

TEST REPORT

**CTK Co., Ltd.**

(Ho-dong), 113, Yejik-ro, Cheoin-gu, Yongin-si,
Gyeonggi-do, Korea
Tel: +82-31-339-9970
Fax: +82-31-624-9501

REPORT No.:
CTK-2026-00062
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1. Applicant

- Name : Samsung Electronics Co Ltd
- Address : 19 Chapin Rd, Building D. Pine Brook, New Jersey, United States
- Date of Receipt : 2025-10-22

2. Manufacturer

- Name : Samsung Electronics Co Ltd

3. Use of Report : For FCC Conformance**4. Test sample / Model : Wi-Fi/BT Transceiver / WCH931M****5. Date(s) of test : 2025-12-05 to 2026-01-03****6. Test Standard (Method) used : FCC 47 CFR part 15 subpart C 15.247****7. Testing Environment : Refer to 8 page****8. Test Results : Compliance****9. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing**

(Address : (Unhak-Dong) 5, 221 beon-gil, Dongbu-ro, Cheoin-gu, Yongin-si, Gyeonggi-do,
Republic of Korea)

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
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Approval	Tested by:	Technical Manager:
	 Seong-uk Park (Signature)	 Bong-seok Kim (Signature)

2026-01-07

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REPORT REVISION HISTORY

Date	Revision	Page No
2026-01-07	Issued (CTK-2026-00062)	all

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1. General Product Description

1.1 Applicant Information

Company	Samsung Electronics Co Ltd
Contact Point	19 Chapin Rd, Building D. Pine Brook, New Jersey, United States
Contact Person	Name : Minhyung Cho E-mail : mh719.cho@samsung.com Tel : +82-31-277-2688 Fax : -

1.2 Manufacturer Information

Manufacturer	Samsung Electronics Co Ltd
Address	129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Republic of Korea
Factory #1	XUGUANG TECHNOLOGY (VIETNAM) COMPANY LIMITED
Address	Factory No.4, Lot CN1, An Duong Industrial Park, Hong Phong Commune, An Duong District, Hai Phong City, Vietnam
Factory #2	Chengdu Xuguang Technology Co., Ltd.
Address	Building 1, Floors 1-2 and Building 2, Wenbai Avenue No.998, Baihe Street, Economic and Technological Development Zone (Longquanyi District), Chengdu City, Sichuan Province, P.R.China
Factory #3	SJIT CO., LTD.
Address	#54-11, Dongtanhana 1gil, Hwaseong-si, Gyeonggi-Do, Korea
Factory #4	SJIT VINA Co., Ltd
Address	Lot X2, Ho Nai Industrial Zone, Ho Nai 3 Commune, Trang Bom District, Dong Nai Province, Vietnam
Factory #5	CHEMTRONICS Co., Ltd
Address	35, Hyeongjero, Namsa-myeon, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea
Factory #6	CHEMTROVINA COMPANY LIMITED
Address	Nhon Trach 2 - Loc Khang IZ, Hiep Phuoc Town, Nhon Trach District, Dong Nai, Province, Vietnam

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1.3 Product Information

FCC ID	A3LWCH931M	
Product Description	Wi-Fi/BT Transceiver	
Model name	WCH931M	
Variant Model name	-	
Operating Frequency	2 412 MHz to 2 472 MHz (20 MHz_BW)	
RF Output Power	802.11b : 19.68 dBm (92.90 mW) 802.11g : 15.71 dBm (37.24 mW) 802.11n_HT20 : 17.54 dBm (56.75 mW) 802.11ax_HE20 : 16.77 dBm (47.54 mW)	
Antenna Specification	Antenna Type	Chip Antenna
	Peak Gain	0.51 dBi (ANT0), 0.90 dBi (ANT1)
Antenna Configurations	802.11b : SISO (ANT0, ANT1) 802.11g : SISO (ANT0, ANT1) 802.11n : SISO (ANT0, ANT1), MIMO (ANT0+ANT1) 802.11ax : SISO (ANT0, ANT1), MIMO (ANT0+ANT1)	
Number of channels	13	
Type of modulation	802.11b : DSSS 802.11g/n/ax : OFDM 802.11ax : OFDMA	
Data Rate	802.11b : 11 / 5.5 / 2 / 1 Mbps 802.11g : 54 / 48 / 36 / 24 / 18 / 12 / 9 / 6 Mbps 802.11n : up to 300 Mbps 802.11ax : up to 573 Mbps	
Power Source	DC 5 V	
Hardware Rev	V1.0	
Software Rev(FVIN)	FC 3, FC 4	
Test Program	QATest-Tool_FC 3	

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RF Power Setting in Test SW

Mode		Frequency	Power Setting Value
802.11b		2 412 MHz to 2 467 MHz	16.5
		2 472 MHz	11.0
802.11g		2 412 MHz to 2 462 MHz	13.5
		2 467 MHz	11.0
		2 472 MHz	8.5
802.11n_HT20		2 412 MHz to 2 462 MHz	12.5
		2 467 MHz	8.5
		2 472 MHz	2.5
802.11ax_HE20	26T	2 412 MHz to 2 462 MHz	11.0
		2 467 MHz	9.0
		2 472 MHz	-3.5
	52T	2 412 MHz to 2 462 MHz	12.0
		2 467 MHz	9.0
		2 472 MHz	-1.0
	106T	2 412 MHz to 2 462 MHz	12.0
		2 467 MHz	9.0
		2 472 MHz	1.0
	242T	2 412 MHz to 2 462 MHz	12.0
		2 467 MHz	9.0
		2 472 MHz	7.5

1.4 Peripheral Devices

Device	Manufacturer	Model No.	Serial No.
Note Computer	HP	15-bs563TU	CND7253R6N
AC/DC Adapter	HP	HSTNN-LA40	-
Note Computer	Samsung Electronics Co., Ltd.	NT-RC530-WS55	HPFG91EC300116B
AC/DC Adapter	Samsung Electronics Co., Ltd.	PA-1600-66	-
Note Computer	Samsung Electronics Co., Ltd.	NT751BBC	4LMA9FGNC00112B
AC/DC Adapter	Samsung Electronics Co., Ltd.	GST40A12	-

1.5 Model Differences

- Option1 : With mic
- Option2 : Without mic and related parts.
(The only difference is the presence of mic; all other circuit is completely identical for between the Basic and Variant options.)
- Test sample : Option1

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2. Accreditations

2.1 Laboratory Accreditations and Listings

Country	Agency	Registration Number
USA	FCC	805871
CANADA	ISED	CN : 8737A CAB ID : KR0025
KOREA	NRRA	KR0025

2.2 Calibration Details of Equipment used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less. All test equipment calibrations are traceable to the Korea Research Institute of Standards and Science (KRISS), therefore, all test data recorded in this report is traceable to KRISS.

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3. Test Specifications

3.1 Standards

FCC Part Section(s)	Requirement(s)	Status (Note 1)	Test Condition
15.247(a)	6 dB Bandwidth	C	Conducted
15.247(b)	Maximum Output Power	C	
15.247(d)	Conducted Spurious Emission	C	
15.247(d)	Unwanted Emission (Conducted)	C	
15.247(e)	Transmitter Power Spectral Density	C	
15.209	Radiated Emissions	C	Radiated
15.207	AC Conducted Emissions	C	Line Conducted

Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable

Note 2: The data in this test report are traceable to the national or international standards.

Note 3: The sample was tested according to the following specification: FCC Part 15.247

Note 4: The tests were performed according to the method of measurements prescribed in KDB No.558074, ANSI C63.10-2020

3.2 Testing Environment

Test Item		Test Date	Temperature (°C)	Relative Humidity (%)
6 dB Bandwidth & 99 % Bandwidth		2025-12-15, 2025-12-17, 2025-12-18	20±1, 21±1, 22±1	22±3, 25±3, 21±3
Maximum Output Power				
Conducted Spurious Emission				
Transmitter Power Spectral Density				
Transmitter Emission (Radiated)	(1 GHz Below)	2025-12-28, 2025-12-30	(18 ~ 20)±1	23±3
	(1 GHz Above)	2025-12-05, 2025-12-08, 2025-12-11	(26, 21, 23)±1	(23, 24, 22)±3
AC Conducted Emission		2026-01-03	19±1	20±3



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3.3 Mode of Operation during the Test

The EUT is operated in a manner representative of the typical of the equipments.
During at testing, system components were manipulated within the confines of typical usage to maximize each emission. All modulation modes were tests. The results are only attached worst cases.

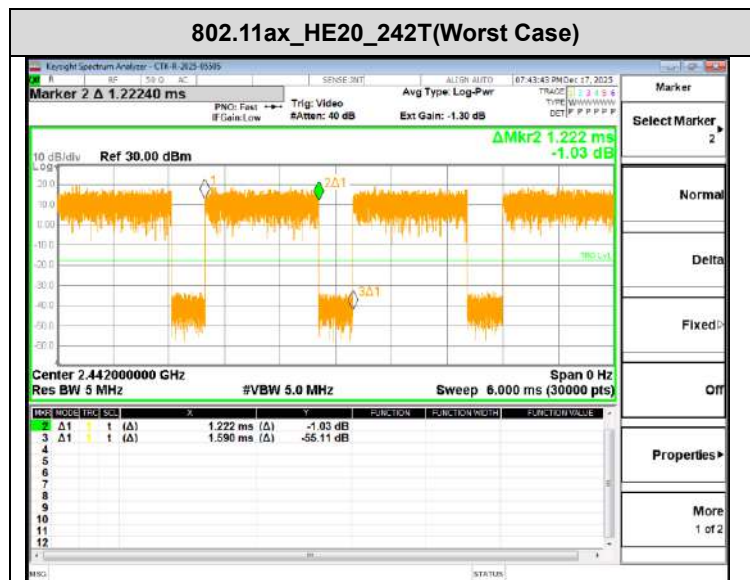
The Output power and Power Spectral Density for the 802.11 ax mode were investigated between all different tones, and we found that the highest tone had the highest output power and lowest tone had the highest PSD readings. Therefore, full testing was performed on both the highest and lowest tones.

Test Frequency & Bandwidth

Bandwidth	Lowest Channel	Middle Channel	Highest Channel 1	Highest Channel 2	Highest Channel 3
20 MHz	2 412 MHz	2 442 MHz	2 462 MHz	2 467 MHz	2 472 MHz

Test Mode & Worst Case

Test Mode	Modulation	Data Rate (Worst Case)	Duty Cycle	Duty Cycle Factor
802.11b	DSSS	1 Mbps	99.8 %	0.00 dB
802.11g	OFDM	6 Mbps	97.2 %	0.12 dB
802.11n_HT20	OFDM	MCS 0	97.0 %	0.13 dB
802.11ax_HE20_26T	OFDMA	MCS 0	83.1 %	0.81 dB
802.11ax_HE20_52T			81.5 %	0.89 dB
802.11ax_HE20_106T			80.1 %	0.96 dB
802.11ax_HE20_242T			76.7 %	1.15 dB



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Test RU Index for Tones

Mode	Tones	RU Index	
802.11ax_HE20	26T	Low	0
		Mid	4
		High	8
	52T	Low	37
		Mid	39
		High	40
	106T	Low	53
		Mid	-
		High	54
	242T / SU	61 / NA	61 / NA

The output power of the SU(Single Unit) mode is equal to or lower than that of the Full RU(Resource Unit) mode, only the representative worst-case mode was selected and evaluated.

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3.4 Device Modifications

The following modifications were necessary for compliance:

Not applicable

3.5 Measurement Uncertainty

The value of the measurement uncertainty for the measurement of each parameter.
Coverage factor $k = 2$, Confidence levels of 95 %

Description	Uncertainty
Conducted RF Output Power	1.50 dB (C.L.: Approx. 95 %, $k = 2$)
Power Spectral Density	1.50 dB (C.L.: Approx. 95 %, $k = 2$)
Occupied Bandwidth	0.10 MHz (C.L.: Approx. 95 %, $k = 2$)
Unwanted Emission (Conducted)	3.00 dB (C.L.: Approx. 95 %, $k = 2$)
Radiated Emissions ($f \leq 1$ GHz)	4.11 dB (C.L.: Approx. 95 %, $k = 2$)
Radiated Emissions ($f > 1$ GHz)	4.34 dB (C.L.: Approx. 95 %, $k = 2$)
Line Conducted Emission	2.06 dB (C.L.: Approx. 95 %, $k = 2$)

3.6 Test Software

Conducted Test	Ics Pro Ver. 6.0.3
Radiated Test	EP5RE Ver. 6.0.1.0
Line Conducted Test	EMC32 Ver. 10.50.00

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4. Technical Characteristic Test

4.1 6 dB Bandwidth

Test Procedures

KDB 558074 - Section 8.2
ANSI C63.10-2020 - Section 11.8.2

Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

ANSI C63.10-2020 - Section 6.9.3

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5 % of the total mean power of the given emission.

Use the 99 % power bandwidth function of the instrument and report the measured bandwidth.

Test Settings:

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described in 11.8.1 (i.e., RBW = 100 kHz, VBW $\geq$ 3 $\times$ RBW, and peak detector with maximum hold) is implemented by the instrumentation function.

When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be $\geq$ 6 dB.

Minimum Standard :

6 dB Bandwidth > 500 kHz

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Test Data :**ANT0**

Test Mode	6 dB Bandwidth & 99 % Bandwidth [MHz]							
	802.11b		802.11g		802.11n_HT20		802.11ax_HE20_242T	
Frequency	6 dB	99 %	6 dB	99 %	6 dB	99 %	6 dB	99 %
2 412 MHz	8.15	12.52	15.94	16.38	17.27	17.55	18.97	18.81
2 442 MHz	8.14	12.56	16.29	16.81	17.31	17.96	18.85	18.93
2 462 MHz	8.14	12.53	16.27	16.74	17.49	17.91	19.00	18.93
2 467 MHz	8.15	12.50	15.97	16.37	17.19	17.52	18.99	18.80
2 472 MHz	8.14	12.39	15.85	16.35	16.20	17.51	18.87	18.78

Test Mode	6 dB Bandwidth & 99 % Bandwidth [MHz]					
	802.11ax_HE20_26T		802.11ax_HE20_26T		802.11ax_HE20_26T	
	RU Index_Low		RU Index_Mid		RU Index_High	
Frequency	6 dB	99 %	6 dB	99 %	6 dB	99 %
2 412 MHz	2.10	18.02	2.73	17.06	2.13	18.23
2 442 MHz	2.19	18.76	2.74	17.01	2.27	18.46
2 462 MHz	2.20	18.76	2.73	17.05	2.21	18.50
2 467 MHz	2.12	18.06	2.79	17.04	2.15	18.14
2 472 MHz	2.08	18.16	2.73	17.01	2.19	18.20

ANT1

Test Mode	6 dB Bandwidth & 99 % Bandwidth [MHz]							
	802.11b		802.11g		802.11n_HT20		802.11ax_HE20_242T	
Frequency	6 dB	99 %	6 dB	99 %	6 dB	99 %	6 dB	99 %
2 412 MHz	8.14	12.30	15.94	16.38	16.28	17.55	18.75	18.78
2 442 MHz	8.14	12.35	16.29	16.73	17.57	17.87	18.86	18.93
2 462 MHz	8.13	12.32	16.29	16.78	17.61	17.85	19.00	18.96
2 467 MHz	8.13	12.32	15.98	16.38	16.47	17.54	18.84	18.81
2 472 MHz	8.13	12.24	15.95	16.38	16.25	17.53	18.72	18.76

Test Mode	6 dB Bandwidth & 99 % Bandwidth [MHz]					
	802.11ax_HE20_26T		802.11ax_HE20_26T		802.11ax_HE20_26T	
	RU Index_Low		RU Index_Mid		RU Index_High	
Frequency	6 dB	99 %	6 dB	99 %	6 dB	99 %
2 412 MHz	2.11	18.05	2.70	16.89	2.15	18.03
2 442 MHz	2.10	18.54	2.69	17.06	2.08	18.42
2 462 MHz	2.10	18.56	2.70	17.03	2.09	18.44
2 467 MHz	2.13	18.04	2.69	16.83	2.10	17.98
2 472 MHz	2.09	18.06	2.79	16.91	2.17	18.10

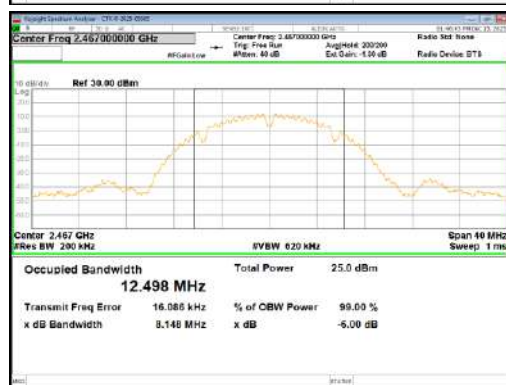
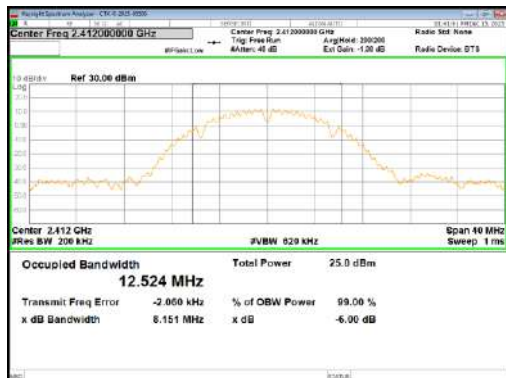
See next pages for actual measured spectrum plots.



