

TEST REPORT

Applicant: Chengdu Xiaochen Technology Co., Ltd
EUT Description: VERTU META3 5G DIGITAL MOBILE PHONE
Model: VTL-202403
Brand: VERTU
FCC ID: 2BGHD-VTL202403
Standards: FCC 47 CFR Part 15 Subpart E
Date of Receipt: 2025/08/28
Date of Test: 2025/08/28 to 2025/10/20
Date of Issue: 2025/11/05

TOWE. Tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of the model are manufactured with identical electrical and mechanical components. All sample tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise. Without written approval of TOWE, the test report shall not be reproduced except in full.



Jim Huang
Approved By:



Carey Chen
Reviewed By:

Revision History

Rev.	Issue Date	Description	Revised by
01	2025/11/05	Original	Carey Chen

Summary of Test Results

Clause	FCC Part	Test Items	Test Bands	Result
4.1	§15.203	Antenna Requirement	---	PASS
4.2	§15.407(g)	Frequency Stability	---	---
4.3	§15.207	AC Power Line Conducted Emission	Section 2.2	PASS
4.4	§15.407(a)(1)(iv) §15.407(a)(2) §15.407(a)(3)(i)	Maximum Conducted Output Power	U-NII-1 U-NII-2A U-NII-2C U-NII-3	PASS
4.5	§KDB 789033 II.C.1	Emission Bandwidth	U-NII-1 U-NII-2A U-NII-2C	Reporting purposes only
4.6	§15.407(e)	Minimum Emission Bandwidth	U-NII-3	PASS
4.7	§KDB 789033 II.D	Occupied Bandwidth	U-NII-1 U-NII-2A U-NII-2C U-NII-3	Reporting purposes only
4.8	§15.407(a)(1)(iv) §15.407(a)(2) §15.407(a)(3)(i)	Maximum Power Spectral Density	U-NII-1 U-NII-2A U-NII-2C U-NII-3	PASS
4.9	§15.407(b) §15.209(d)	Unwanted Emissions	U-NII-1 U-NII-2A U-NII-2C U-NII-3	PASS
Test Method: ANSI C63.10:2020, KDB 789033 D02 General UNII Test Procedures New Rules v02r01				
Remark: Pass is EUT meets standard requirements.				

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1 General Description

1.1 Lab Information

1.1.1 Testing Location

These measurements tests were conducted at the Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. Facility located at F401 and F101, Building E, Hongwei Industrial Zone, Liuxian 3rd Road, Bao'an District, Shenzhen, China. The measurement facility is compliant with the test site requirements specified in ANSI C63.4-2014

Tel.: +86-755-27212361

Contact Email: info@towewireless.com

1.1.2 Test Facility / Accreditations

A2LA (Certificate Number: 7088.01)

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).

FCC Designation No.: CN1353

Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. Has been recognized as an accredited testing laboratory. Designation Number: CN1353.

ISED CAB identifier: CN0152

Sushi TOWE Wireless Testing(Shenzhen) Co., Ltd. Has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0152

Company Number: 31000

1.2 Client Information

1.2.1 Applicant

Applicant:	Chengdu Xiaochen Technology Co., Ltd
Address:	3rd Floor,Building B15,Ganzhizhongguo Chengdu Center,No.777 HuafuAvenue Shuangliu County,Chengdu City,Sichuan Province,China

1.2.2 Manufacturer

Manufacturer:	VERTU INTERNATIONAL CORPORATION LIMITED
Address:	Chase Business Centre 39-41 Chase Side LondonEngland N14 5BP

1.3 Product Information

EUT Description:	VERTU META3 5G DIGITAL MOBILE PHONE			
Model:	VTL-202403			
Brand:	VERTU			
Hardware Version:	P10			
Software Version:	15.0.1_6.01.01.01			
IMEI:	RF Conducted	357125130004876		
	RSE & AC power line	357125130005048		
Modulation Type:	802.11a/n:	OFDM-BPSK, QPSK, 16QAM, 64QAM		
	802.11ac:	OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM		
	802.11ax:	OFDM/OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM		
	802.11be:	OFDM/OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM		
Smart System:	☒ SISO	802.11a/n/ac/ax/be	/	
	☒ MIMO	802.11n/ac/ax/be	(2)TX(2)RX	
	☒ CDD	802.11a	(2)TX(2)RX	
EUT Function	☒ Client ☐ Outdoor AP ☐ Indoor AP ☐ Fixed P2P AP			
DFS Function:	☐ Master ☐ Slave with radar detection ☒ Slave without radar detection			
Frequency Range:	U-NII-1:	5150 ~ 5250MHz		
	U-NII-2A:	5250 ~ 5350MHz		
	U-NII-2C:	5470 ~ 5725MHz		
	U-NII-3:	5725 ~ 5850MHz		
Channel Frequency:	20M BWch.:	U-NII-1:	5180 ~ 5240MHz	4 Channels
		U-NII-2A:	5260 ~ 5320MHz	4 Channels
		U-NII-2C:	5500 ~ 5700MHz	11 Channels
		U-NII-3:	5745 ~ 5825MHz	5 Channels
	40M BWch.:	U-NII-1:	5190 ~ 5230MHz	2 Channels
		U-NII-2A:	5270 ~ 5310MHz	2 Channels
		U-NII-2C:	5510 ~ 5670MHz	5 Channels
		U-NII-3:	5755 ~ 5795MHz	2 Channels
	80M BWch.:	U-NII-1:	5210MHz	1 Channel
		U-NII-2A:	5290MHz	1 Channel
		U-NII-2C:	5530 ~ 5610MHz	2 Channels
		U-NII-3:	5775MHz	1 Channel
	160M BWch.:	U-NII-2A:	5250MHz	1 Channel
		U-NII-2C:	5570MHz	1 Channel
Antenna Type:	☐ External, ☒ Integrated			
Antenna Gain:	Frequency Range	Ant4 (dBi)	Ant7 (dBi)	
	U-NII-1:	-4.66	-4.2	
	U-NII-2A:	-4.66	-4.2	

	U-NII-2C:	-4.66	-4.2
	U-NII-3:	-4.66	-4.2
Remark: The above EUT's information was declared by applicant, please refer to the specifications or user's manual for more detailed description.			

2 Test Configuration

2.1 Test Channel

Frequency Channels for U-NII-1							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180MHz	40	5200MHz	44	5220MHz	48	5240MHz
38	5190MHz	42	5210MHz	46	5230MHz	/	
Remark: In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:							
Modulation Type		Test Channel		Test Frequency			
802.11a/n20 /ac20/ax20/be20		The Lowest channel (CH36)		5180MHz			
		The Middle channel (CH40)		5200MHz			
		The Highest channel (CH48)		5240MHz			
Modulation Type		Test Channel		Test Frequency			
802.11n40 /ac40/ax40/be40		The Lowest channel (CH38)		5190MHz			
		The Highest channel (CH46)		5230MHz			
Modulation Type		Test Channel		Test Frequency			
802.11 ac80/ax80/be80		The Middle channel (CH42)		5210MHz			

Frequency Channels for U-NII-2A							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
50	5250MHz	54	5270MHz	58	5290MHz	62	5310MHz
52	5260MHz	56	5280MHz	60	5300MHz	64	5320MHz
Remark: In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:							
Modulation Type	Test Channel		Test Frequency				
802.11a/n20 /ac20/ax20/be20	The Lowest channel (CH52)		5260MHz				
	The Middle channel (CH60)		5300MHz				
	The Highest channel (CH64)		5320MHz				
Modulation Type	Test Channel		Test Frequency				
802.11n40 /ac40/ax40/be40	The Lowest channel (CH54)		5270MHz				
	The Highest channel (CH62)		5310MHz				
Modulation Type	Test Channel		Test Frequency				
802.11 ac80/ax80/be80	The Middle channel (CH58)		5290MHz				
Modulation Type	Test Channel		Test Frequency				
802.11 ac160/ax160/be160	The Middle channel (CH50)		5250MHz				

Frequency Channels for U-NII-2C							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
100	5500MHz	110	5550MHz	120	5600MHz	132	5660MHz
102	5510MHz	112	5560MHz	122	5610MHz	134	5670MHz
104	5520MHz	114	5570MHz	124	5620MHz	136	5680MHz
106	5530MHz	116	5580MHz	126	5630MHz	140	5700MHz
108	5540MHz	118	5590MHz	128	5640MHz	/	

Remark:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Modulation Type	Test Channel	Test Frequency
802.11a/n20 /ac20/ax20/be20	The Lowest channel (CH100)	5500MHz
	The Middle channel (CH120)	5600MHz
	The Highest channel (CH140)	5700MHz
Modulation Type	Test Channel	Test Frequency
802.11n40 /ac40/ax40/be40	The Lowest channel (CH102)	5510MHz
	The Middle channel (CH118)	5590MHz
	The Highest channel (CH134)	5670MHz
Modulation Type	Test Channel	Test Frequency
802.11 ac80/ax80/be80	The Lowest channel (CH106)	5530MHz
	The Highest channel (CH122)	5610MHz
Modulation Type	Test Channel	Test Frequency
802.11 ac160/ax160/be160	The Middle channel (CH114)	5570MHz

Frequency Channels for U-NII-3							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745MHz	153	5765MHz	157	5785MHz	161	5805MHz
151	5755MHz	155	5775MHz	159	5795MHz	165	5825MHz

Remark:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Modulation Type	Test Channel	Test Frequency
802.11a/n20 /ac20/ax20/be20	The Lowest channel (CH149)	5745MHz
	The Middle channel (CH157)	5785MHz
	The Highest channel (CH165)	5825MHz
Modulation Type	Test Channel	Test Frequency
802.11n40 /ac40/ax40/be40	The Lowest channel (CH151)	5755MHz
	The Highest channel (CH159)	5795MHz
Modulation Type	Test Channel	Test Frequency
802.11 ac80/ax80/be80	The Middle channel (CH155)	5775MHz

2.2 Worst-case configuration and Mode

Modulation Type	SISO - Data Rate	CDD/MIMO(2)TX(2)RX Data Rate
802.11a	6 Mbps	12 Mbps
802.11n20	MCS0 (6.5 Mbps)	MCS0 (13 Mbps)
802.11n40	MCS0 (13.5 Mbps)	MCS0 (27 Mbps)
802.11ac20	MCS0 (6.5 Mbps)	MCS0 (13 Mbps)
802.11ac40	MCS0 (13.5 Mbps)	MCS0 (27 Mbps)
802.11ac80	MCS0 (29.3 Mbps)	MCS0 (58.6 Mbps)
802.11ac160	MCS0 (58.5 Mbps)	MCS0 (117 Mbps)
802.11ax20	MCS0 (8.6 Mbps)	MCS0 (17.2 Mbps)
802.11ax40	MCS0 (17.2 Mbps)	MCS0 (34.4 Mbps)
802.11ax80	MCS0 (36.0 Mbps)	MCS0 (72.1 Mbps)
802.11ax160	MCS0 (72.1 Mbps)	MCS0 (144.1 Mbps)
802.11be20	MCS0 (8.6 Mbps)	MCS0 (17.2 Mbps)
802.11be40	MCS0 (17.2 Mbps)	MCS0 (34.4 Mbps)
802.11be80	MCS0 (36.0 Mbps)	MCS0 (72.1 Mbps)
802.11be160	MCS0 (72.1 Mbps)	MCS0 (144.1 Mbps)
Transmitting mode:	Keep the EUT was programmed to be in continuously transmitting mode.	
Normal Link:	Keep the EUT operation to normal function.	

2.3 Support Unit used in test

The EUT has been tested as an independent unit.

2.4 Test Environment

Temperature:	Normal: 15°C ~ 35°C
Humidity:	45 ~ 56 % RH Ambient
Voltage:	DC 3.79V
AC Voltage:	AC 120V/60Hz for Conducted Emissions
Remark: The testing environment is within the scope of the EUT user manual and meets the requirements of the standard testing environment.	

