Testing and Certification

TEST REPORT

FCC DTS ax Test for LGSWCAX71

Certification

APPLICANT

LG Electronics Inc.

REPORT NO.

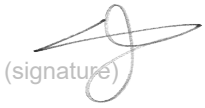
HCT-RF-2609-FC008

DATE OF ISSUE

September 04, 2026

Tested by

Se Wook Park



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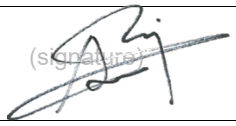

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TEST REPORT

REPORT NO.
HCT-RF-2609-FC008

DATE OF ISSUE
September 04, 2026

Applicant	**LG Electronics Inc.** 222, LG-ro, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do 17709, Republic of Korea
Product Name **Model Name**	RF Module LGSWCAX71
FCC ID	2BO3LLGSWCAX71
Date of Test	July 07, 2026 ~ September 04, 2026
FCC Classification	Digital Transmission System(DTS)
Test Standard Used	FCC Rule Part(s): Part 15.247
Test Results	PASS
Location of Test	■ Permanent Testing Lab □ On Site Testing Lab (Address: 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea)
Brand	LG

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REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	September 04, 2026	Initial Release

Notice

Content
Engineering Statement: The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC Rules under normal use and maintenance. The results shown in this test report only apply to the sample(s), as received, provided by the applicant, unless otherwise stated. The test results have only been applied with the test methods required by the standard(s). The laboratory is not accredited for the test results marked *. Information provided by the applicant is marked **. Test results provided by external providers are marked ***. When confirmation of authenticity of this test report is required, please contact www.hct.co.kr This test report provides test result(s) under the scope accredited by the Korea Laboratory Accreditation Scheme (KOLAS), which signed the ILAC-MRA. (KOLAS (KS Q ISO/IEC 17025) Accreditation No. KT197)

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1. EUT DESCRIPTION

Model	LGSWCAX71		
Additional Model	-		
EUT Type	RF Module		
Power Supply	DC 3.30 V		
Frequency Range	2 412 MHz ~ 2 472 MHz		
Max. RF Output Power	Peak Power	SISO(Ant.1)	22.04 dBm
		SISO(Ant.2)	22.67 dBm
		MIMO_CDD(Ant.1+ Ant.2)	25.29 dBm
	Average Power	SISO(Ant.1)	13.03 dBm
		SISO(Ant.2)	13.32 dBm
		MIMO_CDD(Ant.1+ Ant.2)	16.13 dBm
Modulation Type	OFDM : 802.11ax (HE20) OFDMA : 802.11ax (HE20)		
Number of Channels	13 Channels		
Antenna Information	Please refer to the Antenna Specification document.		
Serial number	Conducted : 8C2AC169F094 Radiated : 8C2AC169EEF6		

Grant Notes :
1. Output Power listed is conducted(Peak)

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ANTENNA CONFIGURATIONS

1. Antenna configuration

Configurations	SISO		MIMO	
	ANT.1	ANT.2	CDD	SDM
802.11ax(HE20)	O	O	O	O

Note:

(1) O = Support, X = Not Support

(2) SISO = Single Input Single Output

(3) SDM = Spatial Diversity Multiplexing

(4) CDD = Cyclic Delay Diversity

2.This device supports simultaneous transmission operation, which allows for two channels to operate independent of one another in the 2.4 GHz and 5 GHz or 6GHz Bands simultaneously on each antenna.

Simultaneous transmission Scenario	2.4 GHz WiFi Ant.1	2.4 GHz WiFi Ant.2	5 GHz WiFi Ant.1	5 GHz WiFi Ant.2	6 GHz WiFi Ant.1	6 GHz WiFi Ant.2	Bluetooth	Test Case
Bluetooth + 2.4 GHz WiFi MIMO	on	on	-	-	-	-	on	Scenario 1
Bluetooth + 5 GHz WiFi MIMO	-	-	on	on	-	-	on	Scenario 2
Bluetooth + 6 GHz WiFi MIMO	-	-	-	-	on	on	on	-
2.4 GHz WiFi SISO + 5 GHz WiFi SISO	-	on	on	-	-	-	-	-
2.4 GHz WiFi SISO + 6 GHz WiFi SISO	-	on	-	-	on	-	-	-
Bluetooth + 2.4 GHz WiFi SISO + 5 GHz WiFi SISO	-	on	on	-	-	-	on	Scenario 3
Bluetooth + 2.4 GHz WiFi SISO + 6 GHz WiFi SISO	-	on	-	-	on	-	on	-

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3. Directional Gain Calculation

According to KDB 662911 D01 Multiple Transmitter Output v02r01 F) 2) e) (iii), f) ii)

$$\text{Directional Gain(CDD)} = 10 \cdot \log\left[\frac{\sum_{j=1}^{N_{SS}}\{\sum_{k=1}^{N_{ANT}} g_{j,k}\}^2}{N_{ANT}}\right]$$

Directional gain(SDM) = Gmax + 10·LOG(N_{ANT}/ N_{ss})

Ant Gain (dBi)		N_{ANT}/ N_{ss}	Directional Gain (dBi)	
			CDD	SDM
ANT.1	1.74	2/2	4.90	2.03
ANT.2	2.03			

Note

According to to ANSI C63.10-2020 section 14.6.3, the directional gain is calculated using the formula, where G_N is the gain of the nth antenna and N_{ANT} is the total number of antennas used.

Directional gain(CDD) = 10·log(((10$^{(ANT.0\ Gain/20)}$+10$^{(ANT.1\ Gain/20)}$)^2)/2) dBi

Directional gain(SDM) = Gmax + 10·log(N_{ANT}/ N_{ss})

Sample MIMO Calculation:

Ex) ANT.1 : 11.58 dBm ANT.2 : 12.08 dBm

MIMO = ANT.1 + ANT.2

(11.58 dBm + 12.08 dBm) = (14.387 mW + 16.143 mW) = 30.53 mW = 14.88 dBm

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2. TEST METHODOLOGY

Unlicensed wireless device were tested using the following measurement procedure.
[1] KDB 558074 D01 15.247 Meas Guidance v05r02
[2] ANSI C63.10-2020 + Cor. 1-2023
Note : Here in after, ANSI C63.10-2020 + Cor. 1-2023 will be referred to as ANSI C63.10-2020

EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

EUT EXERCISE

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2 of ANSI C63.10-2020. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

According to the requirements in Section 6.3 ~ Section 6.6 of ANSI C63.10-2020.
The EUT is placed on a turn table, which is 0.8 m above ground plane below 1 GHz. Above 1 GHz with 1.5 m using absorbers between the EUT and receive antenna. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes.

DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

3. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment's, which is traceable to recognized national standards.
Especially, all antenna for measurement is calibrated in accordance with the requirements of ANSI C63.5 -2017.

4. FACILITIES AND ACCREDITATIONS

FACILITIES

The SAC(Semi-Anechoic Chamber) and conducted measurement facility used to collect the radiated data are located at the 74, Seoicheon-ro 578beon-gil, Majang-myeon, Icheon-si, Gyeonggi-do, Republic of Korea. This test facility has completed the evaluation in compliance with the standards and evaluation period required for chamber validity verification. ANSI C63.4-2014 + C63.4a-2017 and ANSI C63.25.1-2018
Detailed description of test facility was submitted to the Commission and accepted dated February 26, 2026 (Registration Number: KR0032).

EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.
Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to ANSI/USEMCSC C63.2-2023, "American National Standard for Specifications of Electromagnetic Interference and Field Strength Measuring Instrumentation in the Frequency Range 9 kHz to 40 GHz".

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5. ANTENNA REQUIREMENTS

According to FCC 47 CFR §15.203:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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."

6. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2020.
All measurement uncertainty values are shown with a coverage factor of k = 2 to indicate a 95 % level of confidence.
The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty (±kHz)
X dB, 99% Bandwidth	95 (Confidence level about 95 %, k=2)

Parameter	Expanded Uncertainty (±dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.16 (Confidence level about 95 %, k=2)
Conducted Output Power(Power Meter)	0.54 (Confidence level about 95 %, k=2)
Conducted Output Power(Signal Analyzer)	0.73 (Confidence level about 95 %, k=2)
Power Spectral Density	0.98 (Confidence level about 95 %, k=2)
Band Edge (Out of Band Emissions)	1.11 (Confidence level about 95 %, k=2)
Radiated Disturbance (9 kHz ~ 30 MHz)	4.54 (Confidence level about 95 %, k=2)
Radiated Disturbance (30 MHz ~ 1 GHz)	5.74 (Confidence level about 95 %, k=2)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.80 (Confidence level about 95 %, k=2)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.86 (Confidence level about 95 %, k=2)
Radiated Disturbance (Above 40 GHz)	5.44 (Confidence level about 95 %, k=2)

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7. DESCRIPTION OF TESTS

Test Item	Test Procedure
Duty Cycle	- ANSI C63.10-2020 – Section 11.6
6 dB Bandwidth	- ANSI C63.10-2020 – Section 11.8
Output Power	- ANSI C63.10-2020 – Section 11.9.1.2(Peak) & 11.9.2.3(Avg)
Power Spectral Density	- ANSI C63.10-2020 – Section 11.10
Conducted Band Edge(Out of Band Emissions) & Conducted Spurious Emissions	- ANSI C63.10-2020– Section 11.11
Radiated Test	- ANSI C63.10-2020 – Section 6.4 (Below 30 MHz) - ANSI C63.10-2020 – Section 6.5 (30 MHz to 1000 MHz) - ANSI C63.10-2020 – Section 6.6 (1 GHz to 40 GHz) - ANSI C63.10-2020 – Section 6.10 & 11.12 (Restricted frequency bands)
AC Power line Conducted Emissions	- ANSI C63.10-2020– Section 6.2

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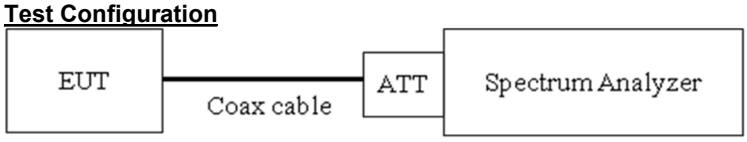
7.1. Duty Cycle

Test Configuration



Test Procedure

We tested according to the zero-span measurement method.
The largest available value of RBW is 8 MHz and VBW is 50 MHz.
The zero-span method of measuring duty cycle shall not be used if T ≤ 6.25 microseconds. (50/6.25 = 8)
The zero-span method was used because all measured T data are > 6.25 microseconds and both RBW and VBW are > 50/*T*.

The transmitter output is connected to the Spectrum Analyzer.
The Spectrum Analyzer is set to :

1. RBW = 8 MHz (the largest available value)
2. VBW = 8 MHz or 50 MHz (≥ RBW)
3. SPAN = 0 Hz
4. Detector = Average
5. Number of points in sweep > 100
6. Trace mode = Clear write
7. Measure T_{total} and T_{on}
8. Calculate Duty Cycle = T_{on} / T_{total} and Duty Cycle Factor = 10log(1/Duty Cycle)

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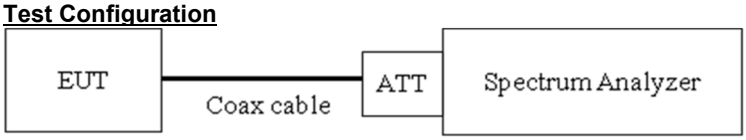
7.2. 6 dB Bandwidth

Limit
The minimum permissible 6 dB bandwidth is 500 kHz.

Test Configuration



Test Procedure
The transmitter output is connected to the Spectrum Analyzer.
The Spectrum Analyzer is set to :

1) RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
2) VBW ≥ 3 x RBW
3) Detector = Peak
4) Trace mode = max hold
5) Sweep = No faster than coupled (auto) time.
6) Allow the trace to stabilize
7) We tested 6 dB bandwidth using the automatic bandwidth measurement capability of a spectrum analyzer. X dB is set 6 dB.

Note : We tested OBW using the automatic bandwidth measurement capability of a spectrum analyzer.

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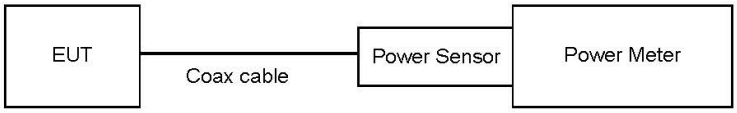
7.3. Output Power

Limit

The maximum permissible conducted output power is 1 Watt.

Test Configuration



Test Procedure

The transmitter output is connected to the Power Meter.

▪ Peak Power
: Measure the peak power of the transmitter.

▪ Average Power
1) Measure the duty cycle.
2) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3) 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.

Sample Calculation

▪ Conducted Output Power(Peak) = Measured Value + ATT loss + Cable loss
▪ Conducted Output Power(Average) = Measured Value + ATT loss + Cable loss + Duty Cycle Factor

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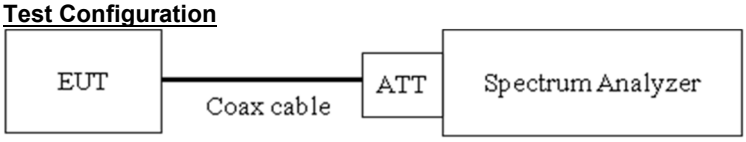
7.4. Power Spectral Density

Limit

The transmitter power density average over 1-second interval shall not be greater than 8 dBm in any 3 kHz BW.

