

TEST REPORT

of

FCC Part 15 Subpart E §15.407
IC RSS-247 Issue 4 and RSS-Gen Issue 5

FCC ID: 2BO3LLANR61
IC Certification: 2703H-LANR61

Equipment Under Test : CONT ASSY-CDC
Model Name : LANR61
Variant Model Name(s) : -
FCC Applicant : LG Electronics Inc.
IC Applicant : LG ELECTRONICS INC.
Manufacturer : LG Electronics Inc.
Date of Receipt : 2025.10.24
Date of Test(s) : 2025.11.07 ~ 2026.03.17
Date of Issue : 2026.05.26

In the configuration tested, the EUT complied with the standards specified above. This test report does not assure KOLAS accreditation.

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 - 2) The SGS Korea is not responsible for the sampling, the results of this test report apply to the sample as received.
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Tested by:



Dave Kim

Technical
Manager:



Jinhyoung Cho

SGS Korea Co., Ltd. Gunpo Laboratory

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1. General Information

1.1. Testing Laboratory

SGS Korea Co., Ltd. (Gunpo Laboratory)

- 10-2, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- 4, LS-ro 182beon-gil, Gunpo-si, Gyeonggi-do, Korea, 15807
- Designation number: KR0150

All SGS services are rendered in accordance with the applicable SGS conditions of service available on request and accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>.

Phone No. : +82 31 688 0901

Fax No. : +82 31 688 0921

1.2. Details of Applicant

FCC Applicant : LG Electronics Inc.

FCC Address : 222 LG-ro, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, South Korea, 17709

IC Applicant : LG ELECTRONICS INC.

IC Address : 222, LG-ro, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, Korea (Republic of), 451-713

Contact Person : Kwon, Yong-deok

Phone No. : +82 31 8066 5538

1.3. Details of Manufacturer

Company : LG Electronics Inc.

Address : 128, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea, 07336

Factory 1 : LG Electronics Inc.

Factory 1 Address : 222 LG-ro, Jinwi-myeon, Pyeongtaek-si, Gyeonggi-do, 17709, Republic of Korea

Factory 2 : LG Electronics Vietnam Haiphong Co., Ltd.

Factory 2 Address : Lots CN2, Trang Due Industrial Park, Le Loi Commune, An Duong District, Hai Phong City, Vietnam

Factory 3 : LG Electronics Reynosa S.A. de C.V.

Factory 3 Address : Av. Olimpia #2342, Parque Industrial Santa Maria 2da Etapa, 25903 Ramos Arizpe, Coahuila, Mexico

1.4. Description of EUT

Kind of Product	CONT ASSY-CDC
Model Name	LANR61
Serial Number	Conducted: 001 Radiated: 002
Power Supply	DC 12 V
Frequency Range	5 180 MHz ~ 5 240 MHz (Band 1: 11a/n_HT20, 11ac_VHT20) 5 190 MHz ~ 5 230 MHz (Band 1: 11n_HT40, 11ac_VHT40) 5 210 MHz (Band 1: 11ac_VHT80) 5 745 MHz ~ 5 805 MHz (Band 3: 11a/n_HT20, 11ac_VHT20) 5 755 MHz ~ 5 795 MHz (Band 3: 11n_HT40, 11ac_VHT40) 5 775 MHz (Band 3: 11ac_VHT80)
Modulation Technique	OFDM
Number of Channels	4 channels (Band 1: 11a/n_HT20, 11ac_VHT20) 2 channels (Band 1: 11n_HT40, 11ac_VHT40) 1 channel (Band 1: 11ac_VHT80) 4 channels (Band 3: 11a/n_HT20, 11ac_VHT20) 2 channels (Band 3: 11n_HT40, 11ac_VHT40) 1 channel (Band 3: 11ac_VHT80)
Antenna Type	Ant.1: Internal Chip Antenna Ant.2: External Metal Antenna Ant.3: Internal Chip Antenna
Antenna Gain ※	Ant. 1 BT&BLE: 2 402 MHz ~ 2 480 MHz: 0.33 dB i WLAN5: 5 180 MHz ~ 5 240 MHz: 0.29 dB i 5 745 MHz ~ 5 805 MHz: 0.49 dB i Ant. 2 WLAN2: 2 412 MHz ~ 2 462 MHz: 3.09 dB i WLAN5: 5 180 MHz ~ 5 240 MHz: 2.95 dB i 5 745 MHz ~ 5 805 MHz: 4.04 dB i Ant. 3 WLAN2: 2 412 MHz ~ 2 462 MHz: 0.35 dB i WLAN5: 5 180 MHz ~ 5 240 MHz: 0.69 dB i 5 745 MHz ~ 5 805 MHz: 0.85 dB i
H/W Version	1.0
S/W Version	1.0
FVIN	1.0

1.5. Declaration by the Manufacturer

- This device operates as both an AP (Access Point) and a Client mode, and it maintains the same output power regardless of the operating mode
- The EUT supports transmit power control (TPC).
- The EUT only supports UNII-1 Band and UNII-3 Band.
- The EUT does not support channel 165.
- The EUT has three ports (Port1, Port 2 and Port 3).
- WLAN 5G transmits both SISO and CDD/MIMO mode.

1.6. Automatically Discontinue Transmission

1.6.1. Limit of Automatically Discontinue Transmission

The device shall automatically discontinue transmission in case of either absence of information to transmit or operating failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization to describe how this requirement is met.

1.6.2. Test Result of Automatically Discontinue Transmission

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.

1.7. Test Equipment List

Equipment	Manufacturer	Model	S/N	Cal. Date	Cal. Interval	Cal. Due
Signal Generator	R&S	SMA100B	106887	10/20/2025	Annual	10/20/2026
Spectrum Analyzer	R&S	FSW8	101659	05/23/2025	Annual	05/23/2026
Spectrum Analyzer	Agilent	N9020A	MY53421758	09/10/2025	Annual	09/10/2026
Spectrum Analyzer ¹⁾	Agilent	N9030A	US51350132	11/29/2024	Annual	11/29/2025
				12/03/2025		12/03/2026
Attenuator	AEROFLEX/INMET	40AH2W-10	40G-1	06/17/2025	Annual	06/17/2026
COAXIAL STEP ATTENUATOR	AGILENT	8495B	MY42140907	07/02/2025	Annual	07/02/2026
High Pass Filter	Wainwright Instrument GmbH	WHKX6.0/18G-10SS	51	08/05/2025	Annual	08/05/2026
High Pass Filter	Wainwright Instrument GmbH	WHNX7.5/26.5G-6SS	15	06/09/2025	Annual	06/09/2026
Low Pass Filter ²⁾	Mini-Circuits	NLP-1200+	V8979400903-2	02/04/2025	Annual	02/04/2026
				02/02/2026		02/02/2027
Power Sensor	R&S	NRP-Z81	100669	05/24/2025	Annual	05/24/2026
Power Sensor	Anritus	MA24408A	11841	04/08/2025	Annual	04/08/2026
DC Power Supply	R&S	HMP2020	022802107	10/24/2025	Annual	10/24/2026
Preamplifier	H.P.	8447F	2944A03909	08/07/2025	Annual	08/07/2026
Signal Conditioning Unit ³⁾	R&S	SCU-18F	101058	02/27/2025	Annual	02/27/2026
			100959	01/05/2026	Annual	01/05/2027
Preamplifier ⁴⁾	TESTEK	TK-PA1840H	130016	03/13/2025	Annual	03/13/2026
				03/06/2026		03/06/2027
Loop Antenna	Schwarzbeck Mess-Elektronik	FMZB 1519	1519-039	10/01/2025	Biennial	10/01/2027
Bilog Antenna ⁵⁾	Schwarzbeck Mess-Elektronik	VULB 9163	01126	03/05/2025	Biennial	03/05/2026
				03/09/2026		03/09/2028
Horn Antenna ⁶⁾	R&S	HF906	100326	02/24/2025	Annual	02/24/2026
				03/03/2026		03/03/2027
Horn Antenna ⁷⁾	Schwarzbeck Mess-Elektronik	BBHA 9170	9170-540	12/11/2024	Annual	12/11/2025
				12/05/2025		12/05/2026
EMI Test Receiver ⁸⁾	R&S	ESU26	100109	01/13/2025	Annual	01/13/2026
				01/21/2026		01/21/2027
Turn Table	Innco systems GmbH	DS 1200 S	N/A	N.C.R.	N/A	N.C.R.
Controller	Innco systems GmbH	CONTROLLER CO3000-4P	CO3000/963/38330 516/L	N.C.R.	N/A	N.C.R.
Antenna Mast	Innco systems GmbH	MA4640-XP-ET	MA4640/536/38330 516/L	N.C.R.	N/A	N.C.R.
Anechoic Chamber	SY Corporation	L × W × H (9.6 m × 6.4 m × 6.6 m)	N/A	N.C.R.	N/A	N.C.R.
Coaxial Cable	SENSORVIEW	NMST-13A26-NMST-5 m	TPC2402190004	10/13/2025	Semi-Annual	04/13/2026
Coaxial Cable	SENSORVIEW	NMST-13A26-NMST-10 m	TPC2402190001	10/13/2025	Semi-Annual	04/13/2026
Coaxial Cable	Qualwave	QT50P-40-KK-1.5	24270074	10/10/2025	Semi-Annual	04/10/2026

Note;

- 1) The equipment was not used for testing during the period from 11/27/2025 to 12/08/2026
- 2) The equipment was not used for testing during the period from 02/02/2026 to 02/05/2026
- 3) As of 02/05/2026, use of the 101058 was discontinued, and the 100959 was used instead.
- 4) The equipment was not used for testing during the period from 03/03/2026 to 03/09/2026
- 5) The equipment was not used for testing during the period from 03/03/2026 to 03/12/2026
- 6) The equipment was not used for testing during the period from 02/24/2026 to 03/05/2026
- 7) The equipment was not used for testing during the period from 12/05/2025 to 12/08/2025
- 8) The equipment was not used for testing during the period from 01/13/2026 to 01/22/2026

1.8. Summary of Test Result

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15 Subpart E, IC RSS-247 Issue 4 and RSS-Gen Issue 5			
Section in FCC	Section in IC	Test Item(s)	Result
15.205(a) 15.209(a) 15.407(b)(1) 15.407(b)(4)	RSS-Gen Issue 5 8.9 RSS-247 Issue 4 7.3.1.3 RSS-247 Issue 4 7.3.4.4	Transmitter Radiated Spurious Emissions	Pass
15.407(a)	RSS-Gen Issue 5 6.7	26 dB Bandwidth & 99 % Bandwidth	Pass
15.407(e)	RSS-247 Issue 4 7.3.4.2	6 dB Bandwidth	Pass
15.407(a)(1) 15.407(a)(3)	RSS-247 Issue 4 7.3.1.2 RSS-247 Issue 4 7.3.4.3	Maximum Conducted Output Power	Pass
15.407(a)(1) 15.407(a)(3)	RSS-247 Issue 4 7.3.1.2 RSS-247 Issue 4 7.3.4.3	Maximum Power Spectral Density	Pass
15.207	RSS-Gen Issue 5 8.8	AC Power Line Conducted Emission	N/A ¹⁾

Note;

- 1) The AC power line test was not performed because the EUT use battery power for operation and which do not operate from the AC power lines.

1.9. Test Procedure(s)

The measurement procedures described in the American National Standard of Procedure for Compliance Testing of Unlicensed Wireless Devices (ANSI C63.10-2020 for FCC and ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Errata to C63.10a-2024 for ISED), as well as the guidance provided in KDB 789033 D02 General UNII Test Procedures New Rules v02r01, were used in the measurement of the DUT.

All measurement procedures in the test report comply with both ANSI versions, with no effect on the test results

1.10. Sample Calculation

Where relevant, the following sample calculation is provided:

1.10.1. Conducted Test

Offset value (dB) = Attenuator (dB) + Cable loss (dB)

1.10.2. Radiation Test

Field strength level (dB μ V/m) = Measured level (dB μ V) + Antenna factor (dB/m) + Cable loss (dB) - Amplifier gain (dB)
+ Duty factor (dB)

1.11. Information of Software for test

- Using the software of MobaXterm v23.6 to test for the WLAN.