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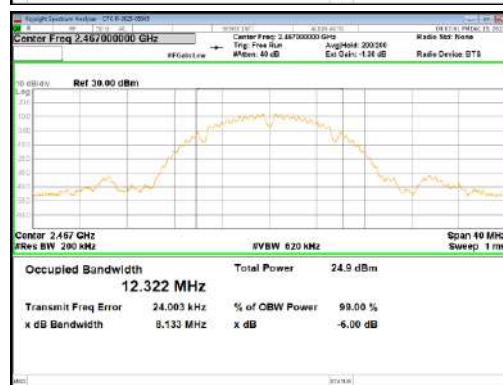
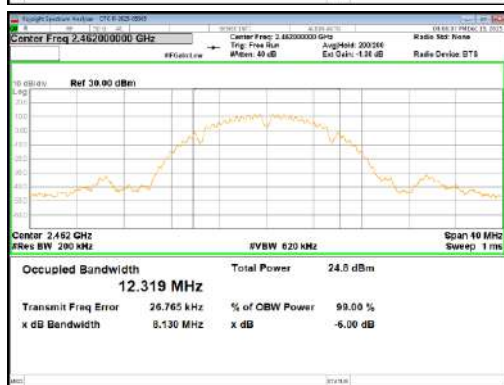
ANT0, 802.11b, 6 dB & 99 % Bandwidth



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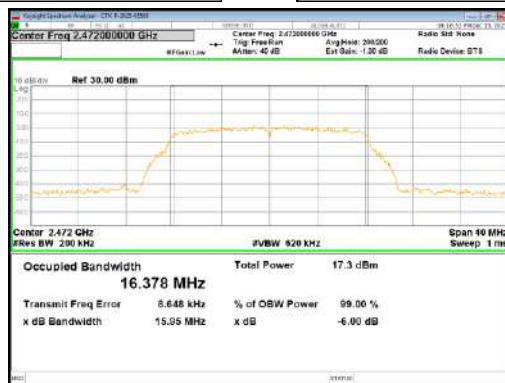
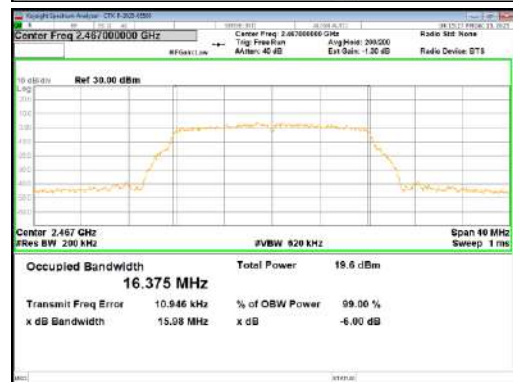
ANT1, 802.11b, 6 dB & 99 % Bandwidth



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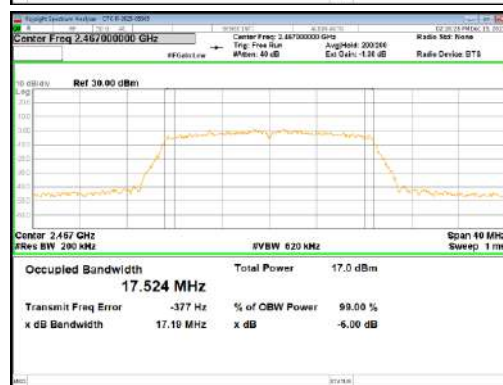
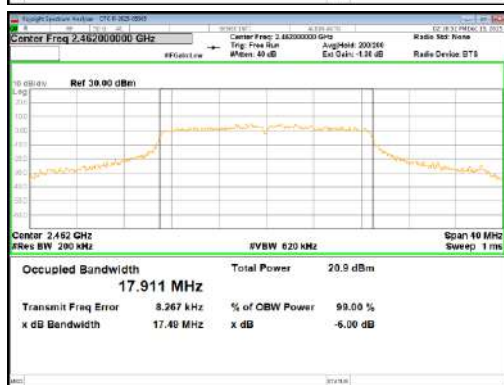
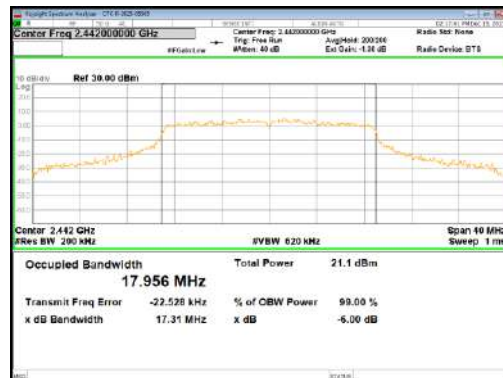
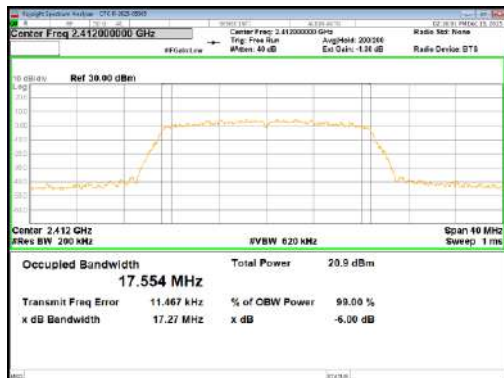
ANT1, 802.11g, 6 dB & 99 % Bandwidth



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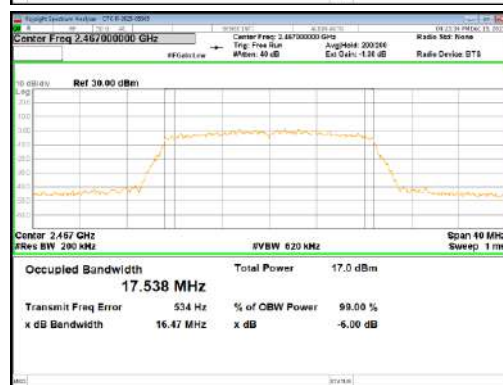
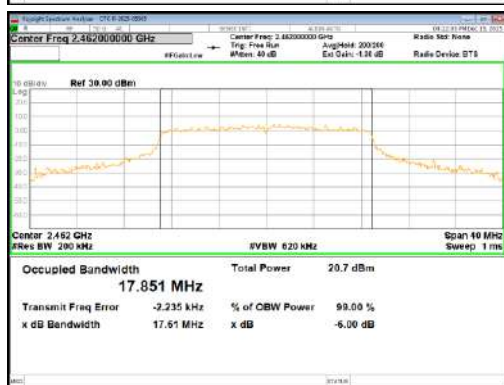
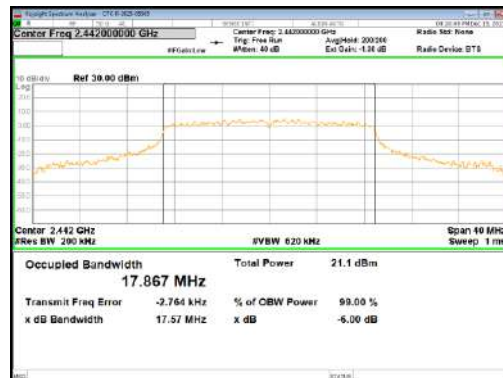
ANT0, 802.11n_HT20, 6 dB & 99 % Bandwidth



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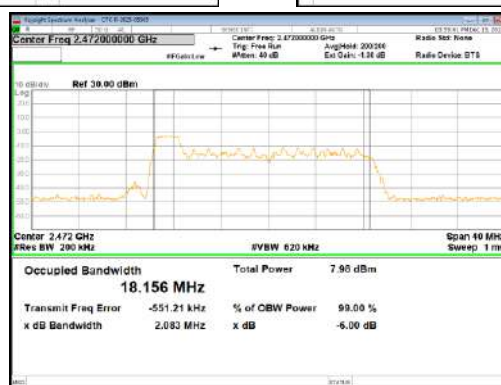
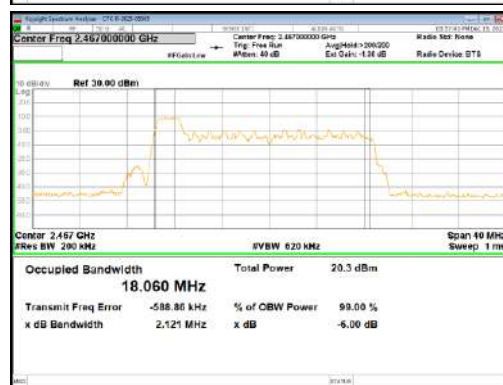
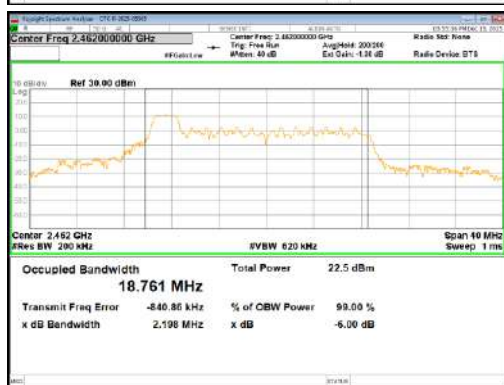
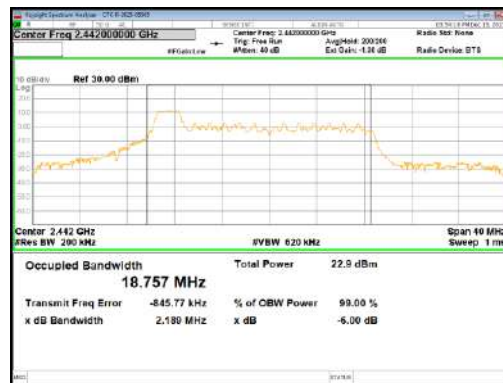
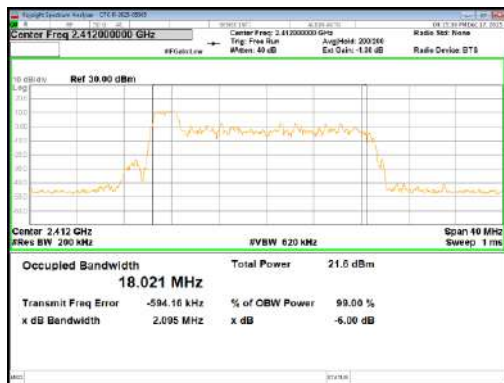
ANT1, 802.11n_HT20, 6 dB & 99 % Bandwidth



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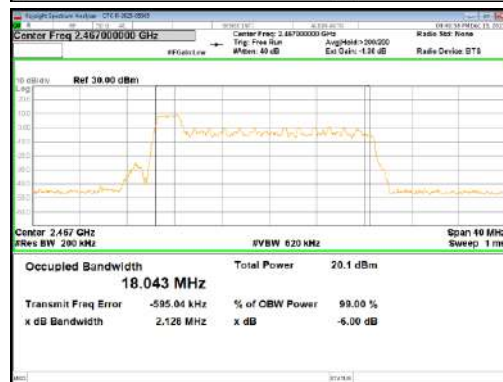
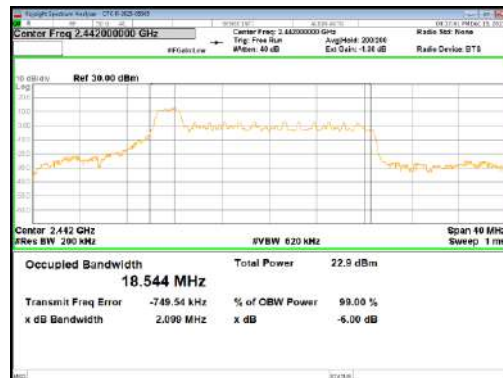
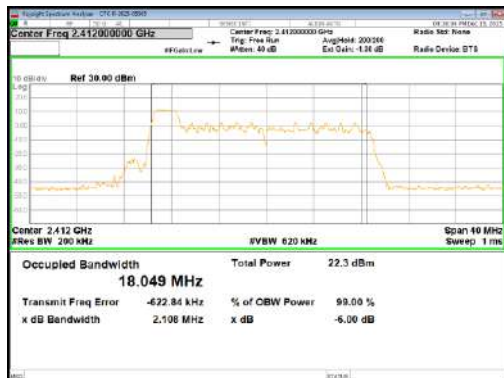
ANT0, 802.11ax_HE20_26T_Low, 6 dB & 99 % Bandwidth



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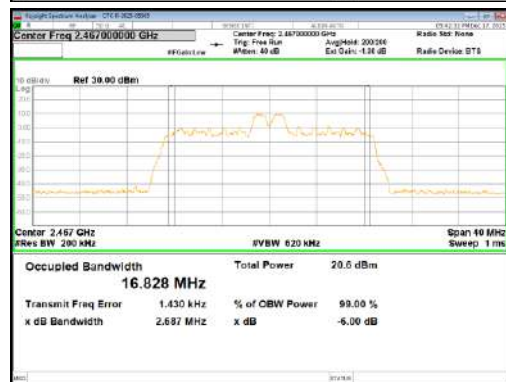
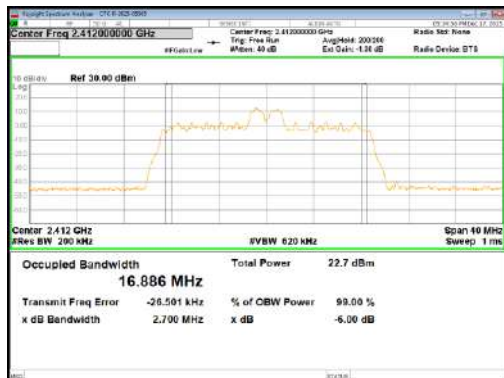
ANT1, 802.11ax_HE20_26T_Low, 6 dB & 99 % Bandwidth



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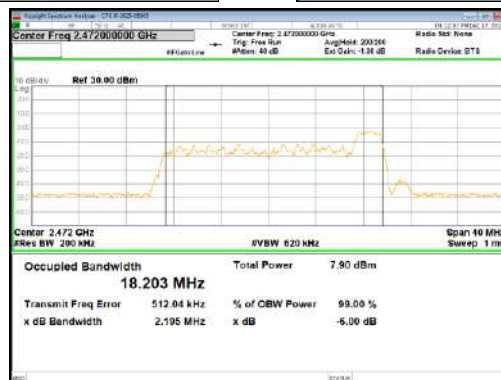
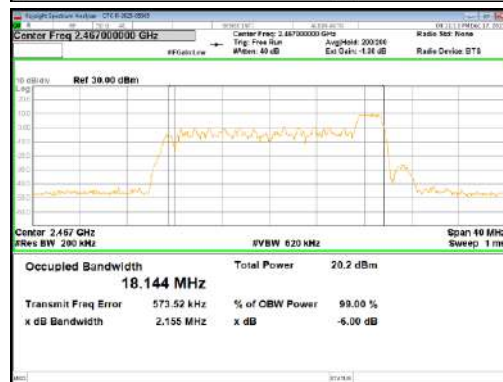
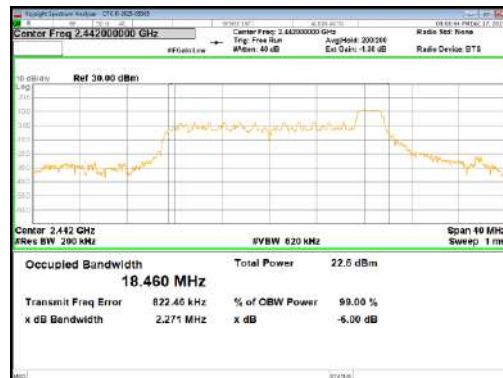
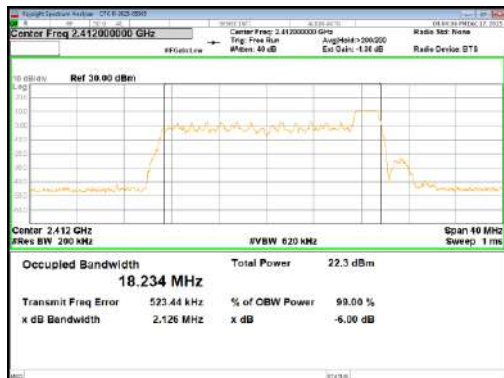
ANT1, 802.11ax_HE20_26T_Mid, 6 dB & 99 % Bandwidth



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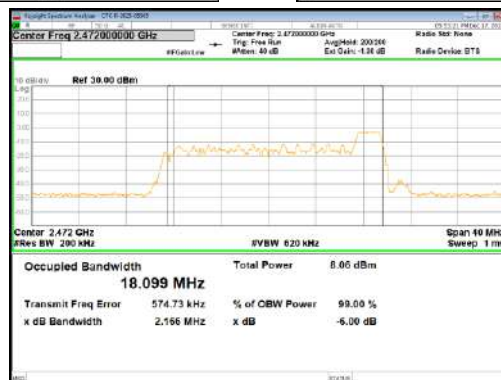
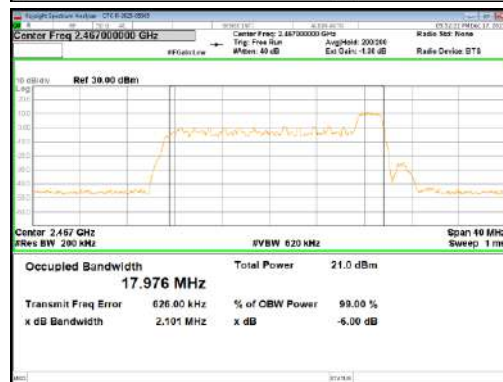
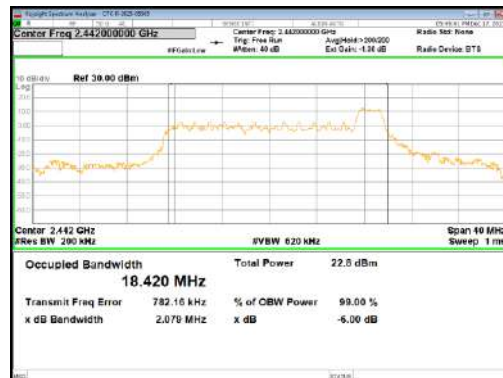
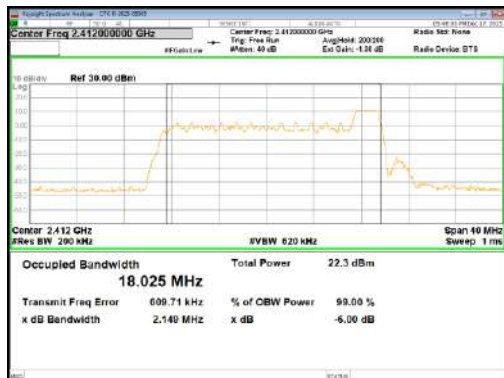
ANT0, 802.11ax_HE20_26T_High, 6 dB & 99 % Bandwidth



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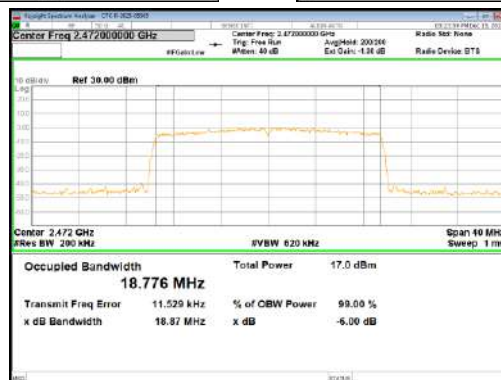
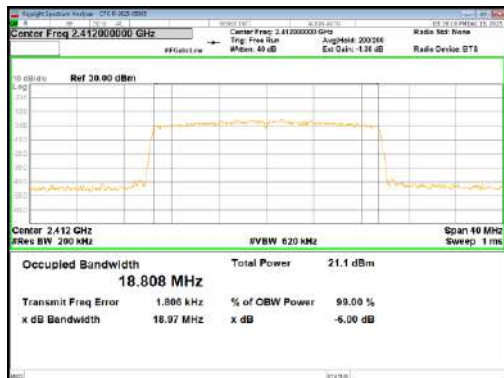
ANT1, 802.11ax_HE20_26T_High, 6 dB & 99 % Bandwidth



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ANT0, 802.11ax_HE20_242T, 6 dB & 99 % Bandwidth

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4.2 Output Power

Test Procedures

KDB 558074 - Section 8.3.2.2 (Average Power)

ANSI C63.10-2020 - Section 11.9.2.2.4

KDB 662911 D01, D02 (Multiple Transmitter Output)

The transmitter output is connected to a spectrum analyzer and the analyzer's internal channel power integration function is used to integrate the power over a bandwidth greater than or equal to the 99 % bandwidth.