Test Configuration



Test Procedure

The transmitter output is connected to the Spectrum Analyzer.
The Spectrum Analyzer is set to :

1) Set analyzer center frequency to DTS channel center frequency.
2) Set span to at least 1.5 times the DTS bandwidth.
3) RBW = 3 kHz ≤ RBW ≤ 100 kHz.
4) VBW ≥ 3 x RBW.
5) Sweep = No faster than coupled (auto) time.
6) Detector = Peak.
7) Trace mode = max hold.
8) Allow trace to fully stabilize.
9) Use the peak marker function to determine the maximum amplitude level within the RBW.
10) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

Sample Calculation

▪ Power Spectral Density = Measured Value + ATT loss + Cable loss

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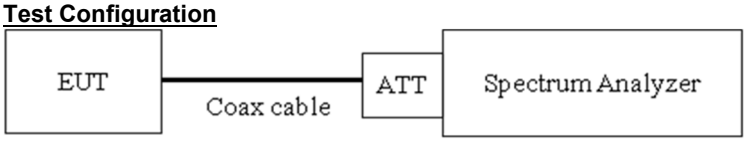
7.5. Conducted Band Edge (Out of Band Emissions) & Conducted Spurious Emissions

Limit

The maximum conducted (Peak) output power was used to demonstrate compliance, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz.
[Conducted > 20 dBc]

Test Configuration



Test Procedure

The transmitter output is connected to the Spectrum Analyzer.
The Spectrum Analyzer is set to :

1) RBW = 100 kHz
2) VBW ≥ 3 x RBW
3) Set span to encompass the spectrum to be examined
4) Detector = Peak
5) Trace Mode = max hold
6) Sweep time = No faster than coupled (auto) time.
7) Ensure that the number of measurement points ≥ 2 x Span/RBW
8) Allow trace to fully stabilize.
9) Use peak marker function to determine the maximum amplitude level.

Measurements are made over the 30 MHz to 25 GHz range with the transmitter set to the lowest, middle, and highest channels.

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Factors for frequency

Freq(MHz)	Factor(dB)
30	10.11
100	10.11
200	10.25
300	10.30
400	10.25
500	10.36
600	10.33
700	10.34
800	10.41
900	10.45
1 000	10.50
2 000	10.57
2 400	**10.86**
2 500	**10.86**
3 000	10.93
4 000	10.40
5 000	10.47
5 150	10.55
5 850	10.55
6 000	10.91
7 000	10.91
8 000	11.04
9 000	11.27
10 000	11.37
11 000	11.46
12 000	11.54
13 000	11.35
14 000	11.31
15 000	11.28
16 000	11.10
17 000	11.41
18 000	11.76
19 000	11.70
20 000	11.30
21 000	11.66
22 000	11.54
23 000	12.07
24 000	11.98
25 000	11.85
26 000	11.93

Note : 1. 2400 ~ 2500 MHz is fundamental frequency range.

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7.6. Radiated Test

Limit

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

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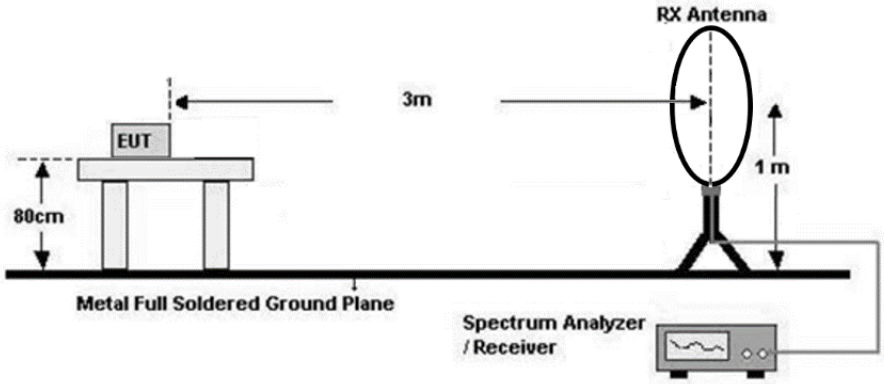
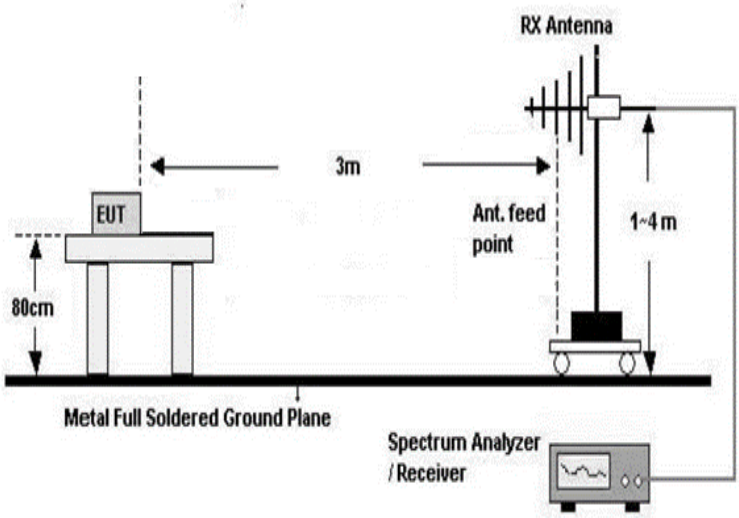
Test Configuration

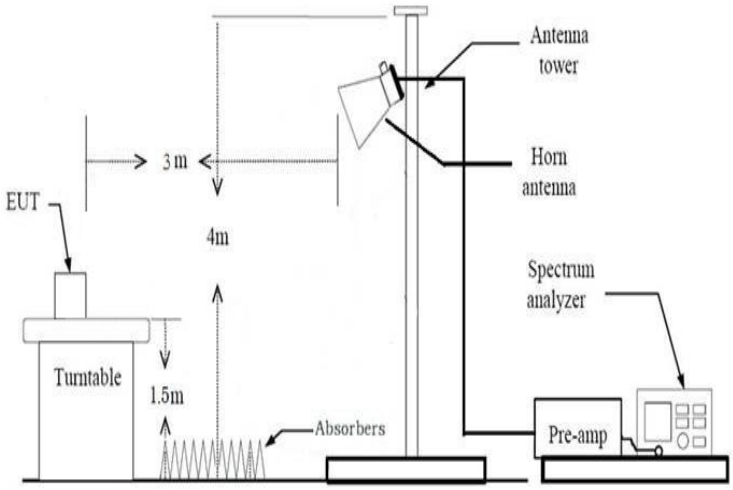
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



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Test Procedure of Radiated spurious emissions (Below 30 MHz)

1. The EUT was placed on a non-conductive table located on semi-anechoic chamber.
2. The loop antenna was placed at a location 3 m from the EUT
3. The EUT is placed on a turntable, which is 0.8 m above ground plane.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization and Parallel to the ground plane in detecting antenna.
5. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
6. Distance Correction Factor(0.009 MHz – 0.490 MHz) = 40log(3 m/300 m) = - 80 dB
   Measurement Distance : 3 m
7. Distance Correction Factor(0.490 MHz – 30 MHz) = 40log(3 m/30 m) = - 40 dB
   Measurement Distance : 3 m
8. Spectrum Analyzer Setting
   Measurement Type(Peak):
   - Frequency Range = 9 kHz ~ 30 MHz
   - Detector = Peak
   - Trace = Max hold
   - RBW = 9 kHz
   - VBW ≥ 3 x RBW
9. Total = Measured value + Antenna Factor(A.F) + Cable Loss(C.L) + Distance Factor(D.F)
10. Measurement value only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.

KDB 414788 OFS and Chamber Correlation Justification

Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.
OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

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Test Procedure of Radiated spurious emissions (Below 1 GHz)

1. The EUT was placed on a non-conductive table located on semi-anechoic chamber.
2. The EUT is placed on a turntable, which is 0.8 m above ground plane.
3. The Hybrid antenna was placed at a location 3 m from the EUT, which is varied from 1 m to 4 m to find out the highest emissions.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
5. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
6. Spectrum Analyzer Setting
   (1) Measurement Type(Peak):
   - Measured Frequency Range : 30 MHz – 1 GHz
   - Detector = Peak
   - Trace = Max hold
   - RBW = 100 kHz
   - VBW ≥ 3 x RBW

   (2) Measurement Type(Quasi-peak):
   - Measured Frequency Range : 30 MHz – 1 GHz
   - Detector = Quasi-Peak
   - RBW = 120 kHz

   In general, (1) is used mainly
7. Total = Measured Value + Antenna Factor(A.F) + Cable Loss(C.L)
8. Measurement value only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.

Test Procedure of Radiated spurious emissions (Above 1 GHz)

1. The EUT is placed on a turntable, which is 1.5 m above ground plane.
2. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
3. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
4. EUT is set 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
5. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
6. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
7. Spectrum Analyzer Setting
   (1) Measurement Type(Peak):
   - Measured Frequency Range : 1 GHz – 25 GHz
   - Detector = Peak
   - Trace = Maxhold
   - RBW = 1 MHz
   - VBW ≥ 3 x RBW

   (2) Measurement Type(Average): (Duty cycle ≥ 98 %)
   - Measured Frequency Range : 1 GHz – 25 GHz
   - Detector = RMS
   - Averaging type = power (*i.e.*, RMS)
   - RBW = 1 MHz
   - VBW ≥ 3 x RBW
   - Sweep time = auto.
   - Trace mode = average (at least 100 traces).

   (3) Measurement Type(Average): (Duty cycle < 98 %, duty cycle variations are less than ±2 %)
   - Measured Frequency Range : 1 GHz – 25 GHz
   - Detector = RMS
   - Averaging type = power (*i.e.*, RMS)
   - RBW = 1 MHz
   - VBW ≥ 3 x RBW
   - Sweep time = auto.
   - Trace mode = average (at least 100 traces).
   - Correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 % duty cycle.
   - Duty Cycle Factor (dB) : Please refer to Duty cycle test result.
8. Measurement value only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
9. Distance extrapolation factor = 20log (test distance / specific distance) (dB)

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10. Total(Measurement Type : Peak)
= Measured value + Antenna Factor(A.F) + Cable Loss(C.L) - Amp Gain(A.G) + Distance Factor(D.F)
Total(Measurement Type : Average, Duty cycle ≥ 98 %)
= Measured value + Antenna Factor(A.F) + Cable Loss(C.L) - Amp Gain(A.G) + Distance Factor(D.F)
Total(Measurement Type : Average, Duty cycle < 98 %)
= Measured value + Antenna Factor(A.F) + Cable Loss(C.L) - Amp Gain(A.G) + Distance Factor(D.F)
+ Duty Cycle Factor

Test Procedure of Radiated Restricted Band Edge

1. The EUT is placed on a turntable, which is 1.5 m above ground plane.
2. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
3. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
4. EUT is set 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
5. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
6. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
7. Spectrum Analyzer Setting
   (1) Measurement Type(Peak):
   - Measured Frequency Range : 2310 MHz ~ 2390 MHz/ 2483.5 MHz ~ 2500 MHz
   - Detector = Peak
   - Trace = Maxhold
   - RBW = 1 MHz
   - VBW ≥ 3 x RBW

   (2) Measurement Type(Average):
   (Duty cycle ≥ 98 %)
   - Measured Frequency Range : 2310 MHz ~ 2390 MHz/ 2483.5 MHz ~ 2500 MHz
   - Detector = RMS
   - Averaging type = power (*i.e.*, RMS)
   - RBW = 1 MHz
   - VBW ≥ 3 x RBW
   - Sweep time = auto.
   - Trace mode = average (at least 100 traces).

   (3) Measurement Type(Average): (Duty cycle < 98 %, duty cycle variations are less than ±2 %)
   - Measured Frequency Range : 2310 MHz ~ 2390 MHz / 2483.5 MHz ~ 2500 MHz
   - Detector = RMS
   - Averaging type = power (*i.e.*, RMS)
   - RBW = 1 MHz
   - VBW ≥ 3 x RBW
   - Sweep time = auto.
   - Trace mode = average (at least 100 traces).
   - Correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 % duty cycle.
   - Duty Cycle Factor (dB) : Please refer to Duty cycle test result.

   (4) Measurement Type(Average , Integration Method) : Duty cycle ≥ 98 %
   - Measured Frequency Range : 2310 MHz ~ 2390 MHz/ 2483.5 MHz ~ 2500 MHz
   - Detector = RMS
   - Averaging type = power (*i.e.*, RMS)
   - RBW = 100 kHz
   - VBW ≥ 3 x RBW
   - Sweep time = auto.
   - Trace mode = average (at least 100 traces).
   - Compute the power by integrating the spectrum over 1 MHz using the analyzer's band-power measurement function with band limits set equal to the emission frequency ($f_{emission}$) ± 0.5 MHz. If the instrument does not have a band-power function, then sum the amplitude levels (in power units) at 100 kHz intervals extending across the 1 MHz spectrum defined by $f_{emission}$ ± 0.5 MHz

   (5) Measurement Type(Average , Integration Method) : Duty cycle < 98 %, duty cycle variations are less than ±2 %
   - Measured Frequency Range : 1 GHz – 25 GHz
   - Detector = RMS
   - Averaging type = power (*i.e.*, RMS)
   - RBW = 100 kHz

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- VBW ≥ 3 x RBW
- Sweep time = auto.
- Trace mode = average (at least 100 traces).
- Compute the power by integrating the spectrum over 1 MHz using the analyzer's band-power measurement function with band limits set equal to the emission frequency ($f_{emission}$) ± 0.5 MHz. If the instrument does not have a band-power function, then sum the amplitude levels (in power units) at 100 kHz intervals extending across the 1 MHz spectrum defined by $f_{emission}$ ± 0.5 MHz.
- Correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 % duty cycle.
- Duty Cycle Factor (dB) : Please refer to Duty cycle test result.

