



FCC RADIO TEST REPORT

FCC ID : G95601TX
Equipment : DOCSIS 4.0 Residential Gateway
Brand Name : Vantiva
Model Name : CGM601TCOM, CGM601TCOX
Applicant : Vantiva USA LLC
4855 Peachtree Industrial Blvd. Suite 200
Norcross, Georgia 30092
Manufacturer : Vantiva
4855 Peachtree Industrial Blvd, Suite 200
Norcross GA 30092
Standard : FCC Part 15 Subpart E §15.407

The product was received on Nov. 01, 2024 and testing was performed from Nov. 27, 2024 to Jan. 16, 2025. We, Sporton International Inc. Wensan Laboratory, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval from Sporton International Inc. Wensan Laboratory, the test report shall not be reproduced except in full.

Louis Wu

Approved by: Louis Wu

Sporton International Inc. Wensan Laboratory

No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)



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History of this test report

Report No.	Version	Description	Issue Date
FR4O1125E	01	Initial issue of report	Jan. 23, 2025

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.403	6dB & 26dB Bandwidth	Pass	-
3.1	2.1049	99% Occupied Bandwidth	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	Pass	-
3.3	15.407(a)	Power Spectral Density	Pass	-
3.4	15.407(b)	Unwanted Emissions	Pass	-
3.5	15.207	AC Conducted Emission	Pass	-
3.6	15.203	Antenna Requirement	Pass	-

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Wei Chen

Report Producer: Ming Chen

1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature	
General Specs Bluetooth - LE, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax/be, Wi-Fi 5GHz 802.11a/n/ac/ax/be, Wi-Fi 6GHz 802.11a/ax/be, and ZigBee.	
Antenna Type WLAN: Monopole Antenna	

Antenna information		
5725 MHz ~ 5850 MHz	Peak Gain (dBi)	<Ant. 5> :4.66
		<Ant. 6> :5.19
		<Ant. 7> :5.18
		<Ant. 8> :4.84

Antenna information for Directional Gain		
5725 MHz ~ 5850 MHz	Peak Gain (dBi)	MIMO <Ant. 5+6+7+8>: 5.76

Remark: The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

Test Site	Sporton International Inc. EMC & Wireless Communications Laboratory
Test Site Location	No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.) TEL: +886-3-327-3456 FAX: +886-3-328-4978
Test Site No.	Sporton Site No. CO05-HY (TAF Code: 1190)
Remark	The AC Conducted Emission test item subcontracted to Sporton International Inc. EMC & Wireless Communications Laboratory.

Note: The test site complies with ANSI C63.4 2014 requirement.

Test Site	Sporton International Inc. Wensan Laboratory
Test Site Location	No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.) TEL: +886-3-327-0868 FAX: +886-3-327-0855
Test Site No.	Sporton Site No. TH05-HY, 03CH15-HY

Note: The test site complies with ANSI C63.4 2014 requirement.

FCC designation No.: TW1190 and TW3786

1.4 Applicable Standards

According to the specifications declared by the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 414788 D01 Radiated Test Site v01r01.
- ♦ FCC KDB 662911 D01 Multiple Transmitter Output v02r01.
- ♦ ANSI C63.10-2013

Remark:

1. All the test items were validated and recorded in accordance with the standards without any modification during the testing.
2. The TAF code is not including all the FCC KDB listed without accreditation.
3. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: conduction emission (150 kHz to 30 MHz), radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, the measured emission level of the EUT was maximized by rotating the EUT on a turntable, adjusting the orientation of the EUT and EUT antenna in three orthogonal axis (X: flat, Y: portrait, Z: landscape), and adjusting the measurement antenna orientation, following C63.10 exploratory test procedures and only the worst case emissions were reported in this report.
- b. AC power line Conducted Emission was tested under maximum output power.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5725-5850 MHz Band 4 (U-NII-3)	149	5745	157	5785
	151*	5755	159*	5795
	153	5765	161	5805
	155#	5775	165	5825

Note:

1. The above Frequency and Channel with "*" are 802.11n HT40 and 802.11ac VHT40 and 802.11ax HE40 and 802.11be EHT40.
2. The above Frequency and Channel with "#" are 802.11ac VHT80 and 802.11ax HE80 and 802.11be EHT80.



2.2 Test Mode

Only full RU is supported for 11ax and 11be.

The SISO mode conducted power is covered by MIMO mode per chain, so only the MIMO mode is tested.

The power for 802.11n mode is smaller than 802.11ac mode, so all other conducted test is covered by 802.11ac mode.

The power for 802.11ax mode is smaller than 802.11be mode, so all other conducted and radiated test is covered by 802.11be mode.

The final test modes include the worst data rates for each modulation shown in the table below.



<Nss = 1>

CDD Mode

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20 (Covered by VHT20)	MCS0
802.11n HT40 (Covered by VHT40)	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0
802.11ax HE20 (Covered by EHT20)	MCS0
802.11ax HE40 (Covered by EHT40)	MCS0
802.11ax HE80 (Covered by EHT80)	MCS0
802.11be EHT20	MCS0
802.11be EHT40	MCS0
802.11be EHT80	MCS0

TXBF Mode

Modulation	Data Rate
802.11n HT20 (Covered by VHT20)	MCS0
802.11n HT40 (Covered by VHT40)	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0
802.11ax HE20 (Covered by EHT20)	MCS0
802.11ax HE40 (Covered by EHT40)	MCS0
802.11ax HE80 (Covered by EHT80)	MCS0
802.11be EHT20	MCS0
802.11be EHT40	MCS0
802.11be EHT80	MCS0

<Nss = 2>

CDD Mode

Modulation	Data Rate
802.11a	6 Mbps
802.11n HT20 (Covered by VHT20)	MCS0
802.11n HT40 (Covered by VHT40)	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0
802.11ax HE20 (Covered by EHT20)	MCS0
802.11ax HE40 (Covered by EHT40)	MCS0
802.11ax HE80 (Covered by EHT80)	MCS0
802.11be EHT20	MCS0
802.11be EHT40	MCS0
802.11be EHT80	MCS0

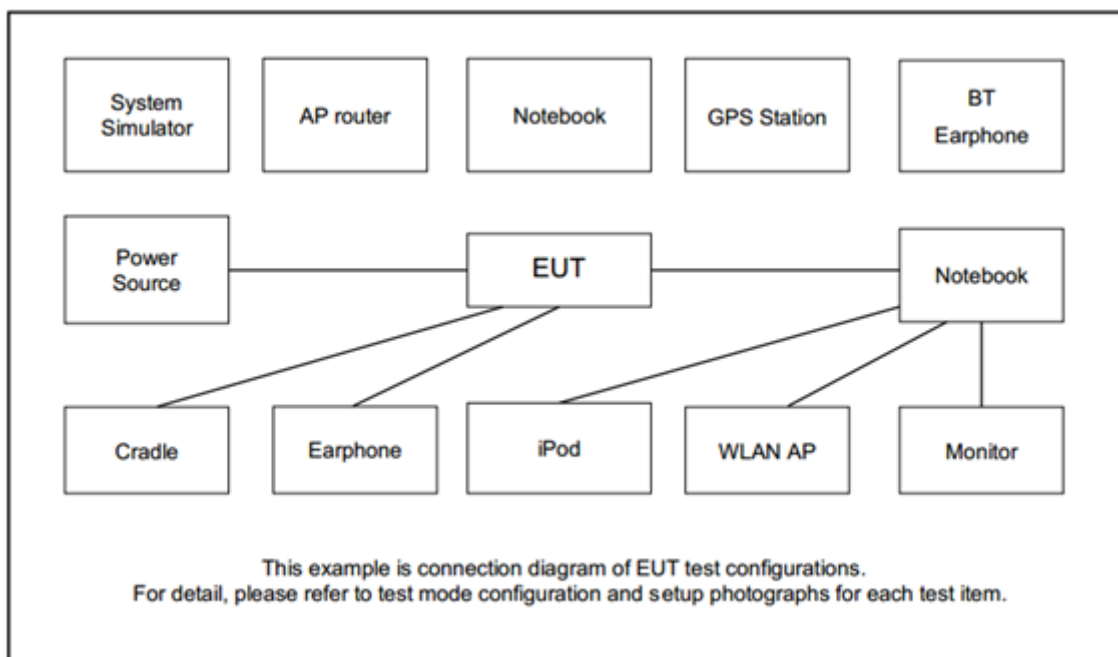
TXBF Mode

Modulation	Data Rate
802.11n HT20 (Covered by VHT20)	MCS0
802.11n HT40 (Covered by VHT40)	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0
802.11ax HE20 (Covered by EHT20)	MCS0
802.11ax HE40 (Covered by EHT40)	MCS0
802.11ax HE80 (Covered by EHT80)	MCS0
802.11be EHT20	MCS0
802.11be EHT40	MCS0
802.11be EHT80	MCS0

Remark: The conducted power level of each chain in MIMO mode is equal or higher than SISO mode.

Test Cases	
AC Conducted Emission	Mode 1 WLAN (5GHz) Link + LAN Link + AC Adapter
Remark: - The detailed test modes are shown in Appendix C. - For radiation spurious emission, the modulation and the data rate picked for testing are determined by the Max. RF conducted power.	

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Brand Name	Model Name	FCC ID	Data Cable	Power Cord
1.	Notebook	DELL	Latitude 3420	FCC DoC	N/A	AC I/P: Unshielded, 1.2 m DC O/P: Shielded, 1.8 m

2.5 EUT Operation Test Setup

The RF test items, utility “Access Manual Tool3.3.0.9” was installed in Notebook which was programmed in order to make the EUT get into the engineering modes to provide channel selection, power level, data rate and the application type and for continuous transmitting signals.

For TXBF mode, the modulation modes and data rates manipulated by the command lines in the engineering program made the EUT link to another EUT by power under the normal operation. The “Access Manual Tool3.3.0.9” software tool was used to enable the EUT to transmit signals continuously.

2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

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

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 4.2 dB and 10 dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 4.2 + 10 = 14.2 \text{ (dB)}\end{aligned}$$

3 Test Result

3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement

3.1.1 Description of 6dB and 26dB and 99% Occupied Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

26dB and 99% Occupied bandwidth are reporting only.

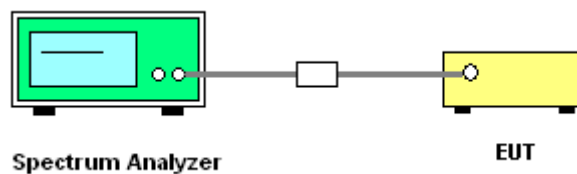
3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.1.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section C) Emission bandwidth for the band 5.725-5.85 GHz
2. Set RBW = 100 kHz.
3. Set the VBW $\geq 3 \times$ RBW.
4. Detector = Peak.
5. Trace mode = max hold
6. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.
7. Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result of 6dB and 26dB and 99% Occupied Bandwidth

Please refer to Appendix A.



3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.2.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.2.3 Test Procedures

<CDD Modes>

The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Method PM-G (Measurement using a gated RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter.
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01

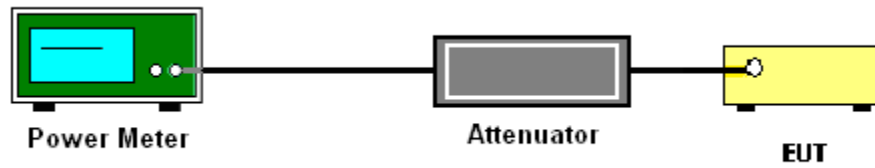
<TXBF Modes>

The testing follows Method PM-G of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01 for TXBF modes.

Method PM-G (Measurement using a gated RF average power meter):

1. Measurement is performed using a wideband RF power meter.
2. The EUT is configured to transmit at its maximum power control level.
3. Measure the average power of the transmitter
4. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.
5. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

3.2.4 Test Setup



3.2.5 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

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

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section F) Maximum power spectral density.

<CDD Modes and TxBF Modes>

Method SA-2

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

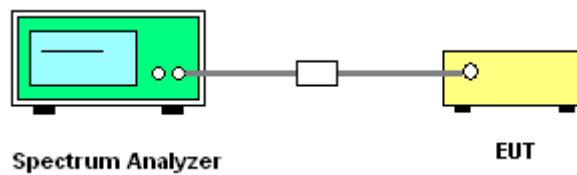
- Measure the duty cycle.
 - Set span to encompass the entire emission bandwidth (EBW) of the signal.
 - Set RBW = 300kHz.
 - Set VBW ≥ 1 MHz.
 - Add $10 \log(500 \text{ kHz/RBW})$ to the measured result, whereas RBW ($<500 \text{ kHz}$) is the reduced resolution bandwidth of the spectrum analyzer set during measurement
 - Number of points in sweep $\geq 2 \text{ Span} / \text{RBW}$.
 - Sweep time = auto.
 - Detector = RMS
 - Trace average at least 100 traces in power averaging mode.
 - Add $10 \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add $10 \log(1/0.25) = 6 \text{ dB}$ if the duty cycle is 25 percent.
1. The RF output of EUT is connected to the spectrum analyzer by a low loss cable.
 2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3. For MIMO mode, calculation method follows FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

Method (c): Measure and add $10 \log(N_{\text{ANT}})$ dB.

With this technique, spectrum measurements are performed at each output of the device, but rather than summing the spectra or the spectral peaks across the outputs, the quantity $10 \log(N_{\text{ANT}})$ dB is added to each spectrum value before comparing to the emission limit. The addition of $10 \log(N_{\text{ANT}})$ dB serves to apportion the emission limit among the N_{ANT} outputs so that each output is permitted to contribute no more than $1/N_{\text{ANT}}^{\text{th}}$ of the PSD limit.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.

3.4 Unwanted Emissions Measurement

3.4.1 Limit of Unwanted Emissions

- (1) For transmitters operating in the 5.725-5.85 GHz band:

15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

- (2) Unwanted spurious emissions falls in restricted bands shall comply with the general field strength limits as below table,

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

Note: The following formula is used to convert the EIRP to field strength.

$$E = \frac{1000000\sqrt{30P}}{3} \text{ } \mu\text{V/m, where P is the eirp (Watts)}$$

EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.3

- (3) KDB789033 D02 v02r01 G)2)c)

(i) Sections 15.407(b)(1-3) specifies the unwanted emissions limit for the U-NII-1 and U-NII-2 bands. As specified, emissions above 1000 MHz that are outside of the restricted bands are subject to a peak emission limit of -27 dBm/MHz.

(ii) Section 15.407(b)(4) specifies the unwanted emissions limit for the U-NII-3 band. A band emissions mask is specified in Section 15.407(b)(4)(i). The emission limits are based on the use of a peak detector.

3.4.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

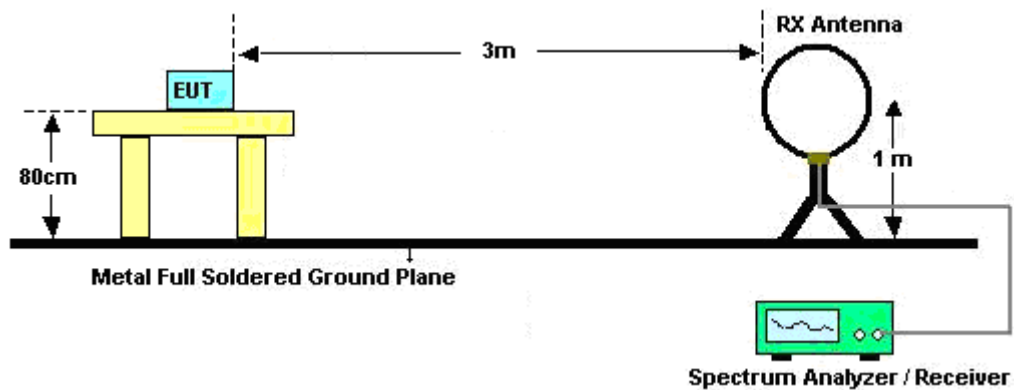
3.4.3 Test Procedures

1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
Section G) Unwanted emissions measurement.
(1) Procedure for Unwanted Emissions Measurements Below 1000 MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
(2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW $\geq$ 3 MHz
 - Detector = Peak
 - Sweep time = auto
 - Trace mode = max hold
(3) Procedures for Average Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq$ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT is placed on a turntable with 0.8 meter for frequency below 1 GHz and 1.5 meter for frequency above 1 GHz respectively above ground.
3. The EUT is set 3 meters away from the receiving antenna which is mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT is arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.