2.5 Test RF Cable

For all conducted test items: The offset level is set spectrum analyzer to compensate the RF cable loss and attenuator factor between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

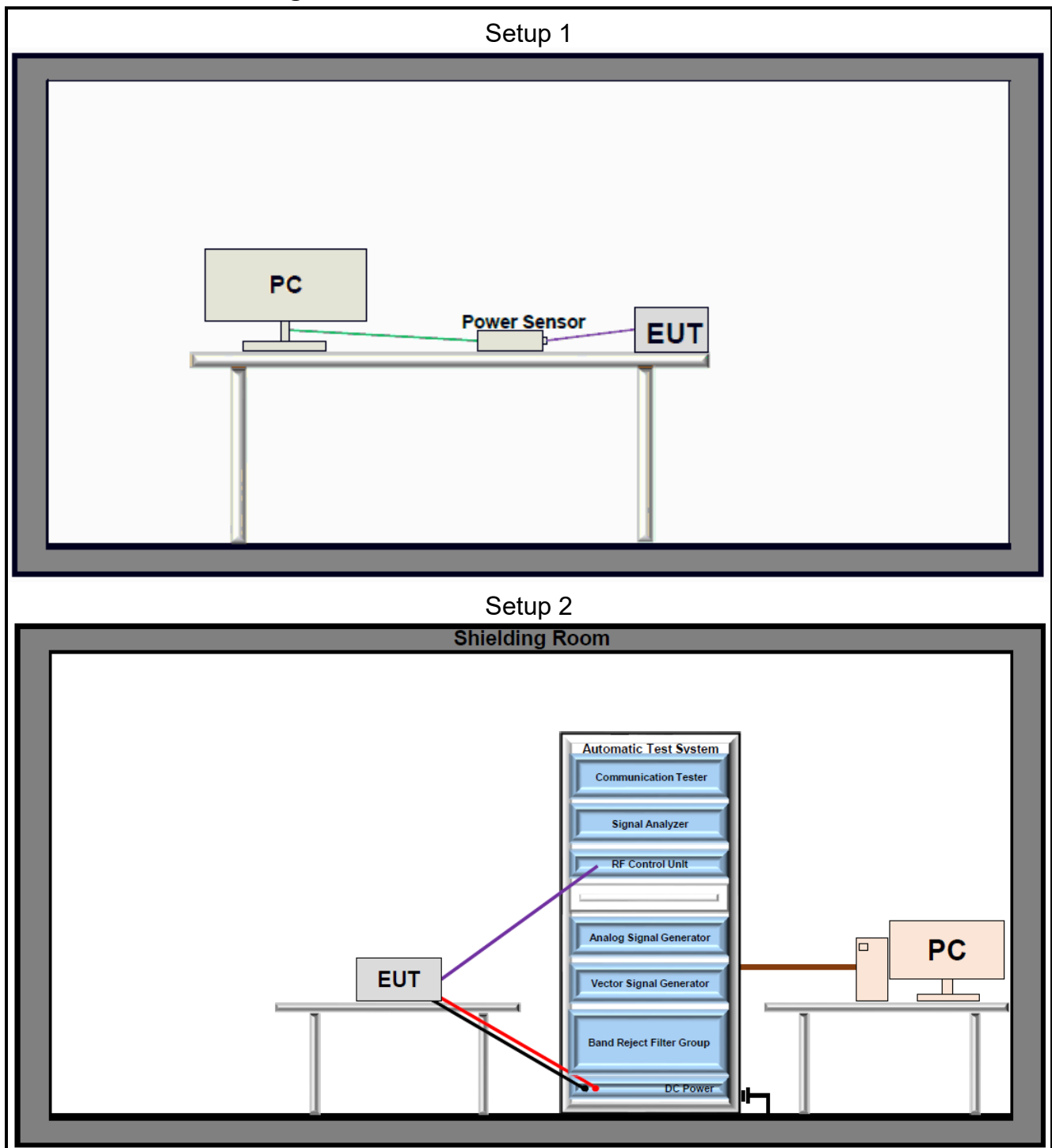
Offset = RF cable loss + attenuator factor.

2.6 Modifications

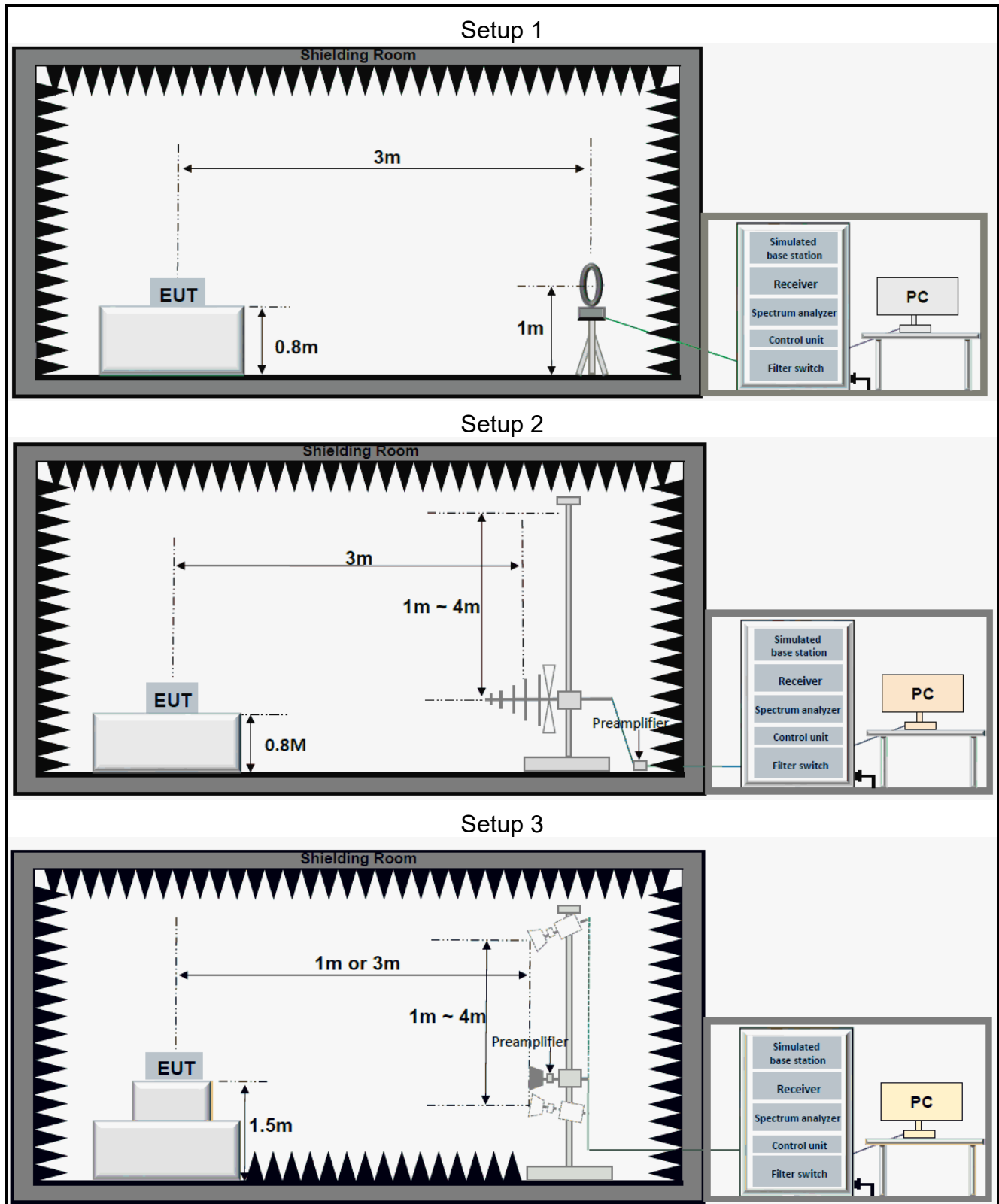
No modifications were made during testing.

2.7 Test Setup Diagram

2.7.1 Conducted Configuration



2.7.2 Radiated Configuration



Directional gain calculations:

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

If all antennas have the same gain, G_{ANT} , Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

- For power spectral density (PSD) measurements on all devices

$$\text{Array Gain} = 10 \log(N_{ANT}/N_{SS}=1) \text{ dB}$$

- For power measurements on IEEE 802.11 devices:

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

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

$$\text{Array Gain} = 5 \log(N_{ANT}/N_{SS}=1) \text{ dB or } 3 \text{ dB, whichever is less, for 20-MHz channel widths with } N_{ANT} \geq 5.$$

Directional gain may be calculated by using the formulas applicable to equal gain antennas with G_{ANT} set equal to the gain of the antenna having the highest gain.

Unequal antenna gains, with equal transmit powers. For antenna gains given by $G_1, G_2, \dots, G_N$ dBi

- If transmit signals are correlated, then

$$\text{Directional gain} = 10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{ANT}] \text{ dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]}$$

- If all transmit signals are completely uncorrelated, then

$$\text{Directional gain} = 10 \log[(10^{G_1/10} + 10^{G_2/10} + \dots + 10^{G_N/10}) / N_{ANT}] \text{ dBi}$$

The Power and PSD limit should be modified if the directional gain of EUT is over 6dBi.

The EUT supports CDD System.

Transmit signals are completely correlated						
Operation Band	ANT Gain4 (dBi)	ANT Gain7 (dBi)	Directional gain For Power (dBi)	Directional gain For PSD (dBi)	Power Limit Reduction (dBm)	PSD Limit Reduction (dBm)
U-NII-1	-4.66	-4.2	-4.2	-1.42	0	0
U-NII-2A	-4.66	-4.2	-4.2	-1.42	0	0
U-NII-2C	-4.66	-4.2	-4.2	-1.42	0	0
U-NII-3	-4.66	-4.2	-4.2	-1.42	0	0

3 Equipment and Measurement Uncertainty

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, whichever is less, and where applicable is traceable to recognized national standards.

3.1 Test Equipment List

RF Conducted					
Description	Manufacturer	Model	S.N.	Last Due	Cal Due
Signal Analyzer	Keysight	N9020A	US46470429	2025/03/14	2026/03/13
Signal Generator	R&S	SMR20	101027	2025/03/11	2026/03/10
Vector Signal Generator	R&S	SMM100A	549353	2025/05/29	2026/05/28
Power Sensor	Anritsu	MA24408A	12520	2025/05/29	2026/05/28
RF Control Unit	Tonscend	JS0806-2	23C80620671	2025/05/29	2026/05/28
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY63440541	2025/05/29	2026/05/28
Attenuator	Yin Saige	SMA-10dBm	N/A	N/A	N/A
Measurement Software	Tonscend	TS1120-3	10659	N/A	N/A

Radiated Emission					
Description	Manufacturer	Model	S.N.	Last Due	Cal Due
Biconic Logarithmic Periodic Antennas	Schwarzbeck	VULB9163	1643	2023/06/25	2026/06/24
Double-Ridged Horn Antennas	Schwarzbeck	BBHA 9120D	2809	2023/06/25	2026/06/24
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	1290	2023/06/25	2026/06/24
Loop Antenna	Schwarzbeck	FMZB 1519C	1519C-028	2023/06/29	2026/06/28
Signal Analyzer	Keysight	N9020A	MY49100252	2025/03/11	2026/03/10
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY63440541	2025/05/29	2026/05/28
Wideband Radio Communication Tester	R&S	CMW500	150645	2025/03/11	2026/03/10
Low Noise Amplifier	Tonscend	TAP9K3G40	AP23A8060273	2025/03/11	2027/03/10
Low Noise Amplifier	Tonscend	TAP01018050	AP22G806258	2025/03/11	2027/03/10
Low Noise Amplifier	Tonscend	TAP18040048	AP22G806247	2025/03/11	2027/03/10
Hygrometer	BINGYU	HTC-1	N/A	2025/07/25	2026/07/24
Band Reject Filter Group	Townshend	JS0806-F	23A806F0652	N/A	N/A
Test Software	Tonscend	TS+	Version: 5.0.0	N/A	N/A