1.12. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Parameter	Uncertainty	
Maximum Conducted Output Power	0.32 dB	
Maximum Power Spectral Density	0.64 dB	
99 % Bandwidth	0.05 MHz	
26 dB Bandwidth	0.05 MHz	
6 dB Bandwidth	0.06 MHz	
Radiated Emission, 9 kHz to 30 MHz	H	3.60 dB
	V	3.60 dB
Radiated Emission, below 1 GHz	H	5.50 dB
	V	5.10 dB
Radiated Emission, above 1 GHz	H	3.50 dB
	V	3.40 dB

All measurement uncertainty values are shown with a coverage factor $k = 2$ to indicate a 95 % level of confidence

1.13. Test Report Revision

Revision	Report Number	Date of Issue	Description
0	F690501-RF-RTL006857	2026.04.10	Initial
1	F690501-RF-RTL006857-1	2026.05.26	Updated the test equipment list

1.14. Device Capabilities

Mode	SISO			CDD / MIMO	
	Ant. 1	Ant. 2	Ant. 3	Ant. 1 + Ant. 2	Ant. 1 + Ant. 3
Bluetooth Low Energy	O	X	X	X	X
Bluetooth	O	X	X	X	X
WLAN 2 GHz	X	O	O	X	X
WLAN 5 GHz	O	O	O	O	O

Note;

- The EUT has three ports and all ports transmit by one WLAN module.

1.15. Worst-Case Configuration and Test Mode

Band	Mode	Frequency (MHz)	Average Power (dBm)				
			SISO			MIMO	
			Ant.1	Ant.2	Ant.3	Ant.1+Ant.2	Ant.1+Ant.3
UNII-1	11a	5 200	7.24	7.41	7.22	<u>8.06</u>	<u>8.70</u>
	11n_HT20		7.14	7.11	7.09	7.91	8.51
	11ac_VHT20		7.32	7.17	7.20	<u>8.04</u>	<u>8.57</u>
	11n_HT40	5 230	6.86	6.63	6.59	7.33	8.56
	11ac_VHT40		7.05	7.23	7.25	<u>7.38</u>	<u>8.57</u>
	11ac_VHT80	5 210	4.27	4.21	4.41	<u>4.86</u>	<u>5.45</u>
UNII-3	11a	5 745	12.35	11.83	10.91	<u>15.45</u>	<u>14.89</u>
	11n_HT20		12.47	11.63	10.03	<u>15.33</u>	<u>14.89</u>
	11ac_VHT20		12.41	11.60	10.01	15.27	14.84
	11n_HT40	5 755	12.46	11.32	10.08	<u>15.45</u>	<u>15.04</u>
	11ac_VHT40		12.25	11.36	10.02	15.41	15.02
	11ac_VHT80	5 775	10.91	10.26	9.12	<u>14.08</u>	<u>13.61</u>

Band	Mode	Bandwidth (MHz)	Data rate with highest output power
UNII-1	11a	20	6 Mbps
	11ac_VHT20	20	MCS0
	11ac_VHT40	40	MCS1
	11ac_VHT80	80	MCS0
UNII-3	11a	20	6 Mbps
	11n_HT20	20	MCS0
	11n_HT40	40	MCS1
	11ac_VHT80	80	MCS0

*For duplicate test items among 802.11n_HT20, HT40, 802.11ac_VHT20 and VHT40 mode, the test mode with the highest power level was tested.

Radiated emission below 1 GHz was performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Radiated emission above 1 GHz was performed with the EUT set to transmit Low/Middle/High Channels.

Conducted tests were performed with the EUT set to transmit Low/Middle/High channels with highest output power.

1.16. Duty Cycle of EUT

Regarding to KDB 789033 D02 General UNII Test Procedures New Rules v02r01, II.B, the maximum duty cycles of all modes were investigated and set the spectrum analyzer as below.
Set RBW $\geq$ EBW if possible; otherwise, set RBW to the largest available value, Set VBW $\geq$ RBW.
Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are $> 50/T$ and the number of sweep points across duration T exceeds 100.

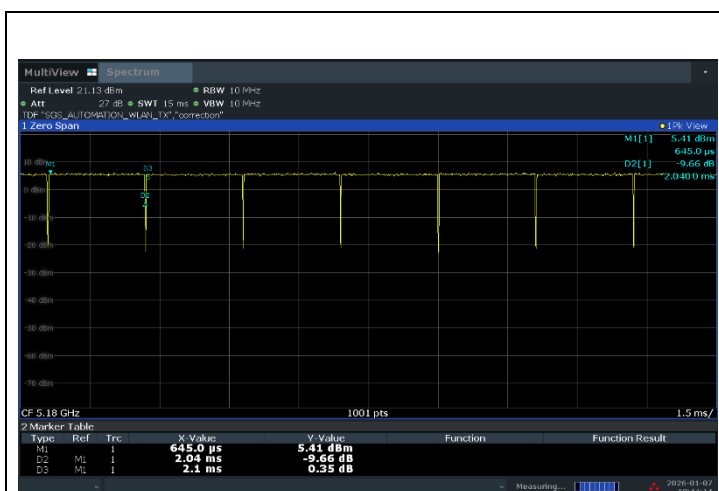
Mode	Data Rate	Duty Cycle (%)	Correction Factor (dB)
11a	6 Mbps	97.14	0.13
11n_HT20	MCS0	86.36	0.64
11ac_VHT20	MCS0	76.47	1.17
11n_HT40	MCS1	60.45	2.19
11ac_VHT40	MCS1	46.05	3.37
11ac_VHT80	MCS0	43.49	3.62

Remark;

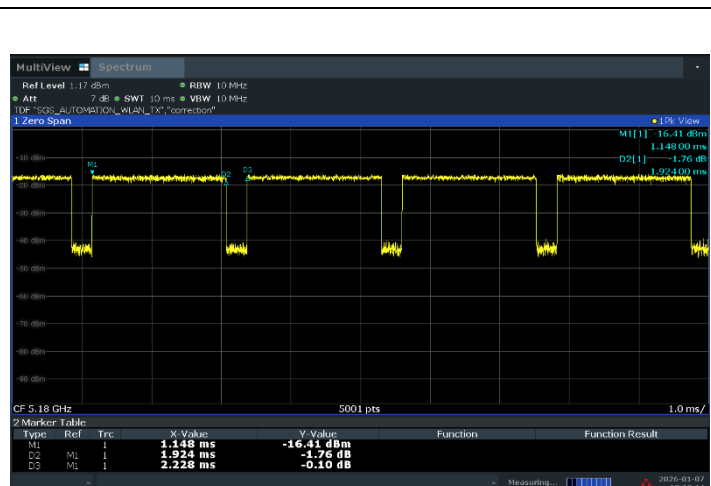
1. As measured duty cycles of EUT, all of mode and data rate keep constant period and are converted to log scale (power averaging) to compensate correction factor to result of average test items.
2. Duty Cycle (%) = (Tx on time / Tx on + off time) x 100
3. Correction Factor (dB) = 10 log (1 / Duty Cycle)
4. Duty cycle is over 98 %, compensation is no required.
5. Among all antenna ports, only the worst-case measurement results are reported.

