uniti 102
Test Mode : IEEE 802.11n HT20 TX 5700MHz

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	5697.74	33.57	5.93	44.16	98.67	94.01	68.20	-25.81	Peak
2	5725.00	33.60	5.96	44.15	51.13	46.54	68.20	21.66	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. Margin= Limit - Emission Level.
3. The emission levels that are 20dB below the official limit are not reported.

18000MHz-40000MHz

Pass

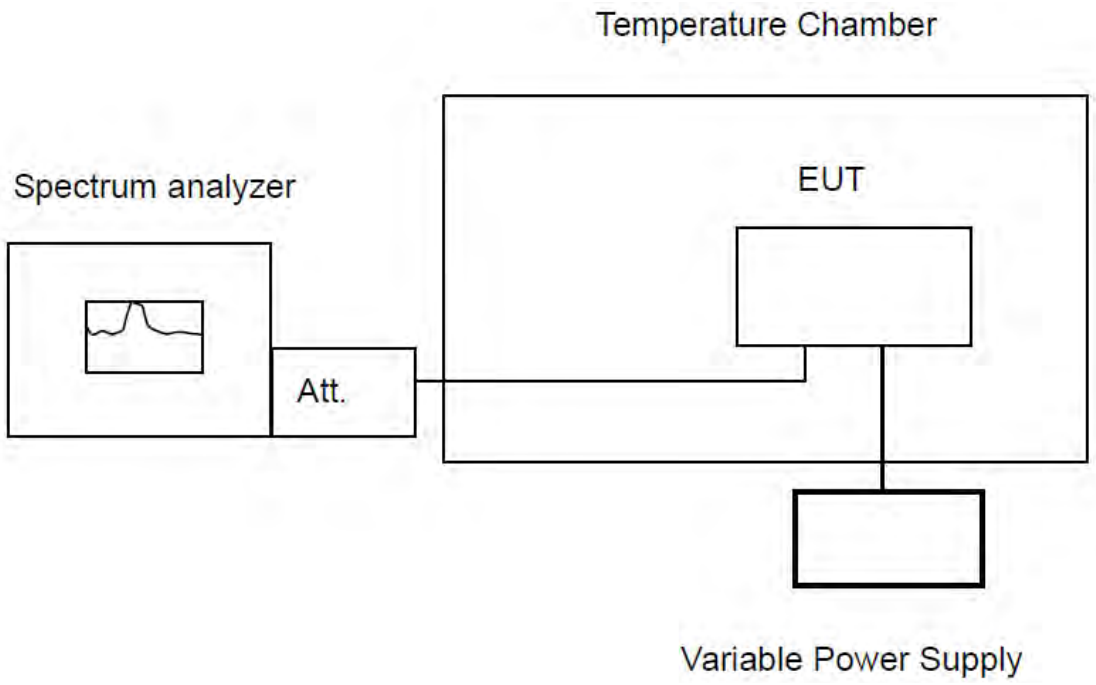
Note: The amplitude of spurious emission that is attenuated by more than 20dB below the permissible
limit has no need to be reported.

7.FREQUENCY STABILITY

7.1.Limit

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 operational description.

7.2.Test Setup



7.3.Spectrum Analyzer Setting

Spectrum Parameters	Setting
RBW	10KHz
VBW	10KHz
Span	200KHz
Sweep Time	Auto
Detector	PEAK
Trace Mode	Max Hold

7.4.Test Procedure

For measurement frequency stability under temperature variation :

a. Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT.
b. Turn the EUT OFF and place it inside the environmental temperature chamber.
c. Connect EUT antenna terminal to the spectrum analyzer with RF cable.
d. Spectrum analyzer setting parameters in accordance with section 7.3.
e. Set the temperature control on the chamber to the Specified temperature and allow the oscillator heater and the chamber temperature to stabilize.
f. Turn the EUT ON with the rated voltage, and the EUT transmit continuously with maximum output power.
g. Record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized.
h. Repeat step d through step f to measured the temperature form -20℃ to +50℃ in 10℃ steps.