Conducted Emission					
Description	Manufacturer	Model	S.N.	Last Due	Cal Due
EMI Tester Receiver	Rohde & Schwarz	ESR3	103108	2025/05/29	2026/05/28
LISN	Rohde & Schwarz	ENV 216	102836	2025/01/04	2026/01/03
Test software	Rohde & Schwarz	ELEKTRA V4.61	N/A	N/A	N/A

3.2 Measurement Uncertainty

Parameter	U _{lab}
Frequency Error	679.98Hz
Output Power	0.76dB
Conducted Spurious Emissions	2.22dB
Conducted Emissions(150kHz~30MHz)	2.43dB
Radiated Emissions(9kHz~30MHz)	2.40dB
Radiated Emissions(30MHz~1000MHz)	4.66dB
Radiated Emissions(1GHz~18GHz)	5.42dB
Radiated Emissions(18GHz~40GHz)	5.46dB

Uncertainty figures are valid to a confidence level of 95%

4 Test Results

4.1 Antenna Requirement

Standard Applicable:	47 CFR Part 15E Section 15.203
15.203 requirement: 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, 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.	
The antenna gain and type as provided by the manufacturer are as follows: The antenna Type is Integrated. With Antenna gain is U-NII-1: -4.66dBi(Ant4), -4.2dBi(Ant7). U-NII-2A: -4.66dBi(Ant4), -4.2dBi(Ant7). U-NII-2C: -4.66dBi(Ant4), -4.2dBi(Ant7). U-NII-3: -4.66dBi(Ant4), -4.2dBi(Ant7). Antenna Anti-Replacement Construction: An embedded-in antenna design is used.	

4.2 Frequency Stability

Standard Applicable:	47 CFR Part 15E Section 15.407(g)
Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.	

4.3 AC Power Line Conducted Emissions

Limits

Frequency range (MHz)	Limit (dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

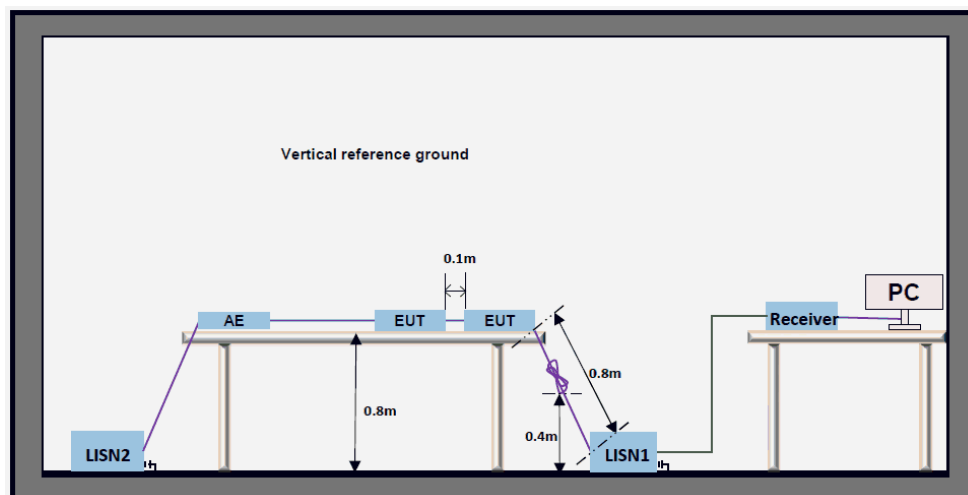
Test Procedure

ANSI C63.10:2020, Section 6.2.

Test Settings

1. The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
2. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.
3. The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
4. Set the test-receiver system to Peak detect function and specified bandwidth (if bandwidth =9kHz) with maximum hold mode. Then measurement is also conducted by average detector and Quasi-Peak detector function respectively
5. Both sides of AC line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

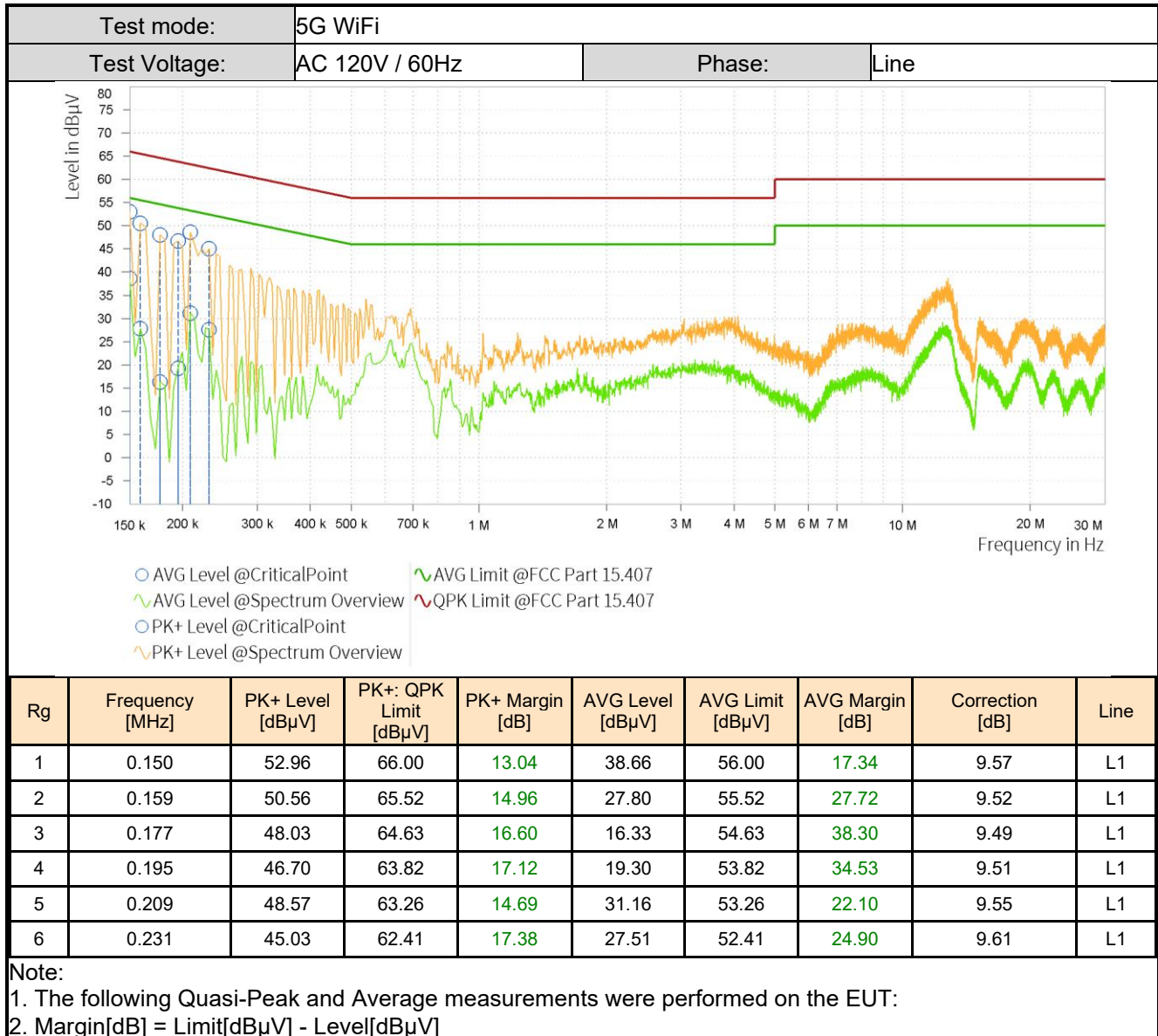
Test Setup

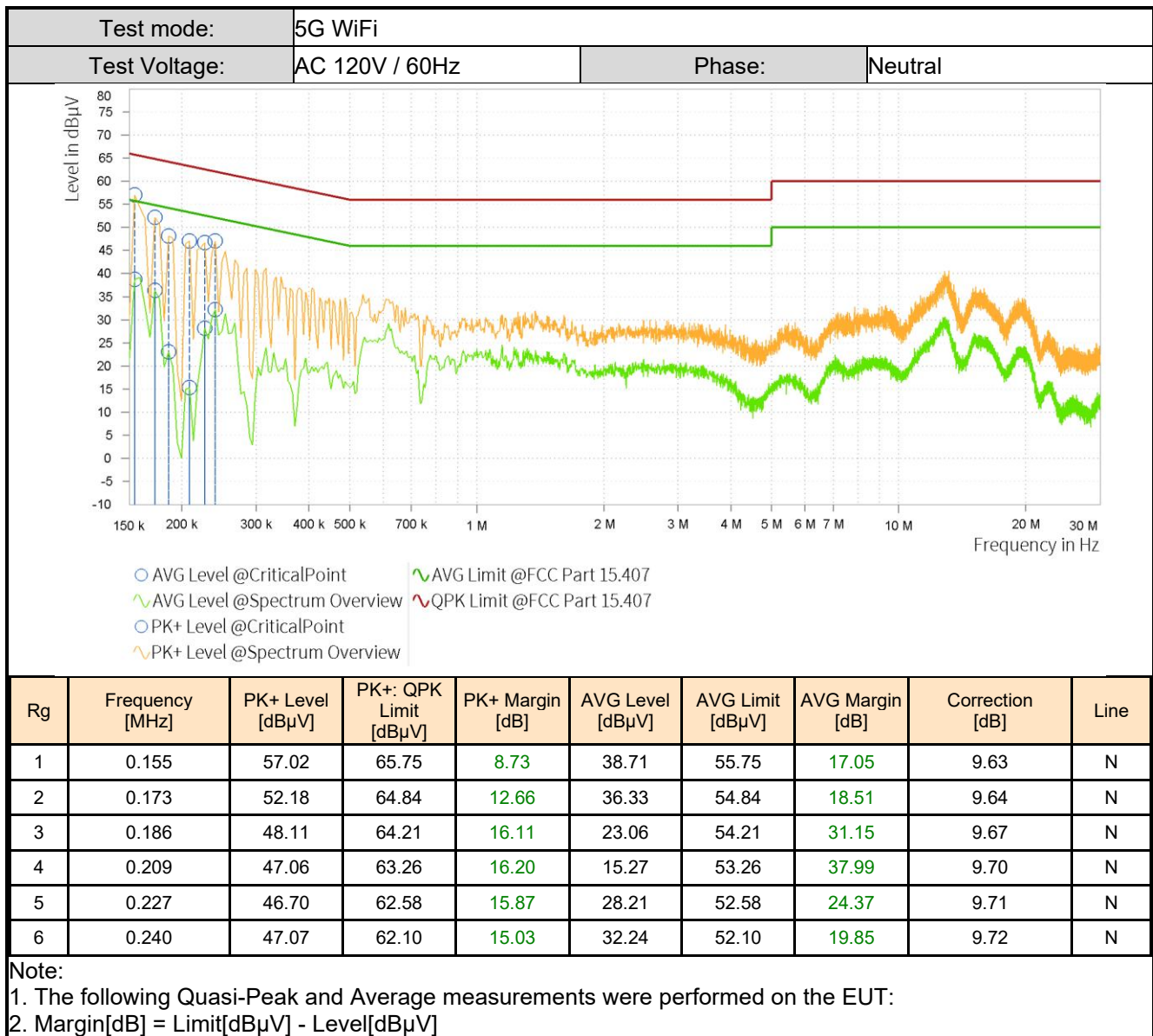


Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result:





4.4 Maximum Conducted Output Power

Limits

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz.