This method uses trace averaging across ON and OFF times of the EUT transmissions, followed by duty cycle correction.

Test Settings:

Center frequency = the highest, middle and the lowest channels

- a) Span $\geq 1.5 \times \text{OBW}$
- b) RBW = 1 % to 5 % of the OBW, but do not exceed 1 MHz.
- c) VBW $\geq 3 \times \text{RBW}$
- d) Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq \text{RBW} / 2$)
- e) Sweep time = auto
- f) Detector = RMS
- g) Do not use sweep triggering. Allow the sweep to "free run."
- h) Trace average at least 100 traces in power averaging (rms) mode;
- i) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band-power measurement function with band limits set equal to the OBW band-edges.
- j) Add $[10 \log (1 / D)]$, where D is the duty cycle, to the measured power to compute the average power during the actual transmission times

Test Mode	Duty Cycle Factor	Test Mode	Duty Cycle Factor
802.11b	0.00 dB	802.11ax_HE20_26T	0.81 dB
802.11g	0.12 dB	802.11ax_HE20_52T	0.89 dB
802.11n_HT20	0.13 dB	802.11ax_HE20_106T	0.96 dB
		802.11ax_HE20_242T	1.15 dB

Limit :

Operating Mode	Mode	ANT Configuration	ANT Gain [dBi]	Limit [dBm]
SISO	802.11b/g/n/ax	ANT0	0.51	30.00
SISO	802.11b/g/n/ax	ANT1	0.90	30.00
MIMO (2TX)	802.11n/ax	ANT0 + ANT1	3.72	30.00

Note :

Per KDB 662911, the MIMO directional gain is calculated using the following formula, Where G_N is the gain of the nth antenna and N_{ANT} , the total number of antennas used.

$$\text{Directional gain} = 10 \log[(10^{G_1/20} + 10^{G_2/20} + \dots + 10^{G_N/20})^2 / N_{\text{ANT}}] \text{ dBi}$$

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Test Data :**ANT0 (SISO)**

Test Mode	Frequency [MHz]	Measured Output Power [dBm]	Duty Cycle Factor [dB]	Result Output Power [dBm]	Limit [dBm]	Margin [dB]
802.11b	2 412	19.46	0.00	19.46	30.00	10.54
	2 442	19.68	0.00	<u>19.68</u>	30.00	10.32
	2 462	19.45	0.00	19.45	30.00	10.55
	2 467	19.51	0.00	19.51	30.00	10.49
	2 472	13.96	0.00	13.96	30.00	16.04
802.11g	2 412	15.31	0.12	15.43	30.00	14.57
	2 442	15.59	0.12	<u>15.71</u>	30.00	14.29
	2 462	15.32	0.12	15.44	30.00	14.56
	2 467	12.87	0.12	12.99	30.00	17.01
	2 472	10.40	0.12	10.52	30.00	19.48
802.11n _HT20	2 412	14.26	0.13	14.39	30.00	15.61
	2 442	14.41	0.13	14.54	30.00	15.46
	2 462	14.20	0.13	14.33	30.00	15.67
	2 467	10.26	0.13	10.39	30.00	19.61
	2 472	4.58	0.13	4.71	30.00	25.29

Test Mode	Frequency [MHz]	RU Index	Measured Output Power [dBm]	Duty Cycle Factor [dB]	Result Output Power [dBm]	Limit [dBm]	Margin [dB]
802.11ax _HE20 _26T	2 412	Low	10.74	0.81	11.55	30.00	18.45
		Mid	11.85	0.81	12.66	30.00	17.34
		High	10.84	0.81	11.65	30.00	18.35
	2 442	Low	11.34	0.81	12.15	30.00	17.85
		Mid	11.74	0.81	12.55	30.00	17.45
		High	11.11	0.81	11.92	30.00	18.08
	2 462	Low	11.26	0.81	12.07	30.00	17.93
		Mid	11.85	0.81	12.66	30.00	17.34
		High	10.95	0.81	11.76	30.00	18.24
	2 467	Low	8.51	0.81	9.32	30.00	20.68
		Mid	10.02	0.81	10.83	30.00	19.17
		High	9.01	0.81	9.82	30.00	20.18
	2 472	Low	-3.63	0.81	-2.82	30.00	32.82
		Mid	-2.43	0.81	-1.62	30.00	31.62
		High	-3.34	0.81	-2.53	30.00	32.53

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Test Mode	Frequency [MHz]	RU Index	Measured Output Power [dBm]	Duty Cycle Factor [dB]	Result Output Power [dBm]	Limit [dBm]	Margin [dB]
802.11ax _HE20 _52T	2 412	Low	12.54	0.89	13.43	30.00	16.57
		Mid	12.51	0.89	13.40	30.00	16.60
		High	12.47	0.89	13.36	30.00	16.64
	2 442	Low	12.48	0.89	13.37	30.00	16.63
		Mid	12.98	0.89	13.87	30.00	16.13
		High	12.43	0.89	13.32	30.00	16.68
	2 462	Low	12.24	0.89	13.13	30.00	16.87
		Mid	12.75	0.89	13.64	30.00	16.36
		High	12.23	0.89	13.12	30.00	16.88
	2 467	Low	9.31	0.89	10.20	30.00	19.80
		Mid	10.02	0.89	10.91	30.00	19.09
		High	9.52	0.89	10.41	30.00	19.59
	2 472	Low	-0.59	0.89	0.30	30.00	29.70
		Mid	0.29	0.89	1.18	30.00	28.82
		High	-0.12	0.89	0.77	30.00	29.23
802.11ax _HE20 _106T	2 412	Low	12.89	0.96	13.85	30.00	16.15
		High	12.50	0.96	13.46	30.00	16.54
	2 442	Low	12.63	0.96	13.59	30.00	16.41
		High	12.26	0.96	13.22	30.00	16.78
	2 462	Low	12.12	0.96	13.08	30.00	16.92
		High	12.34	0.96	13.30	30.00	16.70
	2 467	Low	9.60	0.96	10.56	30.00	19.44
		High	9.62	0.96	10.58	30.00	19.42
	2 472	Low	1.68	0.96	2.64	30.00	27.36
		High	2.03	0.96	2.99	30.00	27.01
802.11ax _HE20 _242T	2 412	-	12.10	1.15	13.25	30.00	16.75
	2 442	-	12.31	1.15	13.46	30.00	16.54
	2 462	-	11.86	1.15	13.01	30.00	16.99
	2 467	-	9.11	1.15	10.26	30.00	19.74
	2 472	-	7.56	1.15	8.71	30.00	21.29

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ANT1 (SISO)

Test Mode	Frequency [MHz]	Measured Output Power [dBm]	Duty Cycle Factor [dB]	Result Output Power [dBm]	Limit [dBm]	Margin [dB]
802.11b	2 412	19.23	0.00	19.23	30.00	10.77
	2 442	19.45	0.00	19.45	30.00	10.55
	2 462	19.35	0.00	19.35	30.00	10.65
	2 467	19.39	0.00	19.39	30.00	10.61
	2 472	13.91	0.00	13.91	30.00	16.09
802.11g	2 412	15.37	0.12	15.49	30.00	14.51
	2 442	15.53	0.12	15.65	30.00	14.35
	2 462	15.33	0.12	15.45	30.00	14.55
	2 467	12.96	0.12	13.08	30.00	16.92
	2 472	10.55	0.12	10.67	30.00	19.33
802.11n _HT20	2 412	14.18	0.13	14.31	30.00	15.69
	2 442	14.38	0.13	14.51	30.00	15.49
	2 462	14.23	0.13	14.36	30.00	15.64
	2 467	10.27	0.13	10.40	30.00	19.60
	2 472	4.63	0.13	4.76	30.00	25.24

Test Mode	Frequency [MHz]	RU Index	Measured Output Power [dBm]	Duty Cycle Factor [dB]	Result Output Power [dBm]	Limit [dBm]	Margin [dB]
802.11ax _HE20 _26T	2 412	Low	10.52	0.81	11.33	30.00	18.67
		Mid	11.82	0.81	12.63	30.00	17.37
		High	10.45	0.81	11.26	30.00	18.74
	2 442	Low	11.50	0.81	12.31	30.00	17.69
		Mid	11.68	0.81	12.49	30.00	17.51
		High	11.24	0.81	12.05	30.00	17.95
	2 462	Low	10.67	0.81	11.48	30.00	18.52
		Mid	11.73	0.81	12.54	30.00	17.46
		High	11.22	0.81	12.03	30.00	17.97
	2 467	Low	8.30	0.81	9.11	30.00	20.89
		Mid	10.00	0.81	10.81	30.00	19.19
		High	9.10	0.81	9.91	30.00	20.09
	2 472	Low	-4.11	0.81	-3.30	30.00	33.30
		Mid	-2.55	0.81	-1.74	30.00	31.74
		High	-3.37	0.81	-2.56	30.00	32.56

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Test Mode	Frequency [MHz]	RU Index	Measured Output Power [dBm]	Duty Cycle Factor [dB]	Result Output Power [dBm]	Limit [dBm]	Margin [dB]
802.11ax _HE20 _52T	2 412	Low	12.24	0.89	13.13	30.00	16.87
		Mid	12.52	0.89	13.41	30.00	16.59
		High	12.16	0.89	13.05	30.00	16.95
	2 442	Low	12.22	0.89	13.11	30.00	16.89
		Mid	12.76	0.89	13.65	30.00	16.35
		High	12.59	0.89	13.48	30.00	16.52
	2 462	Low	12.14	0.89	13.03	30.00	16.97
		Mid	12.63	0.89	13.52	30.00	16.48
		High	12.47	0.89	13.36	30.00	16.64
	2 467	Low	8.99	0.89	9.88	30.00	20.12
		Mid	10.18	0.89	11.07	30.00	18.93
		High	9.65	0.89	10.54	30.00	19.46
	2 472	Low	-0.83	0.89	0.06	30.00	29.94
		Mid	0.24	0.89	1.13	30.00	28.87
		High	-0.20	0.89	0.69	30.00	29.31
802.11ax _HE20 _106T	2 412	Low	12.62	0.96	13.58	30.00	16.42
		High	12.22	0.96	13.18	30.00	16.82
	2 442	Low	12.48	0.96	13.44	30.00	16.56
		High	12.41	0.96	13.37	30.00	16.63
	2 462	Low	12.01	0.96	12.97	30.00	17.03
		High	12.29	0.96	13.25	30.00	16.75
	2 467	Low	9.35	0.96	10.31	30.00	19.69
		High	9.85	0.96	10.81	30.00	19.19
	2 472	Low	1.61	0.96	2.57	30.00	27.43
		High	2.16	0.96	3.12	30.00	26.88
802.11ax _HE20 _242T	2 412	-	11.82	1.15	12.97	30.00	17.03
	2 442	-	12.24	1.15	13.39	30.00	16.61
	2 462	-	12.15	1.15	13.30	30.00	16.70
	2 467	-	9.13	1.15	10.28	30.00	19.72
	2 472	-	7.90	1.15	9.05	30.00	20.95

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ANT0 + ANT1 (MIMO)

Test Mode	Frequency [MHz]	Measured Output Power [dBm]	Duty Cycle Factor [dB]	Result Output Power [dBm]	Limit [dBm]	Margin [dB]
802.11n_HT20	2 412	17.23	0.13	17.36	30.00	12.64
	2 442	17.41	0.13	<u>17.54</u>	30.00	12.46
	2 462	17.23	0.13	17.36	30.00	12.64
	2 467	13.28	0.13	13.41	30.00	16.59
	2 472	7.62	0.13	7.75	30.00	22.25

Test Mode	Frequency [MHz]	RU Index	Measured Output Power [dBm]	Duty Cycle Factor [dB]	Result Output Power [dBm]	Limit [dBm]	Margin [dB]
802.11ax_HE20_26T	2 412	Low	13.64	0.81	14.45	30.00	15.55
		Mid	14.85	0.81	15.66	30.00	14.34
		High	13.66	0.81	14.47	30.00	15.53
	2 442	Low	14.43	0.81	15.24	30.00	14.76
		Mid	14.72	0.81	15.53	30.00	14.47
		High	14.19	0.81	15.00	30.00	15.00
	2 462	Low	13.99	0.81	14.80	30.00	15.20
		Mid	14.80	0.81	15.61	30.00	14.39
		High	14.10	0.81	14.91	30.00	15.09
	2 467	Low	11.42	0.81	12.23	30.00	17.77
		Mid	13.02	0.81	13.83	30.00	16.17
		High	12.07	0.81	12.88	30.00	17.12
	2 472	Low	-0.85	0.81	-0.04	30.00	30.04
		Mid	0.52	0.81	1.33	30.00	28.67
		High	-0.34	0.81	0.47	30.00	29.53
802.11ax_HE20_52T	2 412	Low	15.40	0.89	16.29	30.00	13.71
		Mid	15.53	0.89	16.42	30.00	13.58
		High	15.33	0.89	16.22	30.00	13.78
	2 442	Low	15.36	0.89	16.25	30.00	13.75
		Mid	15.88	0.89	<u>16.77</u>	30.00	13.23
		High	15.52	0.89	16.41	30.00	13.59
	2 462	Low	15.20	0.89	16.09	30.00	13.91
		Mid	15.70	0.89	16.59	30.00	13.41
		High	15.36	0.89	16.25	30.00	13.75
	2 467	Low	12.16	0.89	13.05	30.00	16.95
		Mid	13.11	0.89	14.00	30.00	16.00
		High	12.60	0.89	13.49	30.00	16.51
	2 472	Low	2.30	0.89	3.19	30.00	26.81
		Mid	3.28	0.89	4.17	30.00	25.83
		High	2.85	0.89	3.74	30.00	26.26

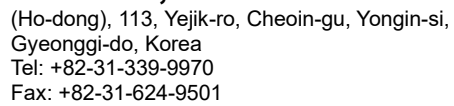
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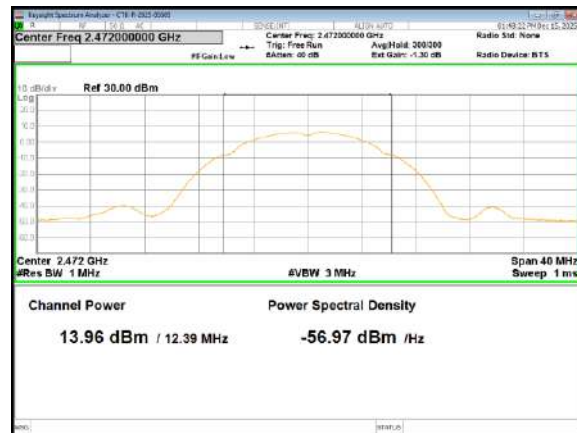
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Test Mode	Frequency [MHz]	RU Index	Measured Output Power [dBm]	Duty Cycle Factor [dB]	Result Output Power [dBm]	Limit [dBm]	Margin [dB]
802.11ax _HE20 _106T	2 412	Low	15.77	0.96	16.73	30.00	13.27
		High	15.37	0.96	16.33	30.00	13.67
	2 442	Low	15.57	0.96	16.53	30.00	13.47
		High	15.35	0.96	16.31	30.00	13.69
	2 462	Low	15.08	0.96	16.04	30.00	13.96
		High	15.33	0.96	16.29	30.00	13.71
	2 467	Low	12.49	0.96	13.45	30.00	16.55
		High	12.75	0.96	13.71	30.00	16.29
	2 472	Low	4.66	0.96	5.62	30.00	24.38
		High	5.11	0.96	6.07	30.00	23.93
802.11ax _HE20 _242T	2 412	-	14.97	1.15	16.12	30.00	13.88
	2 442	-	15.29	1.15	16.44	30.00	13.56
	2 462	-	15.02	1.15	16.17	30.00	13.83
	2 467	-	12.13	1.15	13.28	30.00	16.72
	2 472	-	10.74	1.15	11.89	30.00	18.11

See next pages for actual measured spectrum plots.



