

TEST REPORT

FCC DTS ax Test for TFBMEEBN6FU
Certification

APPLICANT
LG Electronics Inc.

REPORT NO.
HCT-RF-2507-FC078-R3

DATE OF ISSUE
September 1, 2025

Tested by
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Accredited by KOLAS, Republic of KOREA

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TEST REPORT

REPORT NO.
HCT-RF-2507-FC078-R3

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September 01, 2025

Additional Model
TFBMEEBN6FR, TFBMNENN0FN

Applicant **LG Electronics Inc.**
128, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea

Product Name	Telematics
Model Name	TFBMEEBN6FU
FCC ID	2B03LTFBMEEBN6FU
Date of Test	March 14, 2025~ July 11, 2025
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)

REVISION HISTORY

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

Revision No.	Date of Issue	Description
0	July 17, 2025	Initial Release
1	August 04, 2025	Added Note on page 6.
2	August 06, 2025	Revised BTLE Antenna information (Ant.3 → Ant.1)
3	September 01, 2025	Added the Radiated Emissions test method

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	TFBMEEBN6FU		
Additional Model	TFBMEEBN6FR, TFBMNENN0FN		
EUT Type	Telematics		
Power Supply	DC 12.0 V		
Frequency Range	2 412 MHz ~ 2 462 MHz		
Max. RF Output Power	<u>Peak Power</u>	SISO(Ant.3)	17.24 dBm
		MIMO_CDD(Ant.1+ Ant.2)	16.79 dBm
	<u>Average Power</u>	SISO(Ant.3)	6.62 dBm
		MIMO_CDD(Ant.1+ Ant.2)	6.84 dBm
Modulation Type	OFDM, OFDMA		
Number of Channels	11 Channels		
Antenna Type	ANT.1 & ANT.2: Shark-fin ANT.3: Carrier + Metal Press		
Serial number	Conducted : 0000009077 Radiated : 0000009074		

ANTENNA CONFIGURATIONS

1. Antenna configuration

Configurations	SISO			MIMO	
	ANT.1	ANT.2	ANT.3	CDD	SDM
802.11ax(HE20/HE40)	X	X	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
- (5) MIMO = MIMO(Ant.1 + Ant.2), MIMO(Ant.1 + Ant.3)

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

Simultaneous transmission Scenario	5 GHz WiFi Ant.1	5 GHz WiFi Ant.2	5 GHz WiFi Ant.3	6 GHz WiFi Ant.1	6 GHz WiFi Ant.2	6 GHz WiFi Ant.3	BT LE Ant.1	WWAN	Test Case
Bluetooth LE + 5 GHz WiFi MIMO + WWAN	on	on	-	-	-	-	on	on	Scenario1
Bluetooth LE + 5 GHz WiFi MIMO + WWAN	on	-	on	-	-	-	on	on	-
Bluetooth LE + 6 GHz WiFi MIMO + WWAN	-	-	-	on	on	-	on	on	Scenario2
Bluetooth LE + 6 GHz WiFi MIMO + WWAN	-	-	-	on	-	on	on	on	-

Note : TFBMNN0FN does not support WWAN.

3. Directional Gain Calculation

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

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

$$\text{Directional gain(SDM)} = G_{\max} + 10 \cdot \text{LOG}(N_{ANT}/N_{SS})$$

[US-5A7F527]

Ant Gain (dBi)		N _{ANT} / N _{SS}	Directional Gain (dBi)	
			CDD	SDM
ANT.1	4.99	2/2	7.63	4.99
ANT.2	4.23			

[ROW-5A7F528]

Ant Gain (dBi)		N _{ANT} / N _{SS}	Directional Gain (dBi)	
			CDD	SDM
ANT.1	5.53	2/2	8.23	5.53
ANT.2	4.89			

[NC-5A7F529]]

Ant Gain (dBi)		N _{ANT} / N _{SS}	Directional Gain (dBi)	
			CDD	SDM
ANT.1	7.34	2/2	9.67	7.34
ANT.2	5.92			

[BUA]

Ant Gain (dBi)	
Ant.3	
0.88	

Note

According to ANSI C63.10-2013 section 14.4.3, 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.

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

$$\text{Directional gain(SDM)} = G_{\max} + 10 \cdot \log(N_{ANT} / N_{SS})$$

Sample MIMO Calculation:

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

$$\text{MIMO} = \text{ANT.1} + \text{ANT.2}$$

$$(11.58 \text{ dBm} + 12.08 \text{ dBm}) = (14.387 \text{ mW} + 16.143 \text{ mW}) = 30.53 \text{ mW} = 14.88 \text{ dBm}$$

2. TEST METHODOLOGY

FCC KDB 558074 D01 15.247 Meas Guidance v05r02 dated April 02, 2019 entitled “guidance for compliance measurements on digital transmission system, frequency hopping spread spectrum system, and hybrid system devices and the measurement procedure described in ANSI C63.10 (Version : 2013) ‘the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices’.

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. (Version :2013) 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

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 according to the requirements in Section 6.6.5 of ANSI C63.10. (Version: 2013)

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 C63.5 (Version : 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. The site is constructed in conformance with the requirements of ANSI C63.4. (Version :2014) and CISPR Publication 22.

Detailed description of test facility was submitted to the Commission and accepted dated March 11, 2024 (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 CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

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.”

- (1) The antennas of this E.U.T are permanently attached.
- (2) The E.U.T Complies with the requirement of § 15.203

6. MEASUREMENT UNCERTAINTY

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013.

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.

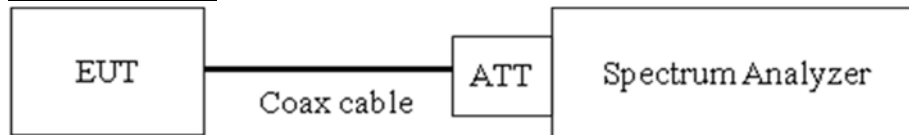
Parameter	Expanded Uncertainty ($\pm$ kHz)
X dB, 99% Bandwidth	95 (Confidence level about 95 %, $k=2$)
Frequency stability	28 (Confidence level about 95 %, $k=2$)

Parameter	Expanded Uncertainty ($\pm$ dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.54 (Confidence level about 95 %, $k=2$)
Conducted Output Power(Power Meter)	0.54 (Confidence level about 95 %, $k=2$)
Conducted Output Power(Signal Analyzer)	0.68 (Confidence level about 95 %, $k=2$)
Power Spectral Density	1.03 (Confidence level about 95 %, $k=2$)
Band Edge (Out of Band Emissions)	0.70 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (9 kHz ~ 30 MHz)	4.36 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (30 MHz ~ 1 GHz)	5.68 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.75 (Confidence level about 95 %, $k=2$)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.82 (Confidence level about 95 %, $k=2$)

7. DESCRIPTION OF TESTS

7.1. Duty Cycle

Test Configuration



Test Procedure

The transmitter output is connected to the Spectrum Analyzer.

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 $T \leq 6.25$ 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 $> 50/T$.

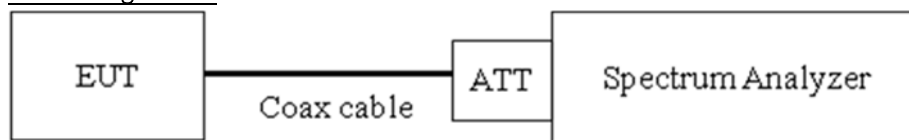
1. RBW = 8 MHz (the largest available value)
2. VBW = 8 MHz ($\geq$ RBW)
3. SPAN = 0 Hz
4. Detector = Peak
5. Number of points in sweep > 100
6. Trace mode = Clear write
7. Measure T_{total} and T_{on}
8. Calculate Duty Cycle = T_{on} / T_{total} and Duty Cycle Factor = $10\log(1/\text{Duty Cycle})$

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 (Procedure 11.8.1 in ANSI 63.10-2013)

- 1) RBW = 100 kHz
- 2) VBW $\geq 3 \times$ RBW
- 3) Detector = Peak
- 4) Trace mode = max hold
- 5) Sweep = auto couple
- 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.

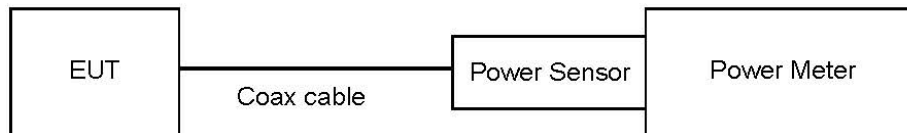
Note : We tested OBW using the automatic bandwidth measurement capability of a spectrum analyzer.

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 (Procedure 11.9.1.3 in ANSI 63.10-2013)
: Measure the peak power of the transmitter.
- Average Power (Procedure 11.9.2.3 in ANSI 63.10-2013)
 - 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

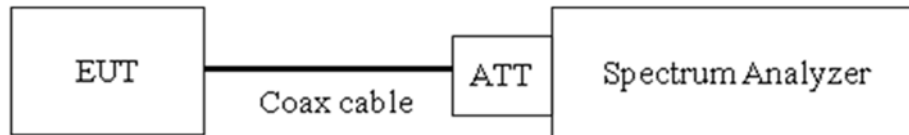
- Conducted Output Power(Peak) = Measured Value + ATT loss + Cable loss
- Conducted Output Power(Average) = Measured Value + ATT loss + Cable loss + Duty Cycle Factor

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.

We tested according to Procedure 8.4 in KDB 558074 v05r02, Procedure 11.10 in ANSI 63.10-2013.

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) $RBW = 3 \text{ kHz} \leq RBW \leq 100 \text{ kHz}$.
- 4) $VBW \geq 3 \times RBW$.
- 5) Sweep = auto couple.
- 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 + Duty Cycle Factor

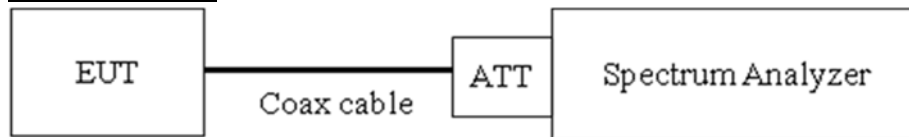
7.5. Conducted Band Edge (Out of Band Emissions) & Conducted Spurious Emissions

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.

(Procedure 11.11 in ANSI 63.10-2013)

- 1) RBW = 100 kHz
- 2) VBW $\geq 3 \times$ RBW
- 3) Set span to encompass the spectrum to be examined
- 4) Detector = Peak
- 5) Trace Mode = max hold
- 6) Sweep time = auto couple
- 7) Ensure that the number of measurement points $\geq 2 \times$ 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.

Factors for frequency

Freq(MHz)	Factor(dB)
30	20.06
100	20.14
200	20.17
300	20.21
400	20.28
500	20.28
600	20.28
700	20.28
800	20.30
900	20.31
1000	20.35
2000	20.55
2400	20.62
2500	20.67
3000	20.74
4000	20.86
5000	20.84
5850	20.83
6000	20.93
7000	20.97
8000	21.09
9000	21.18
10000	21.27
11000	21.33
12000	21.33
13000	21.40
14000	21.49
15000	21.52
16000	21.55
17000	21.63
18000	21.65
19000	21.66
20000	21.76
21000	21.82
22000	21.86
23000	21.90
24000	21.92
25000	22.04

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

2. Factor = Attenuator loss + Cable loss

3. Ant.1 Total Port offset = Attenuator loss + Cable loss + EUT cable loss(1 dB) = 21.62 dB

4. Ant.2, 3 Total Port offset = Attenuator loss + Cable loss = 20.62 dB

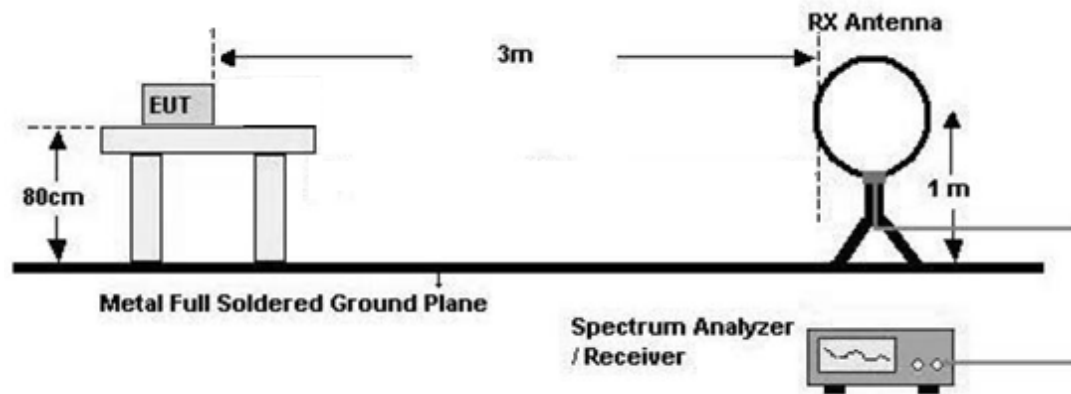
7.6. Radiated Test

Limit

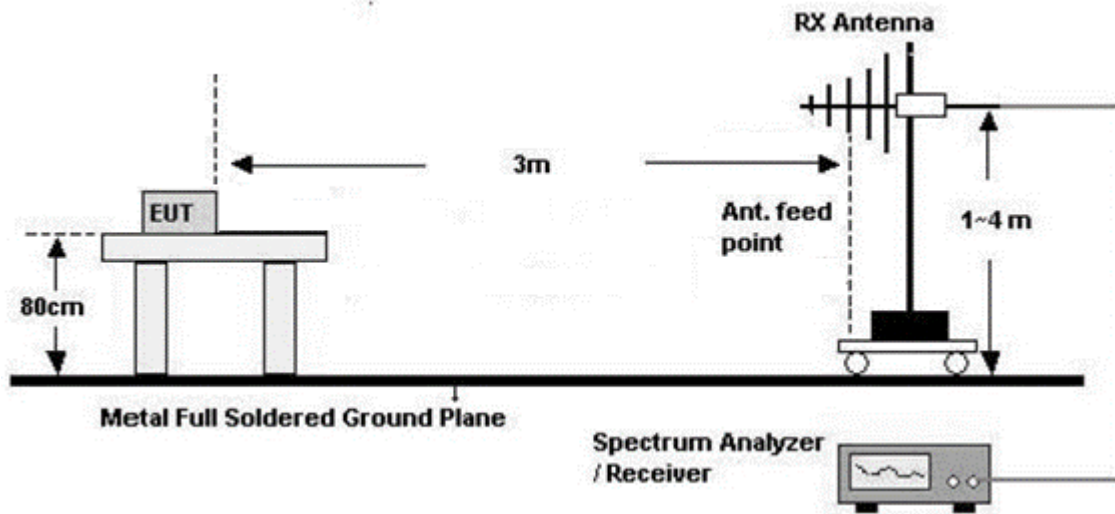
Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	Measurement Distance (m)
0.009 – 0.490	$2400/F(\text{kHz})$	300
0.490 – 1.705	$24000/F(\text{kHz})$	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test Configuration

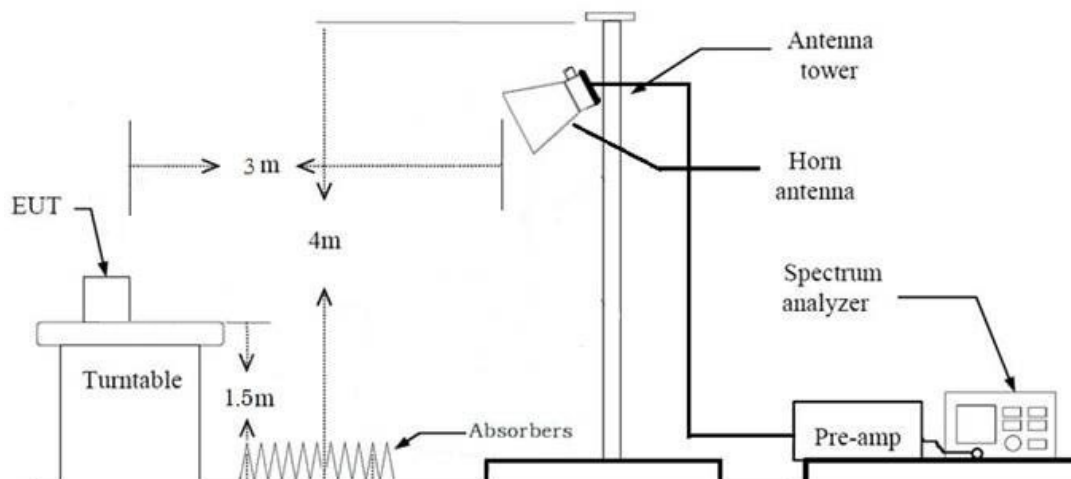
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



Test Procedure of Radiated spurious emissions (Below 30 MHz)

Test Standard Used : Section 6.4 in ANSI C63.10-2013

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) = $40\log(3\text{ m}/300\text{ m}) = -80\text{ dB}$
Measurement Distance : 3 m
7. Distance Correction Factor(0.490 MHz – 30 MHz) = $40\log(3\text{ m}/30\text{ m}) = -40\text{ dB}$
Measurement Distance : 3 m
8. Spectrum Setting
 - Frequency Range = 9 kHz ~ 30 MHz
 - Detector = Peak
 - Trace = Max hold
 - RBW = 9 kHz
 - VBW $\geq 3 \times$ 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.