For frequency stability under voltage variation:

a. Supply the EUT with a nominal ac voltage or install a new or fully charged battery in the EUT.
b. Turn the EUT OFF and place it inside the environmental temperature chamber.
c. Connect EUT antenna terminal to the spectrum analyzer with RF cable.
d. Spectrum analyzer setting parameters in accordance with section 7.3.
e. Unless otherwise specified, set the temperature control on the chamber to the ambient room temperature (+15℃ to +25℃) and allow the oscillator heater and the chamber temperature to stabilize.
f. Turn the EUT ON with the rated voltage, and the EUT transmit continuously with maximum output power.
g. Record the operating frequency.
h. Repeat step d through step f to measured the varied from 85% to 115% of the rated voltage.

7.5.Test Result

Refer to section 10: Appendix G

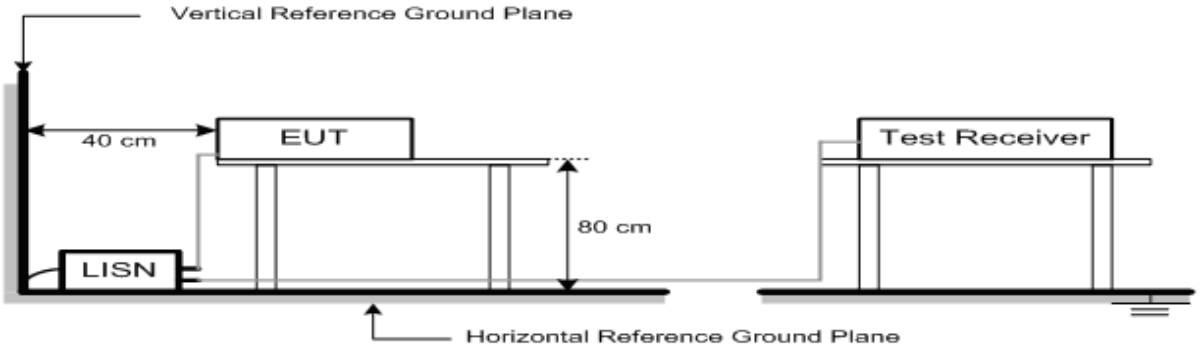
8.AC POWER LINE CONDUCTED EMISSIONS

8.1.Limit

Frequency			Maximum RF Line Voltage	
			Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz	~	500kHz	66 ~ 56*	56 ~ 46*
500kHz	~	5MHz	56	46
5MHz	~	30MHz	60	50

Notes:
1. * Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

8.2.Test Setup



8.3.Spectrum Analyzer Setting

Spectrum Parameters	Setting
RBW	9KHz
VBW	9KHz
Start frequency	150KHz
Stop frequency	30MHz
Sweep Time	Auto
Detector	QP/AVG
Trace Mode	Max Hold

8.4.Test Procedure

a. The EUT was placed on a non-metallic table, 80cm above the ground plane.
b. The EUT Power connected to the power mains through a line impedance stabilization network.
c. Provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs).
d. Set the EUT transmit continuously with maximum output power.
e. Spectrum analyzer setting parameters in accordance with section 8.3.
f. The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Test.
g. Record the results in the test report.

8.5.Test Result

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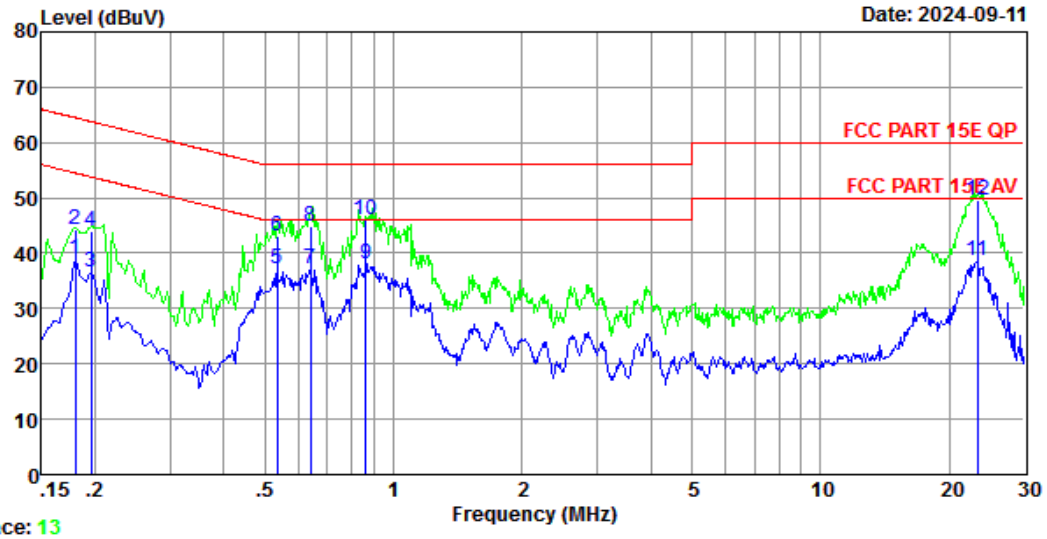
Data: 14 File: \\EMC-CE-2\Test Data\2024\RF\T\Ting Feng\CI-Uniti 102.EM6 (42)