For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

Test Procedure

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.E.3.b (Other Channel)

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.E.2.b(Straddle Channel)

Test Settings

1. PM-G:
Set to the maximum power setting and enable the EUT transmit continuously.
The power output was measured on the EUT antenna port using RF Cable with an attenuator connected to a power sensor. Output power was read directly from the power sensor.
Measure and record the results in the test report.
2. SA:
RBW = 1MHz
VBW $\geq$ 3MHz
Span = Encompass the EBW (or, alternatively, the entire 99% occupied bandwidth)
Sweep = Auto
Detector = power averaging (rms)

Test Setup

Refer to section 2.7.1 Setup 1 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix**.

4.5 Emission Bandwidth

Limits

None, for reporting purposes only.

Test Procedure

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.C.1.

Test Settings

1. Set to the maximum power setting and enable the EUT transmit continuously.
2. The transmitter output is connected to a spectrum analyzer:
3. RBW = 1% - 5%(99%BW)
4. VBW = 3 times the RBW
5. Sweep = Auto
6. Detector = Peak
7. Trace = Max hold
8. The trace was allowed to stabilize
9. Measure and record the results in the test report.

Test Notes

The signal analyzers' automatic bandwidth measurement capability of the spectrum analyzer was used to perform the 26dB bandwidth measurement. The "X" dB bandwidth parameter was set to X= 26. The bandwidth measurement was not influenced by any intermediate power nulls in the fundamental emission.

Test Setup

Refer to section 2.7.1 Setup 2 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix**.

4.6 Minimum Emission Bandwidth

Limits

Within the 5.725-5.850 GHz and 5.850-5.895 GHz bands, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.C.2.

Test Settings

1. Set to the maximum power setting and enable the EUT transmit continuously.
2. The transmitter output is connected to a spectrum analyzer:
3. RBW = 100kHz(DTS)
4. VBW = 3 times the RBW
5. Sweep = Auto
6. Detector = Peak
7. Trace = Max hold
8. The trace was allowed to stabilize
9. Measure and record the results in the test report.

Test Notes

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.

Test Setup

Refer to section 2.7.1- Setup 2 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix**.

4.7 Occupied Bandwidth

Limits

None, for reporting purposes only.

Test Procedure

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.D.

Test Settings

1. Set to the maximum power setting and enable the EUT transmit continuously.
2. The transmitter output is connected to a spectrum analyzer:
3. RBW = 1% - 5%(99%BW)
4. VBW = 3 times the RBW
5. Sweep = Auto
6. Detector = Peak
7. Trace = Max hold
8. The trace was allowed to stabilize
9. Measure and record the results in the test report.

Test Setup

Refer to section 2.7.1- Setup 2 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix**.

4.8 Maximum Power Spectral Density

Limits

For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1-megahertz band.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1-megahertz band.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

Test Procedure

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.F

Test Settings

1. Set to the maximum power setting and enable the EUT transmit continuously
2. The transmitter output is connected to a spectrum analyzer
3. RBW = 1MHz (for 5.15–5.25 GHz, 5.25–5.35 GHz, and 5.47–5.725 GHz)
4. RBW = 500kHz (for 5.725–5.85 GHz)
5. VBW $\geq$ 3 times RBW
6. Sweep = Auto
7. Detector = Peak
8. Trace = Max hold
9. The trace was allowed to stabilize
10. Measure and record the results in the test report.

Test Setup

Refer to section 2.7.1- Setup 2 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix**.

4.9 Unwanted Emissions

Limits

Spurious emissions are permitted in an of the frequency bands:

MHz	MHz	MHz	MHz	GHz	GHz
0.090 - 0.110	12.29 - 12.293	149.9 - 150.05	1660 - 1710	4.5 - 5.15	14.47 - 14.5
0.495 - 0.505	12.51975 - 12.52025	156.52475 - 156.52525	1718.8 - 1722.2	5.35 - 5.46	15.35 - 16.2
2.1735 - 2.1905	12.5767 - 12.57725	156.7 - 156.9	2200 - 2300	7.25 - 7.75	17.7 - 21.4
4.125 - 128	13.36 - 13.41	162.0125 - 167.17	2310 - 2390	8.025 - 8.5	22.01 - 23.12
4.17725 - 4.17775	16.42 - 16.423	167.72 - 173.2	2483.5 - 2500	9.0 - 9.2	23.6 - 24.0
4.20725 - 4.20775	16.69475 - 16.69525	240 - 285	2655 - 2900	9.3 - 9.5	31.2 - 31.8
6.215 - 6.218	1680425 - 1680475	322 - 335.4	3260 - 3267	10.6 - 12.7	36.43 - 36.5
6.26775 - 6.26825	25.5 - 25.67	399.9 - 410	3332 - 3339	13.25 - 13.4	
6.31175 - 6.31225	37.5 - 38.25	608 - 614	3345.8 - 3358		
8.291 - 8.294	73 - 74.6	960 - 1240	3600 - 4400		
8.362 - 8.366	74.8 - 75.2	1300 - 1427			
8.37625 - 8.38675	108 - 121.94	1435 - 1626.5			
8.41425 - 8.41475	123 - 138	1645.5 - 1646.5			

Radiated disturbance of an intentional radiator:

Frequency	Field strength ($\mu\text{V/m}$)	Limit (dB $\mu\text{V/m}$)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	74.0	Peak	3
		54.0	Average	

Un-restricted band emissions above 1GHz limit:

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.

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.

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.

For transmitters operating solely in the 5.725-5.850 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.

Test Procedure

ANSI C63.10:2020 Section 6.4 & 6.5 & 6.6.

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Section II.G.3 ~ 6.

Test Settings

1. For radiated emissions measurements performed at frequencies less than or equal to 1GHz, the EUT shall be placed on a RF-transparent table or support at a nominal height of 80cm above the reference ground plane.
2. For radiated emissions measurements performed at frequencies above 1GHz, the EUT shall be placed on a RF-transparent table or support at a nominal height of 80cm above the ground plane.
3. Radiated measurements shall be made with the measurement antenna positioned in both horizontal and vertical polarization. The measurement antenna shall be varied from 1m to 4m in height above the reference ground in a search for the relative positioning that produces the maximum radiated signal level (i.e, field strength or received power), when orienting the measurement antenna in vertical polarization, the minimum height of the lowest element of the antenna shall clear the site reference ground plane by at least 25cm.
4. For each suspected emission, the EUT was ranged its worst case and then tune the antenna tower(from 1~4m) and turntable(from 0~360°) find the maximum reading. Preamplifier and a high pass filter are used for the test in order get better signal level comply with the guidelines.
5. The simulated base station was set to force the EUT to its maximum transmitting power.
6. The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.
7. spectrum analyzer setting:
Measurements Below 1000MHz: RBW = 120 kHz; VBW ≥ 300 kHz; Detector = Peak
Measurements Above 1000MHz: RBW = 1 MHz; VBW ≥ 3 MHz; Detector = Peak
Average Measurements Above 1000MHz:
RBW = 1 MHz, VBW ≥ 1/T, with peak detector for average measurements.
8. The field strength is calculated by adding the Antenna Factor, Cable Factor. The basic equation with a sample calculation is as follows:
Level = Reading(dBμV) + Factor(dB):
Factor = Cable Factor(dB) + AF(dB/m) - Preamplifier gain(dB)
AF = Antenna Factor(dB/m)
Margin = Limit(dBμV/m) – Level(dBμV/m)
9. Repeat above procedures until all frequencies measured was complete.
10. Measure and record the results in the test report.

Test Notes

1. Emissions below 18GHz were measured at a 3-meter test distance while emissions above 18GHz were measured at a 1-meter test distance with the application of a distance correction factor.
2. Radiated spurious emissions were investigated from 9kHz to 30MHz, 30MHz-1GHz and above 1GHz. the disturbance between 9kHz to 30MHz and 18GHz to 40GHz was very low. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be recorded, so only the harmonics had been displayed.
3. These frequencies which near "-" should be ignored because they are Fundamental frequency.

Test Setup

Refer to section 2.7.2 for details.

Measuring Instruments

The measuring equipment is listed in the section 3.1 of this test report.

Test Result

The detailed test data see: **Appendix.**

5 Test Setup Photos

The detailed test data see: **Appendix-F BTWIFI Setup Photos**

Appendix

Emission Bandwidth Test Result

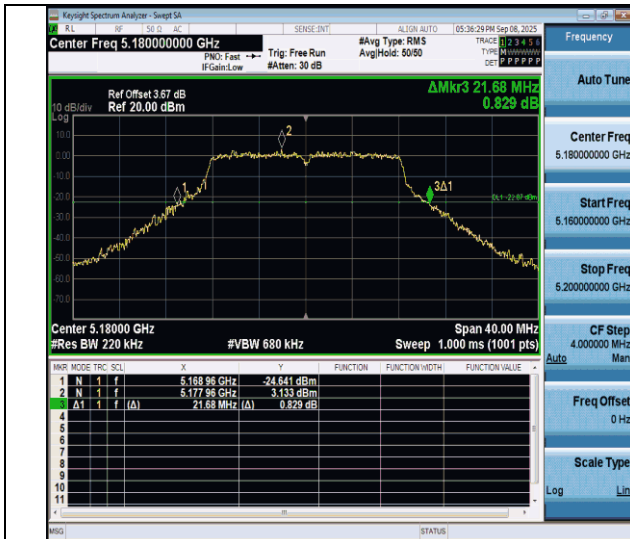
TestMode	Antenna	Frequency[MHz]	26dB EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11a-CDD	Ant4	5180	21.680	5168.960	5190.640	---	---
11a-CDD	Ant7	5180	22.080	5168.840	5190.920	---	---
11a-CDD	Ant7	5200	21.520	5189.080	5210.600	---	---
11a-CDD	Ant4	5200	22.280	5188.880	5211.160	---	---
11a-CDD	Ant4	5240	21.840	5228.880	5250.720	---	---
11a-CDD	Ant7	5240	21.000	5229.640	5250.640	---	---
11a-CDD	Ant4	5260	22.000	5248.800	5270.800	---	---
11a-CDD	Ant7	5260	22.160	5248.960	5271.120	---	---
11a-CDD	Ant4	5300	22.080	5289.120	5311.200	---	---
11a-CDD	Ant7	5300	21.600	5289.080	5310.680	---	---
11a-CDD	Ant4	5320	22.080	5309.040	5331.120	---	---
11a-CDD	Ant7	5320	21.680	5309.120	5330.800	---	---
11a-CDD	Ant4	5500	21.840	5488.960	5510.800	---	---
11a-CDD	Ant7	5500	22.080	5489.120	5511.200	---	---
11a-CDD	Ant4	5600	21.680	5589.160	5610.840	---	---
11a-CDD	Ant7	5600	21.360	5589.160	5610.520	---	---
11a-CDD	Ant4	5700	21.560	5689.040	5710.600	---	---
11a-CDD	Ant7	5700	21.280	5689.240	5710.520	---	---
11a-CDD	Ant4	5745	21.480	5734.320	5755.800	---	---
11a-CDD	Ant7	5745	22.040	5734.240	5756.280	---	---
11a-CDD	Ant4	5785	22.200	5773.920	5796.120	---	---
11a-CDD	Ant7	5785	21.800	5774.080	5795.880	---	---
11a-CDD	Ant4	5825	21.560	5813.920	5835.480	---	---
11a-CDD	Ant7	5825	21.200	5814.480	5835.680	---	---
11n20MIMO	Ant4	5180	21.720	5168.960	5190.680	---	---
11n20MIMO	Ant7	5180	22.320	5168.960	5191.280	---	---
11n20MIMO	Ant4	5200	29.240	5188.080	5217.320	---	---
11n20MIMO	Ant7	5200	21.680	5188.920	5210.600	---	---
11n20MIMO	Ant7	5240	21.880	5229.240	5251.120	---	---
11n20MIMO	Ant4	5240	20.640	5229.800	5250.440	---	---
11n20MIMO	Ant4	5260	22.440	5248.760	5271.200	---	---
11n20MIMO	Ant7	5260	22.240	5248.800	5271.040	---	---
11n20MIMO	Ant4	5300	20.840	5289.080	5309.920	---	---
11n20MIMO	Ant7	5300	22.240	5288.840	5311.080	---	---
11n20MIMO	Ant4	5320	23.120	5309.640	5332.760	---	---
11n20MIMO	Ant7	5320	22.360	5308.840	5331.200	---	---
11n20MIMO	Ant4	5500	22.320	5489.040	5511.360	---	---
11n20MIMO	Ant7	5500	22.760	5488.800	5511.560	---	---
11n20MIMO	Ant4	5600	22.720	5588.400	5611.120	---	---
11n20MIMO	Ant7	5600	22.000	5589.040	5611.040	---	---
11n20MIMO	Ant4	5700	22.120	5689.160	5711.280	---	---
11n20MIMO	Ant7	5700	22.160	5688.840	5711.000	---	---
11n20MIMO	Ant4	5745	22.360	5733.800	5756.160	---	---
11n20MIMO	Ant7	5745	22.360	5733.920	5756.280	---	---
11n20MIMO	Ant4	5785	22.600	5773.640	5796.240	---	---
11n20MIMO	Ant7	5785	22.400	5773.800	5796.200	---	---
11n20MIMO	Ant4	5825	23.240	5813.000	5836.240	---	---
11n20MIMO	Ant7	5825	21.760	5813.880	5835.640	---	---
11n40MIMO	Ant4	5190	42.960	5168.640	5211.600	---	---
11n40MIMO	Ant7	5190	43.280	5168.080	5211.360	---	---
11n40MIMO	Ant4	5230	43.440	5208.400	5251.840	---	---
11n40MIMO	Ant7	5230	43.920	5208.320	5252.240	---	---
11n40MIMO	Ant4	5270	42.800	5248.640	5291.440	---	---
11n40MIMO	Ant7	5270	43.280	5248.240	5291.520	---	---
11n40MIMO	Ant4	5310	43.200	5288.640	5331.840	---	---
11n40MIMO	Ant7	5310	42.640	5288.160	5330.800	---	---
11n40MIMO	Ant4	5510	43.120	5488.320	5531.440	---	---