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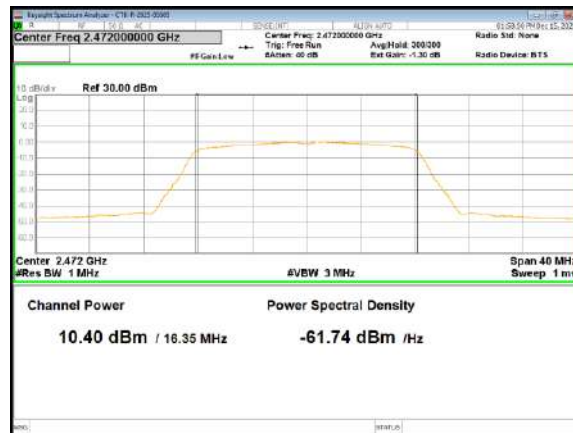
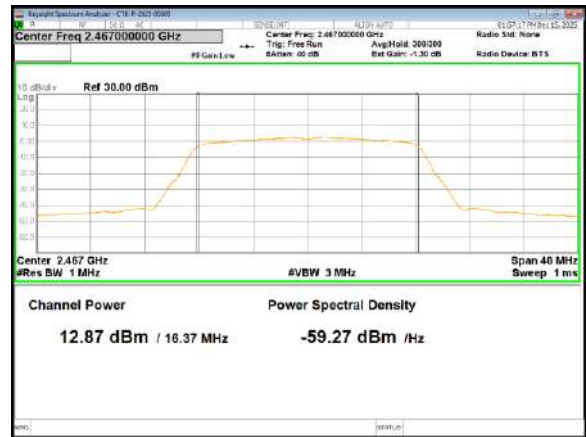
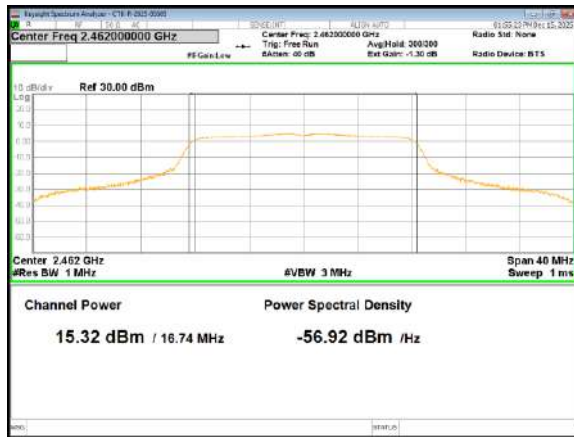
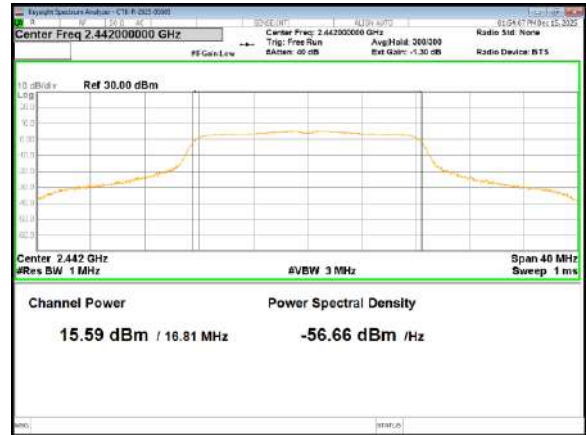
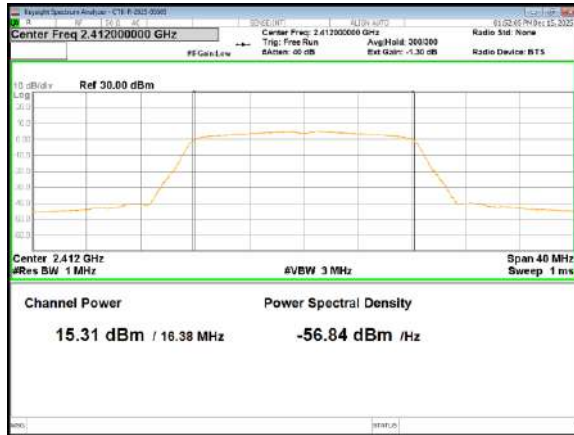
ANT0, 802.11b



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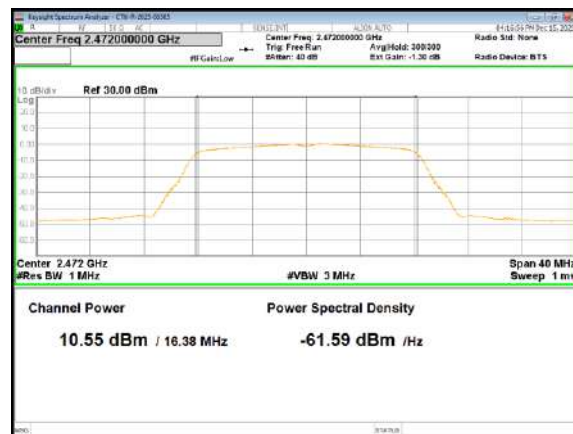
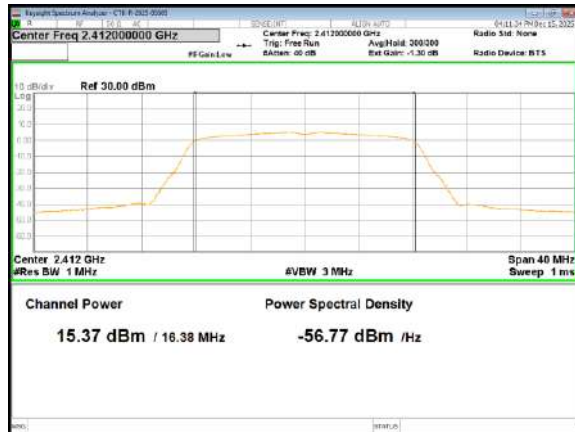
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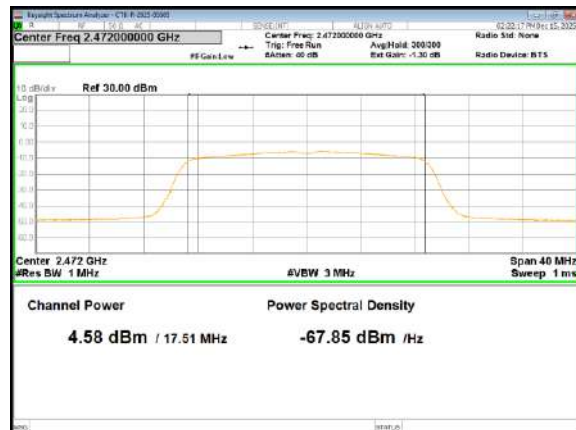
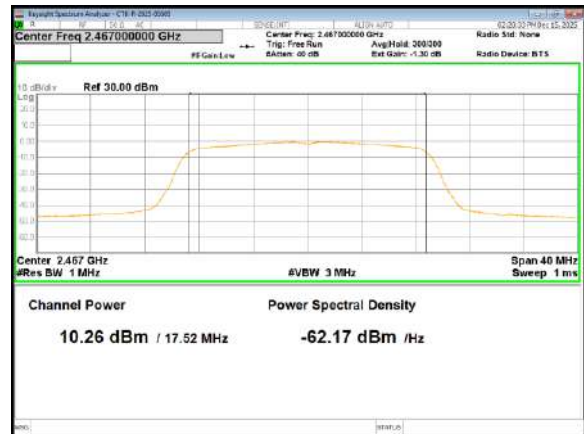
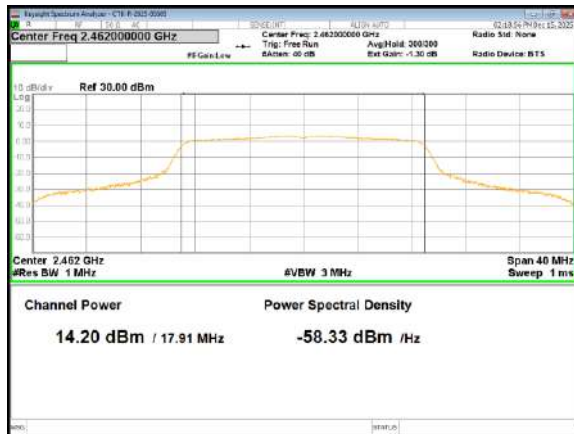
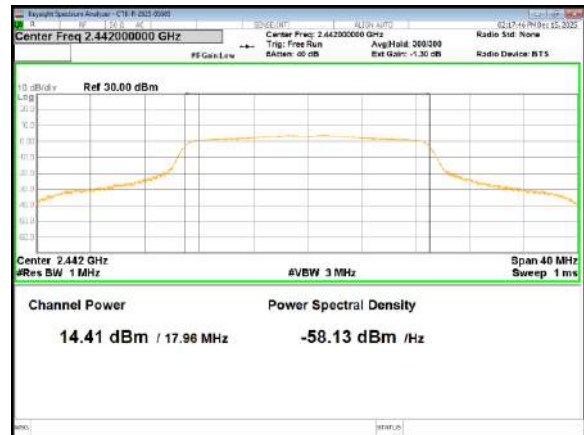
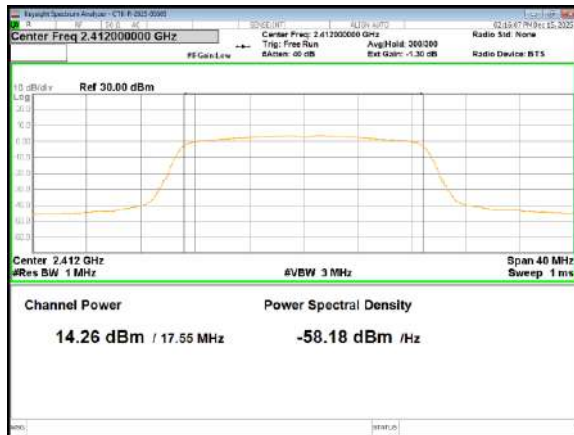
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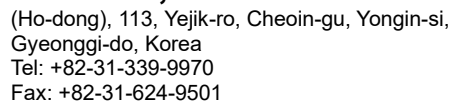
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ANT1, 802.11g

**ANT0, 802.11n_HT20**

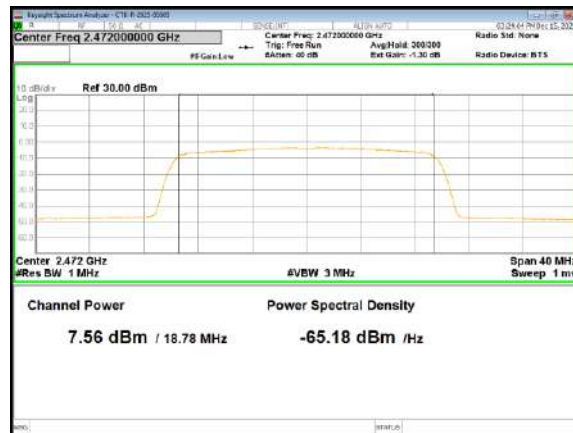
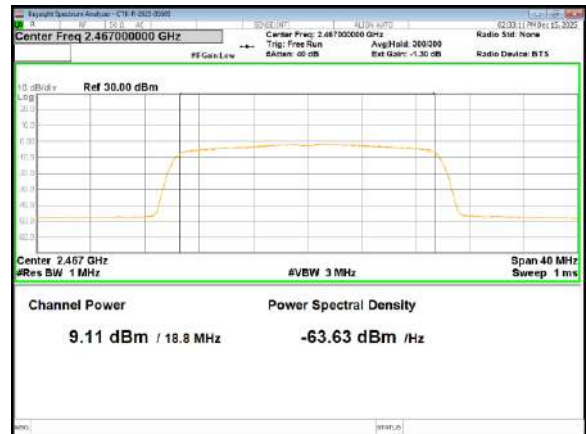
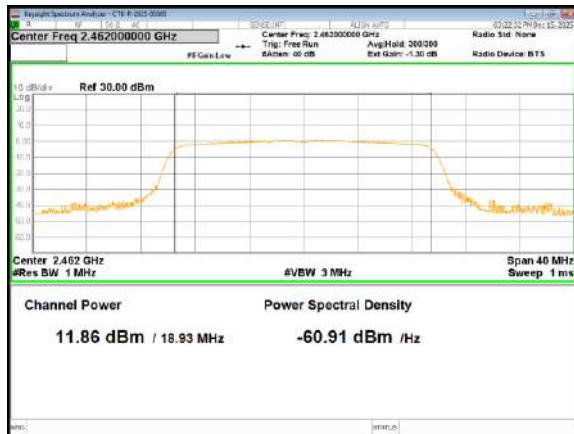
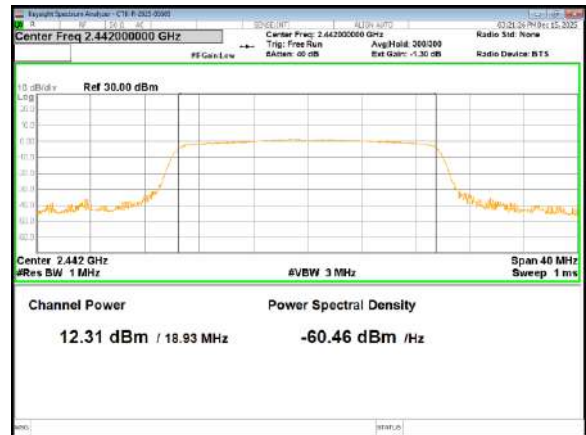
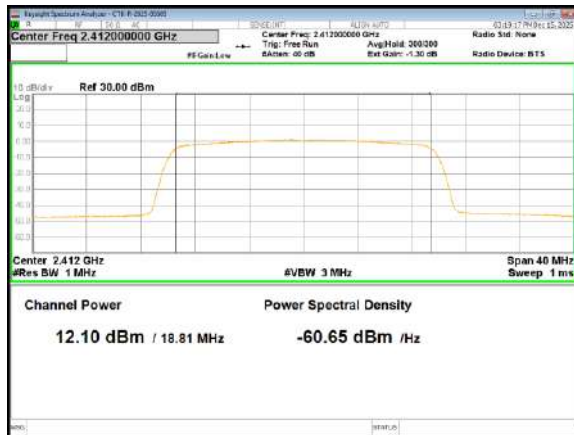




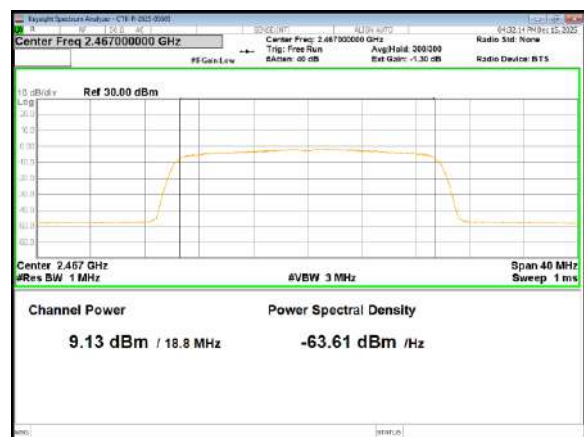
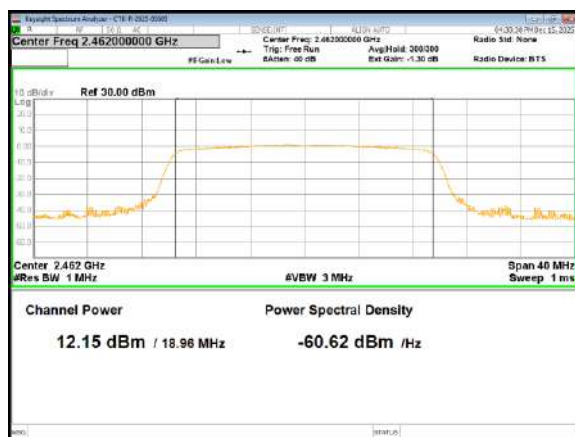
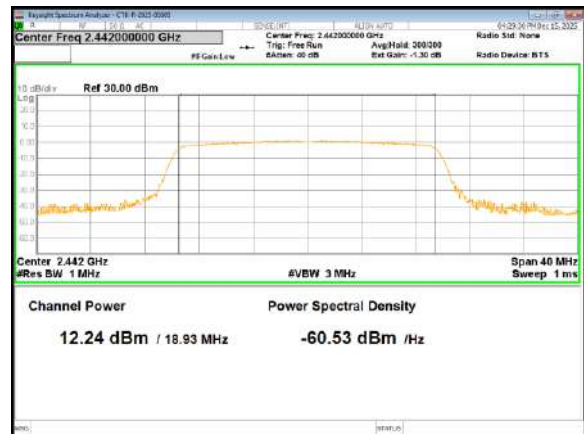
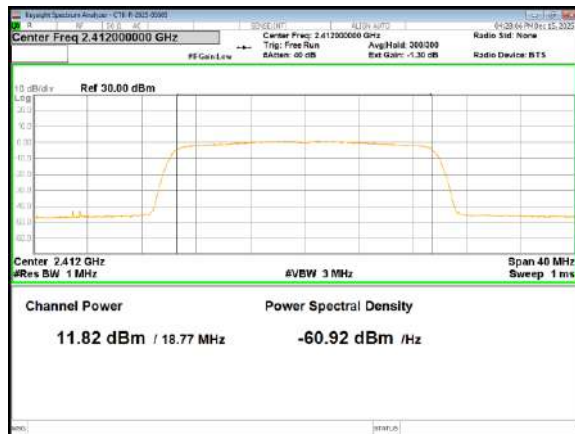
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ANT0, 802.11ax_HE20_242T



ANT1, 802.11ax_HE20_242T

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4.3 Transmitter Power Spectral Density

Test Procedures

KDB 558074 - Section 8.4
ANSI C63.10-2020 - Section 11.10.2
KDB 662911 D01, D02 (Multiple Transmitter Output)

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance.