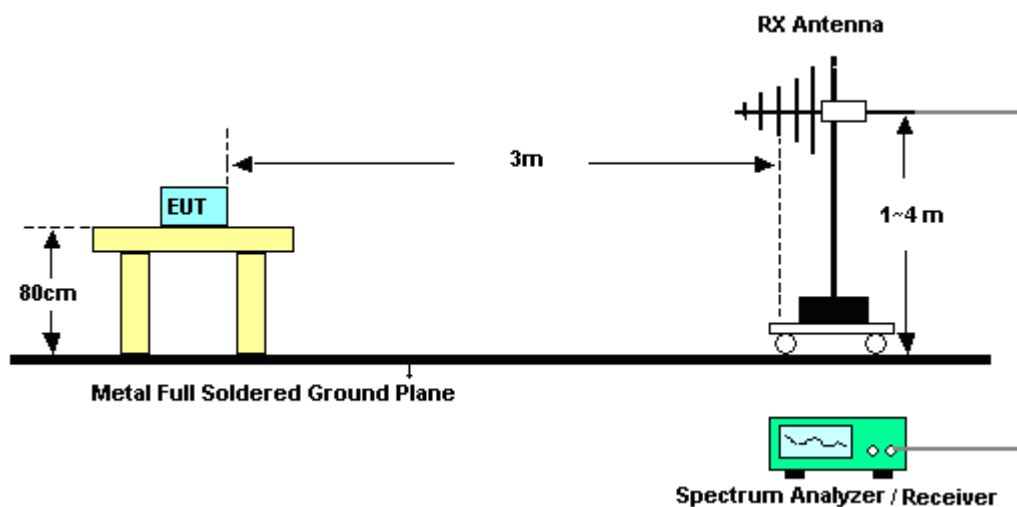
6. Radiated testing below 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading. When there is no suspected emission found and the emission level is with at least 6 dB margin against QP limit line, the position is marked as “-”.
7. Radiated testing above 1 GHz is performed by adjusting the antenna tower from 1 m to 4 m and by rotating the turn table from 0 degree to 360 degrees to find the peak maximum hold reading for scanning all frequencies. When there is no suspected emission found and the harmonic emission level is with at least 6 dB margin against average limit line, the position is marked as “-”.

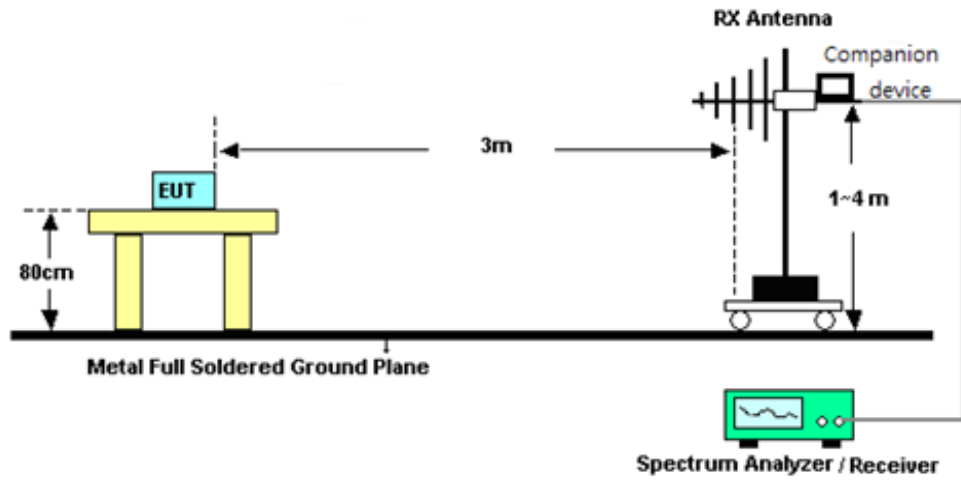
3.4.4 Test Setup

For radiated emissions below 30MHz

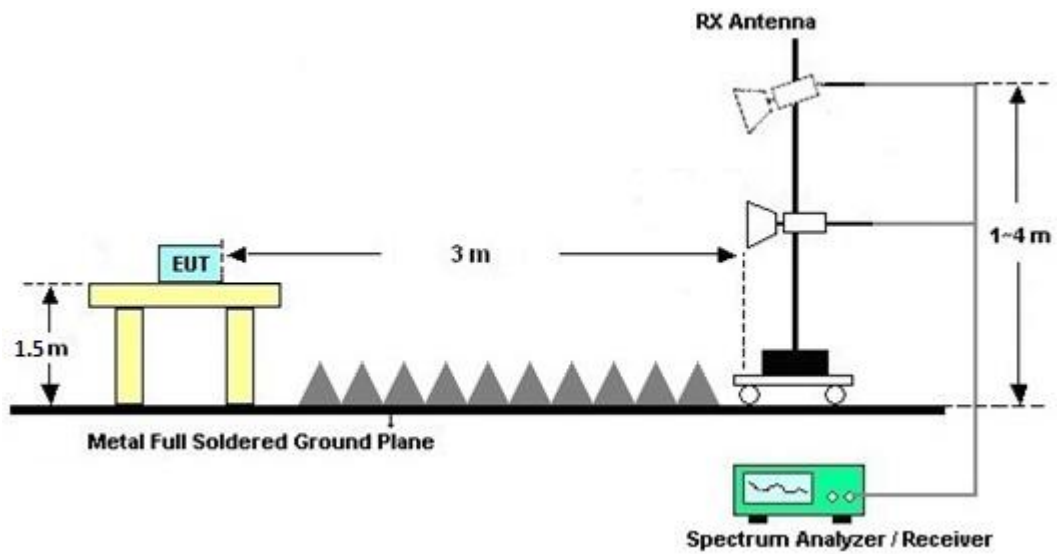


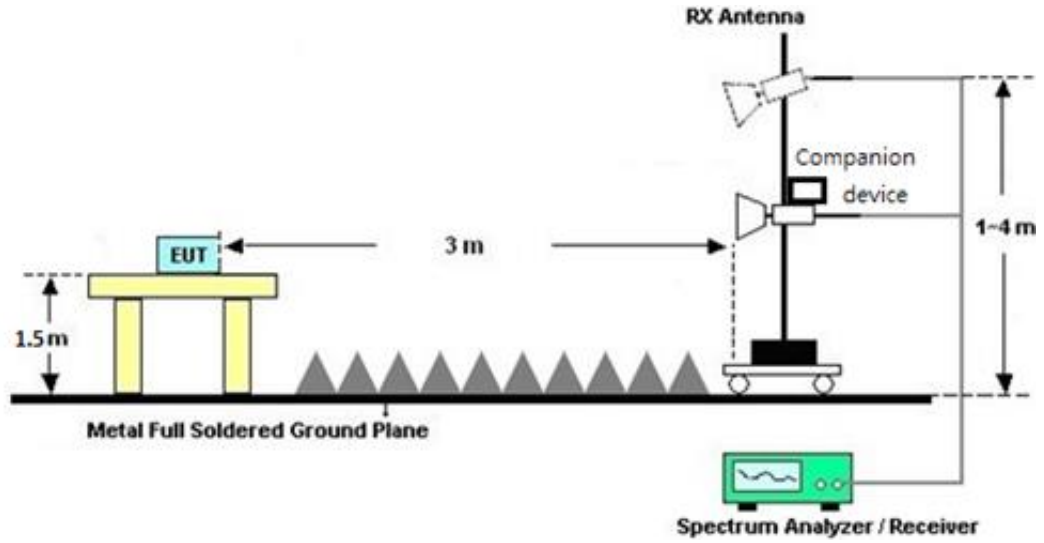
For radiated emissions from 30MHz to 1GHz



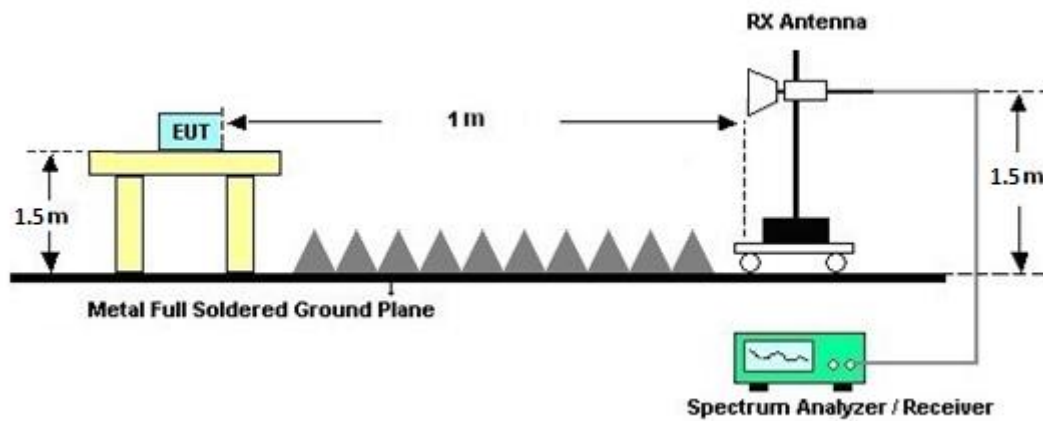
<TXBF Modes>


For radiated test from 1GHz to 18GHz

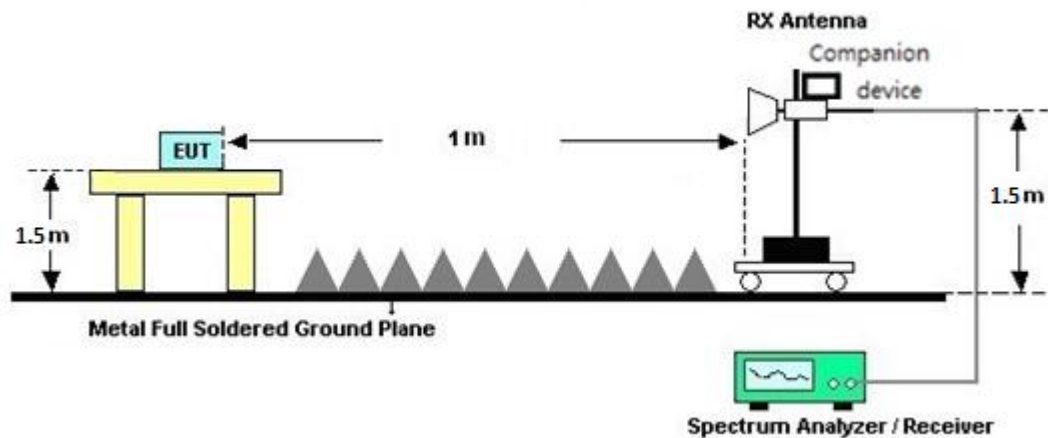


<TXBF Modes>


For radiated test above 18GHz



<TXBF Modes>



3.4.5 Test Results of Radiated Emissions (9 kHz ~ 30 MHz)

The low frequency, which starts from 9 kHz to 30 MHz, is pre-scanned and the result which is 20 dB lower than the limit line is not reported.

There is adequate comparison measurement of both open-field test site and alternative test site - semi-Anechoic chamber according to 414788 D01 Radiated Test Site v01r01, and the result came out very similar.

3.4.6 Test Result of Radiated Band Edges

Please refer to Appendix C.

3.4.7 Duty Cycle

Please refer to Appendix D.

3.4.8 Test Result of Unwanted Radiated Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix C and.

3.5 AC Conducted Emission Measurement

3.5.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted 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.

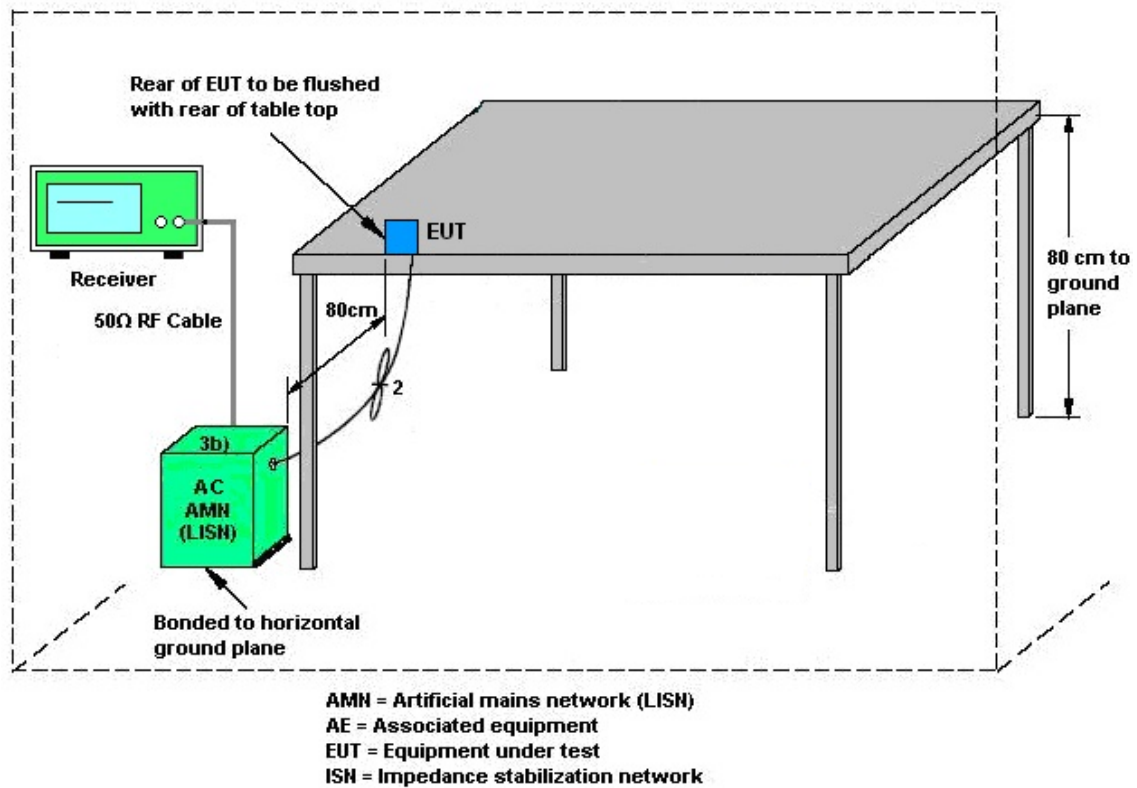
3.5.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.5.3 Test Procedures

1. The EUT is placed 0.4 meter away from the conducting wall of the shielding room, and is kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN shall be used.
6. Both Line and Neutral shall be tested in order to find out the maximum conducted emission.
7. The frequency range from 150 kHz to 30 MHz is scanned.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.

3.5.4 Test Setup



3.5.5 Test Result of AC Conducted Emission

Please refer to Appendix B.



3.6 Antenna Requirements

3.6.1 Standard Applicable

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.