Test Procedure of Radiated spurious emissions (Below 1 GHz)

Test Standard Used : Section 6.5 in ANSI C63.10-2013

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 Setting
 - (1) Measurement Type(Peak):
 - Measured Frequency Range : 30 MHz – 1 GHz
 - Detector = Peak
 - Trace = Max hold
 - RBW = 100 kHz
 - VBW $\geq 3 \times$ 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)

Test Standard Used : Section 6.6 in ANSI C63.10-2013

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 Setting (Method 8.6 in KDB 558074 v05r02, Procedure 11.12 in ANSI 63.10-2013)
 - (1) Measurement Type(Peak):

- Measured Frequency Range : 1 GHz – 25 GHz
- Detector = Peak
- Trace = Maxhold
- RBW = 1 MHz
- VBW $\geq 3 \times$ RBW

(2) Measurement Type(Average): Duty cycle $\geq 98 \%$

- Measured Frequency Range : 1 GHz – 25 GHz
- Detector = RMS
- Averaging type = power (*i.e.*, RMS)
- RBW = 1 MHz
- VBW $\geq 3 \times$ RBW
- Sweep time = auto.
- Trace mode = average (at least 100 traces).

(3) Measurement Type(Average): Duty cycle $< 98 \%$, duty cycle variations are less than $\pm 2 \%$

- Measured Frequency Range : 1 GHz – 25 GHz
- Detector = RMS
- Averaging type = power (*i.e.*, RMS)
- RBW = 1 MHz
- VBW $\geq 3 \times$ RBW
- Sweep time = auto.
- Trace mode = average (at least 100 traces).
- Duty Cycle Factor (dB) : Please refer to the please refer to section 9.1.

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 = $20\log$ (test distance / specific distance) (dB)

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 $\geq 98 \%$)

= 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

Test Standard Used : Section 6.10 & 11.12 in ANSI C63.10-2013

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 Setting

(1) Measurement Type(Peak):

- Measured Frequency Range : 2310 MHz ~ 2390 MHz / 2483.5 MHz ~ 2500 MHz
- Detector = Peak
- Trace = Max hold
- RBW = 1 MHz
- VBW $\geq 3 \times$ RBW

(2) Measurement Type(Average): Duty cycle $\geq 98 \%$,

- Measured Frequency Range : 2310 MHz ~ 2390 MHz / 2483.5 MHz ~ 2500 MHz
- Detector = RMS
- Averaging type = power (*i.e.*, RMS)
- RBW = 1 MHz
- VBW $\geq 3 \times$ RBW
- Sweep time = auto.
- Trace mode = average (at least 100 traces).

(3) Measurement Type(Average): Duty cycle $< 98 \%$, duty cycle variations are less than $\pm 2 \%$

- Measured Frequency Range : 2310 MHz ~ 2390 MHz / 2483.5 MHz ~ 2500 MHz
- Detector = RMS
- Averaging type = power (*i.e.*, RMS)
- RBW = 1 MHz
- VBW $\geq 3 \times$ RBW
- Sweep time = auto.
- Trace mode = average (at least 100 traces).
- Duty Cycle Factor (dB) : Please refer to the please refer to section 9.1.

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 = $20\log$ (test distance / specific distance) (dB)

10. Total (Measurement Type : Peak)

= Measured value + Antenna Factor(A.F) + Cable Loss(C.L) + Distance Factor(D.F)

Total(Measurement Type : Average, Duty cycle $\geq 98\%$)

= Measured value + Antenna Factor(A.F) + Cable Loss(C.L) + Distance Factor(D.F)

Total(Measurement Type : Average, Duty cycle $< 98\%$)

= Measured value + Antenna Factor(A.F) + Cable Loss(C.L) + Distance Factor(D.F) + Duty Cycle Factor

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 μ H/50 ohms line impedance stabilization network (LISN).

Frequency Range (MHz)	Limits (dB μ V)	
	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

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	-
40	26	0~17	0	9	17
	52	37~44	37	41	44
	106	53~56	53	54	56
	242	61~62	61	-	62
	484	65	-	65	-

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.

[HE20]

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

[HE40]

Tones	Channel	RU Index
26	1	0
	11	17
52	1	37
	11	44
106	1	53
	11	56
242	1	61
	11	62
484	1, 11	65
SU	1, 11	-

3. TFBMEEBN6FU, Additional Models were tested and the worst case results are reported.

(Worst case : TFBMEEBN6FU)

4. Antenna2 and Antenna3 use the same antenna port. Therefore, conducted testing was performed only once.

Radiated test

1. All modes of operation were investigated and the worst case configuration results are reported.

- Mode : Stand alone

- Worst case : 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(Ant.3), MIMO_CDD(Ant.1+Ant.2), MIMO_CDD(Ant.1+Ant.3)
 - Worst case: MIMO_CDD(Ant.1+Ant.2)
4. EUT Axis
 - Radiated Spurious Emissions : Z
 - Radiated Restricted Band Edge : Y
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. TFBMEEBN6FU, Additional Models were tested and the worst case results are reported.
(Worst case : TFBMNENN0FN)

[RSE Worst case]

[RSE Worst Case]			
BW (MHz)	Test	Tones (T)	Offset
20	RSE	26	4
		242	61
40		26	9
		484	65

[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	-	-
40	Band Edge	26	0	17
		52	37	44
		106	53	56
		242	61	62
		484	65	65
		SU	-	-

Radiated test(Simultaneous transmission Scenario)

1. Please refer to the [BT LE], [UNII ax], [UNII 6G] Test Report.

AC Power line Conducted Emissions

1. We don't perform powerline conducted emission test. The device only employ battery power for operation.

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 Band		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		N/A (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. The device only employ battery power for operation
2. The decision rule applies 'simple acceptance'

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	5.092	5.112	0.996	0.017
	52	MCS0	5.077	5.097	0.996	0.017
	106	MCS0	4.768	4.889	0.975	0.109
	242	MCS0	4.666	4.773	0.978	0.098
802.11ax (HE40)	26	MCS0	5.087	5.107	0.996	0.017
	52	MCS0	5.077	5.117	0.992	0.035
	106	MCS0	4.768	4.829	0.987	0.055
	242	MCS0	4.666	4.773	0.978	0.098
	484	MCS0	4.666	4.742	0.984	0.070
802.11ax(SU)	BW 20	MCS0	5.447	5.462	0.997	0.012
	BW 40	MCS0	5.447	5.462	0.997	0.012

Note:

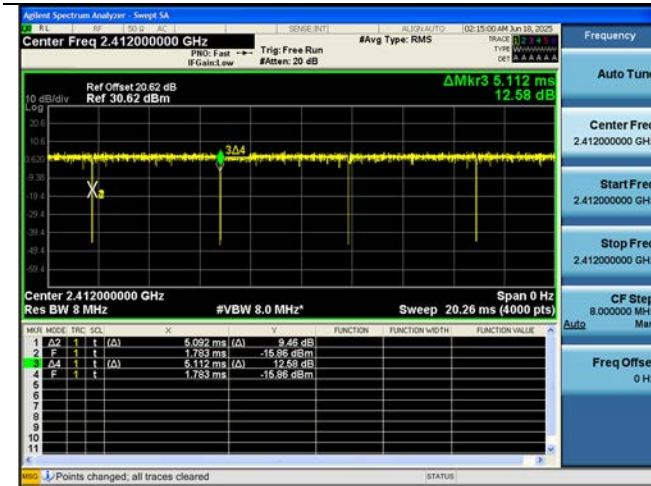
1. Duty Cycle Factor = $10 \times \log(1/\text{Duty Cycle})$. where, Duty Cycle = T_{on} / T_{total}

Test Plots

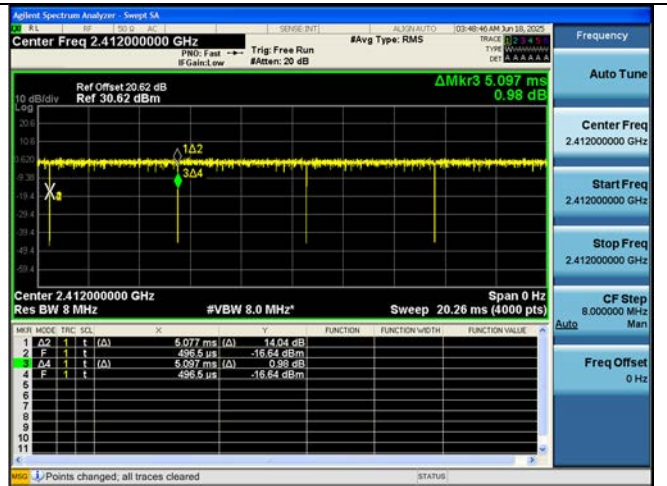
Note: In order to simplify the report, attached plots were only the lowest data rate.

[HE20]

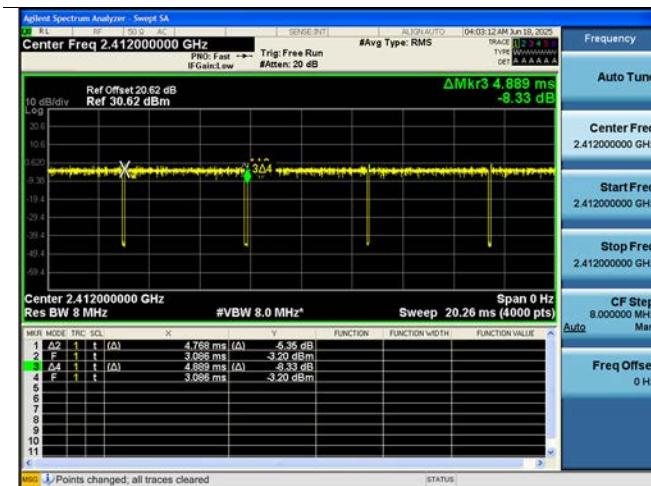
26 Tones (MCS 0)



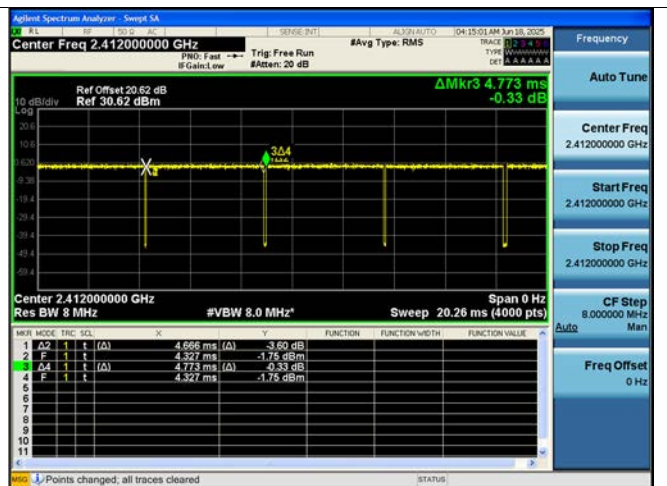
52 Tones (MCS 0)



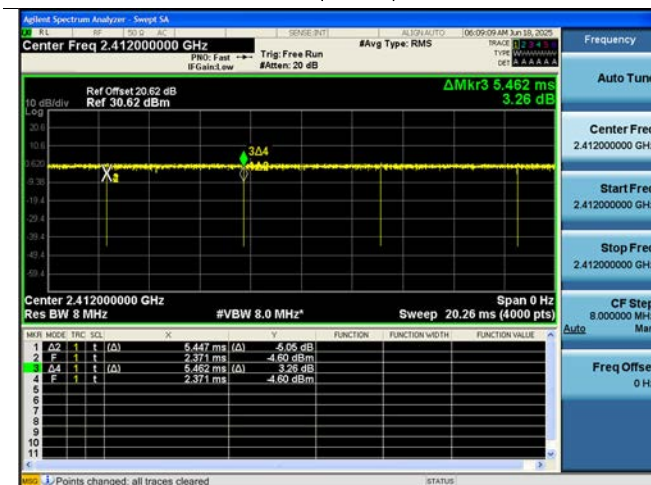
106 Tones (MCS 0)



242 Tones (MCS 0)

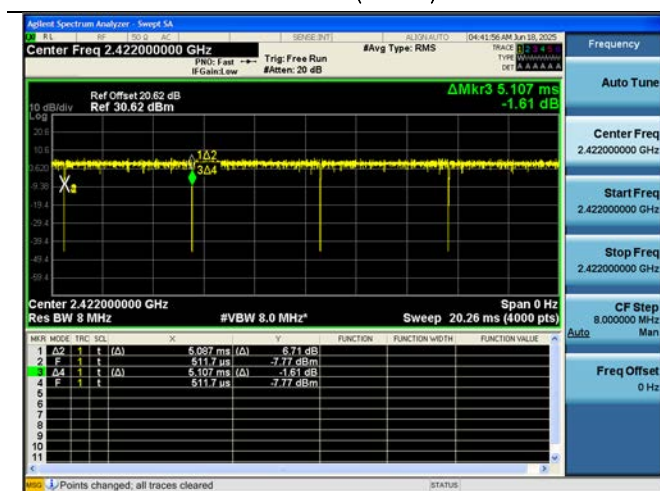


SU (MCS 0)