Test Settings:

Set analyzer center frequency to DTS channel center frequency.

- a) span > 1.5 times the DTS bandwidth
- b) RBW to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- c) VBW $\geq [3 \times \text{RBW}]$
- d) Detector = peak.
- e) Sweep time = No faster than coupled (auto) time.
- f) Trace mode = max hold
- g) Allow trace to fully stabilize
- h) Use the peak marker function to determine the maximum amplitude level within the RBW.
- i) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

Limit :

Operating Mode	Mode	ANT Configuration	ANT Gain [dBi]	Limit [dBm]
SISO	802.11b/g/n/ax	ANT0	0.51	8.00
SISO	802.11b/g/n/ax	ANT1	0.90	8.00
MIMO (2TX)	802.11n/ax	ANT0 + ANT1	3.72	8.00

Note :

Per KDB 662911, the MIMO directional gain is calculated using the following formula, Where G_N is the gain of the nth antenna and N_{ANT} , the total number of antennas used.

$$\text{Directional gain} = 10 \log[(10^{G1/20} + 10^{G2/20} + \dots + 10^{GN/20})^2 / N_{ANT}] \text{ dBi}$$

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Test Data :**ANT0 (SISO)**

Test Mode	Frequency [MHz]	Measured Power Density [dBm]	Limit [dBm]	Margin [dB]
802.11b	2 412	-2.71	8.00	10.71
	2 442	-2.64	8.00	10.64
	2 462	-2.93	8.00	10.93
	2 467	-2.02	8.00	10.02
	2 472	-7.95	8.00	15.95
802.11g	2 412	-7.91	8.00	15.91
	2 442	-8.72	8.00	16.72
	2 462	-9.54	8.00	17.54
	2 467	-11.66	8.00	19.66
	2 472	-12.25	8.00	20.25
802.11n _HT20	2 412	-9.04	8.00	17.04
	2 442	-10.44	8.00	18.44
	2 462	-11.20	8.00	19.20
	2 467	-13.90	8.00	21.90
	2 472	-19.93	8.00	27.93

Test Mode	Frequency [MHz]	RU Index	Measured Power Density [dBm]	Limit [dBm]	Margin [dB]
802.11ax _HE20 _26T	2 412	Low	-4.41	8.00	12.41
		Mid	-3.87	8.00	11.87
		High	-3.19	8.00	11.19
	2 442	Low	-3.84	8.00	11.84
		Mid	-4.74	8.00	12.74
		High	-3.91	8.00	11.91
	2 462	Low	-4.86	8.00	12.86
		Mid	-4.90	8.00	12.90
		High	-3.13	8.00	11.13
	2 467	Low	-7.33	8.00	15.33
		Mid	-4.80	8.00	12.80
		High	-6.54	8.00	14.54
	2 472	Low	-18.26	8.00	26.26
		Mid	-18.74	8.00	26.74
		High	-18.98	8.00	26.98



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Test Mode	Frequency [MHz]	RU Index	Measured Power Density [dBm]	Limit [dBm]	Margin [dB]
802.11ax _HE20 _52T	2 412	Low	-5.26	8.00	13.26
		Mid	-5.48	8.00	13.48
		High	-5.07	8.00	13.07
	2 442	Low	-4.18	8.00	12.18
		Mid	-5.36	8.00	13.36
		High	-6.69	8.00	14.69
	2 462	Low	-6.16	8.00	14.16
		Mid	-4.18	8.00	12.18
		High	-6.05	8.00	14.05
	2 467	Low	-9.84	8.00	17.84
		Mid	-8.04	8.00	16.04
		High	-8.84	8.00	16.84
	2 472	Low	-18.61	8.00	26.61
		Mid	-17.51	8.00	25.51
		High	-18.05	8.00	26.05
802.11ax _HE20 _106T	2 412	Low	-7.52	8.00	15.52
		High	-8.15	8.00	16.15
	2 442	Low	-9.23	8.00	17.23
		High	-8.42	8.00	16.42
	2 462	Low	-7.84	8.00	15.84
		High	-9.24	8.00	17.24
	2 467	Low	-11.00	8.00	19.00
		High	-11.31	8.00	19.31
802.11ax _HE20 _242T	2 472	Low	-18.95	8.00	26.95
		High	-19.39	8.00	27.39
	2 412	Low	-11.75	8.00	19.75
	2 442	Mid	-11.20	8.00	19.20
	2 462	High-1	-12.51	8.00	20.51
	2 467	High-2	-13.69	8.00	21.69
	2 472	High-3	-15.73	8.00	23.73

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ANT1 (SISO)

Test Mode	Frequency [MHz]	Measured Power Density [dBm]	Limit [dBm]	Margin [dB]
802.11b	2 412	-2.45	8.00	10.45
	2 442	-1.71	8.00	9.71
	2 462	-3.54	8.00	11.54
	2 467	-0.83	8.00	8.83
	2 472	-8.64	8.00	16.64
802.11g	2 412	-7.30	8.00	15.30
	2 442	-9.51	8.00	17.51
	2 462	-9.11	8.00	17.11
	2 467	-11.39	8.00	19.39
	2 472	-13.42	8.00	21.42
802.11n _HT20	2 412	-9.33	8.00	17.33
	2 442	-9.91	8.00	17.91
	2 462	-10.25	8.00	18.25
	2 467	-12.88	8.00	20.88
	2 472	-19.86	8.00	27.86

Test Mode	Frequency [MHz]	RU Index	Measured Power Density [dBm]	Limit [dBm]	Margin [dB]
802.11ax _HE20 _26T	2 412	Low	-4.51	8.00	12.51
		Mid	-4.33	8.00	12.33
		High	-4.69	8.00	12.69
	2 442	Low	-5.00	8.00	13.00
		Mid	-4.72	8.00	12.72
		High	-3.99	8.00	11.99
	2 462	Low	-3.89	8.00	11.89
		Mid	-4.13	8.00	12.13
		High	-4.94	8.00	12.94
	2 467	Low	-7.12	8.00	15.12
		Mid	-5.69	8.00	13.69
		High	-5.24	8.00	13.24
	2 472	Low	-17.73	8.00	25.73
		Mid	-16.86	8.00	24.86
		High	-18.98	8.00	26.98

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Test Mode	Frequency [MHz]	RU Index	Measured Power Density [dBm]	Limit [dBm]	Margin [dB]
802.11ax _HE20 _52T	2 412	Low	-5.60	8.00	13.60
		Mid	-5.32	8.00	13.32
		High	-5.75	8.00	13.75
	2 442	Low	-5.88	8.00	13.88
		Mid	-5.67	8.00	13.67
		High	-6.01	8.00	14.01
	2 462	Low	-5.62	8.00	13.62
		Mid	-4.74	8.00	12.74
		High	-5.73	8.00	13.73
	2 467	Low	-8.85	8.00	16.85
		Mid	-8.22	8.00	16.22
		High	-7.61	8.00	15.61
	2 472	Low	-17.71	8.00	25.71
		Mid	-17.76	8.00	25.76
		High	-18.91	8.00	26.91
802.11ax _HE20 _106T	2 412	Low	-7.63	8.00	15.63
		High	-9.05	8.00	17.05
	2 442	Low	-7.66	8.00	15.66
		High	-8.50	8.00	16.50
	2 462	Low	-8.52	8.00	16.52
		High	-9.25	8.00	17.25
	2 467	Low	-11.14	8.00	19.14
		High	-10.10	8.00	18.10
802.11ax _HE20 _242T	2 472	Low	-18.93	8.00	26.93
		High	-19.28	8.00	27.28
	2 412	Low	-11.51	8.00	19.51
	2 442	Mid	-12.15	8.00	20.15
	2 462	High-1	-11.48	8.00	19.48
	2 467	High-2	-12.90	8.00	20.90
	2 472	High-3	-15.60	8.00	23.60

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ANT0 + ANT1 (MIMO)

Test Mode	Frequency [MHz]	Measured Power Density [dBm]	Limit [dBm]	Margin [dB]
802.11n_HT20	2 412	-6.17	8.00	14.17
	2 442	-7.16	8.00	15.16
	2 462	-7.69	8.00	15.69
	2 467	-10.35	8.00	18.35
	2 472	-16.88	8.00	24.88

Test Mode	Frequency [MHz]	RU Index	Measured Power Density [dBm]	Limit [dBm]	Margin [dB]
802.11ax _HE20 _26T	2 412	Low	-1.45	8.00	9.45
		Mid	-1.08	8.00	9.08
		High	-0.87	8.00	8.87
	2 442	Low	-1.37	8.00	9.37
		Mid	-1.72	8.00	9.72
		High	-0.94	8.00	8.94
	2 462	Low	-1.34	8.00	9.34
		Mid	-1.49	8.00	9.49
		High	-0.93	8.00	8.93
	2 467	Low	-4.21	8.00	12.21
		Mid	-2.21	8.00	10.21
		High	-2.83	8.00	10.83
	2 472	Low	-14.98	8.00	22.98
		Mid	-14.69	8.00	22.69
		High	-15.97	8.00	23.97
802.11ax _HE20 _52T	2 412	Low	-2.42	8.00	10.42
		Mid	-2.39	8.00	10.39
		High	-2.39	8.00	10.39
	2 442	Low	-1.94	8.00	9.94
		Mid	-2.50	8.00	10.50
		High	-3.33	8.00	11.33
	2 462	Low	-2.87	8.00	10.87
		Mid	-1.44	8.00	9.44
		High	-2.88	8.00	10.88
	2 467	Low	-6.31	8.00	14.31
		Mid	-5.12	8.00	13.12
		High	-5.17	8.00	13.17
	2 472	Low	-15.13	8.00	23.13
		Mid	-14.62	8.00	22.62
		High	-15.45	8.00	23.45

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Test Mode	Frequency [MHz]	RU Index	Measured Power Density [dBm]	Limit [dBm]	Margin [dB]
802.11ax _HE20 _106T	2 412	Low	-4.56	8.00	12.56
		High	-5.57	8.00	13.57
	2 442	Low	-5.36	8.00	13.36
		High	-5.45	8.00	13.45
	2 462	Low	-5.16	8.00	13.16
		High	-6.23	8.00	14.23
	2 467	Low	-8.06	8.00	16.06
		High	-7.65	8.00	15.65
802.11ax _HE20 _242T	2 472	Low	-15.93	8.00	23.93
		High	-16.32	8.00	24.32
	2 412	Low	-8.62	8.00	16.62
	2 442	Mid	-8.64	8.00	16.64
	2 462	High-1	-8.95	8.00	16.95
	2 467	High-2	-10.27	8.00	18.27
	2 472	High-3	-12.65	8.00	20.65

See next pages for actual measured spectrum plots.