Trace: 13

Site no : 2#CE Shield Room Data no. : 14
Env. / Ins. : Temp:24.8℃ Humi:55% Press:101.50kPa LINE Phase : NEUTRAL
Limit : FCC PART 15E QP
Engineer : Clare
EUT : CI-Uniti 102
Power : AC 120V/60Hz
M/N : CI-Uniti 102
Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (db)	Cable Loss (db)	Reading dBuV)	Emission Level (dBuv)	Limits (dBuv)	Margin (dB)	Remark
1	0.18	9.57	9.91	19.60	39.08	54.50	15.42	Average
2	0.18	9.57	9.91	24.69	44.17	64.50	20.33	QP
3	0.20	9.57	9.91	17.22	36.70	53.80	17.10	Average
4	0.20	9.57	9.91	24.58	44.06	63.80	19.74	QP
5	0.53	9.56	9.88	17.82	37.26	46.00	8.74	Average
6	0.53	9.56	9.88	23.64	43.08	56.00	12.92	QP
7	0.64	9.55	9.88	17.74	37.17	46.00	8.83	Average
8	0.64	9.55	9.88	25.59	45.02	56.00	10.98	QP
9	0.86	9.55	9.89	18.64	38.08	46.00	7.92	Average
10	0.86	9.55	9.89	26.54	45.98	56.00	10.02	QP
11	23.26	9.89	10.31	18.48	38.68	50.00	11.32	Average
12	23.26	9.89	10.31	29.51	49.71	60.00	10.29	QP

Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.
2. Margin= Limit - Emission Level.
3. If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

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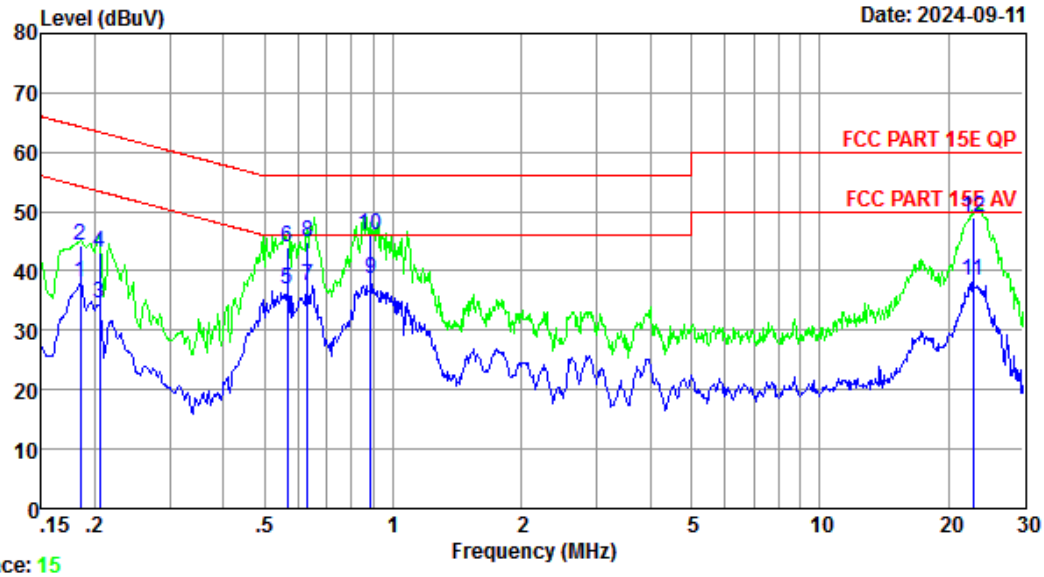
Data: 16 File: \\EMC-CE-2\Test Data\2024\RF\T\Ting Feng\CI-Uniti 102.EM6 (42)