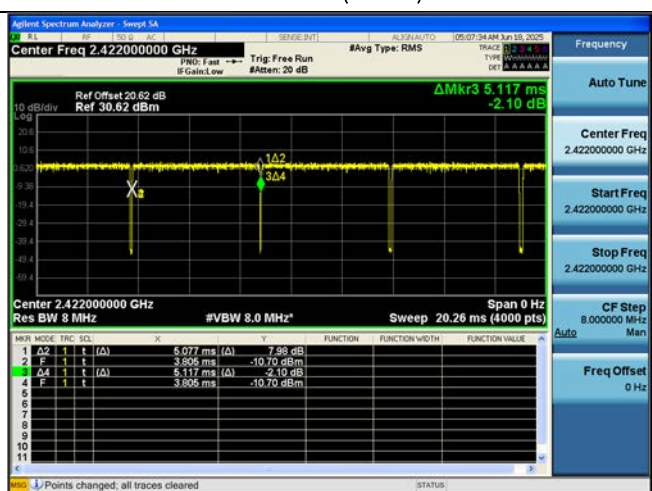


[HE40]

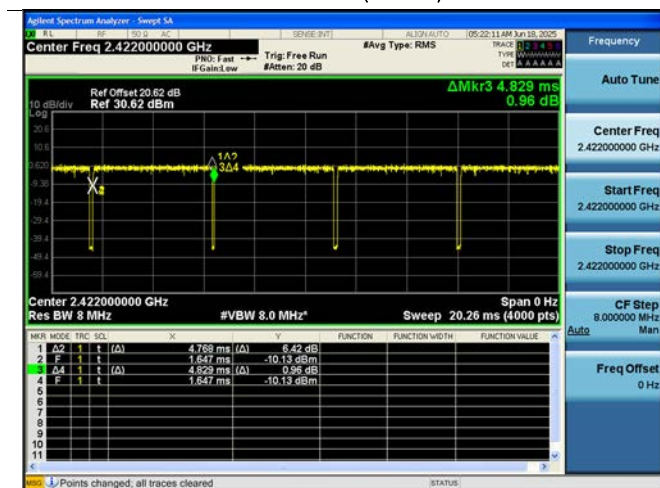
26 Tones (MCS 0)



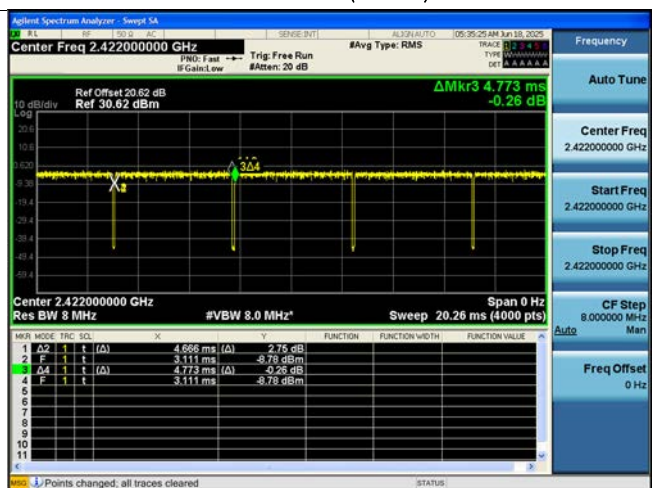
52 Tones (MCS 0)



106 Tones (MCS 0)



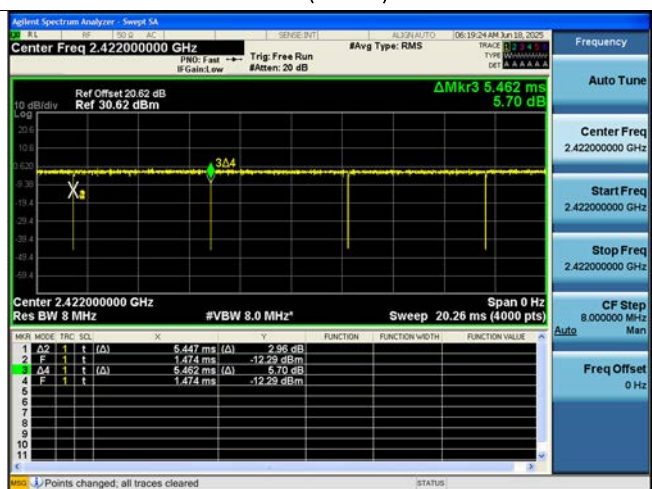
242 Tones (MCS 0)



484 Tones (MCS 0)



SU (MCS 0)



9.2 6 dB BANDWIDTH

Limit : > 500 kHz

[SISO_Ant.3]

Mode	Freq. [MHz]	CH.	6dB Bandwidth [MHz]			99% Occupied Bandwidth [MHz]		
			RU Index : Low	RU Index : Mid	RU Index : High	RU Index : Low	RU Index : Mid	RU Index : High
HE20 26T	2412	1	2.140	2.656	2.152	18.448	17.316	18.378
	2437	6	2.143	8.829	14.54	18.269	17.300	18.512
	2462	11	2.161	2.694	17.06	18.263	17.164	18.440
HE20 52T	2412	1	17.13	13.86	17.04	18.284	17.411	18.241
	2437	6	17.07	15.07	17.10	18.098	17.012	18.350
	2462	11	17.09	15.05	17.08	18.059	17.146	18.151
HE20 106T	2412	1	18.17	-	17.13	18.297	-	18.268
	2437	6	17.09	-	18.38	18.128	-	18.322
	2462	11	17.05	-	17.14	17.993	-	18.030
HE20 242T	2412	1	-	19.13	-	-	19.018	-
	2437	6	-	19.07	-	-	18.991	-
	2462	11	-	18.95	-	-	18.917	-
HE20 SU	2412	1	-	16.08	-	-	18.866	-
	2437	6	-	15.20	-	-	18.799	-
	2462	11	-	15.05	-	-	18.711	-
HE40 26T	2422	3	2.129	2.146	2.135	37.498	36.119	37.252
	2437	6	2.151	2.157	2.141	37.389	36.422	37.493
	2452	9	2.151	2.156	2.158	37.248	36.334	37.421
HE40 52T	2422	3	4.182	4.164	4.202	37.432	36.071	37.209
	2437	6	4.206	4.140	4.140	37.296	36.202	37.229
	2452	9	4.196	4.134	4.159	37.207	36.355	37.423
HE40 106T	2422	3	36.64	35.08	21.59	37.220	36.421	37.093
	2437	6	36.57	35.02	36.60	37.267	36.450	37.278
	2452	9	34.13	32.63	35.31	37.110	36.589	37.198
HE40 242T	2422	3	36.74	-	36.70	37.406	-	37.115
	2437	6	35.50	-	36.97	37.436	-	37.249
	2452	9	36.81	-	36.73	37.215	-	37.286
HE40 484T	2422	3	-	38.09	-	-	37.855	-
	2437	6	-	38.08	-	-	37.827	-
	2452	9	-	38.10	-	-	37.874	-
HE20 SU	2422	3	-	33.90	-	-	37.425	-
	2437	6	-	34.43	-	-	37.523	-
	2452	9	-	36.87	-	-	37.502	-

[MIMO_CDD(Ant1)]

Mode	Freq. [MHz]	CH.	6dB Bandwidth [MHz]			99% Occupied Bandwidth [MHz]		
			RU Index : Low	RU Index : Mid	RU Index : High	RU Index : Low	RU Index : Mid	RU Index : High
HE20 26T	2412	1	17.08	2.705	8.283	18.266	17.048	18.151
	2437	6	2.117	8.893	2.088	18.462	17.389	18.308
	2462	11	2.126	8.861	17.08	18.275	17.347	18.556
HE20 52T	2412	1	17.10	15.09	17.02	18.144	16.956	18.061
	2437	6	17.08	15.13	15.83	18.237	17.412	18.271
	2462	11	5.812	8.821	17.14	17.870	17.176	18.378
HE20 106T	2412	1	17.17	-	17.10	18.159	-	18.118
	2437	6	18.19	-	17.12	18.319	-	18.310
	2462	11	15.91	-	18.36	18.115	-	18.334
HE20 242T	2412	1	-	19.04	-	-	18.948	-
	2437	6	-	19.11	-	-	19.043	-
	2462	11	-	19.01	-	-	18.999	-
HE20 SU	2412	1	-	13.87	-	-	18.683	-
	2437	6	-	16.74	-	-	18.863	-
	2462	11	-	15.50	-	-	18.802	-
HE40 26T	2422	3	2.122	2.131	2.149	37.482	36.398	37.545
	2437	6	2.155	2.167	2.147	37.776	37.071	37.580
	2452	9	2.161	2.151	2.127	37.631	35.829	37.175
HE40 52T	2422	3	11.58	13.20	31.57	37.267	36.254	37.373
	2437	6	4.200	31.31	4.183	37.572	36.882	37.283
	2452	9	25.32	4.176	21.56	37.493	35.756	37.145
HE40 106T	2422	3	16.56	15.96	36.68	37.009	35.783	37.370
	2437	6	36.68	36.19	36.61	37.573	37.179	37.378
	2452	9	35.40	19.86	27.87	37.458	35.683	37.087
HE40 242T	2422	3	36.71	-	36.85	37.169	-	37.312
	2437	6	37.89	-	36.98	37.687	-	37.313
	2452	9	36.65	-	36.66	37.227	-	37.026
HE40 484T	2422	3	-	37.69	-	-	37.834	-
	2437	6	-	38.21	-	-	38.049	-
	2452	9	-	37.82	-	-	37.797	-
HE20 SU	2422	3	-	33.80	-	-	37.372	-
	2437	6	-	38.08	-	-	37.783	-
	2452	9	-	32.59	-	-	37.278	-

[MIMO_CDD(Ant2&Ant3)]

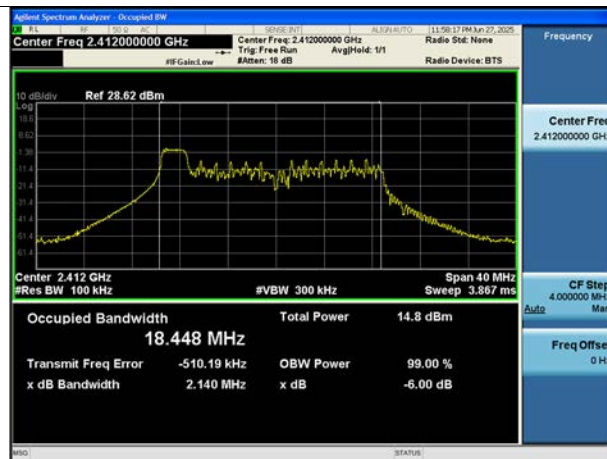
Mode	Freq. [MHz]	CH.	6dB Bandwidth [MHz]			99% Occupied Bandwidth [MHz]		
			RU Index : Low	RU Index : Mid	RU Index : High	RU Index : Low	RU Index : Mid	RU Index : High
HE20 26T	2412	1	2.140	2.676	2.127	18.401	17.215	18.283
	2437	6	2.153	2.663	17.05	18.274	17.256	18.465
	2462	11	2.117	2.700	7.057	18.306	17.116	18.404
HE20 52T	2412	1	17.12	15.13	17.04	18.279	17.306	18.234
	2437	6	17.06	14.98	17.07	18.011	17.234	18.350
	2462	11	17.11	13.80	17.00	18.035	17.000	18.267
HE20 106T	2412	1	18.15	-	15.94	18.224	-	18.296
	2437	6	17.15	-	18.38	18.121	-	18.312
	2462	11	17.16	-	17.14	18.073	-	18.228
HE20 242T	2412	1	-	19.12	-	-	19.039	-
	2437	6	-	19.03	-	-	18.990	-
	2462	11	-	18.98	-	-	18.945	-
HE20 SU	2412	1	-	17.94	-	-	18.853	-
	2437	6	-	16.43	-	-	18.818	-
	2462	11	-	15.14	-	-	18.704	-
HE40 26T	2422	3	2.155	2.170	2.164	37.673	36.227	37.472
	2437	6	2.167	2.166	2.140	37.478	36.292	37.368
	2452	9	2.148	2.167	2.148	37.457	36.554	37.596
HE40 52T	2422	3	30.35	4.169	4.192	37.308	36.228	37.175
	2437	6	4.176	4.119	4.174	37.307	36.258	37.252
	2452	9	4.170	4.181	4.193	37.057	36.335	37.397
HE40 106T	2422	3	36.63	33.87	21.60	37.480	36.387	37.170
	2437	6	16.58	17.26	36.62	37.003	36.476	37.328
	2452	9	34.05	35.13	36.58	37.094	36.206	37.408
HE40 242T	2422	3	37.63	-	36.66	37.431	-	37.113
	2437	6	36.71	-	35.51	37.176	-	37.350
	2452	9	36.79	-	37.89	37.421	-	37.437
HE40 484T	2422	3	-	38.13	-	-	37.889	-
	2437	6	-	38.14	-	-	37.894	-
	2452	9	-	38.18	-	-	37.920	-
HE20 SU	2422	3	-	33.90	-	-	37.468	-
	2437	6	-	35.09	-	-	37.477	-
	2452	9	-	36.48	-	-	37.565	-

Test Plots

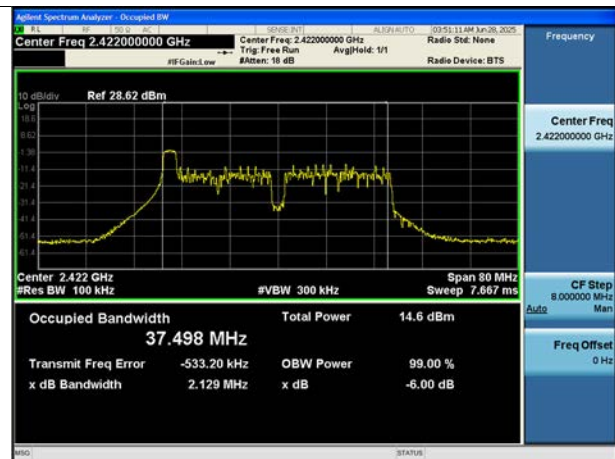
Note: In order to simplify the report, attached plots were only the narrowest 6 dB BW channel.