- Test plots

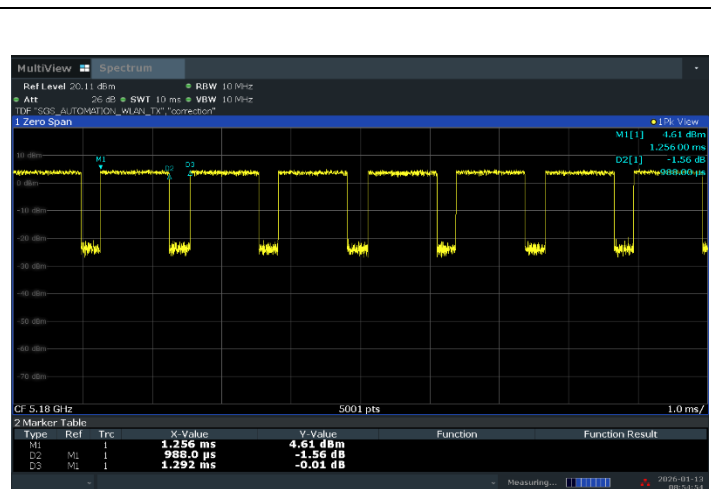
11a



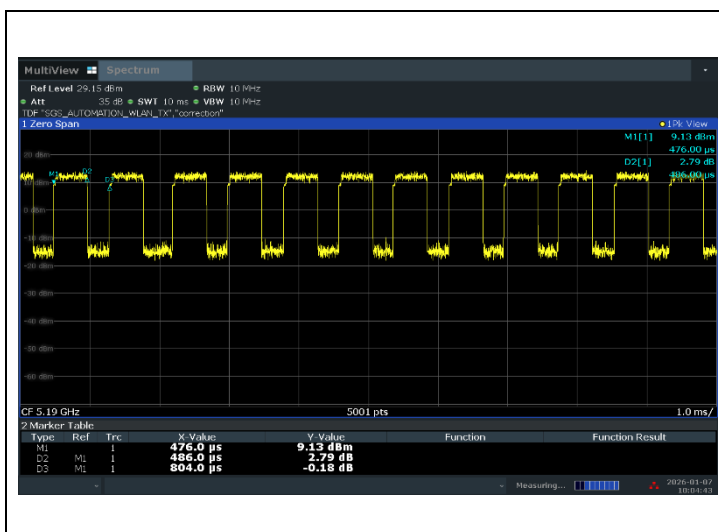
11n_HT20



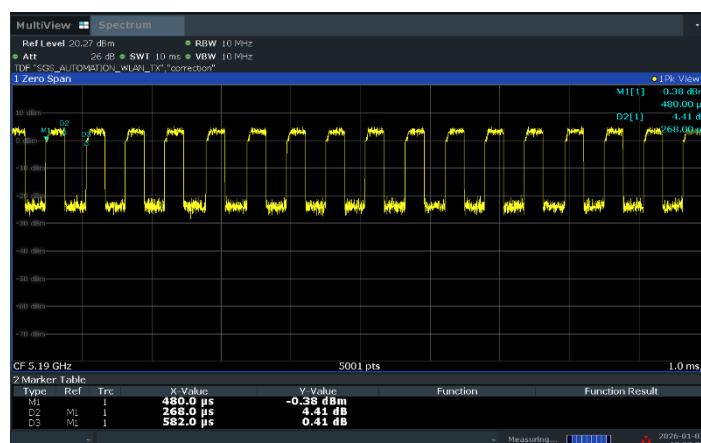
11ac_VHT20



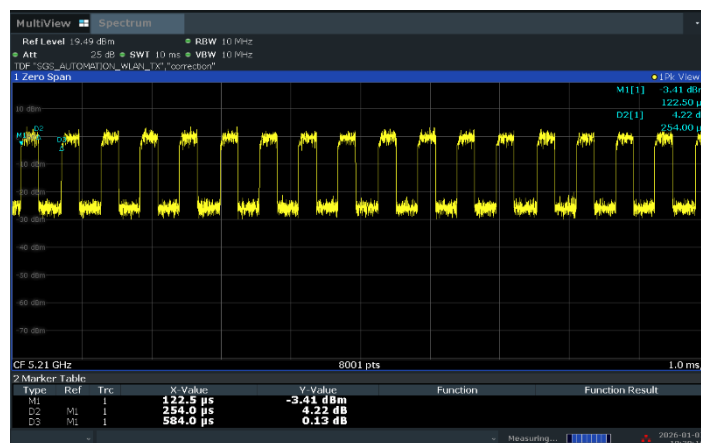
11n_HT40



11ac_VHT40



11ac_VHT80

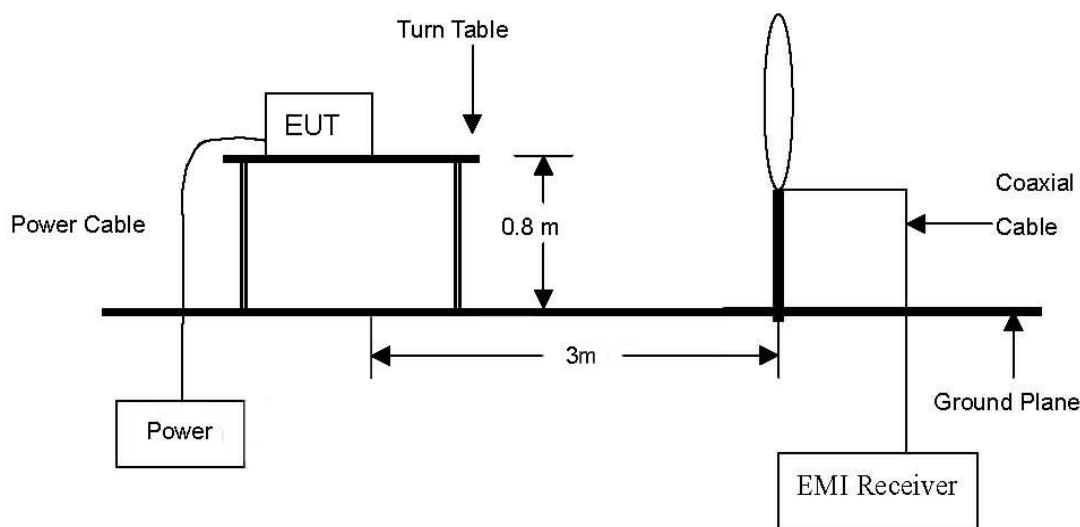


2. Transmitter Radiated Spurious Emissions

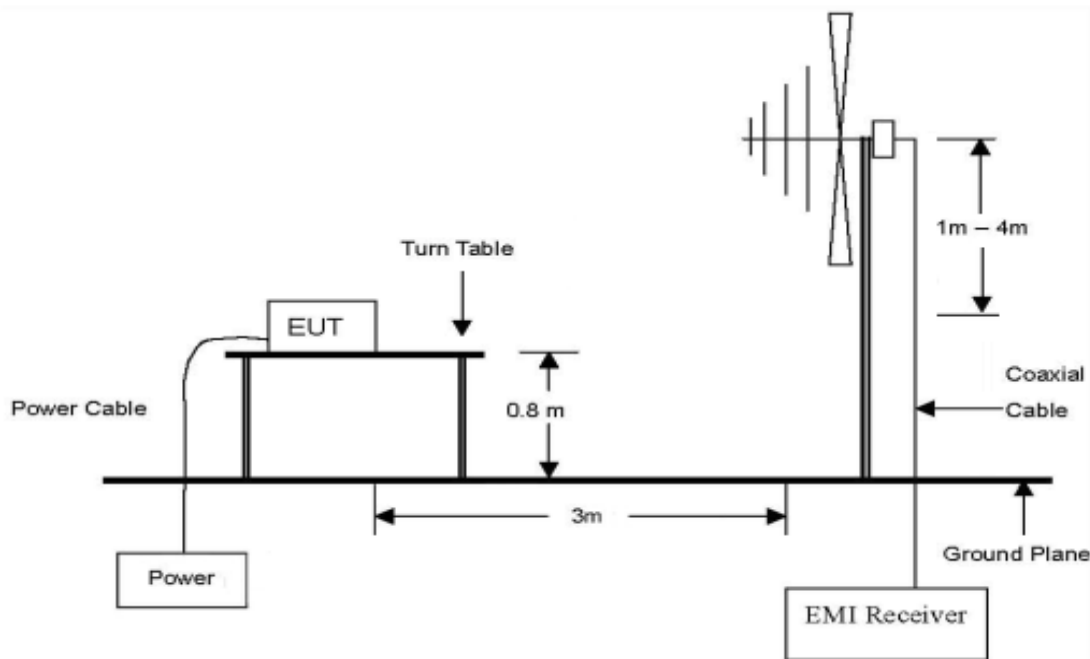
2.1. Test Setup

2.1.1. Transmitter radiated spurious emissions

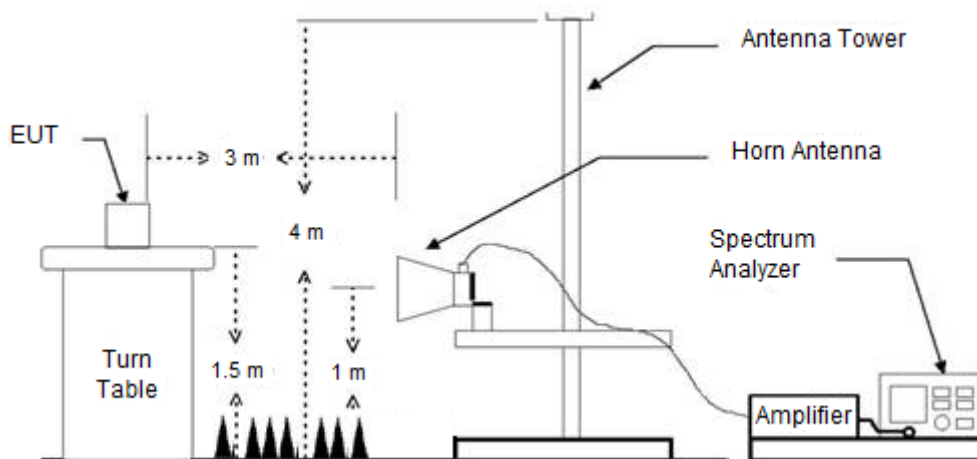
The diagram below shows the test setup that is utilized to make the measurements for emission from 9 kHz to 30 MHz emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 30 MHz to 1 GHz emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission. The spurious emissions were investigated from 1 GHz to the 10th harmonic of the highest fundamental frequency or 40 GHz, whichever is lower.



2.2. Limit

2.2.1. FCC

According to § 15.407(b)

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

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

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

According to § 15.209(a), except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength ($\mu\text{V/m}$)	Measurement Distance (Meters)
0.009-0.490	2 400/F(kHz)	300
0.490-1.705	24 000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§15.231 and 15.241.

2.2.2. IC

According to RSS-247 Issue 4,

7.3.1.3 Frequency band 5 150-5 250 MHz

For transmitters with operating frequencies in the band 5 150-5 250 MHz:

- a. all emissions outside the 5 150-5 350 MHz band shall not exceed -27 dBm/MHz peak e.i.r.p. spectral density;
- b. any unwanted emissions that falls between the upper edge of the 26 dB bandwidth and 5 350 MHz shall be attenuated below the channel power by at least 26 dB, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth.
- c. if the occupied bandwidth also falls within the 5 250-5 350 MHz band, the transmission is considered as intentional and the devices shall comply with all requirements in the band 5 250-5 350 MHz including implementing DFS (see section 7.3.6) and TPC, on the portion of the emission that resides in the 5 250-5 350 MHz band.

7.3.4.4 Frequency band 5 725-5 850 MHz

Equipment operating in the band 5 725-5 850 MHz shall comply with the following peak e.i.r.p. spectral density limits:

- a. 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
- b. 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
- c. 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
- d. -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

2.3. Test Procedures

Radiated spurious emissions from the EUT were measured according to the dictates in section G of KDB 789033 D02 General UNII Test Procedures New Rules v02r01 and ANSI C63.10-2020 (for FCC) and ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Errata to C63.10a-2024 (for ISSED).

2.3.1. Test Procedures for emission below 30 MHz

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site. The table was rotated 360 degrees to determine the position of the highest radiation.
2. Then antenna is a loop antenna is fixed at one meter above the ground to determine the maximum value of the field strength. Both parallel and perpendicular of the antenna are set to make the measurement.
3. For each suspected emission, the EUT was arranged to its worst case and then the table was turned from 0 degrees to 360 degrees to find the maximum reading.
4. The test-receiver system was set to average or quasi peak detect function and Specified Bandwidth with Maximum Hold Mode.

2.3.2. Test Procedures for emission from above 30 MHz

1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter anechoic chamber test site below 1 GHz and 1.5 meter above the ground at a 3 meter anechoic chamber test site above 1 GHz. The table was rotated 360 degrees to determine the position of the highest radiation.
2. During performing radiated emission below 1 GHz, the EUT was set 3 meters away from the interference receiving antenna, which was mounted on the top of a variable-height antenna tower. During performing radiated emission above 1 GHz, the EUT was set 3 meter away from the interference-receiving antenna.
3. The antenna is a bi-log antenna, a horn antenna and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the table was turned from 0 degrees to 360 degrees to find the maximum reading.
5. For measurements below 1 GHz resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.
6. For measurements Above 1 GHz resolution bandwidth is set to 1 MHz, the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

- II.G.4. Unwanted emissions measurements below 1 GHz.

Compliance shall be demonstrated using CISPR quasi-peak detection; however, peak detection is permitted as an alternative to quasi-peak detection.

- II.G.5. Unwanted maximum emissions measurements above 1 GHz.

Peak emission levels are measured by setting the analyzer as follows:

Set to RBW = 1 MHz, VBW ≥ 3 MHz, Detector = Peak, Sweep time = auto, Trace mode = Max hold.

- II.G.6. Average unwanted emissions measurements above 1 GHz.

Set to RBW = 1 MHz, VBW ≥ 3 MHz, Detector = power averaging (rms), Averaging type = power averaging (rms), Sweep time = auto, Perform a trace average of at least 100 traces. If the transmission is continuous, If the transmission is not continuous, the number of traces shall be increased by a factor of 1/x, where x is the duty cycle. For example, with 50 % duty cycle, at least 200 traces shall be averaged.

If tests are performed with the EUT transmitting at a duty cycle less than 98 %, a 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. The correction factor is computed as follows:

- If power averaging (rms) mode was used in II.G.6.c)(iv), the correction factor is $10 \log (1 / x)$, where x is the duty cycle. For example, if the transmit duty cycle was 50 %, then 3 dB must be added to the measured emission levels.

- The radiation test of the EUT was investigated in three orthogonal orientations X, Y, and Z described in the test setup photo. All radiated testing of EUT was performed with worst case axis.

2.4. Test Result

Ambient temperature : (23 ± 1) °C

Relative humidity : 47 %

2.4.1. Radiated Spurious Emission below 1 000 MHz

The frequency spectrum from 9 kHz to 1 000 MHz was investigated.

Ant. 1 + Ant. 2

Radiated Emissions			Ant.	Correction (dB/m)	Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.		Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
32.43	44.95	Quasi Peak	V	-11.08	33.87	40.00	6.13
40.19	38.36	Quasi Peak	V	-8.61	29.75	40.00	10.25
133.84	45.85	Quasi Peak	V	-11.99	33.86	43.50	9.64
194.95	29.77	Quasi Peak	H	-8.14	21.63	43.50	21.87
239.95	42.12	Quasi Peak	H	-6.98	35.14	46.00	10.86
479.97	41.37	Quasi Peak	H	-2.57	38.80	46.00	7.20
Above 500.00	Not detected	-	-	-	-	-	-

Remark;

1. Spurious emissions for all channels and modes were investigated and almost the same below 1 GHz.
2. Test from 30 MHz to 1 000 MHz was performed using the software of ELEKTRA(V5.02) from Rohde & Schwarz GmbH & Co. KG.
3. Reported spurious emissions are in **11n HT20 (Band 3) / Low channel** as worst case among other modes.
4. Radiated spurious emission measurement as below.
(Actual = Reading + Correction)
(Correction = Antenna Factor + AMP Factor + Cable Loss)
5. According to §15.31(o), emission levels are not report much lower than the limits by over 20 dB.