Trace: 15

Site no : 2#CE Shield Room Data no. : 16
Env. / Ins. : Temp:24.8℃ Humi:55% Press:101.50kPa LINE Phase : LINE
Limit : FCC PART 15E QP
Engineer : Clare
EUT : CI-Uniti 102
Power : AC 120V/60Hz
M/N : CI-Uniti 102
Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (db)	Cable Loss (db)	Reading dBuV)	Emission Level (dBuv)	Limits (dBuv)	Margin (dB)	Remark
1	0.19	9.61	9.91	18.50	38.02	54.24	16.22	Average
2	0.19	9.61	9.91	24.68	44.20	64.24	20.04	QP
3	0.21	9.60	9.91	15.10	34.61	53.40	18.79	Average
4	0.21	9.60	9.91	23.46	42.97	63.40	20.43	QP
5	0.56	9.54	9.88	17.36	36.78	46.00	9.22	Average
6	0.56	9.54	9.88	24.67	44.09	56.00	11.91	QP
7	0.63	9.55	9.88	18.17	37.60	46.00	8.40	Average
8	0.63	9.55	9.88	25.52	44.95	56.00	11.05	QP
9	0.88	9.54	9.89	19.10	38.53	46.00	7.47	Average
10	0.88	9.54	9.89	26.56	45.99	56.00	10.01	QP
11	22.90	9.79	10.30	18.34	38.43	50.00	11.57	Average
12	22.90	9.79	10.30	28.79	48.88	60.00	11.12	QP

Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.
2. Margin= Limit - Emission Level.
3. If the average limit is met when useing a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

9.ANTENNA REQUIREMENTS

9.1.Limit

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

9.2.Test Result

The antennas used for this product is internal antenna ,so compliance with antenna requirements. (Please refer to the EUT photo for details)

10.APPENDIX

Appendix A1: Emission Bandwidth
Test Result

Test Mode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	21.280	5169.240	5190.520	---	---
11A	Ant2	5180	21.360	5169.160	5190.520	---	---
11A	Ant1	5200	21.400	5189.120	5210.520	---	---
11A	Ant2	5200	21.240	5189.320	5210.560	---	---
11A	Ant1	5240	21.280	5229.280	5250.560	---	---
11A	Ant2	5240	21.440	5229.200	5250.640	---	---
11A	Ant1	5260	21.440	5249.200	5270.640	---	---
11A	Ant2	5260	21.240	5249.440	5270.680	---	---
11A	Ant1	5300	21.280	5289.200	5310.480	---	---
11A	Ant2	5300	21.120	5289.320	5310.440	---	---
11A	Ant1	5320	21.080	5309.680	5330.760	---	---
11A	Ant2	5320	21.320	5309.160	5330.480	---	---
11A	Ant1	5500	22.040	5489.280	5511.320	---	---
11A	Ant2	5500	20.920	5489.560	5510.480	---	---
11A	Ant1	5580	21.160	5569.320	5590.480	---	---
11A	Ant2	5580	20.720	5569.640	5590.360	---	---
11A	Ant1	5700	21.240	5689.360	5710.600	---	---
11A	Ant2	5700	21.240	5689.400	5710.640	---	---
11A	Ant1	5745	21.360	5734.480	5755.840	---	---
11A	Ant2	5745	21.320	5734.280	5755.600	---	---
11A	Ant1	5785	21.280	5774.400	5795.680	---	---
11A	Ant2	5785	21.280	5774.280	5795.560	---	---
11A	Ant1	5825	21.280	5814.280	5835.560	---	---
11A	Ant2	5825	21.080	5814.520	5835.600	---	---
11AC20MIMO	Ant1	5180	21.160	5169.440	5190.600	---	---
11AC20MIMO	Ant2	5180	21.480	5169.160	5190.640	---	---
11AC20MIMO	Ant1	5200	21.280	5189.360	5210.640	---	---
11AC20MIMO	Ant2	5200	21.360	5189.280	5210.640	---	---
11AC20MIMO	Ant1	5240	21.400	5229.200	5250.600	---	---
11AC20MIMO	Ant2	5240	21.280	5229.280	5250.560	---	---
11AC20MIMO	Ant1	5260	21.520	5249.240	5270.760	---	---
11AC20MIMO	Ant1	5300	21.560	5289.280	5310.840	---	---
11AC20MIMO	Ant2	5300	21.360	5289.240	5310.600	---	---
11AC20MIMO	Ant1	5320	21.080	5309.440	5330.520	---	---
11AC20MIMO	Ant2	5260	21.680	5249.160	5270.840	---	---
11AC20MIMO	Ant2	5320	21.520	5309.240	5330.760	---	---
11AC20MIMO	Ant1	5500	21.120	5489.400	5510.520	---	---
11AC20MIMO	Ant2	5500	21.560	5489.200	5510.760	---	---
11AC20MIMO	Ant1	5580	21.360	5569.320	5590.680	---	---
11AC20MIMO	Ant2	5580	21.560	5569.280	5590.840	---	---
11AC20MIMO	Ant1	5700	21.280	5689.280	5710.560	---	---
11AC20MIMO	Ant2	5700	21.600	5689.080	5710.680	---	---
11AC20MIMO	Ant1	5745	21.360	5734.360	5755.720	---	---
11AC20MIMO	Ant2	5745	21.160	5734.440	5755.600	---	---
11AC20MIMO	Ant1	5785	21.160	5774.440	5795.600	---	---
11AC20MIMO	Ant2	5785	21.600	5774.120	5795.720	---	---
11AC20MIMO	Ant1	5825	21.280	5814.400	5835.680	---	---
11AC20MIMO	Ant2	5825	21.560	5814.160	5835.720	---	---
11AC40MIMO	Ant1	5190	40.080	5169.840	5209.920	---	---

