



TEST REPORT

Report Number: 13911916-E4V2

Applicant : APPLE, INC.
1 APPLE PARK WAY
CUPERTINO, CA 95014, U.S.A

Model : A2595 (Parent Model, Full Test)
A2782, A2783, A2784, A2785 (Variant Models)

FCC ID : BCG-E4082A (Parent Model)
BCG-E8064A, BCG-E4083A, BCG-8076A (Variant Models)

IC : 579C-E4082A (Parent Model)
579C-E8064A, 579C-E4083A, 579C-8076A (Variant Models)

EUT Description : SMARTPHONE

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C
ISED RSS-247 ISSUE 2
ISED RSS-GEN ISSUE 5 + A1 + A2

Date Of Issue:
February 07, 2022

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	1/24/2022	Initial Issue	Chin Pang
V2	2/7/2022	Address TCB's Questions on Cover page and page 9.	Chin Pang

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: APPLE INC.
1 APPLE PARK WAY
CUPERTINO, CA 95014, U.S.A

EUT DESCRIPTION: SMARTPHONE

MODEL: A2595 (Parent Model)
A2782, A2783, A2784, A2785 (Variant Models)

BRAND: APPLE

FCC ID: BCG-E4082A (Parent Model)
BCG-E8064A, BCG-E4083A, BCG-E8076A (Variant Models)

IC: 579C-E4082A (Parent Model)
579C-E8064A, 579C-E4083A, 579C-E8076A (Variant Models)

SERIAL NUMBER: DT23CMFDH2

SAMPLE RECEIPT DATE: SEPTEMBER 08, 2021

DATE TESTED: SEPTEMBER 08, 2021 TO JANUARY 19, 2022

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Complies
ISED RSS-247 Issue 2	Complies
ISED RSS-GEN Issue 5 + A1 + A2	Complies

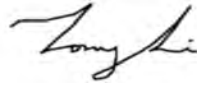
UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
UL Verification Services Inc. By:

Prepared By:



Chin Pang
Senior Engineer
Consumer Technology Division
UL Verification Services Inc.

Tony Li
Test Engineer
Consumer Technology Division
UL Verification Services Inc.

2. TEST RESULTS SUMMARY

This report contains data provided by the customer which can impact the validity of results. UL Verification Services Inc. is only responsible for the validity of results after the integration of the data provided by the customer.

FCC Clause	ISED Clause	Requirement	Result	Comment
See Comment		Duty Cycle	Reporting purposes only	ANSI C63.10 Section 11.6.
-	RSS-GEN 6.7	99% OBW	Reporting purposes only	ANSI C63.10 Section 6.9.3.
15.247 (a) (2)	RSS-247 5.2 (a)	6dB BW	Complies	None.
15.247 (b) (3)	RSS-247 5.4 (d)	Output Power	Complies	None.
See Comment		Average power	Reporting purposes only	Per ANSI C63.10, Section 11.9.2.3.2.
15.247 (e)	RSS-247 5.2 (b)	PSD	Complies	None.
15.247 (d)	RSS-247 5.5	Conducted Spurious Emissions	Complies	None.
15.209, 15.205	RSS-GEN 8.9, 8.10	Radiated Emissions	Complies	None.
15.207	RSS-Gen 8.8	AC Mains Conducted Emissions	Complies	None.

3. TEST METHODOLOGY

The tests documented in this report were performed in accordance with;

- FCC CFR 47 Part 2
- FCC CFR 47 Part 15
- FCC KDB 558074 D01 v05r02 15.247 Meas Guidance
- ANSI C63.10-2013
- RSS-GEN Issue 5 + A1 + A2
- FCC KDB 662911 D01 v02r01
- KDB 414788 D01 Radiated Test Site v01r01
- RSS-247 Issue 2

4. FACILITIES AND ACCREDITATION

UL LLC is accredited by A2LA, certification #0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

Location	Address	ISED CABID	ISED Company Number	FCC Registration
<input type="checkbox"/>	Building 1: 47173 Benicia Street, Fremont, CA 94538, USA	US0104	2324A	550739
<input checked="" type="checkbox"/>	Building 2: 47266 Benicia Street, Fremont, CA 94538, USA	US0104	22541	550739
<input checked="" type="checkbox"/>	Building 4: 47658 Kato Rd, Fremont, CA 94538, USA	US0104	2324B	550739

5. DECISION RULES AND MEASUREMENT UNCERTAINTY

5.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

5.2. DECISION RULES

The Decision Rule is based on Simple Acceptance in accordance with ISO Guide 98-4:2012 Clause 8.2. (Measurement uncertainty is not taken into account when stating conformity with a specified requirement.)

5.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	U_{Lab}
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	2.87 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	6.01 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 dB

Uncertainty figures are valid to a confidence level of 95%.

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The Apple iPhone is a smartphone with multimedia functions (music, application support, and video), cellular GSM, GPRS, EGPRS, UMTS, LTE, 5G FR1, IEEE 802.11a/b/g/n/ac/ax, Bluetooth, GPS and NFC. All models support at least one UICC based SIM. The second SIM is an UICC based e-SIM (electronic SIM) in some models. China model has 1 p-SIM only. The device supports a built-in inductive charging receiver. The rechargeable battery is not user accessible.

Testing was performed on the parent model and is used to support the application for the parent and variants identified in this report based on the test plan submitted and approved via KDB inquiry by the FCC and by ISED-Canada.

The Model and FCC IDs / ISED covered by this report includes:

Parent Model: A2595, FCC ID: BCG-E4082A, IC: 579C-E4082A

Variant Models: A2782, FCC ID: BCG-E8064A, IC: 579C-E8064A
 A2783; FCC ID: BCG-E4083A, IC: 579C-E4083A
 A2784 & A2785, FCC ID: BCG-E8076A, IC: 579C-8076A

6.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
1Tx			
2412 - 2472	802.11b	21.39	137.72
	802.11g	Covered by 802.11n HT20 1TX	
	802.11n HT20	21.46	139.96
	802.11ax HE20	21.41	138.36

2Tx			
2412 - 2472	802.11n HT20 CDD	24.30	269.15
	802.11g SDM/STBC	Covered by 802.11n HT20 2TX CDD	
	802.11ax HE20	24.42	276.69

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The antenna(s) gain and type, as provided by the manufacturer' are as follows:

Frequency Range (GHz)	ANT2 (dBi)	ANT3 (dBi)
2.4	2.6	-0.3

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was WiFi FW Version: 20.86.1.6.

6.5. WORST-CASE CONFIGURATION AND MODE

EUT was investigated in three orthogonal orientations X, Y and Z on ANT2 (Core 0), ANT 3 (Core 1) and 2TX. It was determined that X (Flatbed) orientation was worst-case orientation for both ANT2 and 2TX and Y (Landscape) orientation for ANT 3.

Radiated band edge, harmonic, and spurious emissions from 1GHz to 18GHz were performed with the EUT set to transmit at highest power on Low/Middle/High channels.

Radiated emissions below 1GHz, 18-26GHz and power line conducted emissions were performed with the EUT transmits at the channel with the highest output power as worst-case scenario. There were no emissions found below 30MHz within 20dB of the limit.

For radiated harmonics spurious below 1GHz, 1-18GHz L/M/H channels, 18-26GHz, and power line conducted emissions were performed with the EUT set at the 2TX CDD mode among the CDD/SDM modes and 2TX HE mode with power setting equal or higher than SISO modes as worst-case scenario. G mode covered by HT20 mode since it has the same power as HT20.

Below 1GHz tests were performed with EUT connected to AC power adapter as the worst case; and for above 1GHz tests, the worst-case configuration reported was with EUT only. For AC line conducted emission, test was investigated with AC power adapter and with laptop.

The output power and psd for the 802.11 ax mode were investigated between all different tones, and we found that SU mode had the highest output power and the lowest tone had the highest PSD readings. And after investigation, antenna port conducted tests were performed on both SU and lowest tones; radiated spurious emission and radiated band edge tests were performed on full RU, SU and lowest tones.

Low data rate was used to test on antenna port conducted tests and radiated spurious emissions since it has the highest maximum power. For radiated bandedge, following are the worst-case data rates set for test:

802.11b mode: 1 Mbps
 802.11n HT20mode: MCS7
 802.11ax HE20mode: MCS9
 802.11ax HE20 FULL RU, RU26 and SU.

There are two vendors of the WiFi/Bluetooth radio modules: variant 1 and variant 2. The Wi-Fi/Bluetooth radio modules have the same mechanical outline (e.g., the same package

dimension and pin-out layout), use the same on-board antenna matching circuit, have an identical antenna structure, and are built and tested to conform to the same specifications and to operate within the same tolerances.

Baseline testing was performed on the two variants to determine the worst case on all conducted power and radiated emissions.

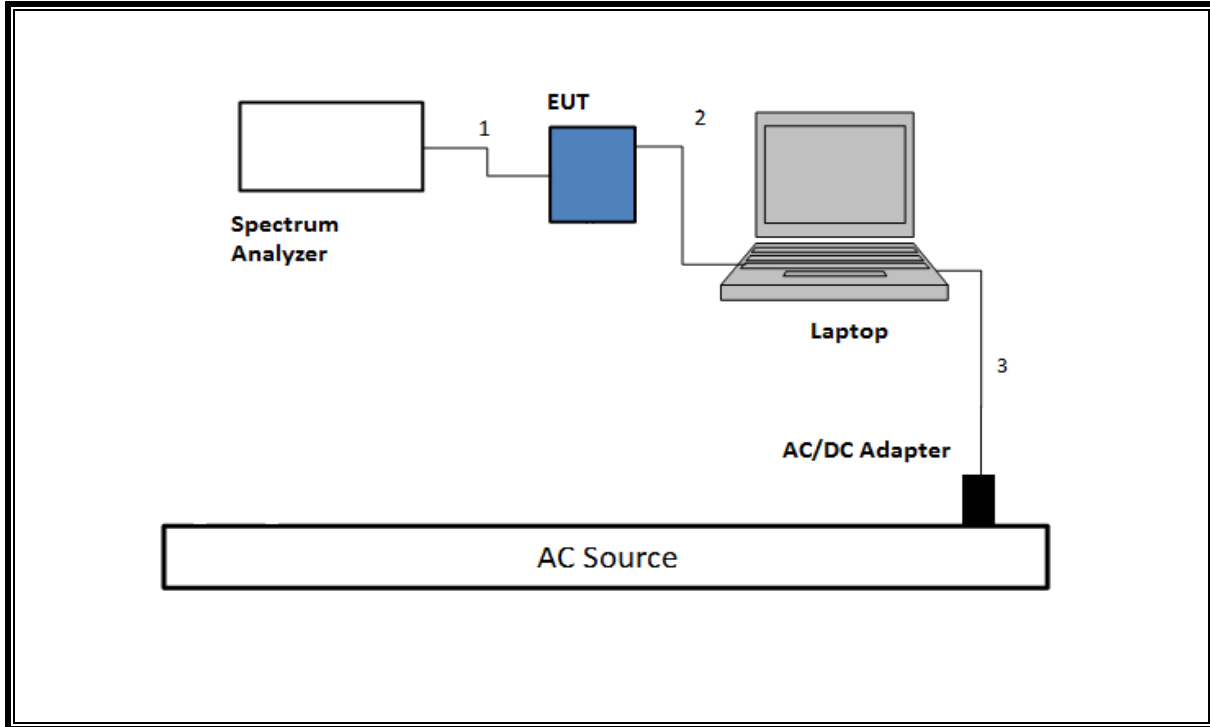
6.6. DESCRIPTION OF TEST SETUP

SUPPORT TEST EQUIPMENT						
Description	Manufacturer	Model	Serial Number	FCC ID/ DoC		
Laptop	Apple	Macbook Pro	C02VD7SAHV22	BCGA1708		
Laptop AC/DC adapter	Liteon Technology	A1424	NSW25679	DoC		
EUT AC/DC adapter	Apple	A1720	C3D8417A7R93KVPA8	DoC		
I/O CABLES (RF CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	1	SMA	Un-shielded	0.2	To spectrum Analyzer
2	USB	1	USB	Shielded	1.0	N/A
3	AC	1	AC	Un-shielded	2	N/A
I/O CABLES (RF RADIATED AND AC LINE CONDUCTED TEST)						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	AC	1	AC	Un-shielded	2	N/A
2	USB	1	USB	Un-shielded	1	N/A

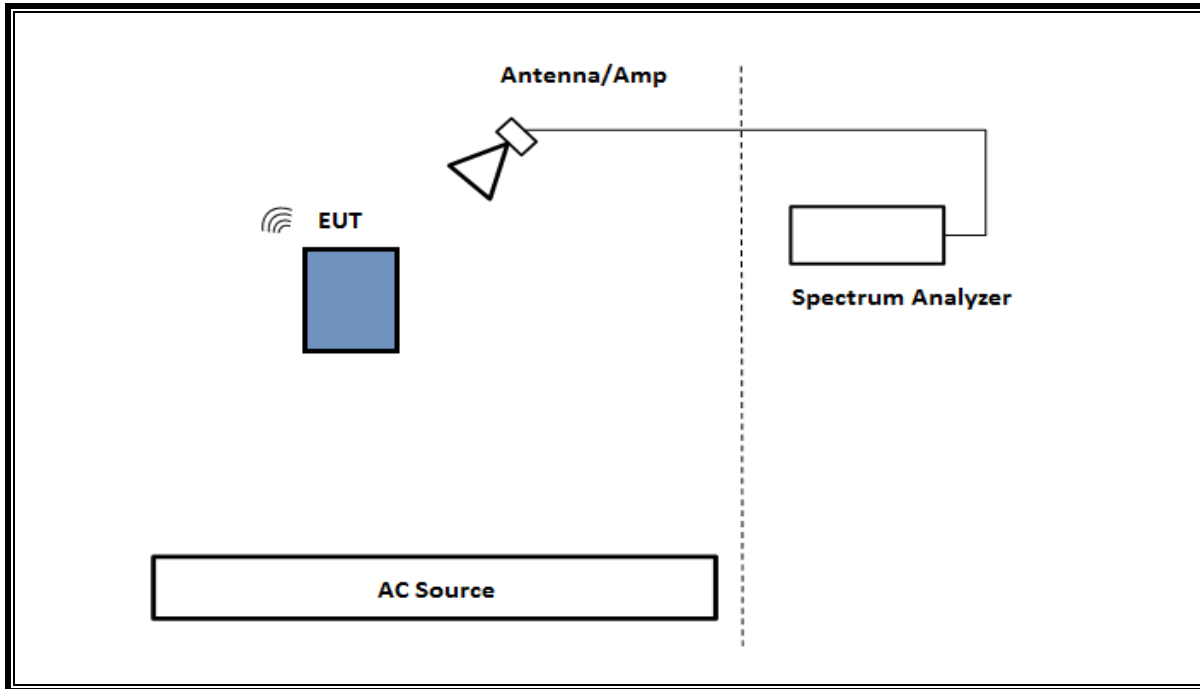
TEST SETUP

The EUT setup is shown as below. Test software exercised the radio card.

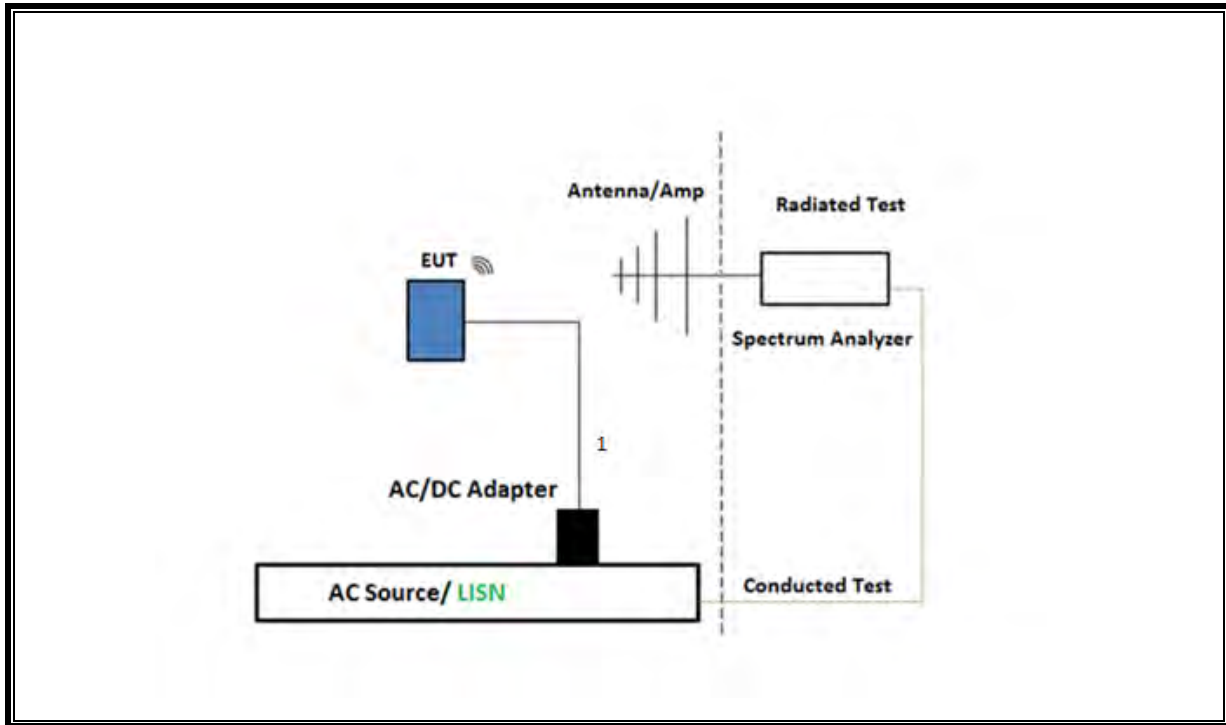
SETUP DIAGRAM FOR CONDUCTED TESTS



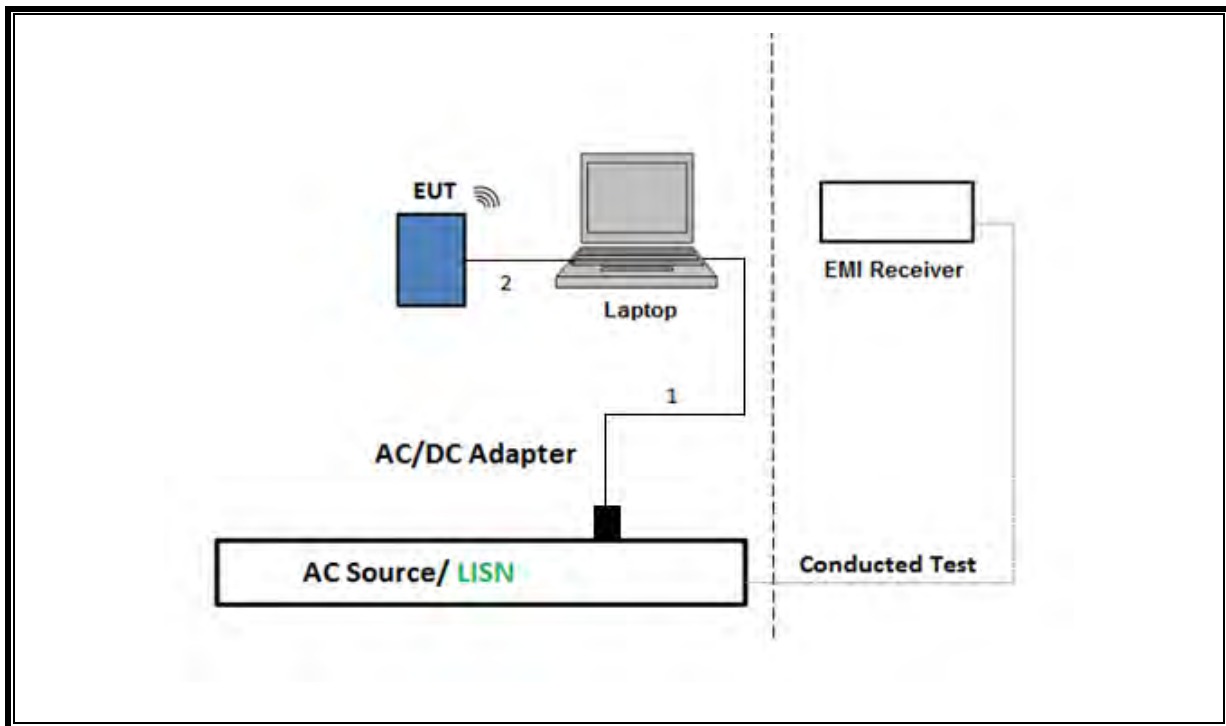
SETUP DIAGRAM FOR RADIATED TESTS Above 1 GHz



SETUP DIAGRAM FOR Below 1GHz and AC LINE CONDUCTED TEST



TEST SETUP- AC LINE CONDUCTED: LAPTOP CONFIGURATION



7. MEASUREMENT METHOD

Test Item	Test Method
6 dB BW	ANSI C63.10 Subclause -11.8.1 RBW \geq DTS BW
99% BW	ANSI C63.10-2013, Subclause 6.9.3.
Output Power	ANSI C63.10 Subclause -11.9.2.3.2 Method AVGPM-G (Measurement using an RF average-reading power meter)
PSD	ANSI C63.10 Subclause -11.10.3 Method AVGPSD-1
Radiated emissions non-restricted frequency bands	ANSI C63.10 Subclause -11.11 & Clause 13
Radiated emissions restricted frequency bands	ANSI C63.10 Subclause -11.12.1 & Clause 13
Conducted emissions in restricted frequency bands	ANSI C63.10 Subclause -11.12.2
Band-edge	ANSI C63.10 Subclause -11.13.3.2 & Clause 13: Integration method -Peak detection
Band-edge	ANSI C63.10 Subclause -11.13.3.3 & Clause 13: Integration method -Trace averaging with continuous transmission at full power
Radiated Spurious Emissions Below 30MHz	ANSI C63.10-2013 Subclause 6.4 & Clause 13
AC Power Line Conducted Emissions	ANSI C63.10-2013, Subclause 6.2

8. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST					
Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	T341	01/28/2022	01/28/2021
*Power Meter, P-series single channel	Keysight Technologies Inc	N1912A	T1245	01/21/2022	01/21/2021
Power Sensor, P - series, 50MHz to 18GHz, Wideband	Keysight Technologies Inc	N1921A	T1225	01/28/2022	01/28/2021
Antenna, Horn 1-18GHz	ETS Lindgren	3117	T712	03/22/2022	03/22/2021
Amplifier, 1 to 18GHz	Miteq	AFS42-00101800-25-S-42	126912	10/13/2022	10/13/2021
Antenna, Horn 1-18GHz	ETS Lindgren	3117	PRE0078107	03/01/2022	03/01/2021
Amplifier, 1 to 18GHz	AMPLICAL	AMP1G18-35	138301	03/30/2022	03/30/2021
*Spectrum Analyzer, PXA 3Hz to 44GHz	Keysight	N9030A	T1466	01/25/2022	01/25/2021
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences	JB3	204045	03/03/2022	03/03/2021
Antenna	ETS-Lindgren	3117	206806	06/22/2022	06/22/2021
Amplifier, 1 to 18GHz, 35dB	AMPLICAL	AMP1G18-35	T1571	08/19/2022	08/19/2021
Amplifier 10KHz to 1GHz 32dB	Sonoma	310N	79145	07/21/2022	07/21/2021
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T342	01/25/2022	01/25/2021
Antenna Horn 18 to 26.5GHz	ARA	MWH-1826/B	81140	04/22/2022	04/22/2021
Pre-Amp 18-26GHz	Agilent Technology	8449B	T404	04/19/2022	04/19/2021
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1454	01/27/2022	01/27/2021
*Antenna, Active Loop 9KHz to 30MHz	EMCO	6502	T35	11/23/2021	11/23/2020
EMI Test Receiver	Rohde & Schwarz	ESW44	Pre0179367	02/21/2022	02/21/2021
Antenna	ETS-Lindgren	3117	206805	02/03/2022	02/03/2021
RF Amplifier, 1-18GHz	AMPLICAL	AMP0.1G18-47-20	206055	05/13/2022	05/13/2021

AC Line Conducted					
EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESR	T1436	02/19/2022	02/19/2021
*Power Cable, Line Conducted Emissions	UL	PR1	T861	10/27/2021	10/27/2020
*LISN for Conducted Emissions CISPR-16	FISCHER CUSTOM COMMUNICATIONS	FCC-LISN-50/250-25-2-01	PRE0186446	01/20/2022	01/20/2021
UL AUTOMATION SOFTWARE					
Radiated Software	UL	UL EMC	Ver 9.5, April 26, 2016		
Conducted Software	UL	UL EMC	Ver 5.4, October 13, 2016		
AC Line Conducted Software	UL	UL EMC	Ver 9.5, May 26, 2015		

*Testing is completed before equipment expiration date.