3.6.2 Antenna Anti-Replacement Construction

Antenna permanently attached.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ChainTek	APC-1000W	N/A	N/A	N/A	Nov. 27, 2024	N/A	Conduction (CO05-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102388	9kHz~3.6GHz	Dec. 06, 2023	Nov. 27, 2024	Dec. 05, 2024	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Oct. 14, 2024	Nov. 27, 2024	Oct. 13, 2025	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100081	9kHz~30MHz	Nov. 14, 2024	Nov. 27, 2024	Nov. 13, 2025	Conduction (CO05-HY)
Software	Rohde & Schwarz	EMC32	N/A	N/A	N/A	Nov. 27, 2024	N/A	Conduction (CO05-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	00691	N/A	Jul. 30, 2024	Nov. 27, 2024	Jul. 29, 2025	Conduction (CO05-HY)
LISN Cable	MVE	RG-400	MQT24082501	N/A	Oct. 15, 2024	Nov. 27, 2024	Oct. 14, 2025	Conduction (CO05-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Aug. 29, 2024	Dec. 04, 2024~Jan. 14, 2025	Aug. 28, 2025	Radiation (03CH15-HY)
Bilog Antenna	TESEQ	CBL 6111D & 00800N1D01N-06	41912 & 05	30MHz~1GHz	Feb. 04, 2024	Dec. 04, 2024~Jan. 14, 2025	Feb. 03, 2025	Radiation (03CH15-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	9120D-02294	1GHz~18GHz	Jun. 20, 2024	Dec. 04, 2024~Jan. 14, 2025	Jun. 19, 2025	Radiation (03CH15-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1220	18GHz~40GHz	Oct. 25, 2024	Dec. 04, 2024~Jan. 14, 2025	Oct. 24, 2025	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 25, 2023	Dec. 04, 2024~Dec. 23, 2024	Dec. 24, 2024	Radiation (03CH15-HY)
Amplifier	SONOMA	310N	363440	9kHz~1GHz	Dec. 24, 2024	Dec. 24, 2024~Jan. 14, 2025	Dec. 23, 2025	Radiation (03CH15-HY)
Preamplifier	EMEC	EM01G18G	060837	1GHz~18GHz	Feb. 15, 2024	Dec. 04, 2024~Jan. 14, 2025	Feb. 14, 2025	Radiation (03CH15-HY)
Preamplifier	EM Electronics	EM01G18G	060802	1GHz~18GHz	Feb. 29, 2024	Dec. 04, 2024~Jan. 14, 2025	Feb. 28, 2025	Radiation (03CH15-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	May 27, 2024	Dec. 04, 2024~Jan. 14, 2025	May 26, 2025	Radiation (03CH15-HY)
Spectrum Analyzer	Keysight	N9010B	MY60241058	10Hz~44GHz	Jul. 11, 2024	Dec. 04, 2024~Jan. 14, 2025	Jul. 10, 2025	Radiation (03CH15-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	20MHz~8.4GHz	Oct. 16, 2024	Dec. 04, 2024~Jan. 14, 2025	Oct. 15, 2025	Radiation (03CH15-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Dec. 04, 2024~Jan. 14, 2025	N/A	Radiation (03CH15-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Dec. 04, 2024~Jan. 14, 2025	N/A	Radiation (03CH15-HY)
Software	Audix	E3_V9_230621	RK-002394	N/A	N/A	Dec. 04, 2024~Jan. 14, 2025	N/A	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 104, 102E	MY582185/4, 519228/2, 803950/2	N/A	Jun. 11, 2024	Dec. 04, 2024~Jan. 14, 2025	Jun. 10, 2025	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804011/2, 804012/2	18-40G	Jan. 02, 2024	Dec. 04, 2024~Dec. 30, 2024	Jan. 01, 2025	Radiation (03CH15-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	804011/2, 804012/2	18-40G	Dec. 31, 2024	Dec. 31, 2024~Jan. 14, 2025	Dec. 30, 2025	Radiation (03CH15-HY)
Filter	Wainwright	WLJ4-1000-1530-6000-40ST	SN4	1.53GHz Low Pass Filter	Jun. 05, 2024	Dec. 04, 2024~Jan. 14, 2025	Jun. 04, 2025	Radiation (03CH15-HY)
Filter	Wainwright	HKK12-2700-3000-18000-60ST	SN4	3GHz High Pass Filter	Jun. 05, 2024	Dec. 04, 2024~Jan. 14, 2025	Jun. 04, 2025	Radiation (03CH15-HY)
Filter	Wainwright	WHKX8-5872.5-6750-18000-40ST	SN6	6.75GHz High Pass Filter	Jun. 05, 2024	Dec. 04, 2024~Jan. 14, 2025	Jun. 04, 2025	Radiation (03CH15-HY)
Hygrometer	TECPEL	DTM-302	SN4	N/A	Aug. 29, 2024	Dec. 04, 2024~Jan. 14, 2025	Aug. 28, 2025	Radiation (03CH15-HY)



Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 01, 2024	Nov. 11, 2024~ Jan. 16, 2025	Oct. 30, 2025	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	17I00015SNO 36 (NO:35 144)	10MHz~6GHz	Aug. 20, 2024	Nov. 11, 2024~ Jan. 16, 2025	Aug. 19, 2025	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV3044	101466	10HZ~44GHZ	Jan. 24, 2024	Nov. 11, 2024~ Jan. 16, 2025	Jan. 23, 2025	Conducted (TH05-HY)
Switch Control Mainframe	Burgeon	ETF-058	EC1300484 (BOX3)	N/A	May 20, 2024	Nov. 11, 2024~ Jan. 16, 2025	May 19, 2025	Conducted (TH05-HY)
Software	Sporton	BTWIFI_Final version_24121 1	N/A	Conducted Other Test Item	N/A	Nov. 11, 2024~ Jan. 16, 2025	N/A	Conducted (TH05-HY)

5 Measurement Uncertainty

Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	3.7 dB
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Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	6.30 dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 6000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	4.40 dB
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Uncertainty of Radiated Emission Measurement (6000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.40 dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.20 dB
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Appendix A. Test Result of Conducted Test Items

Test Engineer	Eason Huang and Ju Chang	Temperature	21~25	°C
Test Date	2024/11/11-2025/1/16	Relative Humidity	51~54	%

<CDD Mode>

<Nss = 1>

Report Number :

FR401125E

TEST RESULTS DATA
6dB and 99% OBW

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8																		
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	26dB Bandwidth (MHz)				6 dB Bandwidth (MHz)				99% Bandwidth (MHz)				6 dB Min. Limit (MHz)	Pass /Fail
					Ant 5	Ant 6	Ant 7	Ant 8	Ant 5	Ant 6	Ant 7	Ant 8	Ant 5	Ant 6	Ant 7	Ant 8		
11a	6Mbps	4	149	5745	23.760	22.160	22.088	23.360	16.345	16.360	16.380	16.350	17.702	17.371	17.287	17.306	0.5	Pass
11a	6Mbps	4	157	5785	22.424	22.112	21.968	24.184	16.370	16.355	16.365	16.350	17.532	17.321	17.222	17.475	0.5	Pass
11a	6Mbps	4	165	5825	23.040	24.656	22.088	25.224	16.350	16.360	16.345	16.360	17.535	17.473	17.258	17.550	0.5	Pass
VHT20	MCS0	4	149	5745	23.328	22.232	23.296	25.040	17.580	17.605	17.590	17.605	18.376	18.169	18.237	18.318	0.5	Pass
VHT20	MCS0	4	157	5785	27.608	22.560	22.216	27.256	17.585	17.610	17.590	17.605	18.516	18.221	18.250	18.363	0.5	Pass
VHT20	MCS0	4	165	5825	26.736	23.872	23.624	28.976	17.580	17.600	17.580	17.600	18.484	18.228	18.277	18.392	0.5	Pass
VHT40	MCS0	4	151	5755	59.920	52.832	64.000	41.648	36.351	36.387	36.369	36.369	37.090	36.982	37.113	36.911	0.5	Pass
VHT40	MCS0	4	159	5795	58.448	52.576	53.568	51.360	36.333	36.369	36.351	36.360	37.109	36.952	36.971	37.028	0.5	Pass
VHT80	MCS0	4	155	5775	86.176	86.592	83.392	85.216	75.488	76.320	75.744	75.712	75.907	75.878	75.908	75.941	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
					Ant 5	Ant 6	Ant 7	Ant 8	SUM	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	
11a	6Mbps	4	149	5745	23.50	24.80	23.4	24.00	29.98	30.00	5.19	Pass
11a	6Mbps	4	157	5785	23.60	24.30	23.3	23.80	29.79	30.00	5.19	Pass
11a	6Mbps	4	165	5825	23.60	24.50	23.4	23.80	29.87	30.00	5.19	Pass
HT20	MCS0	4	149	5745	23.10	24.10	22.9	23.60	29.47	30.00	5.19	Pass
HT20	MCS0	4	157	5785	23.40	23.70	22.9	23.10	29.31	30.00	5.19	Pass
HT20	MCS0	4	165	5825	23.00	24.00	22.6	23.40	29.30	30.00	5.19	Pass
HT40	MCS0	4	151	5755	23.40	24.10	22.3	23.60	29.42	30.00	5.19	Pass
HT40	MCS0	4	159	5795	23.60	24.10	22.3	23.30	29.39	30.00	5.19	Pass
VHT20	MCS0	4	149	5745	23.20	24.20	23	23.70	29.57	30.00	5.19	Pass
VHT20	MCS0	4	157	5785	23.50	23.80	23	23.20	29.41	30.00	5.19	Pass
VHT20	MCS0	4	165	5825	23.10	24.10	22.7	23.50	29.40	30.00	5.19	Pass
VHT40	MCS0	4	151	5755	23.50	24.20	22.4	23.70	29.52	30.00	5.19	Pass
VHT40	MCS0	4	159	5795	23.70	24.20	22.4	23.40	29.49	30.00	5.19	Pass
VHT80	MCS0	4	155	5775	23.80	24.50	22.9	23.60	29.76	30.00	5.19	Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8																
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Duty Factor(dBm)				Average Power Density (dBm/500kHz)					Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass /Fail
					Ant 5	Ant 6	Ant 7	Ant 8	Ant 5	Ant 6	Ant 7	Ant 8	SUM	Ant 5+6+7+8	Ant 5+6+7+8	
11a	6Mbps	4	149	5745	0.23	0.23	0.23	0.23	8.41	9.43	7.99	8.57	15.45	30.00	5.74	Pass
11a	6Mbps	4	157	5785	0.23	0.23	0.23	0.23	8.45	8.95	7.80	8.21	14.97	30.00	5.74	Pass
11a	6Mbps	4	165	5825	0.23	0.23	0.23	0.23	8.48	9.36	8.15	8.65	15.38	30.00	5.74	Pass
VHT20	MCS0	4	149	5745	0.08	0.08	0.08	0.08	7.57	8.77	7.42	8.07	14.79	30.00	5.74	Pass
VHT20	MCS0	4	157	5785	0.08	0.08	0.08	0.08	7.82	8.22	7.25	7.69	14.24	30.00	5.74	Pass
VHT20	MCS0	4	165	5825	0.08	0.08	0.08	0.08	7.33	8.32	7.05	7.65	14.34	30.00	5.74	Pass
VHT40	MCS0	4	151	5755	0.16	0.16	0.16	0.16	5.18	6.17	4.29	5.32	12.19	30.00	5.74	Pass
VHT40	MCS0	4	159	5795	0.16	0.16	0.16	0.16	5.39	5.83	4.14	5.37	11.85	30.00	5.74	Pass
VHT80	MCS0	4	155	5775	0.32	0.32	0.32	0.32	2.41	3.20	1.69	2.19	9.22	30.00	5.74	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8													
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
						Ant 5	Ant 6	Ant 7	Ant 8	SUM			
HE20	MCS0	4	149	5745	Full	23.60	24.50	23.20	24.00	29.87	30.00	5.19	Pass
HE20	MCS0	4	157	5785	Full	23.80	24.10	23.10	23.80	29.74	30.00	5.19	Pass
HE20	MCS0	4	165	5825	Full	23.40	24.50	23.20	23.80	29.77	30.00	5.19	Pass
HE40	MCS0	4	151	5755	Full	23.90	24.50	22.80	23.90	29.84	30.00	5.19	Pass
HE40	MCS0	4	159	5795	Full	23.90	24.60	22.70	23.80	29.82	30.00	5.19	Pass
HE80	MCS0	4	155	5775	Full	23.80	24.50	22.90	23.60	29.76	30.00	5.19	Pass

TEST RESULTS DATA
6dB and 99% OBW

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8																			
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	RU Config	26dB Bandwidth (MHz)				6 dB Bandwidth (MHz)				99% Bandwidth (MHz)				6 dB Min. Limit (MHz)	Pass /Fail
						Ant 5	Ant 6	Ant 7	Ant 8	Ant 5	Ant 6	Ant 7	Ant 8	Ant 5	Ant 6	Ant 7	Ant 8		
EHT20	MCS0	4	149	5745	Full	22.216	25.568	22.064	22.304	18.995	18.965	18.975	18.990	19.240	19.338	19.249	19.270	0.5	Pass
EHT20	MCS0	4	157	5785	Full	25.976	23.560	22.176	22.272	18.985	18.975	18.960	18.960	19.320	19.286	19.249	19.316	0.5	Pass
EHT20	MCS0	4	165	5825	Full	25.760	25.800	22.016	27.528	19.000	19.010	18.980	18.930	19.285	19.262	19.251	19.337	0.5	Pass
EHT40	MCS0	4	151	5755	Full	49.296	47.104	49.616	45.072	37.881	37.809	37.782	37.953	38.233	38.249	38.292	38.209	0.5	Pass
EHT40	MCS0	4	159	5795	Full	46.848	46.672	48.560	48.640	37.287	37.656	37.782	37.791	38.229	38.238	38.190	38.224	0.5	Pass
EHT80	MCS0	4	155	5775	Full	83.744	82.496	82.560	83.840	76.144	76.624	77.440	76.496	77.269	77.313	77.228	77.369	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
						Ant 5	Ant 6	Ant 7	Ant 8	SUM			
EHT20	MCS0	4	149	5745	Full	23.70	24.60	23.30	24.10	29.97	30.00	5.19	Pass
EHT20	MCS0	4	157	5785	Full	23.90	24.20	23.20	23.90	29.84	30.00	5.19	Pass
EHT20	MCS0	4	165	5825	Full	23.50	24.60	23.30	23.90	29.87	30.00	5.19	Pass
EHT40	MCS0	4	151	5755	Full	24.00	24.60	22.90	24.00	29.94	30.00	5.19	Pass
EHT40	MCS0	4	159	5795	Full	24.00	24.70	22.80	23.90	29.92	30.00	5.19	Pass
EHT80	MCS0	4	155	5775	Full	23.90	24.60	23.00	23.70	29.86	30.00	5.19	Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8																	
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Duty Factor(dBm)				Average Power Density (dBm/500kHz)					Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass /Fail
						Ant 5	Ant 6	Ant 7	Ant 8	Ant 5	Ant 6	Ant 7	Ant 8	SUM	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	
EHT20	MCS0	4	149	5745	Full	0.10	0.10	0.10	0.10	7.62	9.01	7.44	8.37	15.03	30.00	5.74	Pass
EHT20	MCS0	4	157	5785	Full	0.10	0.10	0.10	0.10	7.97	8.34	7.29	7.85	14.36	30.00	5.74	Pass
EHT20	MCS0	4	165	5825	Full	0.10	0.10	0.10	0.10	7.41	8.57	7.40	7.89	14.59	30.00	5.74	Pass
EHT40	MCS0	4	151	5755	Full	0.19	0.19	0.19	0.19	5.31	6.22	4.49	5.48	12.24	30.00	5.74	Pass
EHT40	MCS0	4	159	5795	Full	0.19	0.19	0.19	0.19	5.59	6.07	4.30	5.41	12.09	30.00	5.74	Pass
EHT80	MCS0	4	155	5775	Full	0.35	0.35	0.35	0.35	2.57	3.41	1.83	2.45	9.43	30.00	5.74	Pass

Note: PSD Sum = Max PSD(Ant. 5, Ant. 6, Ant. 7, Ant. 8) + 10 log (n)