[SISO_Ant.3]

BW20M Ch.1(2412 MHz) RU 0

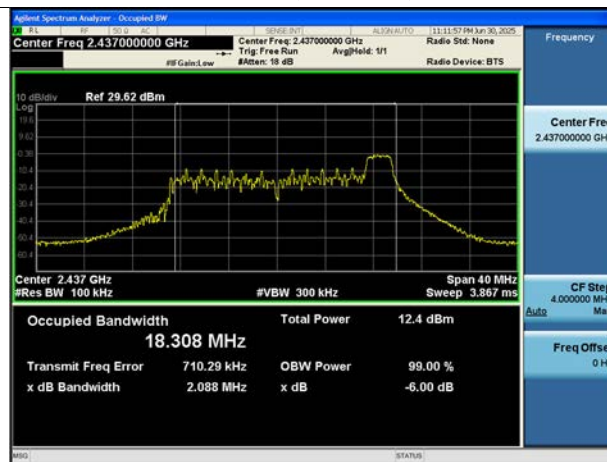


BW40M Ch.3(2422 MHz) RU 0

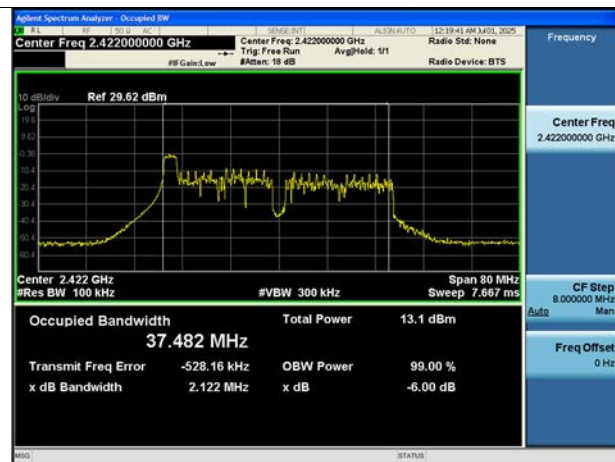


[MIMO_CDD(Ant.1)]

BW20M Ch.6(2437 MHz) RU 8

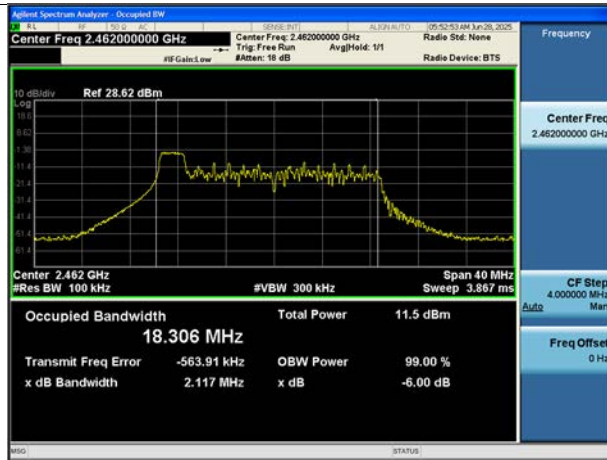


BW40M Ch.3(2422 MHz) RU 0

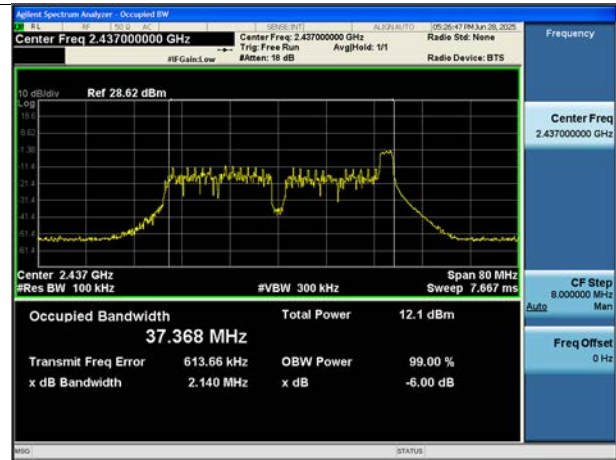


[MIMO_CDD(Ant2&Ant3)]

BW20M Ch.11(2462 MHz) RU 0



BW40M Ch.6(2437 MHz) RU 17



9.3 OUTPUT POWER

Note:

1. MIMO Peak Power = $10 \cdot \log((10^{(\text{Ant.1 Peak power}/10)}) + (10^{(\text{Ant.2 Peak power}/10)}))$

Peak Power

[SISO_Ant.3]

Mode	Freq. [MHz]	CH.	Total Peak Power [dBm]		
			RU Index : Low	RU Index : Mid	RU Index : High
HE20 26T	2412	1	15.97	15.38	17.24
	2437	6	16.44	15.56	15.53
	2462	11	16.74	17.11	16.71
HE20 52T	2412	1	15.62	15.28	16.26
	2437	6	15.92	15.75	15.31
	2462	11	16.55	16.89	16.23
HE20 106T	2412	1	15.21	-	15.49
	2437	6	15.84	-	15.03
	2462	11	16.39	-	16.26
HE20 242T	2412	1	-	14.90	-
	2437	6	-	14.79	-
	2462	11	-	15.81	-
HE20 SU	2412	1	-	15.03	-
	2437	6	-	14.99	-
	2462	11	-	16.12	-
HE40 26T	2422	3	15.39	16.77	16.29
	2437	6	16.56	16.87	16.57
	2452	9	16.05	15.72	15.21
HE40 52T	2422	3	15.56	16.53	16.12
	2437	6	16.75	16.40	16.44
	2452	9	16.01	15.47	15.25
HE40 106T	2422	3	15.27	15.69	15.91
	2437	6	16.73	16.80	15.84
	2452	9	15.70	15.02	15.00
HE40 242T	2422	3	15.27	-	15.98
	2437	6	16.63	-	15.84
	2452	9	15.11	-	15.04
HE40 484T	2422	3	-	14.85	-
	2437	6	-	15.50	-
	2452	9	-	14.28	-
HE20 SU	2422	3	-	14.98	-
	2437	6	-	15.29	-
	2452	9	-	14.59	-

[MIMO_CDD(Ant1+Ant2)]

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	11.77	11.50	14.65	12.81	10.98	15.00	12.69	12.63	15.67
	2437	6	13.65	13.08	16.38	13.14	12.15	15.68	13.96	12.06	16.12
	2462	11	14.40	12.51	16.57	13.08	12.95	16.03	13.14	12.19	15.70
HE20 52T	2412	1	11.75	11.30	14.54	12.34	11.04	14.75	12.51	11.86	15.21
	2437	6	12.25	12.71	15.50	12.93	12.36	15.66	13.29	11.81	15.62
	2462	11	14.41	13.04	16.79	13.74	13.22	16.50	13.07	12.84	15.97
HE20 106T	2412	1	11.38	10.68	14.05	-	-	-	12.39	11.62	15.03
	2437	6	13.00	13.07	16.05	-	-	-	12.62	12.17	15.41
	2462	11	13.64	13.17	16.42	-	-	-	12.50	12.91	15.72
HE20 242T	2412	1	-	-	-	11.66	10.60	14.17	-	-	-
	2437	6	-	-	-	13.14	12.51	15.84	-	-	-
	2462	11	-	-	-	12.96	12.89	15.93	-	-	-
HE20 SU	2412	1	-	-	-	12.28	10.69	14.57	-	-	-
	2437	6	-	-	-	13.06	12.17	15.65	-	-	-
	2462	11	-	-	-	13.19	13.39	16.30	-	-	-
HE40 26T	2422	3	14.01	11.82	16.06	14.38	12.96	16.74	12.85	12.74	15.80
	2437	6	13.31	12.95	16.14	11.73	13.51	15.72	13.81	13.57	16.70
	2452	9	12.70	12.06	15.40	15.03	11.48	16.62	13.42	11.15	15.44
HE40 52T	2422	3	14.14	11.97	16.20	13.91	12.95	16.47	12.63	12.42	15.54
	2437	6	13.20	13.14	16.18	11.89	13.06	15.53	13.58	12.83	16.23
	2452	9	13.07	12.48	15.80	15.08	11.64	16.70	13.90	11.52	15.88
HE40 106T	2422	3	13.36	9.97	15.00	13.63	10.41	15.32	11.77	10.70	14.28
	2437	6	12.93	13.93	16.47	11.44	14.08	15.97	13.50	13.00	16.27
	2452	9	13.22	12.26	15.78	14.67	11.42	16.35	13.67	11.82	15.85
HE40 242T	2422	3	13.18	9.84	14.84	-	-	-	11.86	10.65	14.30
	2437	6	12.14	13.84	16.08	-	-	-	12.58	13.09	15.85
	2452	9	13.58	11.25	15.58	-	-	-	14.09	11.47	15.98
HE40 484T	2422	3	-	-	-	11.67	9.41	13.70	-	-	-
	2437	6	-	-	-	11.71	13.29	15.58	-	-	-
	2452	9	-	-	-	12.96	10.59	14.94	-	-	-
HE40 SU	2422	3	-	-	-	12.42	10.18	14.45	-	-	-
	2437	6	-	-	-	11.42	12.37	14.93	-	-	-
	2452	9	-	-	-	12.49	9.69	14.32	-	-	-

Average Power

[SISO_Ant.3]

Mode	Freq. [MHz]	CH.	Total Average Power [dBm]		
			RU Index : Low	RU Index : Mid	RU Index : High
HE20 26T	2412	1	6.11	4.54	5.53
	2437	6	5.88	4.47	4.36
	2462	11	5.76	6.27	5.22
HE20 52T	2412	1	4.79	4.37	5.60
	2437	6	5.67	5.14	4.19
	2462	11	6.03	6.14	5.28
HE20 106T	2412	1	4.82	-	5.28
	2437	6	5.18	-	4.58
	2462	11	6.36	-	5.12
HE20 242T	2412	1	-	5.08	-
	2437	6	-	5.18	-
	2462	11	-	6.19	-
HE20 SU	2412	1	-	5.53	-
	2437	6	-	5.44	-
	2462	11	-	6.62	-
HE40 26T	2422	3	4.36	5.38	4.69
	2437	6	5.90	5.36	5.33
	2452	9	5.06	4.47	3.84
HE40 52T	2422	3	4.60	5.82	5.23
	2437	6	5.98	5.41	5.73
	2452	9	5.33	4.83	4.13
HE40 106T	2422	3	5.14	5.13	5.48
	2437	6	6.26	6.26	5.64
	2452	9	5.11	4.31	4.65
HE40 242T	2422	3	4.86	-	5.76
	2437	6	6.28	-	5.46
	2452	9	4.80	-	4.97
HE40 484T	2422	3	-	5.32	-
	2437	6	-	5.97	-
	2452	9	-	4.90	-
HE20 SU	2422	3	-	5.94	-
	2437	6	-	6.18	-
	2452	9	-	5.46	-

[MIMO_CDD(Ant1+Ant2)]

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	1.81	1.60	4.72	2.34	0.12	4.38	1.90	1.66	4.79
	2437	6	3.16	2.49	5.85	2.56	1.28	4.98	3.22	1.25	5.36
	2462	11	3.87	2.03	6.06	2.28	2.34	5.32	2.14	1.17	4.69
HE20 52T	2412	1	1.16	0.58	3.89	1.75	0.37	4.13	2.03	1.37	4.72
	2437	6	2.95	2.35	5.67	2.21	1.96	5.10	3.87	1.10	5.71
	2462	11	4.05	2.61	6.40	3.69	2.82	6.29	2.53	1.97	5.27
HE20 106T	2412	1	1.91	0.64	4.33	-	-	-	2.45	1.33	4.93
	2437	6	2.65	2.87	5.77	-	-	-	2.47	1.87	5.19
	2462	11	3.84	3.00	6.45	-	-	-	2.24	2.40	5.33
HE20 242T	2412	1	-	-	-	2.55	0.86	4.80	-	-	-
	2437	6	-	-	-	3.70	2.95	6.35	-	-	-
	2462	11	-	-	-	3.74	3.56	6.66	-	-	-
HE20 SU	2412	1	-	-	-	2.91	1.08	5.10	-	-	-
	2437	6	-	-	-	3.80	2.48	6.20	-	-	-
	2462	11	-	-	-	3.88	3.79	6.84	-	-	-
HE40 26T	2422	3	3.64	1.10	5.57	2.33	2.10	5.22	3.14	1.62	5.46
	2437	6	4.17	2.35	6.36	0.68	2.19	4.51	3.30	2.38	5.87
	2452	9	2.04	1.15	4.63	3.88	0.12	5.41	2.39	-0.27	4.27
HE40 52T	2422	3	3.24	1.05	5.29	3.33	2.25	5.83	1.80	1.85	4.83
	2437	6	2.83	2.50	5.67	1.25	2.22	4.77	3.39	2.18	5.84
	2452	9	2.07	1.54	4.83	4.02	0.87	5.74	2.93	0.55	4.91
HE40 106T	2422	3	2.69	-0.99	4.24	2.82	-0.42	4.50	1.13	-0.05	3.59
	2437	6	1.93	3.31	5.69	0.78	3.41	5.30	2.59	2.58	5.59
	2452	9	2.68	1.27	5.04	4.12	0.49	5.68	3.59	0.86	5.45
HE40 242T	2422	3	3.24	-0.74	4.70	-	-	-	1.47	0.28	3.93
	2437	6	1.76	3.36	5.64	-	-	-	2.60	2.56	5.59
	2452	9	3.90	0.94	5.68	-	-	-	3.99	1.10	5.79
HE40 484T	2422	3	-	-	-	2.30	-0.23	4.23	-	-	-
	2437	6	-	-	-	2.86	3.63	6.27	-	-	-
	2452	9	-	-	-	3.72	1.08	5.61	-	-	-
HE40 SU	2422	3	-	-	-	3.70	1.06	5.59	-	-	-
	2437	6	-	-	-	2.72	3.20	5.98	-	-	-
	2452	9	-	-	-	3.77	0.56	5.47	-	-	-

Note:

1. Total Power [dBm] = Measured Power [dBm] + Duty Cycle Factor [dB]

9.4 POWER SPECTRAL DENSITY

Note:

1. MIMO Total PSD = $10 \cdot \log(((10^{\text{Ant.1 PSD}/10}) + (10^{\text{Ant.2 PSD}/10})))$
2. Total PSD = Measured Value + Duty Cycle Factor

[SISO_Ant.3]

Mode	Freq. [MHz]	CH.	Total Power Spectral Density [dBm/MHz]		
			RU Index : Low	RU Index : Mid	RU Index : High
			ANT3	ANT3	ANT3
HE20 26T	2412	1	-11.072	-12.076	-10.149
	2437	6	-10.096	-11.679	-11.836
	2462	11	-10.254	-9.900	-10.826
HE20 52T	2412	1	-14.018	-14.341	-13.182
	2437	6	-13.234	-13.816	-14.801
	2462	11	-13.109	-12.992	-13.676
HE20 106T	2412	1	-16.626	-	-16.075
	2437	6	-15.686	-	-17.674
	2462	11	-15.646	-	-15.969
HE20 242T	2412	1	-	-19.694	-
	2437	6	-	-19.682	-
	2462	11	-	-19.423	-
HE20 SU	2412	1	-	-19.402	-
	2437	6	-	-19.209	-
	2462	11	-	-17.349	-
HE40 26T	2422	3	-11.724	-10.392	-11.102
	2437	6	-10.768	-10.830	-10.499
	2452	9	-10.912	-11.909	-12.499
HE40 52T	2422	3	-14.561	-13.291	-13.821
	2437	6	-12.980	-13.266	-13.737
	2452	9	-13.469	-14.504	-14.839
HE40 106T	2422	3	-17.814	-17.043	-16.404
	2437	6	-15.599	-15.627	-16.597
	2452	9	-16.454	-18.100	-17.327
HE40 242T	2422	3	-20.493	-	-19.388
	2437	6	-18.715	-	-19.779
	2452	9	-19.857	-	-20.293
HE40 484T	2422	3	-	-22.423	-
	2437	6	-	-21.900	-
	2452	9	-	-23.292	-
HE20 SU	2422	3	-	-21.001	-
	2437	6	-	-21.096	-
	2452	9	-	-22.208	-