11n40MIMO	Ant7	5510	42.880	5488.720	5531.600	---	---
11n40MIMO	Ant4	5590	42.720	5569.040	5611.760	---	---
11n40MIMO	Ant7	5590	42.880	5568.480	5611.360	---	---
11n40MIMO	Ant4	5670	43.280	5648.160	5691.440	---	---
11n40MIMO	Ant7	5670	43.280	5648.480	5691.760	---	---
11n40MIMO	Ant4	5755	43.600	5733.400	5777.000	---	---
11n40MIMO	Ant7	5755	42.800	5733.880	5776.680	---	---
11n40MIMO	Ant4	5795	44.240	5772.840	5817.080	---	---
11n40MIMO	Ant7	5795	43.600	5773.480	5817.080	---	---
11ac20MIMO	Ant4	5180	22.760	5168.640	5191.400	---	---
11ac20MIMO	Ant7	5180	22.520	5168.360	5190.880	---	---
11ac20MIMO	Ant4	5200	22.600	5188.320	5210.920	---	---
11ac20MIMO	Ant7	5200	22.200	5188.800	5211.000	---	---
11ac20MIMO	Ant4	5240	22.640	5228.560	5251.200	---	---
11ac20MIMO	Ant7	5240	22.720	5228.800	5251.520	---	---
11ac20MIMO	Ant4	5260	22.560	5248.720	5271.280	---	---
11ac20MIMO	Ant7	5260	22.480	5248.800	5271.280	---	---
11ac20MIMO	Ant4	5300	22.240	5288.680	5310.920	---	---
11ac20MIMO	Ant7	5300	22.240	5288.880	5311.120	---	---
11ac20MIMO	Ant4	5320	22.480	5309.000	5331.480	---	---
11ac20MIMO	Ant7	5320	22.920	5308.560	5331.480	---	---
11ac20MIMO	Ant4	5500	22.560	5488.560	5511.120	---	---
11ac20MIMO	Ant7	5500	21.960	5489.080	5511.040	---	---
11ac20MIMO	Ant4	5600	22.800	5588.640	5611.440	---	---
11ac20MIMO	Ant7	5600	21.760	5588.960	5610.720	---	---
11ac20MIMO	Ant4	5700	23.400	5688.360	5711.760	---	---
11ac20MIMO	Ant7	5700	22.680	5688.680	5711.360	---	---
11ac20MIMO	Ant4	5745	22.760	5733.600	5756.360	---	---
11ac20MIMO	Ant7	5745	22.120	5734.120	5756.240	---	---
11ac20MIMO	Ant4	5785	22.600	5773.640	5796.240	---	---
11ac20MIMO	Ant7	5785	22.360	5773.720	5796.080	---	---
11ac20MIMO	Ant4	5825	22.920	5813.120	5836.040	---	---
11ac20MIMO	Ant7	5825	22.960	5813.400	5836.360	---	---
11ac40MIMO	Ant4	5190	44.560	5167.600	5212.160	---	---
11ac40MIMO	Ant7	5190	42.880	5168.240	5211.120	---	---
11ac40MIMO	Ant4	5230	43.360	5208.560	5251.920	---	---
11ac40MIMO	Ant7	5230	44.320	5208.160	5252.480	---	---
11ac40MIMO	Ant4	5270	44.240	5247.920	5292.160	---	---
11ac40MIMO	Ant7	5270	42.880	5249.280	5292.160	---	---
11ac40MIMO	Ant4	5310	43.200	5288.800	5332.000	---	---
11ac40MIMO	Ant7	5310	42.080	5288.640	5330.720	---	---
11ac40MIMO	Ant4	5510	43.600	5488.000	5531.600	---	---
11ac40MIMO	Ant7	5510	43.520	5488.400	5531.920	---	---
11ac40MIMO	Ant4	5590	42.480	5568.960	5611.440	---	---
11ac40MIMO	Ant7	5590	42.640	5568.800	5611.440	---	---
11ac40MIMO	Ant4	5670	44.400	5647.680	5692.080	---	---
11ac40MIMO	Ant7	5670	43.680	5648.080	5691.760	---	---
11ac40MIMO	Ant4	5755	44.400	5732.440	5776.840	---	---
11ac40MIMO	Ant7	5755	43.200	5733.480	5776.680	---	---
11ac40MIMO	Ant4	5795	44.480	5772.200	5816.680	---	---
11ac40MIMO	Ant7	5795	42.880	5773.560	5816.440	---	---
11ac80MIMO	Ant4	5210	88.800	5166.160	5254.960	---	---
11ac80MIMO	Ant7	5210	86.720	5166.640	5253.360	---	---
11ac80MIMO	Ant4	5290	86.880	5246.640	5333.520	---	---
11ac80MIMO	Ant7	5290	87.840	5246.960	5334.800	---	---
11ac80MIMO	Ant4	5530	90.080	5485.040	5575.120	---	---
11ac80MIMO	Ant7	5530	86.080	5487.120	5573.200	---	---
11ac80MIMO	Ant4	5610	89.600	5565.680	5655.280	---	---
11ac80MIMO	Ant7	5610	86.400	5567.120	5653.520	---	---
11ac80MIMO	Ant4	5775	88.320	5730.200	5818.520	---	---
11ac80MIMO	Ant7	5775	86.560	5731.960	5818.520	---	---
11ac160MIMO	Ant4	5570	175.040	5482.960	5658.000	---	---
11ac160MIMO	Ant7	5570	174.720	5482.640	5657.360	---	---
11ax20MIMO	Ant4	5180	21.560	5169.120	5190.680	---	---
11ax20MIMO	Ant7	5180	22.200	5168.920	5191.120	---	---
11ax20MIMO	Ant4	5200	20.880	5189.440	5210.320	---	---
11ax20MIMO	Ant7	5200	22.200	5189.120	5211.320	---	---

11ax20MIMO	Ant4	5240	22.320	5228.880	5251.200	---	---
11ax20MIMO	Ant7	5240	21.440	5229.080	5250.520	---	---
11ax20MIMO	Ant4	5260	21.960	5249.280	5271.240	---	---
11ax20MIMO	Ant7	5260	22.120	5249.200	5271.320	---	---
11ax20MIMO	Ant4	5300	22.000	5288.680	5310.680	---	---
11ax20MIMO	Ant7	5300	21.600	5289.160	5310.760	---	---
11ax20MIMO	Ant4	5320	22.560	5308.840	5331.400	---	---
11ax20MIMO	Ant7	5320	21.680	5308.760	5330.440	---	---
11ax20MIMO	Ant4	5500	22.280	5488.640	5510.920	---	---
11ax20MIMO	Ant7	5500	21.920	5488.800	5510.720	---	---
11ax20MIMO	Ant4	5600	22.040	5589.240	5611.280	---	---
11ax20MIMO	Ant7	5600	21.280	5589.320	5610.600	---	---
11ax20MIMO	Ant4	5700	22.240	5689.000	5711.240	---	---
11ax20MIMO	Ant7	5700	21.240	5689.400	5710.640	---	---
11ax20MIMO	Ant4	5745	22.160	5734.080	5756.240	---	---
11ax20MIMO	Ant7	5745	22.000	5734.120	5756.120	---	---
11ax20MIMO	Ant4	5785	21.560	5774.080	5795.640	---	---
11ax20MIMO	Ant7	5785	21.560	5774.440	5796.000	---	---
11ax20MIMO	Ant4	5825	21.280	5814.440	5835.720	---	---
11ax20MIMO	Ant7	5825	22.000	5813.600	5835.600	---	---
11ax40MIMO	Ant4	5190	42.880	5168.640	5211.520	---	---
11ax40MIMO	Ant7	5190	42.400	5169.040	5211.440	---	---
11ax40MIMO	Ant4	5230	42.800	5208.160	5250.960	---	---
11ax40MIMO	Ant7	5230	41.920	5209.040	5250.960	---	---
11ax40MIMO	Ant4	5270	43.280	5247.920	5291.200	---	---
11ax40MIMO	Ant7	5270	42.240	5248.720	5290.960	---	---
11ax40MIMO	Ant4	5310	42.800	5289.200	5332.000	---	---
11ax40MIMO	Ant7	5310	42.320	5288.880	5331.200	---	---
11ax40MIMO	Ant4	5510	42.080	5489.200	5531.280	---	---
11ax40MIMO	Ant7	5510	41.920	5489.120	5531.040	---	---
11ax40MIMO	Ant4	5590	42.400	5569.040	5611.440	---	---
11ax40MIMO	Ant7	5590	41.840	5569.120	5610.960	---	---
11ax40MIMO	Ant4	5670	41.840	5649.280	5691.120	---	---
11ax40MIMO	Ant7	5670	42.000	5649.200	5691.200	---	---
11ax40MIMO	Ant4	5755	43.600	5733.080	5776.680	---	---
11ax40MIMO	Ant7	5755	41.920	5734.360	5776.280	---	---
11ax40MIMO	Ant4	5795	42.960	5773.400	5816.360	---	---
11ax40MIMO	Ant7	5795	41.760	5774.120	5815.880	---	---
11ax80MIMO	Ant4	5210	84.160	5167.600	5251.760	---	---
11ax80MIMO	Ant7	5210	84.000	5168.720	5252.720	---	---
11ax80MIMO	Ant4	5290	85.920	5247.600	5333.520	---	---
11ax80MIMO	Ant7	5290	85.760	5247.440	5333.200	---	---
11ax80MIMO	Ant4	5530	84.160	5488.400	5572.560	---	---
11ax80MIMO	Ant7	5530	83.360	5488.080	5571.440	---	---
11ax80MIMO	Ant4	5610	84.320	5567.600	5651.920	---	---
11ax80MIMO	Ant7	5610	84.800	5568.400	5653.200	---	---
11ax80MIMO	Ant4	5775	84.160	5732.600	5816.760	---	---
11ax80MIMO	Ant7	5775	85.440	5732.600	5818.040	---	---
11ax160MIMO	Ant4	5570	171.520	5485.200	5656.720	---	---
11ax160MIMO	Ant7	5570	169.920	5485.840	5655.760	---	---
11be20MIMO	Ant4	5180	22.120	5169.320	5191.440	---	---
11be20MIMO	Ant7	5180	22.760	5168.240	5191.000	---	---
11be20MIMO	Ant4	5200	21.760	5189.120	5210.880	---	---
11be20MIMO	Ant7	5200	21.400	5189.200	5210.600	---	---
11be20MIMO	Ant4	5240	22.160	5228.960	5251.120	---	---
11be20MIMO	Ant7	5240	22.600	5228.600	5251.200	---	---
11be20MIMO	Ant4	5260	21.840	5249.040	5270.880	---	---
11be20MIMO	Ant7	5260	21.560	5249.080	5270.640	---	---
11be20MIMO	Ant4	5300	22.280	5288.960	5311.240	---	---
11be20MIMO	Ant7	5300	21.920	5289.120	5311.040	---	---
11be20MIMO	Ant4	5320	23.240	5308.240	5331.480	---	---
11be20MIMO	Ant7	5320	22.520	5308.960	5331.480	---	---
11be20MIMO	Ant4	5500	22.720	5488.640	5511.360	---	---
11be20MIMO	Ant7	5500	22.160	5489.240	5511.400	---	---
11be20MIMO	Ant4	5600	22.360	5588.960	5611.320	---	---
11be20MIMO	Ant7	5600	21.320	5589.360	5610.680	---	---
11be20MIMO	Ant4	5700	21.920	5688.840	5710.760	---	---