Ant. 1 + Ant. 3

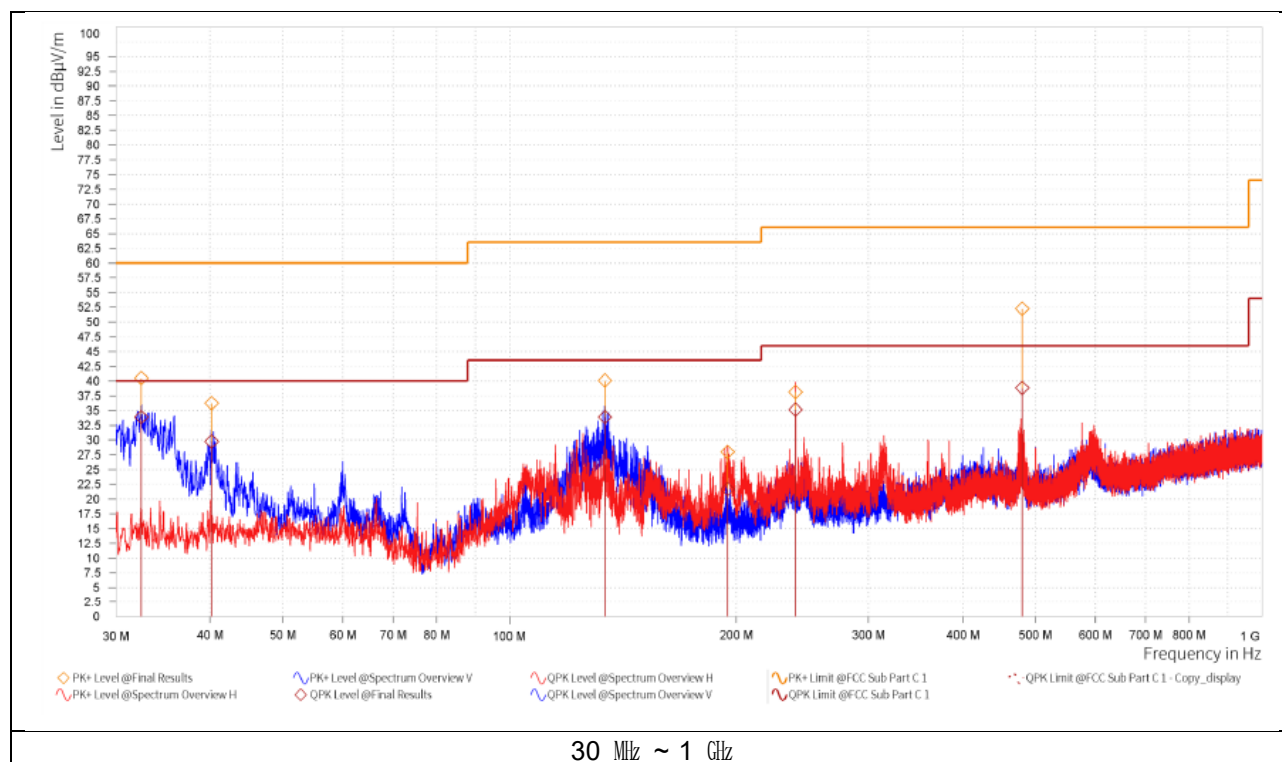
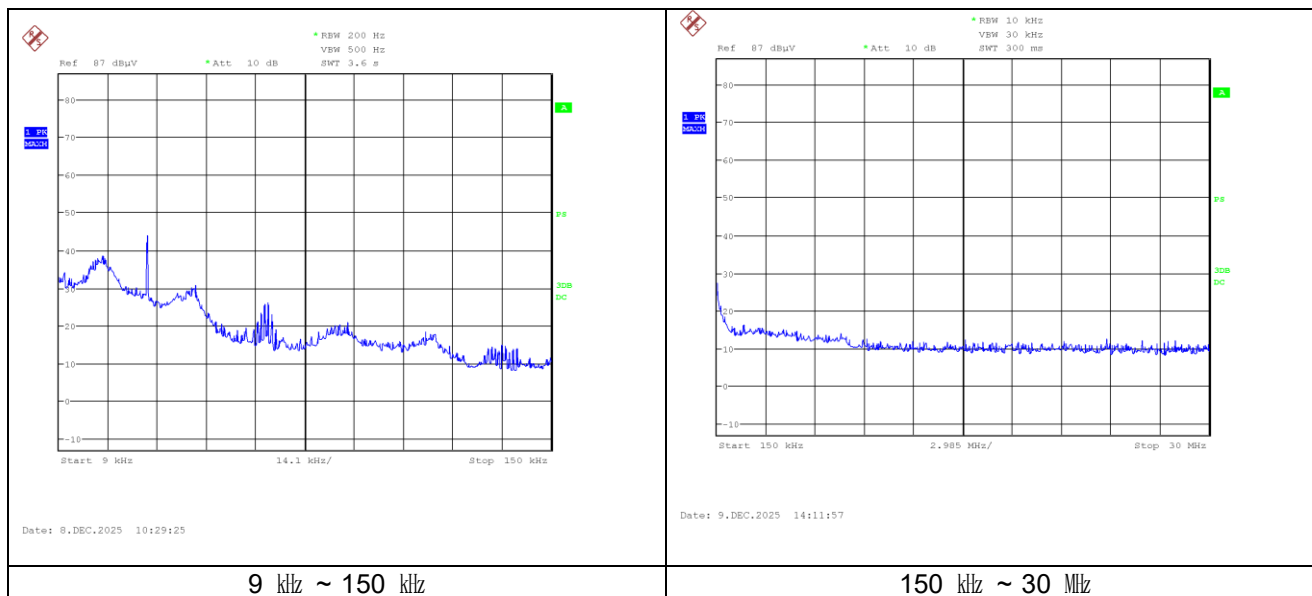
Radiated Emissions			Ant.	Correction (dB/m)	Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.		Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
33.93	45.26	Quasi Peak	V	-10.82	34.44	40.00	5.56
34.96	42.64	Quasi Peak	V	-10.39	32.25	40.00	7.75
125.28	44.04	Quasi Peak	V	-11.43	32.61	43.50	10.89
133.84	45.13	Quasi Peak	V	-11.99	33.14	43.50	10.36
239.95	44.54	Quasi Peak	H	-6.98	37.56	46.00	8.44
479.97	40.47	Quasi Peak	H	-2.57	37.90	46.00	8.10
Above 500.00	Not detected	-	-	-	-	-	-

Remark;

1. Spurious emissions for all channels and modes were investigated and almost the same below 1 GHz.
2. Test from 30 MHz to 1 000 MHz was performed using the software of ELEKTRA(V5.02) from Rohde & Schwarz GmbH & Co. KG.
3. Reported spurious emissions are in **11n HT40 (Band 3) / High channel** as worst case among other modes.
4. Radiated spurious emission measurement as below.
(Actual = Reading + Correction)
(Correction = Antenna Factor + AMP Factor + Cable Loss)
5. According to §15.31(o), emission levels are not report much lower than the limits by over 20 dB.

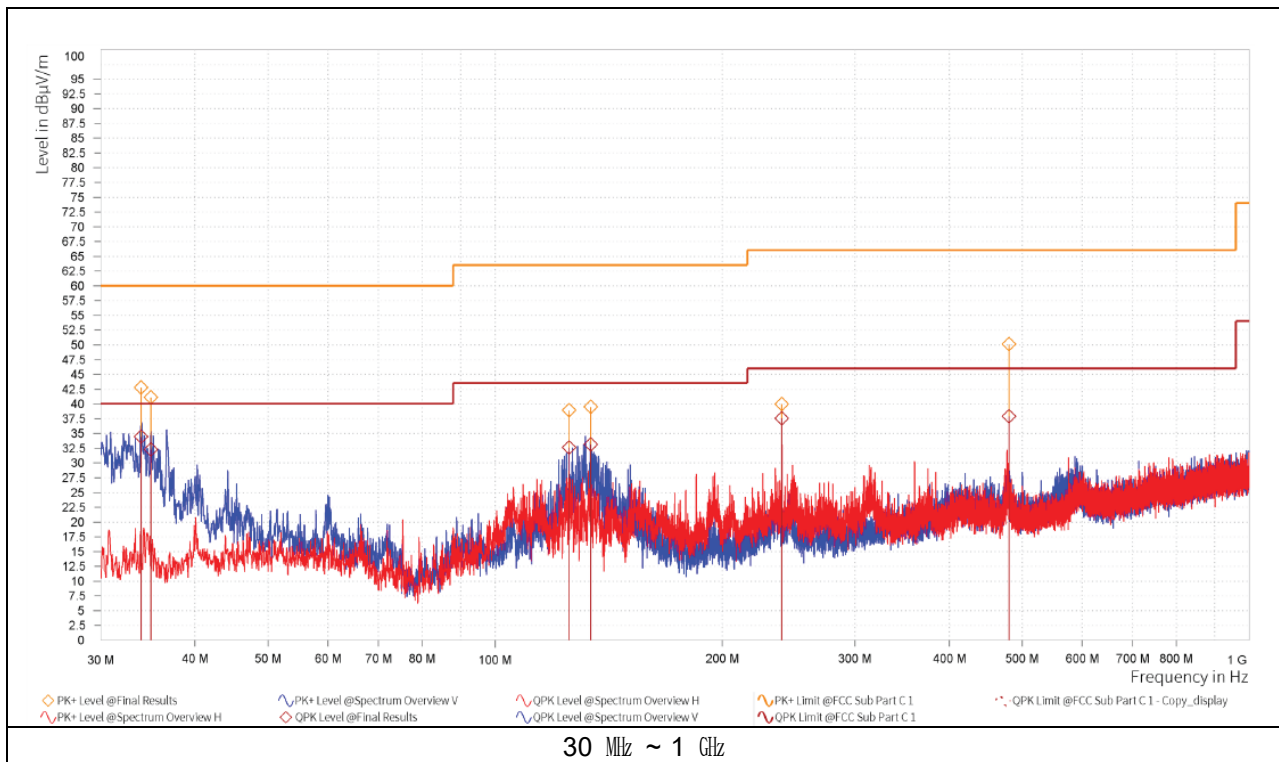
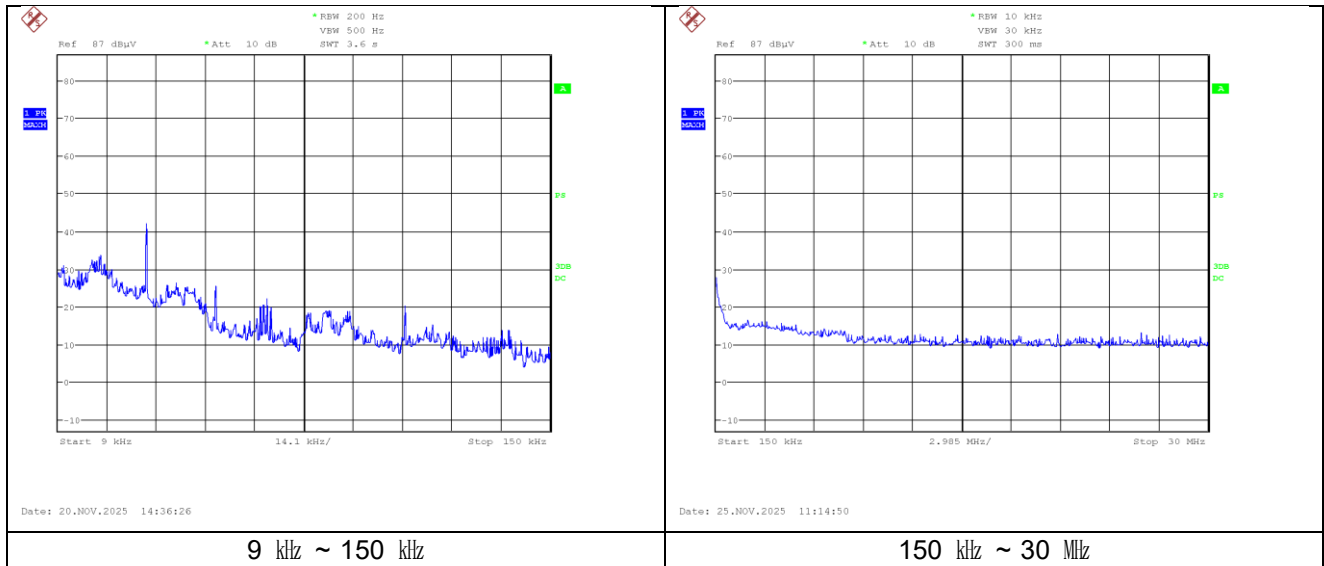
- Test plots