8. Measurement value only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
9. Distance extrapolation factor = 20log (test distance / specific distance) (dB)
10. Total (Measurement Type : Peak)
    = Peak Measured Value

    Total(Measurement Type : Average, Duty cycle ≥ 98 %)
    = Average Measured Value

    Total(Measurement Type : Average, Duty cycle < 98 %)
    = Average Measured Value + Duty Cycle Factor
    - We apply to the offset in the range 1 GHz - 18 GHz.
    - The offset = Antenna Factor(A.F) + Cable Loss(C.L) + Distance Factor(D.F)

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7.7. AC Power line Conducted Emissions

Limit

For an intentional radiator 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, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN).

Frequency Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56[(a)]	56 to 46[(a)]
0.50 to 5	56	46
5 to 30	60	50

[(a)]Decreases with the logarithm of the frequency.

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Annex A for the actual connections between EUT and support equipment.

Test Procedure

1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors : Quasi Peak and Average Detector.

Sample Calculation

Quasi-peak (Final Result) = Measured Value + Correction Factor

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7.8. Test RU offset for Tones

BW (MHz)	Tones (T)	RU offset	Test RU offset		
			Low	Mid	High
20	26	0~8	0	4	8
	52	37~40	37	38	40
	106	53~54	53	-	54
	242	61	-	61	-

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7.9. Worst case configuration and mode

Conducted test

1. All data rate of operation were investigated and the worst case results are reported.
   (Worst case : MCS0)
2. Band Edge (Conducted)
   : All Mode (Channel, Tones, RU Offset) of operation were investigated and the worst case configuration results are reported.

Tones	Channel	RU Index
26	1, 8, 9, 10, 11, 12, 13	0, 8
52	1, 8, 9, 10, 11, 12, 13	37, 40
106	1, 9, 10, 11, 12, 13	53, 54
242	1, 11, 12, 13	61
SU	1, 11, 12, 13	-

3. All test was performed with continuous signal.(Duty Cycle ≥ 98%)

Radiated test

1. All modes of operation were investigated and the worst case configuration results are reported.
   Mode : Stand alone
2. All data rate of operation were investigated and the worst case results are reported.
   (Worst case : MCS 0)
3. All Antenna of operation were investigated and the worst case results are reported
   - Antenna Operation Type : SISO, MIMO_CDD(Ant.1+Ant.2), MIMO_SDM(Ant.1+Ant.2)
   - Worst case: MIMO_CDD(Ant.1+Ant.2)
4. EUT Axis
   - Radiated Spurious Emissions : Z
   - Radiated Restricted Band Edge : X
5. All position of loop antenna were investigated and the test result is a no critical peak found at all positions.
   - Position : Horizontal, Vertical, Parallel to the ground plane
6. All mode(Tone, RU Offset) of operation were investigated and the worst case configuration results are reported
7. All test was performed with continuous signal.(Duty Cycle ≥ 98%)

AC Power line Conducted Emissions

1. Please refer to the [DTS] Test Report.

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Radiated test(Simultaneous transmission Scenario)
1. Please refer to the [DTS], [BT LE], [UNII], [UNII ax] Test Report.

[Bandedge Worst case]

BW (MHz)	Test	Tones (T)	Offset	
			Lower	Upper
20	Band Edge	26	0	8
		52	37	40
		106	53	54
		242	61	61
		SU	-	-

[RSE Worst case]

BW (MHz)	Test	Tones (T)	Offset
20	RSE	26	4
		242	61

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8. SUMMARY TEST OF RESULTS

Test Description	FCC Part Section(s)	Test Limit	Test Condition	Test Result
6 dB Bandwidth	§15.247(a)(2)	> 500 kHz	Conducted	PASS
Conducted Maximum Output Power	§15.247(b)(3)	< 1 Watt		PASS
Power Spectral Density	§15.247(e)	< 8 dBm / 3 kHz		PASS
Band Edge (Out of Band Emissions)	§15.247(d)	Conducted > 20 dBc		PASS
AC Power line Conducted Emissions	§15.207	cf. Section 7.7		PASS (Note1)
Radiated Spurious Emissions	§15.247(d), 15.205, 15.209	cf. Section 7.6	Radiated	PASS
Radiated Restricted Band Edge	§15.247(d), 15.205, 15.209	cf. Section 7.6		PASS

Note:
1. Please refer to the [DTS] Test Report.
2. The decision rule applies 'simple acceptance'

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9. TEST RESULT

9.1 DUTY CYCLE

Mode	Tone (T)	Worst Data rate	T_{on} (ms)	T_{total} (ms)	Duty Cycle	Duty Cycle Factor (dB)
802.11ax (HE20)	26	MCS0	-	-	-	-
	52	MCS0	-	-	-	-
	106	MCS0	-	-	-	-
	242	MCS0	-	-	-	-
802.11ax(SU)	BW 20	MCS0	-	-	-	-

Note:

1. Test was performed with continuous Tx.

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9.2 6 dB BANDWIDTH

Limit : > 500 kHz

[ANT.1]

Mode	Freq. [MHz]	CH.	6dB Bandwidth [MHz]		
			RU Index : Low	RU Index : Mid	RU Index : High
			ANT1	ANT1	ANT1
HE20 26T	2412	1	2.052	2.617	2.034
	2437	6	2.100	2.629	2.064
	2447	8	2.086	2.616	2.121
	2452	9	2.114	2.615	2.076
	2457	10	2.092	2.634	2.075
	2462	11	2.087	2.617	2.062
	2467	12	2.074	2.622	2.069
	2472	13	2.059	2.606	2.015
HE20 52T	2412	1	4.140	4.173	4.119
	2437	6	4.206	4.203	4.112
	2447	8	4.145	4.171	4.079
	2452	9	4.230	4.181	4.098
	2457	10	4.181	4.157	4.094
	2462	11	4.179	4.150	4.149
	2467	12	4.125	4.166	4.131
	2472	13	4.119	4.208	4.167
HE20 106T	2412	1	8.447	-	8.346
	2437	6	8.505	-	8.390
	2452	9	8.515	-	8.443
	2457	10	8.407	-	8.502
	2462	11	8.352	-	8.395
	2467	12	8.385	-	8.363
	2472	13	8.396	-	8.373
HE20 242T	2412	1	-	18.84	-
	2437	6	-	18.89	-
	2462	11	-	18.91	-
	2467	12	-	18.82	-
	2472	13	-	18.83	-
HE20 SU	2412	1	-	18.69	-
	2437	6	-	18.81	-
	2462	11	-	18.93	-
	2467	12	-	18.69	-
	2472	13	-	18.74	-

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[ANT.2]

Mode	Freq. [MHz]	CH.	6dB Bandwidth [MHz]		
			RU Index : Low	RU Index : Mid	RU Index : High
			ANT2	ANT2	ANT2
HE20 26T	2412	1	2.097	2.606	2.043
	2437	6	2.115	2.634	2.088
	2447	8	2.097	2.624	2.123
	2452	9	2.133	2.610	2.086
	2457	10	2.100	2.620	2.112
	2462	11	2.112	2.622	2.082
	2467	12	2.073	2.612	2.062
	2472	13	2.069	2.668	2.026
HE20 52T	2412	1	4.138	4.163	4.094
	2437	6	4.104	4.167	4.085
	2447	8	4.070	4.143	4.171
	2452	9	4.101	4.161	4.234
	2457	10	4.194	4.126	4.151
	2462	11	4.166	4.156	4.161
	2467	12	4.160	4.150	4.122
	2472	13	4.158	4.141	4.134
HE20 106T	2412	1	8.346	-	8.402
	2437	6	8.499	-	8.404
	2452	9	8.510	-	8.529
	2457	10	8.491	-	8.492
	2462	11	8.612	-	8.369
	2467	12	8.293	-	8.326
	2472	13	8.370	-	8.389
HE20 242T	2412	1	-	18.85	-
	2437	6	-	18.89	-
	2462	11	-	18.90	-
	2467	12	-	18.71	-
	2472	13	-	18.79	-
HE20 SU	2412	1	-	18.58	-
	2437	6	-	18.85	-
	2462	11	-	18.82	-
	2467	12	-	18.84	-
	2472	13	-	18.73	-

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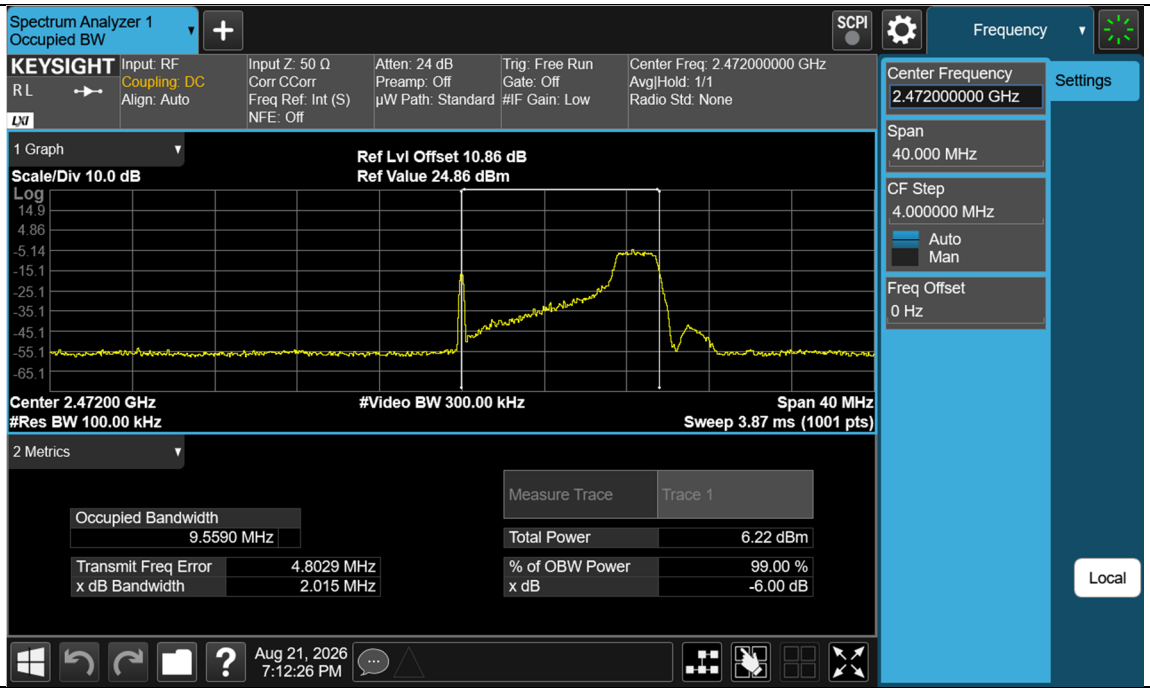
▣ Test Plots

Note: In order to simplify the report, attached plots were only the narrowest 6 dB BW channel.