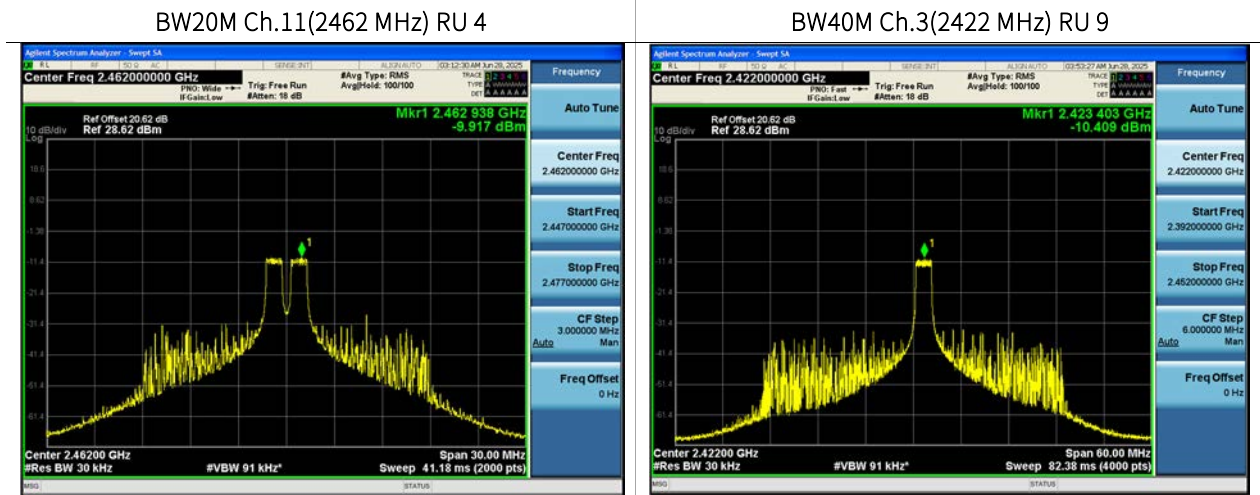
[MIMO_CDD(Ant1+Ant2)]

Mode	Freq. [MHz]	CH.	Total Power Spectral Density [dBm/MHz]								
			RU Index : Low			RU Index : Mid			RU Index : High		
			ANT1	ANT2	MIMO	ANT1	ANT2	MIMO	ANT1	ANT2	MIMO
HE20 26T	2412	1	-9.499	-9.038	-6.252	-7.727	-10.171	-5.769	-8.300	-8.225	-5.252
	2437	6	-7.107	-7.030	-4.058	-7.954	-8.899	-5.390	-7.240	-9.428	-5.187
	2462	11	-6.291	-8.506	-4.248	-8.088	-7.892	-4.978	-8.325	-9.125	-5.696
HE20 52T	2412	1	-11.499	-11.217	-8.345	-11.248	-12.208	-8.691	-10.582	-11.092	-7.819
	2437	6	-11.134	-10.467	-7.777	-10.668	-10.881	-7.763	-9.641	-11.774	-7.567
	2462	11	-8.557	-10.518	-6.417	-9.269	-9.332	-6.290	-10.914	-10.456	-7.668
HE20 106T	2412	1	-14.178	-14.673	-11.408	-	-	-	-12.991	-13.780	-10.357
	2437	6	-12.786	-12.492	-9.626	-	-	-	-12.547	-12.590	-9.558
	2462	11	-11.670	-12.538	-9.072	-	-	-	-12.691	-12.712	-9.691
HE20 242T	2412	1	-	-	-	-13.433	-16.284	-11.618	-	-	-
	2437	6	-	-	-	-11.337	-13.731	-9.361	-	-	-
	2462	11	-	-	-	-12.766	-11.836	-9.266	-	-	-
HE20 SU	2412	1	-	-	-	-10.884	-13.065	-8.829	-	-	-
	2437	6	-	-	-	-10.452	-11.162	-7.782	-	-	-
	2462	11	-	-	-	-12.310	-11.636	-8.950	-	-	-
HE40 26T	2422	3	-6.720	-9.197	-4.774	-6.925	-8.509	-4.635	-8.033	-8.035	-5.023
	2437	6	-7.162	-7.668	-4.397	-10.211	-8.084	-6.008	-6.367	-7.864	-4.041
	2452	9	-8.656	-8.614	-5.624	-6.370	-10.087	-4.832	-7.371	-9.959	-5.464
HE40 52T	2422	3	-8.704	-11.784	-6.967	-9.783	-9.815	-6.789	-11.418	-10.724	-8.047
	2437	6	-9.866	-10.317	-7.076	-12.330	-10.152	-8.096	-9.744	-10.687	-7.180
	2452	9	-11.231	-10.971	-8.089	-8.301	-10.951	-6.417	-9.818	-11.881	-7.718
HE40 106T	2422	3	-12.679	-16.627	-11.209	-12.279	-15.992	-10.740	-14.696	-15.348	-11.999
	2437	6	-12.808	-12.012	-9.381	-15.373	-11.890	-10.281	-11.399	-13.108	-9.160
	2452	9	-13.126	-13.747	-10.415	-10.837	-14.945	-9.412	-12.577	-14.272	-10.332
HE40 242T	2422	3	-14.498	-19.550	-13.317	-	-	-	-16.488	-16.151	-13.306
	2437	6	-15.733	-15.331	-12.517	-	-	-	-15.438	-14.532	-11.951
	2452	9	-15.202	-16.930	-12.970	-	-	-	-12.968	-16.377	-11.336
HE40 484T	2422	3	-	-	-	-15.536	-18.129	-13.631	-	-	-
	2437	6	-	-	-	-14.928	-14.237	-11.558	-	-	-
	2452	9	-	-	-	-15.475	-17.371	-13.310	-	-	-
HE40 SU	2422	3	-	-	-	-14.877	-17.694	-13.051	-	-	-
	2437	6	-	-	-	-15.930	-14.265	-12.008	-	-	-
	2452	9	-	-	-	-15.072	-17.041	-12.935	-	-	-

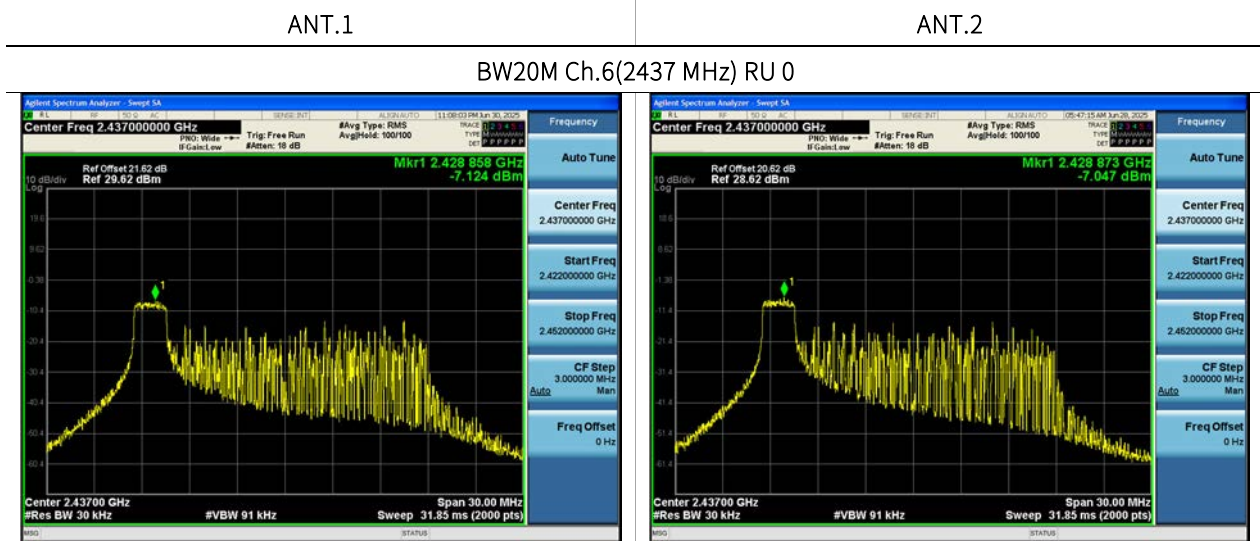
Test Plots

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

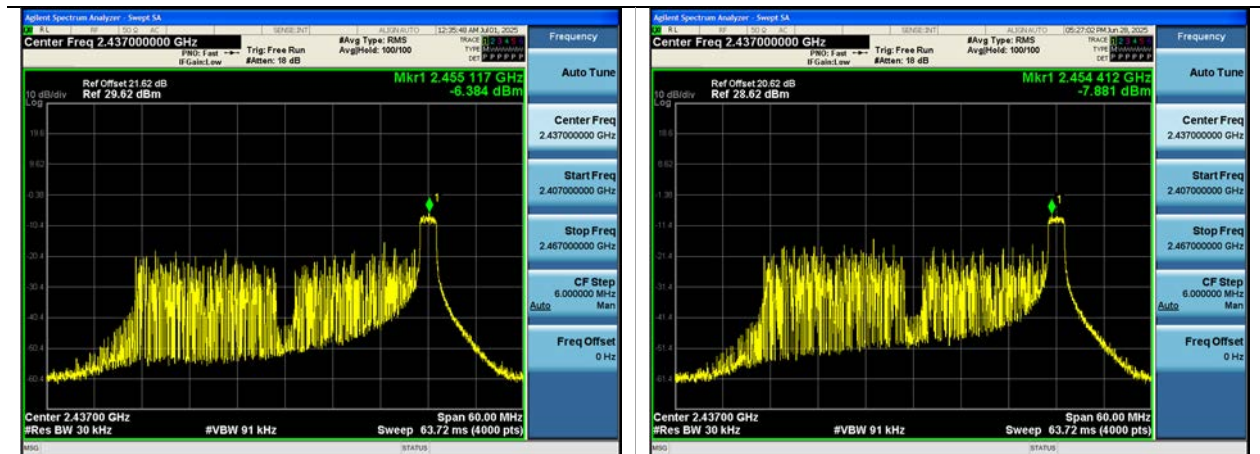
[SISO_Ant.3]



[MIMO_CDD(Ant1+Ant2)]



BW40M Ch.6(2437 MHz) RU 17



9.5 BAND EDGE / CONDUCTED SPURIOUS EMISSIONS

Band Edge

Limit : 20 dBc

[SISO_Ant.3]

Mode	Freq. [MHz]	CH.	RU Index	Measured Position	Band edge [dB]
HE20	2412	1	Low	Lowest Bandedge	31.806
26T	2462	11	High	Highest Bandedge	52.517
HE20	2412	1	Low	Lowest Bandedge	32.242
52T	2462	11	High	Highest Bandedge	50.589
HE20	2412	1	Low	Lowest Bandedge	30.958
106T	2462	11	High	Highest Bandedge	49.193
HE20	2412	1	Low	Lowest Bandedge	33.512
242T	2462	11	High	Highest Bandedge	46.712
HE20	2412	1	Low	Lowest Bandedge	37.429
SU	2462	11	High	Highest Bandedge	50.289
HE40	2422	3	Low	Lowest Bandedge	33.221
26T	2452	9	High	Highest Bandedge	52.364
HE40	2422	3	Low	Lowest Bandedge	30.140
52T	2452	9	High	Highest Bandedge	49.247
HE40	2422	3	Low	Lowest Bandedge	30.350
106T	2452	9	High	Highest Bandedge	47.703
HE40	2422	3	Low	Lowest Bandedge	32.383
242T	2452	9	High	Highest Bandedge	43.173
HE40	2422	3	Low	Lowest Bandedge	31.432
484T	2452	9	High	Highest Bandedge	43.301
HE40	2422	3	Low	Lowest Bandedge	38.359
SU	2452	9	High	Highest Bandedge	44.626

[MIMO_CDD(Ant1)]

Mode	Freq. [MHz]	CH.	RU Index	Measured Position	Band edge [dB]
HE20	2412	1	Low	Lowest Bandedge	32.523
26T	2462	11	High	Highest Bandedge	47.903
HE20	2412	1	Low	Lowest Bandedge	32.903
52T	2462	11	High	Highest Bandedge	46.100
HE20	2412	1	Low	Lowest Bandedge	32.156
106T	2462	11	High	Highest Bandedge	42.869
HE20	2412	1	Low	Lowest Bandedge	34.238
242T	2462	11	High	Highest Bandedge	44.236
HE20	2412	1	Low	Lowest Bandedge	41.645
SU	2462	11	High	Highest Bandedge	44.835
HE40	2422	3	Low	Lowest Bandedge	33.507
26T	2452	9	High	Highest Bandedge	49.527
HE40	2422	3	Low	Lowest Bandedge	30.537
52T	2452	9	High	Highest Bandedge	47.257
HE40	2422	3	Low	Lowest Bandedge	31.254
106T	2452	9	High	Highest Bandedge	44.927
HE40	2422	3	Low	Lowest Bandedge	31.913
242T	2452	9	High	Highest Bandedge	42.230
HE40	2422	3	Low	Lowest Bandedge	30.773
484T	2452	9	High	Highest Bandedge	41.027
HE40	2422	3	Low	Lowest Bandedge	40.046
SU	2452	9	High	Highest Bandedge	42.035

[MIMO_CDD(Ant2&Ant3)]

Mode	Freq. [MHz]	CH.	RU Index	Measured Position	Band edge [dB]
HE20	2412	1	Low	Lowest Bandedge	32.213
26T	2462	11	High	Highest Bandedge	48.922
HE20	2412	1	Low	Lowest Bandedge	31.102
52T	2462	11	High	Highest Bandedge	47.389
HE20	2412	1	Low	Lowest Bandedge	31.529
106T	2462	11	High	Highest Bandedge	45.526
HE20	2412	1	Low	Lowest Bandedge	32.620
242T	2462	11	High	Highest Bandedge	44.847
HE20	2412	1	Low	Lowest Bandedge	37.484
SU	2462	11	High	Highest Bandedge	44.738
HE40	2422	3	Low	Lowest Bandedge	33.141
26T	2452	9	High	Highest Bandedge	46.738
HE40	2422	3	Low	Lowest Bandedge	30.682
52T	2452	9	High	Highest Bandedge	45.525
HE40	2422	3	Low	Lowest Bandedge	30.198
106T	2452	9	High	Highest Bandedge	44.186
HE40	2422	3	Low	Lowest Bandedge	30.946
242T	2452	9	High	Highest Bandedge	40.796
HE40	2422	3	Low	Lowest Bandedge	31.173
484T	2452	9	High	Highest Bandedge	39.973
HE40	2422	3	Low	Lowest Bandedge	39.039
SU	2452	9	High	Highest Bandedge	39.783

Conducted Spurious Emissions

Limit : 20 dBc

[SISO_Ant.3]