Ant. 1 + Ant. 2



30 MHz ~ 1 GHz

Ant. 1 + Ant. 3



2.4.2. Radiated Spurious Emission above 1 000 MHz

- Ant. 1 + Ant. 2

11a (Band 1)

A. Low Channel -1 (5 180 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
*4 500.00	11.07	Peak	V	32.00	10.90	-	53.97	74.00	20.03
*4 500.00	0.97	Average	V	32.00	10.90	0.13	44.00	54.00	10.00
*4 743.88	11.39	Peak	V	32.48	10.82	-	54.69	74.00	19.31
*4 663.30	1.05	Average	V	32.15	10.59	0.13	43.92	54.00	10.08
*5 150.00	10.39	Peak	V	33.60	12.65	-	56.64	74.00	17.36
*5 150.00	1.26	Average	V	33.60	12.65	0.13	47.64	54.00	6.36

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

B. Low Channel -2 (5 200 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
*4 500.00	13.75	Peak	V	32.00	10.90	-	56.65	74.00	17.35
*4 500.00	2.59	Average	V	32.00	10.90	0.13	45.62	54.00	8.38
*5 106.33	16.02	Peak	V	33.51	11.93	-	61.46	74.00	12.54
*5 148.99	3.63	Average	V	33.60	12.63	0.13	49.99	54.00	4.01
*5 150.00	13.51	Peak	V	33.60	12.65	-	59.76	74.00	14.24
*5 150.00	3.30	Average	V	33.60	12.65	0.13	49.68	54.00	4.32

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

C. Middle Channel (5 220 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

D. High Channel (5 240 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

11a (Band 3)

A. Low Channel (5 745 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
5 615.80	17.15	Peak	V	34.10	12.52	63.77	68.23	4.46
5 689.57	17.41	Peak	V	34.18	13.18	64.77	97.51	32.74
5 716.20	16.85	Peak	V	34.20	13.32	64.37	109.76	45.39
5 724.44	17.02	Peak	V	34.20	13.41	64.63	120.95	56.32

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

B. Middle Channel (5 785 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

C. High Channel (5 805 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
5 853.60	14.40	Peak	V	34.41	13.46	62.27	114.02	51.75
5 867.80	15.68	Peak	V	34.44	13.21	63.33	107.24	43.91
5 921.29	16.21	Peak	V	34.50	12.91	63.62	70.97	7.35
5 959.51	16.35	Peak	V	34.52	12.29	63.16	68.34	5.18

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

11ac_VHT20 (Band 1)

A. Low Channel -1 (5 180 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 500.00	10.19	Peak	V	32.00	10.90	-	53.09	74.00	20.91
*4 500.00	0.74	Average	V	32.00	10.90	1.17	44.81	54.00	9.19
*4 660.14	12.00	Peak	V	32.14	10.58	-	54.72	74.00	19.28
*5 085.95	0.88	Average	V	33.50	12.15	1.17	47.70	54.00	6.30
*5 150.00	9.22	Peak	V	33.60	12.65	-	55.47	74.00	18.53
*5 150.00	0.92	Average	V	33.60	12.65	1.17	48.34	54.00	5.66

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

B. Low Channel -2 (5 200 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 500.00	13.47	Peak	V	32.00	10.90	-	56.37	74.00	17.63
*4 500.00	2.55	Average	V	32.00	10.90	1.17	46.62	54.00	7.38
*5 143.62	14.95	Peak	V	33.59	12.55	-	61.09	74.00	12.91
*5 148.99	3.37	Average	V	33.60	12.63	1.17	50.77	54.00	3.23
*5 150.00	15.10	Peak	V	33.60	12.65	-	61.35	74.00	12.65
*5 150.00	3.56	Average	V	33.60	12.65	1.17	50.98	54.00	3.02

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

C. Middle Channel (5 220 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

D. High Channel (5 240 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

11n_HT20 (Band 3)

A. Low Channel (5 745 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
5 623.18	16.00	Peak	V	34.10	12.43	62.53	68.23	5.70
5 689.98	16.33	Peak	V	34.18	13.18	63.69	97.81	34.12
5 716.20	16.77	Peak	V	34.20	13.32	64.29	109.76	45.47
5 724.44	16.87	Peak	V	34.20	13.41	64.48	120.95	56.47

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

B. Middle Channel (5 785 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

B. High Channel (5 805 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
5 851.66	14.82	Peak	V	34.40	13.49	62.71	118.44	55.73
5 863.19	15.18	Peak	V	34.43	13.29	62.90	108.53	45.63
5 901.61	15.93	Peak	V	34.50	12.99	63.42	85.54	22.12
5 951.74	16.38	Peak	V	34.50	12.39	63.27	68.25	4.98

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

11ac_VHT40 (Band 1)

A. Low Channel (5 190 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
*4 500.00	10.65	Peak	V	32.00	10.90	-	53.55	74.00	20.45
*4 500.00	0.89	Average	V	32.00	10.90	3.37	47.16	54.00	6.84
*5 148.36	9.99	Peak	V	33.60	12.62	-	56.21	74.00	17.79
*5 148.36	1.03	Average	V	33.60	12.62	3.37	50.62	54.00	3.38
*5 150.00	9.79	Peak	V	33.60	12.65	-	56.04	74.00	17.96
*5 150.00	0.81	Average	V	33.60	12.65	3.37	50.43	54.00	3.57

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

B. High Channel (5 230 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
*4 500.00	13.84	Peak	V	32.00	10.90	-	56.74	74.00	17.26
*4 500.00	0.73	Average	V	32.00	10.90	3.37	47.00	54.00	7.00
*5 130.19	15.20	Peak	V	33.56	12.35	-	61.11	74.00	12.89
*5 148.99	1.27	Average	V	33.60	12.63	3.37	50.87	54.00	3.13
*5 150.00	14.37	Peak	V	33.60	12.65	-	60.62	74.00	13.38
*5 150.00	0.97	Average	V	33.60	12.65	3.37	50.59	54.00	3.41

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

11n_HT40 (Band 3)

A. Low Channel (5 755 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
5 609.24	17.35	Peak	V	34.10	12.60	64.05	68.23	4.18
5 677.27	16.98	Peak	V	34.15	13.24	64.37	88.41	24.04
5 704.31	17.28	Peak	V	34.20	13.18	64.66	106.43	41.77
5 722.18	16.63	Peak	V	34.20	13.39	64.22	115.80	51.58

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

B. High Channel (5 795 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
5 851.90	15.02	Peak	V	34.40	13.49	62.91	117.90	54.99
5 866.34	14.79	Peak	V	34.43	13.23	62.45	107.65	45.20
5 904.53	15.37	Peak	V	34.50	12.98	62.85	83.38	20.53
5 946.15	15.40	Peak	V	34.50	12.48	62.38	68.23	5.85

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

11ac_VHT80 (Band 1)

A. Middle Channel (5 210 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 500.00	10.44	Peak	V	32.00	10.90	-	53.34	74.00	20.66
*4 500.00	0.94	Average	V	32.00	10.90	3.62	47.46	54.00	6.54
*5 118.00	13.47	Peak	V	33.54	12.15	-	59.16	74.00	14.84
*5 149.20	0.66	Average	V	33.60	12.64	3.62	50.52	54.00	3.48
*5 150.00	11.44	Peak	V	33.60	12.65	-	57.69	74.00	16.31
*5 150.00	0.73	Average	V	33.60	12.65	3.62	50.60	54.00	3.40

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

11ac_VHT80 (Band 3)

A. Middle Channel (5 775 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5 616.82	16.44	Peak	V	34.10	12.51	63.05	68.23	5.18
5 674.40	16.52	Peak	V	34.15	13.24	63.91	86.28	22.37
5 708.41	17.81	Peak	V	34.20	13.23	65.24	107.58	42.34
5 723.62	15.51	Peak	V	34.20	13.40	63.11	119.08	55.97
5 852.38	16.51	Peak	V	34.40	13.48	64.39	116.80	52.41
5 867.56	16.39	Peak	V	34.44	13.21	64.04	107.31	43.27
5 910.60	15.80	Peak	V	34.50	12.96	63.26	78.88	15.62
5 941.78	17.28	Peak	V	34.50	12.57	64.35	68.23	3.88

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

Remark;

1. "*" means the restricted band.
2. Radiated emissions measured in frequency above 1 000 MHz were made with an instrument using Peak / average detector mode if frequency was in restricted band. Otherwise the frequency was out of restricted band, only peak detector should be used.
3. Actual = Reading + AF + CL + (DF) or Reading + AF + AMP + CL + (DF).
4. If frequency was out of restricted band, the calculation method for peak limit is same as below.
 $68.23 \text{ dB}\mu\text{V/m} = \text{EIRP} - 20 \log(d) + 104.77 = -27 - 20 \log(3) + 104.77$
5. In case of the emissions within $\pm 75 \text{ MHz}$ from band edge of band 3, limit should be adjusted to emission mask of 15.407(4)(i).
6. According to § 15.31(o), emission levels are not reported much lower than the limits by over 20 dB.
7. The maximized peak measured value complies with the average limit, to perform an average measurement is unnecessary.

- Ant. 1 + Ant. 3

11a (Band 1)

A. Low Channel -1 (5 180 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 500.00	10.49	Peak	V	32.00	10.90	-	53.39	74.00	20.61
*4 500.00	0.78	Average	V	32.00	10.90	0.13	43.81	54.00	10.19
*5 085.95	12.88	Peak	V	33.50	12.15	-	58.53	74.00	15.47
*5 115.18	0.77	Average	V	33.53	12.09	0.13	46.52	54.00	7.48
*5 150.00	11.06	Peak	V	33.60	12.65	-	57.31	74.00	16.69
*5 150.00	1.14	Average	V	33.60	12.65	0.13	47.52	54.00	6.48

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

B. Low Channel -2 (5 200 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 500.00	10.75	Peak	V	32.00	10.90	-	53.65	74.00	20.35
*4 500.00	0.81	Average	V	32.00	10.90	0.13	43.84	54.00	10.16
*5 138.88	12.43	Peak	V	33.58	12.48	-	58.49	74.00	15.51
*5 119.13	1.14	Average	V	33.54	12.17	0.13	46.98	54.00	7.02
*5 150.00	11.49	Peak	V	33.60	12.65	-	57.74	74.00	16.26
*5 150.00	1.22	Average	V	33.60	12.65	0.13	47.60	54.00	6.40

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

C. Middle Channel (5 220 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

D. High Channel (5 240 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

11a (Band 3)

A. Low Channel (5 745 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
5 644.70	16.29	Peak	V	34.10	12.67	63.06	68.23	5.17
5 682.39	16.50	Peak	V	34.16	13.21	63.87	92.20	28.33
5 705.74	16.43	Peak	V	34.20	13.20	63.83	106.83	43.00
5 724.44	15.92	Peak	V	34.20	13.41	63.53	120.95	57.42

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

B. Middle Channel (5 785 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

C. High Channel (5 805 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
5 852.63	14.58	Peak	V	34.41	13.48	62.47	116.23	53.76
5 868.53	15.04	Peak	V	34.44	13.19	62.67	107.04	44.37
5 884.84	15.40	Peak	V	34.47	13.05	62.92	97.95	35.03
5 963.89	16.38	Peak	V	34.53	12.24	63.15	68.39	5.24

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

11ac_VHT20 (Band 1)