11AC40MIMO	Ant2	5190	39.760	5170.160	5209.920	---	---
11AC40MIMO	Ant1	5230	40.320	5209.920	5250.240	---	---
11AC40MIMO	Ant2	5230	40.000	5210.000	5250.000	---	---
11AC40MIMO	Ant1	5270	39.920	5250.000	5289.920	---	---
11AC40MIMO	Ant2	5270	40.880	5249.040	5289.920	---	---
11AC40MIMO	Ant1	5310	40.320	5289.920	5330.240	---	---
11AC40MIMO	Ant2	5310	40.400	5289.680	5330.080	---	---
11AC40MIMO	Ant1	5510	40.160	5489.760	5529.920	---	---
11AC40MIMO	Ant1	5550	40.480	5529.520	5570.000	---	---
11AC40MIMO	Ant2	5510	39.680	5490.000	5529.680	---	---
11AC40MIMO	Ant2	5550	40.960	5529.520	5570.480	---	---
11AC40MIMO	Ant1	5670	40.000	5650.000	5690.000	---	---
11AC40MIMO	Ant2	5670	49.200	5641.920	5691.120	---	---
11AC40MIMO	Ant1	5755	39.680	5735.160	5774.840	---	---
11AC40MIMO	Ant2	5755	39.600	5735.080	5774.680	---	---
11AC40MIMO	Ant1	5795	39.840	5775.080	5814.920	---	---
11AC40MIMO	Ant2	5795	39.760	5775.000	5814.760	---	---
11AC80MIMO	Ant1	5210	81.760	5169.040	5250.800	---	---
11AC80MIMO	Ant2	5210	81.440	5169.520	5250.960	---	---
11AC80MIMO	Ant1	5290	82.080	5248.720	5330.800	---	---
11AC80MIMO	Ant1	5530	81.440	5489.360	5570.800	---	---
11AC80MIMO	Ant2	5290	81.600	5249.040	5330.640	---	---
11AC80MIMO	Ant2	5530	81.440	5489.200	5570.640	---	---
11AC80MIMO	Ant1	5610	81.600	5569.360	5650.960	---	---
11AC80MIMO	Ant2	5610	82.080	5568.880	5650.960	---	---
11AC80MIMO	Ant1	5775	81.440	5734.200	5815.640	---	---
11AC80MIMO	Ant2	5775	81.600	5734.200	5815.800	---	---
11AX20MIMO	Ant1	5180	21.000	5169.440	5190.440	---	---
11AX20MIMO	Ant2	5180	21.480	5169.120	5190.600	---	---
11AX20MIMO	Ant1	5200	20.960	5189.400	5210.360	---	---
11AX20MIMO	Ant2	5200	21.000	5189.520	5210.520	---	---
11AX20MIMO	Ant1	5240	20.920	5229.440	5250.360	---	---
11AX20MIMO	Ant2	5240	20.680	5229.680	5250.360	---	---
11AX20MIMO	Ant1	5260	21.040	5249.440	5270.480	---	---
11AX20MIMO	Ant2	5260	20.800	5249.640	5270.440	---	---
11AX20MIMO	Ant1	5300	21.720	5289.160	5310.880	---	---
11AX20MIMO	Ant2	5300	21.080	5289.440	5310.520	---	---
11AX20MIMO	Ant1	5320	21.280	5309.280	5330.560	---	---
11AX20MIMO	Ant2	5320	20.840	5309.800	5330.640	---	---
11AX20MIMO	Ant1	5500	20.680	5489.600	5510.280	---	---
11AX20MIMO	Ant2	5500	21.160	5489.560	5510.720	---	---
11AX20MIMO	Ant1	5580	21.200	5569.320	5590.520	---	---
11AX20MIMO	Ant2	5580	20.880	5569.560	5590.440	---	---
11AX20MIMO	Ant1	5700	20.920	5689.360	5710.280	---	---
11AX20MIMO	Ant2	5700	20.720	5689.680	5710.400	---	---
11AX20MIMO	Ant1	5745	20.840	5734.520	5755.360	---	---
11AX20MIMO	Ant2	5745	20.680	5734.680	5755.360	---	---
11AX20MIMO	Ant1	5785	20.880	5774.560	5795.440	---	---
11AX20MIMO	Ant2	5785	21.000	5774.480	5795.480	---	---
11AX20MIMO	Ant1	5825	20.960	5814.480	5835.440	---	---
11AX20MIMO	Ant2	5825	20.520	5814.680	5835.200	---	---
11AX40MIMO	Ant1	5190	39.680	5170.080	5209.760	---	---
11AX40MIMO	Ant2	5190	39.920	5170.000	5209.920	---	---
11AX40MIMO	Ant1	5230	39.440	5210.160	5249.600	---	---
11AX40MIMO	Ant2	5230	39.680	5210.000	5249.680	---	---
11AX40MIMO	Ant1	5270	39.920	5250.000	5289.920	---	---
11AX40MIMO	Ant2	5270	39.840	5250.080	5289.920	---	---