11be20MIMO	Ant7	5700	21.800	5689.320	5711.120	---	---
11be20MIMO	Ant4	5745	22.760	5733.600	5756.360	---	---
11be20MIMO	Ant7	5745	22.440	5733.720	5756.160	---	---
11be20MIMO	Ant4	5785	22.160	5774.080	5796.240	---	---
11be20MIMO	Ant7	5785	22.600	5774.000	5796.600	---	---
11be20MIMO	Ant4	5825	21.920	5813.920	5835.840	---	---
11be20MIMO	Ant7	5825	21.520	5813.920	5835.440	---	---
11be40MIMO	Ant4	5190	42.240	5168.800	5211.040	---	---
11be40MIMO	Ant7	5190	42.640	5168.480	5211.120	---	---
11be40MIMO	Ant4	5230	41.840	5209.360	5251.200	---	---
11be40MIMO	Ant7	5230	42.000	5209.040	5251.040	---	---
11be40MIMO	Ant4	5270	42.800	5248.720	5291.520	---	---
11be40MIMO	Ant7	5270	42.240	5249.120	5291.360	---	---
11be40MIMO	Ant4	5310	42.480	5289.360	5331.840	---	---
11be40MIMO	Ant7	5310	42.240	5288.480	5330.720	---	---
11be40MIMO	Ant4	5510	42.320	5488.960	5531.280	---	---
11be40MIMO	Ant7	5510	42.320	5489.200	5531.520	---	---
11be40MIMO	Ant4	5590	42.400	5568.880	5611.280	---	---
11be40MIMO	Ant7	5590	42.560	5568.720	5611.280	---	---
11be40MIMO	Ant4	5670	42.640	5648.080	5690.720	---	---
11be40MIMO	Ant7	5670	41.920	5649.120	5691.040	---	---
11be40MIMO	Ant4	5755	42.720	5733.320	5776.040	---	---
11be40MIMO	Ant7	5755	42.240	5733.640	5775.880	---	---
11be40MIMO	Ant4	5795	42.880	5773.160	5816.040	---	---
11be40MIMO	Ant7	5795	42.160	5773.960	5816.120	---	---
11be80MIMO	Ant4	5210	85.280	5167.120	5252.400	---	---
11be80MIMO	Ant7	5210	85.120	5167.600	5252.720	---	---
11be80MIMO	Ant4	5290	85.120	5248.240	5333.360	---	---
11be80MIMO	Ant7	5290	83.040	5249.040	5332.080	---	---
11be80MIMO	Ant4	5530	85.280	5487.280	5572.560	---	---
11be80MIMO	Ant7	5530	84.000	5488.080	5572.080	---	---
11be80MIMO	Ant4	5610	86.400	5566.800	5653.200	---	---
11be80MIMO	Ant7	5610	84.960	5567.440	5652.400	---	---
11be80MIMO	Ant4	5775	82.720	5733.240	5815.960	---	---
11be80MIMO	Ant7	5775	84.480	5733.240	5817.720	---	---
11be160MIMO	Ant4	5570	169.600	5485.200	5654.800	---	---
11be160MIMO	Ant7	5570	172.800	5482.320	5655.120	---	---

Test Graphs



11a-CDD-Ant4-5180



11a-CDD-Ant7-5180



11a-CDD-Ant7-5200



11a-CDD-Ant4-5200



11a-CDD-Ant4-5240



11a-CDD-Ant7-5240



11a-CDD-Ant4-5260



11a-CDD-Ant7-5260



11a-CDD-Ant4-5300



11a-CDD-Ant7-5300



11a-CDD-Ant4-5320



11a-CDD-Ant7-5320



11a-CDD-Ant4-5500



11a-CDD-Ant7-5500



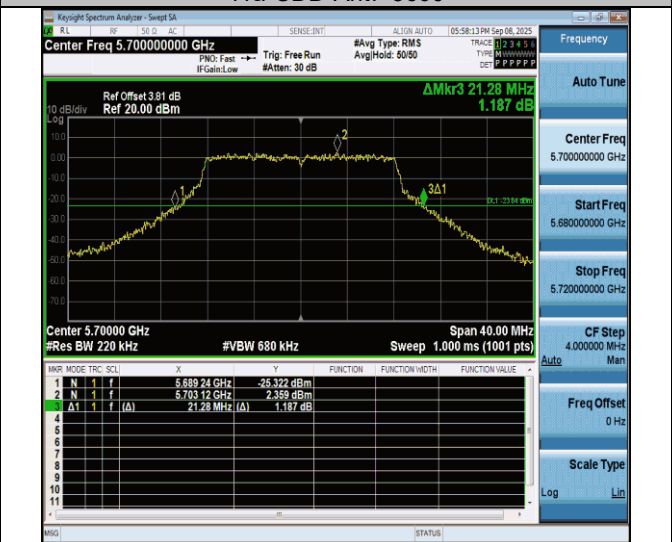
11a-CDD-Ant4-5600



11a-CDD-Ant7-5600



11a-CDD-Ant4-5700



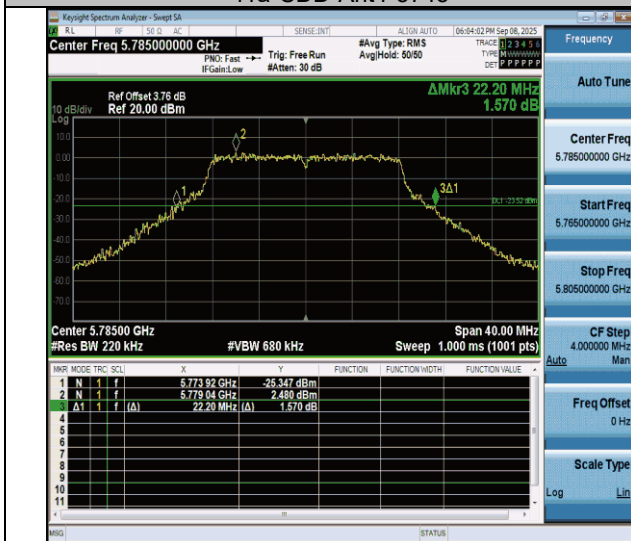
11a-CDD-Ant7-5700



11a-CDD-Ant4-5745



11a-CDD-Ant7-5745



11a-CDD-Ant4-5785



11a-CDD-Ant7-5785



11a-CDD-Ant4-5825



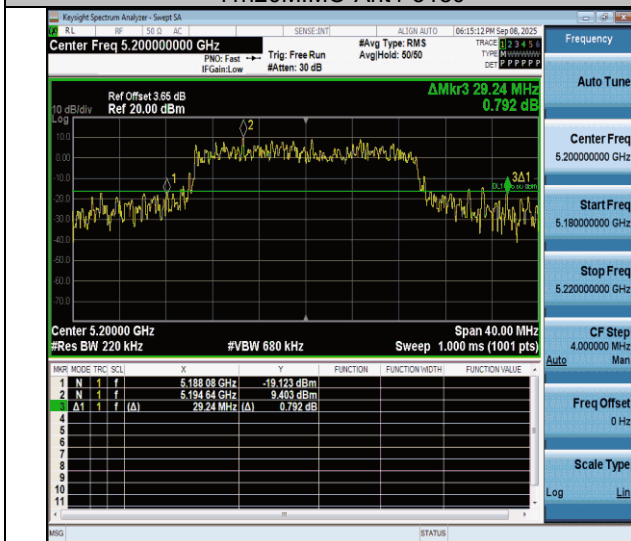
11a-CDD-Ant7-5825



11n20MIMO-Ant4-5180



11n20MIMO-Ant7-5180



11n20MIMO-Ant4-5200



11n20MIMO-Ant7-5200



11n20MIMO-Ant7-5240



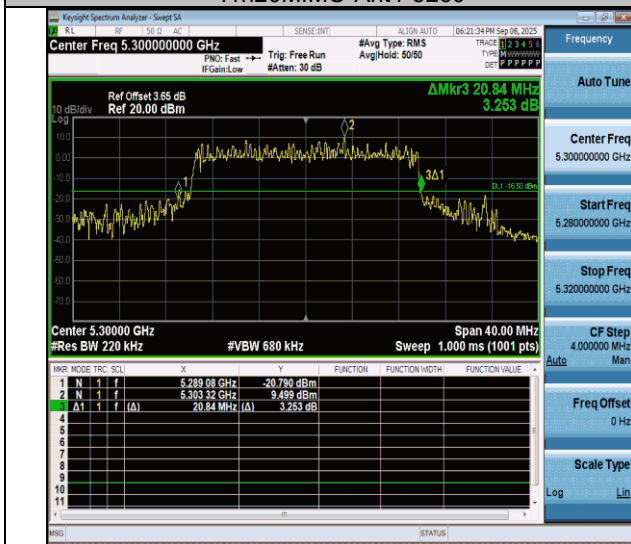
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11n20MIMO-Ant4-5260



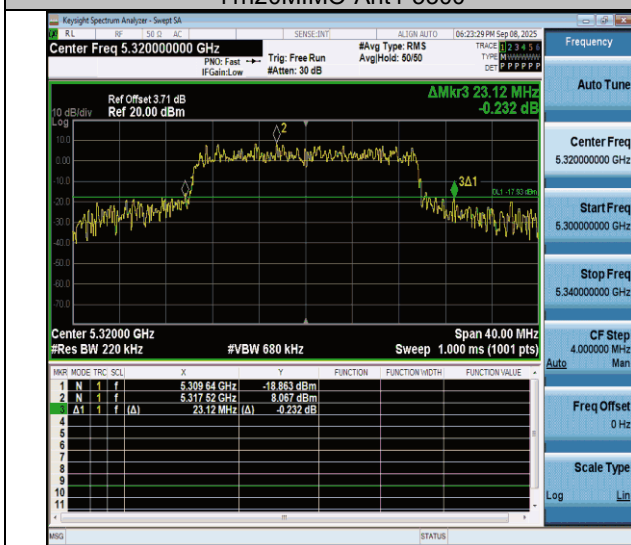
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11n20MIMO-Ant4-5300