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
2.4GHz Band						
802.11b	1.920	1.920	1.000	100.00%	0.00	0.010
802.11n HT20 MCS0	1.920	1.941	0.989	98.92%	0.00	0.010
802.11n HT20 MCS7	227.7	249.4	0.913	91.30%	0.40	0.004
802.11ax HE20 MCS0	1.560	1.582	0.986	98.61%	0.00	0.010
802.11ax HE20 MCS9	161.5	185.6	0.870	86.97%	0.61	0.006
802.11ax HE20 SU MCS9	167.5	190.0	0.882	88.16%	0.55	0.006

Duty cycle 2TX is the same as 1TX.

DUTY CYCLE PLOTS



DUTY CYCLE 802.11b MODE



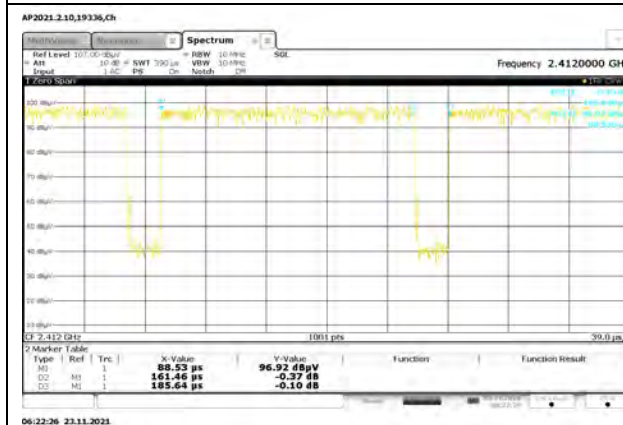
DUTY CYCLE 802.11n HT20 MCS0



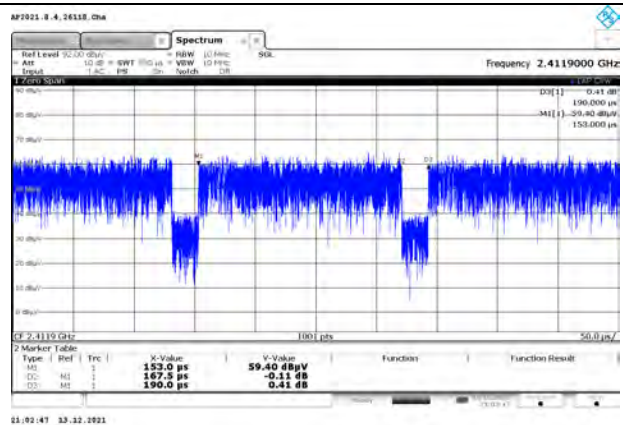
DUTY CYCLE 802.11n HT20 MCS7



DUTY CYCLE 802.11ax HE20 MCS0



DUTY CYCLE 802.11ax HE20 MCS9



DUTY CYCLE 802.11ax HE20 SU MCS09

9.2. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

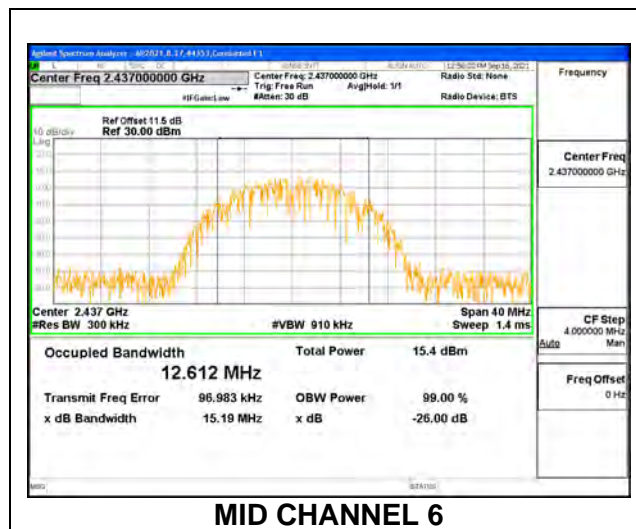
RESULTS

Only Mid channel plot is reported to show setting parameter complies with testing method/procedure.

9.2.1. 802.11b MODE 1TX

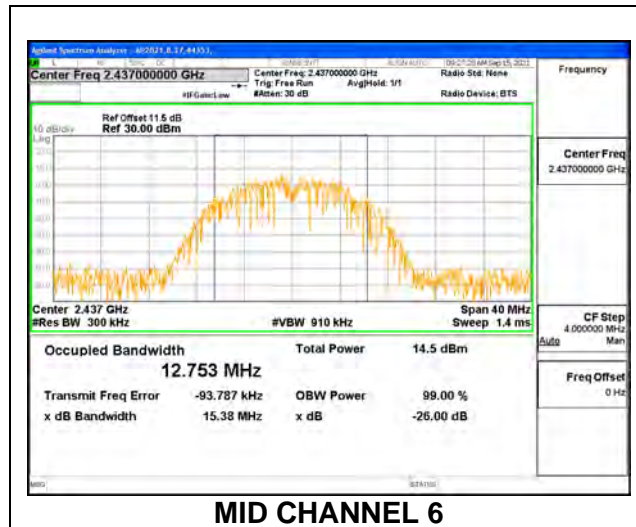
1TX ANT2 MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	12.886
Low 2	2417	13.036
Mid 6	2437	12.612
High 7	2442	12.656
High 8	2447	12.824
High 9	2452	13.221
High 10	2457	12.640
High 11	2462	12.714
High 12	2467	12.655
High 13	2472	12.500



1TX ANT3 MODE

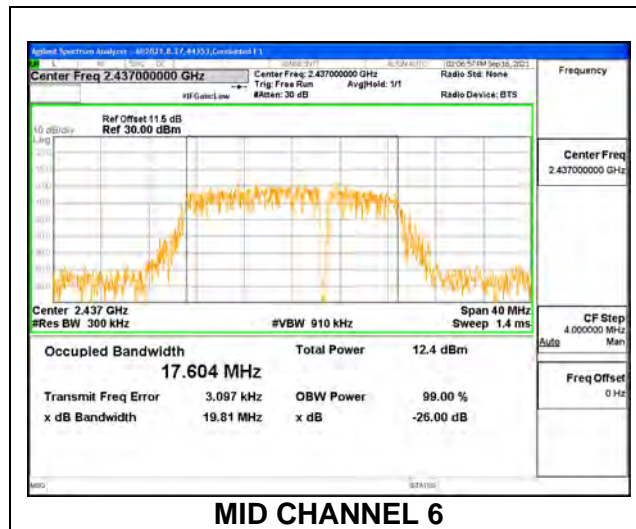
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	12.618
Low 2	2417	13.015
Mid 6	2437	12.753
High 7	2442	12.862
High 8	2447	12.870
High 9	2452	12.849
High 10	2457	12.548
High 11	2462	12.711
High 12	2467	12.754
High 13	2472	12.568



9.2.2. 802.11n HT20 MODE

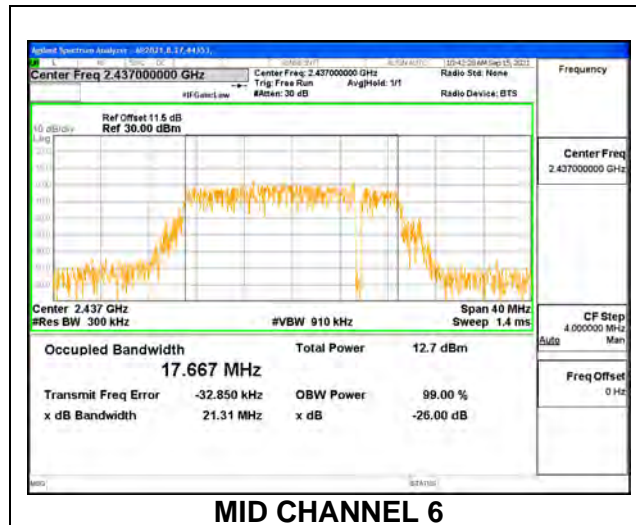
1TX ANT2 MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	17.778
Low 2	2417	17.771
Mid 6	2437	17.604
High 10	2457	17.846
High 11	2462	17.602
High 12	2467	17.751
High 13	2472	17.541



1TX ANT3 MODE

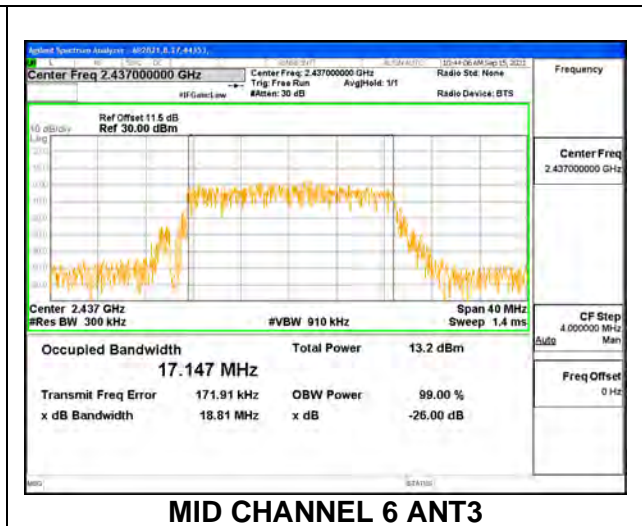
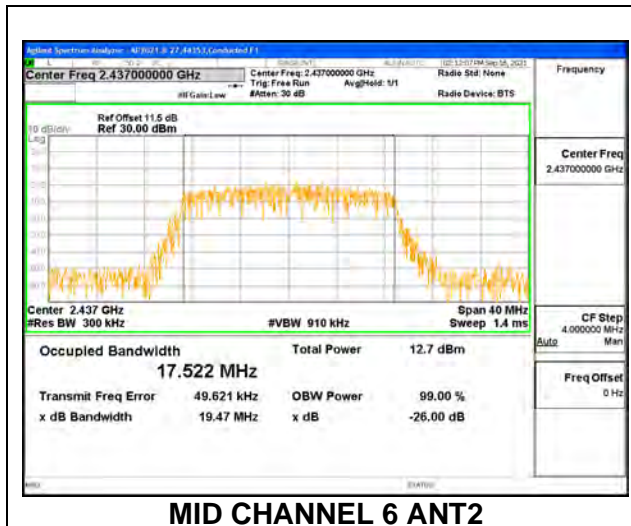
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	17.666
Low 2	2417	17.015
Mid 6	2437	17.667
High 10	2457	17.624
High 11	2462	17.189
High 12	2467	17.514
High 13	2472	17.648



9.2.3. 802.11n HT20 CDD MODE

ANT2 + ANT3 2TX MODE

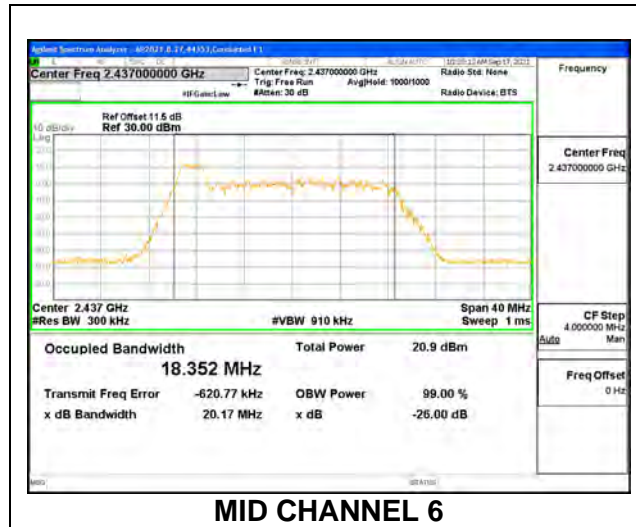
Channel	Frequency (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
		ANT2	ANT3
Low 1	2412	17.784	17.735
Low 2	2417	17.846	17.626
Low 3	2422	17.880	17.799
Low 4	2427	17.029	17.595
Mid 6	2437	17.522	17.147
High 9	2452	17.749	17.680
High 10	2457	17.665	17.733
High 11	2462	17.537	17.630
High 12	2467	17.467	17.615
High 13	2472	17.640	17.662



9.2.4. 802.11ax HE20 MODE

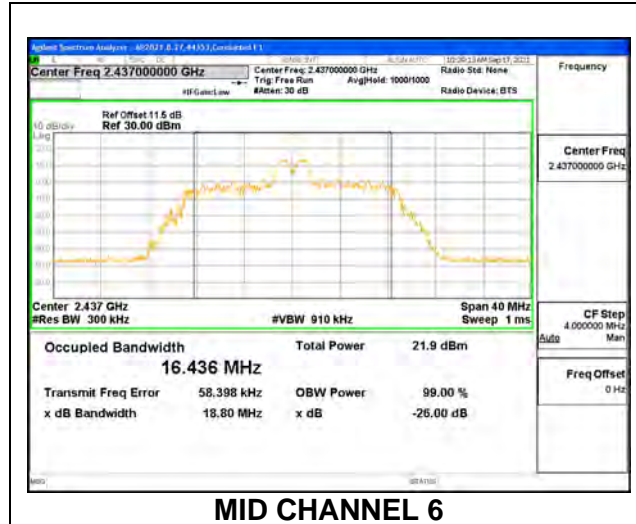
ANT2 LEGACY SISO MODE: 26-Tones, RU index 0

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	18.272
Mid 6	2437	18.352
High 11	2462	18.408
High 12	2467	18.211
High 13	2472	18.075



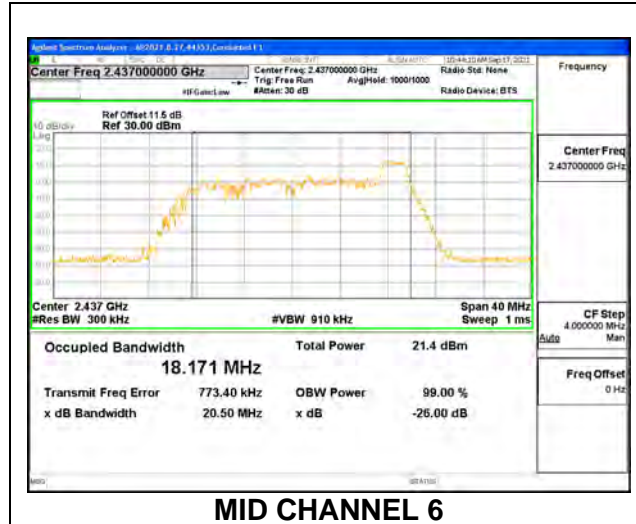
ANT2 LEGACY SISO MODE: 26-Tones, RU Index 4

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	16.609
Mid 6	2437	16.436
High 11	2462	16.914
High 12	2467	16.678
High 13	2472	16.420



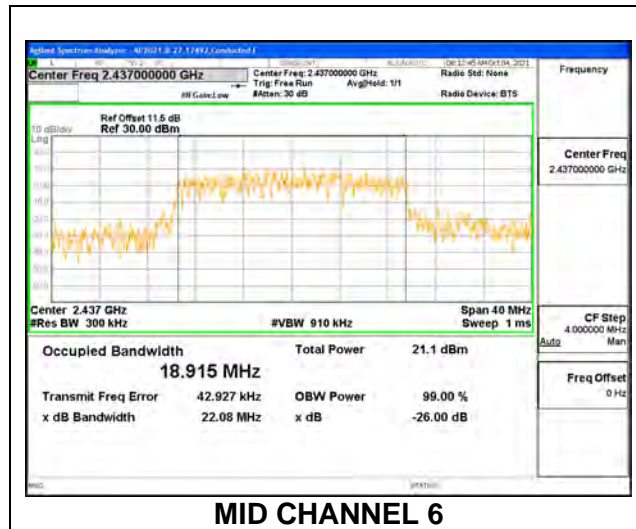
ANT2 LEGACY SISO MODE: 26-Tones, RU Index 8

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	18.738
Mid 6	2437	18.171
High 11	2462	18.413
High 12	2467	18.400
High 13	2472	18.447



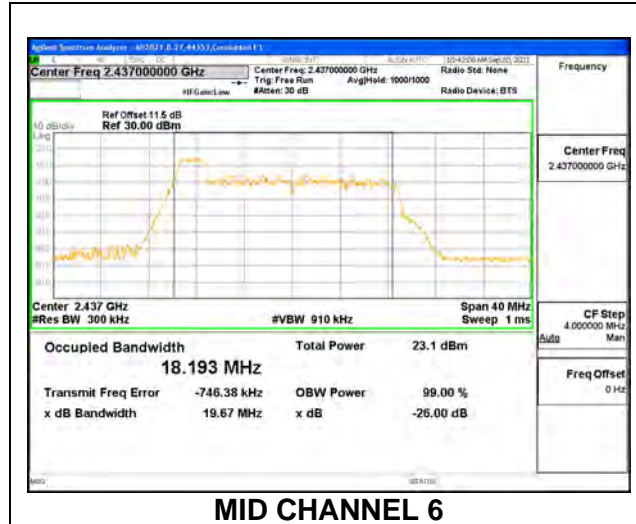
ANT2 LEGACY SISO MODE: SU Mode

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	19.004
Low 2	2417	18.777
Low 3	2422	19.887
Mid 6	2437	18.915
High 9	2452	18.963
High 10	2457	18.908
High 11	2462	18.892
High 12	2467	18.555
High 13	2472	18.671



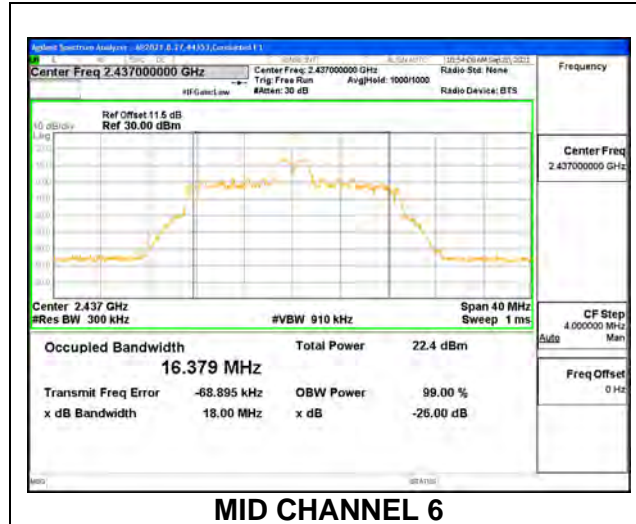
ANT3 LEGACY SISO MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	18.361
Mid 6	2437	18.193
High 11	2462	18.285
High 12	2467	18.211
High 13	2472	18.094