A. Low Channel -1 (5 180 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 500.00	10.24	Peak	V	32.00	10.90	-	53.14	74.00	20.86
*4 500.00	0.78	Average	V	32.00	10.90	1.17	44.85	54.00	9.15
*5 008.53	12.80	Peak	V	33.50	12.20	-	58.50	74.00	15.50
*4 628.54	1.07	Average	V	32.01	10.37	1.17	44.62	54.00	9.38
*5 150.00	10.05	Peak	V	33.60	12.65	-	56.30	74.00	17.70
*5 150.00	0.85	Average	V	33.60	12.65	1.17	48.27	54.00	5.73

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

B. Low Channel -2 (5 200 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 500.00	9.67	Peak	V	32.00	10.90	-	52.57	74.00	21.43
*4 500.00	0.66	Average	V	32.00	10.90	1.17	44.73	54.00	9.27
*4 853.69	11.94	Peak	V	33.02	11.29	-	56.25	74.00	17.75
*5 148.36	1.31	Average	V	33.60	12.62	1.17	48.70	54.00	5.30
*5 150.00	9.79	Peak	V	33.60	12.65	-	56.04	74.00	17.96
*5 150.00	1.15	Average	V	33.60	12.65	1.17	48.57	54.00	5.43

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

C. Middle Channel (5 220 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

D. High Channel (5 240 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

11n_HT20 (Band 3)

C. Low Channel (5 745 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
5 628.92	17.02	Peak	V	34.10	12.46	63.58	68.23	4.65
5 670.71	16.42	Peak	V	34.14	13.16	63.72	83.55	19.83
5 711.07	15.81	Peak	V	34.20	13.26	63.27	108.33	45.06
5 722.80	15.23	Peak	V	34.20	13.39	62.82	117.21	54.39

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

B. Middle Channel (5 785 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

D. High Channel (5 805 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
5 852.28	15.09	Peak	V	34.40	13.48	62.97	117.03	54.06
5 855.00	15.65	Peak	V	34.41	13.43	63.49	110.83	47.34
5 883.27	14.66	Peak	V	34.47	13.05	62.18	99.11	36.93
5 948.04	17.48	Peak	V	34.50	12.45	64.43	68.23	3.80

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

11ac_VHT40 (Band 1)

A. Low Channel (5 190 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 500.00	11.25	Peak	V	32.00	10.90	-	54.15	74.00	19.85
*4 500.00	0.82	Average	V	32.00	10.90	3.37	47.09	54.00	6.91
*4 578.77	12.18	Peak	V	31.90	10.41	-	54.49	74.00	19.51
*4 628.54	1.12	Average	V	32.01	10.37	3.37	46.87	54.00	7.13
*5 150.00	10.45	Peak	V	33.60	12.65	-	56.70	74.00	17.30
*5 150.00	1.10	Average	V	33.60	12.65	3.37	50.72	54.00	3.28

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

B. High Channel (5 230 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 500.00	9.04	Peak	V	32.00	10.90	-	51.94	74.00	22.06
*4 500.00	1.02	Average	V	32.00	10.90	3.37	47.29	54.00	6.71
*5 104.91	11.43	Peak	V	33.51	11.90	-	56.84	74.00	17.16
*5 145.20	0.91	Average	V	33.59	12.58	3.37	50.45	54.00	3.55
*5 150.00	10.07	Peak	V	33.60	12.65	-	56.32	74.00	17.68
*5 150.00	1.19	Average	V	33.60	12.65	3.37	50.81	54.00	3.19

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

11n_HT40 (Band 3)

A. Low Channel (5 755 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
5 627.28	16.44	Peak	V	34.10	12.44	62.98	68.23	5.25
5 660.05	15.83	Peak	V	34.12	12.94	62.89	75.66	12.77
5 720.00	16.26	Peak	V	34.20	13.36	63.82	110.83	47.01
5 721.77	15.01	Peak	V	34.20	13.38	62.59	114.86	52.27

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

B. High Channel (5 795 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
5 851.90	14.66	Peak	V	34.40	13.49	62.55	117.90	55.35
5 867.32	15.07	Peak	V	34.43	13.22	62.72	107.38	44.66
5 905.01	15.80	Peak	V	34.50	12.98	63.28	83.02	19.74
5 968.99	17.14	Peak	V	34.54	12.18	63.86	68.45	4.59

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

11ac_VHT80 (Band 1)

A. Middle Channel (5 210 MHz)

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
*4 500.00	10.98	Peak	V	32.00	10.90	-	53.88	74.00	20.12
*4 500.00	0.78	Average	V	32.00	10.90	3.62	47.30	54.00	6.70
*4 996.40	12.30	Peak	V	33.49	12.04	-	57.83	74.00	16.17
*5 149.20	0.70	Average	V	33.60	12.64	3.62	50.56	54.00	3.44
*5 150.00	10.82	Peak	V	33.60	12.65	-	57.07	74.00	16.93
*5 150.00	0.81	Average	V	33.60	12.65	3.62	50.68	54.00	3.32

Radiated Emissions			Ant.	Correction Factors			Total	Limit	
Frequency (MHz)	Reading (dB μ V)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	DF (dB)	Actual (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-	-

11ac_VHT80 (Band 3)

A. Middle Channel (5 775 MHz)

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	CL (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
5 642.04	17.04	Peak	V	34.10	12.64	63.78	68.23	4.45
5 664.35	16.49	Peak	V	34.13	13.03	63.65	78.85	15.20
5 700.00	15.85	Peak	V	34.20	13.13	63.18	105.23	42.05
5 722.39	15.30	Peak	V	34.20	13.39	62.89	116.28	53.39
5 851.66	16.00	Peak	V	34.40	13.49	63.89	118.44	54.55
5 862.94	16.22	Peak	V	34.43	13.29	63.94	108.60	44.66
5 903.07	16.42	Peak	V	34.50	12.99	63.91	84.46	20.55
5 928.90	16.00	Peak	V	34.50	12.82	63.32	68.23	4.91

Radiated Emissions			Ant.	Correction Factors		Total	Limit	
Frequency (MHz)	Reading (dBμV)	Detect Mode	Pol.	AF (dB/m)	AMP+CL (dB)	Actual (dBμV/m)	Limit (dBμV/m)	Margin (dB)
Above 1 000.00	Not detected	-	-	-	-	-	-	-

Remark;

1. “*” means the restricted band.
2. Radiated emissions measured in frequency above 1 000 MHz were made with an instrument using Peak / average detector mode if frequency was in restricted band. Otherwise the frequency was out of restricted band, only peak detector should be used.
3. Actual = Reading + AF + CL + (DF) or Reading + AF + AMP + CL + (DF).
4. If frequency was out of restricted band, the calculation method for peak limit is same as below.
68.23 dBμV/m = EIRP - 20 log (d) + 104.77 = -27 - 20 log (3) + 104.77
5. In case of the emissions within ±75 MHz from band edge of band 3, limit should be adjusted to emission mask of 15.407(4)(i).
6. According to § 15.31(o), emission levels are not reported much lower than the limits by over 20 dB.
7. The maximized peak measured value complies with the average limit, to perform an average measurement is unnecessary.

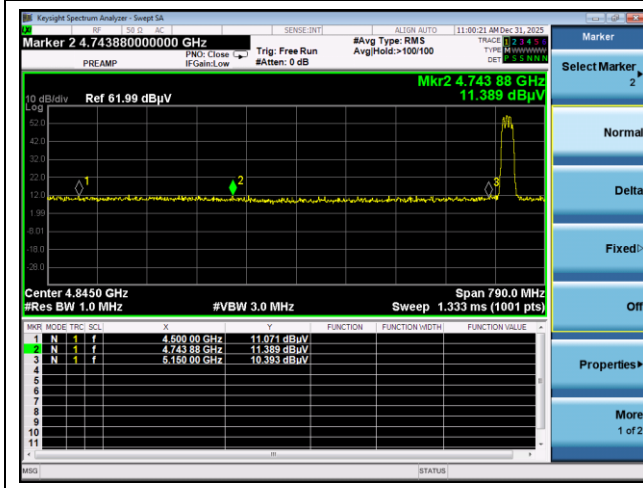
Test plots

- Ant. 1 + Ant. 2

11a

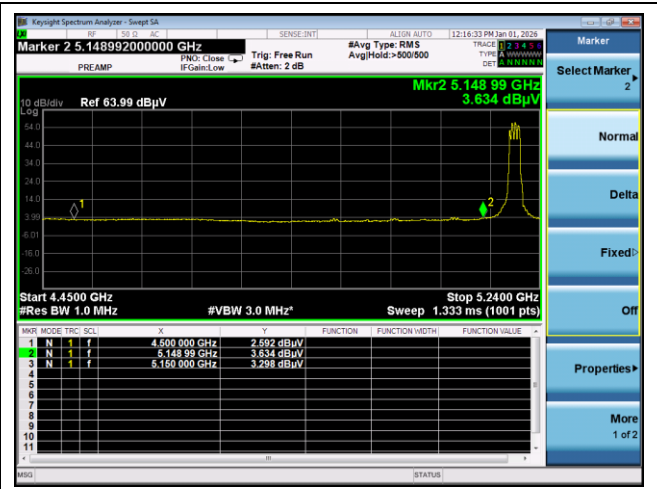
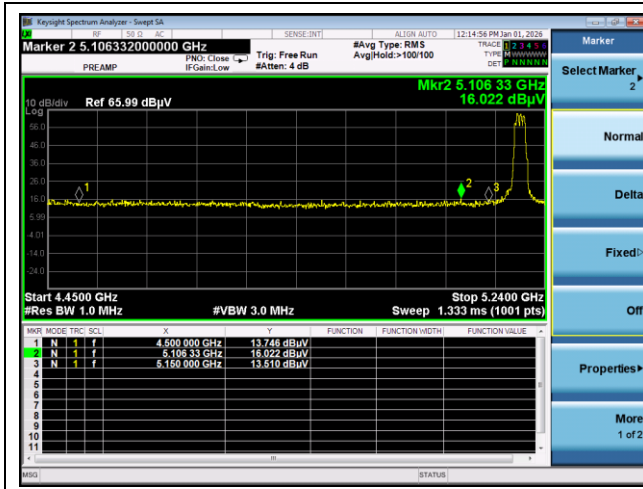
Low channel Band edge (Peak) - Band 1