<Nss = 2>

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8												
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
					Ant 5	Ant 6	Ant 7	Ant 8	SUM	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	
HT20	MCS0	4	149	5745	23.10	24.10	22.9	23.60	29.47	30.00	5.19	Pass
HT20	MCS0	4	157	5785	23.40	23.70	22.9	23.10	29.31	30.00	5.19	Pass
HT20	MCS0	4	165	5825	23.00	24.00	22.6	23.40	29.30	30.00	5.19	Pass
HT40	MCS0	4	151	5755	23.40	24.10	22.3	23.60	29.42	30.00	5.19	Pass
HT40	MCS0	4	159	5795	23.60	24.10	22.3	23.30	29.39	30.00	5.19	Pass
VHT20	MCS0	4	149	5745	23.20	24.20	23	23.70	29.57	30.00	5.19	Pass
VHT20	MCS0	4	157	5785	23.50	23.80	23	23.20	29.41	30.00	5.19	Pass
VHT20	MCS0	4	165	5825	23.10	24.10	22.7	23.50	29.40	30.00	5.19	Pass
VHT40	MCS0	4	151	5755	23.50	24.20	22.4	23.70	29.52	30.00	5.19	Pass
VHT40	MCS0	4	159	5795	23.70	24.20	22.4	23.40	29.49	30.00	5.19	Pass
VHT80	MCS0	4	155	5775	23.80	24.50	22.9	23.60	29.76	30.00	5.19	Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8																
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Duty Factor(dBm)				Average Power Density (dBm/500kHz)					Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass /Fail
					Ant 5	Ant 6	Ant 7	Ant 8	Ant 5	Ant 6	Ant 7	Ant 8	SUM	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	
VHT20	MCS0	4	149	5745	0.08	0.08	0.08	0.08	7.57	8.77	7.42	8.07	14.79	30.00	5.74	Pass
VHT20	MCS0	4	157	5785	0.08	0.08	0.08	0.08	7.82	8.22	7.25	7.69	14.24	30.00	5.74	Pass
VHT20	MCS0	4	165	5825	0.08	0.08	0.08	0.08	7.33	8.32	7.05	7.65	14.34	30.00	5.74	Pass
VHT40	MCS0	4	151	5755	0.16	0.16	0.16	0.16	5.18	6.17	4.29	5.32	12.19	30.00	5.74	Pass
VHT40	MCS0	4	159	5795	0.16	0.16	0.16	0.16	5.39	5.83	4.14	5.37	11.85	30.00	5.74	Pass
VHT80	MCS0	4	155	5775	0.32	0.32	0.32	0.32	2.41	3.20	1.69	2.19	9.22	30.00	5.74	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8													
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
						Ant 5	Ant 6	Ant 7	Ant 8	SUM			
HE20	MCS0	4	149	5745	Full	23.60	24.50	23.20	24.00	29.87	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	Pass
HE20	MCS0	4	157	5785	Full	23.80	24.10	23.10	23.80	29.74	30.00	5.19	Pass
HE20	MCS0	4	165	5825	Full	23.40	24.50	23.20	23.80	29.77	30.00	5.19	Pass
HE40	MCS0	4	151	5755	Full	23.90	24.50	22.80	23.90	29.84	30.00	5.19	Pass
HE40	MCS0	4	159	5795	Full	23.90	24.60	22.70	23.80	29.82	30.00	5.19	Pass
HE80	MCS0	4	155	5775	Full	23.80	24.50	22.90	23.60	29.76	30.00	5.19	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
						Ant 5	Ant 6	Ant 7	Ant 8	SUM			
EHT20	MCS0	4	149	5745	Full	23.70	24.60	23.30	24.10	29.97	30.00	5.19	Pass
EHT20	MCS0	4	157	5785	Full	23.90	24.20	23.20	23.90	29.84	30.00	5.19	Pass
EHT20	MCS0	4	165	5825	Full	23.50	24.60	23.30	23.90	29.87	30.00	5.19	Pass
EHT40	MCS0	4	151	5755	Full	24.00	24.60	22.90	24.00	29.94	30.00	5.19	Pass
EHT40	MCS0	4	159	5795	Full	24.00	24.70	22.80	23.90	29.92	30.00	5.19	Pass
EHT80	MCS0	4	155	5775	Full	23.90	24.60	23.00	23.70	29.86	30.00	5.19	Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8																	
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	RU Config.	Duty Factor(dBm)				Average Power Density (dBm/500kHz)					Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass /Fail
						Ant 5	Ant 6	Ant 7	Ant 8	Ant 5	Ant 6	Ant 7	Ant 8	SUM	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	
EHT20	MCS0	4	149	5745	Full	0.10	0.10	0.10	0.10	7.62	9.01	7.44	8.37	15.03	30.00	5.74	Pass
EHT20	MCS0	4	157	5785	Full	0.10	0.10	0.10	0.10	7.97	8.34	7.29	7.85	14.36	30.00	5.74	Pass
EHT20	MCS0	4	165	5825	Full	0.10	0.10	0.10	0.10	7.41	8.57	7.40	7.89	14.59	30.00	5.74	Pass
EHT40	MCS0	4	151	5755	Full	0.19	0.19	0.19	0.19	5.31	6.22	4.49	5.48	12.24	30.00	5.74	Pass
EHT40	MCS0	4	159	5795	Full	0.19	0.19	0.19	0.19	5.59	6.07	4.30	5.41	12.09	30.00	5.74	Pass
EHT80	MCS0	4	155	5775	Full	0.35	0.35	0.35	0.35	2.57	3.41	1.83	2.45	9.43	30.00	5.74	Pass

Note: PSD Sum = Max PSD(Ant. 5, Ant. 6, Ant. 7, Ant. 8) + 10 log (n)

<TXBF Mode>

<Nss = 1>

Report Number :

FR4O1125E

TEST RESULTS DATA
6dB and 99% OBW

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8									
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	26dB Bandwidth (MHz)	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Min. Limit (MHz)	Pass /Fail
					Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8		
VHT20	MCS0	4	149	5745	30.096	17.580	18.619	0.5	Pass
VHT20	MCS0	4	157	5785	25.576	17.595	18.782	0.5	Pass
VHT20	MCS0	4	165	5825	29.952	16.340	18.632	0.5	Pass
VHT40	MCS0	4	151	5755	52.256	32.355	37.150	0.5	Pass
VHT40	MCS0	4	159	5795	52.368	34.452	36.463	0.5	Pass
VHT80	MCS0	4	155	5775	82.720	67.008	75.607	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8												
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Average Conducted Power (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
					Ant 5	Ant 6	Ant 7	Ant 8	SUM	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	
HT20	MCS0	4	149	5745	23.30	24.40	23.35	23.90	29.78	30.00	5.74	Pass
HT20	MCS0	4	157	5785	23.60	24.00	23.2	23.60	29.63	30.00	5.74	Pass
HT20	MCS0	4	165	5825	23.30	24.00	23.5	23.90	29.70	30.00	5.74	Pass
HT40	MCS0	4	151	5755	23.80	24.40	22.8	23.50	29.68	30.00	5.74	Pass
HT40	MCS0	4	159	5795	23.90	24.20	22.6	23.30	29.56	30.00	5.74	Pass
VHT20	MCS0	4	149	5745	23.40	24.50	23.45	24.00	29.88	30.00	5.74	Pass
VHT20	MCS0	4	157	5785	23.70	24.10	23.3	23.70	29.73	30.00	5.74	Pass
VHT20	MCS0	4	165	5825	23.40	24.10	23.6	24.00	29.80	30.00	5.74	Pass
VHT40	MCS0	4	151	5755	23.90	24.50	22.9	23.60	29.78	30.00	5.74	Pass
VHT40	MCS0	4	159	5795	24.00	24.30	22.7	23.40	29.66	30.00	5.74	Pass
VHT80	MCS0	4	155	5775	23.80	24.45	23	23.70	29.79	30.00	5.74	Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8												
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Average Power Density (dBm/500kHz)					Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass /Fail
					Ant 5	Ant 6	Ant 7	Ant 8	SUM	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	
VHT20	MCS0	4	149	5745	10.54	11.67	10.12	10.77	17.69	30.00	5.74	Pass
VHT20	MCS0	4	157	5785	10.65	11.72	10.56	10.91	17.74	30.00	5.74	Pass
VHT20	MCS0	4	165	5825	10.38	11.58	11.19	11.98	18.00	30.00	5.74	Pass
VHT40	MCS0	4	151	5755	9.63	10.71	10.33	9.33	16.73	30.00	5.74	Pass
VHT40	MCS0	4	159	5795	10.45	10.13	8.53	9.06	16.47	30.00	5.74	Pass
VHT80	MCS0	4	155	5775	9.42	10.01	9.11	9.68	16.03	30.00	5.74	Pass

Note: PSD Sum = Max PSD(Ant. 5, Ant. 6, Ant. 7, Ant. 8) + 10 log (n)

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8													
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
						Ant 5	Ant 6	Ant 7	Ant 8	SUM			
HE20	MCS0	4	149	5745	Full	23.40	24.50	23.40	24.00	29.87	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	Pass
HE20	MCS0	4	157	5785	Full	23.70	24.10	23.30	23.80	29.75	30.00	5.74	Pass
HE20	MCS0	4	165	5825	Full	23.60	24.10	23.60	24.00	29.85	30.00	5.74	Pass
HE40	MCS0	4	151	5755	Full	24.00	24.50	22.90	23.60	29.81	30.00	5.74	Pass
HE40	MCS0	4	159	5795	Full	24.10	24.30	22.70	23.50	29.71	30.00	5.74	Pass
HE80	MCS0	4	155	5775	Full	23.90	24.50	23.00	23.70	29.83	30.00	5.74	Pass

TEST RESULTS DATA
6dB and 99% OBW

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8										
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	RU Config	26dB Bandwidth (MHz)	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Min. Limit (MHz)	Pass /Fail
						Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8		
EHT20	MCS0	4	149	5745	Full	26.096	19.110	19.246	0.5	Pass
EHT20	MCS0	4	157	5785	Full	29.864	19.450	19.278	0.5	Pass
EHT20	MCS0	4	165	5825	Full	26.944	19.085	19.239	0.5	Pass
EHT40	MCS0	4	151	5755	Full	60.368	37.278	38.070	0.5	Pass
EHT40	MCS0	4	159	5795	Full	41.328	37.143	37.828	0.5	Pass
EHT80	MCS0	4	155	5775	Full	83.808	76.832	77.253	0.5	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
						Ant 5	Ant 6	Ant 7	Ant 8	SUM			
EHT20	MCS0	4	149	5745	Full	23.50	24.60	23.50	24.10	29.97	30.00	5.74	Pass
EHT20	MCS0	4	157	5785	Full	23.80	24.20	23.40	23.90	29.85	30.00	5.74	Pass
EHT20	MCS0	4	165	5825	Full	23.70	24.20	23.70	24.10	29.95	30.00	5.74	Pass
EHT40	MCS0	4	151	5755	Full	24.10	24.60	23.00	23.70	29.91	30.00	5.74	Pass
EHT40	MCS0	4	159	5795	Full	24.20	24.40	22.80	23.60	29.81	30.00	5.74	Pass
EHT80	MCS0	4	155	5775	Full	24.00	24.60	23.10	23.80	29.93	30.00	5.74	Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Power Density (dBm/500kHz)					Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass /Fail
						Ant 5	Ant 6	Ant 7	Ant 8	SUM	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	
EHT20	MCS0	4	149	5745	Full	10.93	11.76	10.17	10.83	17.78	30.00	5.74	Pass
EHT20	MCS0	4	157	5785	Full	10.86	11.97	10.69	11.31	17.99	30.00	5.74	Pass
EHT20	MCS0	4	165	5825	Full	10.57	11.80	11.48	12.05	18.07	30.00	5.74	Pass
EHT40	MCS0	4	151	5755	Full	9.87	10.75	10.48	9.55	16.77	30.00	5.74	Pass
EHT40	MCS0	4	159	5795	Full	10.57	10.41	8.74	9.35	16.59	30.00	5.74	Pass
EHT80	MCS0	4	155	5775	Full	9.50	10.18	9.30	9.82	16.20	30.00	5.74	Pass

Note: PSD Sum = Max PSD(Ant. 5, Ant. 6, Ant. 7, Ant. 8) + 10 log (n)

<Nss = 2>

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8												
Mod.	Data Rate	NTx	CH.	Freq. (MHz)	Average Conducted Power (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
					Ant 5	Ant 6	Ant 7	Ant 8	SUM	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	
HT20	MCS0	4	149	5745	23.30	24.40	23.35	23.90	29.78	30.00	5.74	Pass
HT20	MCS0	4	157	5785	23.60	24.00	23.2	23.60	29.63	30.00	5.74	Pass
HT20	MCS0	4	165	5825	23.30	24.00	23.5	23.90	29.70	30.00	5.74	Pass
HT40	MCS0	4	151	5755	23.80	24.40	22.8	23.50	29.68	30.00	5.74	Pass
HT40	MCS0	4	159	5795	23.90	24.20	22.6	23.30	29.56	30.00	5.74	Pass
VHT20	MCS0	4	149	5745	23.40	24.50	23.45	24.00	29.88	30.00	5.74	Pass
VHT20	MCS0	4	157	5785	23.70	24.10	23.3	23.70	29.73	30.00	5.74	Pass
VHT20	MCS0	4	165	5825	23.40	24.10	23.6	24.00	29.80	30.00	5.74	Pass
VHT40	MCS0	4	151	5755	23.90	24.50	22.9	23.60	29.78	30.00	5.74	Pass
VHT40	MCS0	4	159	5795	24.00	24.30	22.7	23.40	29.66	30.00	5.74	Pass
VHT80	MCS0	4	155	5775	23.80	24.45	23	23.70	29.79	30.00	5.74	Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8												
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	Average Power Density (dBm/500kHz)					Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass /Fail
					Ant 5	Ant 6	Ant 7	Ant 8	SUM	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	
VHT20	MCS0	4	149	5745	10.54	11.67	10.12	10.77	17.69	30.00	5.74	Pass
VHT20	MCS0	4	157	5785	10.65	11.72	10.56	10.91	17.74	30.00	5.74	Pass
VHT20	MCS0	4	165	5825	10.38	11.58	11.19	11.98	18.00	30.00	5.74	Pass
VHT40	MCS0	4	151	5755	9.63	10.71	10.33	9.33	16.73	30.00	5.74	Pass
VHT40	MCS0	4	159	5795	10.45	10.13	8.53	9.06	16.47	30.00	5.74	Pass
VHT80	MCS0	4	155	5775	9.42	10.01	9.11	9.68	16.03	30.00	5.74	Pass

Note: PSD Sum = Max PSD(Ant. 5, Ant. 6, Ant. 7, Ant. 8) + 10 log (n)

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8													
Mod.	Data Rate	Ntx	CH.	Freq. (MHz)	RU Config	Average Conducted Power (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
						Ant 5	Ant 6	Ant 7	Ant 8	SUM			
HE20	MCS0	4	149	5745	Full	23.40	24.50	23.40	24.00	29.87	30.00	5.74	Pass
HE20	MCS0	4	157	5785	Full	23.70	24.10	23.30	23.80	29.75	30.00	5.74	Pass
HE20	MCS0	4	165	5825	Full	23.60	24.10	23.60	24.00	29.85	30.00	5.74	Pass
HE40	MCS0	4	151	5755	Full	24.00	24.50	22.90	23.60	29.81	30.00	5.74	Pass
HE40	MCS0	4	159	5795	Full	24.10	24.30	22.70	23.50	29.71	30.00	5.74	Pass
HE80	MCS0	4	155	5775	Full	23.90	24.50	23.00	23.70	29.83	30.00	5.74	Pass

TEST RESULTS DATA
Average Power Table

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8													
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	RU Config.	Average Conducted Power (dBm)					FCC Conducted Power Limit (dBm)	DG (dBi)	Pass/Fail
						Ant 5	Ant 6	Ant 7	Ant 8	SUM			
EHT20	MCS0	4	149	5745	Full	23.50	24.60	23.50	24.10	29.97	30.00	5.74	Pass
EHT20	MCS0	4	157	5785	Full	23.80	24.20	23.40	23.90	29.85	30.00	5.74	Pass
EHT20	MCS0	4	165	5825	Full	23.70	24.20	23.70	24.10	29.95	30.00	5.74	Pass
EHT40	MCS0	4	151	5755	Full	24.10	24.60	23.00	23.70	29.91	30.00	5.74	Pass
EHT40	MCS0	4	159	5795	Full	24.20	24.40	22.80	23.60	29.81	30.00	5.74	Pass
EHT80	MCS0	4	155	5775	Full	24.00	24.60	23.10	23.80	29.93	30.00	5.74	Pass

TEST RESULTS DATA
Power Spectral Density

Band IV MIMO 4Tx Mode Ant 5 + 6 + 7 + 8													
Mod.	Data Rate	N _{TX}	CH.	Freq. (MHz)	RU Config.	Average Power Density (dBm/500kHz)					Average PSD Limit (dBm/500kHz)	DG (dBi)	Pass /Fail
						Ant 5	Ant 6	Ant 7	Ant 8	SUM	Ant 5 + 6 + 7 + 8	Ant 5 + 6 + 7 + 8	
EHT20	MCS0	4	149	5745	Full	10.93	11.76	10.17	10.83	17.78	30.00	5.74	Pass
EHT20	MCS0	4	157	5785	Full	10.86	11.97	10.69	11.31	17.99	30.00	5.74	Pass
EHT20	MCS0	4	165	5825	Full	10.57	11.80	11.48	12.05	18.07	30.00	5.74	Pass
EHT40	MCS0	4	151	5755	Full	9.87	10.75	10.48	9.55	16.77	30.00	5.74	Pass
EHT40	MCS0	4	159	5795	Full	10.57	10.41	8.74	9.35	16.59	30.00	5.74	Pass
EHT80	MCS0	4	155	5775	Full	9.50	10.18	9.30	9.82	16.20	30.00	5.74	Pass