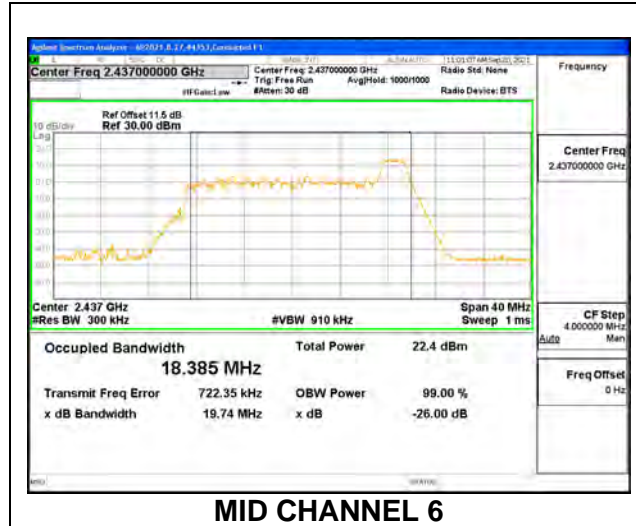
ANT3 LEGACY SISO MODE: 26-Tones, RU Index 4

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	16.476
Mid 6	2437	16.379
High 11	2462	16.664
High 12	2467	16.483
High 13	2472	16.351



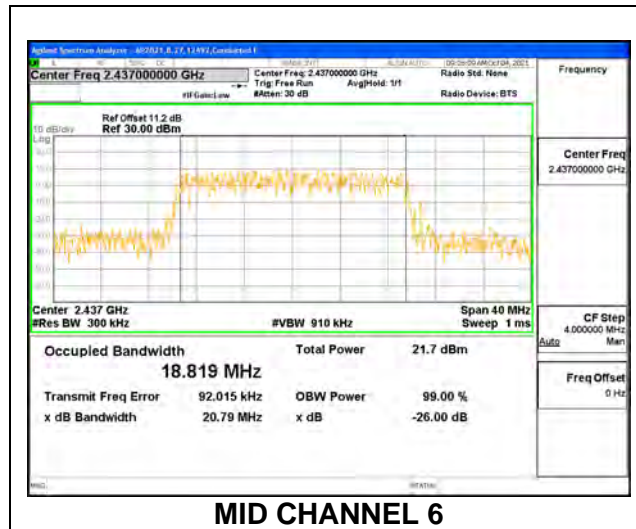
ANT3 LEGACY SISO MODE: 26-Tones, RU Index 8

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	17.917
Mid 6	2437	18.385
High 11	2462	18.365
High 12	2467	18.412
High 13	2472	18.416



ANT3 LEGACY SISO MODE: SU Mode

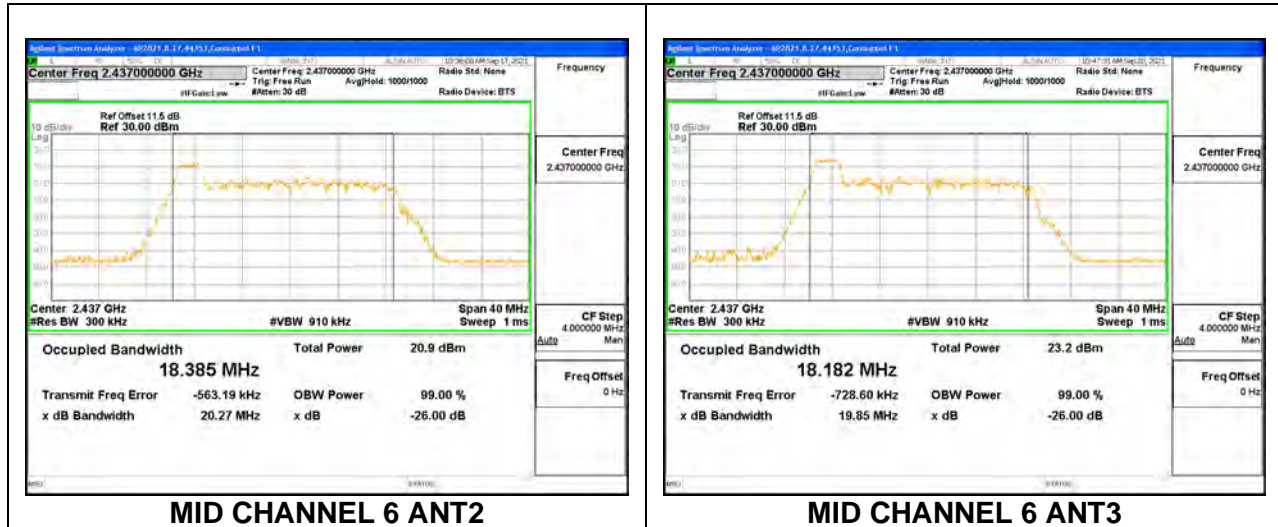
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	18.651
Low 2	2417	18.745
Low 3	2422	19.047
Mid 6	2437	18.819
High 9	2452	18.773
High 10	2457	18.957
High 11	2462	19.046
High 12	2467	18.798
High 13	2472	18.512



9.2.5. 802.11ax HE20 OFDMA MODE 2TX

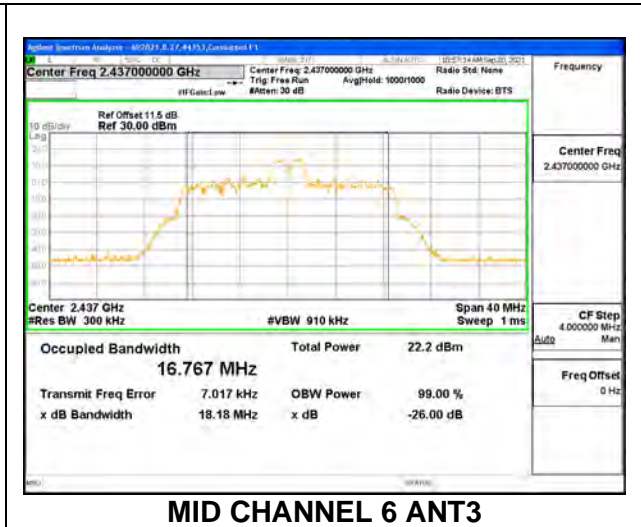
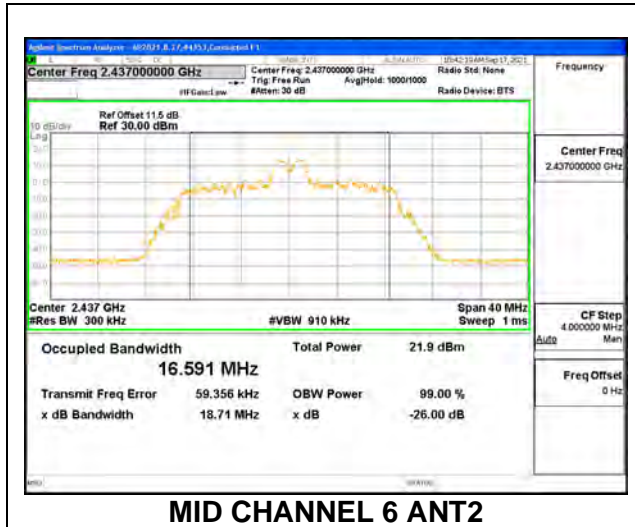
ANT2 + ANT3 2TX MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
		ANT2	ANT3
Low 1	2412	18.294	18.324
Mid 6	2437	18.385	18.182
High 11	2462	18.139	18.214
High 12	2467	18.227	18.173
High 13	2472	18.038	17.486



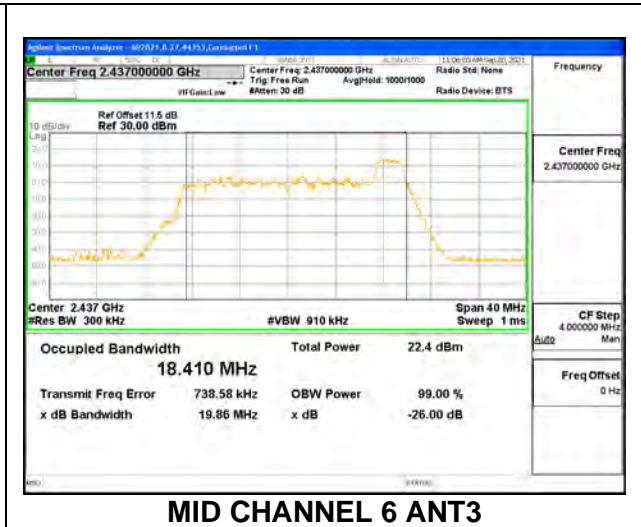
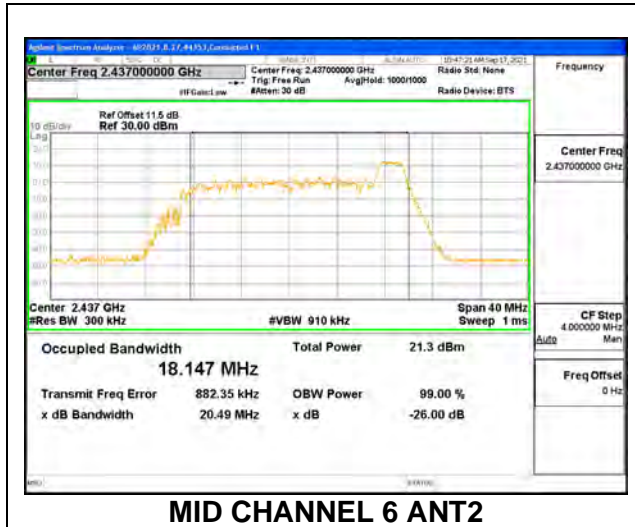
ANT2 + ANT3 2TX MODE: 26-Tones, RU Index 4

Channel	Frequency (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
		ANT2	ANT3
Low 1	2412	16.620	16.388
Mid 6	2437	16.591	16.767
High 11	2462	17.039	16.392
High 12	2467	16.184	16.478
High 13	2472	16.576	16.394



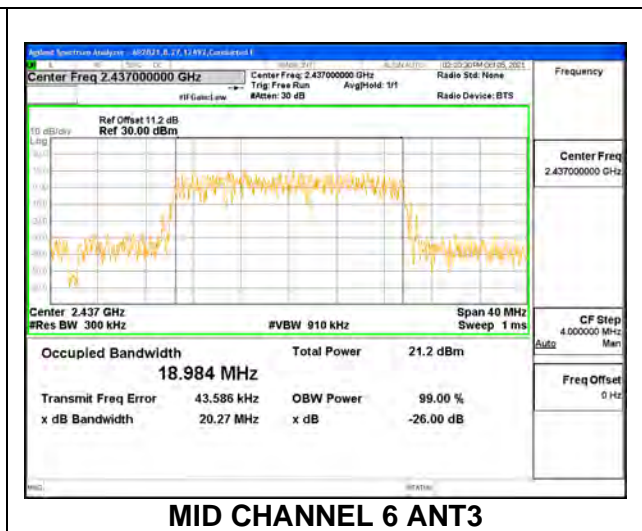
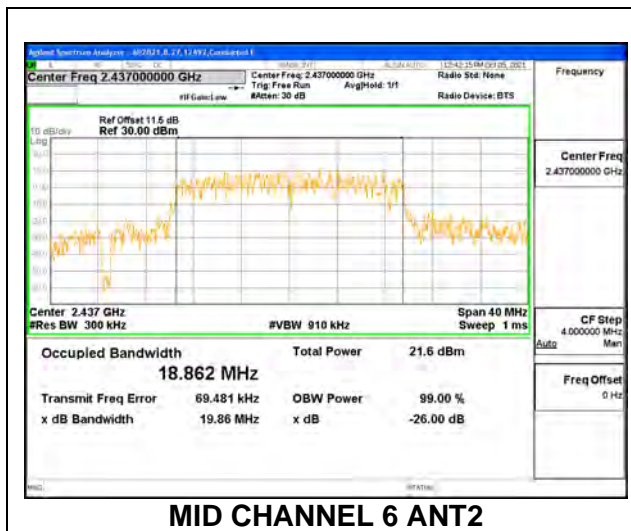
ANT2 + ANT3 2TX MODE: 26-Tones, RU Index 8

Channel	Frequency (MHz)	99% Bandwidth (MHz)	99% Bandwidth (MHz)
		ANT2	ANT3
Low 1	2412	18.634	18.124
Mid 6	2437	18.147	18.410
High 11	2462	18.280	18.357
High 12	2467	18.562	18.276
High 13	2472	18.694	18.474



ANT2 + ANT3 2TX MODE: SU Mode

Channel	Frequency (MHz)	99% Bandwidth (MHz) ANT2	99% Bandwidth (MHz) ANT3
Low 1	2412	18.850	18.718
Low 2	2417	19.021	18.678
Low 3	2422	17.923	18.828
Low 4	2427	19.104	19.501
Mid 6	2437	18.862	18.984
High 8	2447	18.871	19.090
High 9	2452	18.949	18.913
High 10	2457	18.994	18.869
High 11	2462	18.939	18.625
High 12	2467	18.682	18.823
High 13	2472	18.708	18.932



9.3. 6dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

RSS-247 5.2 (a)

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

RESULTS

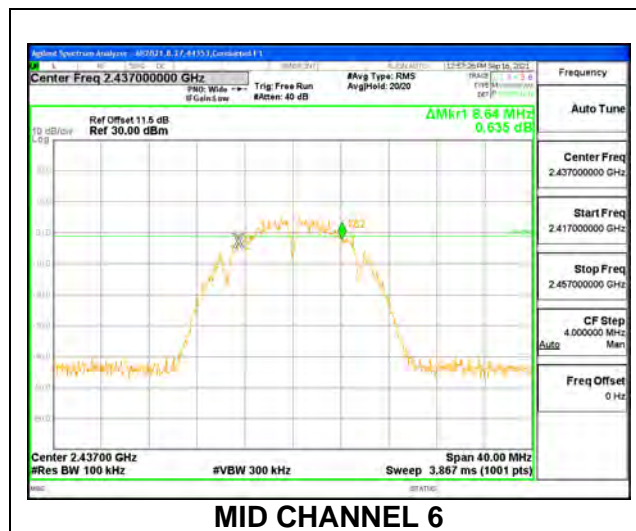
The 6dB bandwidth was measured for the narrowest bandwidth mode, b Mode and ax HE20 Mode 26-Tones as worst case to demonstrate compliance with the minimum required bandwidth of 500 kHz to cover all OFDMA modes.

Only Mid channel plot is reported to show setting parameter complies with testing method/procedure.

9.3.1. 802.11b MODE 1TX

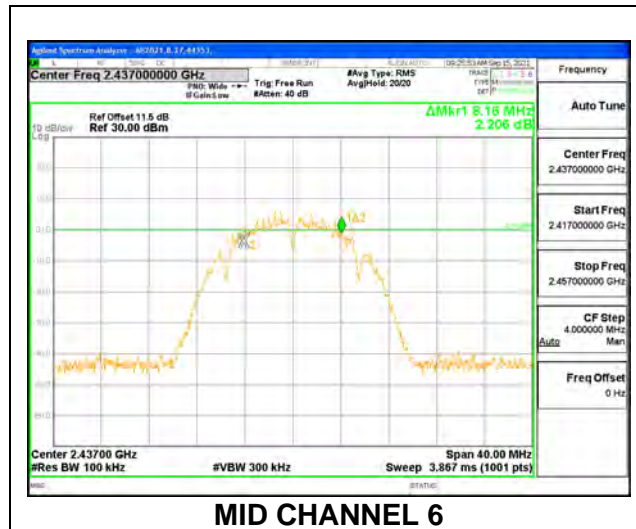
1TX ANT2 MODE

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	8.12	0.5
Low 2	2417	8.64	0.5
Mid 6	2437	8.64	0.5
High 7	2442	8.24	0.5
High 8	2447	8.16	0.5
High 9	2452	8.16	0.5
High 10	2457	8.60	0.5
High 11	2462	8.56	0.5
High 12	2467	8.64	0.5
High 13	2472	8.08	0.5



1TX ANT3 MODE

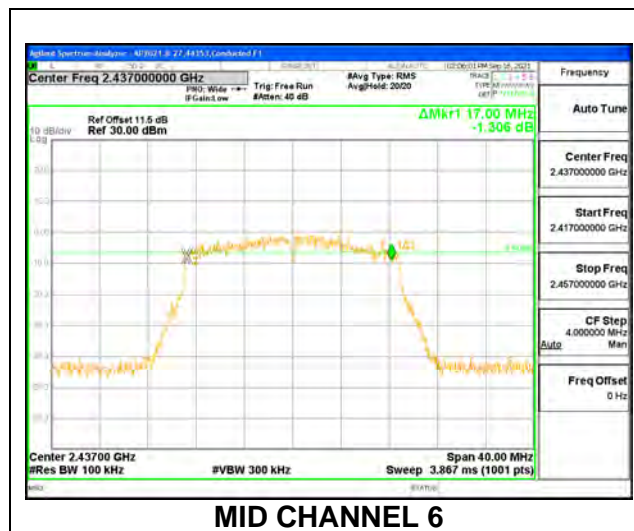
Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	8.16	0.5
Low 2	2417	8.16	0.5
Mid 6	2437	8.16	0.5
High 7	2442	8.12	0.5
High 8	2447	8.64	0.5
High 9	2452	8.12	0.5
High 10	2457	8.04	0.5
High 11	2462	8.44	0.5
High 12	2467	8.16	0.5
High 13	2472	8.36	0.5



9.3.2. 802.11n HT20 MODE 1TX

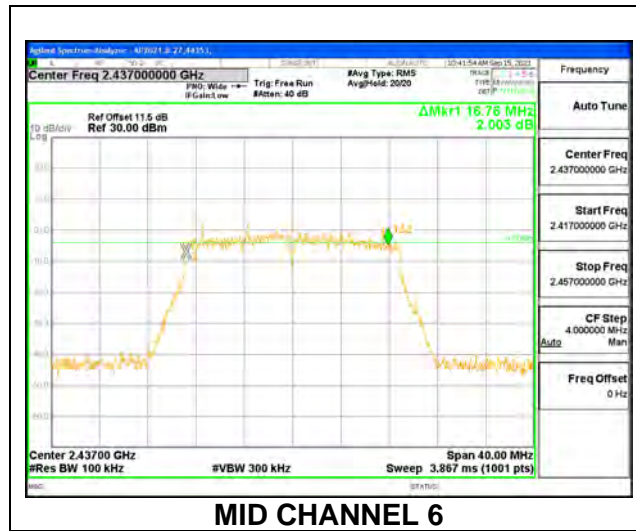
ANT 2

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	16.60	0.5
Low 2	2417	17.80	0.5
Mid 6	2437	17.00	0.5
High 10	2457	17.44	0.5
High 11	2462	17.04	0.5
High 12	2467	17.04	0.5
High 13	2472	17.68	0.5



ANT 3

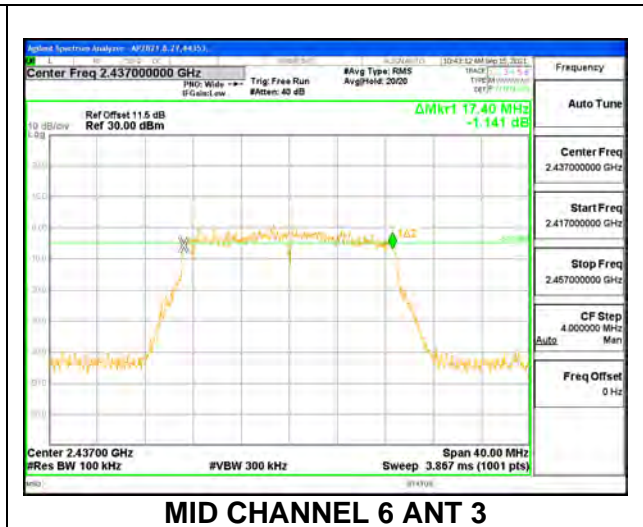
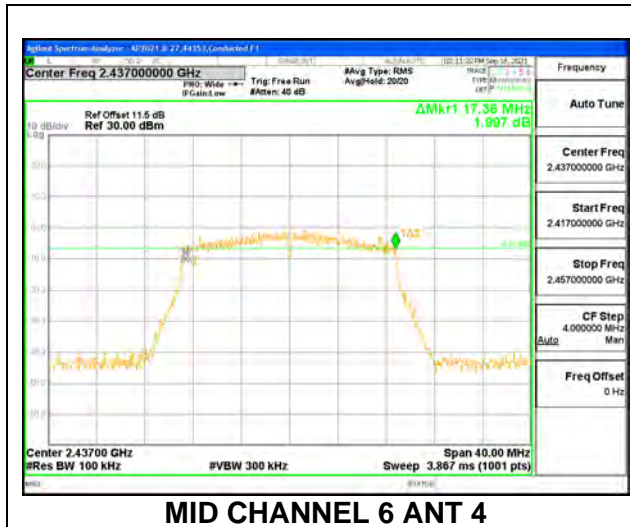
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	16.64	0.5
Low 2	2417	17.00	0.5
Mid 6	2437	16.76	0.5
High 10	2457	16.36	0.5
High 11	2462	16.12	0.5
High 12	2467	16.44	0.5
High 13	2472	16.68	0.5