Low channel Band edge (Average) - Band 1

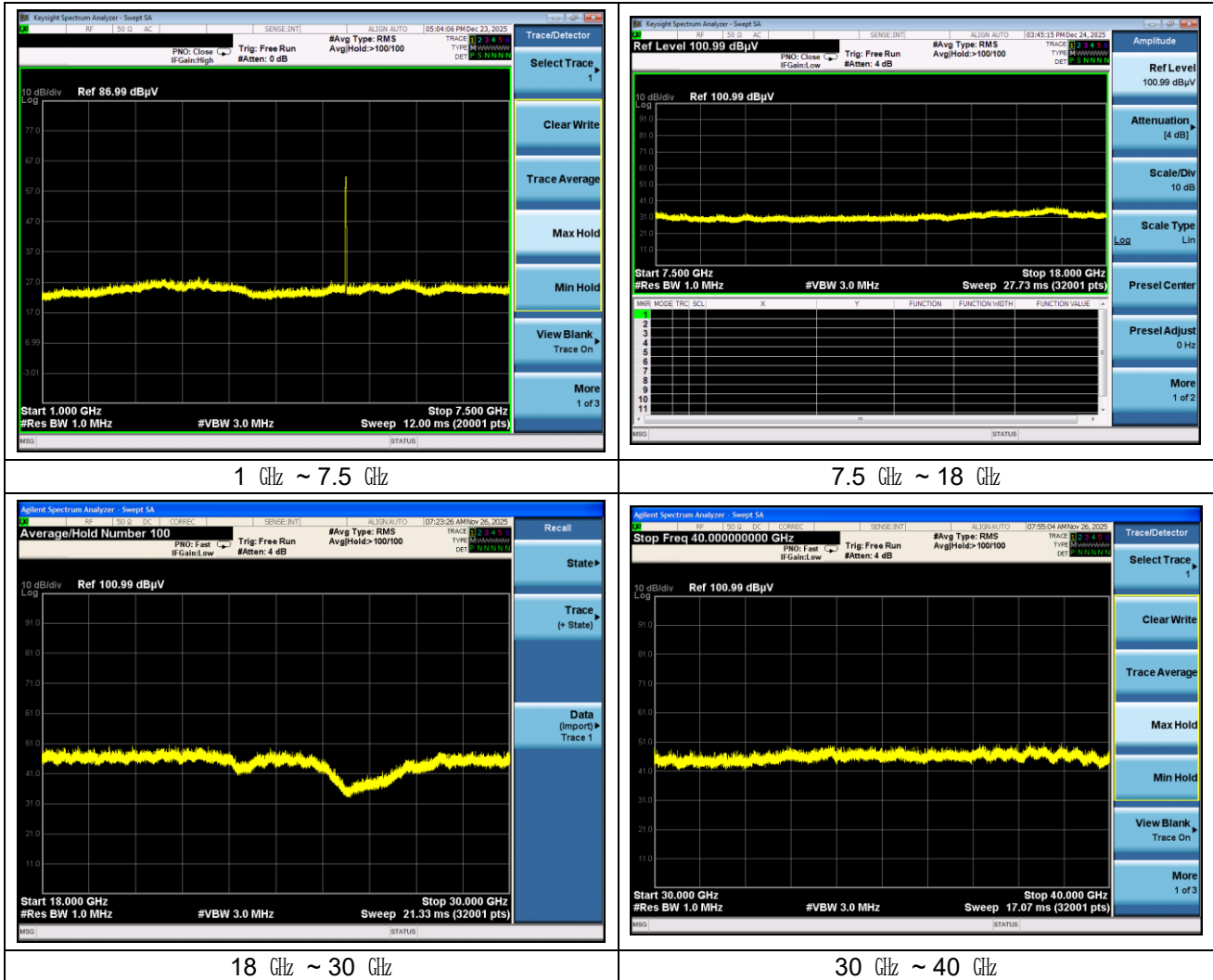


Low channel -2 Band edge (Peak) - Band 1

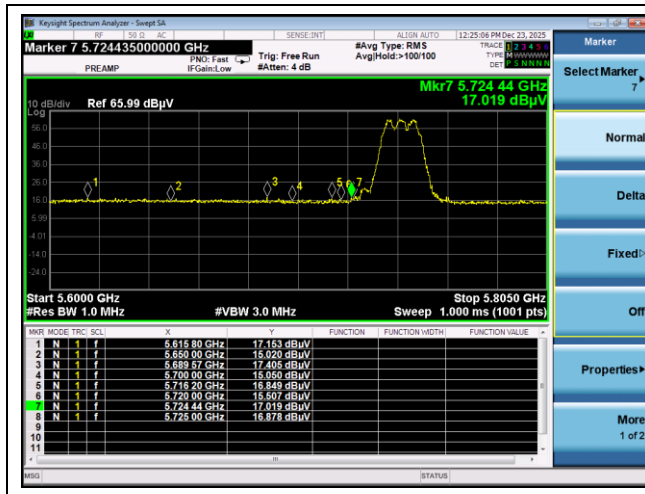
Low channel -2 Band edge (Average) - Band 1



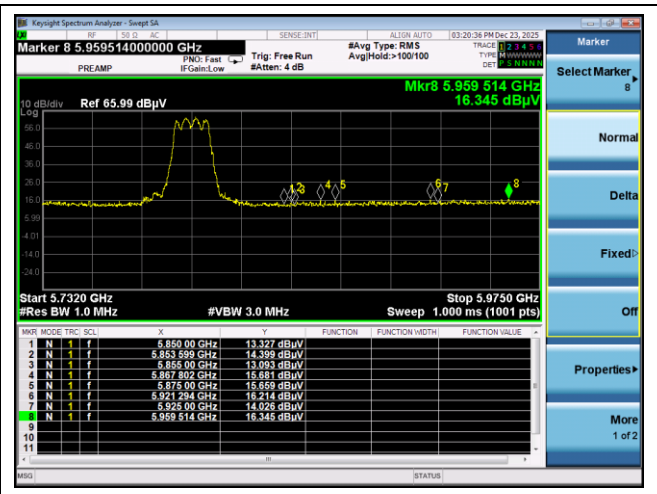
Radiated Spurious Emissions



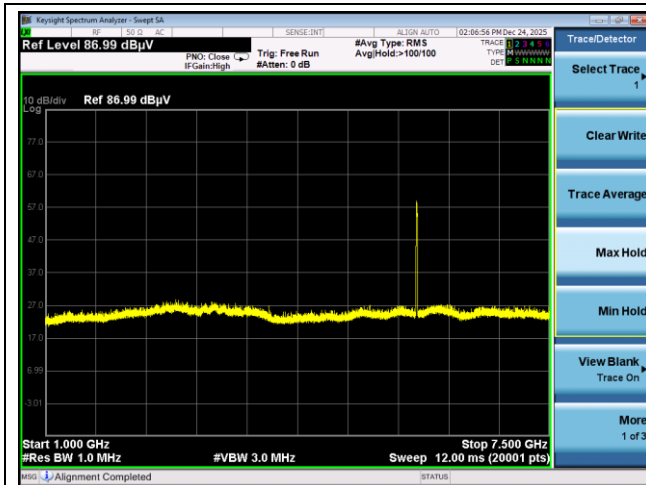
Low channel Band edge (Peak) - Band 3



High channel Band edge (Peak) - Band 3



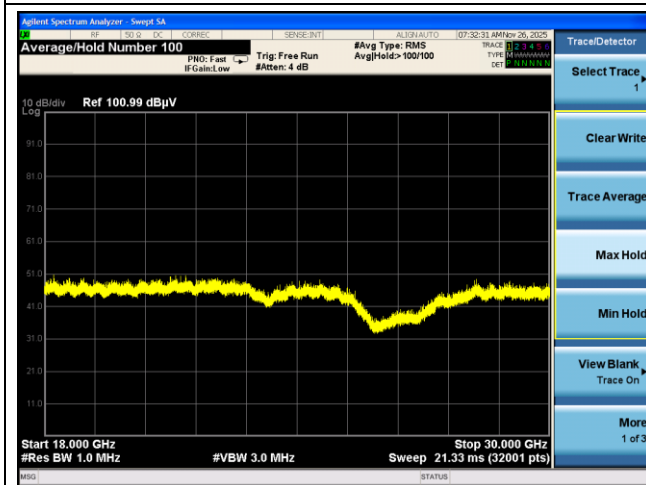
Radiated Spurious Emissions



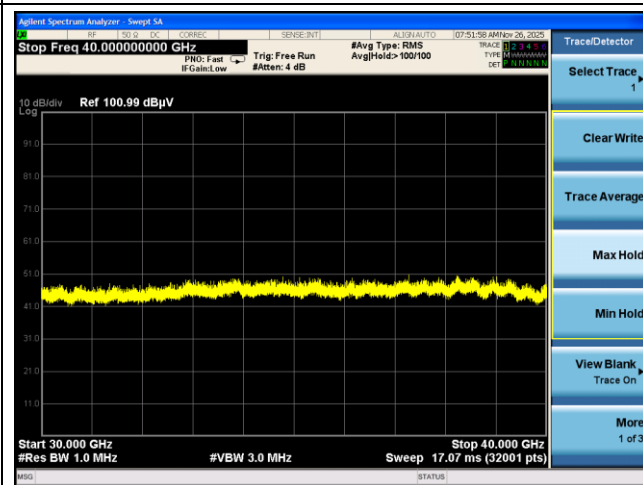
1 GHz ~ 7.5 GHz



7.5 GHz ~ 18 GHz



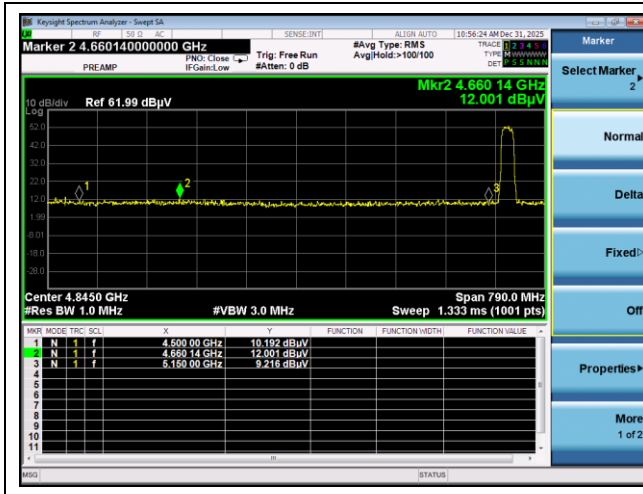
18 GHz ~ 30 GHz



30 GHz ~ 40 GHz

11ac_VHT20

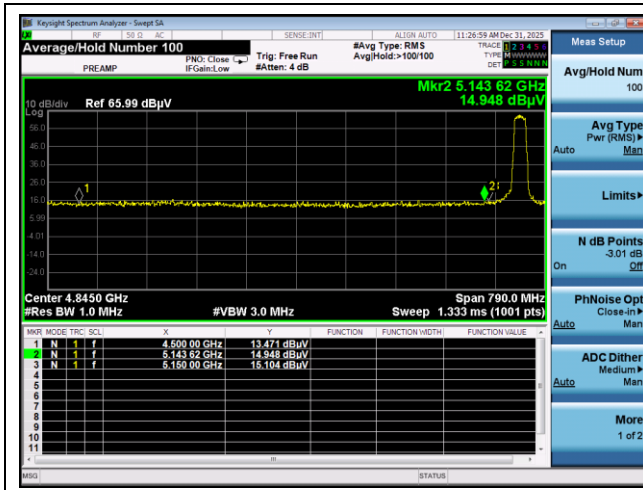
Low channel Band edge (Peak) - Band 1



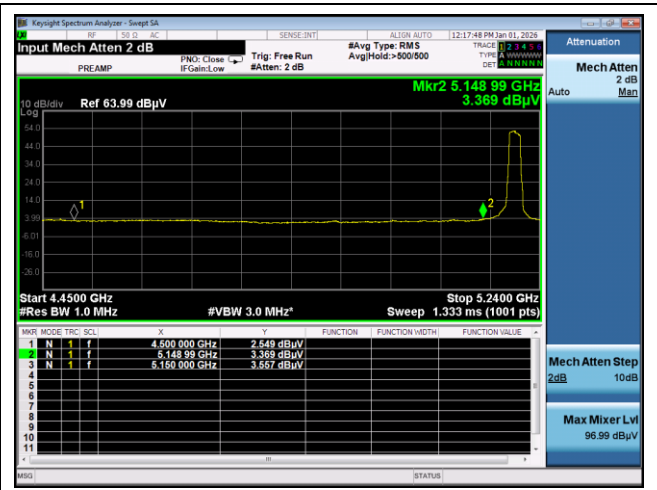
Low channel Band edge (Average) - Band 1