Note: PSD Sum = Max PSD(Ant. 5, Ant. 6, Ant. 7, Ant. 8) + 10 log (n)



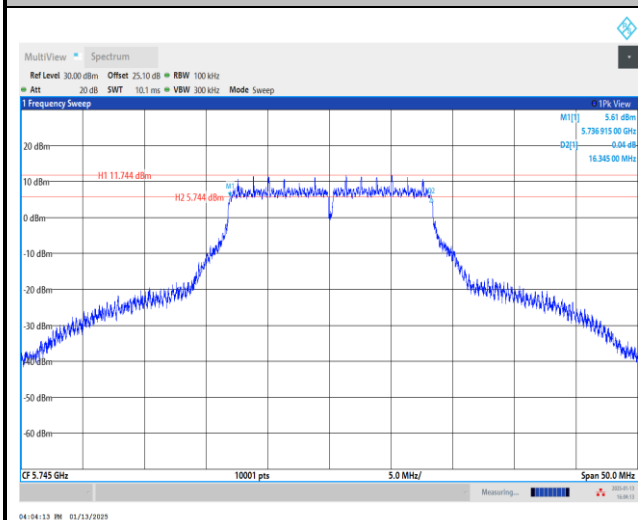
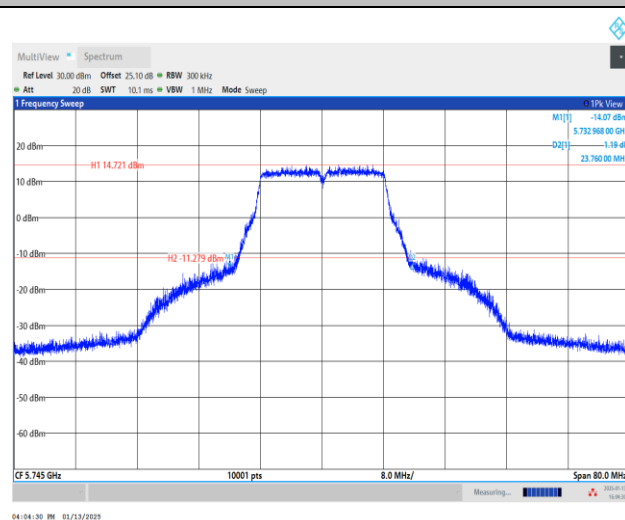
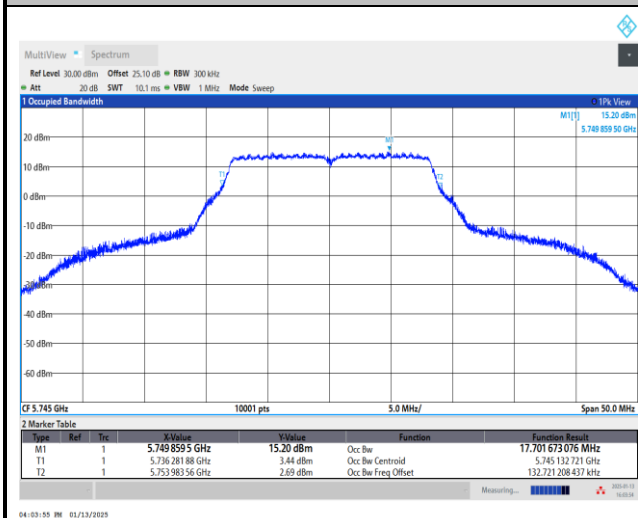
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Test Result of 6dB and 26dB and 99% Occupied Bandwidth

MIMO <Ant. 5+6+7+8>

<802.11a>

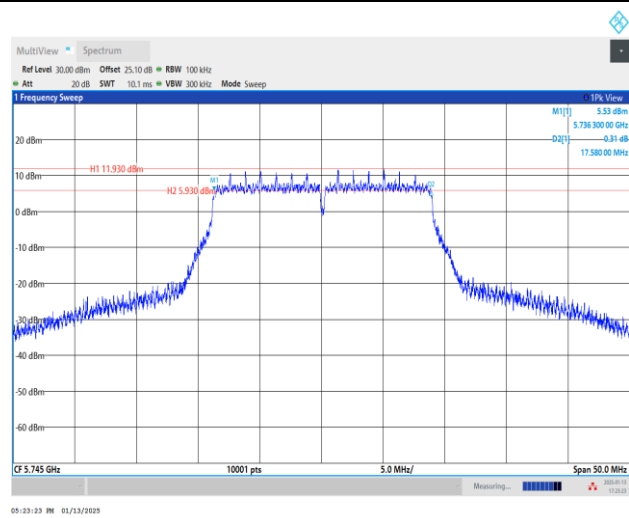
6dB Bandwidth**26dB Bandwidth****99% Occupied Bandwidth**

N/A

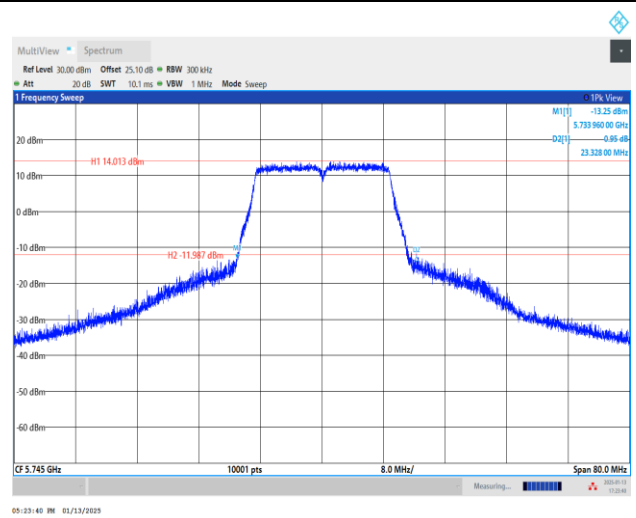


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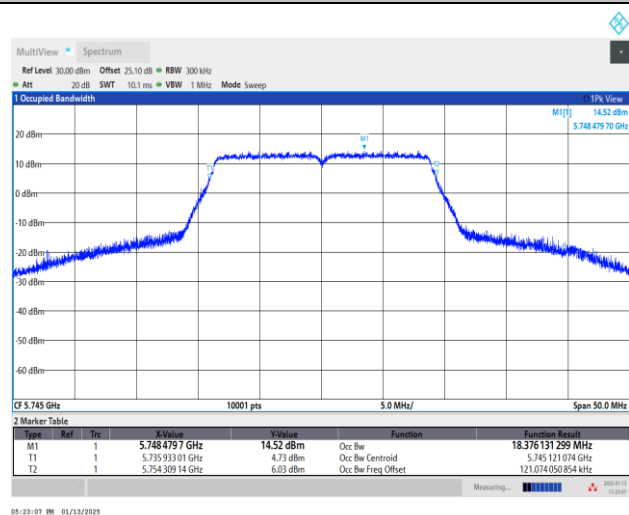
6dB Bandwidth



26dB Bandwidth



99% Occupied Bandwidth

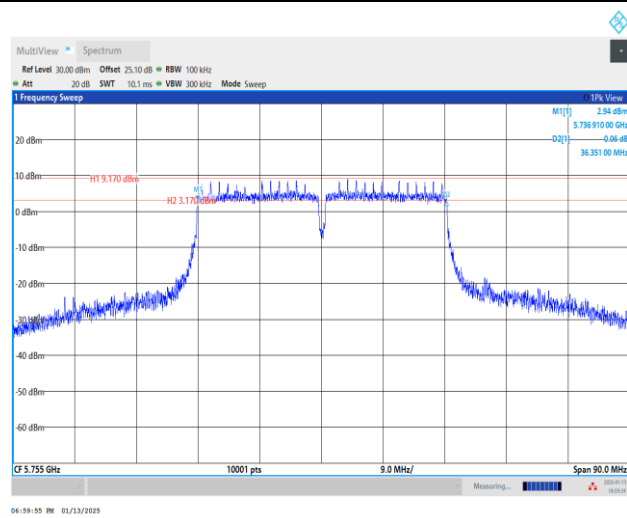


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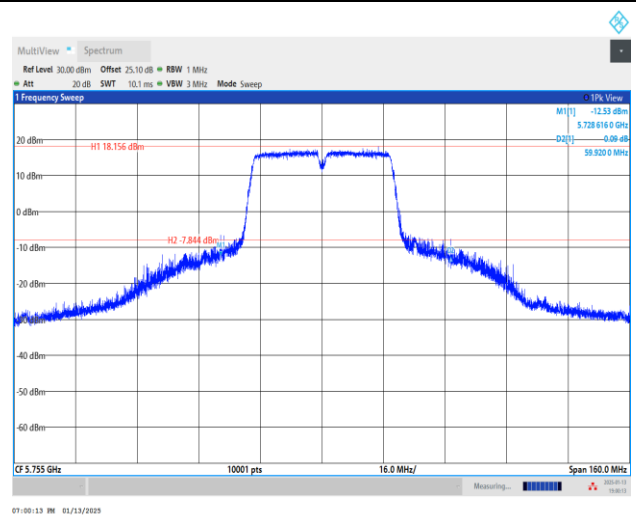


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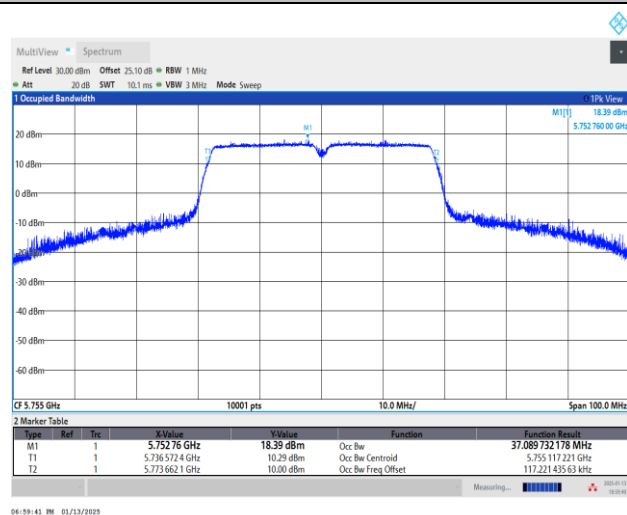
6dB Bandwidth



26dB Bandwidth



99% Occupied Bandwidth

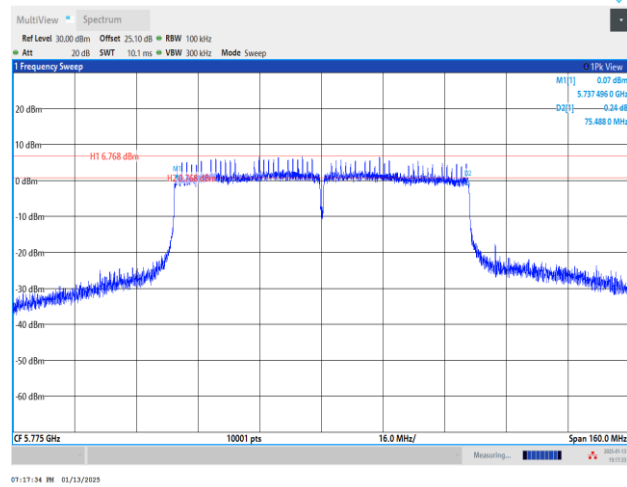


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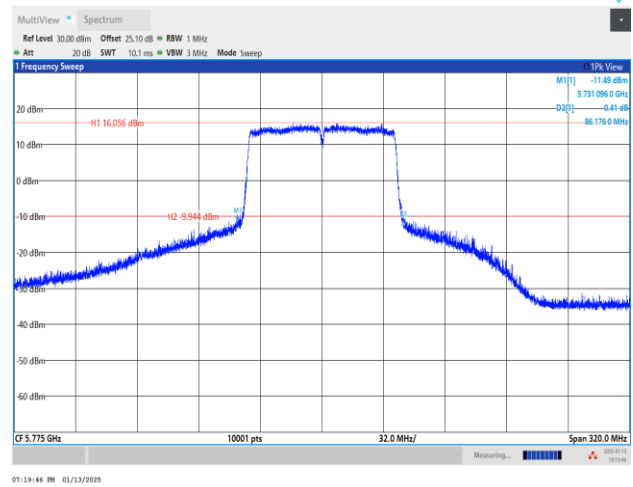


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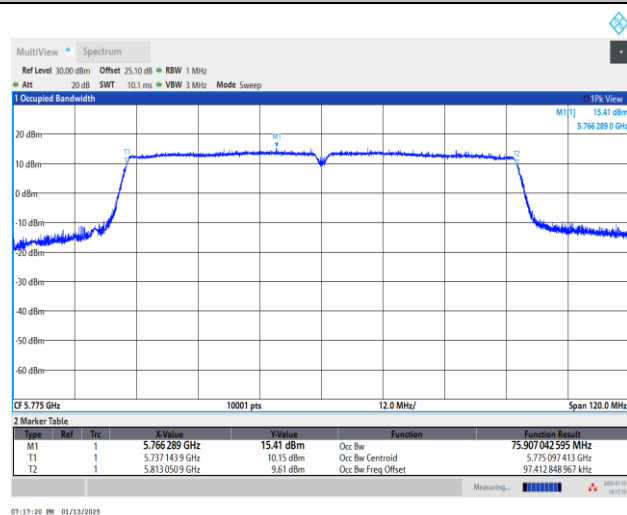
6dB Bandwidth



26dB Bandwidth



99% Occupied Bandwidth

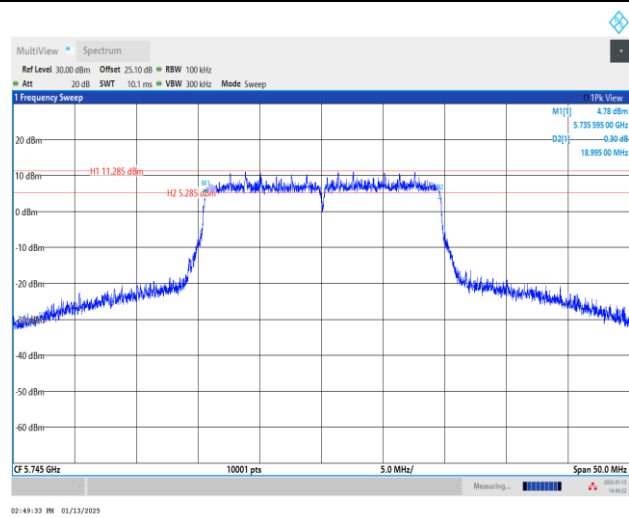


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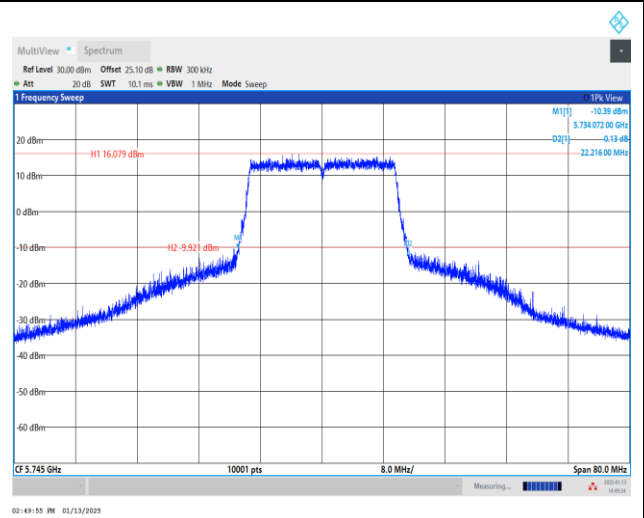


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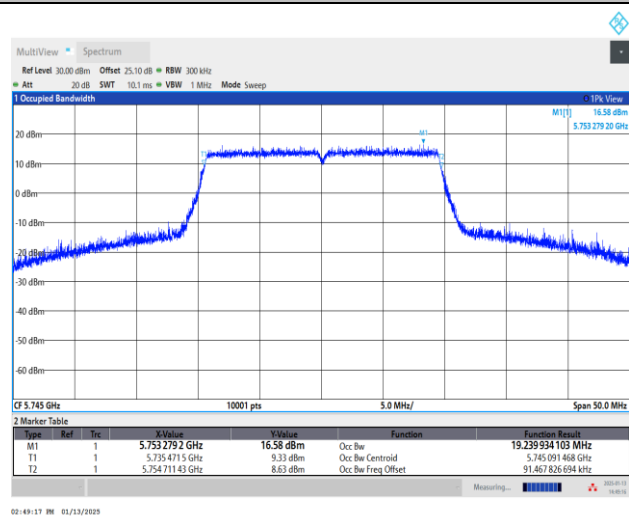
6dB Bandwidth