9.3.3. 802.11n HT20 CDD MODE 2TX

ANT 2 + ANT 3

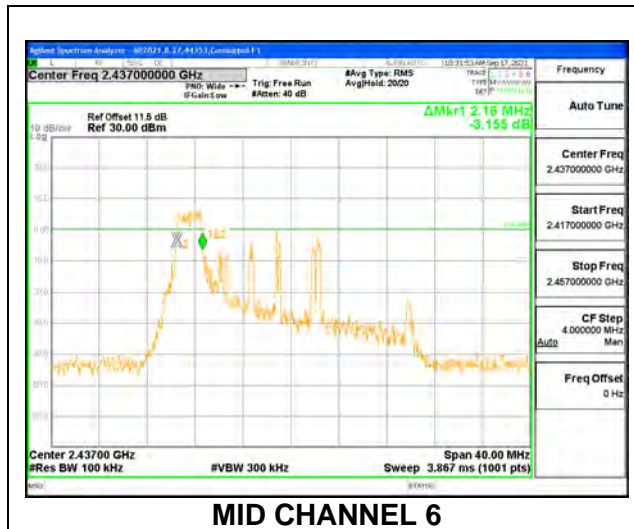
Channel	Frequency (MHz)	6 dB BW Antenna 4 (MHz)	6 dB BW Antenna 3 (MHz)	Minimum Limit (MHz)
Low 1	2412	17.76	17.28	0.5
Low 2	2417	17.28	16.40	0.5
Low 3	2422	17.40	16.12	0.5
Mid 6	2437	17.36	17.40	0.5
High 9	2452	17.44	16.64	0.5
High 10	2457	17.48	17.36	0.5
High 11	2462	16.68	16.64	0.5
High 12	2467	16.64	16.44	0.5
High 13	2472	17.68	16.36	0.5



9.3.4. 802.11ax HE20 MODE

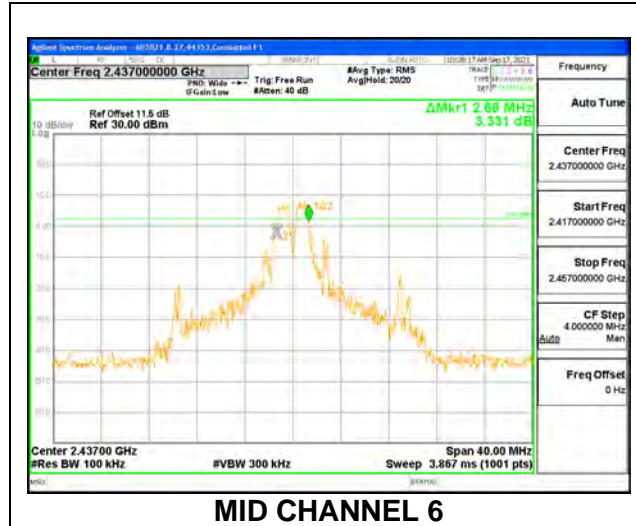
ANT2 LEGACY SISO MODE: 26-Tones, RU index 0

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	2.12	0.5
Mid 6	2437	2.16	0.5
High 11	2462	2.08	0.5
High 12	2467	2.08	0.5
High 13	2472	2.08	0.5



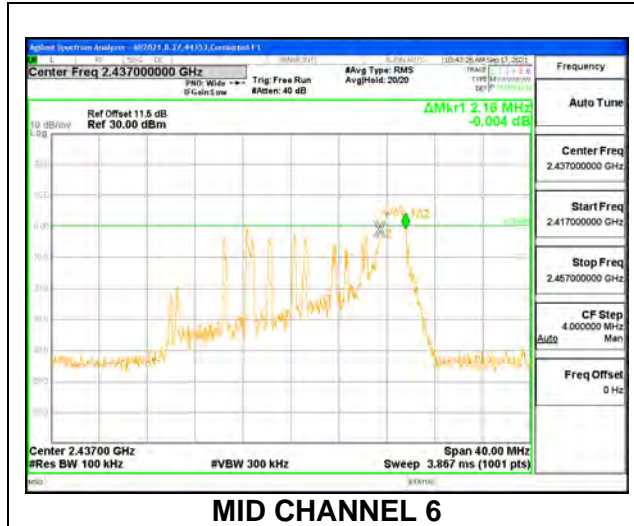
ANT2 LEGACY SISO MODE: 26-Tones, RU Index 4

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	2.72	0.5
Mid 6	2437	2.68	0.5
High 11	2462	2.68	0.5
High 12	2467	2.60	0.5
High 13	2472	2.64	0.5



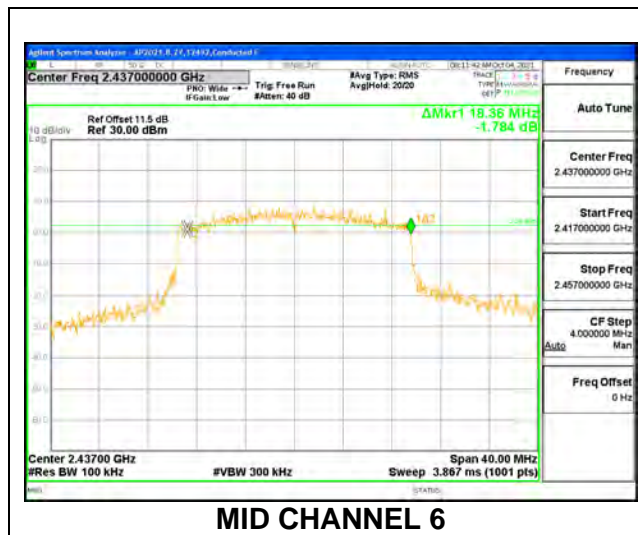
ANT2 LEGACY SISO MODE: 26-Tones, RU Index 8

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	2.12	0.5
Mid 6	2437	2.16	0.5
High 11	2462	2.12	0.5
High 12	2467	2.12	0.5
High 13	2472	2.08	0.5



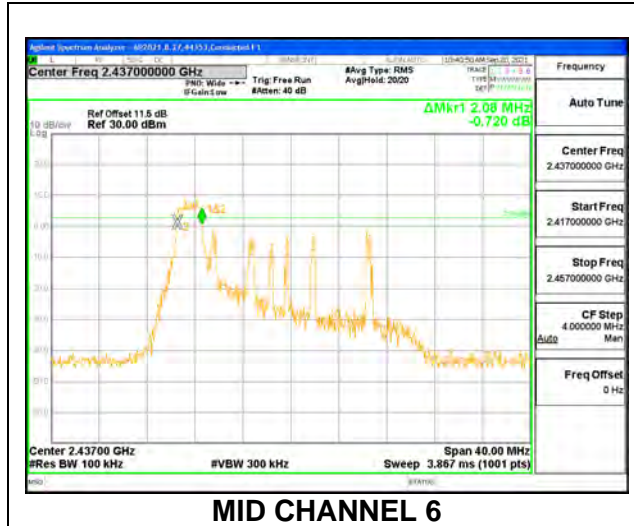
ANT 2 LEGACY SISO MODE: SU Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	18.40	0.5
Low 2	2417	19.12	0.5
Low 3	2422	18.88	0.5
Mid 6	2437	18.36	0.5
High 9	2452	18.00	0.5
High 10	2457	17.92	0.5
High 11	2462	17.76	0.5
High 12	2467	18.12	0.5
High 13	2472	18.24	0.5



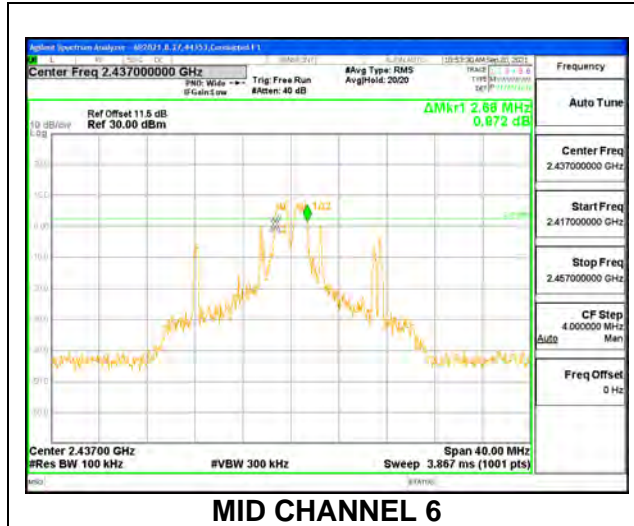
ANT3 LEGACY SISO MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	2.16	0.5
Mid 6	2437	2.08	0.5
High 11	2462	2.12	0.5
High 12	2467	2.12	0.5
High 13	2472	2.08	0.5



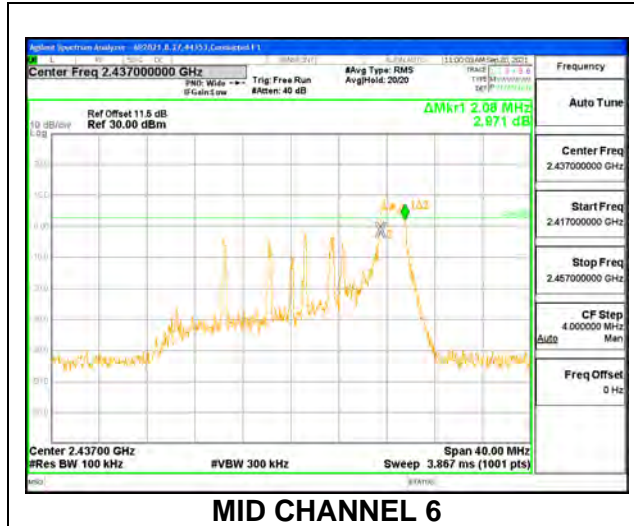
ANT3 LEGACY SISO MODE: 26-Tones, RU Index 4

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	2.68	0.5
Mid 6	2437	2.68	0.5
High 11	2462	2.64	0.5
High 12	2467	2.68	0.5
High 13	2472	2.80	0.5



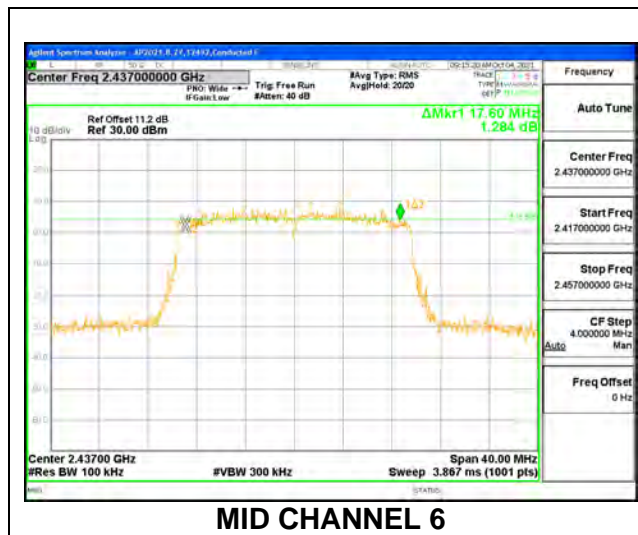
ANT3 LEGACY SISO MODE: 26-Tones, RU Index 8

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	2.12	0.5
Mid 6	2437	2.08	0.5
High 11	2462	2.08	0.5
High 12	2467	2.00	0.5
High 13	2472	2.16	0.5



ANT 2 LEGACY SISO MODE: SU Mode

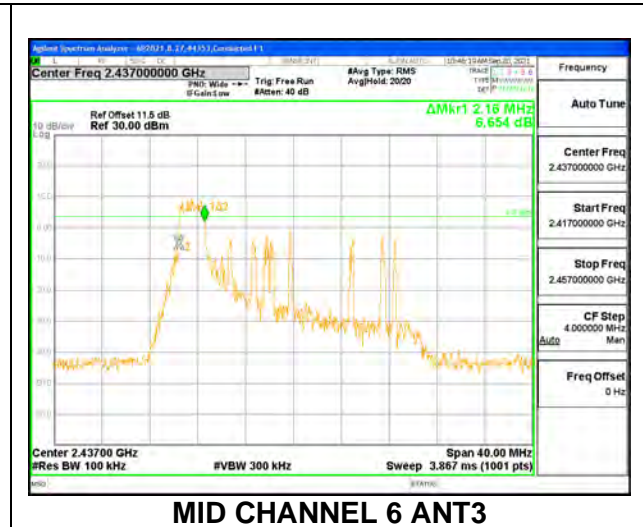
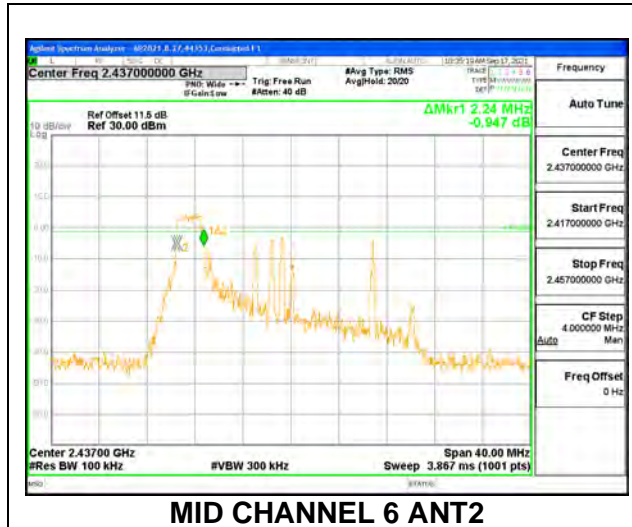
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low 1	2412	18.88	0.5
Low 2	2417	18.76	0.5
Low 3	2422	18.72	0.5
Mid 6	2437	17.60	0.5
High 9	2452	18.88	0.5
High 10	2457	17.68	0.5
High 11	2462	18.24	0.5
High 12	2467	18.04	0.5
High 13	2472	19.00	0.5



9.3.5. 802.11ax HE20 OFDMA MODE 2TX

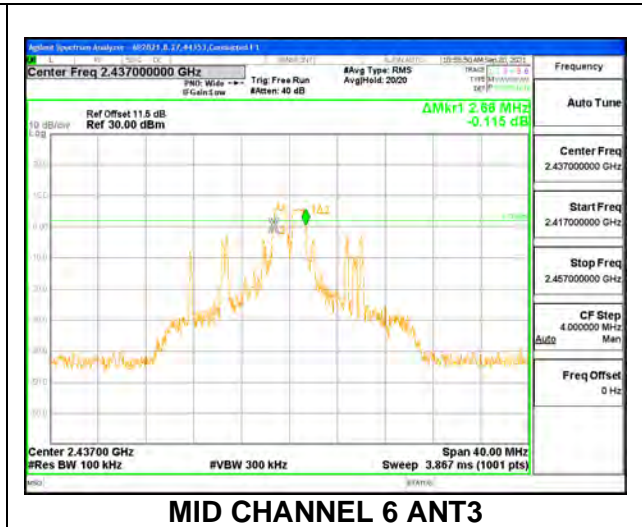
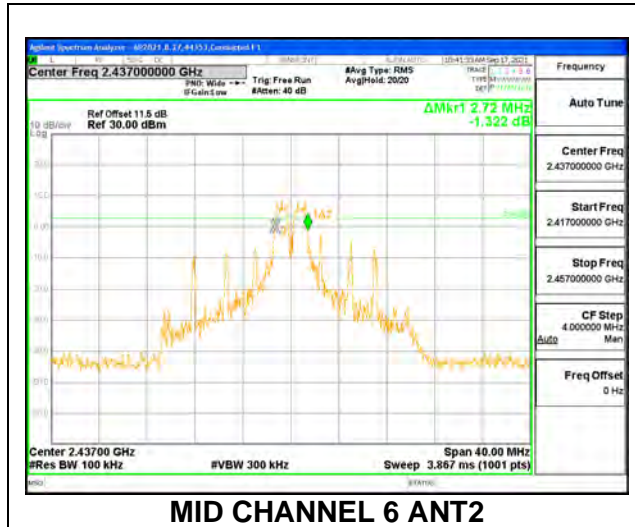
ANT2 + ANT3 2TX MODE: 26-Tones, RU Index 0

Channel	Frequency (MHz)	6dB BW(MHz) ANT2	6dB BW (MHz) ANT3	Minimum Limit (MHz)
Low 1	2412	2.16	2.12	0.5
Mid 6	2437	2.24	2.16	0.5
High 11	2462	2.20	2.08	0.5
High 12	2467	2.08	2.04	0.5
High 13	2472	2.08	2.20	0.5



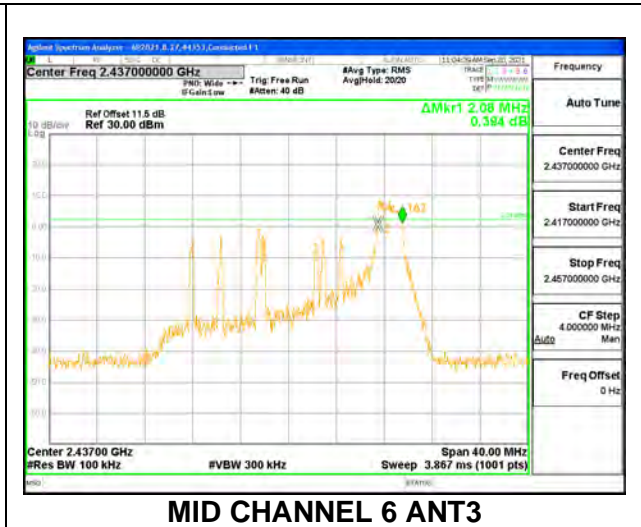
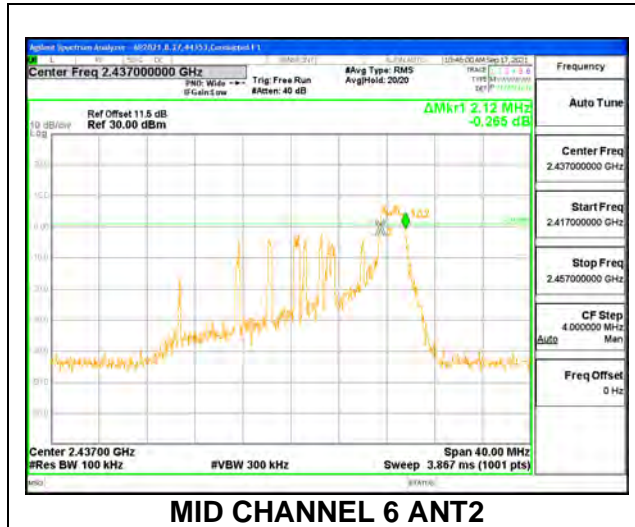
ANT2 + ANT3 2TX MODE: 26-Tones, RU Index 4

Channel	Frequency (MHz)	6dB BW(MHz) ANT2	6dB BW (MHz) ANT3	Minimum Limit (MHz)
Low 1	2412	2.68	2.68	0.5
Mid 6	2437	2.72	2.68	0.5
High 11	2462	2.68	2.68	0.5
High 12	2467	2.68	2.72	0.5
High 13	2472	2.64	2.68	0.5



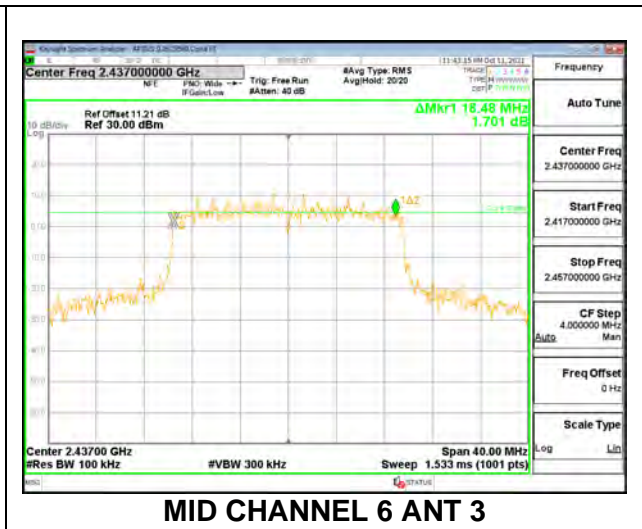
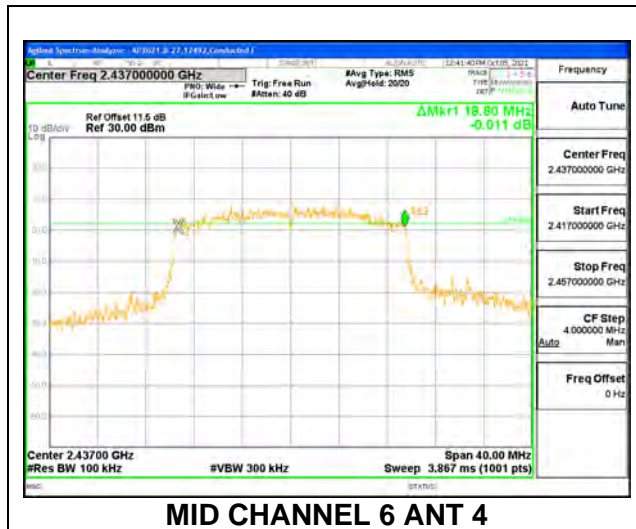
ANT2 + ANT3 2TX MODE: 26-Tones, RU Index 8

Channel	Frequency (MHz)	6dB BW(MHz) ANT2	6dB BW (MHz) ANT3	Minimum Limit (MHz)
Low 1	2412	2.08	2.20	0.5
Mid 6	2437	2.12	2.08	0.5
High 11	2462	2.12	2.16	0.5
High 12	2467	2.16	2.16	0.5
High 13	2472	2.12	2.12	0.5



ANT2 + ANT3 2TX MODE: SU Mode

Channel	Frequency (MHz)	6 dB BW Antenna 4 (MHz)	6 dB BW Antenna 3 (MHz)	Minimum Limit (MHz)
Low 1	2412	17.28	18.56	0.5
Low 2	2417	18.68	18.72	0.5
Low 3	2422	18.76	17.64	0.5
Low 4	2427	17.88	18.32	0.5
Mid 6	2437	18.80	18.48	0.5
High 8	2447	18.96	18.60	0.5
High 9	2452	18.84	19.08	0.5
High 10	2457	18.12	18.96	0.5
High 11	2462	18.16	18.68	0.5
High 12	2467	18.40	17.56	0.5
High 13	2472	18.24	19.04	0.5



9.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

RSS-247 5.4 (d)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt, based on the use of antennas with directional gains that do not exceed 6 dBi. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

TEST PROCEDURE

Measurements perform using a wideband RF power meter.