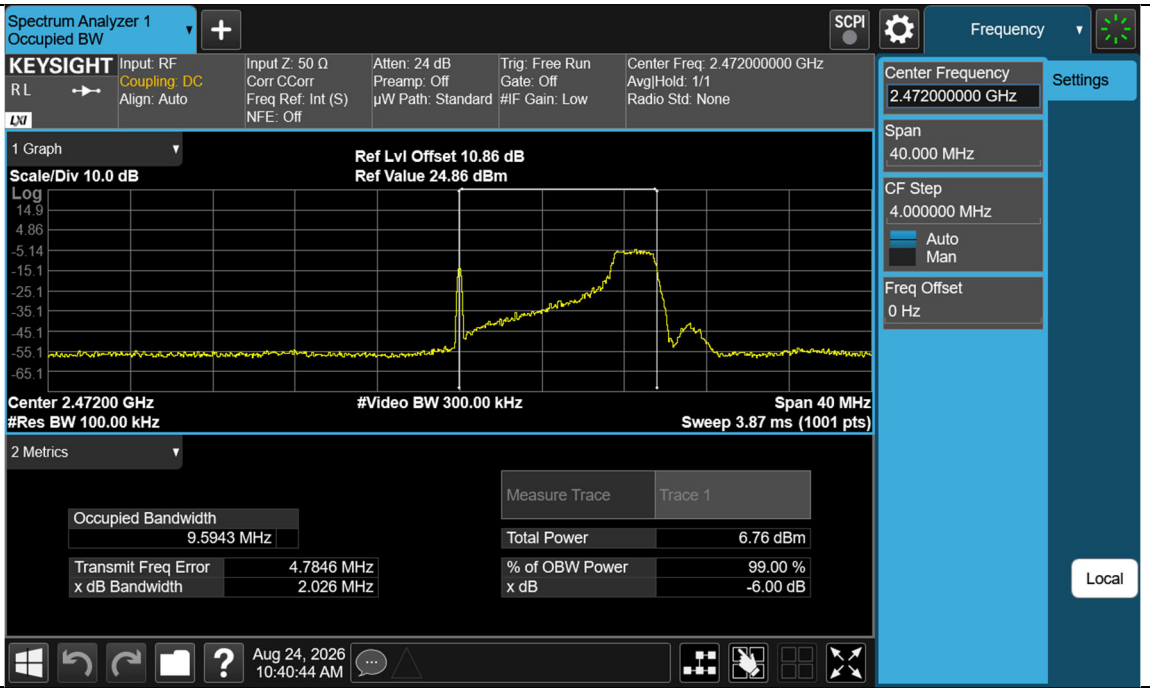
[ANT.1]

BW20M Ch.13 RU 8



[ANT.2]

BW20M Ch.13 RU 8



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9.3 OUTPUT POWER

Peak Power

Note:
1. MIMO Peak Power = 10·log((10^(Ant.1 Peak power /10))+(10^(Ant.2 Peak power /10)))

[MIMO_CDD(Ant.1+Ant.2)]

Mode	Freq. [MHz]	CH.	Total Peak Power [dBm]								
			RU Index : Low			RU Index : Mid			RU Index : High		
			ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
HE20 26T	2412	1	21.42	22.14	24.80	21.86	22.67	25.29	21.75	21.96	24.86
	2437	6	21.32	21.70	24.52	21.65	22.31	25.00	21.44	22.00	24.74
	2447	8	21.37	21.82	24.61	22.00	22.25	25.14	21.16	21.91	24.56
	2452	9	20.85	21.42	24.15	21.39	22.08	24.76	21.01	21.41	24.22
	2457	10	20.40	20.92	23.68	20.82	21.35	24.11	20.38	21.01	23.71
	2462	11	19.90	20.50	23.22	20.31	20.96	23.66	19.87	20.56	23.24
	2467	12	19.82	19.99	22.91	20.40	20.63	23.53	20.18	20.40	23.30
	2472	13	7.57	7.87	10.73	7.81	8.54	11.20	7.60	8.25	10.95
HE20 52T	2412	1	21.94	22.30	25.14	21.95	22.20	25.09	21.79	22.08	24.95
	2437	6	21.75	21.94	24.86	21.68	22.22	24.97	21.63	21.95	24.81
	2447	8	21.43	22.02	24.75	21.71	22.45	25.11	21.58	22.29	24.96
	2452	9	20.86	21.16	24.02	20.89	21.30	24.11	21.01	21.11	24.07
	2457	10	20.74	21.20	23.99	21.04	21.35	24.21	20.82	21.21	24.03
	2462	11	20.86	21.09	23.99	20.86	21.27	24.08	20.67	21.15	23.93
	2467	12	21.18	21.20	24.20	21.03	21.23	24.14	21.61	21.46	24.54
	2472	13	9.06	9.65	12.37	8.93	10.05	12.54	9.34	10.23	12.82
HE20 106T	2412	1	21.97	22.23	25.11	-	-	-	22.04	22.22	25.14
	2437	6	21.67	21.88	24.79	-	-	-	21.86	21.94	24.91
	2452	9	21.74	21.88	24.82	-	-	-	21.93	21.90	24.92
	2457	10	21.42	21.45	24.45	-	-	-	21.28	21.54	24.43
	2462	11	20.90	21.06	23.99	-	-	-	20.85	21.11	23.99
	2467	12	21.01	21.36	24.20	-	-	-	21.29	21.64	24.48
	2472	13	11.62	11.79	14.72	-	-	-	11.89	12.34	15.13
HE20 242T	2412	1	-	-	-	21.63	21.76	24.71	-	-	-
	2437	6	-	-	-	21.70	21.61	24.66	-	-	-
	2462	11	-	-	-	21.81	21.91	24.87	-	-	-
	2467	12	-	-	-	19.98	20.08	23.04	-	-	-
	2472	13	-	-	-	18.82	18.98	21.91	-	-	-
HE20 SU	2412	1	-	-	-	21.70	21.98	24.85	-	-	-
	2437	6	-	-	-	21.50	21.70	24.61	-	-	-
	2462	11	-	-	-	21.52	21.88	24.71	-	-	-
	2467	12	-	-	-	20.03	20.32	23.19	-	-	-
	2472	13	-	-	-	16.96	17.42	20.21	-	-	-

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Average Power

Note:
1. Ant Total Power [dBm] = Measured Power [dBm] + Duty Cycle Factor [dB]
2. MIMO Total Power = 10·log((10^(Ant.1 Total power /10))+(10^(Ant.2 Total power /10)))

[MIMO_CDD(Ant.1+Ant.2)]

Mode	Freq. [MHz]	CH.	Total Average Power [dBm]								
			RU Index : Low			RU Index : Mid			RU Index : High		
			ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
HE20 26T	2412	1	12.25	13.01	15.66	12.55	13.32	15.97	12.51	13.09	15.82
	2437	6	12.27	12.83	15.57	12.44	13.05	15.77	12.43	13.03	15.75
	2447	8	12.40	12.96	15.70	12.63	13.09	15.88	12.38	13.06	15.74
	2452	9	11.94	12.47	15.22	12.07	12.61	15.36	11.90	12.56	15.25
	2457	10	11.35	12.00	14.70	11.48	12.10	14.81	11.35	12.04	14.72
	2462	11	10.83	11.42	14.15	11.17	11.63	14.42	10.92	11.48	14.22
	2467	12	10.75	10.83	13.80	11.05	11.21	14.14	10.97	11.23	14.11
	2472	13	-1.53	-1.15	1.67	-1.37	-0.79	1.94	-1.43	-0.88	1.86
HE20 52T	2412	1	12.64	12.86	15.76	12.60	12.91	15.77	12.55	12.88	15.73
	2437	6	12.40	12.81	15.62	12.39	12.80	15.61	12.37	12.89	15.65
	2447	8	12.50	12.80	15.66	12.60	12.99	15.81	12.45	13.03	15.76
	2452	9	11.47	11.93	14.72	11.68	11.94	14.82	11.70	11.97	14.85
	2457	10	11.60	11.90	14.76	11.65	12.07	14.87	11.60	11.94	14.78
	2462	11	11.57	11.95	14.77	11.68	12.00	14.85	11.55	12.03	14.81
	2467	12	11.84	12.00	14.93	11.68	11.88	14.79	12.15	12.32	15.24
	2472	13	-0.30	0.59	3.18	-0.31	0.56	3.16	0.03	0.99	3.55
HE20 106T	2412	1	12.89	13.08	16.00	-	-	-	12.95	13.07	16.02
	2437	6	12.55	12.77	15.67	-	-	-	12.70	12.88	15.80
	2452	9	12.60	12.77	15.70	-	-	-	12.76	12.93	15.86
	2457	10	12.23	12.37	15.31	-	-	-	12.19	12.36	15.28
	2462	11	11.55	11.86	14.72	-	-	-	11.74	11.84	14.80
	2467	12	11.89	12.25	15.09	-	-	-	12.10	12.54	15.33
	2472	13	2.54	2.83	5.70	-	-	-	2.75	3.19	5.99
HE20 242T	2412	1	-	-	-	12.94	12.95	15.96	-	-	-
	2437	6	-	-	-	12.95	13.05	16.01	-	-	-
	2462	11	-	-	-	13.02	12.93	15.99	-	-	-
	2467	12	-	-	-	10.56	10.82	13.70	-	-	-
	2472	13	-	-	-	9.57	9.81	12.70	-	-	-
HE20 SU	2412	1	-	-	-	13.03	13.20	16.13	-	-	-
	2437	6	-	-	-	12.92	13.01	15.98	-	-	-
	2462	11	-	-	-	12.84	13.23	16.05	-	-	-
	2467	12	-	-	-	10.69	11.06	13.89	-	-	-
	2472	13	-	-	-	7.72	8.15	10.95	-	-	-

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9.4 POWER SPECTRAL DENSITY

Note :

1. MIMO Total PSD = 10·log(((10^(Ant.1 PSD /10))+(10^(Ant.2 PSD/10)))

[MIMO_CDD(Ant.1+Ant.2)]

Mode	Freq. [MHz]	CH.	Total Power Spectral Density [dBm/10 kHz]								
			RU Index : Low			RU Index : Mid			RU Index : High		
			ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
HE20 26T	2412	1	-0.851	-0.374	2.404	-0.753	0.611	2.993	-0.305	-0.334	2.691
	2437	6	-1.081	-0.285	2.346	-0.920	0.228	2.702	-0.958	-0.502	2.286
	2447	8	-0.860	-0.359	2.408	-0.827	-0.068	2.579	-0.400	-0.435	2.593
	2452	9	-0.576	-1.058	2.200	-1.797	-0.322	2.013	-1.528	-0.540	2.004
	2457	10	-2.280	-1.309	1.243	-2.060	-1.264	1.367	-2.039	-1.217	1.402
	2462	11	-2.497	-2.396	0.564	-2.211	-1.544	1.146	-2.633	-1.273	1.110
	2467	12	-2.607	-2.544	0.435	-2.333	-1.659	1.027	-2.131	-2.261	0.815
	2472	13	-14.320	-14.273	-11.286	-14.048	-13.174	-10.579	-14.264	-13.979	-11.109
HE20 52T	2412	1	-1.724	-2.511	0.911	-1.700	-2.359	0.993	-1.803	-2.526	0.861
	2437	6	-2.935	-0.465	1.484	-2.843	-0.333	1.601	-3.002	-0.402	1.500
	2447	8	-2.286	-0.704	1.587	-2.149	-0.497	1.765	-2.296	-0.644	1.618
	2452	9	-3.752	-1.870	0.300	-3.436	-1.829	0.452	-3.608	-1.932	0.321
	2457	10	-3.862	-2.088	0.125	-3.648	-1.963	0.286	-3.845	-2.116	0.115
	2462	11	-4.133	-2.295	-0.107	-3.876	-2.110	0.106	-4.053	-2.280	-0.066
	2467	12	-3.718	-2.606	-0.116	-4.075	-2.583	-0.255	-3.930	-2.681	-0.250
	2472	13	-16.047	-13.059	-11.291	-15.946	-12.898	-11.150	-16.078	-12.910	-11.201
HE20 106T	2412	1	-1.611	-2.330	1.055	-	-	-	-1.626	-2.430	1.001
	2437	6	-2.736	-0.302	1.660	-	-	-	-2.763	-0.293	1.656
	2452	9	-2.225	-0.856	1.524	-	-	-	-2.261	-0.821	1.529
	2457	10	-2.425	-1.046	1.329	-	-	-	-2.453	-1.069	1.304
	2462	11	-3.903	-2.272	-0.001	-	-	-	-4.022	-2.288	-0.059
	2467	12	-4.252	-2.442	-0.243	-	-	-	-4.246	-2.422	-0.229
	2472	13	-11.184	-10.473	-7.804	-	-	-	-11.169	-10.504	-7.813
HE20 242T	2412	1	-	-	-	-1.270	-1.952	1.413	-	-	-
	2437	6	-	-	-	-2.313	-2.211	0.749	-	-	-
	2462	11	-	-	-	-2.193	-0.859	1.535	-	-	-
	2467	12	-	-	-	-3.980	-2.104	0.069	-	-	-
	2472	13	-	-	-	-5.109	-4.344	-1.699	-	-	-
HE20 SU	2412	1	-	-	-	-1.376	-1.968	1.348	-	-	-
	2437	6	-	-	-	-2.398	-1.903	0.867	-	-	-
	2462	11	-	-	-	-2.041	-0.888	1.584	-	-	-
	2467	12	-	-	-	-3.984	-2.181	0.021	-	-	-
	2472	13	-	-	-	-6.690	-4.674	-2.556	-	-	-

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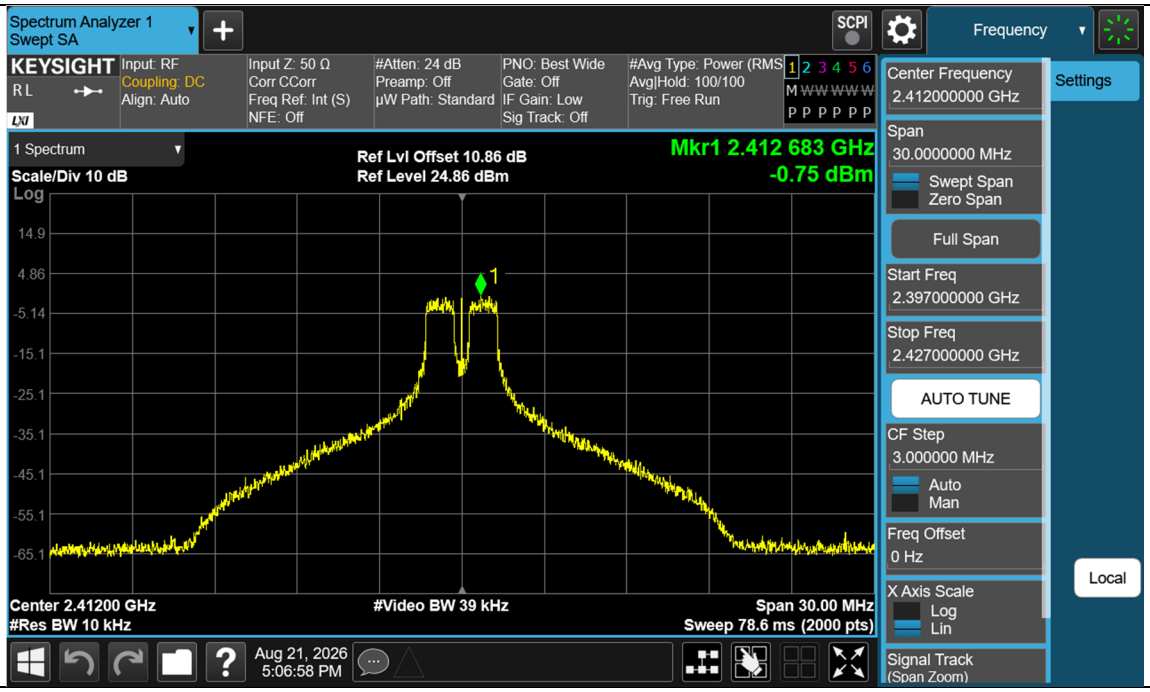
▣ Test Plots

Note: In order to simplify the report, attached plots were only the worst case PSD channel.