26dB Bandwidth



99% Occupied Bandwidth

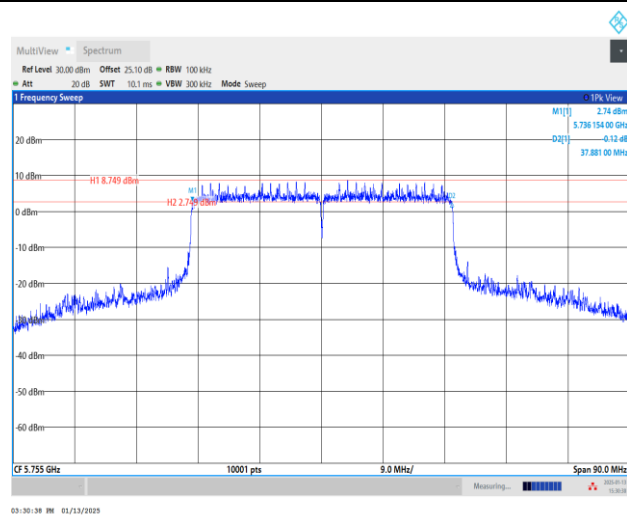


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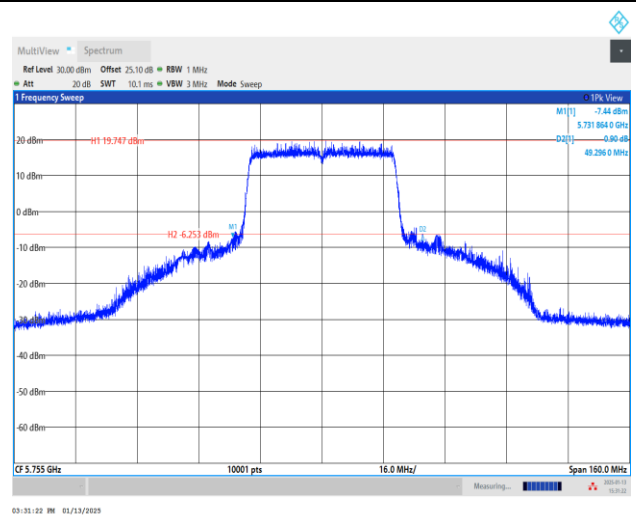


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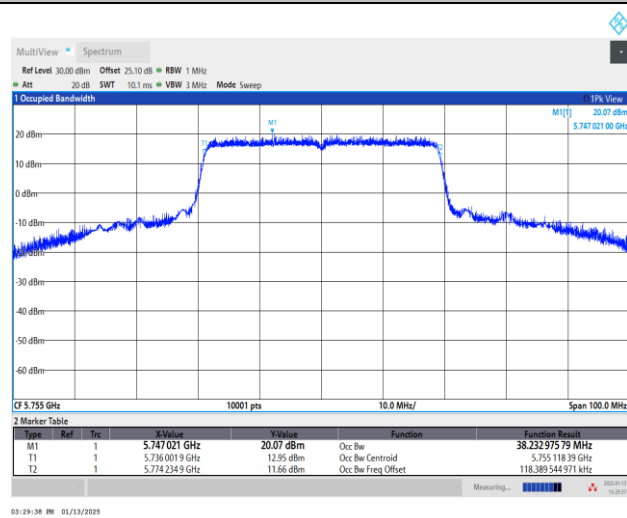
6dB Bandwidth



26dB Bandwidth



99% Occupied Bandwidth

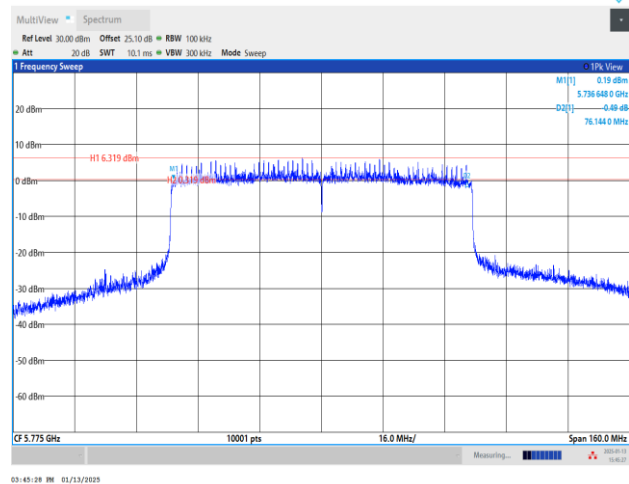


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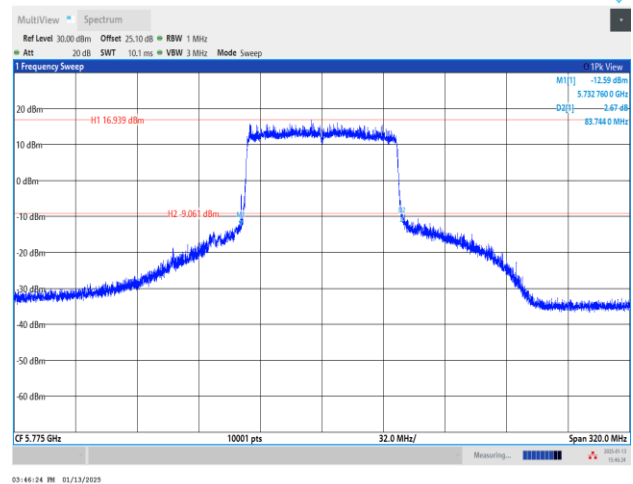


<802.11be EHT80>

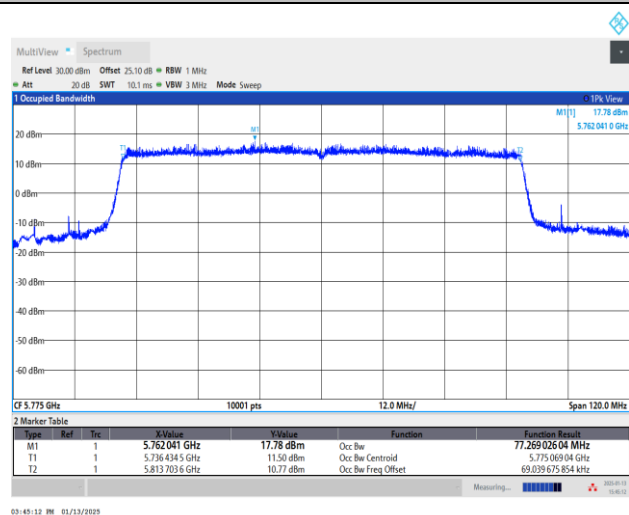
6dB Bandwidth



26dB Bandwidth



99% Occupied Bandwidth

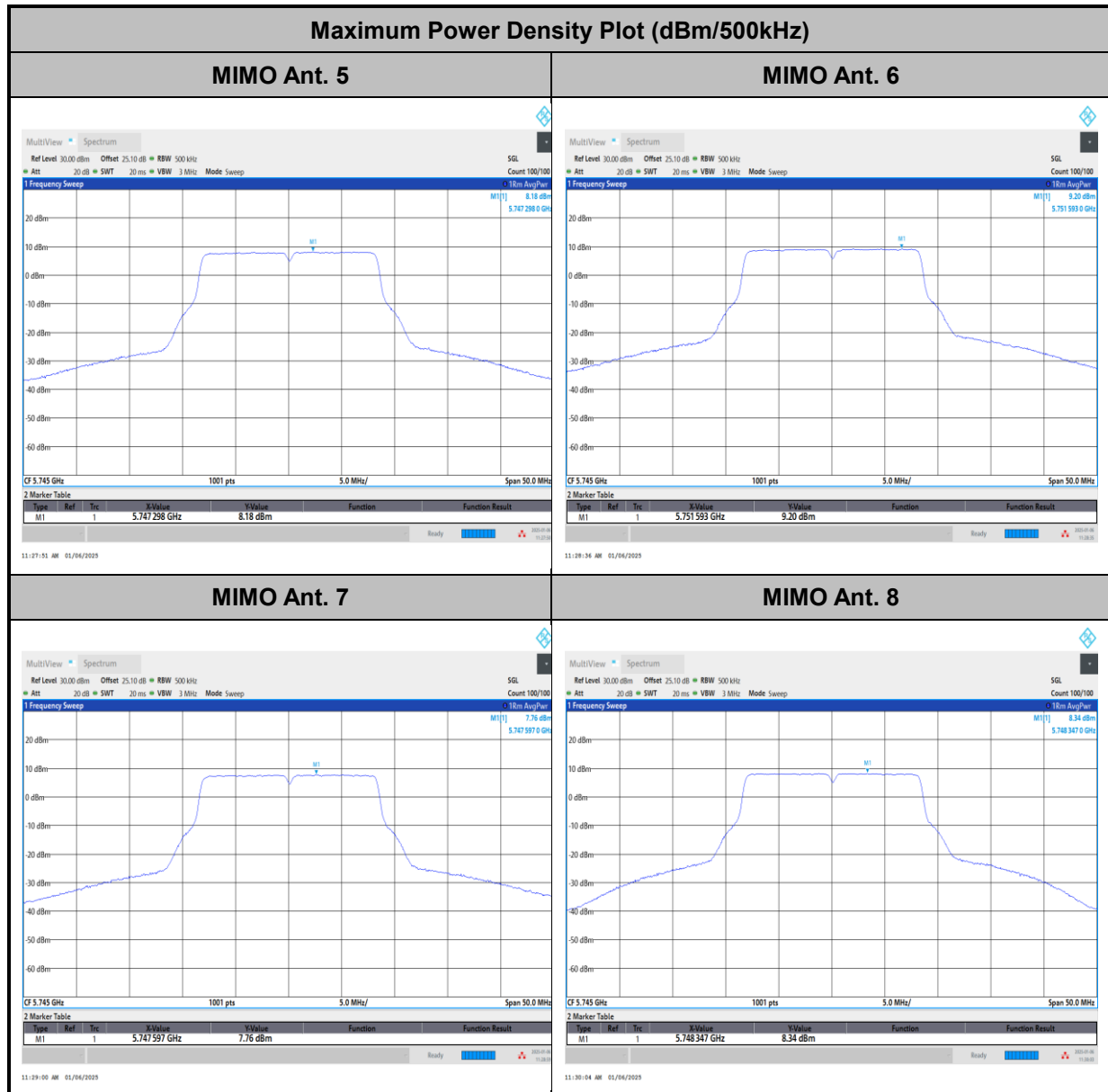


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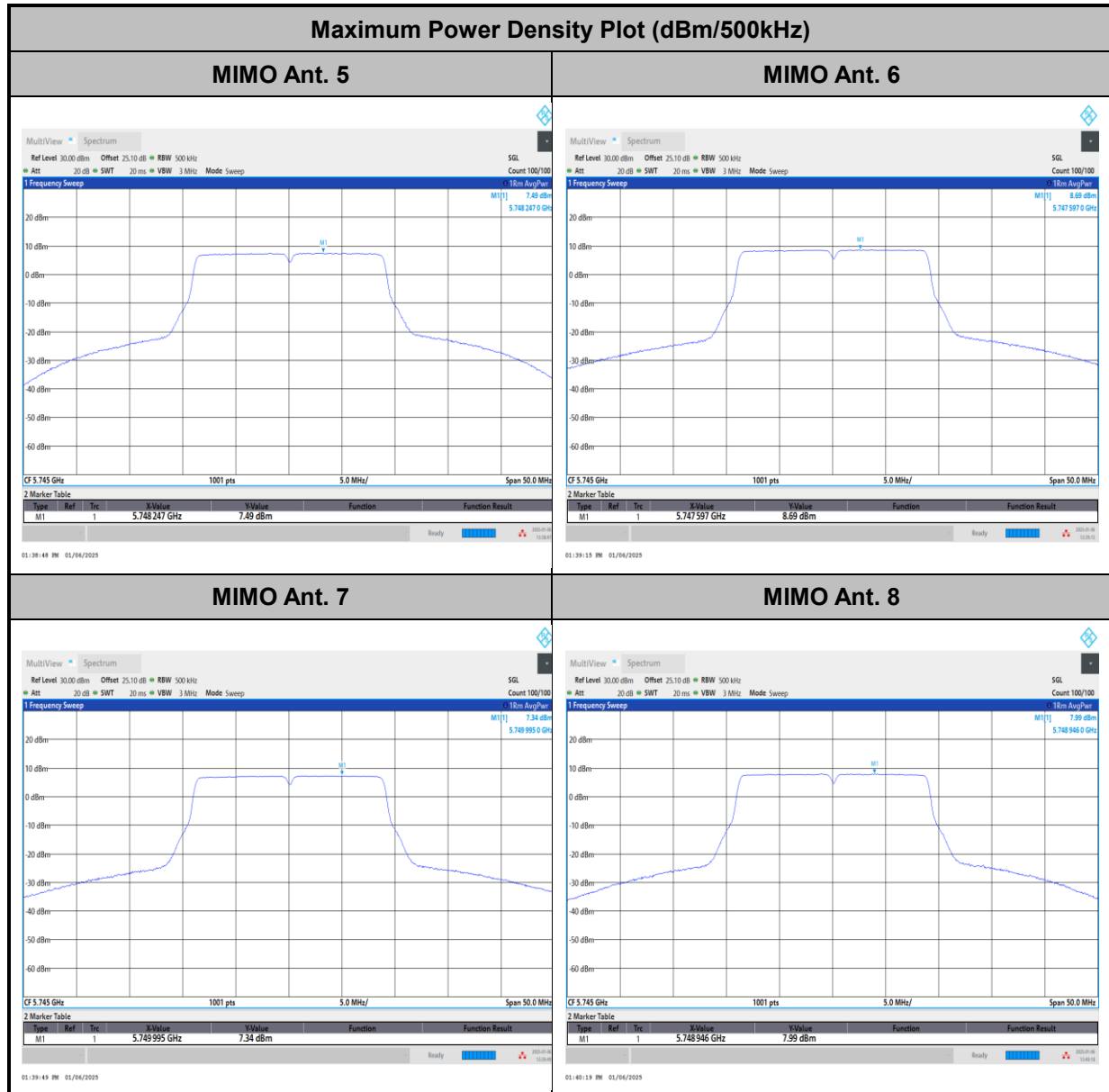
Test Result of Power Spectral Density