The power output was measured on the EUT antenna port using SMA cable with 10dB attenuator connected to a power meter, gated average output power was read directly from the power meter.

DIRECTIONAL ANTENNA GAIN

For 1 TX:

There is only one transmitter output therefore the directional gain is equal to the antenna gain.

For 2 TX:

Tx chains are uncorrelated for power and correlated for PSD due to the device supporting CDD in all MIMO modes. The directional gains are as follows:

	ANT2	ANT3	Uncorrelated Chains	Correlated Chains
	Gain	Gain	Directional	Directional
Band (GHz)	(dBi)	(dBi)	Gain (dBi)	Gain (dBi)
2.4	2.60	-0.30	1.39	4.28

RESULTS

9.4.1. 802.11b MODE 1TX

Test Engineer:	12492
Test Date:	01/18/2022

1TX ANT2 MODE**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	2.60	30.00	30	36	30.00
Low 2	2417	2.60	30.00	30	36	30.00
Mid 6	2437	2.60	30.00	30	36	30.00
High 7	2442	2.60	30.00	30	36	30.00
High 8	2447	2.60	30.00	30	36	30.00
High 9	2452	2.60	30.00	30	36	30.00
High 10	2457	2.60	30.00	30	36	30.00
High 11	2462	2.60	30.00	30	36	30.00
High 12	2467	2.60	30.00	30	36	30.00
High 13	2472	2.60	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	18.88	18.88	30.00	-11.12
Low 2	2417	19.85	19.85	30.00	-10.15
Mid 6	2437	21.21	21.21	30.00	-8.79
High 7	2442	19.81	19.81	30.00	-10.19
High 8	2447	19.22	19.22	30.00	-10.78
High 9	2452	19.27	19.27	30.00	-10.73
High 10	2457	18.79	18.79	30.00	-11.21
High 11	2462	18.84	18.84	30.00	-11.16
High 12	2467	16.78	16.78	30.00	-13.22
High 13	2472	16.90	16.90	30.00	-13.10

1TX ANT3 MODE**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-0.30	30.00	30	36	30.00
Low 2	2417	-0.30	30.00	30	36	30.00
Mid 6	2437	-0.30	30.00	30	36	30.00
High 7	2442	-0.30	30.00	30	36	30.00
High 8	2447	-0.30	30.00	30	36	30.00
High 9	2452	-0.30	30.00	30	36	30.00
High 10	2457	-0.30	30.00	30	36	30.00
High 11	2462	-0.30	30.00	30	36	30.00
High 12	2467	-0.30	30.00	30	36	30.00
High 13	2472	-0.30	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	18.76	18.76	30.00	-11.24
Low 2	2417	19.85	19.85	30.00	-10.15
Mid 6	2437	21.39	21.39	30.00	-8.61
High 7	2442	19.83	19.83	30.00	-10.17
High 8	2447	19.22	19.22	30.00	-10.78
High 9	2452	19.30	19.30	30.00	-10.70
High 10	2457	18.77	18.77	30.00	-11.23
High 11	2462	18.82	18.82	30.00	-11.18
High 12	2467	16.79	16.79	30.00	-13.21
High 13	2472	16.81	16.81	30.00	-13.19

9.4.2. 802.11n HT20 MODE

Test Engineer:	12492
Test Date:	01/18/2022

1TX ANT2 MODE**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	2.60	30.00	30	36	30.00
Low 2	2417	2.60	30.00	30	36	30.00
Mid 6	2437	2.60	30.00	30	36	30.00
High 10	2457	2.60	30.00	30	36	30.00
High 11	2462	2.60	30.00	30	36	30.00
High 12	2467	2.60	30.00	30	36	30.00
High 13	2472	2.60	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	17.28	17.28	30.00	-12.72
Low 2	2417	19.80	19.80	30.00	-10.20
Mid 6	2437	21.35	21.35	30.00	-8.65
High 10	2457	19.78	19.78	30.00	-10.22
High 11	2462	17.47	17.47	30.00	-12.53
High 12	2467	14.81	14.81	30.00	-15.19
High 13	2472	13.79	13.79	30.00	-16.21

1TX ANT3 MODE**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-0.30	30.00	30	36	30.00
Low 2	2417	-0.30	30.00	30	36	30.00
Mid 6	2437	-0.30	30.00	30	36	30.00
High 10	2457	-0.30	30.00	30	36	30.00
High 11	2462	-0.30	30.00	30	36	30.00
High 12	2467	-0.30	30.00	30	36	30.00
High 13	2472	-0.30	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	17.33	17.33	30.00	-12.67
Low 2	2417	19.90	19.90	30.00	-10.10
Mid 6	2437	21.46	21.46	30.00	-8.54
High 10	2457	19.87	19.87	30.00	-10.13
High 11	2462	17.37	17.37	30.00	-12.63
High 12	2467	14.89	14.89	30.00	-15.11
High 13	2472	13.81	13.81	30.00	-16.19

9.4.3. 802.11n HT20 CDD MODE 2TX

Test Engineer:	12492
Test Date:	01/18/2022

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	1.39	30.00	36	30.00
Low 2	2417	1.39	30.00	36	30.00
Low 3	2422	1.39	30.00	36	30.00
Mid 6	2437	1.39	30.00	36	30.00
High 9	2452	1.39	30.00	36	30.00
High 10	2457	1.39	30.00	36	30.00
High 11	2462	1.39	30.00	36	30.00
High 12	2467	1.39	30.00	36	30.00
High 13	2472	1.39	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	ANT2 Meas Power (dBm)	ANT3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	16.29	16.27	19.29	30.00	-10.71
Low 2	2417	18.81	18.84	21.84	30.00	-8.16
Low 3	2422	20.39	20.75	23.58	30.00	-6.42
Mid 6	2437	21.22	21.36	24.30	30.00	-5.70
High 9	2452	20.30	20.33	23.33	30.00	-6.67
High 10	2457	18.86	18.91	21.90	30.00	-8.10
High 11	2462	16.27	16.29	19.29	30.00	-10.71
High 12	2467	13.87	13.76	16.83	30.00	-13.17
High 13	2472	12.31	12.38	15.36	30.00	-14.64

9.4.4. 802.11ax HE20 MODE

Test Engineer:	12492
Test Date:	01/18/2022

1TX ANT2 MODE: 26-Tones, RU Index 0

Limits

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	2.60	30.00	30	36	30.00
Mid 6	2437	2.60	30.00	30	36	30.00
High 11	2462	2.60	30.00	30	36	30.00
High 12	2467	2.60	30.00	30	36	30.00
High 13	2472	2.60	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	11.91	11.91	30.00	-18.09
Mid 6	2437	11.97	11.97	30.00	-18.03
High 11	2462	11.87	11.87	30.00	-18.13
High 12	2467	11.96	11.96	30.00	-18.04
High 13	2472	-0.07	-0.07	30.00	-30.07

1TX ANT2 MODE: 26-Tones, RU Index 4**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-0.30	30.00	30	36	30.00
Mid 6	2437	-0.30	30.00	30	36	30.00
High 11	2462	-0.30	30.00	30	36	30.00
High 12	2467	-0.30	30.00	30	36	30.00
High 13	2472	-0.30	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	11.96	11.96	30.00	-18.04
Mid 6	2437	11.91	11.91	30.00	-18.09
High 11	2462	11.82	11.82	30.00	-18.18
High 12	2467	11.91	11.91	30.00	-18.09
High 13	2472	-0.04	-0.04	30.00	-30.04

1TX ANT2 MODE: 26-Tones, RU Index 8**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	2.60	30.00	30	36	30.00
Mid 6	2437	2.60	30.00	30	36	30.00
High 11	2462	2.60	30.00	30	36	30.00
High 12	2467	2.60	30.00	30	36	30.00
High 13	2472	2.60	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	11.87	11.87	30.00	-18.13
Mid 6	2437	11.91	11.91	30.00	-18.09
High 11	2462	11.88	11.88	30.00	-18.12
High 12	2467	11.91	11.91	30.00	-18.09
High 13	2472	-0.10	-0.10	30.00	-30.10

1TX ANT2 MODE: SU Mode**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	2.60	30.00	30	36	30.00
Low 2	2417	2.60	30.00	30	36	30.00
Low 3	2422	2.60	30.00	30	36	30.00
Mid 6	2437	2.60	30.00	30	36	30.00
High 9	2452	2.60	30.00	30	36	30.00
High 10	2457	2.60	30.00	30	36	30.00
High 11	2462	2.60	30.00	30	36	30.00
High 12	2467	2.60	30.00	30	36	30.00
High 13	2472	2.60	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	15.89	15.89	30.00	-14.11
Low 2	2417	18.24	18.24	30.00	-11.76
Low 3	2422	19.86	19.86	30.00	-10.14
Mid 6	2437	21.40	21.40	30.00	-8.60
High 9	2452	19.88	19.88	30.00	-10.12
High 10	2457	18.34	18.34	30.00	-11.66
High 11	2462	15.88	15.88	30.00	-14.12
High 12	2467	13.42	13.42	30.00	-16.58
High 13	2472	8.78	8.78	30.00	-21.22

1TX ANT3 MODE: 26-Tones, RU Index 0**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-0.30	30.00	30	36	30.00
Mid 6	2437	-0.30	30.00	30	36	30.00
High 11	2462	-0.30	30.00	30	36	30.00
High 12	2467	-0.30	30.00	30	36	30.00
High 13	2472	-0.30	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	11.77	11.77	30.00	-18.23
Mid 6	2437	11.78	11.78	30.00	-18.22
High 11	2462	11.81	11.81	30.00	-18.19
High 12	2467	11.81	11.81	30.00	-18.19
High 13	2472	-0.08	-0.08	30.00	-30.08

1TX ANT3 MODE: 26-Tones, RU Index 4**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-0.30	30.00	30	36	30.00
Mid 6	2437	-0.30	30.00	30	36	30.00
High 11	2462	-0.30	30.00	30	36	30.00
High 12	2467	-0.30	30.00	30	36	30.00
High 13	2472	-0.30	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	11.92	11.92	30.00	-18.08
Mid 6	2437	11.82	11.82	30.00	-18.18
High 11	2462	11.86	11.86	30.00	-18.14
High 12	2467	11.83	11.83	30.00	-18.17
High 13	2472	-0.50	-0.50	30.00	-30.50

1TX ANT3 MODE: 26-Tones, RU Index 8**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-0.30	30.00	30	36	30.00
Mid 6	2437	-0.30	30.00	30	36	30.00
High 11	2462	-0.30	30.00	30	36	30.00
High 12	2467	-0.30	30.00	30	36	30.00
High 13	2472	-0.30	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	11.97	11.97	30.00	-18.03
Mid 6	2437	11.70	11.70	30.00	-18.30
High 11	2462	11.92	11.92	30.00	-18.08
High 12	2467	11.82	11.82	30.00	-18.18
High 13	2472	-0.01	-0.01	30.00	-30.01

1TX ANT3 MODE: SU Mode**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC Power Limit (dBm)	ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	-0.30	30.00	30	36	30.00
Low 2	2417	-0.30	30.00	30	36	30.00
Low 3	2422	-0.30	30.00	30	36	30.00
Mid 6	2437	-0.30	30.00	30	36	30.00
High 9	2452	-0.30	30.00	30	36	30.00
High 10	2457	-0.30	30.00	30	36	30.00
High 11	2462	-0.30	30.00	30	36	30.00
High 12	2467	-0.30	30.00	30	36	30.00
High 13	2472	-0.30	30.00	30	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	15.80	15.80	30.00	-14.20
Low 2	2417	18.39	18.39	30.00	-11.61
Low 3	2422	19.90	19.90	30.00	-10.10
Mid 6	2437	21.41	21.41	30.00	-8.59
High 9	2452	19.78	19.78	30.00	-10.22
High 10	2457	18.37	18.37	30.00	-11.63
High 11	2462	15.82	15.82	30.00	-14.18
High 12	2467	13.27	13.27	30.00	-16.73
High 13	2472	8.81	8.81	30.00	-21.19

9.4.5. 802.11ax HE20 OFDMA MODE 2TX

Test Engineer:	12492
Test Date:	01/18/2022

ANT2 + ANT3 2TX MODE: 26-Tones, RU Index 0**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	1.39	30.00	36	30.00
Mid 6	2437	1.39	30.00	36	30.00
High 11	2462	1.39	30.00	36	30.00
High 12	2467	1.39	30.00	36	30.00
High 13	2472	1.39	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	ANT2 Meas Power (dBm)	ANT3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	11.80	11.97	14.90	30.00	-15.10
Mid 6	2437	11.79	11.96	14.89	30.00	-15.11
High 11	2462	11.97	11.75	14.87	30.00	-15.13
High 12	2467	11.87	11.96	14.93	30.00	-15.07
High 13	2472	-0.30	-0.70	2.51	30.00	-27.49

ANT2 + ANT3 2TX MODE: 26-Tones, RU Index 4**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	1.39	30.00	36	30.00
Mid 6	2437	1.39	30.00	36	30.00
High 11	2462	1.39	30.00	36	30.00
High 12	2467	1.39	30.00	36	30.00
High 13	2472	1.39	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	ANT2 Meas Power (dBm)	ANT3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	11.96	11.96	14.97	30.00	-15.03
Mid 6	2437	11.81	11.81	14.82	30.00	-15.18
High 11	2462	11.65	11.75	14.71	30.00	-15.29
High 12	2467	11.98	11.88	14.94	30.00	-15.06
High 13	2472	-0.02	-0.13	2.94	30.00	-27.06

ANT2 + ANT3 2TX MODE: 26-Tones, RU Index 8**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	1.39	30.00	36	30.00
Mid 6	2437	1.39	30.00	36	30.00
High 11	2462	1.39	30.00	36	30.00
High 12	2467	1.39	30.00	36	30.00
High 13	2472	1.39	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	ANT2 Meas Power (dBm)	ANT3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	11.97	11.75	14.87	30.00	-15.13
Mid 6	2437	11.97	11.98	14.99	30.00	-15.01
High 11	2462	11.94	11.90	14.93	30.00	-15.07
High 12	2467	11.84	11.97	14.92	30.00	-15.08
High 13	2472	-0.10	-0.25	2.84	30.00	-27.16

ANT2 + ANT3 2TX MODE: SU Mode**Limits**

Channel	Frequency (MHz)	Directional Gain (dBi)	FCC/ISED Power Limit (dBm)	ISED EIRP Limit (dBm)	Max Power (dBm)
Low 1	2412	1.39	30.00	36	30.00
Low 2	2417	1.39	30.00	36	30.00
Low 3	2422	1.39	30.00	36	30.00
Low 4	2427	1.39	30.00	36	30.00
Mid 6	2437	1.39	30.00	36	30.00
High 8	2447	1.39	30.00	36	30.00
High 9	2452	1.39	30.00	36	30.00
High 10	2457	1.39	30.00	36	30.00
High 11	2462	1.39	30.00	36	30.00
High 12	2467	1.39	30.00	36	30.00
High 13	2472	1.39	30.00	36	30.00

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd Power
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Results

Channel	Frequency (MHz)	ANT2 Meas Power (dBm)	ANT3 Meas Power (dBm)	Total Corr'd Power (dBm)	Power Limit (dBm)	Margin (dB)
Low 1	2412	14.84	14.78	17.82	30.00	-12.18
Low 2	2417	17.28	17.20	20.25	30.00	-9.75
Low 3	2422	17.80	17.95	20.89	30.00	-9.11
Low 4	2427	19.82	19.75	22.80	30.00	-7.20
Mid 6	2437	21.47	21.35	24.42	30.00	-5.58
High 8	2447	19.77	19.80	22.80	30.00	-7.20
High 9	2452	17.83	17.87	20.86	30.00	-9.14
High 10	2457	17.35	17.32	20.35	30.00	-9.65
High 11	2462	14.78	14.83	17.82	30.00	-12.18
High 12	2467	12.37	12.31	15.35	30.00	-14.65
High 13	2472	8.55	8.61	11.59	30.00	-18.41

9.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

RSS-247 (5.2) (b)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

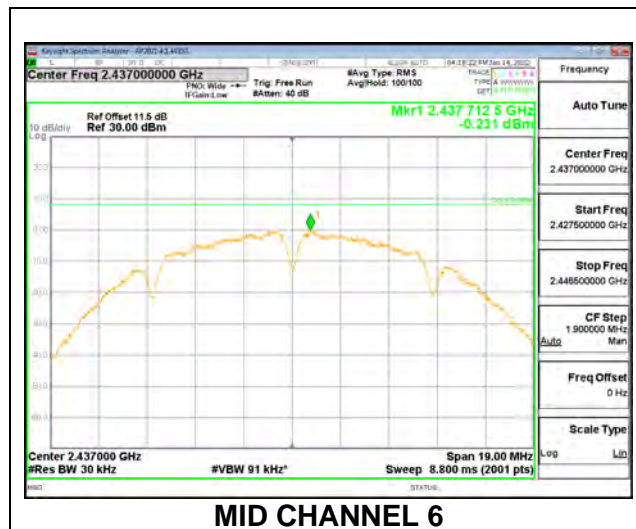
Only Mid channel plot is reported to show setting parameter complies with testing method/procedure.

Note: RBW setting is used greater than 3KHz on PSD measurement

9.5.1. 802.11b MODE 1TX

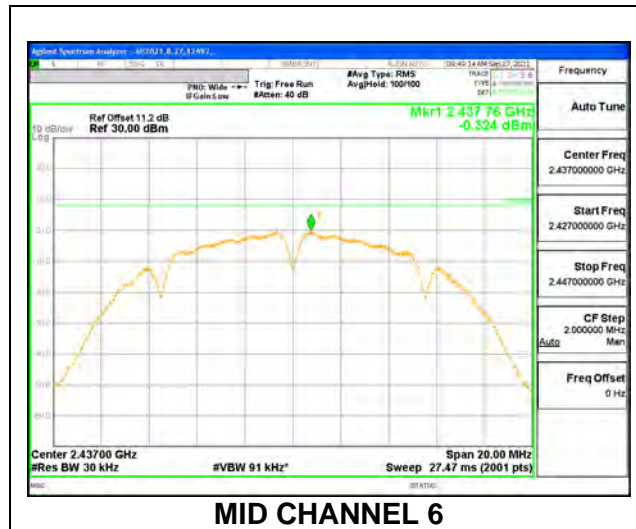
1TX ANT2 MODE

Duty Cycle CF (dB)		0.00	Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-2.860	-2.860	8.0	-10.9
Low 2	2417	-1.679	-1.679	8.0	-9.7
Mid 6	2437	-0.231	-0.231	8.0	-8.2
High 7	2442	-1.791	-1.791	8.0	-9.8
High 8	2447	-2.200	-2.200	8.0	-10.2
High 9	2452	-2.261	-2.261	8.0	-10.3
High 10	2457	-2.700	-2.700	8.0	-10.7
High 11	2462	-2.856	-2.856	8.0	-10.9
High 12	2467	-4.797	-4.797	8.0	-12.8
High 13	2472	-4.540	-4.540	8.0	-12.5



1TX ANT3 MODE

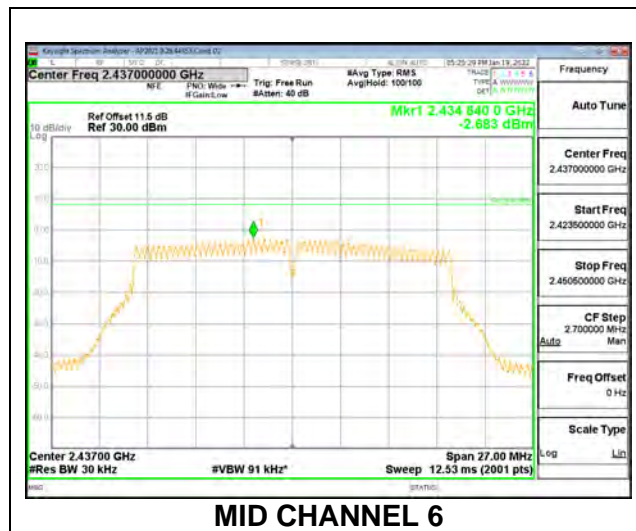
Duty Cycle CF (dB)		0.00	Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-2.891	-2.891	8.0	-10.9
Low 2	2417	-1.695	-1.695	8.0	-9.7
Mid 6	2437	-0.324	-0.324	8.0	-8.3
High 7	2442	-1.777	-1.777	8.0	-9.8
High 8	2447	-2.299	-2.299	8.0	-10.3
High 9	2452	-2.283	-2.283	8.0	-10.3
High 10	2457	-2.650	-2.650	8.0	-10.7
High 11	2462	-2.831	-2.831	8.0	-10.8
High 12	2467	-4.783	-4.783	8.0	-12.8
High 13	2472	-4.633	-4.633	8.0	-12.6