Mode	Freq. [MHz]	CH.	Conducted Spurious Emissions [dB]		
			RU Index : Low	RU Index : Mid	RU Index : High
HE20 26T	2412	1	44.940	45.699	46.427
	2437	6	48.154	45.605	46.254
	2462	11	47.990	47.942	46.687
HE20 52T	2412	1	43.165	43.439	43.672
	2437	6	44.913	44.315	43.535
	2462	11	45.130	45.572	43.477
HE20 106T	2412	1	40.819	-	41.606
	2437	6	42.172	-	41.111
	2462	11	43.649	-	42.296
HE20 242T	2412	1	-	40.087	-
	2437	6	-	38.476	-
	2462	11	-	39.863	-
HE20 SU	2412	1	-	38.901	-
	2437	6	-	38.563	-
	2462	11	-	39.887	-
HE40 26T	2422	3	46.626	45.556	46.471
	2437	6	46.662	45.751	48.682
	2452	9	46.635	45.523	45.237
HE40 52T	2422	3	44.161	44.710	44.438
	2437	6	43.948	45.071	45.243
	2452	9	44.936	42.846	43.048
HE40 106T	2422	3	40.003	41.963	41.361
	2437	6	41.664	42.582	42.436
	2452	9	41.664	41.609	41.377
HE40 242T	2422	3	37.826	-	38.543
	2437	6	38.532	-	38.873
	2452	9	37.721	-	37.248
HE40 484T	2422	3	-	35.297	-
	2437	6	-	39.850	-
	2452	9	-	35.206	-
HE40 SU	2422	3	-	37.033	-
	2437	6	-	38.104	-
	2452	9	-	35.097	-

[MIMO_CDD(Ant1)]

Mode	Freq. [MHz]	CH.	Conducted Spurious Emissions [dB]		
			RU Index : Low	RU Index : Mid	RU Index : High
HE20 26T	2412	1	41.745	42.520	42.429
	2437	6	43.307	42.855	43.701
	2462	11	44.759	42.547	42.691
HE20 52T	2412	1	37.613	39.074	39.568
	2437	6	38.560	41.073	40.280
	2462	11	41.619	41.970	39.577
HE20 106T	2412	1	37.974	-	38.005
	2437	6	36.853	-	37.764
	2462	11	39.507	-	37.175
HE20 242T	2412	1	-	37.485	-
	2437	6	-	36.264	-
	2462	11	-	36.769	-
HE20 SU	2412	1	-	35.375	-
	2437	6	-	35.523	-
	2462	11	-	37.707	-
HE40 26T	2422	3	43.914	44.417	41.962
	2437	6	44.883	40.332	44.178
	2452	9	41.978	43.921	41.605
HE40 52T	2422	3	41.232	41.337	40.427
	2437	6	41.142	39.521	40.672
	2452	9	39.826	42.196	39.781
HE40 106T	2422	3	37.829	38.068	34.813
	2437	6	38.191	35.226	39.434
	2452	9	37.237	40.172	35.694
HE40 242T	2422	3	35.713	-	33.199
	2437	6	34.116	-	34.148
	2452	9	35.776	-	34.874
HE40 484T	2422	3	-	32.123	-
	2437	6	-	32.067	-
	2452	9	-	33.029	-
HE40 SU	2422	3	-	34.396	-
	2437	6	-	32.539	-
	2452	9	-	34.393	-

[MIMO_CDD(Ant2&Ant3)]

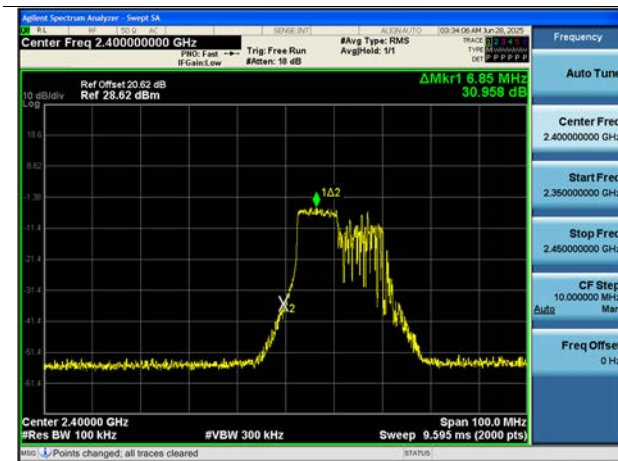
Mode	Freq. [MHz]	CH.	Conducted Spurious Emissions [dB]		
			RU Index : Low	RU Index : Mid	RU Index : High
HE20 26T	2412	1	40.967	42.651	43.797
	2437	6	44.071	42.584	42.943
	2462	11	42.932	43.685	43.006
HE20 52T	2412	1	40.316	38.955	40.822
	2437	6	40.424	41.183	39.405
	2462	11	41.733	40.989	39.694
HE20 106T	2412	1	36.457	-	37.668
	2437	6	38.814	-	37.373
	2462	11	38.739	-	39.947
HE20 242T	2412	1	-	33.962	-
	2437	6	-	37.146	-
	2462	11	-	38.881	-
HE20 SU	2412	1	-	34.174	-
	2437	6	-	37.327	-
	2462	11	-	38.560	-
HE40 26T	2422	3	43.176	44.642	42.662
	2437	6	42.848	42.306	43.558
	2452	9	42.394	42.640	42.134
HE40 52T	2422	3	40.092	41.374	39.477
	2437	6	41.824	41.265	40.530
	2452	9	40.537	39.143	39.823
HE40 106T	2422	3	35.963	35.785	36.199
	2437	6	38.990	39.676	38.760
	2452	9	38.747	37.446	38.819
HE40 242T	2422	3	32.557	-	34.617
	2437	6	36.846	-	36.363
	2452	9	34.223	-	33.922
HE40 484T	2422	3	-	30.448	-
	2437	6	-	35.540	-
	2452	9	-	32.949	-
HE40 SU	2422	3	-	31.997	-
	2437	6	-	34.361	-
	2452	9	-	33.150	-

☐ Test Plots [Band Edge]

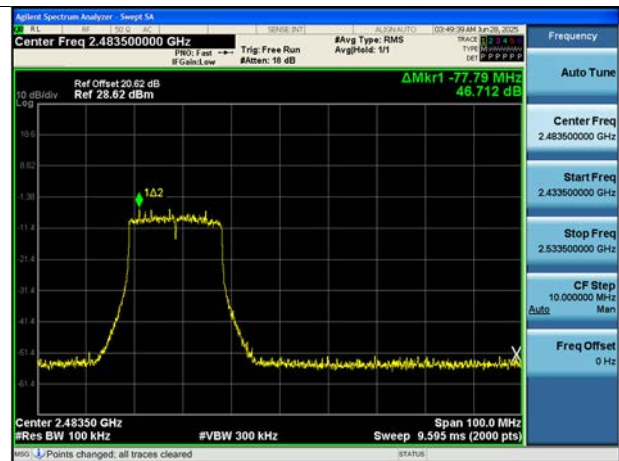
Note: In order to simplify the report, attached plots were only the worst case.

[SISO_Ant.3]

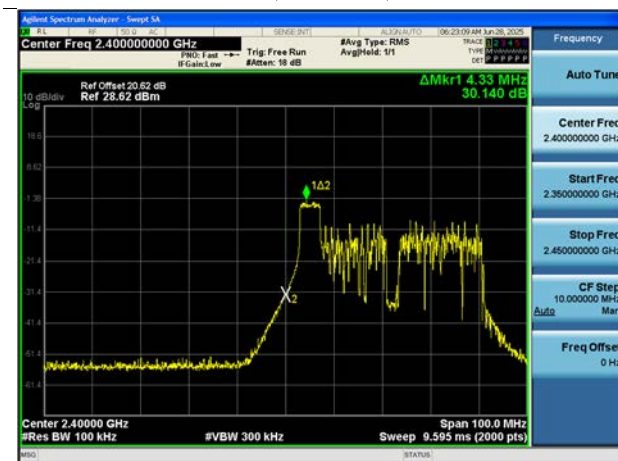
BW20M Ch.1(2412 MHz) 106T RU 53



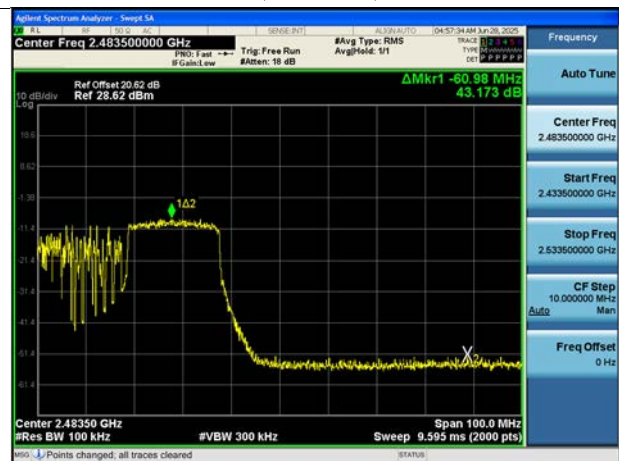
BW20M Ch.11(2462 MHz) 242T RU 61



BW40M Ch.3(2422 MHz) 52T RU 37



BW40M Ch.9(2452 MHz) 242T RU 62



[MIMO_CDD(Ant1)]

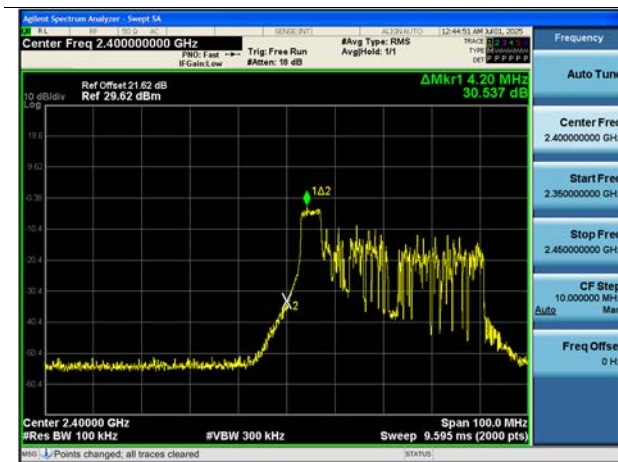
BW20M Ch.1(2412 MHz) 106T RU 53



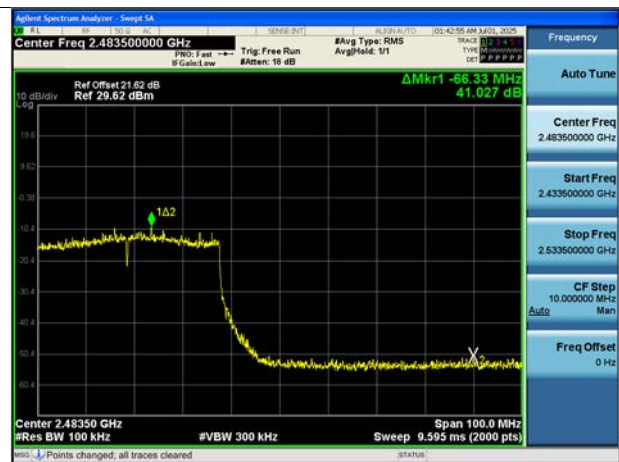
BW20M Ch.11(2462 MHz) 106T RU 54



BW40M Ch.3(2422 MHz) 52T RU 37

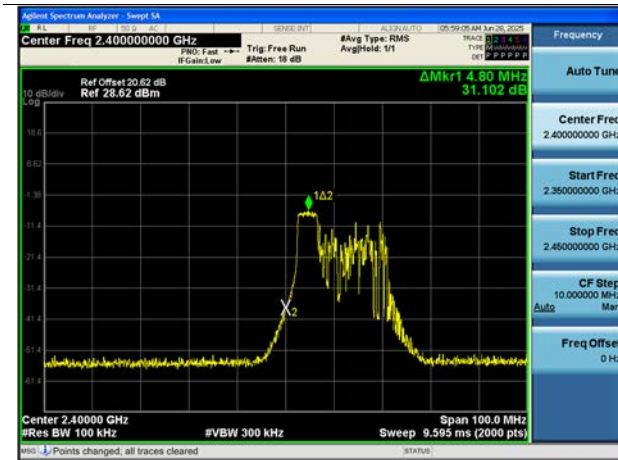


BW40M Ch.9(2452 MHz) 484T RU 65

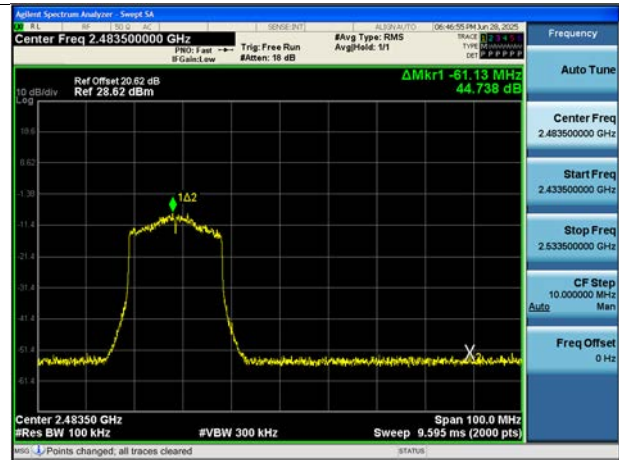


[MIMO_CDD(Ant2&Ant3)]

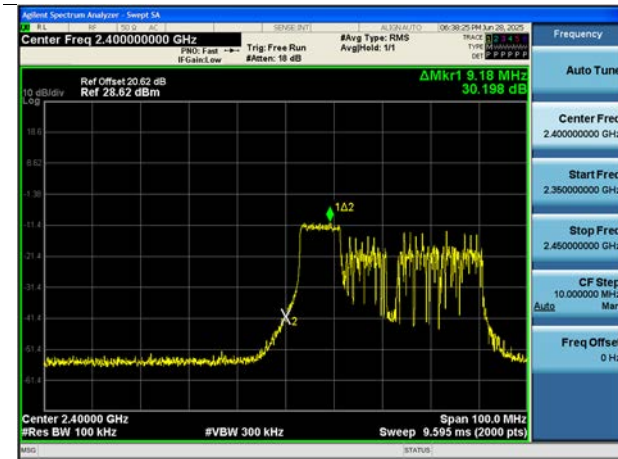
BW20M Ch.1(2412 MHz) 52T RU 37



BW20M Ch.11(2462 MHz) SU



BW40M Ch.3(2422 MHz) 106T RU 53



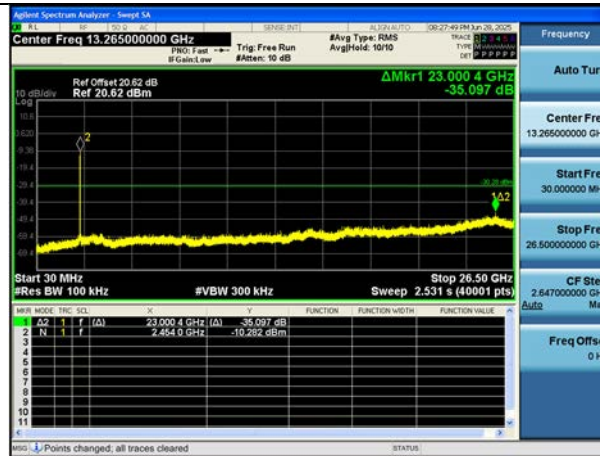
BW40M Ch.9(2452 MHz) SU



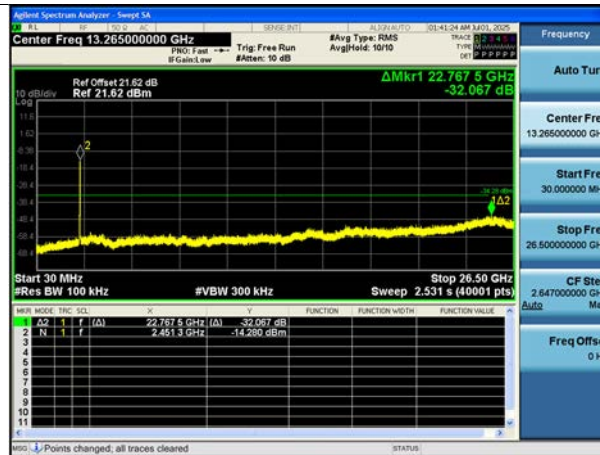
Test Plots[Conducted Spurious Emissions]