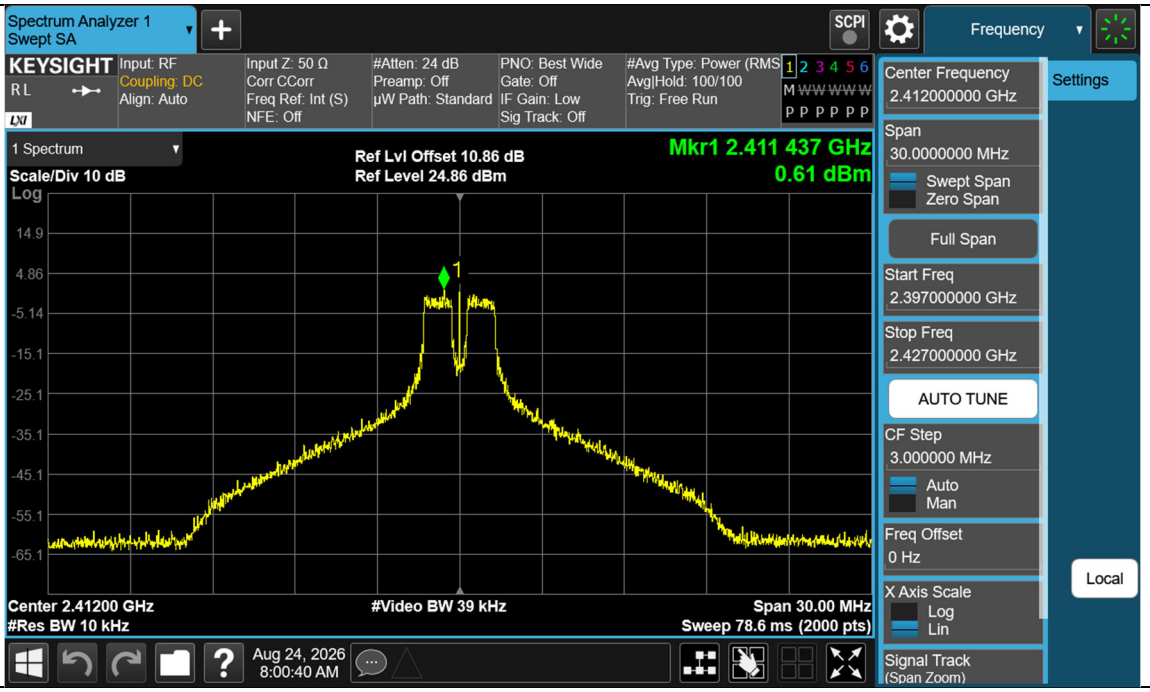
[ANT.1]

BW20M Ch.1 RU 4



[ANT.2]

BW20M Ch.1 RU 4



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9.5 BAND EDGE / CONDUCTED SPURIOUS EMISSIONS

Band Edge
Limit : 20 dBc

[ANT.1]

Mode	Freq. [MHz]	CH.	RU Index	Measured Position	Band edge [dB]
HE20 26T	2412	1	Low	Lowest Bandedge	47.135
	2447	8	High	Highest Bandedge	59.873
	2452	9	High	Highest Bandedge	61.159
	2457	10	High	Highest Bandedge	59.785
	2462	11	High	Highest Bandedge	58.562
	2467	12	High	Highest Bandedge	49.227
	2472	13	High	Highest Bandedge	40.463
HE20 52T	2412	1	Low	Lowest Bandedge	43.781
	2447	8	High	Highest Bandedge	57.445
	2452	9	High	Highest Bandedge	56.914
	2457	10	High	Highest Bandedge	56.203
	2462	11	High	Highest Bandedge	56.259
	2467	12	High	Highest Bandedge	52.799
	2472	13	High	Highest Bandedge	39.504
HE20 106T	2412	1	Low	Lowest Bandedge	43.458
	2452	9	High	Highest Bandedge	54.081
	2457	10	High	Highest Bandedge	54.928
	2462	11	High	Highest Bandedge	53.167
	2467	12	High	Highest Bandedge	48.518
	2472	13	High	Highest Bandedge	39.561
HE20 242T	2412	1	Low	Lowest Bandedge	47.776
	2462	11	High	Highest Bandedge	47.053
	2467	12	High	Highest Bandedge	45.057
	2472	13	High	Highest Bandedge	40.999
HE20 SU	2412	1	Low	Lowest Bandedge	44.576
	2462	11	High	Highest Bandedge	47.990
	2467	12	High	Highest Bandedge	43.792
	2472	13	High	Highest Bandedge	40.607

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[ANT.2]

Mode	Freq. [MHz]	CH.	RU Index	Measured Position	Band edge [dB]
HE20 26T	2412	1	Low	Lowest Bandedge	43.269
	2447	8	High	Highest Bandedge	55.756
	2452	9	High	Highest Bandedge	58.778
	2457	10	High	Highest Bandedge	59.154
	2462	11	High	Highest Bandedge	58.817
	2467	12	High	Highest Bandedge	46.124
	2472	13	High	Highest Bandedge	39.980
HE20 52T	2412	1	Low	Lowest Bandedge	43.186
	2447	8	High	Highest Bandedge	57.910
	2452	9	High	Highest Bandedge	58.635
	2457	10	High	Highest Bandedge	57.658
	2462	11	High	Highest Bandedge	57.005
	2467	12	High	Highest Bandedge	49.900
	2472	13	High	Highest Bandedge	39.281
HE20 106T	2412	1	Low	Lowest Bandedge	42.046
	2452	9	High	Highest Bandedge	55.716
	2457	10	High	Highest Bandedge	53.950
	2462	11	High	Highest Bandedge	53.575
	2467	12	High	Highest Bandedge	47.765
	2472	13	High	Highest Bandedge	38.801
HE20 242T	2412	1	Low	Lowest Bandedge	45.797
	2462	11	High	Highest Bandedge	49.524
	2467	12	High	Highest Bandedge	44.970
	2472	13	High	Highest Bandedge	40.907
HE20 SU	2412	1	Low	Lowest Bandedge	44.566
	2462	11	High	Highest Bandedge	49.443
	2467	12	High	Highest Bandedge	44.665
	2472	13	High	Highest Bandedge	42.699

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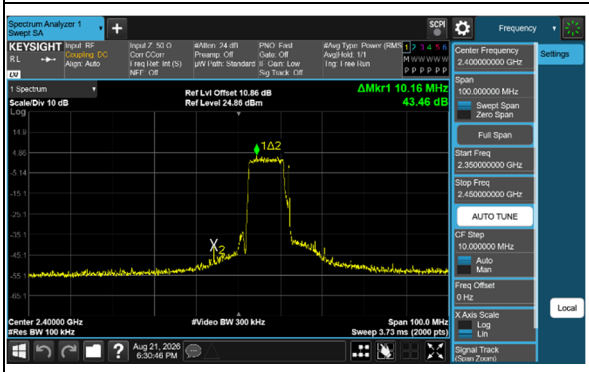
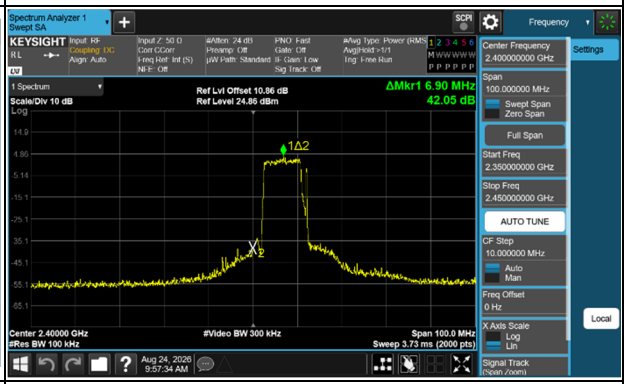
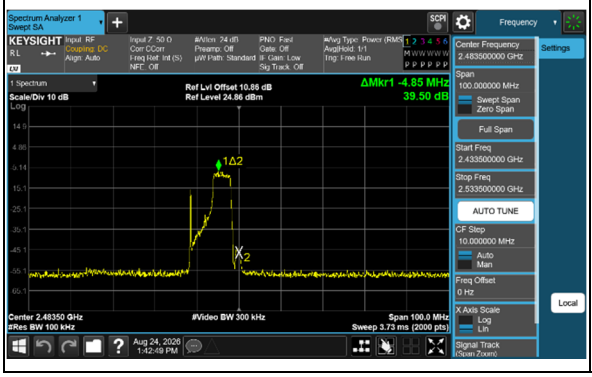
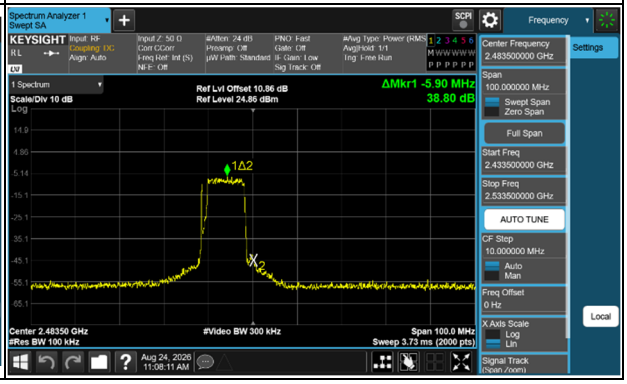
▣ Test Plots

Note: In order to simplify the report, attached plots were only the worst case.

[ANT.1]	[ANT.2]
BW 20M Ch.1 106T RU 53	**BW 20M Ch.1 106T RU 53**
	
BW 20M Ch.13 52T RU 40	**BW 20M Ch.13 106T RU 54**
	

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Conducted Spurious Emissions
Limit : 20 dBc

[ANT.1]

Mode	Freq. [MHz]	CH.	Conducted Spurious Emissions [dB]		
			RU Index : Low	RU Index : Mid	RU Index : High
			ANT1	ANT1	ANT1
HE20 26T	2412	1	67.856	64.736	66.405
	2437	6	65.678	65.677	65.888
	2447	8	64.860	62.745	65.900
	2452	9	64.694	64.951	64.351
	2457	10	64.352	64.257	62.195
	2462	11	65.892	65.286	64.470
	2467	12	64.486	64.029	64.302
	2472	13	53.365	53.367	53.501
HE20 52T	2412	1	64.108	63.801	64.530
	2437	6	63.264	62.779	63.980
	2447	8	62.204	65.560	65.379
	2452	9	63.076	62.347	62.577
	2457	10	62.121	62.335	62.981
	2462	11	63.526	62.743	60.748
	2467	12	61.739	64.300	62.433
	2472	13	50.331	51.323	51.491
HE20 106T	2412	1	60.997	-	61.331
	2437	6	61.392	-	62.388
	2452	9	59.900	-	60.919
	2457	10	59.660	-	60.616
	2462	11	60.068	-	60.508
	2467	12	61.826	-	59.842
	2472	13	50.970	-	50.538
HE20 242T	2412	1	-	58.833	-
	2437	6	-	56.746	-
	2462	11	-	58.715	-
	2467	12	-	56.738	-
	2472	13	-	55.718	-
HE20 SU	2412	1	-	60.376	-
	2437	6	-	59.486	-
	2462	11	-	58.186	-
	2467	12	-	57.425	-
	2472	13	-	53.721	-

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[ANT.2]

Mode	Freq. [MHz]	CH.	Conducted Spurious Emissions [dB]		
			RU Index : Low	RU Index : Mid	RU Index : High
			ANT2	ANT2	ANT2
HE20 26T	2412	1	67.842	67.201	66.057
	2437	6	64.585	66.382	66.269
	2447	8	66.965	65.944	66.760
	2452	9	65.761	65.823	65.330
	2457	10	65.867	65.821	66.441
	2462	11	62.842	64.904	63.638
	2467	12	65.378	64.148	64.776
	2472	13	50.727	50.673	51.974
HE20 52T	2412	1	63.737	63.011	62.950
	2437	6	63.049	65.650	62.788
	2447	8	65.131	63.852	65.664
	2452	9	63.258	63.621	62.849
	2457	10	62.857	63.464	62.688
	2462	11	62.828	62.140	62.116
	2467	12	62.923	64.326	62.797
	2472	13	51.274	53.062	52.855
HE20 106T	2412	1	61.531	-	62.227
	2437	6	61.497	-	60.530
	2452	9	61.086	-	61.279
	2457	10	61.156	-	60.324
	2462	11	60.861	-	60.441
	2467	12	62.183	-	62.113
	2472	13	51.304	-	51.710
HE20 242T	2412	1	-	59.169	-
	2437	6	-	59.616	-
	2462	11	-	58.784	-
	2467	12	-	58.528	-
	2472	13	-	56.919	-
HE20 SU	2412	1	-	60.472	-
	2437	6	-	57.183	-
	2462	11	-	59.706	-
	2467	12	-	58.263	-
	2472	13	-	55.982	-