11n20MIMO-Ant7-5300



11n20MIMO-Ant4-5320



11n20MIMO-Ant7-5320



11n20MIMO-Ant4-5500



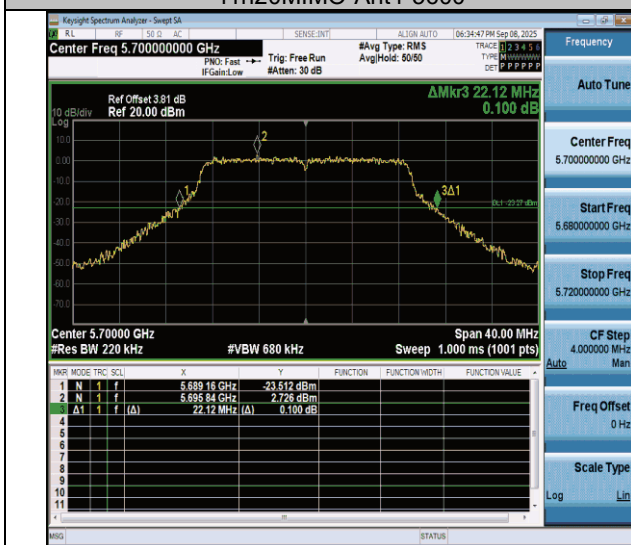
11n20MIMO-Ant7-5500



11n20MIMO-Ant4-5600



11n20MIMO-Ant7-5600



11n20MIMO-Ant4-5700



11n20MIMO-Ant7-5700



11n20MIMO-Ant4-5745



11n20MIMO-Ant7-5745



11n20MIMO-Ant4-5785



11n20MIMO-Ant7-5785



11n20MIMO-Ant4-5825



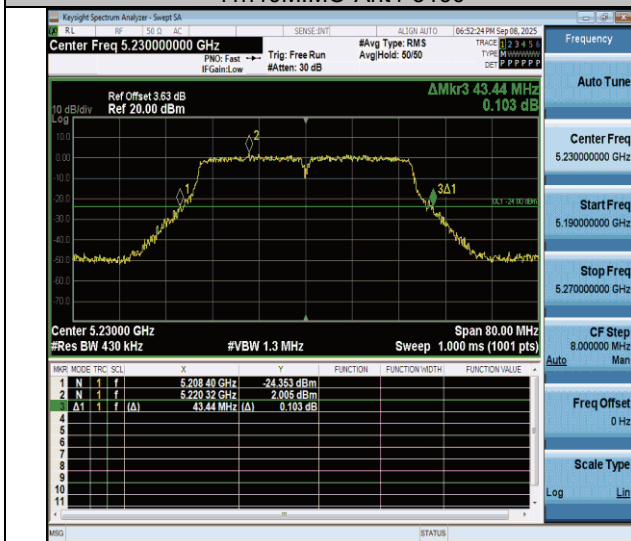
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11n40MIMO-Ant4-5190



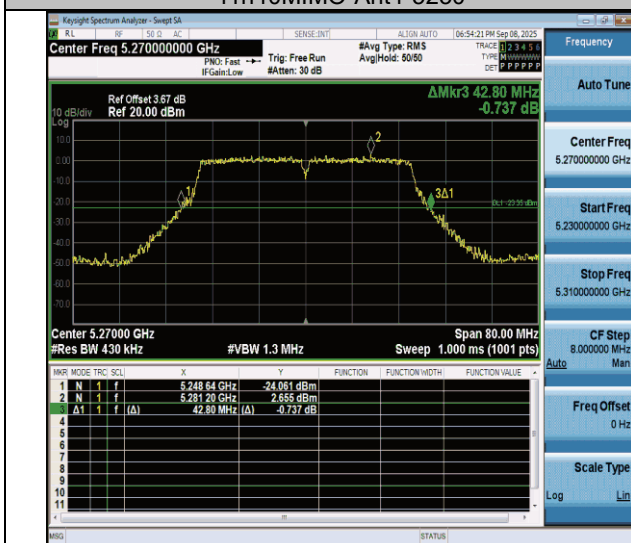
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11n40MIMO-Ant4-5230



11n40MIMO-Ant7-5230



11n40MIMO-Ant4-5270



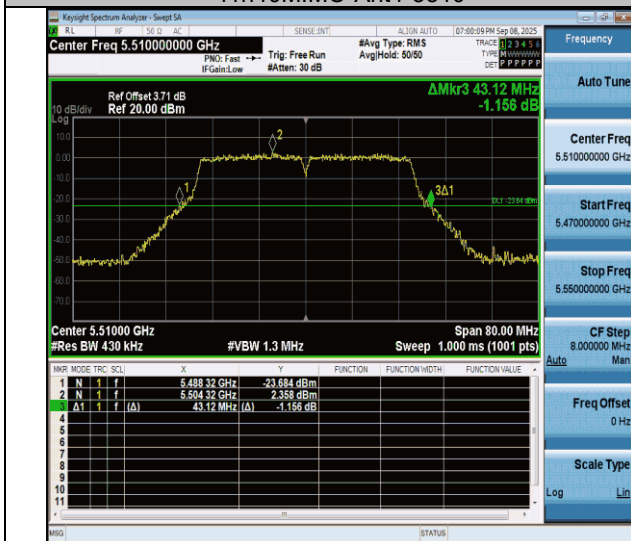
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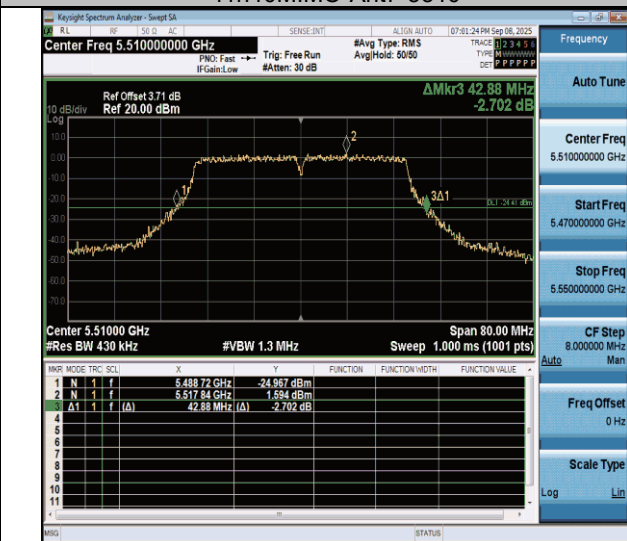
11n40MIMO-Ant4-5310



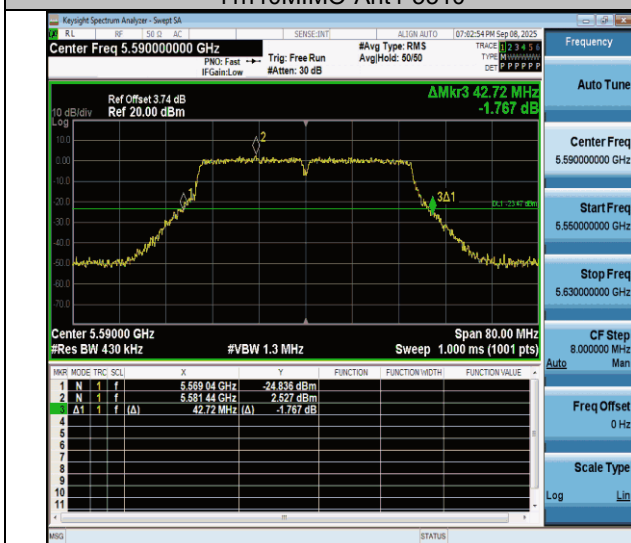
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11n40MIMO-Ant4-5510