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ANT0, 802.11b



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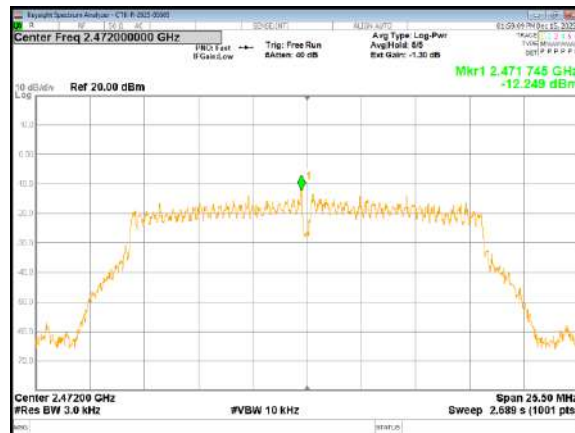
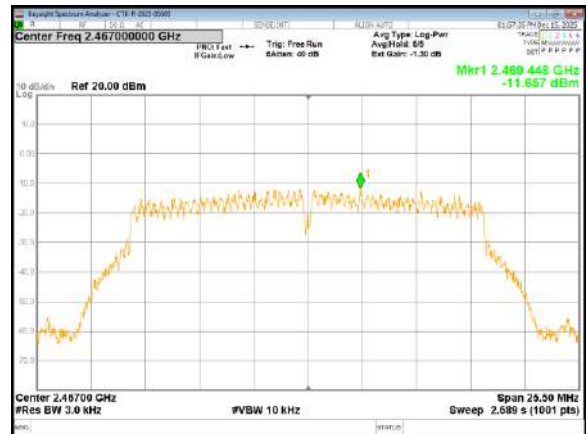
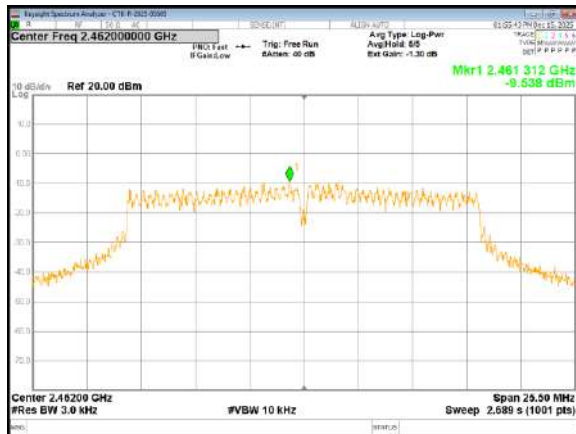
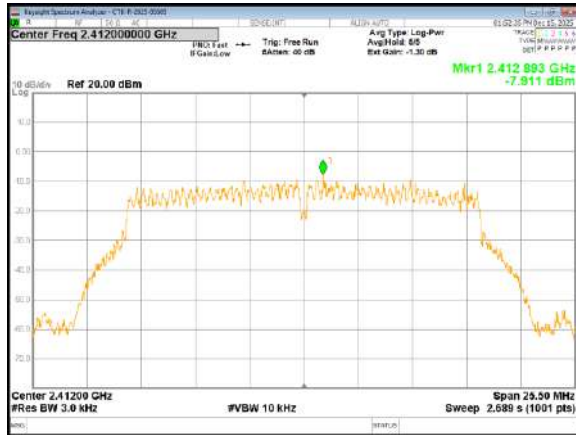
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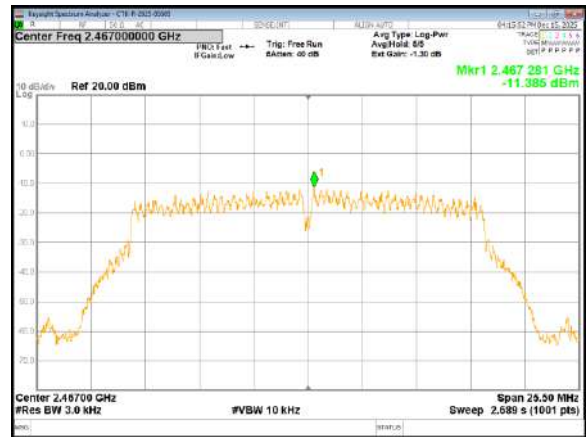
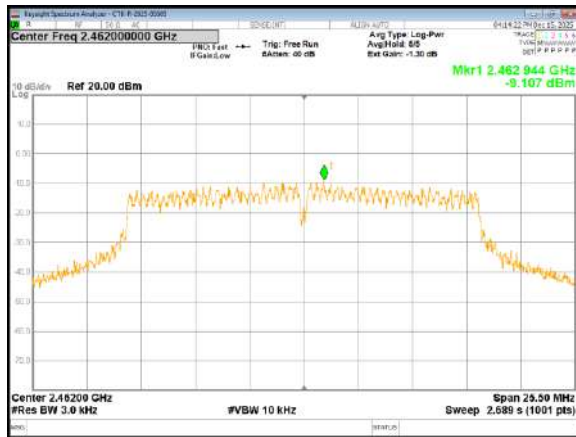
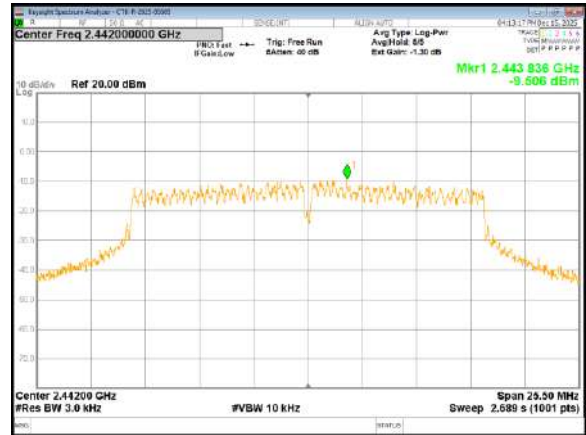
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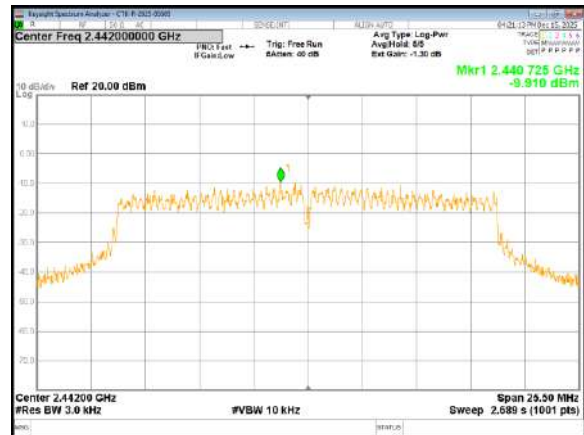
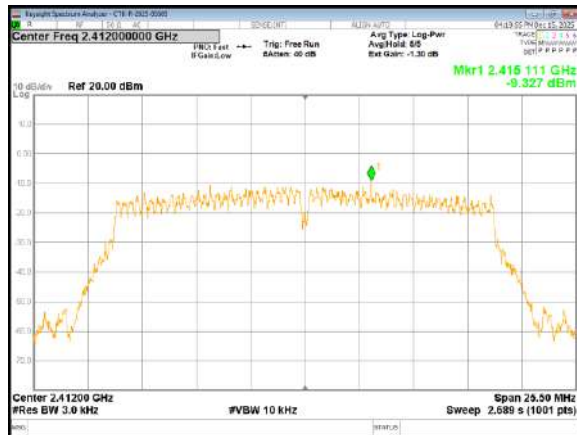
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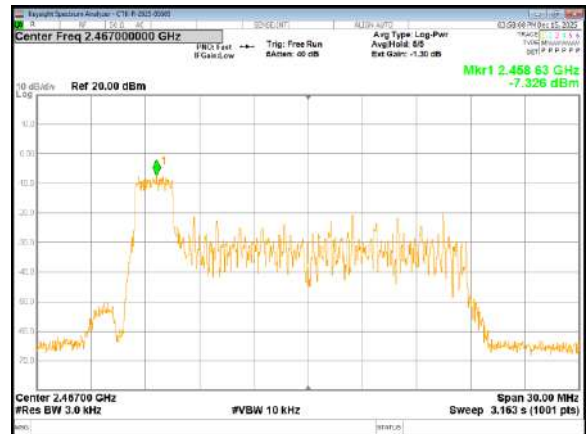
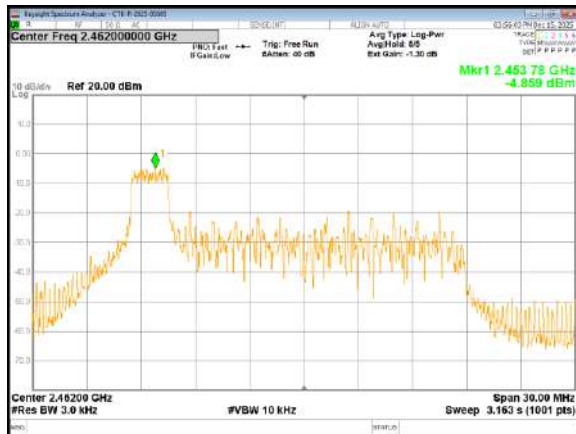
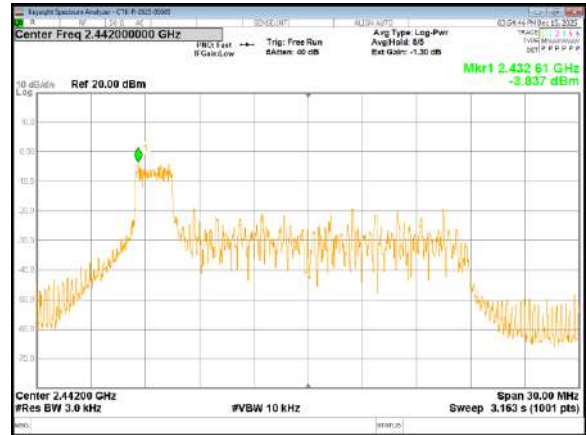
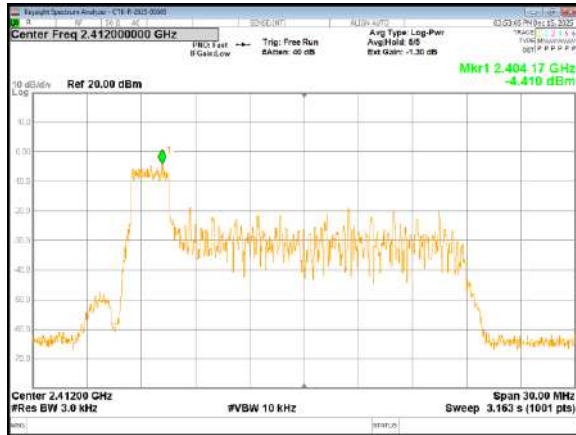
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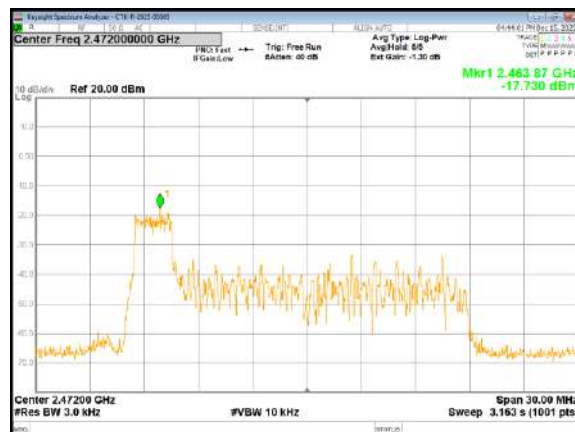
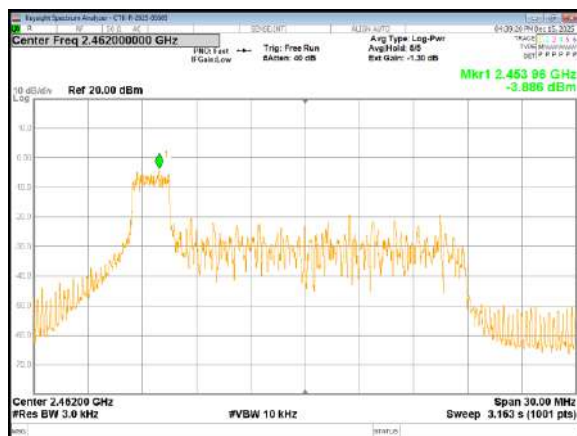
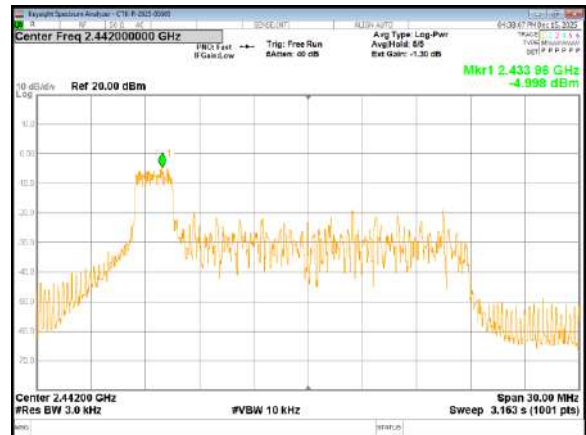
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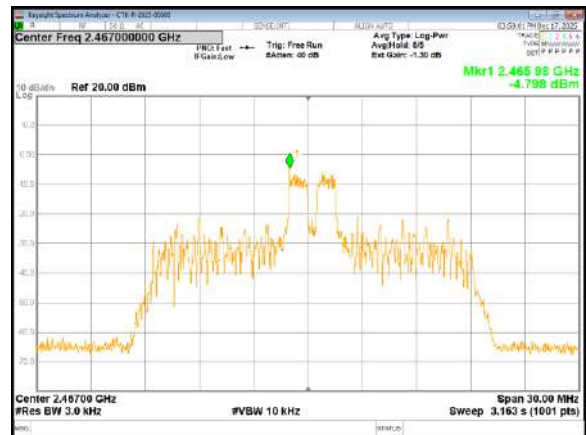
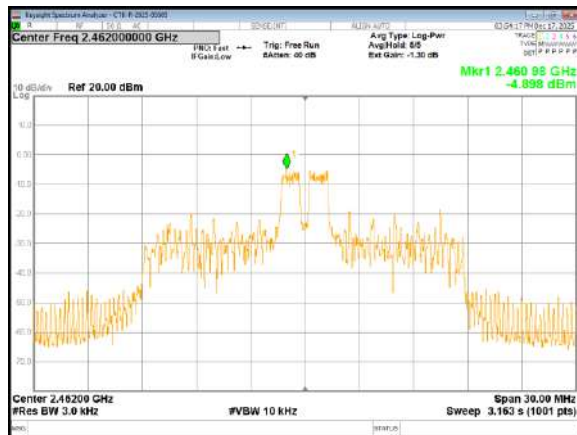
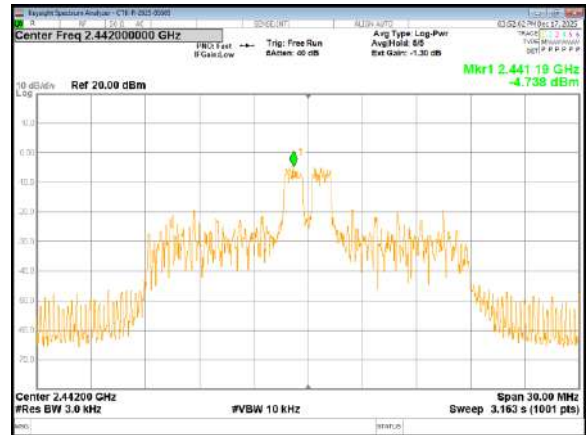
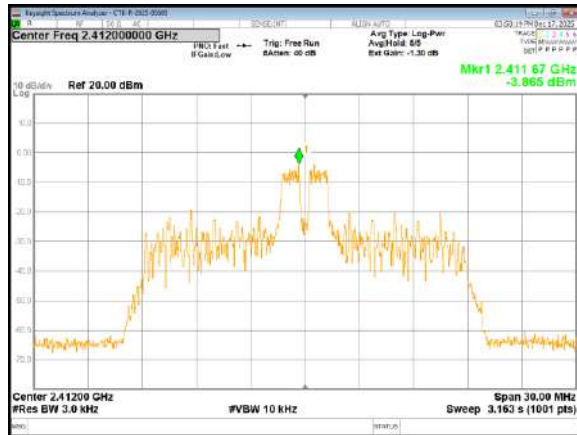
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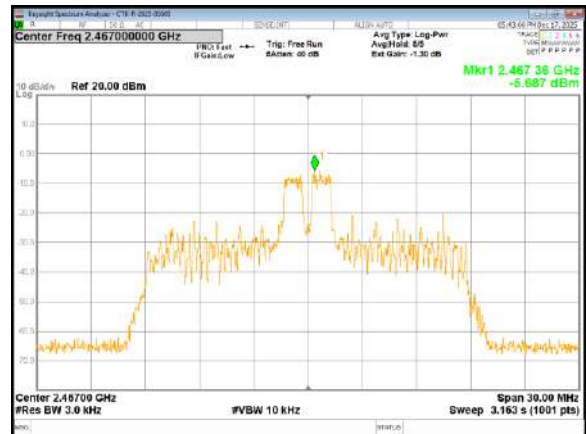
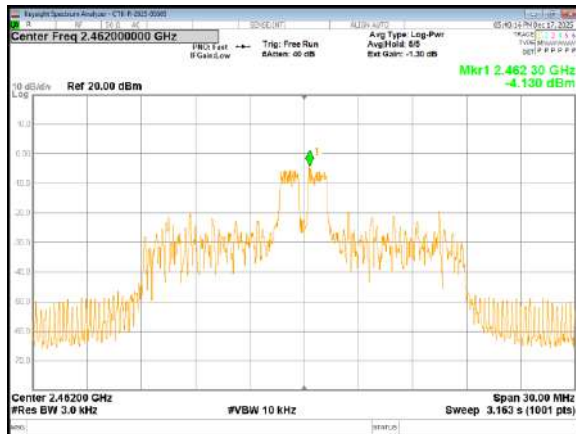
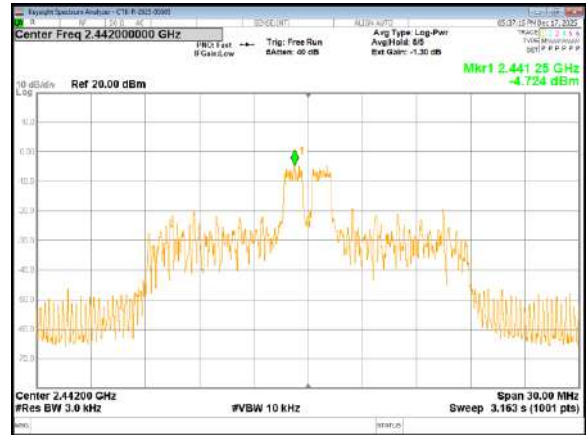
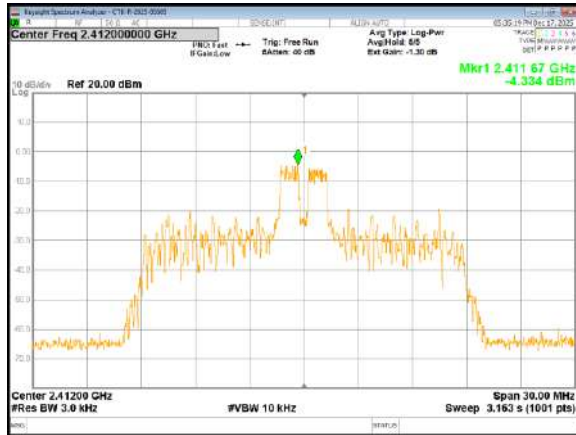
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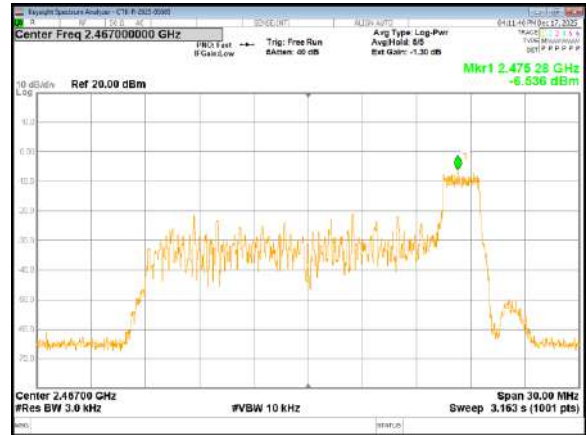
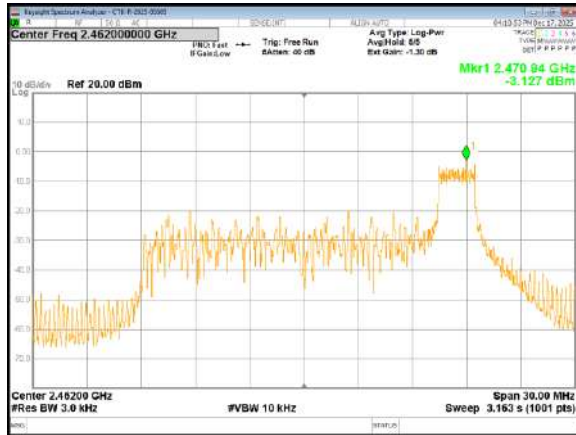
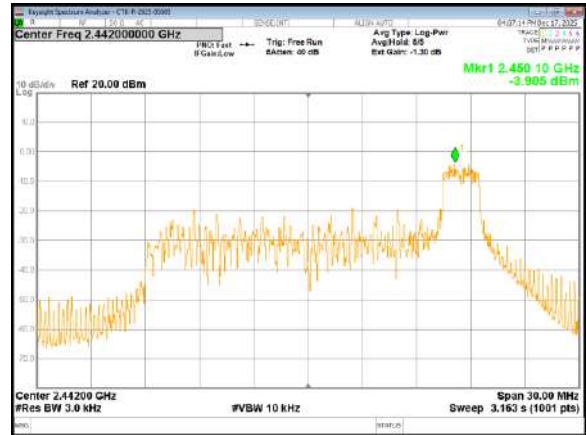
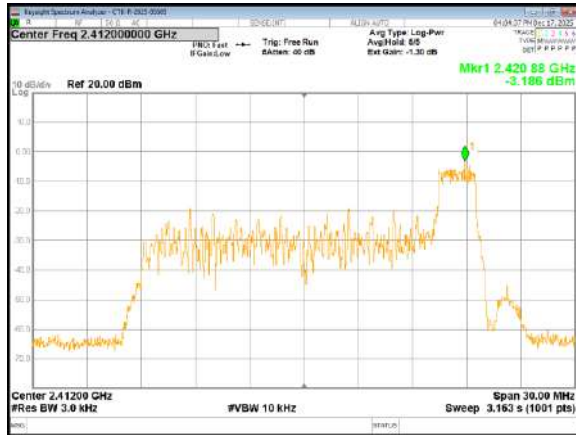
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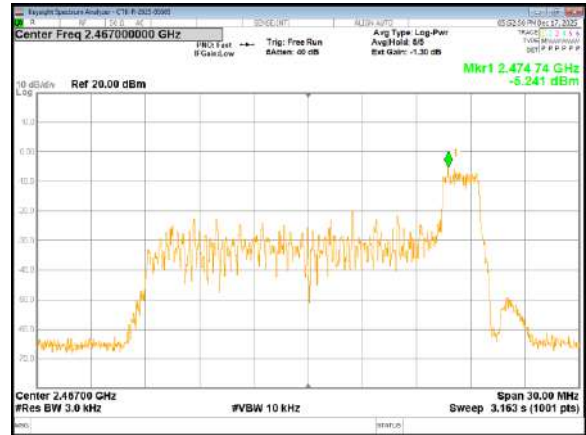
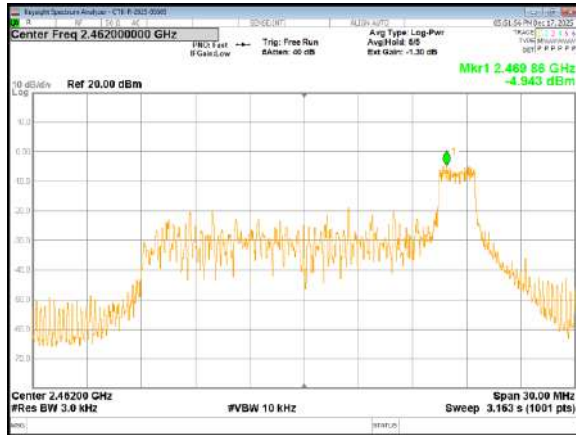
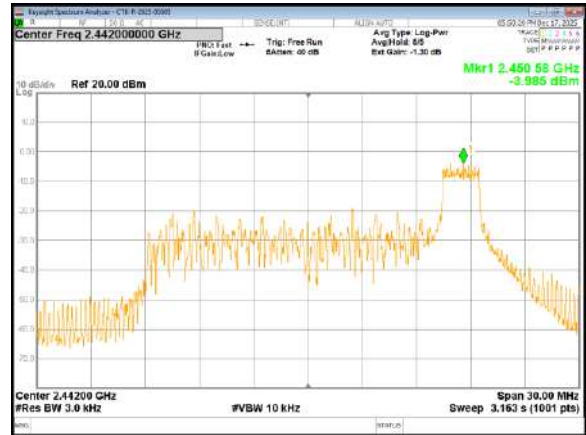
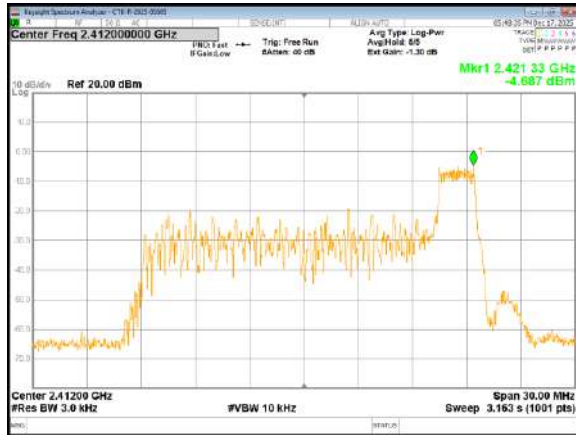
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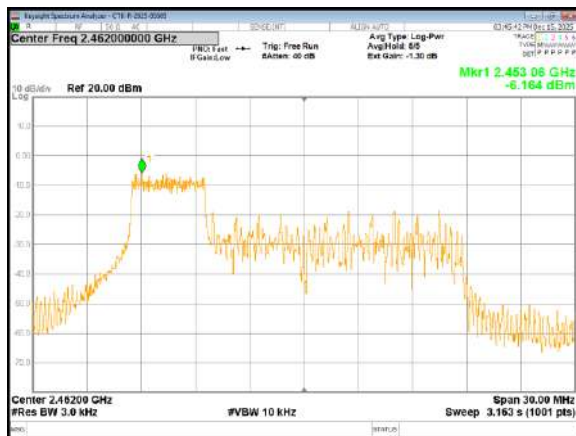
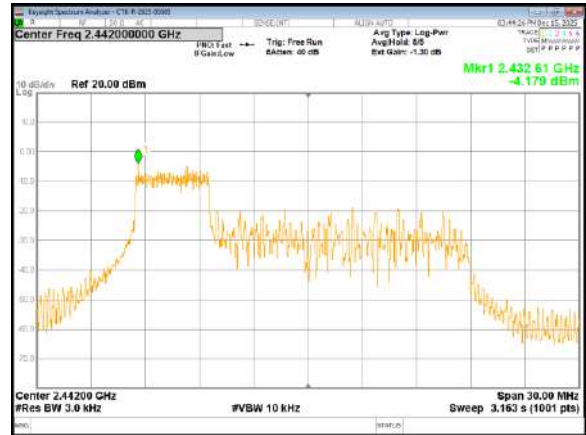
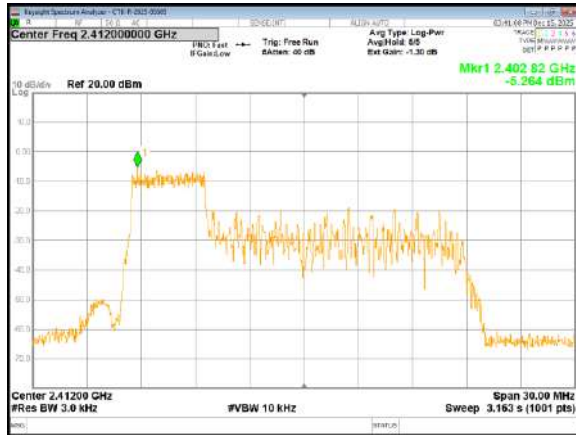