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

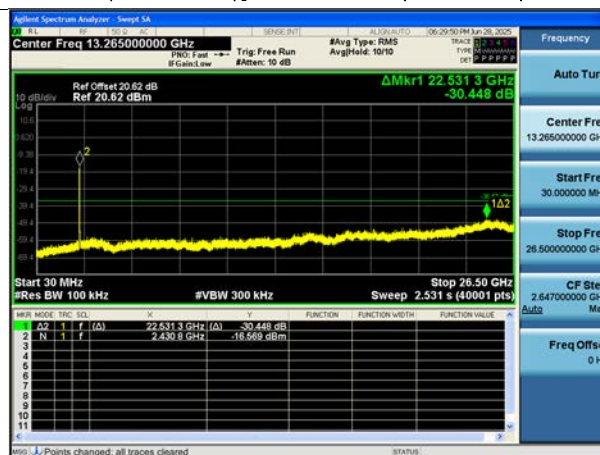
[SISO_Ant.3] BW 40M Ch.9(2 452 MHz) SU



[MIMO_CDD(Ant1)] BW 40M Ch.6(2 437 MHz) 484T RU65



[MIMO_CDD(Ant2&Ant3)] BW 40M Ch.3(2 422 MHz) 484T RU65



Limit

SISO_Ant.3 : -30.282 dBm, MIMO_CDD(Ant1): -34.280 dBm, MIMO_CDD(Ant2&Ant3): -36.569 dBm

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]	[dB μ V/m]	[dB/m]	[H/V]	[dB μ V/m]	[dB μ V/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 = $40\log(\text{specific distance} / \text{test distance})$ (dB)
3. Limit line = specific Limits (dB μ V) + Distance extrapolation factor

Frequency Range : Below 1 GHz

Frequency	Measured Value	A.F+C.L	POL	Total	Limit	Margin
[MHz]	[dB μ V/m]	[dB/m]	[H/V]	[dB μ V/m]	[dB μ V/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.

Frequency Range : Above 1 GHz

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

Band : DTS			Operation Mode :		HE20 MCS0 242T RU61			
CH.1 2412 MHz			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	41.85	0.00	4.99	V	46.84	73.98	27.14	PK
4824	29.42	0.10	4.99	V	34.51	53.98	19.47	AV
7236	38.95	0.00	12.93	V	51.88	73.98	22.10	PK
7236	26.48	0.10	12.93	V	39.51	53.98	14.47	AV
4824	42.01	0.00	4.99	H	47.00	73.98	26.98	PK
4824	29.52	0.10	4.99	H	34.61	53.98	19.37	AV
7236	39.03	0.00	12.93	H	51.96	73.98	22.02	PK
7236	26.52	0.10	12.93	H	39.55	53.98	14.43	AV

Band : DTS			Operation Mode :		HE20 MCS0 242T RU61			
CH.6 2437 MHz			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	41.65	0.00	5.25	V	46.90	73.98	27.08	PK
4874	29.77	0.10	5.25	V	35.12	53.98	18.86	AV
7311	38.89	0.00	12.82	V	51.71	73.98	22.27	PK
7311	26.48	0.10	12.82	V	39.40	53.98	14.58	AV
4874	41.70	0.00	5.25	H	46.95	73.98	27.03	PK
4874	29.84	0.10	5.25	H	35.19	53.98	18.79	AV
7311	39.07	0.00	12.82	H	51.89	73.98	22.09	PK
7311	26.50	0.10	12.82	H	39.42	53.98	14.56	AV

Band : DTS			Operation Mode :		HE20 MCS0 242T RU61			
CH.11 2462 MHz			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	42.33	0.00	5.45	V	47.78	73.98	26.20	PK
4924	30.11	0.10	5.45	V	35.66	53.98	18.32	AV
7386	38.95	0.00	12.63	V	51.58	73.98	22.40	PK
7386	26.60	0.10	12.63	V	39.33	53.98	14.65	AV
4924	42.43	0.00	5.45	H	47.88	73.98	26.10	PK
4924	30.29	0.10	5.45	H	35.84	53.98	18.14	AV
7386	39.01	0.00	12.63	H	51.64	73.98	22.34	PK
7386	26.64	0.10	12.63	H	39.37	53.98	14.61	AV

Band : DTS			Operation Mode :		HE20 MCS0 26T RU4			
CH.1 2412 MHz			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	46.25	0.00	4.99	V	51.24	73.98	22.74	PK
4824	32.22	0.02	4.99	V	37.23	53.98	16.75	AV
7236	38.89	0.00	12.93	V	51.82	73.98	22.16	PK
7236	26.44	0.02	12.93	V	39.39	53.98	14.59	AV
4824	47.15	0.00	4.99	H	52.14	73.98	21.84	PK
4824	32.33	0.02	4.99	H	37.34	53.98	16.64	AV
7236	38.95	0.00	12.93	H	51.88	73.98	22.10	PK
7236	26.52	0.02	12.93	H	39.47	53.98	14.51	AV

Band : DTS			Operation Mode :		HE20 MCS0 26T RU4			
CH.6 2437 MHz			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	42.41	0.00	5.25	V	47.66	73.98	26.32	PK
4874	30.05	0.02	5.25	V	35.32	53.98	18.66	AV
7311	38.80	0.00	12.82	V	51.62	73.98	22.36	PK
7311	26.40	0.02	12.82	V	39.24	53.98	14.74	AV
4874	42.63	0.00	5.25	H	47.88	73.98	26.10	PK
4874	30.25	0.02	5.25	H	35.52	53.98	18.46	AV
7311	38.82	0.00	12.82	H	51.64	73.98	22.34	PK
7311	26.48	0.02	12.82	H	39.32	53.98	14.66	AV

Band : DTS			Operation Mode :		HE20 MCS0 26T RU4			
CH.11 2462 MHz			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	45.88	0.00	5.45	V	51.33	73.98	22.65	PK
4924	31.95	0.02	5.45	V	37.42	53.98	16.56	AV
7386	38.85	0.00	12.63	V	51.48	73.98	22.50	PK
7386	26.62	0.02	12.63	V	39.27	53.98	14.71	AV
4924	46.36	0.00	5.45	H	51.81	73.98	22.17	PK
4924	32.15	0.02	5.45	H	37.62	53.98	16.36	AV
7386	38.97	0.00	12.63	H	51.60	73.98	22.38	PK
7386	26.64	0.02	12.63	H	39.29	53.98	14.69	AV

Band : DTS				Operation Mode : HE40 MCS0 484T RU65				
CH.3		2422	MHz	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
4844	41.44	0.00	5.02	V	46.46	73.98	27.52	PK
4844	29.41	0.07	5.02	V	34.50	53.98	19.48	AV
7266	38.55	0.00	12.69	V	51.24	73.98	22.74	PK
7266	26.15	0.07	12.69	V	38.91	53.98	15.07	AV
4844	41.50	0.00	5.02	H	46.52	73.98	27.46	PK
4844	29.44	0.07	5.02	H	34.53	53.98	19.45	AV
7266	38.62	0.00	12.69	H	51.31	73.98	22.67	PK
7266	26.19	0.07	12.69	H	38.95	53.98	15.03	AV

Band : DTS				Operation Mode : HE40 MCS0 484T RU65				
CH.6		2437	MHz	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	42.05	0.00	5.25	V	47.30	73.98	26.68	PK
4874	29.12	0.07	5.25	V	34.44	53.98	19.54	AV
7311	38.88	0.00	12.82	V	51.70	73.98	22.28	PK
7311	26.20	0.07	12.82	V	39.09	53.98	14.89	AV
4874	42.19	0.00	5.25	H	47.44	73.98	26.54	PK
4874	29.39	0.07	5.25	H	34.71	53.98	19.27	AV
7311	38.92	0.00	12.82	H	51.74	73.98	22.24	PK
7311	26.24	0.07	12.82	H	39.13	53.98	14.85	AV

Band : DTS				Operation Mode : HE40 MCS0 484T RU65				
CH.9		2452	MHz	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	41.51	0.00	5.44	V	46.95	73.98	27.03	PK
4904	29.62	0.07	5.44	V	35.13	53.98	18.85	AV
7356	38.51	0.00	12.71	V	51.22	73.98	22.76	PK
7356	26.28	0.07	12.71	V	39.06	53.98	14.92	AV
4904	41.64	0.00	5.44	H	47.08	73.98	26.90	PK
4904	29.77	0.07	5.44	H	35.28	53.98	18.70	AV
7356	38.58	0.00	12.71	H	51.29	73.98	22.69	PK
7356	26.35	0.07	12.71	H	39.13	53.98	14.85	AV

Band : DTS				Operation Mode : HE40 MCS0 26T RU9				
CH.3 2422 MHz				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
4844	47.85	0.00	5.02	V	52.87	73.98	21.11	PK
4844	31.29	0.02	5.02	V	36.33	53.98	17.65	AV
7266	38.48	0.00	12.69	V	51.17	73.98	22.81	PK
7266	26.20	0.02	12.69	V	38.91	53.98	15.07	AV
4844	48.19	0.00	5.02	H	53.21	73.98	20.77	PK
4844	31.65	0.02	5.02	H	36.69	53.98	17.29	AV
7266	38.65	0.00	12.69	H	51.34	73.98	22.64	PK
7266	26.30	0.02	12.69	H	39.01	53.98	14.97	AV

Band : DTS				Operation Mode : HE40 MCS0 26T RU9				
CH.6 2437 MHz				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	46.48	0.00	5.25	V	51.73	73.98	22.25	PK
4874	30.05	0.02	5.25	V	35.32	53.98	18.66	AV
7311	38.55	0.00	12.82	V	51.37	73.98	22.61	PK
7311	26.21	0.02	12.82	V	39.05	53.98	14.93	AV
4874	46.74	0.00	5.25	H	51.99	73.98	21.99	PK
4874	30.16	0.02	5.25	H	35.43	53.98	18.55	AV
7311	38.62	0.00	12.82	H	51.44	73.98	22.54	PK
7311	26.24	0.02	12.82	H	39.08	53.98	14.90	AV

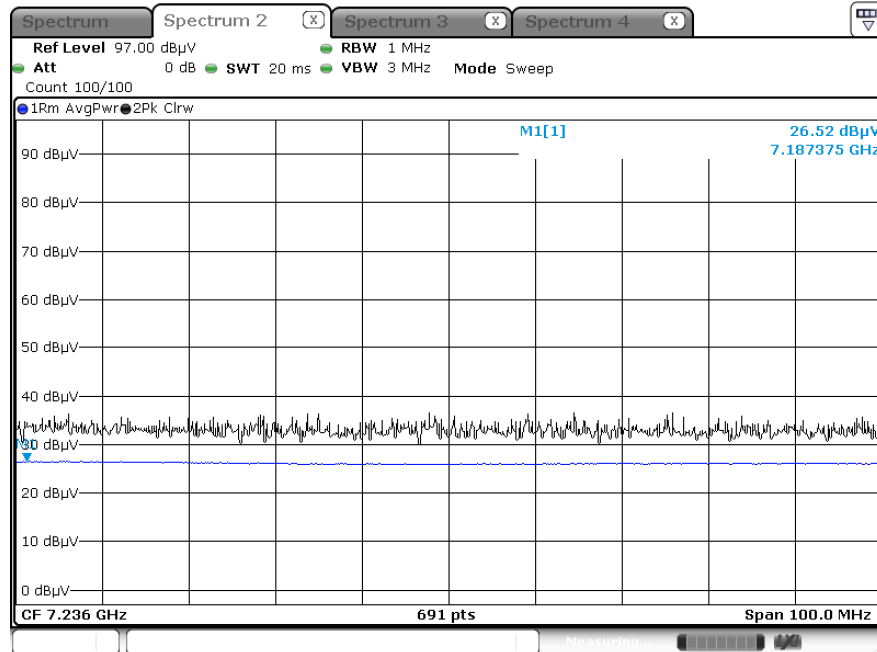
Band : DTS				Operation Mode : HE40 MCS0 26T RU9				
CH.9 2452 MHz				Transfer Rate : MCS0				
Frequency [MHz]	Measured value [dBμV]	D.C.F [dB]	CL+AF+DF-AG [dB/m]	ANT. POL [H/V]	Total [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Measurement Type
4904	47.32	0.00	5.44	V	52.76	73.98	21.22	PK
4904	31.59	0.02	5.44	V	37.05	53.98	16.93	AV
7356	40.32	0.00	12.71	V	53.03	73.98	20.95	PK
7356	26.30	0.02	12.71	V	39.03	53.98	14.95	AV
4904	47.85	0.00	5.44	H	53.29	73.98	20.69	PK
4904	31.90	0.02	5.44	H	37.36	53.98	16.62	AV
7356	40.79	0.00	12.71	H	53.50	73.98	20.48	PK
7356	26.37	0.02	12.71	H	39.10	53.98	14.88	AV

Test Plots

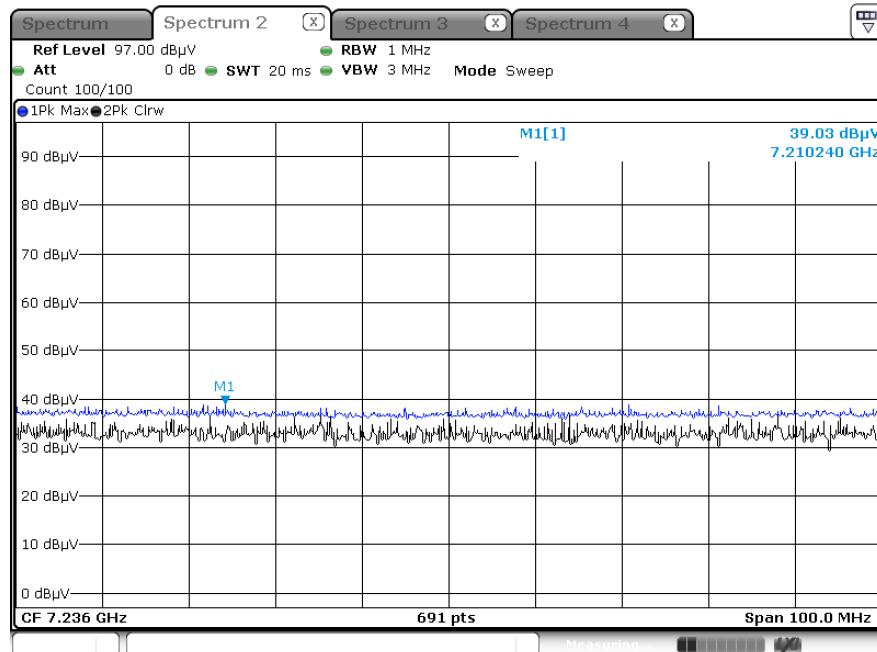
[MIMO_CDD(Ant.1+Ant.2)]