11AX40MIMO	Ant1	5310	39.520	5290.320	5329.840	---	---
11AX40MIMO	Ant2	5310	39.680	5290.160	5329.840	---	---
11AX40MIMO	Ant1	5510	40.240	5490.000	5530.240	---	---
11AX40MIMO	Ant2	5510	40.000	5490.080	5530.080	---	---
11AX40MIMO	Ant1	5550	39.760	5530.320	5570.080	---	---
11AX40MIMO	Ant2	5550	40.000	5530.160	5570.160	---	---
11AX40MIMO	Ant1	5670	39.440	5650.320	5689.760	---	---
11AX40MIMO	Ant2	5670	39.680	5650.080	5689.760	---	---
11AX40MIMO	Ant1	5755	40.320	5734.920	5775.240	---	---
11AX40MIMO	Ant2	5755	39.360	5735.320	5774.680	---	---
11AX40MIMO	Ant1	5795	40.400	5774.840	5815.240	---	---
11AX40MIMO	Ant2	5795	39.440	5775.320	5814.760	---	---
11AX80MIMO	Ant1	5210	80.800	5169.360	5250.160	---	---
11AX80MIMO	Ant2	5210	80.960	5169.360	5250.320	---	---
11AX80MIMO	Ant1	5290	80.640	5249.840	5330.480	---	---
11AX80MIMO	Ant2	5290	80.960	5249.360	5330.320	---	---
11AX80MIMO	Ant1	5530	80.800	5489.520	5570.320	---	---
11AX80MIMO	Ant2	5530	80.800	5489.680	5570.480	---	---
11AX80MIMO	Ant1	5610	81.280	5569.520	5650.800	---	---
11AX80MIMO	Ant2	5610	81.120	5569.520	5650.640	---	---
11AX80MIMO	Ant1	5775	81.120	5734.360	5815.480	---	---
11AX80MIMO	Ant2	5775	80.960	5734.840	5815.800	---	---
11N20MIMO	Ant1	5180	21.120	5169.400	5190.520	---	---
11N20MIMO	Ant2	5180	20.960	5169.400	5190.360	---	---
11N20MIMO	Ant1	5200	21.640	5189.040	5210.680	---	---
11N20MIMO	Ant2	5200	21.480	5189.280	5210.760	---	---
11N20MIMO	Ant1	5240	21.640	5229.240	5250.880	---	---
11N20MIMO	Ant2	5240	21.680	5229.000	5250.680	---	---
11N20MIMO	Ant1	5260	21.600	5249.040	5270.640	---	---
11N20MIMO	Ant2	5260	21.280	5249.320	5270.600	---	---
11N20MIMO	Ant1	5300	21.360	5289.280	5310.640	---	---
11N20MIMO	Ant2	5300	21.480	5289.280	5310.760	---	---
11N20MIMO	Ant1	5320	21.600	5309.000	5330.600	---	---
11N20MIMO	Ant2	5320	22.320	5309.120	5331.440	---	---
11N20MIMO	Ant1	5500	21.920	5488.960	5510.880	---	---
11N20MIMO	Ant2	5500	22.520	5489.240	5511.760	---	---
11N20MIMO	Ant1	5580	21.520	5569.200	5590.720	---	---
11N20MIMO	Ant2	5580	21.400	5569.280	5590.680	---	---
11N20MIMO	Ant1	5700	21.400	5689.360	5710.760	---	---
11N20MIMO	Ant2	5700	22.280	5688.800	5711.080	---	---
11N20MIMO	Ant1	5745	21.560	5734.080	5755.640	---	---
11N20MIMO	Ant2	5745	21.440	5734.200	5755.640	---	---
11N20MIMO	Ant1	5785	21.640	5774.200	5795.840	---	---
11N20MIMO	Ant2	5785	21.320	5774.320	5795.640	---	---
11N20MIMO	Ant1	5825	21.040	5814.440	5835.480	---	---
11N20MIMO	Ant2	5825	21.480	5814.360	5835.840	---	---
11N40MIMO	Ant1	5190	39.920	5170.000	5209.920	---	---
11N40MIMO	Ant2	5190	39.680	5170.240	5209.920	---	---
11N40MIMO	Ant1	5230	39.680	5210.400	5250.080	---	---
11N40MIMO	Ant2	5230	39.600	5210.240	5249.840	---	---
11N40MIMO	Ant1	5270	39.360	5250.320	5289.680	---	---
11N40MIMO	Ant2	5270	39.600	5250.320	5289.920	---	---
11N40MIMO	Ant1	5310	39.680	5290.080	5329.760	---	---
11N40MIMO	Ant1	5510	39.840	5490.000	5529.840	---	---
11N40MIMO	Ant1	5550	39.440	5530.240	5569.680	---	---
11N40MIMO	Ant1	5670	39.440	5650.320	5689.760	---	---
11N40MIMO	Ant1	5755	39.360	5735.240	5774.600	---	---