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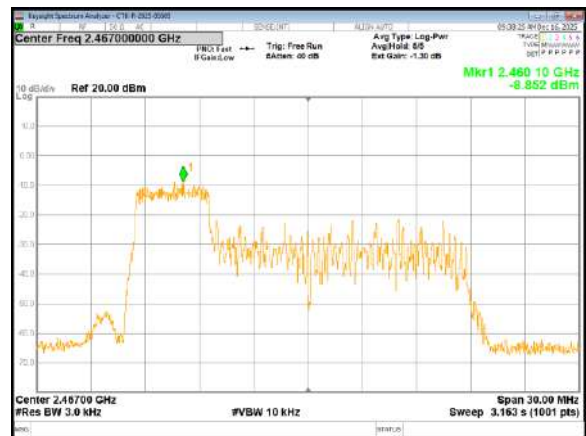
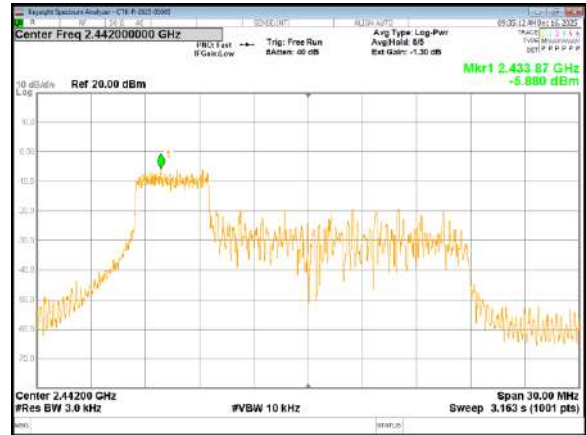
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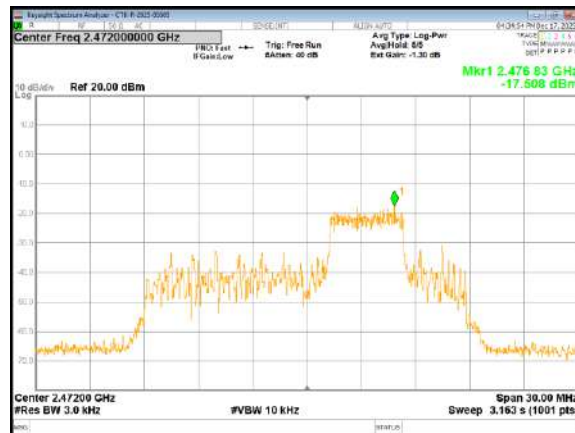
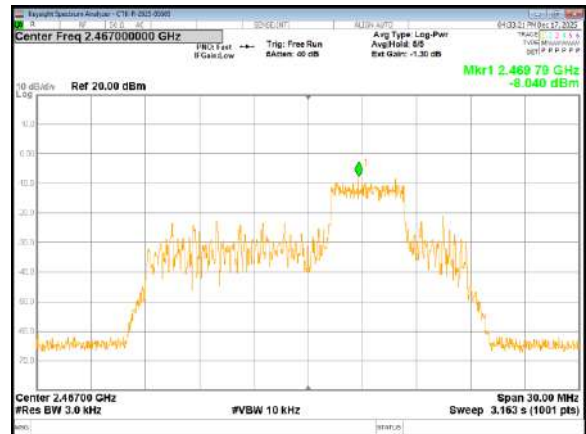
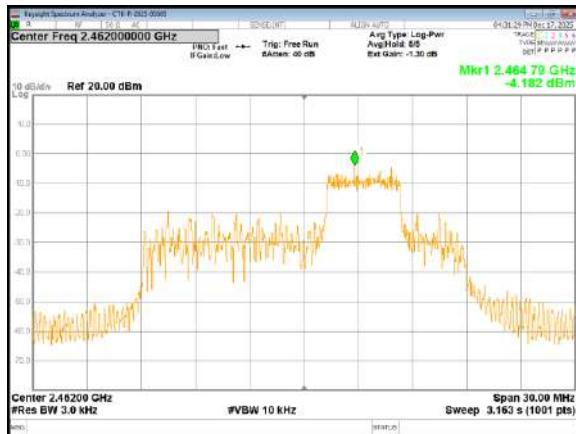
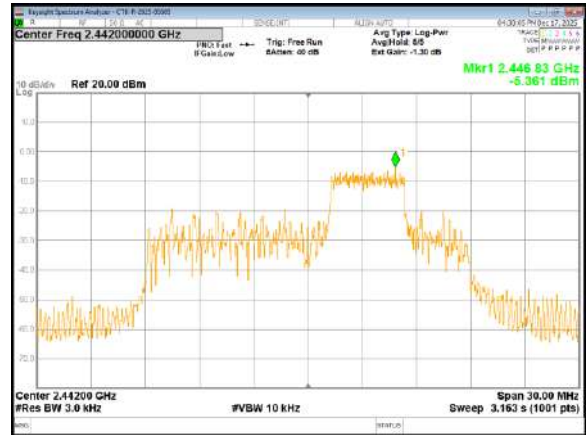
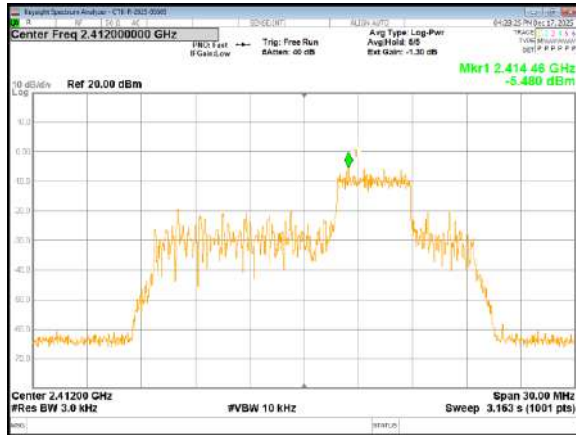
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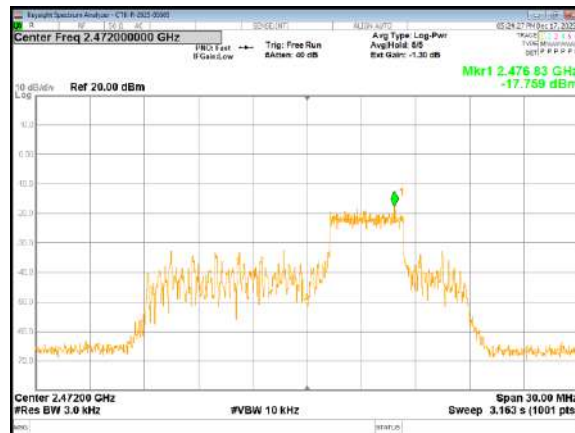
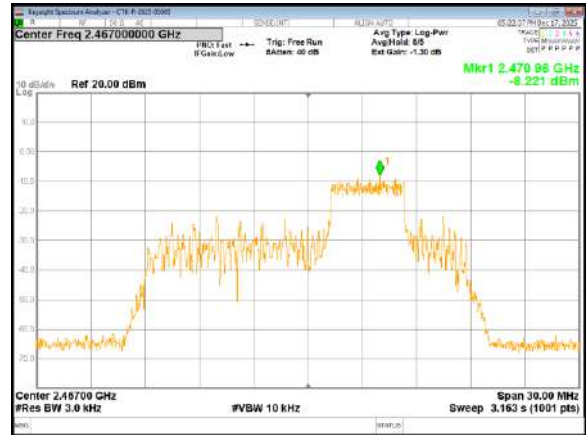
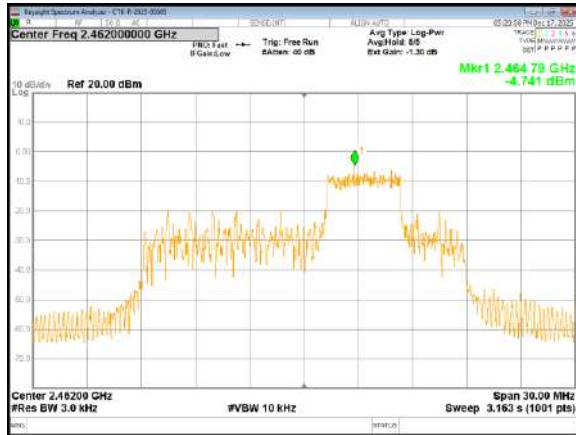
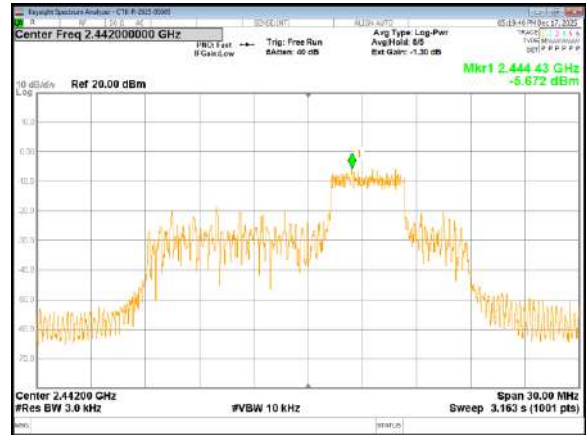
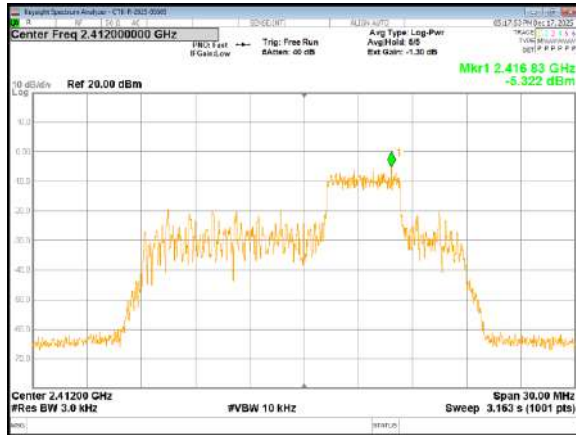
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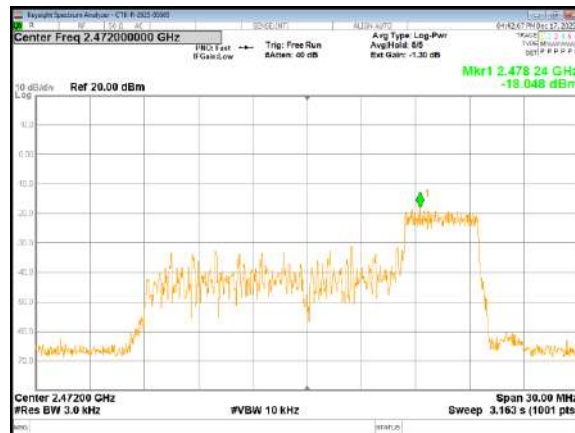
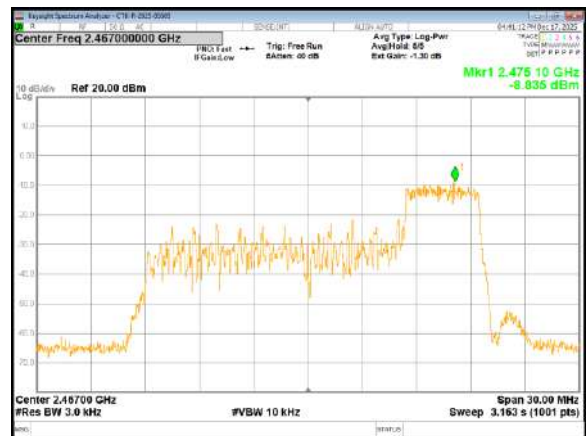
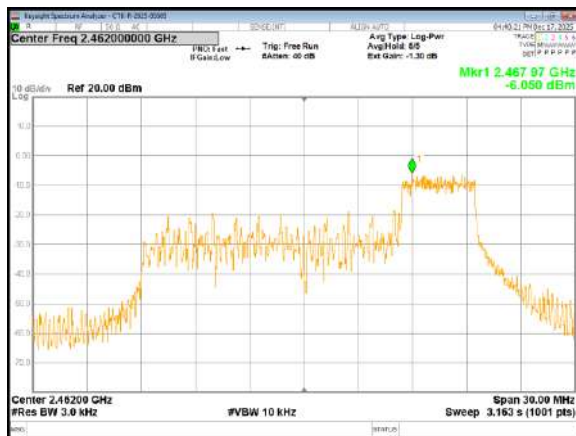
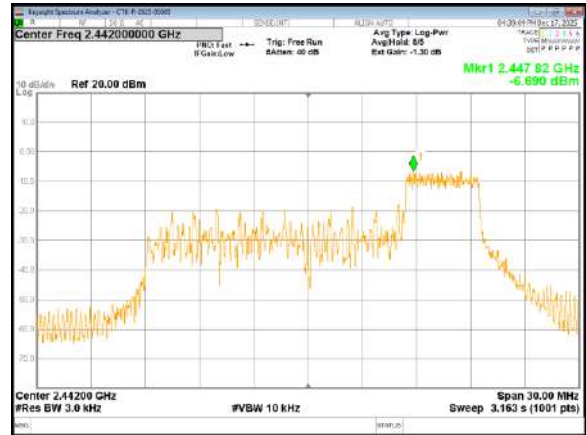
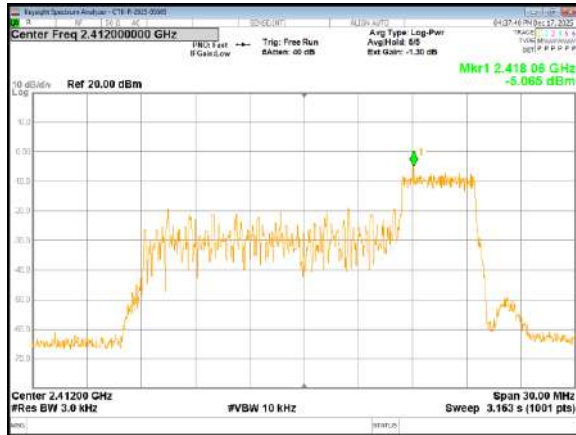
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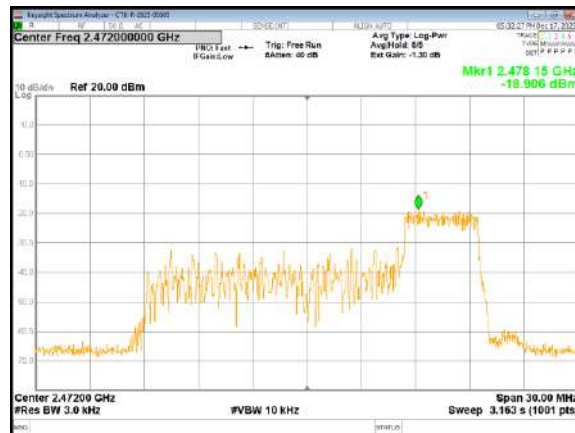
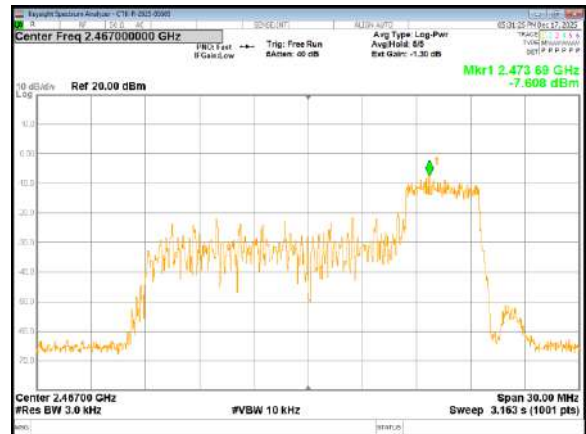
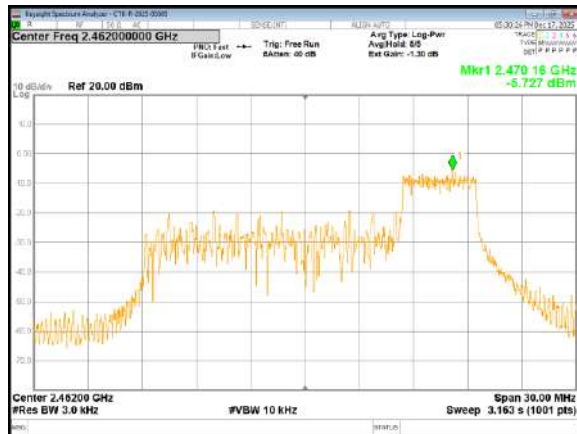
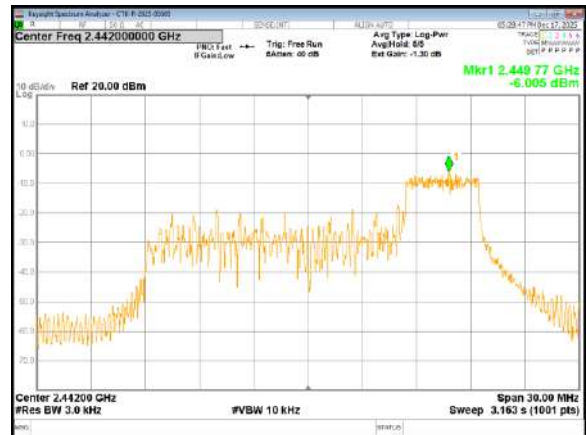
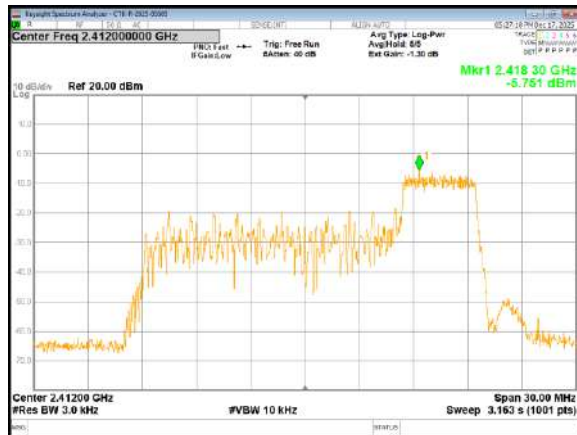
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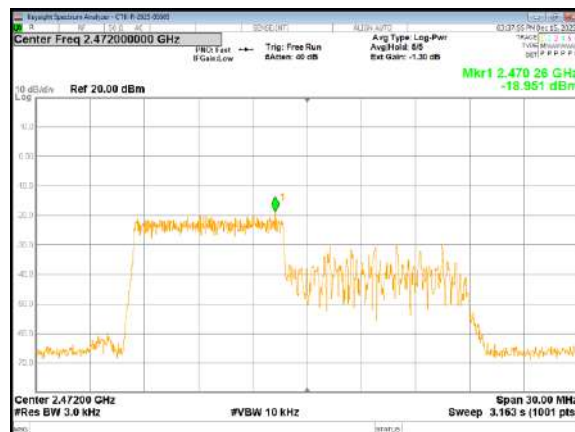
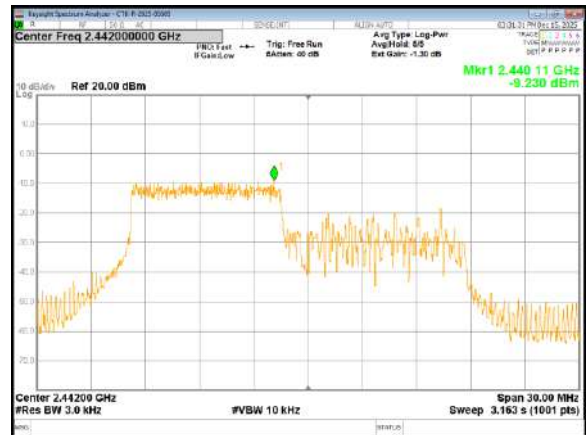
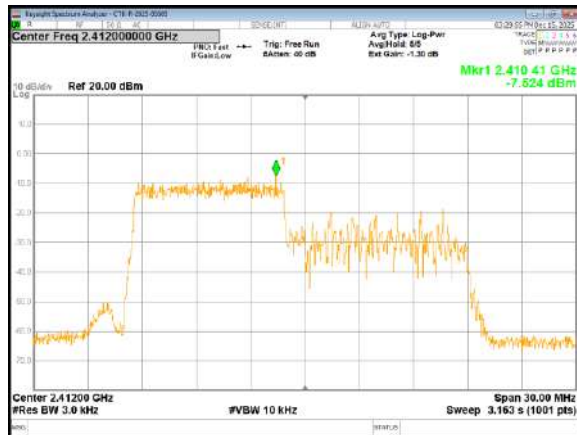
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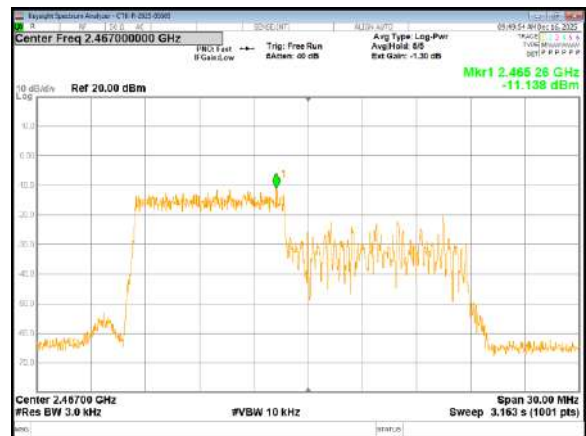
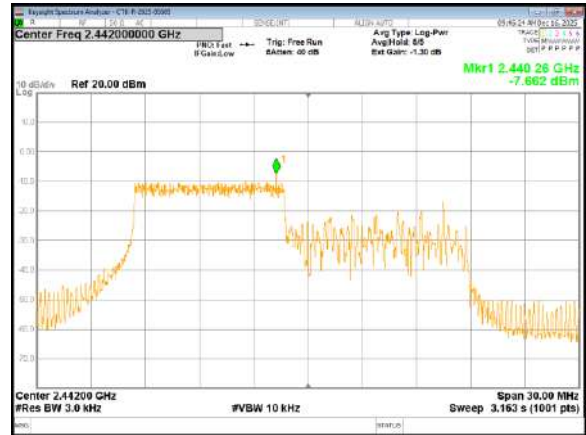
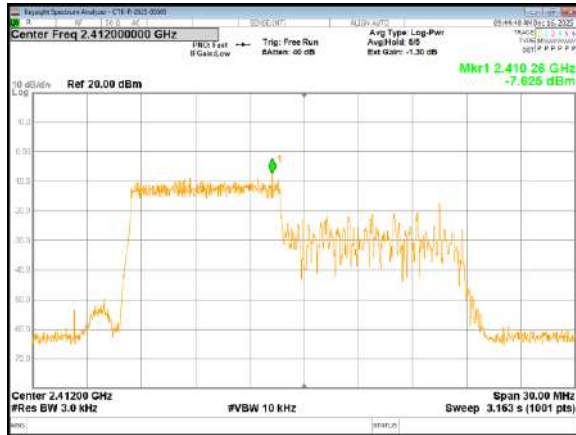
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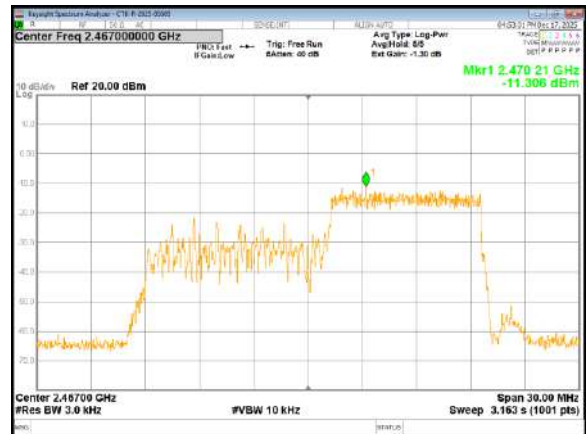
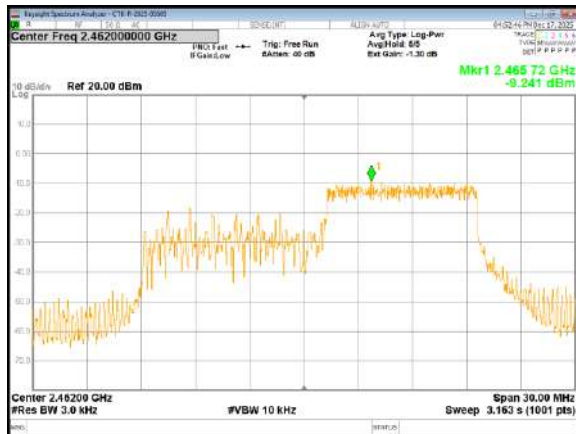
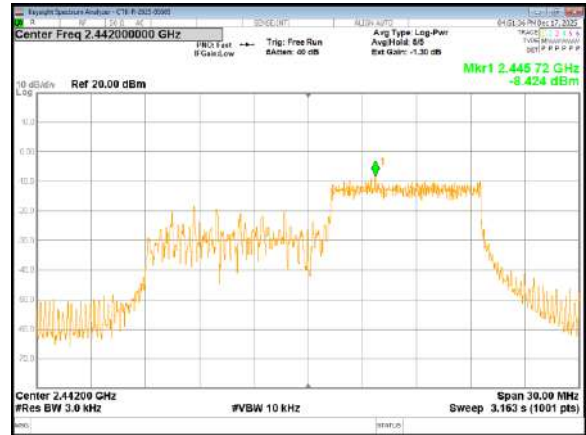
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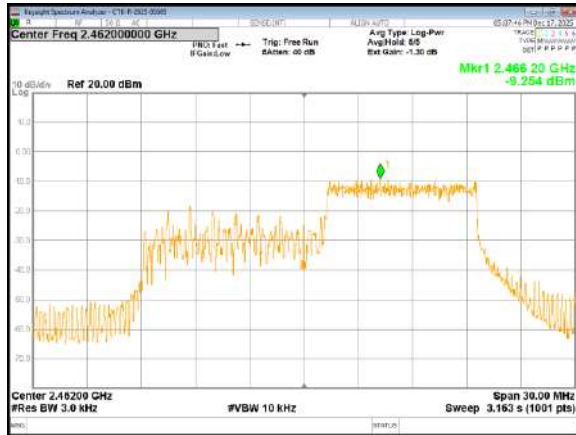
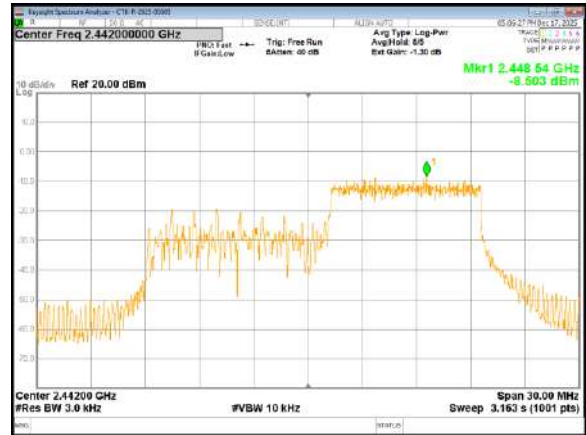
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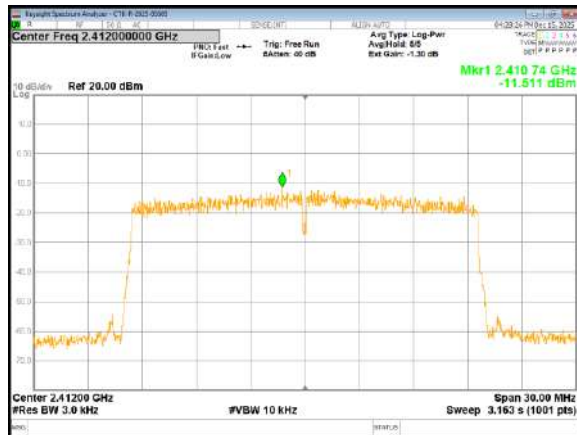
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4.4 Conducted Spurious Emission