<802.11a>



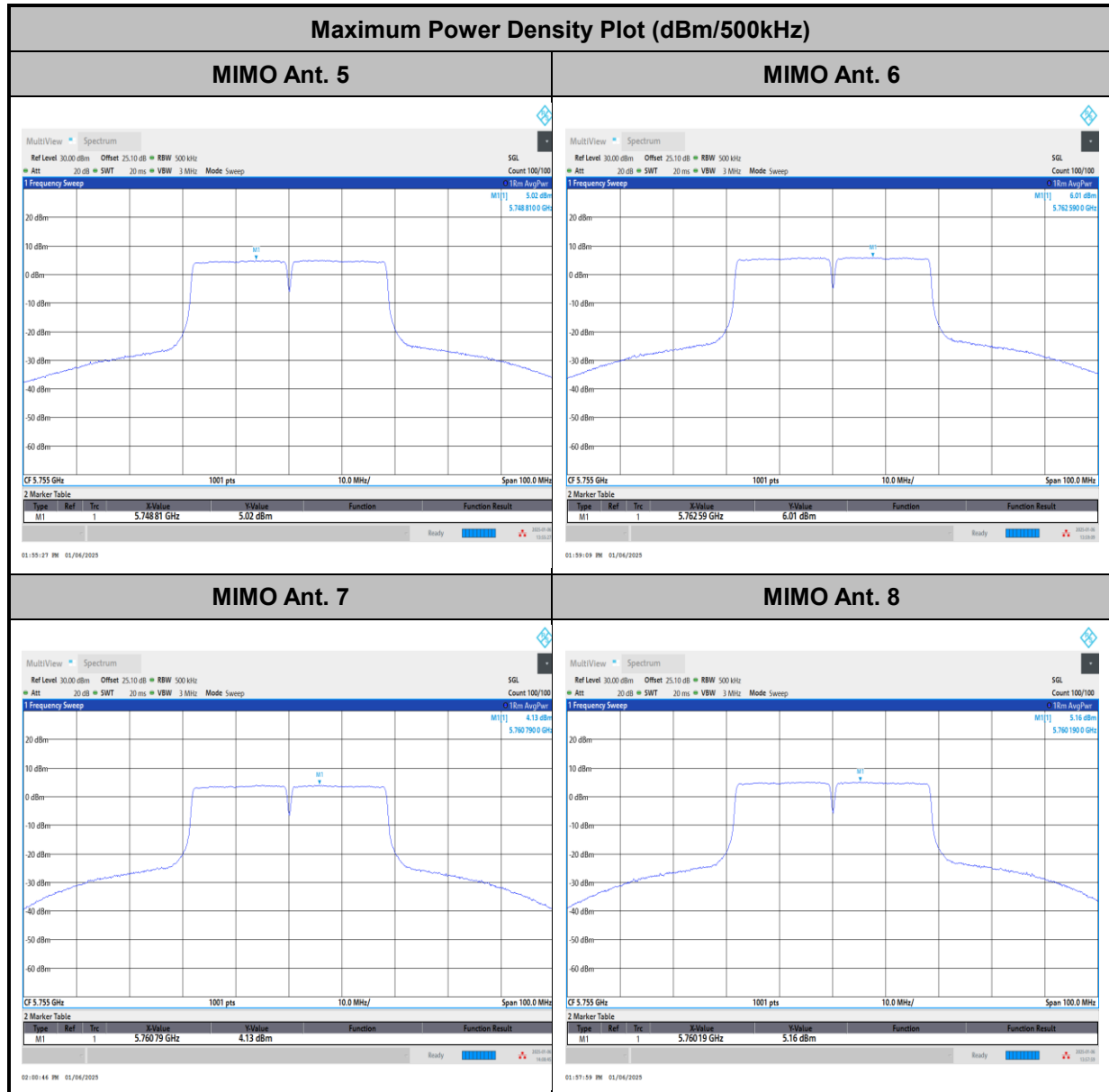


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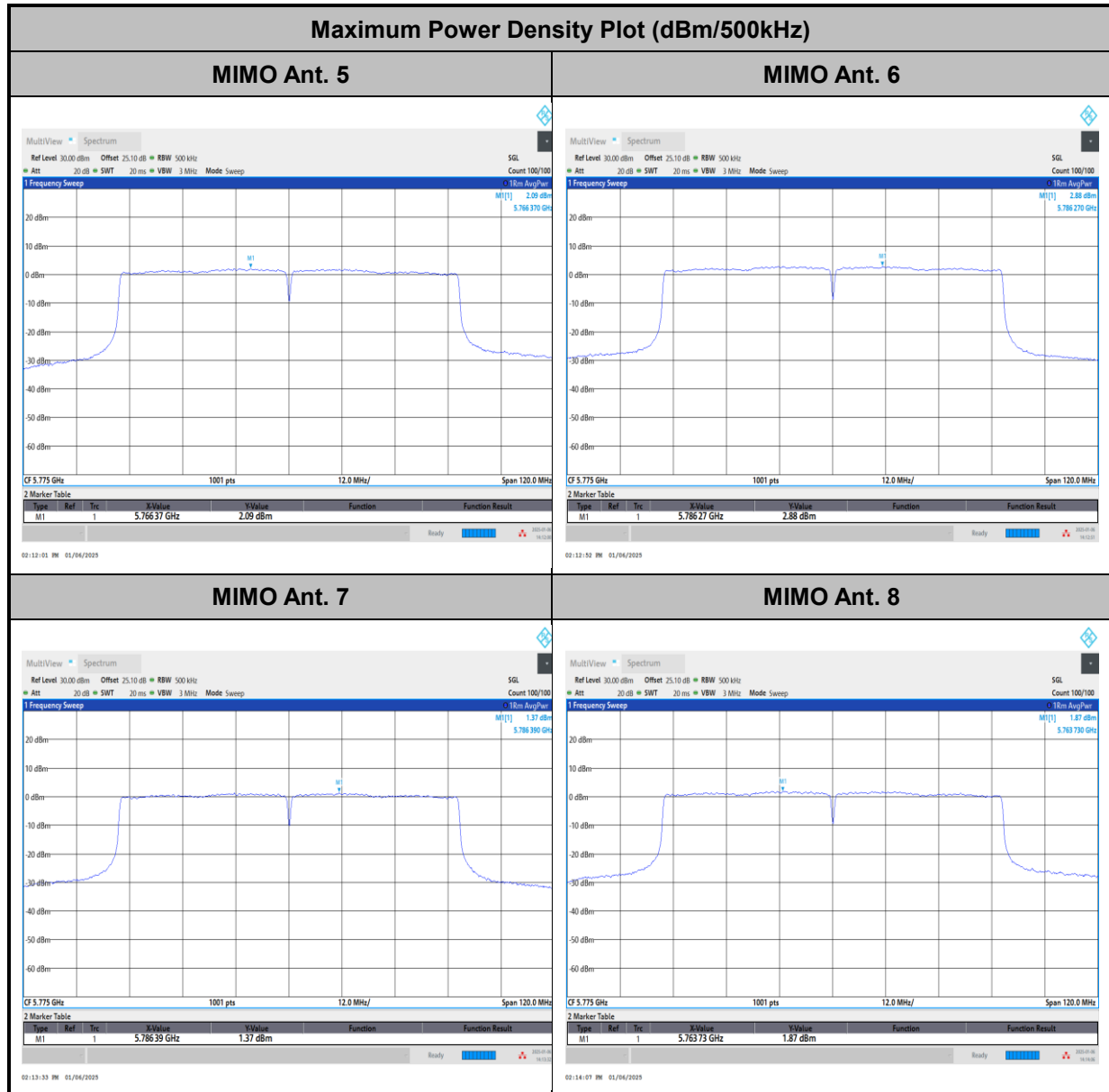


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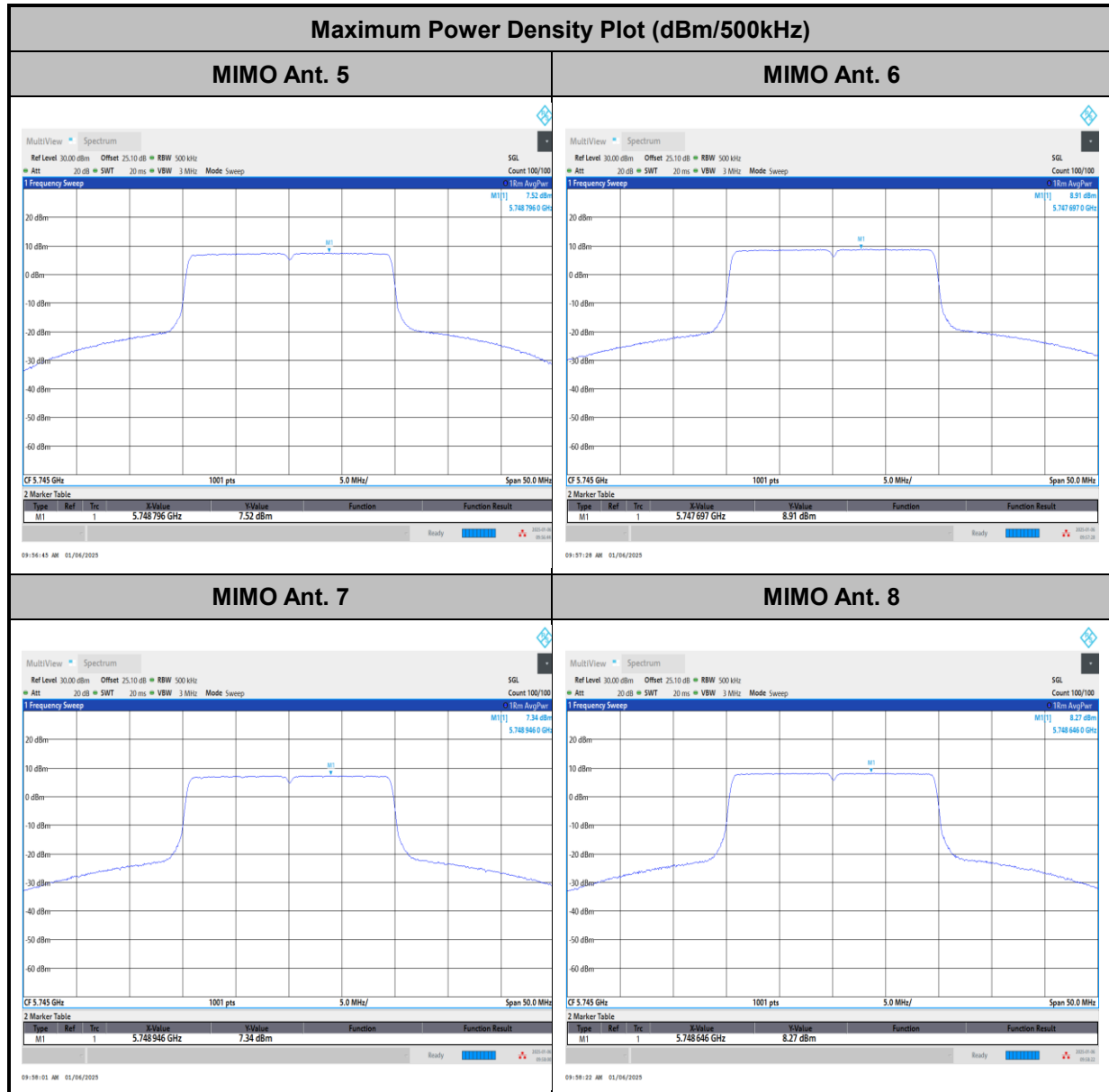


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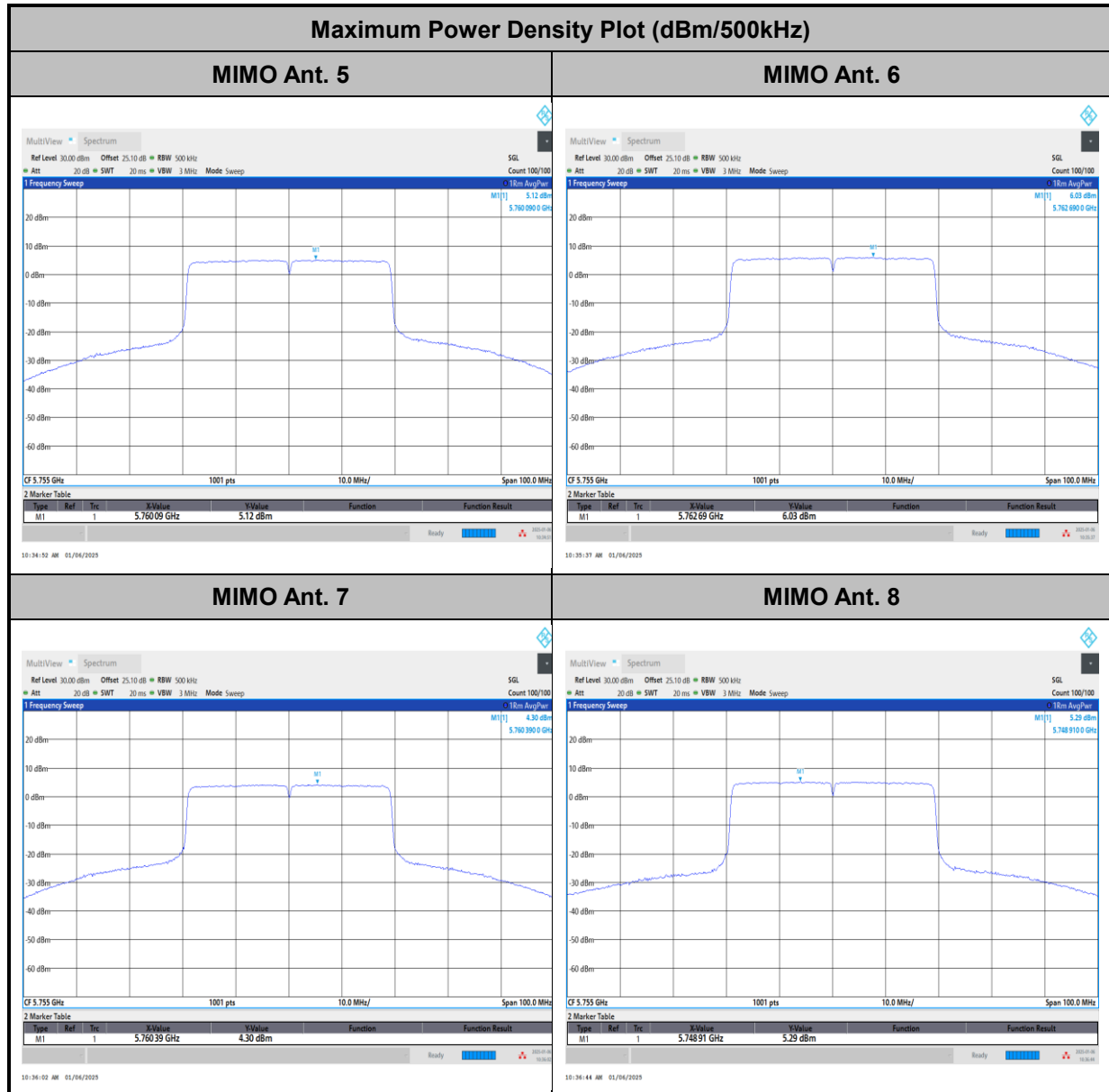


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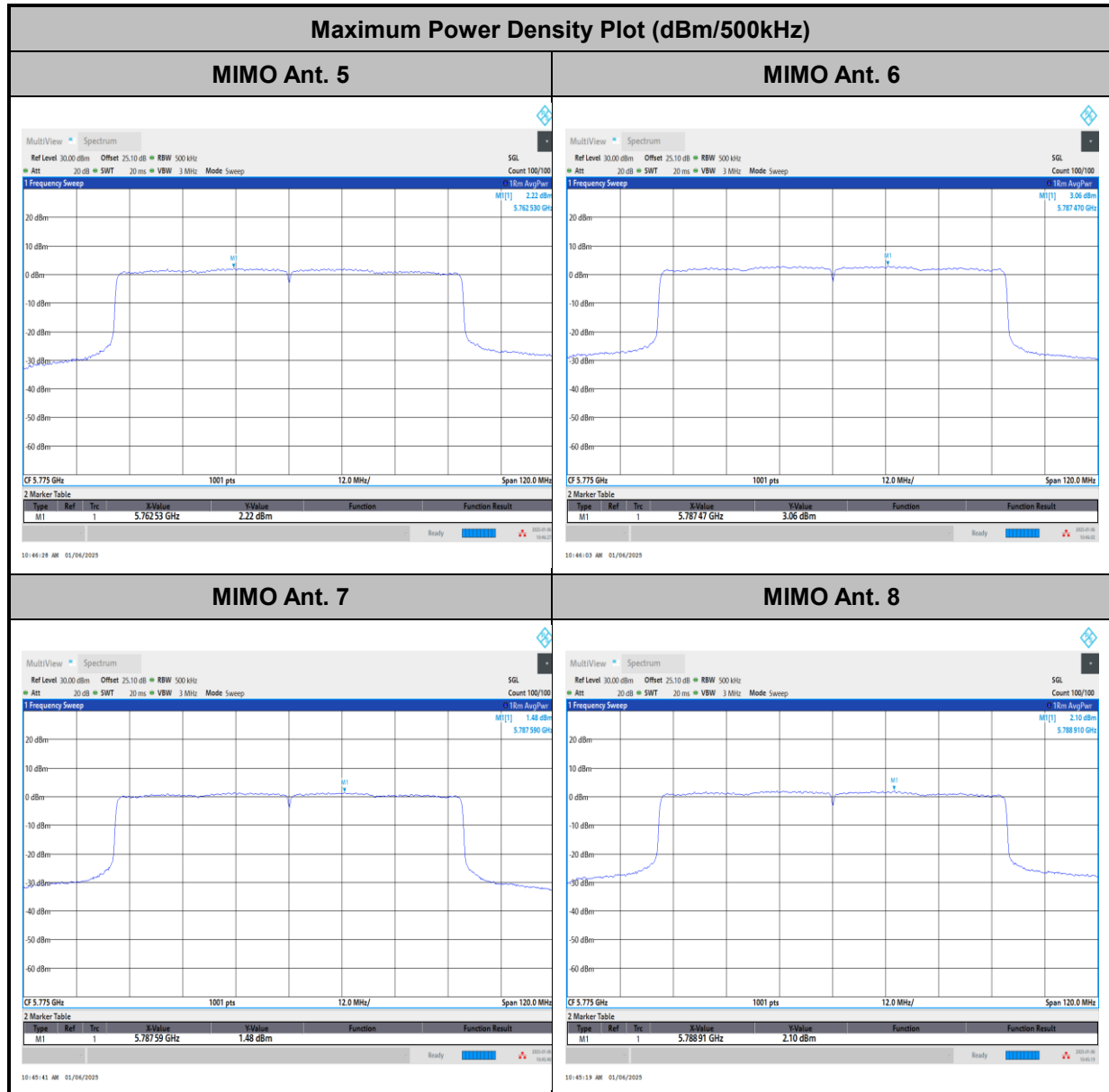