9.5.2. 802.11n HT20 MODE

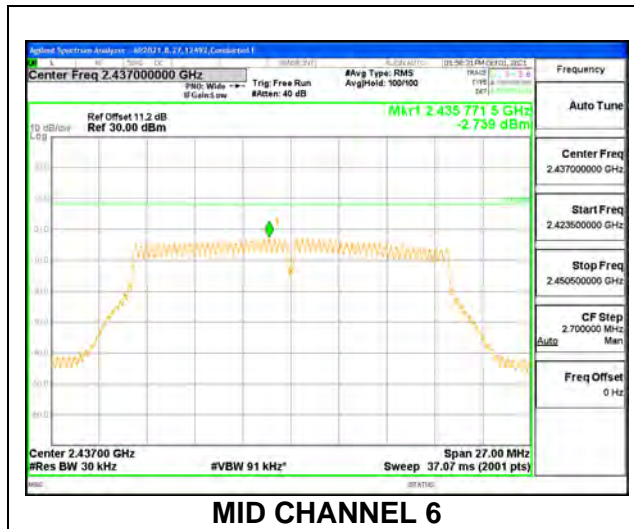
1TX ANT2 MODE

Duty Cycle CF (dB)		0.00	Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-6.582	-6.582	8.0	-14.6
Low 2	2417	-4.202	-4.202	8.0	-12.2
Mid 6	2437	-2.683	-2.683	8.0	-10.7
High 10	2457	-4.201	-4.201	8.0	-12.2
High 11	2462	-6.690	-6.690	8.0	-14.7
High 12	2467	-8.899	-8.899	8.0	-16.9
High 13	2472	-9.800	-9.800	8.0	-17.8



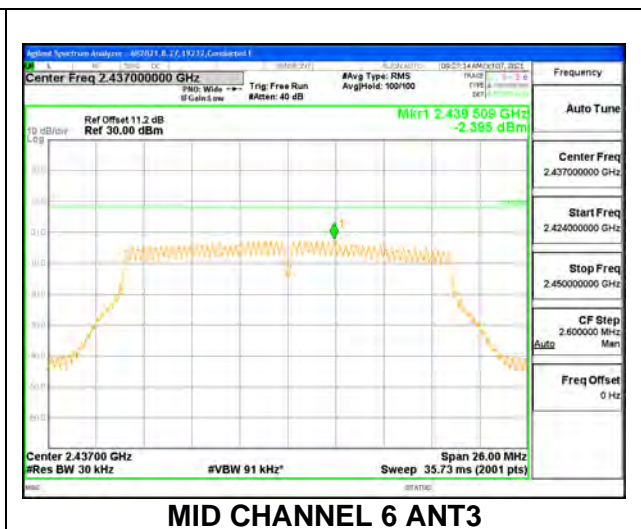
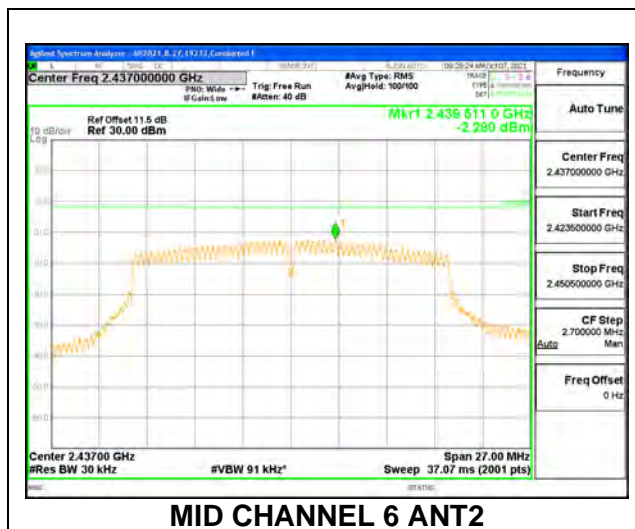
1TX ANT3 MODE

Duty Cycle CF (dB)		0.00	Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-6.710	-6.710	8.0	-14.7
Low 2	2417	-4.312	-4.312	8.0	-12.3
Mid 6	2437	-2.739	-2.739	8.0	-10.7
High 10	2457	-4.206	-4.206	8.0	-12.2
High 11	2462	-6.743	-6.743	8.0	-14.7
High 12	2467	-8.971	-8.971	8.0	-17.0
High 13	2472	-9.907	-9.907	8.0	-17.9



9.5.3. 802.11n HT20 CDD MODE 2TX

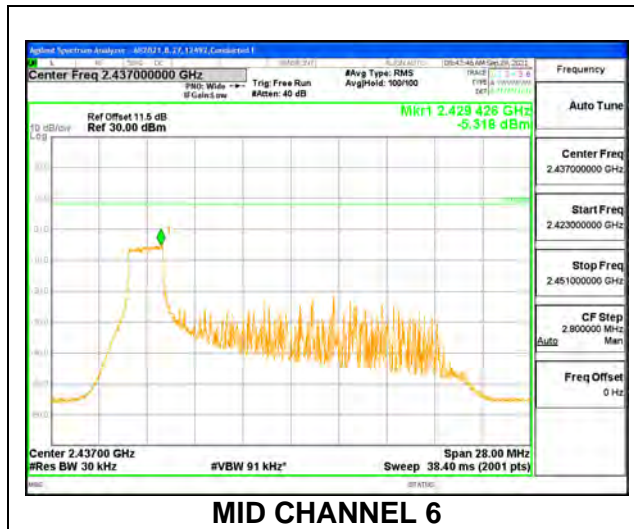
Duty Cycle CF (dB)		0.00		Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	ANT2 Meas (dBm/ 3kHz)	ANT3 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-7.475	-7.496	-4.475	8.0	-12.5
Low 2	2417	-5.074	-4.963	-2.008	8.0	-10.0
Low 3	2422	-3.457	-3.409	-0.423	8.0	-8.4
Mid 6	2437	-2.280	-2.385	0.678	8.0	-7.3
High 9	2452	-3.301	-3.564	-0.420	8.0	-8.4
High 10	2457	-4.964	-4.872	-1.907	8.0	-9.9
High 11	2462	-7.421	-7.407	-4.404	8.0	-12.4
High 12	2467	-10.022	-10.176	-7.088	8.0	-15.1
High 13	2472	-11.064	-11.034	-8.039	8.0	-16.0



9.5.4. 802.11ax HE20 MODE

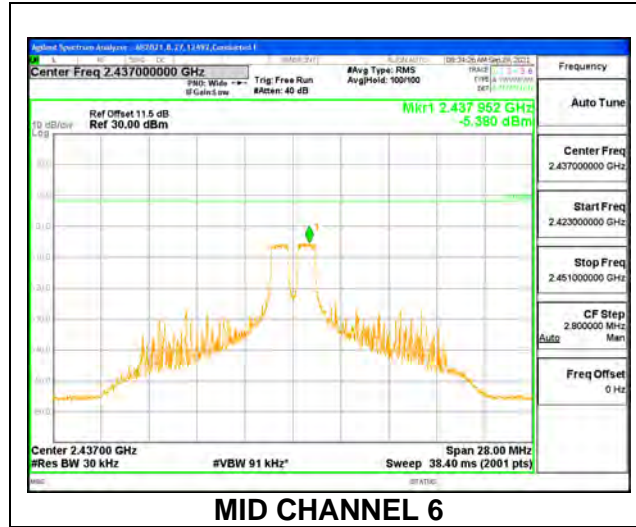
1TX ANT2 MODE , 26-Tone RU Index 0

Duty Cycle CF (dB)		0.00	Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-5.040	-5.040	8.0	-13.0
Mid 6	2437	-5.318	-5.318	8.0	-13.3
High 11	2462	-5.339	-5.339	8.0	-13.3
High 12	2467	-5.191	-5.191	8.0	-13.2
High 13	2472	-17.110	-17.110	8.0	-25.1



1TX ANT2 MODE , 26-Tone RU Index 4

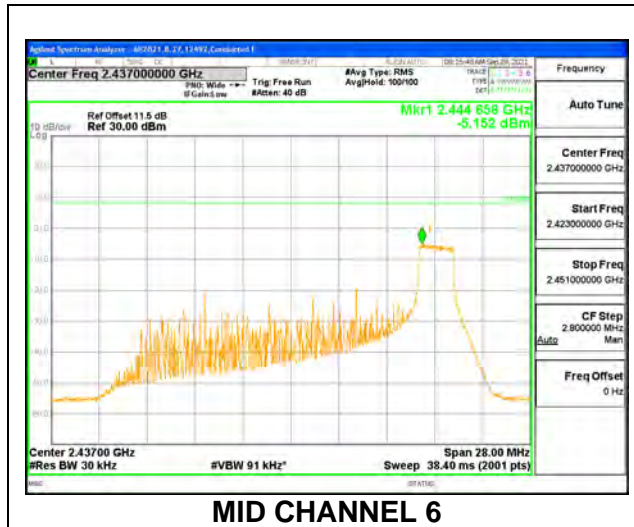
Duty Cycle CF (dB)		0.00	Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-5.271	-5.271	8.0	-13.3
Mid 6	2437	-5.380	-5.380	8.0	-13.4
High 11	2462	-5.439	-5.439	8.0	-13.4
High 12	2467	-5.185	-5.185	8.0	-13.2
High 13	2472	-17.136	-17.136	8.0	-25.1



MID CHANNEL 6

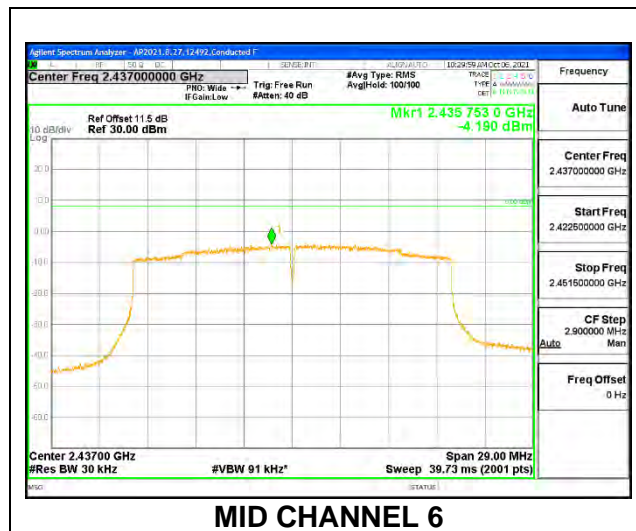
1TX ANT2 MODE , 26-Tone RU Index 8

Duty Cycle CF (dB)		0.00	Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-5.214	-5.214	8.0	-13.2
Mid 6	2437	-5.512	-5.512	8.0	-13.5
High 11	2462	-5.199	-5.199	8.0	-13.2
High 12	2467	-5.179	-5.179	8.0	-13.2
High 13	2472	-17.088	-17.088	8.0	-25.1



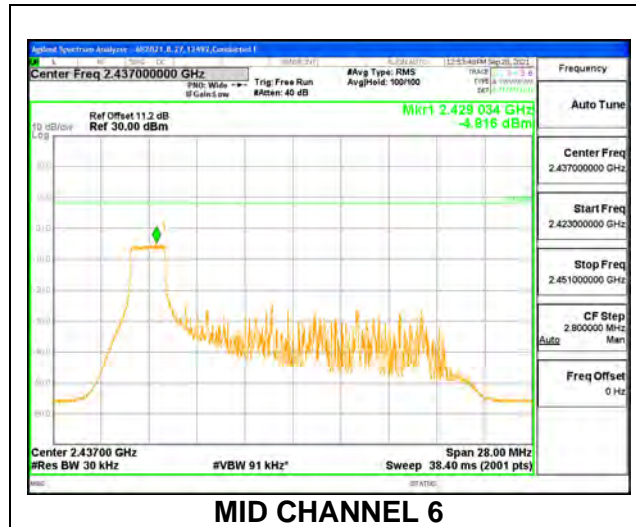
1TX ANT2 MODE , SU Mode

Duty Cycle CF (dB)		0.00	Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-9.931	-9.931	8.0	-17.9
Low 2	2417	-7.452	-7.452	8.0	-15.5
Low 3	2422	-6.203	-6.203	8.0	-14.2
Mid 6	2437	-4.190	-4.190	8.0	-12.2
High 9	2452	-6.281	-6.281	8.0	-14.3
High 10	2457	-7.519	-7.519	8.0	-15.5
High 11	2462	-9.819	-9.819	8.0	-17.8
High 12	2467	-12.235	-12.235	8.0	-20.2
High 13	2472	-16.590	-16.590	8.0	-24.6



1TX ANT3 MODE , 26-Tone RU Index 0

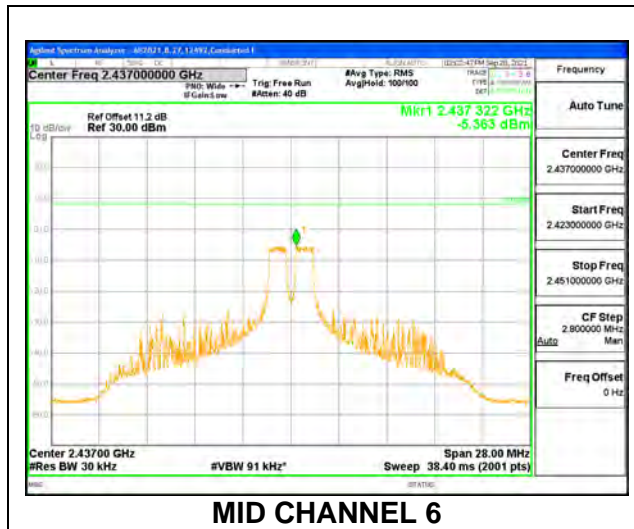
Duty Cycle CF (dB)		0.00	Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-4.937	-4.937	8.0	-12.9
Mid 6	2437	-4.816	-4.816	8.0	-12.8
High 11	2462	-5.297	-5.297	8.0	-13.3
High 12	2467	-5.511	-5.511	8.0	-13.5
High 13	2472	-17.305	-17.305	8.0	-25.3



MID CHANNEL 6

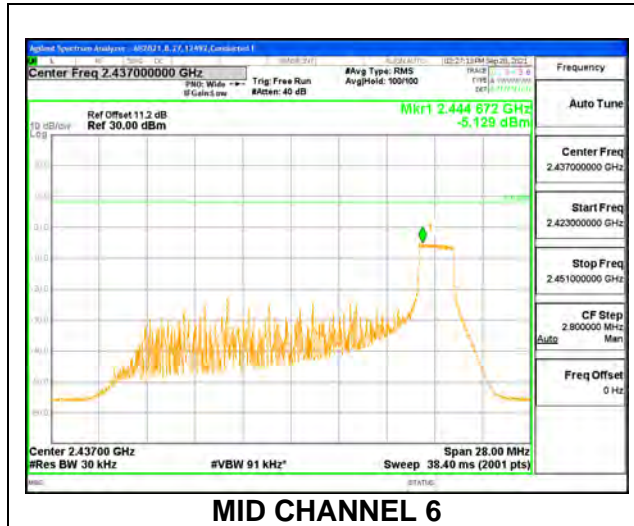
1TX ANT3 MODE , 26-Tone RU Index 4

Duty Cycle CF (dB)		0.00	Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-5.297	-5.297	8.0	-13.3
Mid 6	2437	-5.363	-5.363	8.0	-13.4
High 11	2462	-5.348	-5.348	8.0	-13.3
High 12	2467	-5.301	-5.301	8.0	-13.3
High 13	2472	-17.913	-17.913	8.0	-25.9



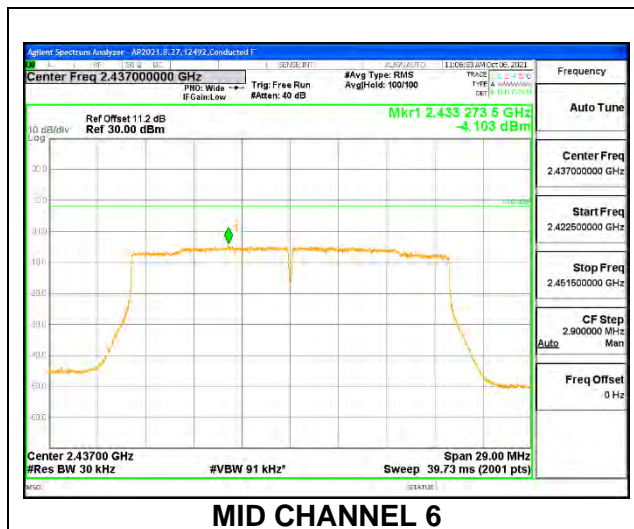
1TX ANT3 MODE , 26-Tone RU Index 8

Duty Cycle CF (dB)		0.00	Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-5.328	-5.328	8.0	-13.3
Mid 6	2437	-5.129	-5.129	8.0	-13.1
High 11	2462	-5.280	-5.280	8.0	-13.3
High 12	2467	-5.416	-5.416	8.0	-13.4
High 13	2472	-17.023	-17.023	8.0	-25.0



1TX ANT3 MODE , SU Mode

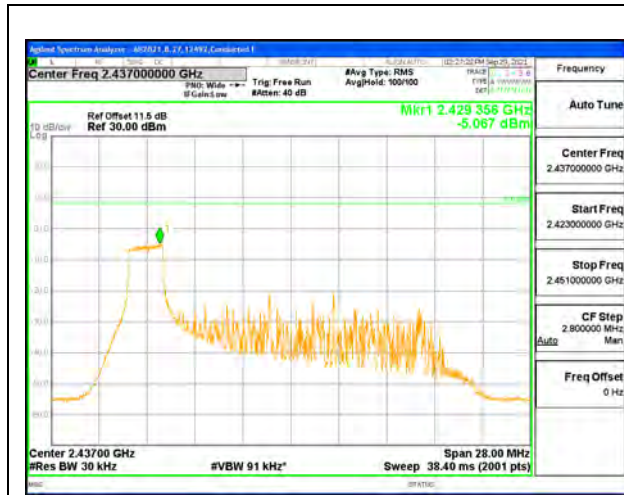
Duty Cycle CF (dB)		0.55	Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-10.095	-9.545	8.0	-17.5
Low 2	2417	-7.493	-6.943	8.0	-14.9
Low 3	2422	-5.819	-5.269	8.0	-13.3
Mid 6	2437	-4.103	-3.553	8.0	-11.6
High 9	2452	-6.002	-5.452	8.0	-13.5
High 10	2457	-7.385	-6.835	8.0	-14.8
High 11	2462	-9.872	-9.322	8.0	-17.3
High 12	2467	-12.371	-11.821	8.0	-19.8
High 13	2472	-16.648	-16.098	8.0	-24.1



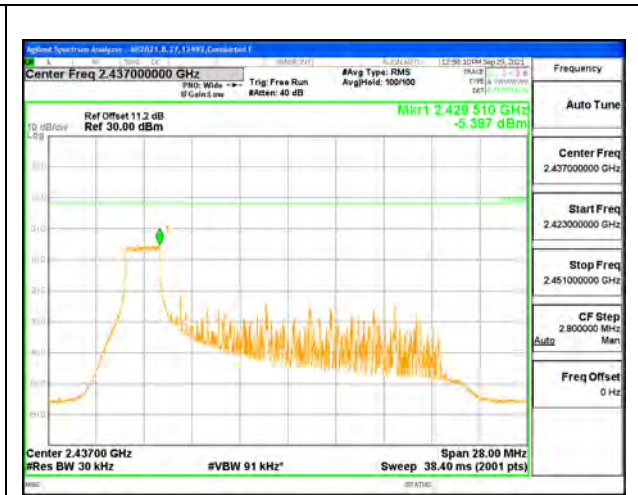
9.5.5. 802.11ax HE20 OFDMA MODE 2TX

ANT2 + ANT3 2TX MODE: 26-Tones, RU Index 0

Duty Cycle CF (dB)		0.00		Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	ANT2 Meas (dBm/ 3kHz)	ANT3 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-4.957	-5.146	-2.040	8.0	-10.0
Mid 6	2437	-5.067	-5.387	-2.214	8.0	-10.2
High 11	2462	-4.939	-5.028	-1.973	8.0	-10.0
High 12	2467	-5.104	-5.043	-2.063	8.0	-10.1
High 13	2472	-17.189	-17.159	-14.164	8.0	-22.2



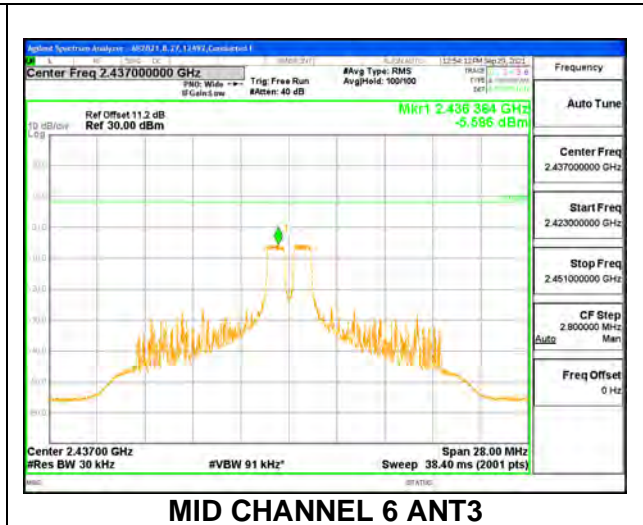
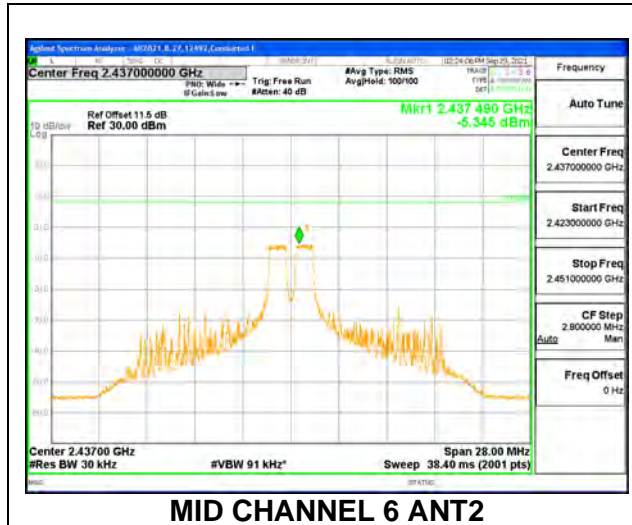
MID CHANNEL 6 ANT2