Test Procedures

KDB 558074 - Section 8.5

ANSI C63.10-2020 - Section 11.11.2, Section 11.11.3

The Unwanted emission from the EUT were measured according to the dictates PKPSD measurement procedure in section 11.11 of ANSI C63.10-2020.

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB.

- Reference Level

Test Settings:

Center frequency = the highest, middle and the lowest channels

- a) Span $\geq [1.5 \times \text{DTS bandwidth}]$
- b) RBW = 100 kHz
- c) VBW $\geq [3 \times \text{RBW}]$
- d) Detector = peak
- e) Sweep time = No faster than coupled (auto) time.
- f) Trace mode = max hold
- g) Allow trace to fully stabilize
- h) Use the peak marker function to determine the maximum amplitude level.

- Emission Level

Test Settings:

Set the center frequency and span to encompass frequency range to be measured.

- a) RBW = 100 kHz
- b) VBW $\geq [3 \times \text{RBW}]$
- c) Detector = peak
- d) Sweep time = No faster than coupled (auto) time.
- e) Trace mode = max hold
- f) Allow trace to fully stabilize
- g) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements.

Limit :

Emission Level > 20 dBc

Test Results : Complies

- All conducted emission in any 100 kHz bandwidth outside of the spread spectrum band was at least 20 dB lower than the highest in-band spectral density. Therefore the applying equipment meets the requirement.

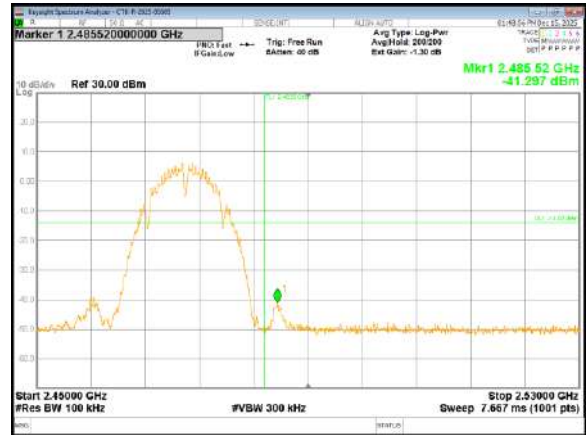
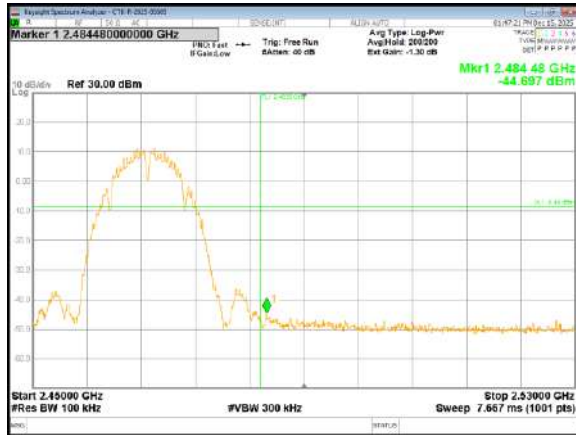
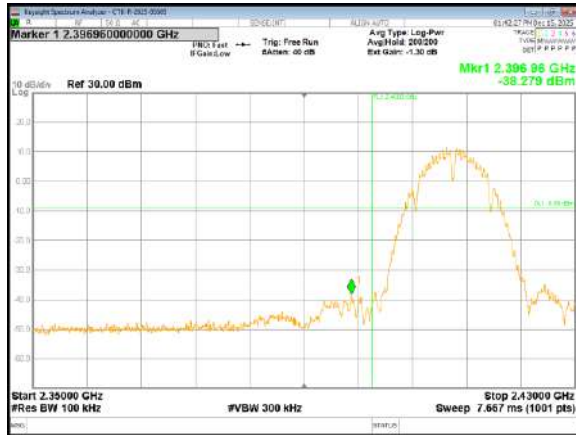
See next pages for actual measured spectrum plots.



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