11N40MIMO	Ant2	5755	39.360	5735.320	5774.680	---	---
11N40MIMO	Ant1	5795	39.520	5775.320	5814.840	---	---
11N40MIMO	Ant2	5310	39.920	5290.160	5330.080	---	---
11N40MIMO	Ant2	5510	39.440	5490.320	5529.760	---	---
11N40MIMO	Ant2	5550	39.360	5530.400	5569.760	---	---
11N40MIMO	Ant2	5670	39.760	5650.080	5689.840	---	---
11N40MIMO	Ant2	5795	39.440	5775.240	5814.680	---	---

Test Graphs

11A-Ant1-5180

11A-Ant2-5180

11A-Ant1-5200

11A-Ant2-5200

11A-Ant1-5240

11A-Ant2-5240

11A-Ant1-5260

11A-Ant2-5260

11A-Ant1-5300

11A-Ant2-5300

11A-Ant1-5320

11A-Ant2-5320

11A-Ant1-5500

11A-Ant2-5500

11A-Ant1-5580

11A-Ant2-5580

11A-Ant1-5700

11A-Ant2-5700

11A-Ant1-5745

11A-Ant2-5745

11A-Ant1-5785

11A-Ant2-5785

11A-Ant1-5825

11A-Ant2-5825

11AC20MIMO-Ant1-5180

11AC20MIMO-Ant2-5180

11AC20MIMO-Ant1-5200

11AC20MIMO-Ant2-5200

11AC20MIMO-Ant1-5240

11AC20MIMO-Ant2-5240