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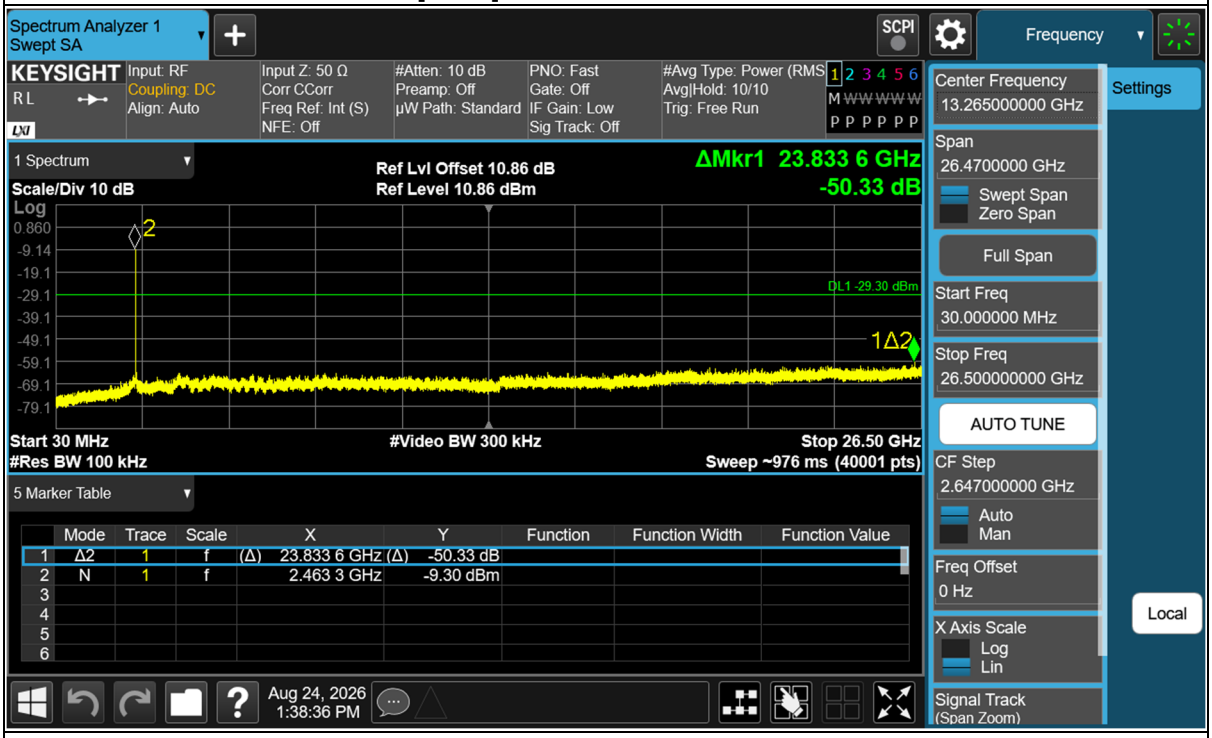
▣ Test Plots

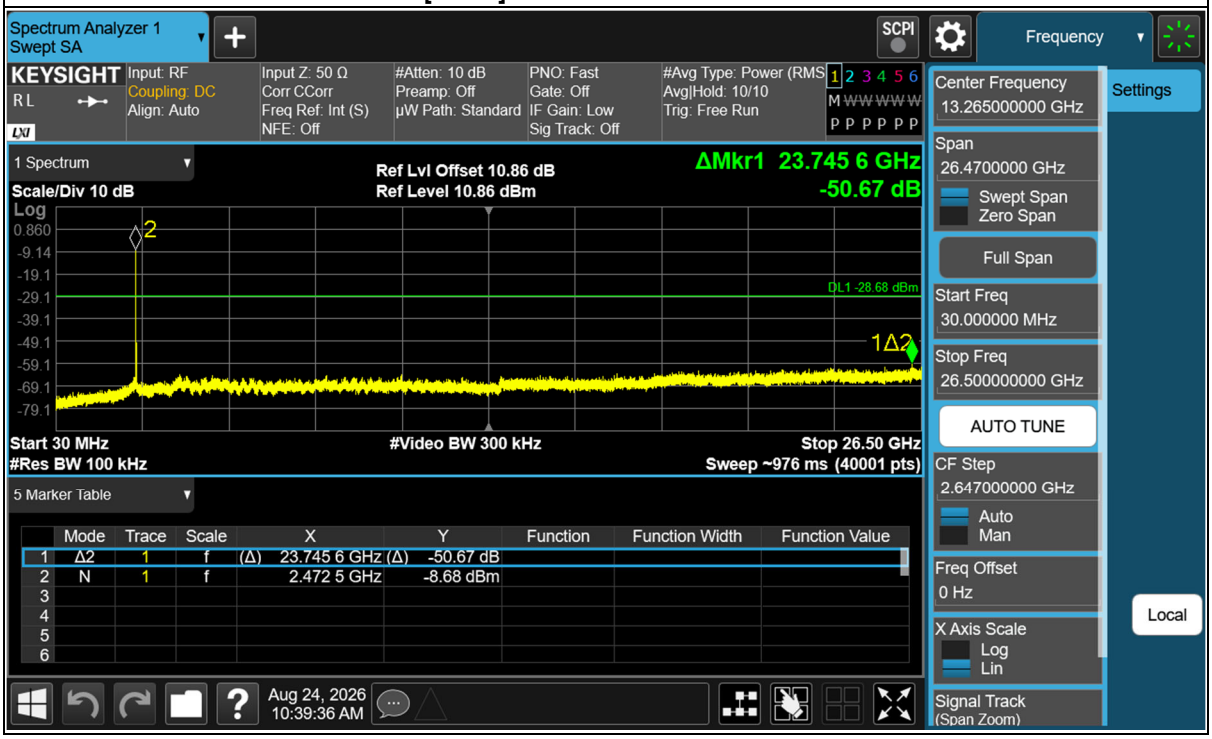
Note:

In order to simplify the report, attached plots were only the worst case.

[ANT.1] BW 20M Ch.13 52T RU 37



[ANT.2] BW 20M Ch.13 26T RU 4



Limit

ANT.1 : -29.30 dBm, ANT.2 : -28.68 dBm

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9.6 RADIATED SPURIOUS EMISSIONS

Frequency Range : 9 kHz – 30 MHz

Frequency	Measured Value	A.F+C.L+D.F	POL	Total	Limit	Margin
[MHz]	[dBμV/m]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]
No Critical peaks found						

Note:

1. The Measured of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
2. Distance extrapolation factor = 40log (specific distance / test distance) (dB)
3. Limit line = specific Limits (dBμV) + Distance extrapolation factor

Frequency Range : Below 1 GHz

Frequency	Measured Value	A.F+C.L	POL	Total	Limit	Margin
[MHz]	[dBμV/m]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]
No Critical peaks found						

Note:

1. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.

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Frequency Range : Above 1 GHz

[MIMO_CDD(Ant.1+Ant.2)]

Band :	DTS		Operation Mode :		802.11ax_HE20 MCS0 26T RU4			
CH.1	2412MHz		Transfer Rate :		MCS0			
Frequency [MHz]	Measured value [dBµV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
4824	54.64	0.00	-10.46	V	44.18	73.98	29.80	PK
4824	43.57	0.00	-10.46	V	33.11	53.98	20.87	AV
7236	51.63	0.00	-3.73	V	47.90	73.98	26.08	PK
7236	40.22	0.00	-3.73	V	36.49	53.98	17.49	AV
4824	55.94	0.00	-10.46	H	45.48	73.98	28.50	PK
4824	43.68	0.00	-10.46	H	33.22	53.98	20.76	AV
7236	52.49	0.00	-3.73	H	48.76	73.98	25.22	PK
7236	40.24	0.00	-3.73	H	36.51	53.98	17.47	AV

Band :	DTS		Operation Mode :		802.11ax_HE20 MCS0 26T RU4			
CH.6	2437MHz		Transfer Rate :		MCS0			
Frequency [MHz]	Measured value [dBµV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
4874	55.28	0.00	-10.37	V	44.91	73.98	29.07	PK
4874	44.81	0.00	-10.37	V	34.44	53.98	19.54	AV
7311	51.50	0.00	-3.71	V	47.79	73.98	26.19	PK
7311	40.06	0.00	-3.71	V	36.35	53.98	17.63	AV
4874	55.73	0.00	-10.37	H	45.36	73.98	28.62	PK
4874	44.56	0.00	-10.37	H	34.19	53.98	19.79	AV
7311	51.89	0.00	-3.71	H	48.18	73.98	25.80	PK
7311	40.16	0.00	-3.71	H	36.45	53.98	17.53	AV

Band :	DTS		Operation Mode :		802.11ax_HE20 MCS0 26T RU4			
CH.8	2447MHz		Transfer Rate :		MCS0			
Frequency [MHz]	Measured value [dBµV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
4894	55.31	0.00	-10.33	V	44.98	73.98	29.00	PK
4894	44.93	0.00	-10.33	V	34.60	53.98	19.38	AV
7341	52.25	0.00	-3.69	V	48.56	73.98	25.42	PK
7341	40.08	0.00	-3.69	V	36.39	53.98	17.59	AV
4894	56.53	0.00	-10.29	H	46.24	73.98	27.74	PK
4894	44.96	0.00	-10.29	H	34.67	53.98	19.31	AV
7341	51.43	0.00	-3.69	H	47.74	73.98	26.24	PK
7341	40.23	0.00	-3.69	H	36.54	53.98	17.44	AV

Band :	DTS		Operation Mode :		802.11ax_HE20 MCS0 26T RU4			
CH.9	2452MHz		Transfer Rate :		MCS0			
Frequency [MHz]	Measured value [dBµV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
4904	55.69	0.00	-10.29	V	45.40	73.98	28.58	PK
4904	44.96	0.00	-10.29	V	34.67	53.98	19.31	AV
7356	51.27	0.00	-3.65	V	47.62	73.98	26.36	PK
7356	39.94	0.00	-3.65	V	36.29	53.98	17.69	AV
4904	55.77	0.00	-10.29	H	45.48	73.98	28.50	PK
4904	44.66	0.00	-10.29	H	34.37	53.98	19.61	AV
7356	51.91	0.00	-3.65	H	48.26	73.98	25.72	PK
7356	39.87	0.00	-3.65	H	36.22	53.98	17.76	AV

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Band :	DTS		Operation Mode :		802.11ax_HE20 MCS0 26T RU4			
CH.10	2457MHz		Transfer Rate :		MCS0			
Frequency [MHz]	Measured value [dBµV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
4914	55.80	0.00	-10.26	V	45.54	73.98	28.44	PK
4914	45.04	0.00	-10.26	V	34.78	53.98	19.20	AV
7371	51.49	0.00	-3.65	V	47.84	73.98	26.14	PK
7371	39.79	0.00	-3.65	V	36.14	53.98	17.84	AV
4914	56.11	0.00	-10.26	H	45.85	73.98	28.13	PK
4914	43.95	0.00	-10.26	H	33.69	53.98	20.29	AV
7371	51.72	0.00	-3.65	H	48.07	73.98	25.91	PK
7371	39.89	0.00	-3.65	H	36.24	53.98	17.74	AV

Band :	DTS		Operation Mode :		802.11ax_HE20 MCS0 26T RU4			
CH.11	2462MHz		Transfer Rate :		MCS0			
Frequency [MHz]	Measured value [dBµV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
4924	55.21	0.00	-10.26	V	44.95	73.98	29.03	PK
4924	44.57	0.00	-10.26	V	34.31	53.98	19.67	AV
7386	51.99	0.00	-3.66	V	48.33	73.98	25.65	PK
7386	39.81	0.00	-3.66	V	36.15	53.98	17.83	AV
4924	54.53	0.00	-10.26	H	44.27	73.98	29.71	PK
4924	43.98	0.00	-10.26	H	33.72	53.98	20.26	AV
7386	52.30	0.00	-3.66	H	48.64	73.98	25.34	PK
7386	39.85	0.00	-3.66	H	36.19	53.98	17.79	AV

Band :	DTS		Operation Mode :		802.11ax_HE20 MCS0 26T RU4			
CH.12	2467MHz		Transfer Rate :		MCS0			
Frequency [MHz]	Measured value [dBµV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
4934	55.64	0.00	-10.24	V	45.40	73.98	28.58	PK
4934	44.83	0.00	-10.24	V	34.59	53.98	19.39	AV
7401	51.92	0.00	-3.61	V	48.31	73.98	25.67	PK
7401	39.83	0.00	-3.61	V	36.22	53.98	17.76	AV
4934	55.09	0.00	-10.24	H	44.85	73.98	29.13	PK
4934	44.63	0.00	-10.24	H	34.39	53.98	19.59	AV
7401	51.41	0.00	-3.61	H	47.80	73.98	26.18	PK
7401	39.94	0.00	-3.61	H	36.33	53.98	17.65	AV