MID CHANNEL 6 ANT3

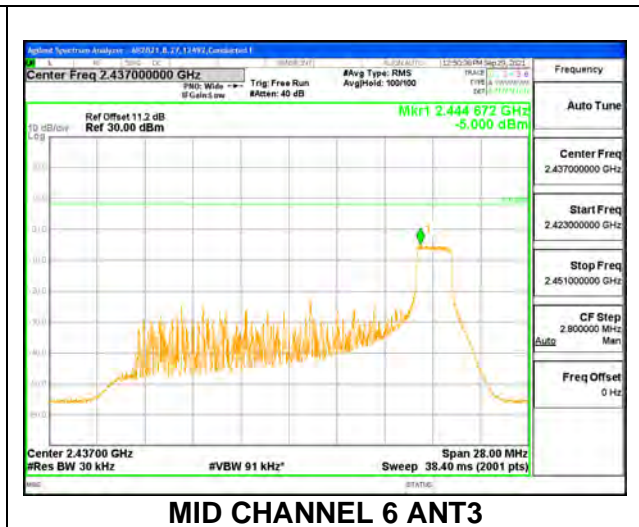
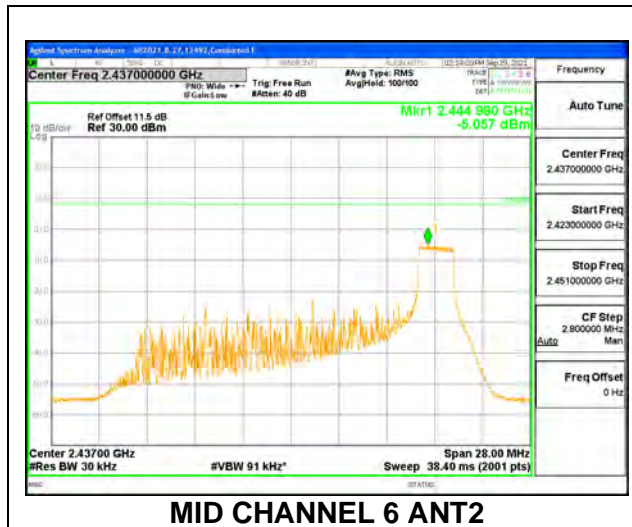
ANT2 + ANT3 2TX MODE: 26-Tones, RU Index 4

Duty Cycle CF (dB)		0.00		Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	ANT2 Meas (dBm/ 3kHz)	ANT3 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-5.369	-5.461	-2.404	8.0	-10.4
Mid 6	2437	-5.345	-5.586	-2.454	8.0	-10.5
High 11	2462	-5.429	-5.261	-2.334	8.0	-10.3
High 12	2467	-5.074	-5.267	-2.159	8.0	-10.2
High 13	2472	-16.970	-17.072	-14.010	8.0	-22.0



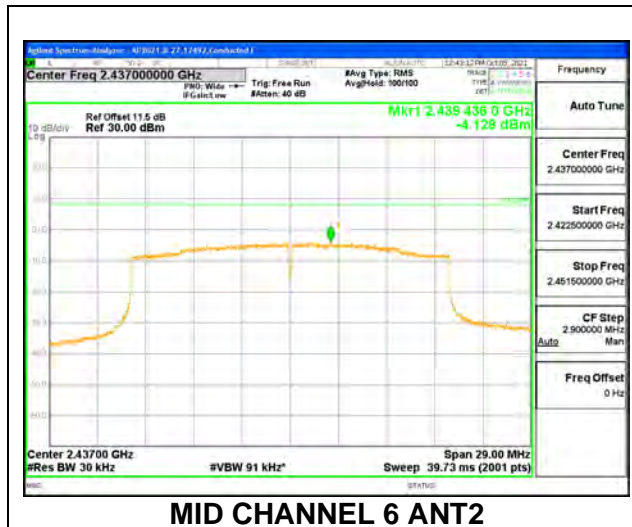
ANT2 + ANT3 2TX MODE: 26-Tones, RU Index 8

Duty Cycle CF (dB)		Included in Calculations of Corr'd PSD				
Channel	Frequency (MHz)	ANT2 Meas (dBm/ 3kHz)	ANT3 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-5.210	-4.976	-2.081	8.0	-10.1
Mid 6	2437	-5.057	-5.000	-2.018	8.0	-10.0
High 11	2462	-5.282	-5.049	-2.154	8.0	-10.2
High 12	2467	-5.041	-5.072	-2.046	8.0	-10.0
High 13	2472	-17.327	-17.106	-14.205	8.0	-22.2

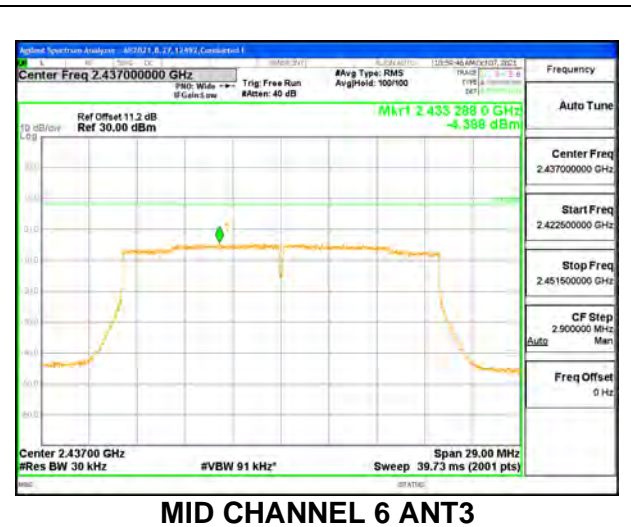


ANT2 + ANT3 2TX MODE: SU Mode

Duty Cycle CF (dB)		0.55		Included in Calculations of Corr'd PSD		
Channel	Frequency (MHz)	ANT2 Meas (dBm/ 3kHz)	ANT3 Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-10.997	-10.854	-7.365	8.0	-15.4
Low 2	2417	-8.345	-8.368	-4.796	8.0	-12.8
Low 3	2422	-8.005	-7.997	-4.441	8.0	-12.4
Low 4	2427	-6.001	-6.099	-2.489	8.0	-10.5
Mid 6	2437	-4.128	-4.388	-0.696	8.0	-8.7
High 8	2447	-6.023	-6.008	-2.455	8.0	-10.5
High 9	2452	-8.169	-8.112	-4.580	8.0	-12.6
High 10	2457	-8.460	-8.473	-4.906	8.0	-12.9
High 11	2462	-11.036	-10.094	-6.979	8.0	-15.0
High 12	2467	-13.517	-13.557	-9.977	8.0	-18.0
High 13	2472	-16.600	-16.885	-13.180	8.0	-21.2



MID CHANNEL 6 ANT2



MID CHANNEL 6 ANT3

9.6. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

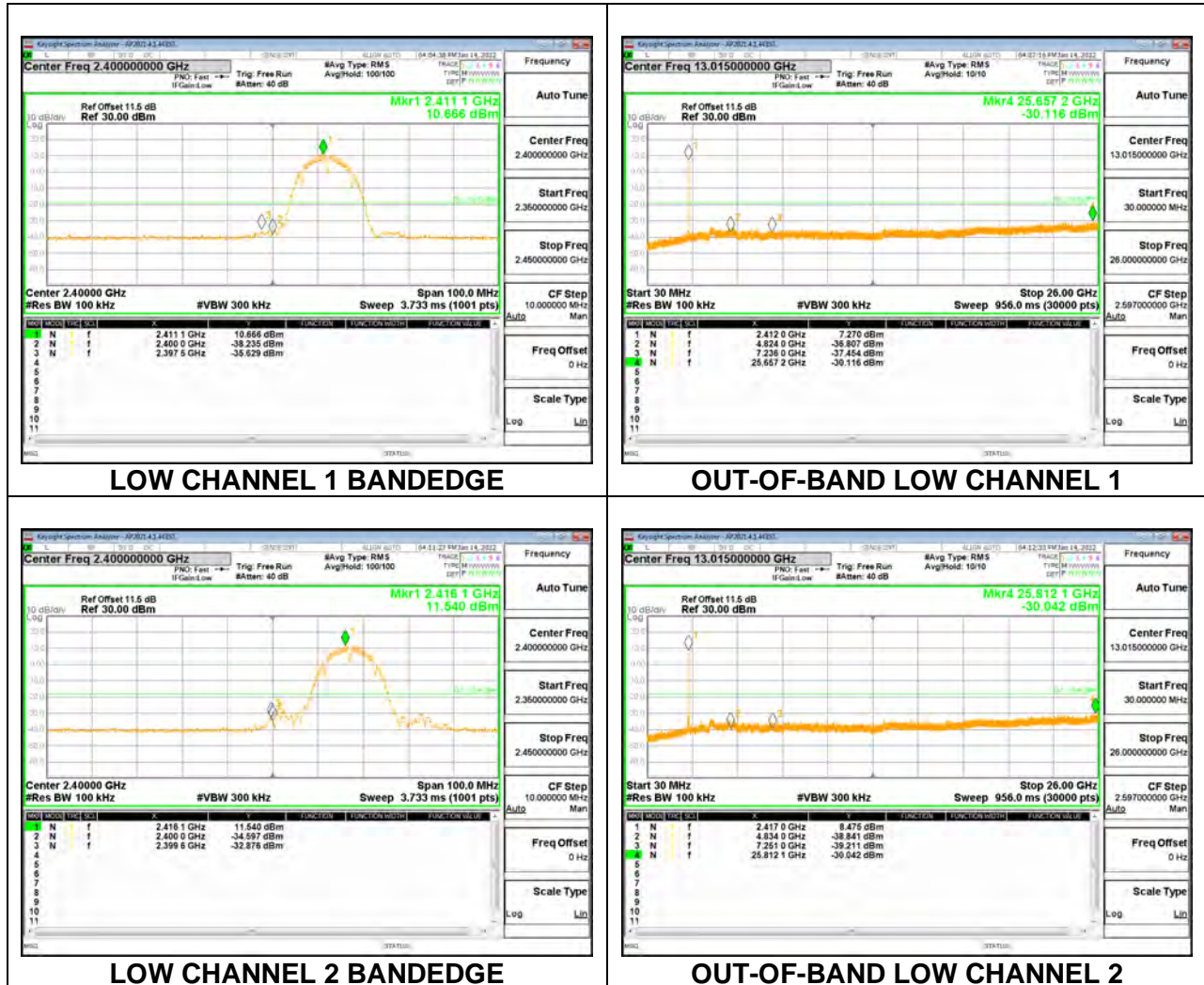
RSS-247 5.5

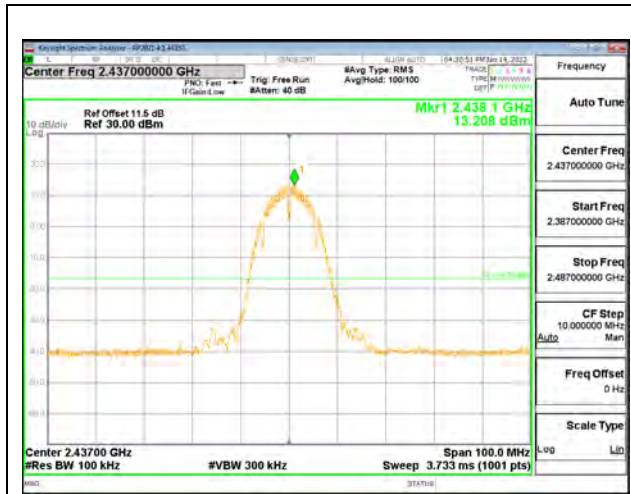
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

RESULTS

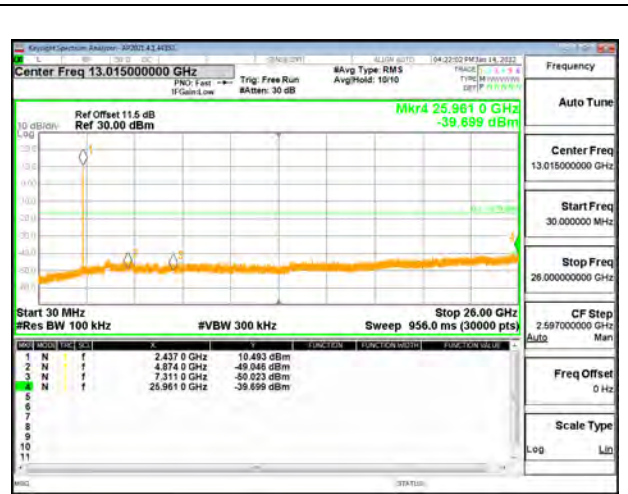
9.6.1. 802.11b MODE 1TX

1TX ANT2 MODE

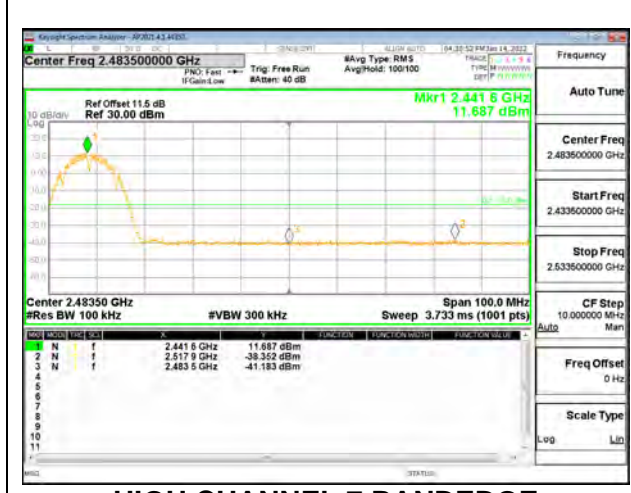




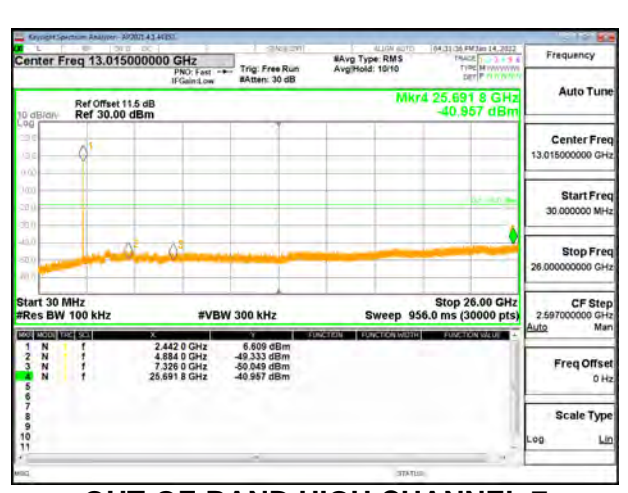
IN-BAND REFERENCE LEVEL



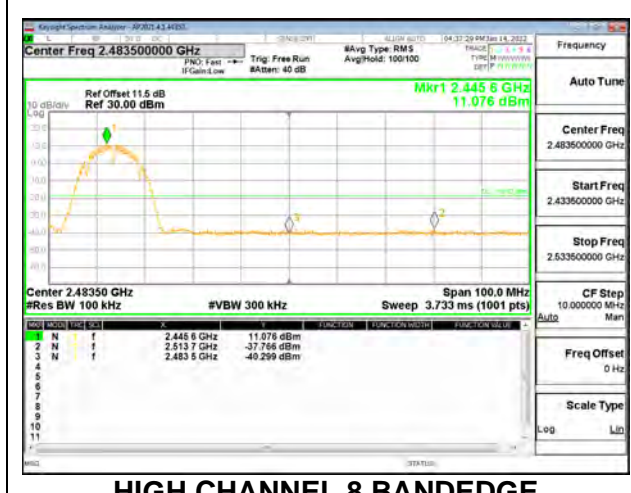
OUT-OF-BAND MID CHANNEL



HIGH CHANNEL 7 BANDEDGE



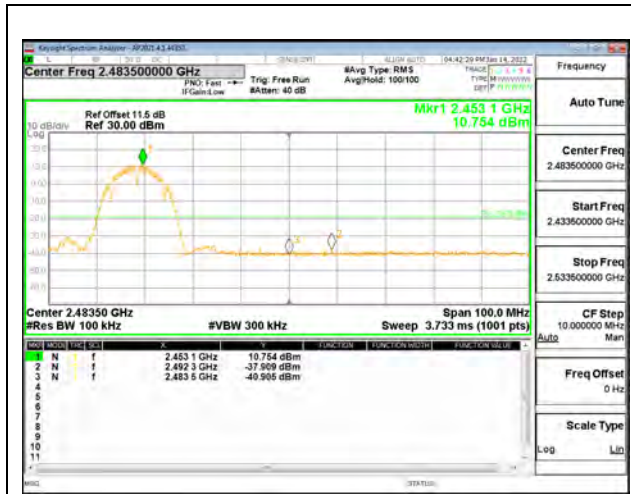
OUT-OF-BAND HIGH CHANNEL 7



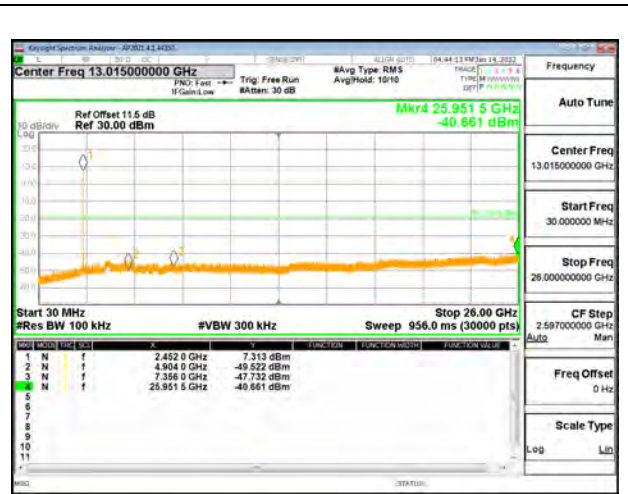
HIGH CHANNEL 8 BANDEDGE



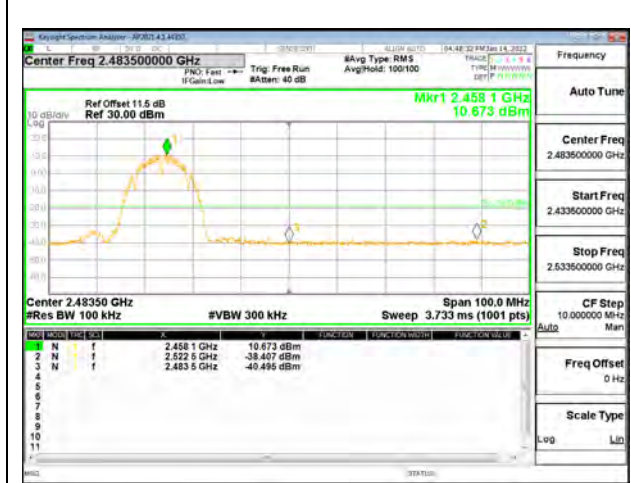
OUT-OF-BAND HIGH CHANNEL 8



HIGH CHANNEL 9 BANDEDGE



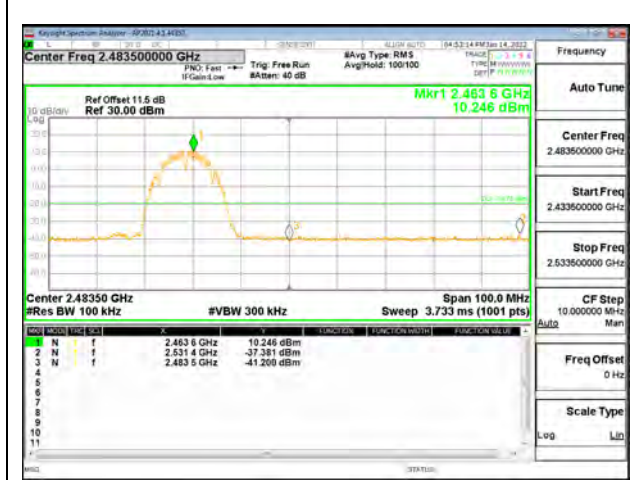
OUT-OF-BAND HIGH CHANNEL 9



HIGH CHANNEL 10 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 10



HIGH CHANNEL 11 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 11



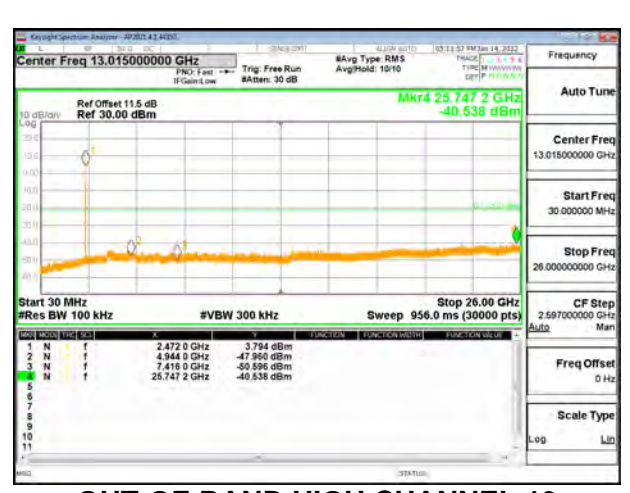
HIGH CHANNEL 12 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 12