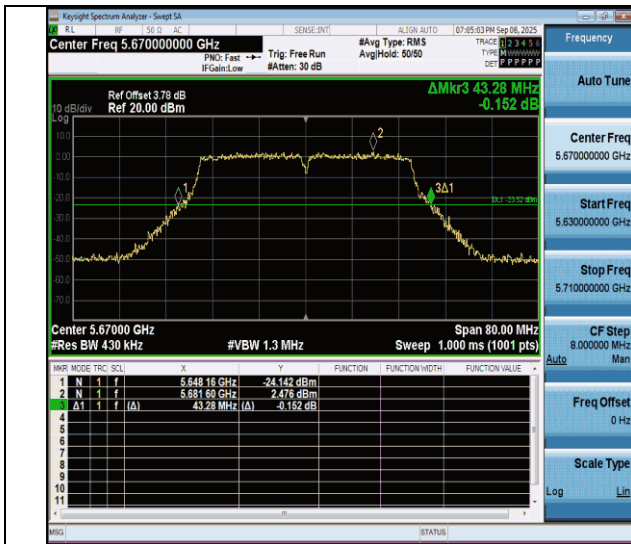
11n40MIMO-Ant7-5510



11n40MIMO-Ant4-5590



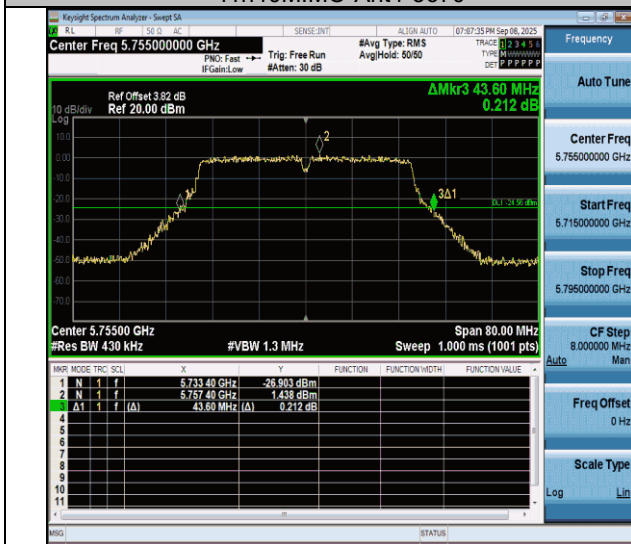
11n40MIMO-Ant7-5590



11n40MIMO-Ant4-5670



11n40MIMO-Ant7-5670



11n40MIMO-Ant4-5755



11n40MIMO-Ant7-5755



11n40MIMO-Ant4-5795



11n40MIMO-Ant7-5795



11ac20MIMO-Ant4-5180



11ac20MIMO-Ant7-5180



11ac20MIMO-Ant4-5200



11ac20MIMO-Ant7-5200



11ac20MIMO-Ant4-5240



11ac20MIMO-Ant7-5240



11ac20MIMO-Ant4-5260



11ac20MIMO-Ant7-5260



11ac20MIMO-Ant4-5300



11ac20MIMO-Ant7-5300



11ac20MIMO-Ant4-5320



11ac20MIMO-Ant7-5320



11ac20MIMO-Ant4-5500



11ac20MIMO-Ant7-5500



11ac20MIMO-Ant4-5600



11ac20MIMO-Ant7-5600



11ac20MIMO-Ant4-5700



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11ac20MIMO-Ant4-5745



11ac20MIMO-Ant7-5745



11ac20MIMO-Ant4-5785



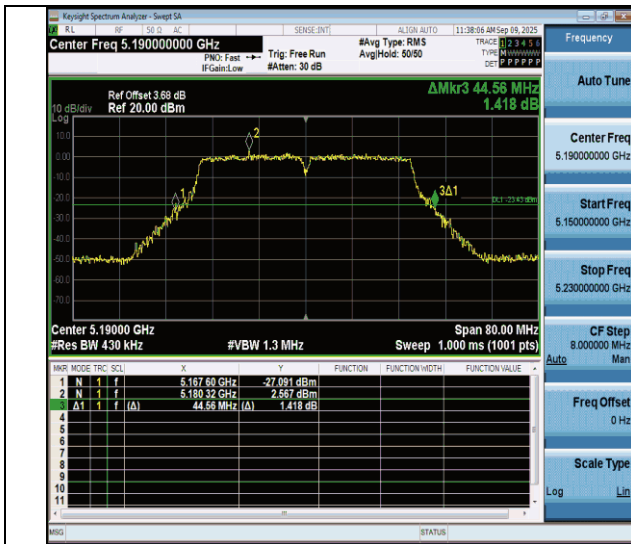
11ac20MIMO-Ant7-5785



11ac20MIMO-Ant4-5825



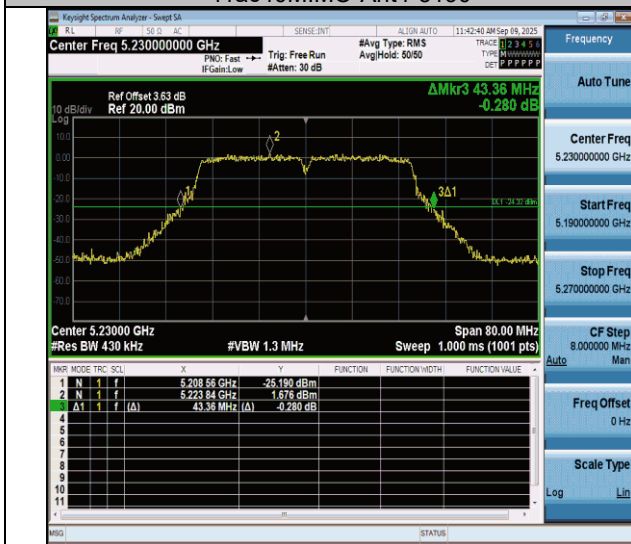
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11ac40MIMO-Ant4-5190



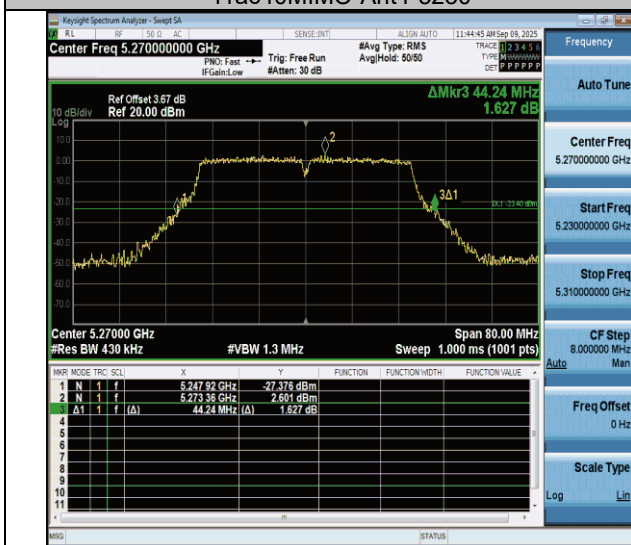
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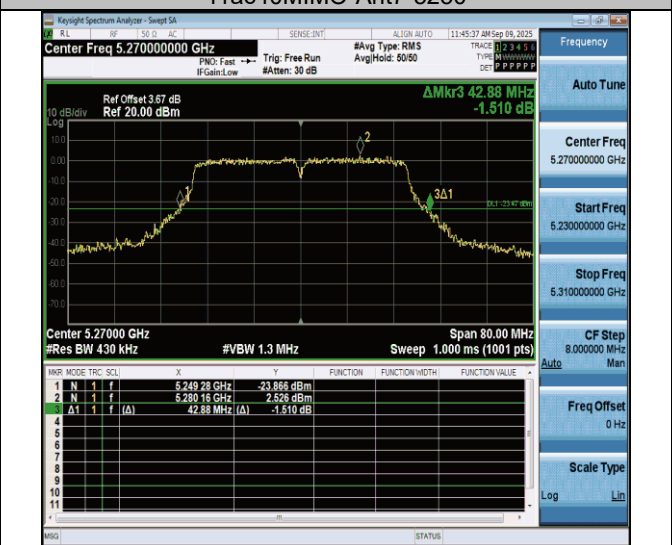
11ac40MIMO-Ant4-5230



11ac40MIMO-Ant7-5230



11ac40MIMO-Ant4-5270



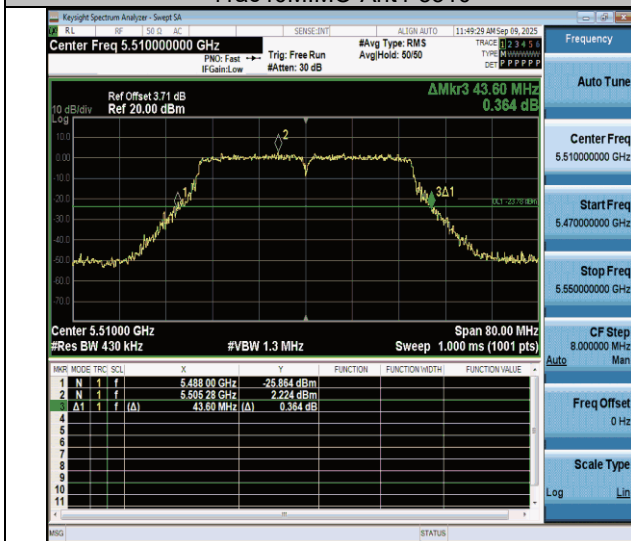
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11ac40MIMO-Ant4-5310



11ac40MIMO-Ant7-5310



11ac40MIMO-Ant4-5510



11ac40MIMO-Ant7-5510



11ac40MIMO-Ant4-5590



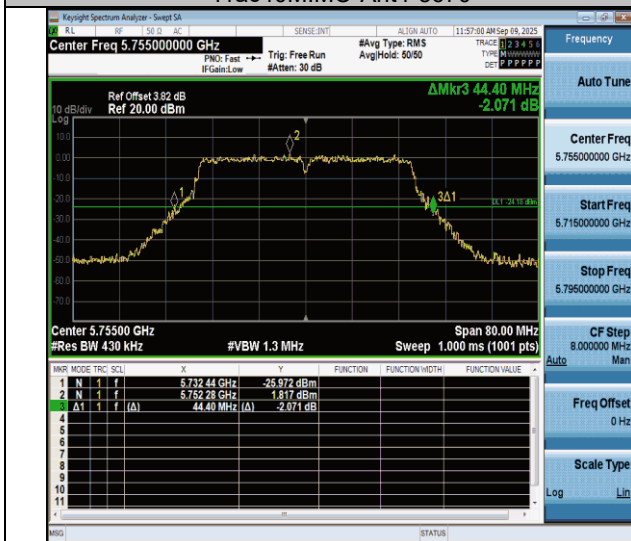
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11ac40MIMO-Ant4-5670



11ac40MIMO-Ant7-5670



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11ac40MIMO-Ant7-5755



11ac40MIMO-Ant4-5795



11ac40MIMO-Ant7-5795



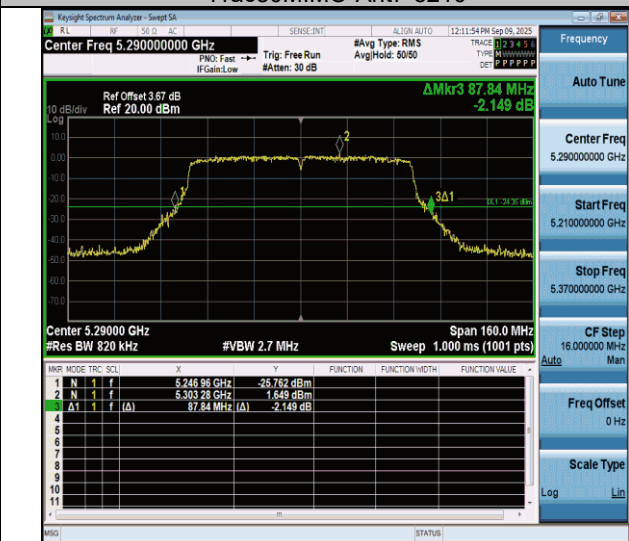
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11ac80MIMO-Ant4-5290



11ac80MIMO-Ant7-5290



11ac80MIMO-Ant4-5530



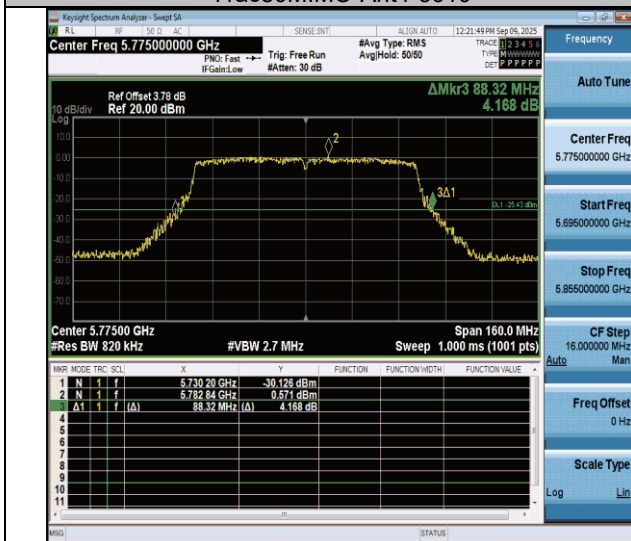
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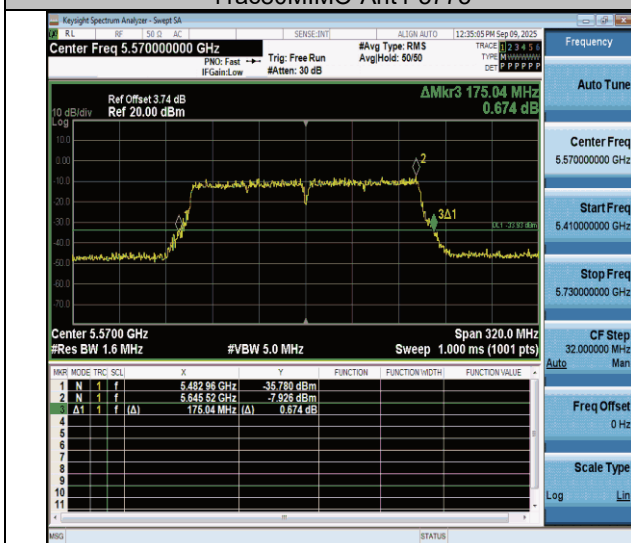
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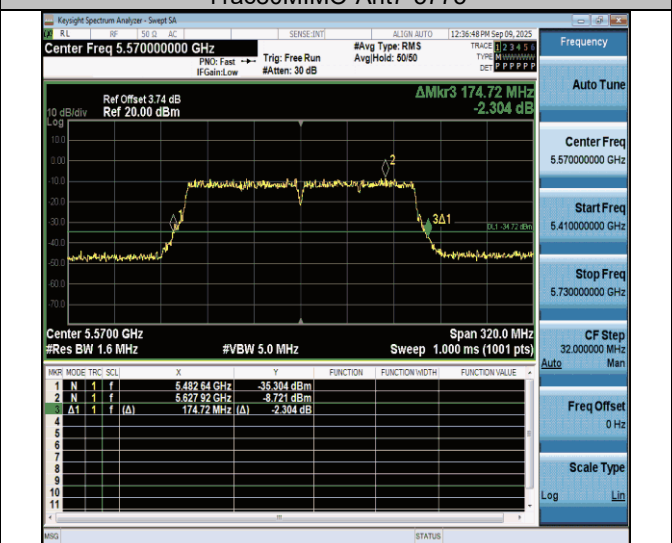
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11ac80MIMO-Ant7-5775



11ac160MIMO-Ant4-5570



11ac160MIMO-Ant7-5570