Band :	DTS		Operation Mode :		802.11ax_HE20 MCS0 26T RU4			
CH.13	2472MHz		Transfer Rate :		MCS0			
Frequency [MHz]	Measured value [dBµV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
4944	55.07	0.00	-10.20	V	44.87	73.98	29.11	PK
4944	43.50	0.00	-10.20	V	33.30	53.98	20.68	AV
7416	51.57	0.00	-3.57	V	48.00	73.98	25.98	PK
7416	39.94	0.00	-3.57	V	36.37	53.98	17.61	AV
4944	54.97	0.00	-10.20	H	44.77	73.98	29.21	PK
4944	43.46	0.00	-10.20	H	33.26	53.98	20.72	AV
7416	52.31	0.00	-3.57	H	48.74	73.98	25.24	PK
7416	39.99	0.00	-3.57	H	36.42	53.98	17.56	AV

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Band :	DTS		Operation Mode :		802.11ax_HE20 MCS0 242T RU61			
CH.1	2412MHz		Transfer Rate :		MCS0			
Frequency [MHz]	Measured value [dBµV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
4824	54.35	0.00	-10.46	V	43.89	73.98	30.09	PK
4824	42.85	0.00	-10.46	V	32.39	53.98	21.59	AV
7236	51.46	0.00	-3.73	V	47.73	73.98	26.25	PK
7236	40.20	0.00	-3.73	V	36.47	53.98	17.51	AV
4824	53.54	0.00	-10.46	H	43.08	73.98	30.90	PK
4824	42.95	0.00	-10.46	H	32.49	53.98	21.49	AV
7236	51.81	0.00	-3.73	H	48.08	73.98	25.90	PK
7236	40.27	0.00	-3.73	H	36.54	53.98	17.44	AV

Band :	DTS		Operation Mode :		802.11ax_HE20 MCS0 242T RU61			
CH.6	2437MHz		Transfer Rate :		MCS0			
Frequency [MHz]	Measured value [dBµV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
4874	54.27	0.00	-10.37	V	43.90	73.98	30.08	PK
4874	43.00	0.00	-10.37	V	32.63	53.98	21.35	AV
7311	52.01	0.00	-3.71	V	48.30	73.98	25.68	PK
7311	40.16	0.00	-3.71	V	36.45	53.98	17.53	AV
4874	54.95	0.00	-10.37	H	44.58	73.98	29.40	PK
4874	43.30	0.00	-10.37	H	32.93	53.98	21.05	AV
7311	52.19	0.00	-3.71	H	48.48	73.98	25.50	PK
7311	40.26	0.00	-3.71	H	36.55	53.98	17.43	AV

Band :	DTS		Operation Mode :		802.11ax_HE20 MCS0 242T RU61			
CH.11	2462MHz		Transfer Rate :		MCS0			
Frequency [MHz]	Measured value [dBµV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
4924	55.31	0.00	-10.26	V	45.05	73.98	28.93	PK
4924	43.56	0.00	-10.26	V	33.30	53.98	20.68	AV
7386	51.64	0.00	-3.66	V	47.98	73.98	26.00	PK
7386	39.85	0.00	-3.66	V	36.19	53.98	17.79	AV
4924	54.96	0.00	-10.26	H	44.70	73.98	29.28	PK
4924	43.39	0.00	-10.26	H	33.13	53.98	20.85	AV
7386	51.41	0.00	-3.66	H	47.75	73.98	26.23	PK
7386	39.99	0.00	-3.66	H	36.33	53.98	17.65	AV

Band :	DTS		Operation Mode :		802.11ax_HE20 MCS0 242T RU61			
CH.12	2467MHz		Transfer Rate :		MCS0			
Frequency [MHz]	Measured value [dBµV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
4934	54.81	0.00	-10.24	V	44.57	73.98	29.41	PK
4934	43.61	0.00	-10.24	V	33.37	53.98	20.61	AV
7401	52.19	0.00	-3.61	V	48.58	73.98	25.40	PK
7401	39.96	0.00	-3.61	V	36.35	53.98	17.63	AV
4934	54.41	0.00	-10.24	H	44.17	73.98	29.81	PK
4934	43.67	0.00	-10.24	H	33.43	53.98	20.55	AV
7401	51.83	0.00	-3.61	H	48.22	73.98	25.76	PK
7401	39.97	0.00	-3.61	H	36.36	53.98	17.62	AV

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Band :	DTS		Operation Mode :		802.11ax_HE20 MCS0 242T RU61			
CH.13	2472MHz		Transfer Rate :		MCS0			
Frequency [MHz]	Measured value [dBµV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
4944	54.60	0.00	-10.20	V	44.40	73.98	29.58	PK
4944	43.61	0.00	-10.20	V	33.41	53.98	20.57	AV
7416	51.52	0.00	-3.57	V	47.95	73.98	26.03	PK
7416	39.88	0.00	-3.57	V	36.31	53.98	17.67	AV
4944	54.91	0.00	-10.20	H	44.71	73.98	29.27	PK
4944	43.60	0.00	-10.20	H	33.40	53.98	20.58	AV
7416	52.07	0.00	-3.57	H	48.50	73.98	25.48	PK
7416	40.01	0.00	-3.57	H	36.44	53.98	17.54	AV

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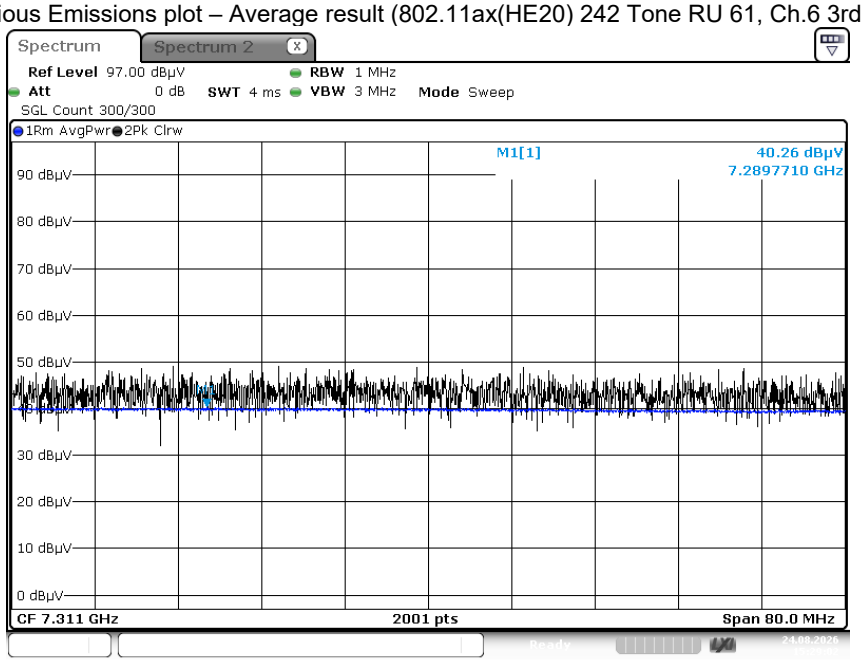
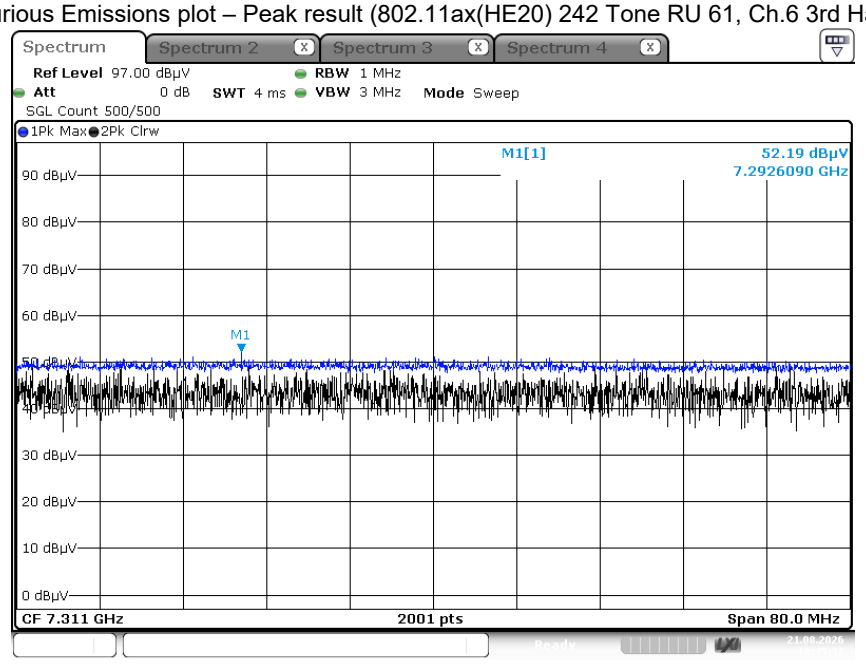
▣ Test Plots
[MIMO_CDD(Ant.1+Ant.2)]
Note: In order to simplify, Plots of worst case are only reported.

Radiated Spurious Emissions plot – Average result (802.11ax(HE20) 242 Tone RU 61, Ch.6 3rd Harmonic, X-H)



Radiated Spurious Emissions plot – Peak result (802.11ax(HE20) 242 Tone RU 61, Ch.6 3rd Harmonic, Z-H)



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9.7 RADIATED RESTRICTED BAND EDGES

[MIMO_CDD(Ant.1+Ant.2)]

[DTS Lower Edge]
[802.11ax]

Operation Mode : 802.11ax_20 Tone & RU Index : 26T & 0 MCS index : MCS0
Channel No. : 1 Frequency : 2412 MHz Band : DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2310 - 2390	57.79	0.00	H	57.79	73.98	16.19	PK
2310 - 2390	46.57	0.00	H	46.57	53.98	7.41	AV

Operation Mode : 802.11ax_20 Tone & RU Index : 52T & 37 MCS index : MCS0
Channel No. : 1 Frequency : 2412 MHz Band : DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2310 - 2390	58.60	0.00	H	58.60	73.98	15.38	PK
2310 - 2390	46.41	0.00	H	46.41	53.98	7.57	AV

Operation Mode : 802.11ax_20 Tone & RU Index : 106T & 53 MCS index : MCS0
Channel No. : 1 Frequency : 2412 MHz Band : DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2310 - 2390	58.54	0.00	H	58.54	73.98	15.44	PK
2310 - 2390	46.57	0.00	H	46.57	53.98	7.41	AV

Operation Mode : 802.11ax_20 Tone & RU Index : 242T & 61 MCS index : MCS0
Channel No. : 1 Frequency : 2412 MHz Band : DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2310 - 2390	60.45	0.00	H	60.45	73.98	13.53	PK
2310 - 2390	48.10	0.00	H	48.10	53.98	5.88	AV

Operation Mode : 802.11ax_20 Tone & RU Index : SU MCS index : MCS0
Channel No. : 1 Frequency : 2412 MHz Band : DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2310 - 2390	59.38	0.00	H	59.38	73.98	14.60	PK
2310 - 2390	47.26	0.00	H	47.26	53.98	6.72	AV

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[DTS Upper Edge]
[802.11ax]

Operation Mode : 802.11ax_20 Tone & RU Index : 26T & 8 MCS index : MCS0
Channel No. : 8 Frequency : 2447 MHz Band : DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	67.88	0.00	H	67.88	73.98	6.10	PK
2483.5 - 2500	46.81	0.00	H	46.81	53.98	7.17	AV

Operation Mode : 802.11ax_20 Tone & RU Index : 52T & 40 MCS index : MCS0
Channel No. : 8 Frequency : 2447 MHz Band : DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	68.11	0.00	H	68.11	73.98	5.87	PK
2483.5 - 2500	46.65	0.00	H	46.65	53.98	7.33	AV

Operation Mode : 802.11ax_20 Tone & RU Index : 26T & 8 MCS index : MCS0
Channel No. : 9 Frequency : 2452 MHz Band : DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	57.90	0.00	H	57.90	73.98	16.08	PK
2483.5 - 2500	45.68	0.00	H	45.68	53.98	8.30	AV

Operation Mode : 802.11ax_20 Tone & RU Index : 52T & 40 MCS index : MCS0
Channel No. : 9 Frequency : 2452 MHz Band : DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	57.22	0.00	H	57.22	73.98	16.76	PK
2483.5 - 2500	45.42	0.00	H	45.42	53.98	8.56	AV

Operation Mode : 802.11ax_20 Tone & RU Index : 106T & 54 MCS index : MCS0
Channel No. : 9 Frequency : 2452 MHz Band : DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	65.45	0.00	H	65.45	73.98	8.53	PK
2483.5 - 2500	46.60	0.00	H	46.60	53.98	7.38	AV

Operation Mode : 802.11ax_20 Tone & RU Index : 26T & 8 MCS index : MCS0
Channel No. : 10 Frequency : 2457 MHz Band : DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	60.29	0.00	H	60.29	73.98	13.69	PK
2483.5 - 2500	46.74	0.00	H	46.74	53.98	7.24	AV

Operation Mode : 802.11ax_20 Tone & RU Index : 52T & 40 MCS index : MCS0
Channel No. : 10 Frequency : 2457 MHz Band : DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	59.73	0.00	H	59.73	73.98	14.25	PK
2483.5 - 2500	46.13	0.00	H	46.13	53.98	7.85	AV