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.1 3rd Harmonic, Z-H)



Radiated Spurious Emissions plot – Peak result (802.11ax(HE20) 242 Tone RU 61, Ch.1 3rd Harmonic, Z-H)



9.7 RADIATED RESTRICTED BAND EDGES

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

802.11ax(MCS0)			HE20	242T				
Channel	CH 1		Freq	2412 MHz		RU offset	61	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2390.0	19.86	0.00	36.66	H	56.52	73.98	17.46	PK
2390.0	7.10	0.10	36.66	H	43.86	53.98	10.12	AV

802.11ax(MCS0)			HE20	242T				
Channel	CH 11		Freq	2462 MHz		RU offset	61	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2483.5	26.44	0.00	37.22	H	63.66	73.98	10.32	PK
2483.5	7.45	0.10	37.22	H	44.77	53.98	9.21	AV

802.11ax(MCS0)			HE20	26T				
Channel	CH 1		Freq	2412 MHz		RU offset	0	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2390.0	18.35	0.00	36.66	H	55.01	73.98	18.97	PK
2390.0	5.45	0.02	36.66	H	42.13	53.98	11.85	AV

802.11ax(MCS0)			HE20	26T				
Channel	CH 11		Freq	2462 MHz		RU offset	8	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2483.5	18.00	0.00	37.22	H	55.22	73.98	18.76	PK
2483.5	6.23	0.02	37.22	H	43.47	53.98	10.51	AV

802.11ax(MCS0)			HE20	52T				
Channel	CH 1		Freq	2412 MHz		RU offset	37	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2390.0	17.49	0.00	36.66	H	54.15	73.98	19.83	PK
2390.0	5.45	0.02	36.66	H	42.13	53.98	11.85	AV

802.11ax(MCS0)			HE20	52T				
Channel	CH 11		Freq	2462 MHz		RU offset	40	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2483.5	19.72	0.00	37.22	H	56.94	73.98	17.04	PK
2483.5	6.59	0.02	37.22	H	43.83	53.98	10.15	AV

802.11ax(MCS0)			HE20	106T				
Channel	CH 1		Freq	2412 MHz		RU offset	53	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2390.0	18.32	0.00	36.66	H	54.98	73.98	19.00	PK
2390.0	5.44	0.11	36.66	H	42.21	53.98	11.77	AV

802.11ax(MCS0)			HE20	106T				
Channel	CH 11		Freq	2462 MHz		RU offset	54	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2483.5	19.85	0.00	37.22	H	57.07	73.98	16.91	PK
2483.5	6.20	0.11	37.22	H	43.53	53.98	10.45	AV

802.11ax(MCS0)			HE20			SU		
Channel	CH 1		Freq	2412 MHz				
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2390.0	18.42	0.00	36.66	H	55.08	73.98	18.90	PK
2390.0	6.06	0.01	36.66	H	42.73	53.98	11.25	AV

802.11ax(MCS0)			HE20			SU		
Channel	CH 11		Freq	2462 MHz				
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2483.5	18.96	0.00	37.22	H	56.18	73.98	17.80	PK
2483.5	6.44	0.01	37.22	H	43.67	53.98	10.31	AV

802.11ax(MCS0)			HE40	484T				
Channel	CH 3		Freq	2422 MHz		RU offset	65	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2390.0	21.74	0.00	36.66	H	58.40	73.98	15.58	PK
2390.0	8.66	0.07	36.66	H	45.39	53.98	8.59	AV

802.11ax(MCS0)			HE40	484T				
Channel	CH 9		Freq	2452 MHz		RU offset	65	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2483.5	19.55	0.00	37.22	H	56.77	73.98	17.21	PK
2483.5	6.50	0.07	37.22	H	43.79	53.98	10.19	AV

802.11ax(MCS0)			HE40	26T				
Channel	CH 3		Freq	2422 MHz		RU offset	0	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2390.0	21.66	0.00	36.66	H	58.32	73.98	15.66	PK
2390.0	5.65	0.02	36.66	H	42.33	53.98	11.65	AV

802.11ax(MCS0)			HE40	26T				
Channel	CH 9		Freq	2452 MHz		RU offset	17	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2483.5	18.97	0.00	37.22	H	56.19	73.98	17.79	PK
2483.5	6.23	0.02	37.22	H	43.47	53.98	10.51	AV

802.11ax(MCS0)			HE40	52T				
Channel	CH 3		Freq	2422 MHz		RU offset	37	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2390.0	23.16	0.00	36.66	H	59.82	73.98	14.16	PK
2390.0	5.73	0.03	36.66	H	42.42	53.98	11.56	AV

802.11ax(MCS0)			HE40	52T				
Channel	CH 9		Freq	2452 MHz		RU offset	44	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2483.5	19.33	0.00	37.22	H	56.55	73.98	17.43	PK
2483.5	6.35	0.03	37.22	H	43.60	53.98	10.38	AV

802.11ax(MCS0)			HE40	106T				
Channel	CH 3		Freq	2422 MHz		RU offset	53	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2390.0	22.19	0.00	36.66	H	58.85	73.98	15.13	PK
2390.0	5.59	0.06	36.66	H	42.31	53.98	11.67	AV

802.11ax(MCS0)			HE40	106T				
Channel	CH 9		Freq	2452 MHz		RU offset	56	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2483.5	19.10	0.00	37.22	H	56.32	73.98	17.66	PK
2483.5	6.19	0.06	37.22	H	43.47	53.98	10.51	AV

802.11ax(MCS0)			HE40	242T				
Channel	CH 3		Freq	2422 MHz		RU offset	61	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2390.0	22.15	0.00	36.66	H	58.81	73.98	15.17	PK
2390.0	7.45	0.10	36.66	H	44.21	53.98	9.77	AV

802.11ax(MCS0)			HE40	242T				
Channel	CH 9		Freq	2452 MHz		RU offset	62	
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2483.5	20.02	0.00	37.22	H	57.24	73.98	16.74	PK
2483.5	6.47	0.10	37.22	H	43.79	53.98	10.19	AV

802.11ax(MCS0)			HE40			SU		
Channel	CH 3		Freq	2422 MHz				
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2390.0	18.18	0.00	36.66	H	54.84	73.98	19.14	PK
2390.0	6.06	0.01	36.66	H	42.73	53.98	11.25	AV

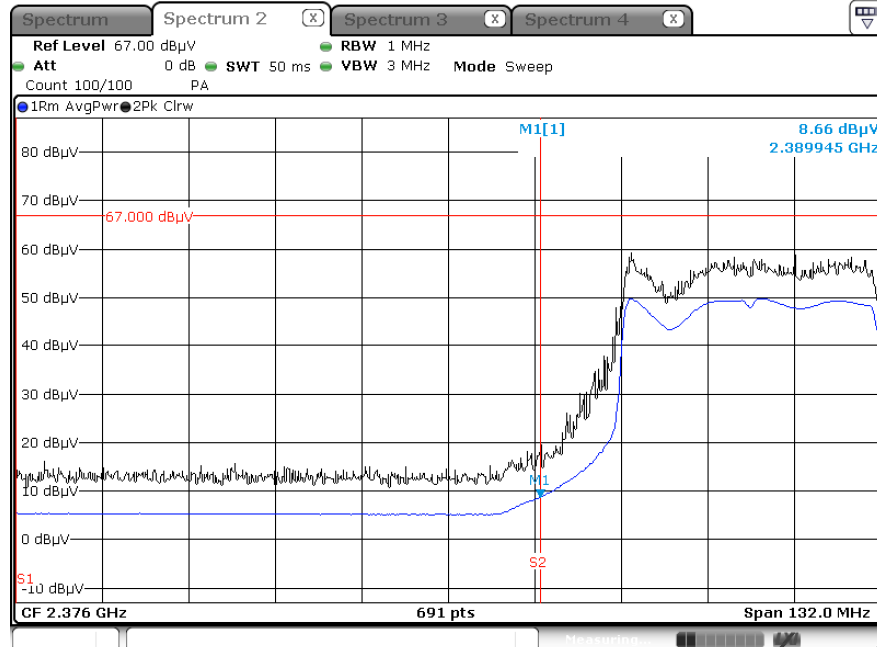
802.11ax(MCS0)			HE40			SU		
Channel	CH 9		Freq	2452 MHz				
Frequency	Measured Value	Duty Cycle Factor	A.F+C.L+D.F	ANT. POL	Total	Limit	Margin	Measurement Type
[MHz]	[dBμV]	[dB]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]	
2483.5	18.94	0.00	37.22	H	56.16	73.98	17.82	PK
2483.5	7.62	0.01	37.22	H	44.85	53.98	9.13	AV

Test Plots

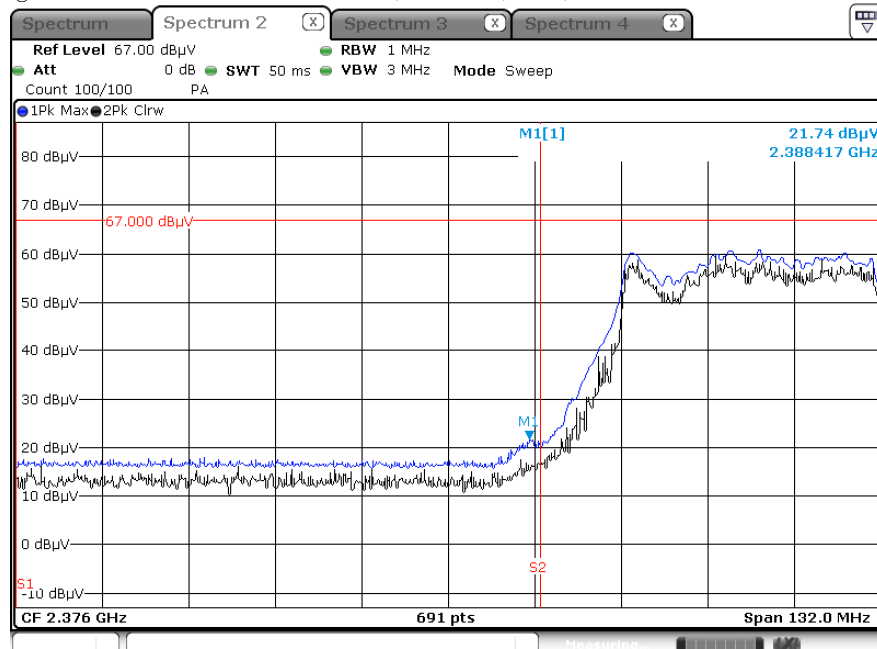
[MIMO_CDD(Ant.1+Ant.2)]

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

Integration method Used_ Average result(802.11ax(HE40) 484T RU65, MCS0, SU ch.3, Y-H)



Integration method Used_ Peak result(802.11ax(HE40) 484T RU65, MCS0, SU ch.3, Y-H)



10. LIST OF TEST EQUIPMENT

Conducted Test

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
LISN	ENV216	Rohde & Schwarz	102245	07/15/2026	Annual
EMI Test Receiver	ESR	Rohde & Schwarz	101910	08/27/2025	Annual
Temperature Chamber	SU-642	ESPEC	0093008124	02/11/2026	Annual
Signal Analyzer	N9030A	Agilent	MY49432108	02/18/2026	Annual
Power Measurement Set	OSP 120	Rohde & Schwarz	100935	08/01/2025	Annual
Power Meter	N1911A	Agilent	MY45100523	02/21/2026	Annual
Power Sensor	N1921A	Agilent	MY57820067	02/04/2026	Annual
Directional Coupler	87300B	Agilent	3116A03621	10/21/2025	Annual
Power Splitter	11667B	Hewlett Packard	10545	01/23/2026	Annual
DC Power Supply	E3632A	Agilent	KR75303243	04/16/2026	Annual
Attenuator(10 dB)(DC-26.5 GHz)	8493C	HP	07560	05/27/2026	Annual
Attenuator(10 dB)(DC-26.5 GHz)	8493C	HP	08285	05/19/2026	Annual
Attenuator(20 dB)	18N-20dB	Rohde & Schwarz	8	02/18/2026	Annual
Software	EMC32	Rohde & Schwarz	N/A	N/A	N/A
Bluetooth Tester	CBT	Rohde & Schwarz	100752	12/27/2025	Annual
Automation Software	FCC WLAN Conducted	HCT CO., LTD	N/A	N/A	N/A

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

Radiated Test

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
Controller	CO3000	Innco system	CO3000-4p	N/A	N/A
Antenna Position Tower	MA4640/800-XP-EP	Innco system	S1AM	07/30/2025	Annual
Turn Table	DS2000-S-1t	Innco system	DS2000/572/54610422/P	N/A	N/A
Amp & Filter Bank Switch Controller	FBSM-01B	T&M system	TM19050002	N/A	N/A
Loop Antenna	1513	Schwarzbeck	1513-175	01/06/2027	Biennial
Hybrid Antenna	VULB 9168	Schwarzbeck	9168-0895	08/28/2026	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	9120D-1300	01/03/2026	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	9120D-2296	05/16/2026	Biennial
Horn Antenna(15 GHz ~ 40 GHz)	BBHA9170	Schwarzbeck	BBHA9170342	09/20/2026	Biennial
Spectrum Analyzer	FSV(10 Hz ~ 40 GHz)	Rohde & Schwarz	101055	05/07/2026	Annual
Band Reject Filter	WRCJV2400/2483.5-2370/2520-60/12SS	Wainwright Instruments	2	12/26/2025	Annual
Band Reject Filter	WRCJV12-4900-5100-5900-6100-50SS	Wainwright Instruments	5	05/27/2026	Annual
Band Reject Filter	WRCJV12-4900-5100-5900-6100-50SS	Wainwright Instruments	6	05/27/2026	Annual
High Pass Filter(7 GHz ~ 18 GHz)	WHKX10-7150-8000-18000-50SS	Wainwright Instruments	1	02/21/2026	Annual
Power Amplifier	CBL18265035	CERNEX	22966	11/07/2025	Annual
Power Amplifier	CBL26405040	CERNEX	25956	02/19/2026	Annual
Bluetooth Tester	TC-3000C	TESCOM	3000C000175	03/12/2026	Annual
RF Switching System	FMSR-05B (HPF(3~18GHz) + LNA1(1~18GHz))	T&M system	S1L1	12/23/2025	Annual
RF Switching System	FMSR-05B (ATT(10dB) + LNA1(1~18GHz))	T&M system	S1L2	12/23/2025	Annual
RF Switching System	FMSR-05B (ATT(3dB) + LNA1(1~18GHz))	T&M system	S1L3	12/23/2025	Annual
RF Switching System	FMSR-05B (LNA1(1~18GHz))	T&M system	S1L4	12/23/2025	Annual
RF Switching System	FMSR-05B (HPF(7~18GHz) + LNA2(6~18GHz))	T&M system	S1L5	12/23/2025	Annual
RF Switching System	FMSR-05B (Thru(30MHz ~ 18GHz))	T&M system	S1L6	12/23/2025	Annual
Automation Software	FCC WLAN Radiated	HCT CO., LTD	N/A	N/A	N/A

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.
3. Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5(Version : 2017).

11. ANNEX A_ TEST SETUP PHOTO

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

No.	Description
1	HCT-RF-2507-FC078-P