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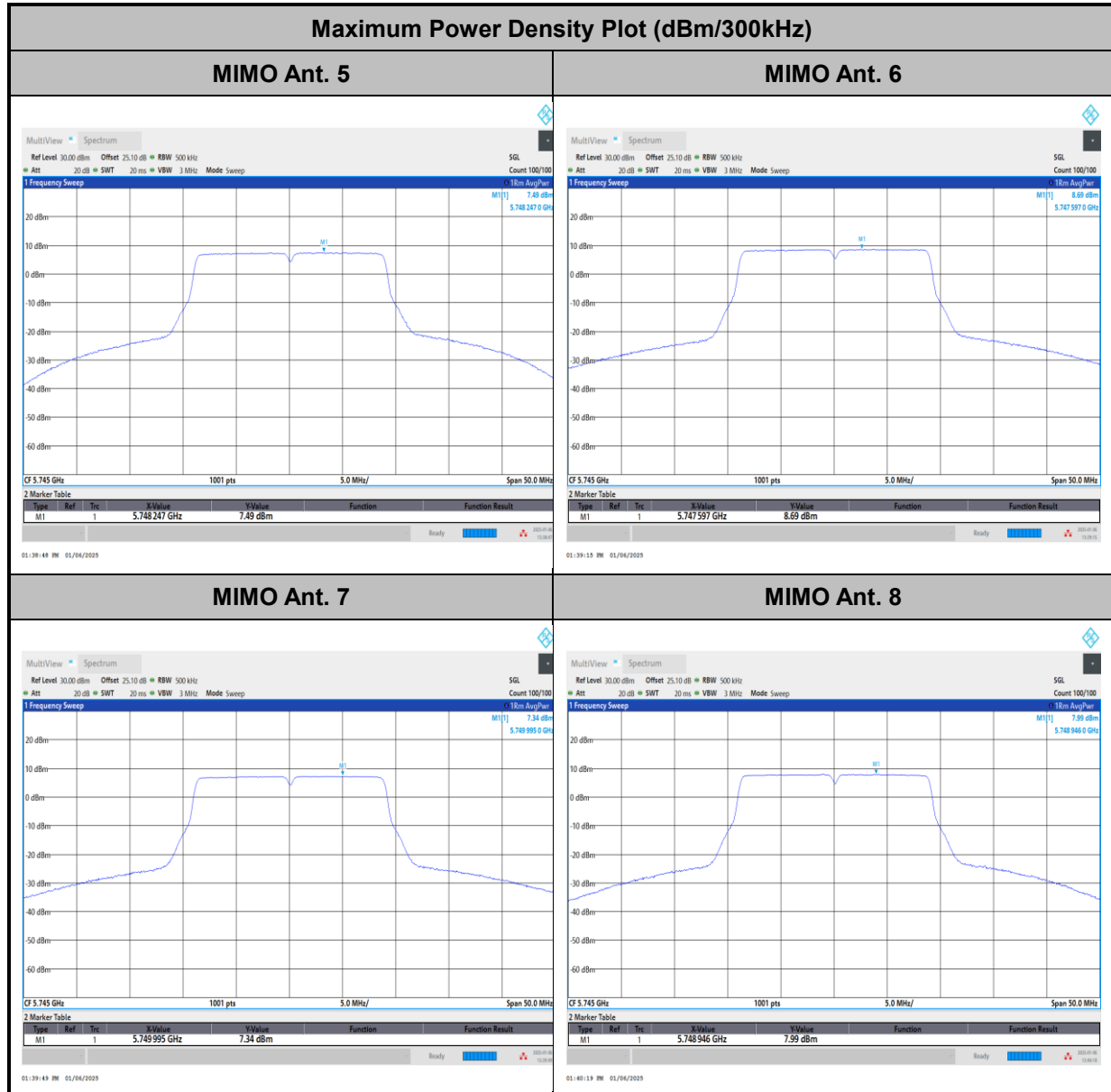




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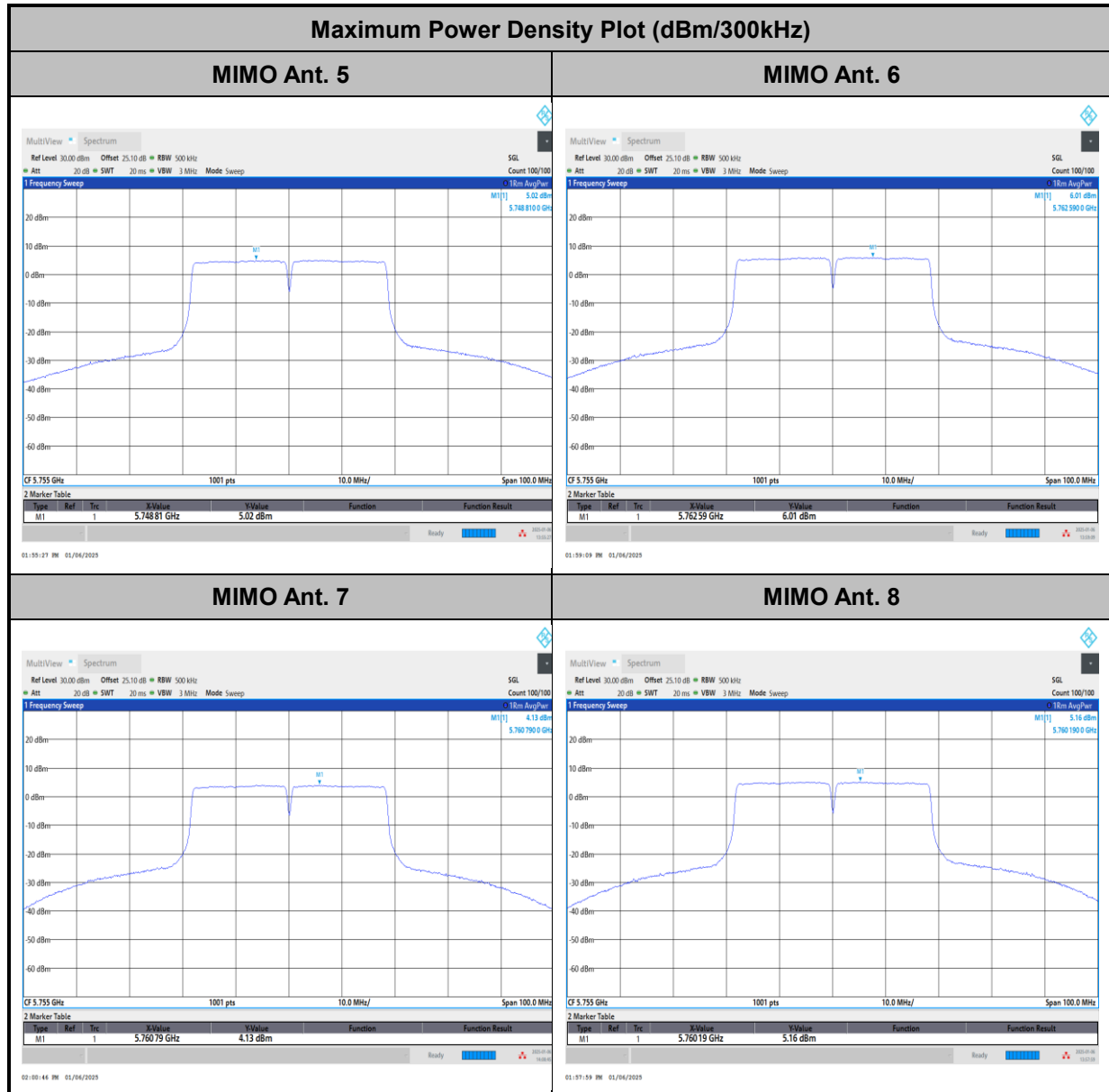
Test Result of Power Spectral Density

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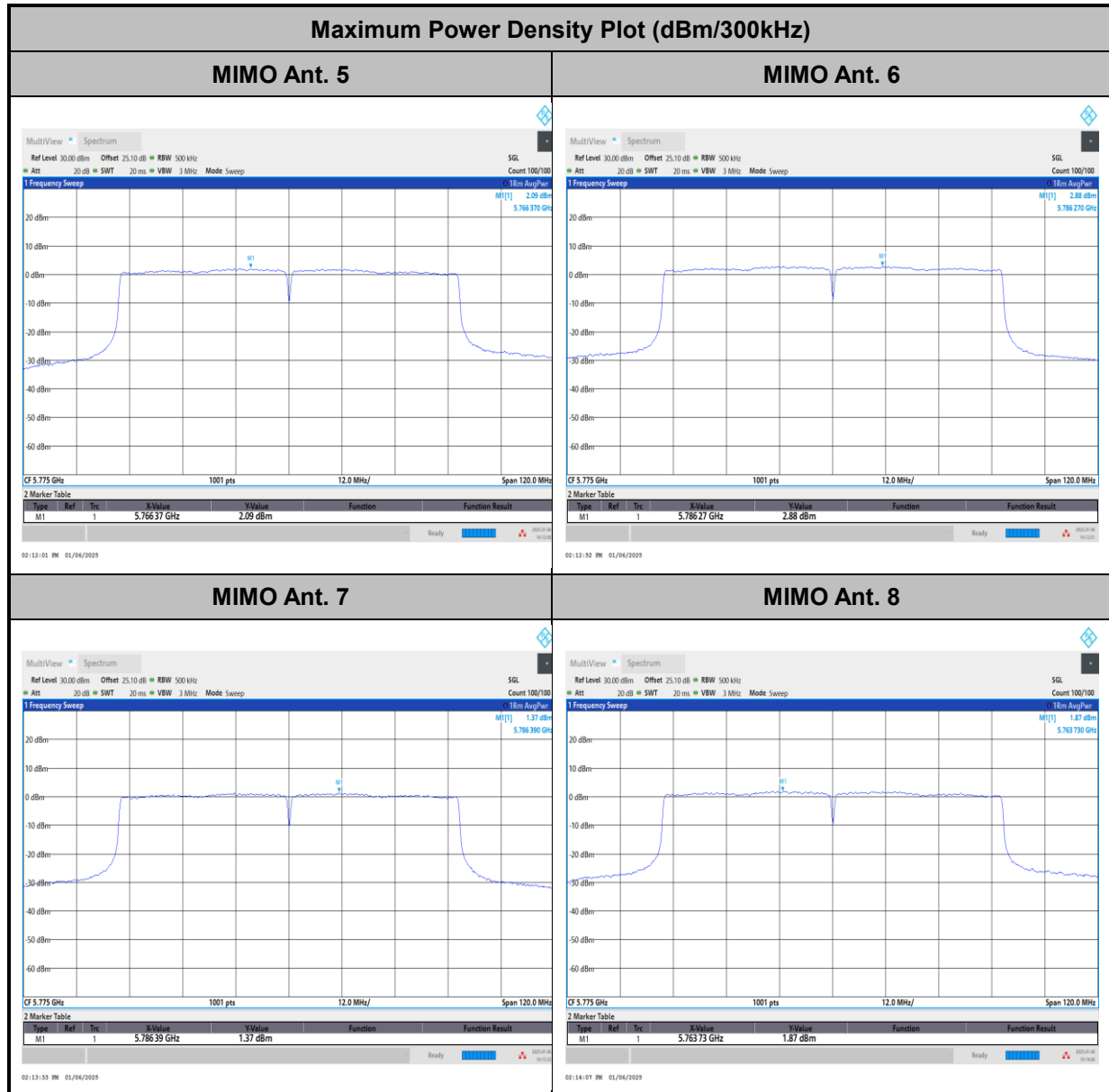


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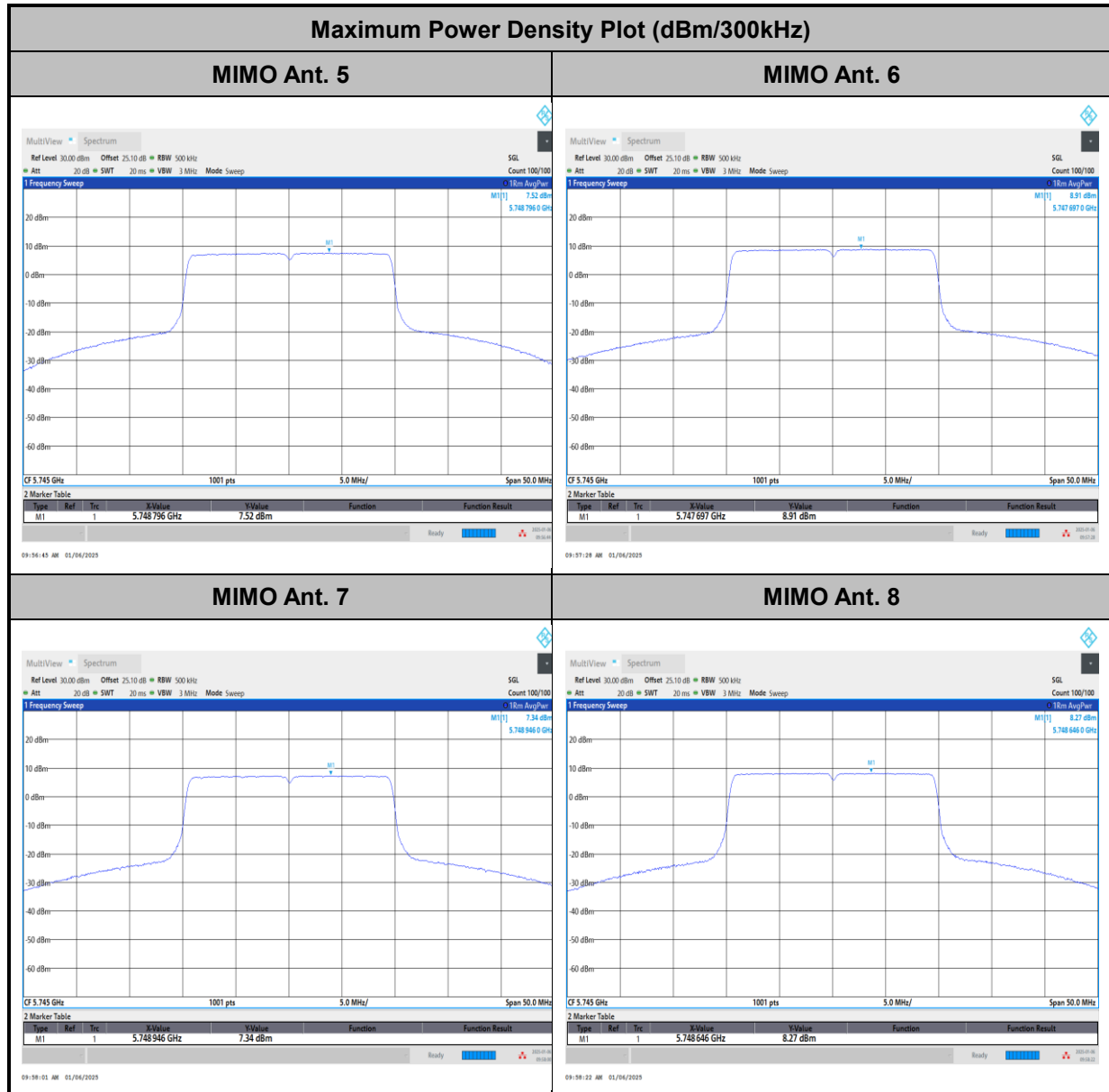


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