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Operation Mode :	802.11ax_20	Tone & RU Index :	106T & 54	MCS index :	MCS0
Channel No. :	10	Frequency :	2457 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	70.64	0.00	H	70.64	73.98	3.34	PK
2483.5 - 2500	47.20	0.00	H	47.20	53.98	6.78	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	26T & 8	MCS index :	MCS0
Channel No. :	11	Frequency :	2462 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	58.49	0.00	H	58.49	73.98	15.49	PK
2483.5 - 2500	46.27	0.00	H	46.27	53.98	7.71	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	52T & 40	MCS index :	MCS0
Channel No. :	11	Frequency :	2462 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	59.16	0.00	H	59.16	73.98	14.82	PK
2483.5 - 2500	46.44	0.00	H	46.44	53.98	7.54	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	106T & 54	MCS index :	MCS0
Channel No. :	11	Frequency :	2462 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	58.53	0.00	H	58.53	73.98	15.45	PK
2483.5 - 2500	46.62	0.00	H	46.62	53.98	7.36	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	242T & 61	MCS index :	MCS0
Channel No. :	11	Frequency :	2462 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	67.09	0.00	H	67.09	73.98	6.89	PK
2483.5 - 2500	50.63	0.00	H	50.63	53.98	3.35	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	SU	MCS index :	MCS0
Channel No. :	11	Frequency :	2462 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	65.13	0.00	H	65.13	73.98	8.85	PK
2483.5 - 2500	50.26	0.00	H	50.26	53.98	3.72	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	26T & 8	MCS index :	MCS0
Channel No. :	12	Frequency :	2467 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	66.61	0.00	H	66.61	73.98	7.37	PK
2483.5 - 2500	50.07	0.00	H	50.07	53.98	3.91	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	52T & 40	MCS index :	MCS0
Channel No. :	12	Frequency :	2467 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	62.75	0.00	H	62.75	73.98	11.23	PK
2483.5 - 2500	48.60	0.00	H	48.60	53.98	5.38	AV

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Operation Mode :	802.11ax_20	Tone & RU Index :	106T & 54	MCS index :	MCS0
Channel No. :	12	Frequency :	2467 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	65.20	0.00	H	65.20	73.98	8.78	PK
2483.5 - 2500	49.64	0.00	H	49.64	53.98	4.34	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	242T & 61	MCS index :	MCS0
Channel No. :	12	Frequency :	2467 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	66.03	0.00	H	66.03	73.98	7.95	PK
2483.5 - 2500	50.67	0.00	H	50.67	53.98	3.31	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	SU	MCS index :	MCS0
Channel No. :	12	Frequency :	2467 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	64.17	0.00	H	64.17	73.98	9.81	PK
2483.5 - 2500	50.98	0.00	H	50.98	53.98	3.00	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	26T & 8	MCS index :	MCS0
Channel No. :	13	Frequency :	2472 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	68.40	0.00	H	68.40	73.98	5.58	PK
2483.5 - 2500	48.58	0.00	H	48.58	53.98	5.40	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	52T & 40	MCS index :	MCS0
Channel No. :	13	Frequency :	2472 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	70.54	0.00	H	70.54	73.98	3.44	PK
2483.5 - 2500	49.98	0.00	H	49.98	53.98	4.00	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	106T & 54	MCS index :	MCS0
Channel No. :	13	Frequency :	2472 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	68.59	0.00	H	68.59	73.98	5.39	PK
2483.5 - 2500	48.66	0.00	H	48.66	53.98	5.32	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	242T & 61	MCS index :	MCS0
Channel No. :	13	Frequency :	2472 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	65.66	0.00	H	65.66	73.98	8.32	PK
2483.5 - 2500	51.18	0.00	H	51.18	53.98	2.80	AV

Operation Mode :	802.11ax_20	Tone & RU Index :	SU	MCS index :	MCS0
Channel No. :	13	Frequency :	2472 MHz	Band :	DTS

Frequency [MHz]	Measured Value [dBµV]	Duty Cycle Factor [dB]	ANT. POL [H/V]	Total [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Measurement Type
2483.5 - 2500	62.25	0.00	H	62.25	73.98	11.73	PK
2483.5 - 2500	49.99	0.00	H	49.99	53.98	3.99	AV

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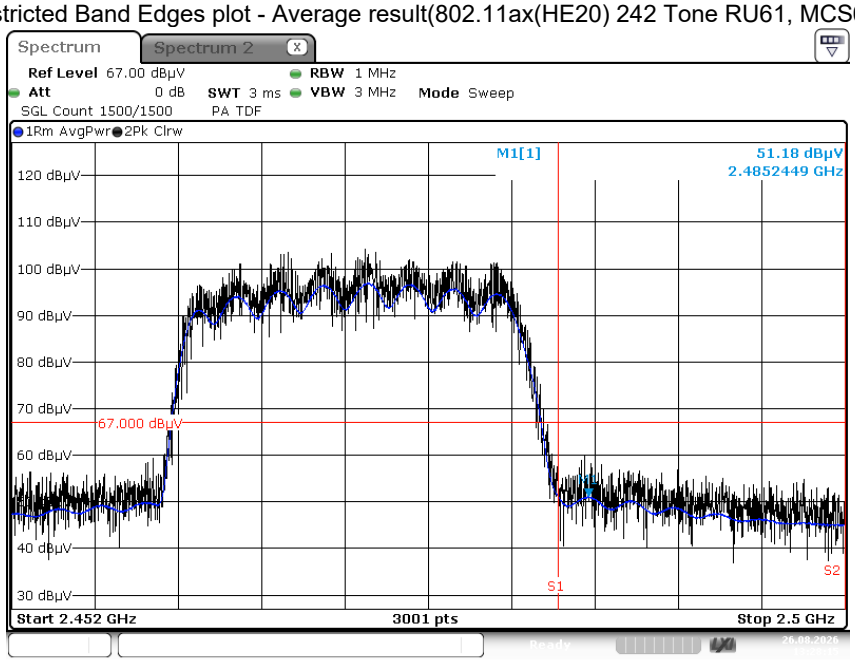
▣ Test Plots

[MIMO_CDD(Ant.1+Ant.2)]

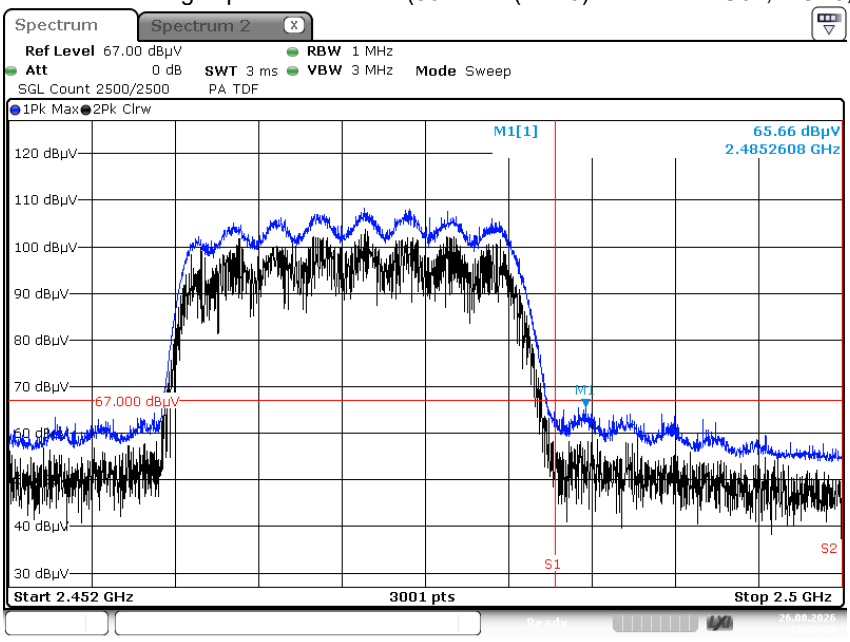
Note: In order to simplify the report, Plots of worst case are only reported.

Radiated Restricted Band Edges plot - Average result(802.11ax(HE20) 242 Tone RU61, MCS0, ch.13, X-H)



Date: 26.AUG.2026 13:28:16

Radiated Restricted Band Edges plot - Peak result(802.11ax(HE20) 242 Tone RU61, MCS0, ch.13, X-H)



Date: 26.AUG.2026 13:28:00

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10. LIST OF TEST EQUIPMENT

Conducted Test

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
LISN	ENV216	Rohde & Schwarz	102245	07/10/2027	Annual
EMI Test Receiver	EPL1000	Rohde & Schwarz	101127	05/15/2027	Annual
Chamber	SU-642	ESPEC	93022487	06/17/2027	Annual
Signal Analyzer	N9030B	Keysight	MY56320554	01/26/2027	Annual
Open switch and control platform	OSP 150	Rohde & Schwarz	100894	05/06/2027	Annual
Power Meter	N1911A	Agilent	MY45100523	02/13/2027	Annual
Wideband Power Sensor	N1921A	Keysight	MY57820067	01/26/2027	Annual
Directional Coupler	87300B	Agilent	3116A03621	10/14/2026	Annual
Power Splitter	11667B	Hewlett Packard	10545	01/15/2027	Annual
DC Power Supply	E3632A	Agilent	MY50360067	01/27/2027	Annual
Attenuator	10 dB	Sensor View	ATT10FC001	05/14/2027	Annual
Software	ELEKTRA	Rohde & Schwarz	N/A	N/A	N/A
Bluetooth Tester	CBT	Rohde & Schwarz	100752	12/22/2026	Annual
Radio Communication Tester	CMX500	Rohde&Schwarz	100325	09/29/2026	Annual
4 Way Power DIVIDER	4456-4	Narda	01640	04/13/2027	Annual
Step Attenuator	8310-202-F	Aeroflex/Weinschel	1070	03/18/2027	Annual
Automation Software	FCC WLAN Conducted	HCT CO., LTD	-	-	-
Automation Software	FCC Bluetooth Conducted	HCT CO.,LTD	-	-	-

Note:

1. Equipment whose calibration due date was updated during the test period was not used between the previous due date and the update.
All reported measurements were performed using equipment within valid calibration.
2. Especially, all antenna for measurement is calibrated in accordance with the requirements of ANSI C63.5-2017.

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Radiated Test

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
Antenna Mast Controller	CO3000	Innco systems GmbH	CO3000/ 1542/57580623/G	N/A	N/A
Antenna Mast	MA4640-XP-ET	Innco systems GmbH	9320422	03/24/2027	Biennial
Turn Table	DT2000-2t	Innco systems GmbH	5930623	N/A	N/A
Loop Antenna	FMZB 1513	Schwarzbeck Mess-Elektronik OHG	1513-175	06/24/2027	Biennial
Trilog Broadband Antenna	VULB 9168	Schwarzbeck Mess-Elektronik OHG	9168-1135	08/12/2028	Biennial
Horn Antenna	BBHA 9120 D	Schwarzbeck Mess-Elektronik OHG	9120D-1151	07/11/2027	Biennial
Horn Antenna	BBHA 9170	Schwarzbeck Mess-Elektronik OHG	BBHA9170342	09/20/2026	Biennial
Band Reject Filter	WRCJV2400/2483.5-2370/2520-60/12SS	Wainwright Instruments GmbH	2	12/11/2026	Annual
Band Reject Filter	WRCJV12-4900-5100-5900-6100-50SS	Wainwright Instruments GmbH	5	03/19/2027	Annual
Band Reject Filter	WRCJV12-4900-5100-5900-6100-50SS	Wainwright Instruments GmbH	6	03/19/2027	Annual
Band Reject Filter	WRCJV5100/5850-40/50-8EEK	Wainwright Instruments GmbH	1	01/07/2027	Annual
RF Switching System	FBSR-04C (HPF(3~18GHz) + LNA1(1~18GHz))	T&M system	S5L1	02/12/2027	Annual
RF Switching System	FBSR-04C (ATT(10dB) + LNA1(1~18GHz))	T&M system	S5L2	02/12/2027	Annual
RF Switching System	FBSR-04C (ATT(3dB) + LNA1(1~18GHz))	T&M system	S5L3	02/12/2027	Annual
RF Switching System	FBSR-04C (LNA1(1~18GHz))	T&M system	S5L4	02/12/2027	Annual
RF Switching System	FBSR-04C (HPF(7~18GHz) + LNA2(6~18GHz))	T&M system	S5L5	02/12/2027	Annual
RF Switching System	FBSR-04C (Thru(30MHz ~ 18GHz))	T&M system	S5L6	02/12/2027	Annual
Broadband LNA	CBL18265035	CERNEX	22966	10/21/2026	Annual
Broadband LNA	CBL26405040	CERNEX	25956	02/09/2027	Annual
Bluetooth Tester	TC-3000C	TESCOM	3000C000175	03/03/2027	Annual
Signal Analyzer	FSV40	Rohde & Schwarz	101510	09/01/2027	Annual
Attenuator	18B-03	API Technologies	1	04/13/2027	Annual
Automation Software	FCC WLAN Radiated	HCT CO., LTD	-	-	-

Note:
1. Equipment whose calibration due date was updated during the test period was not used between the previous due date and the update.
All reported measurements were performed using equipment within valid calibration.
2. Especially, all antenna for measurement is calibrated in accordance with the requirements of ANSI C63.5-2017.

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11. ANNEX A_TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-2609-FC008-P

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