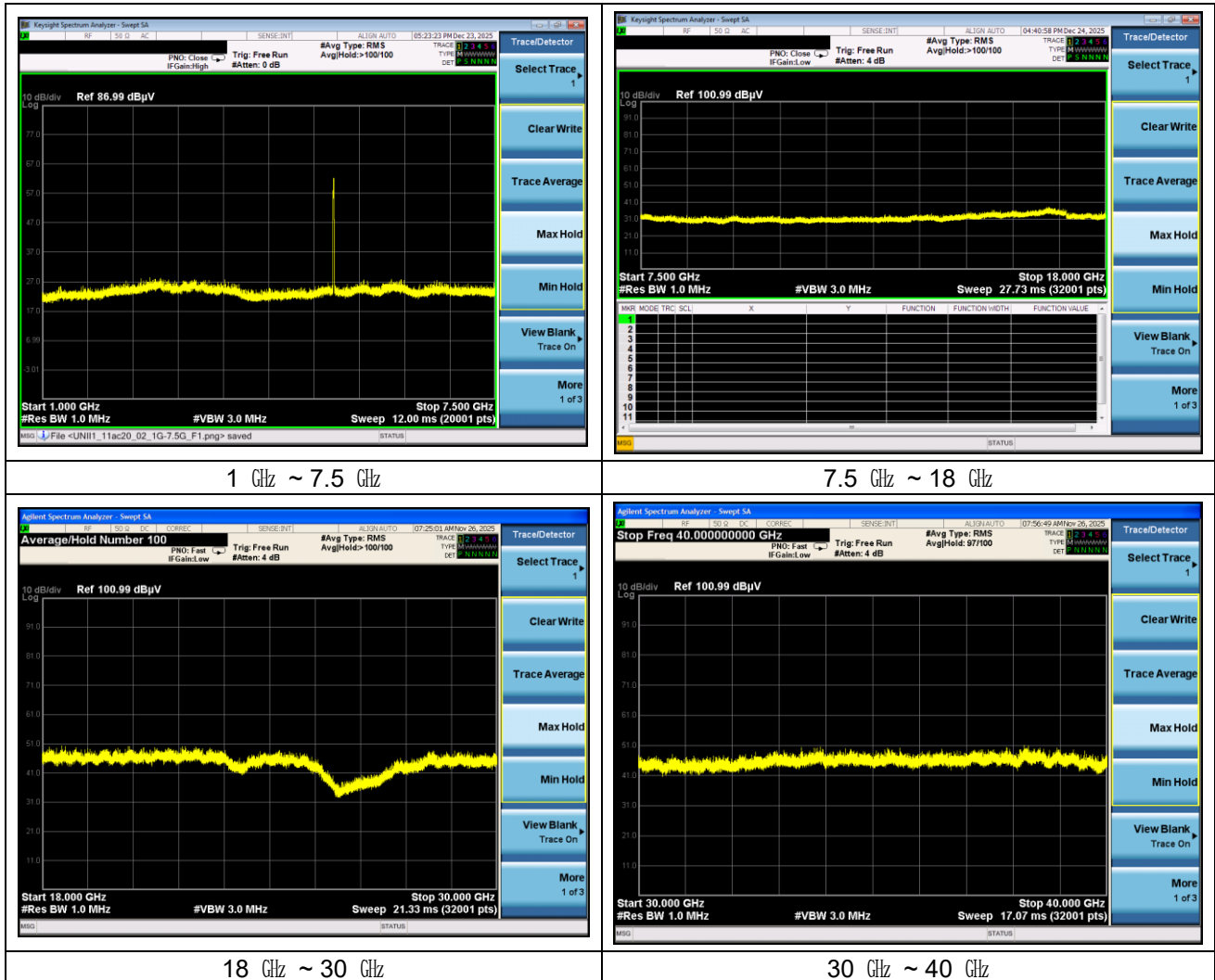
Low channel -2 Band edge (Peak) - Band 1



Low channel -2 Band edge (Average) - Band 1



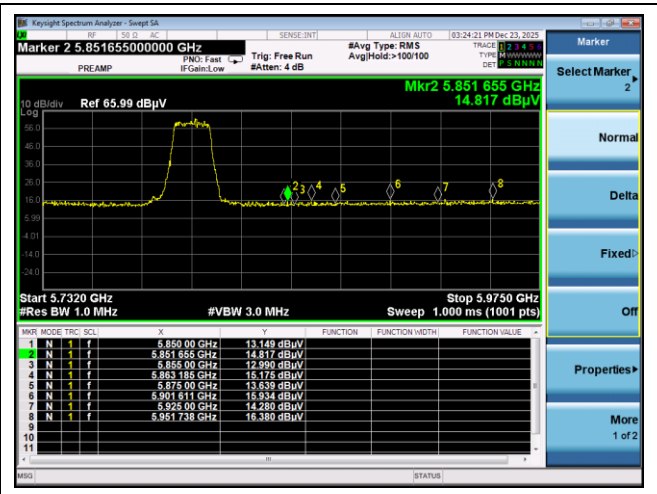
Radiated Spurious Emissions



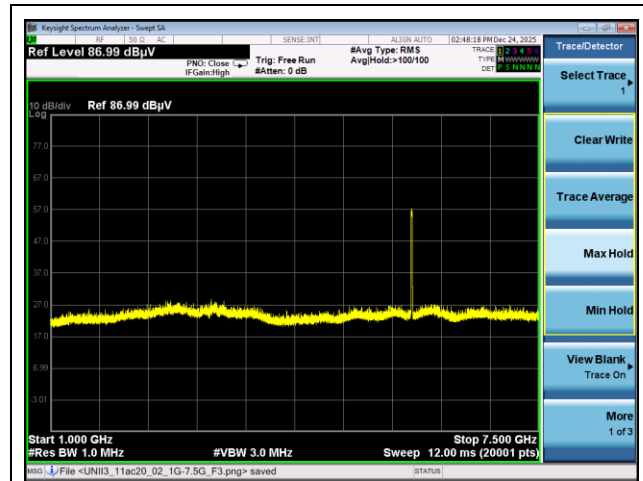
11n_HT20

Low channel Band edge (Peak) - Band 3

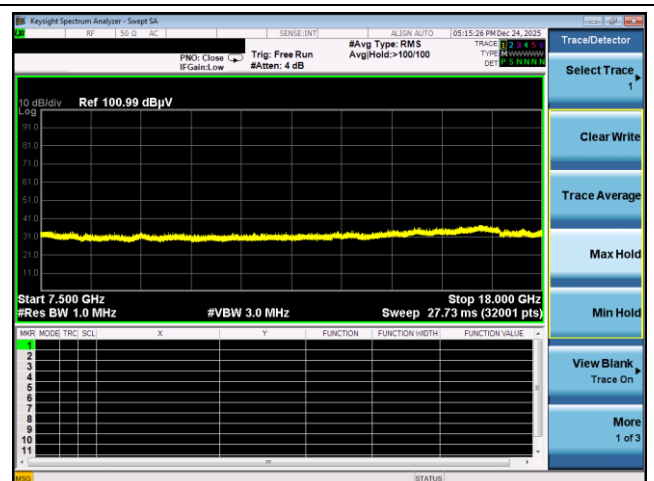
High channel Band edge (Peak) - Band 3



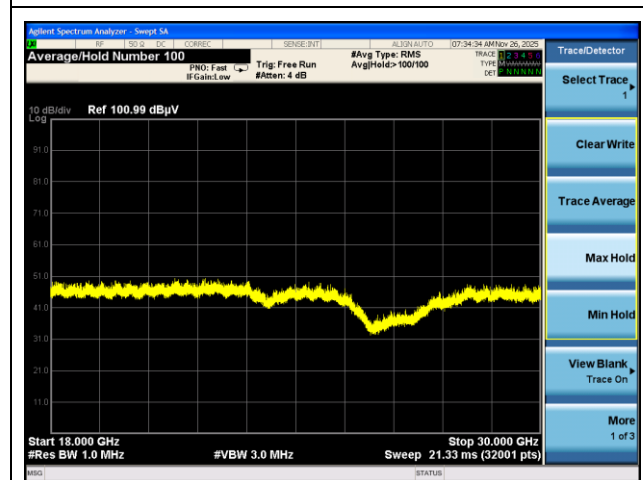
Radiated Spurious Emissions



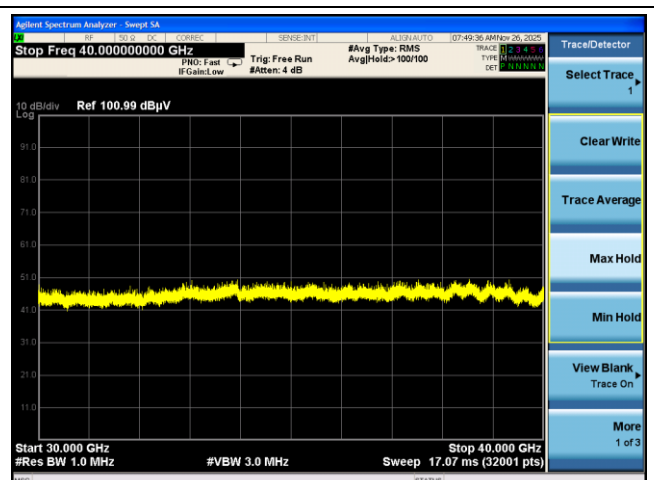
1 GHz ~ 7.5 GHz



7.5 GHz ~ 18 GHz



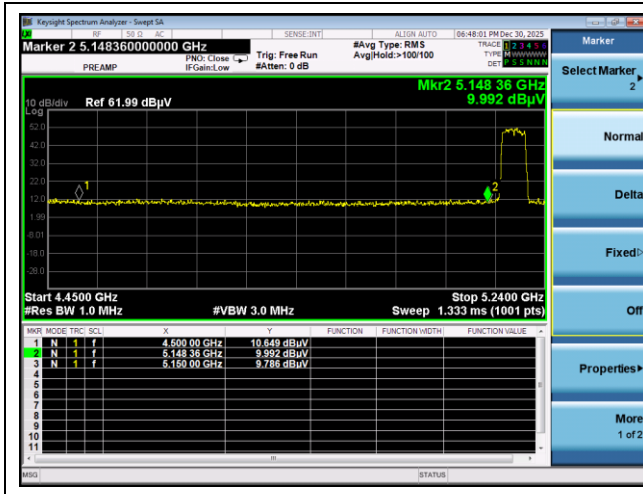
18 GHz ~ 30 GHz



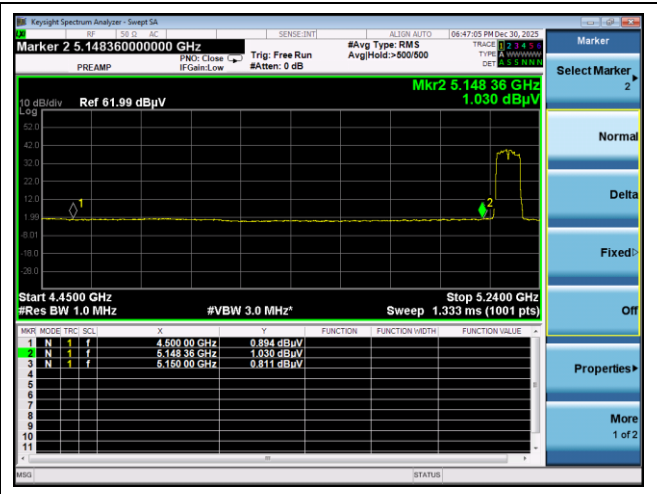
30 GHz ~ 40 GHz

11ac_VHT40

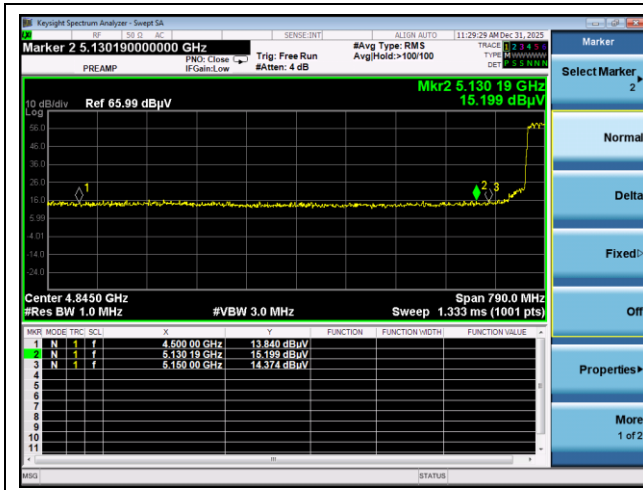
Low channel Band edge (Peak) - Band 1



Low channel Band edge (Average) - Band 1



High channel Band edge (Peak) - Band 1



High channel Band edge (Average) - Band 1