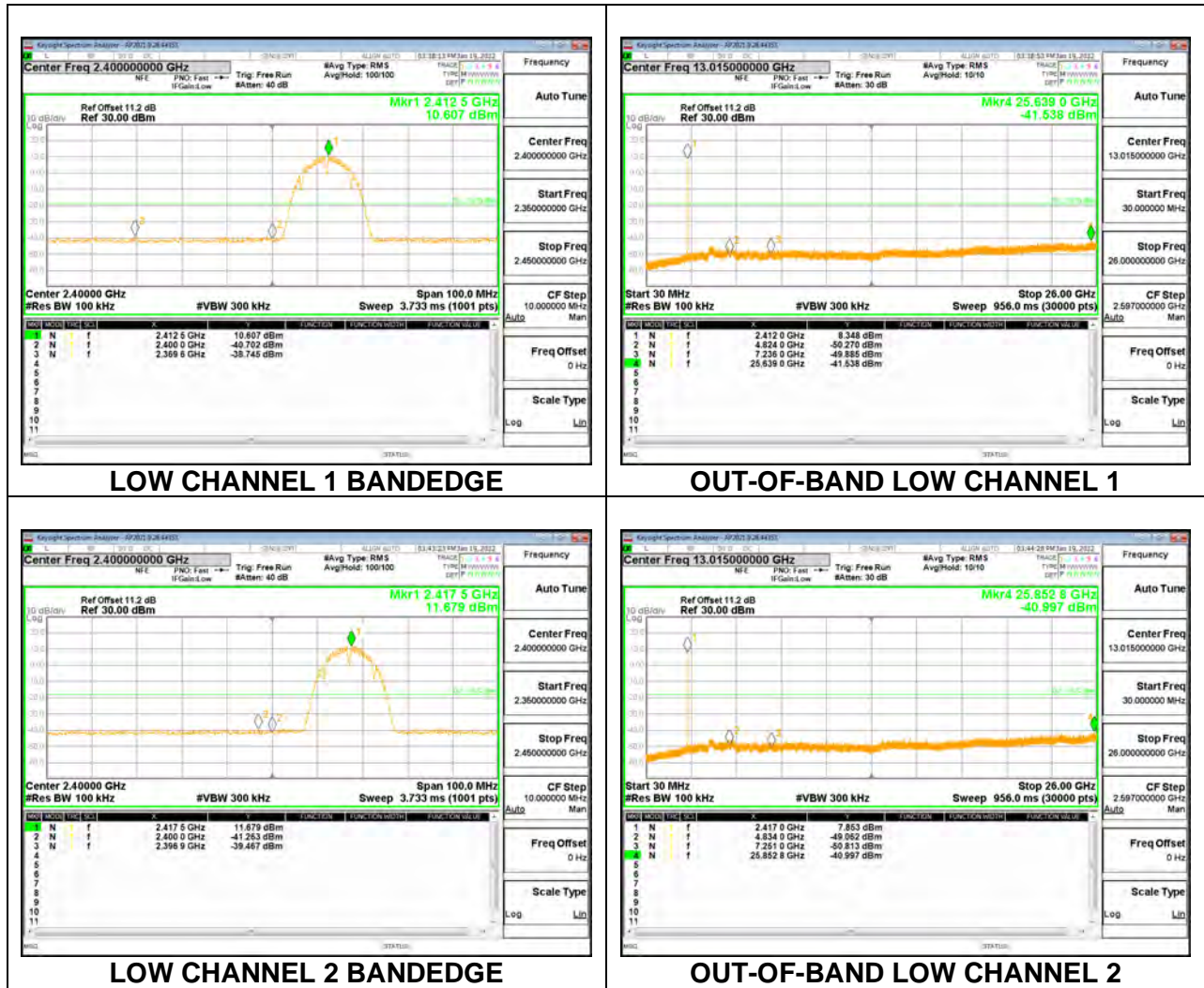


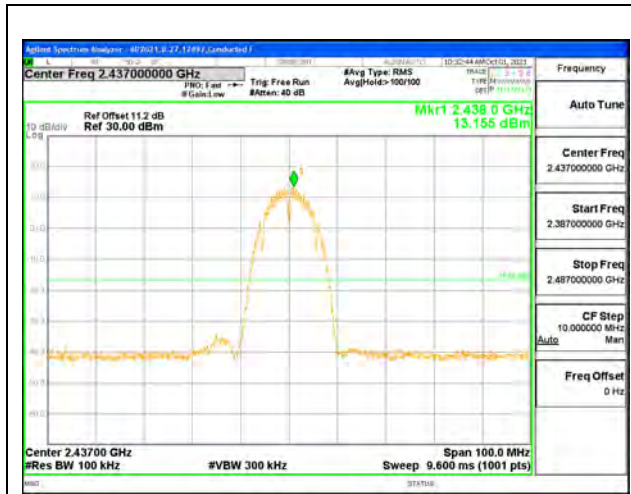
HIGH CHANNEL 13 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 13

1TX ANT3 MODE





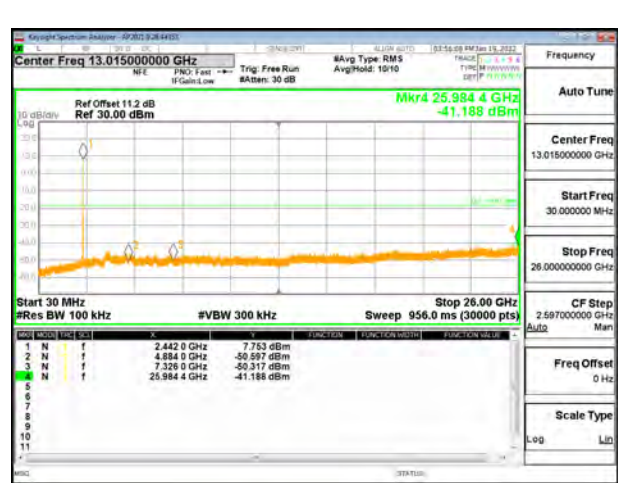
IN-BAND REFERENCE LEVEL



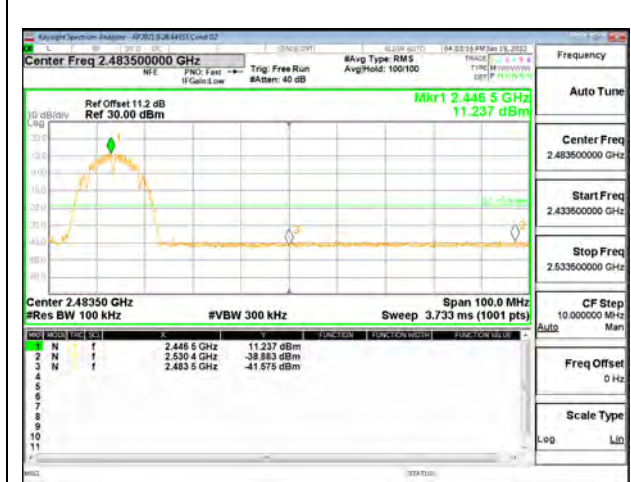
OUT-OF-BAND MID CHANNEL



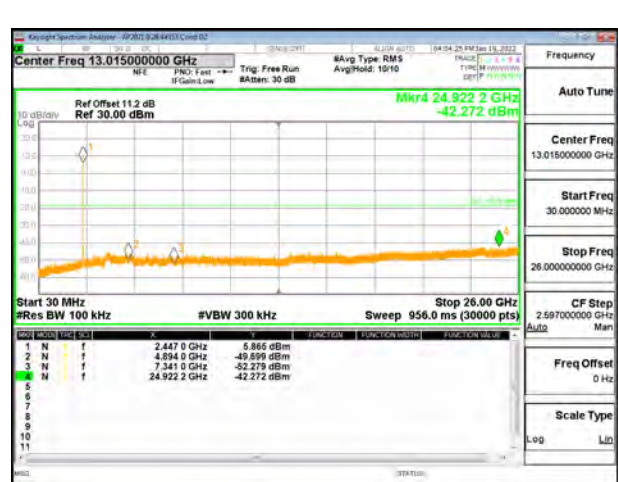
HIGH CHANNEL 7 BANDEDGE



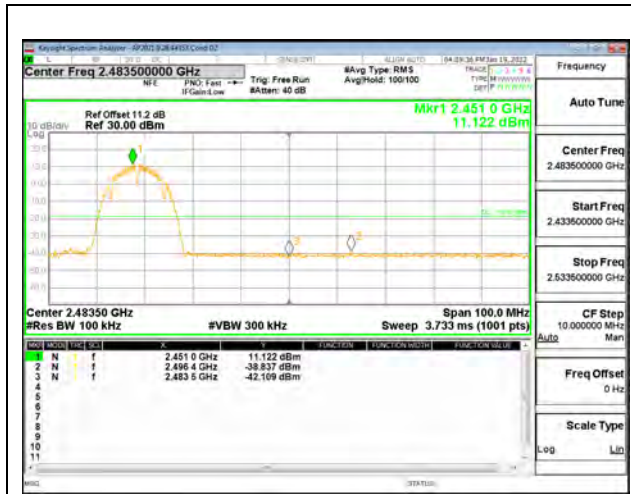
OUT-OF-BAND HIGH CHANNEL 7



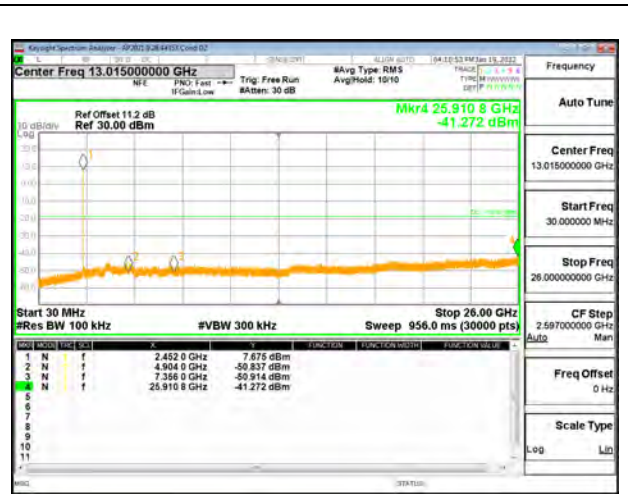
HIGH CHANNEL 8 BANDEDGE



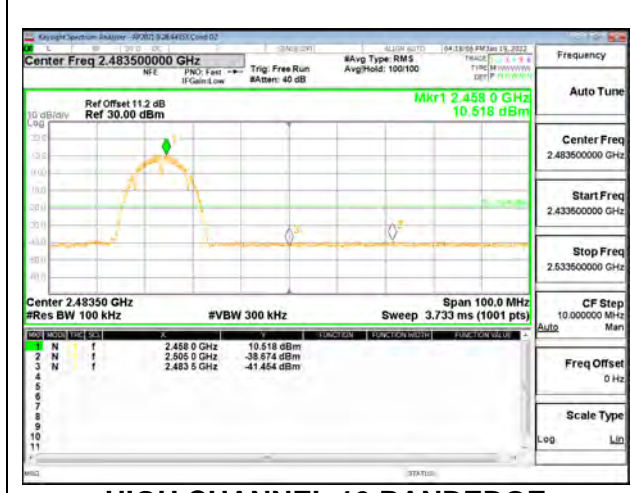
OUT-OF-BAND HIGH CHANNEL 8



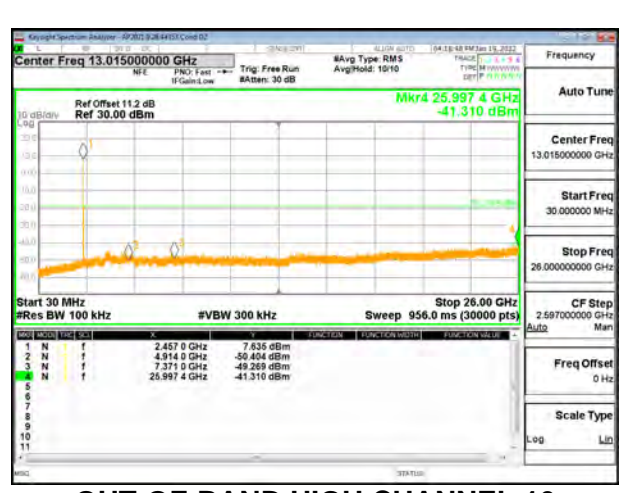
HIGH CHANNEL 9 BANDEDGE



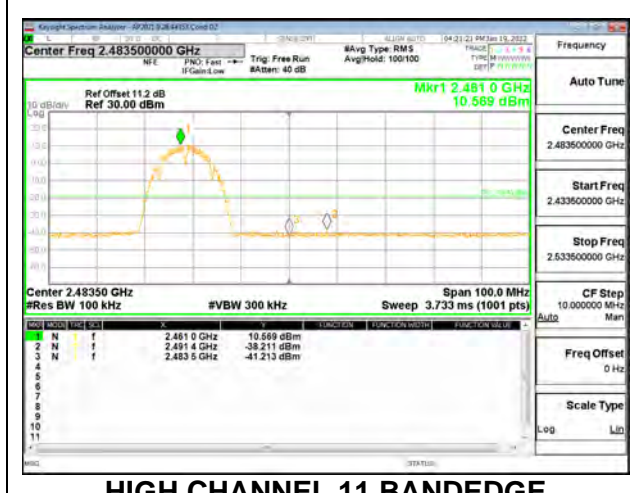
OUT-OF-BAND HIGH CHANNEL 9



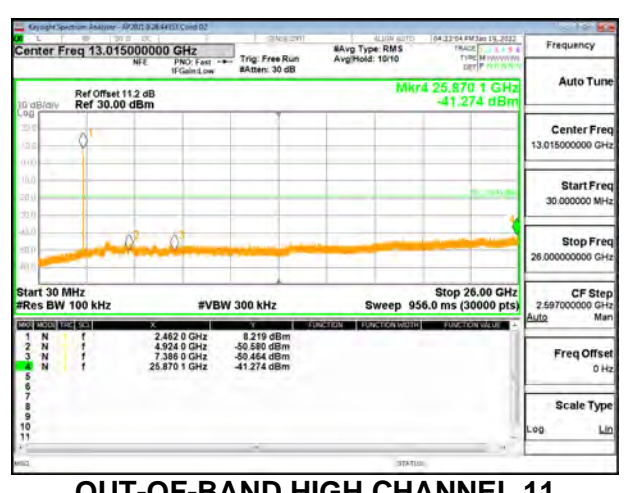
HIGH CHANNEL 10 BANDEDGE



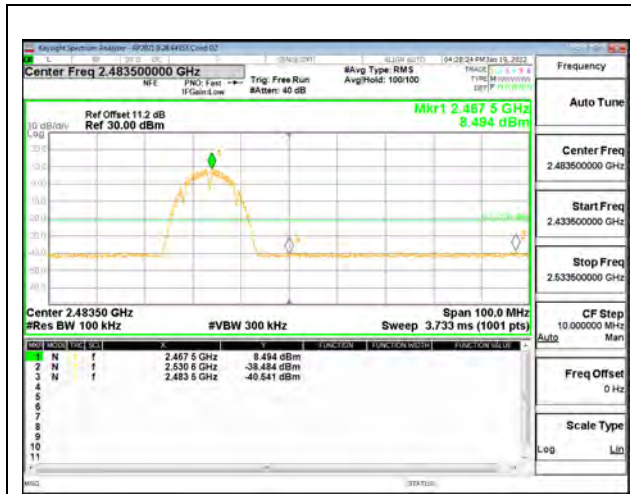
OUT-OF-BAND HIGH CHANNEL 10



HIGH CHANNEL 11 BANDEDGE



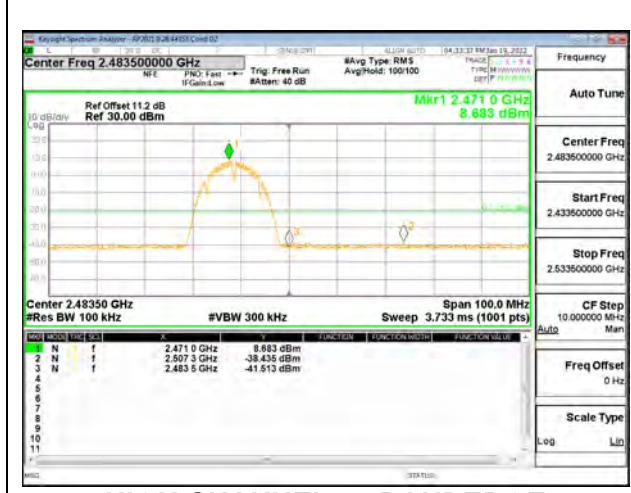
OUT-OF-BAND HIGH CHANNEL 11



HIGH CHANNEL 12 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 12



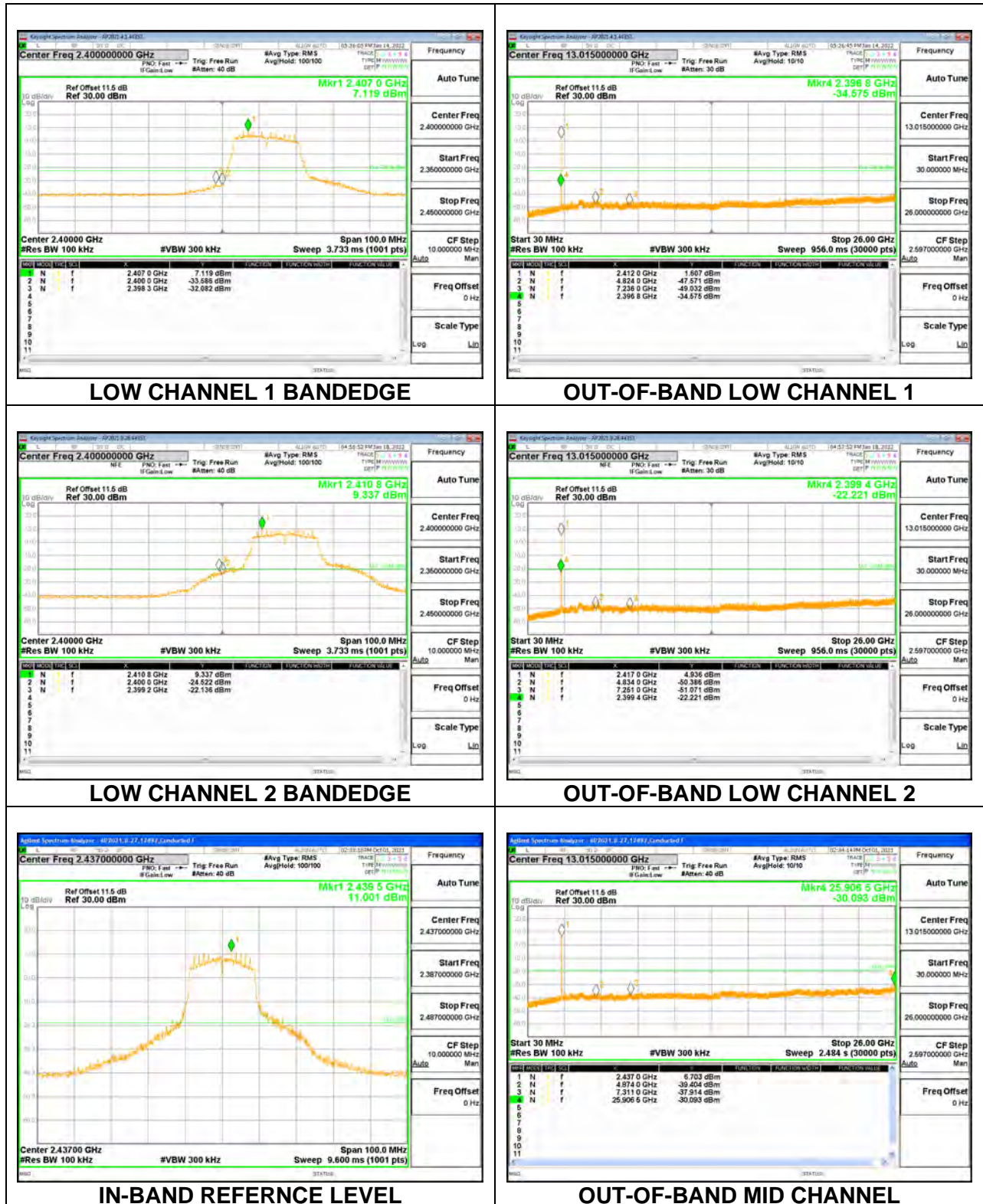
HIGH CHANNEL 13 BANDEDGE

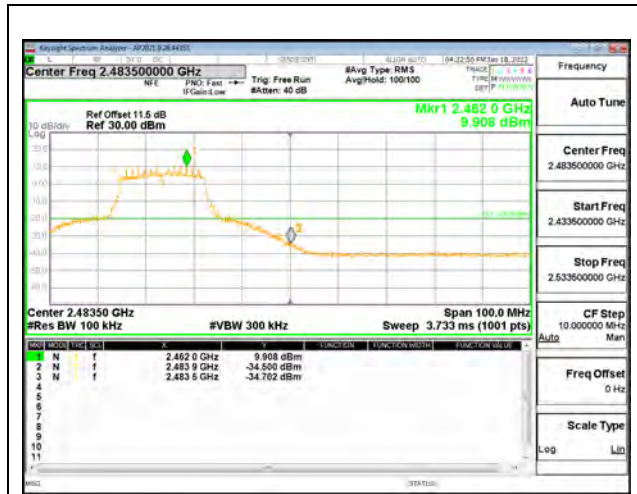


OUT-OF-BAND HIGH CHANNEL 13

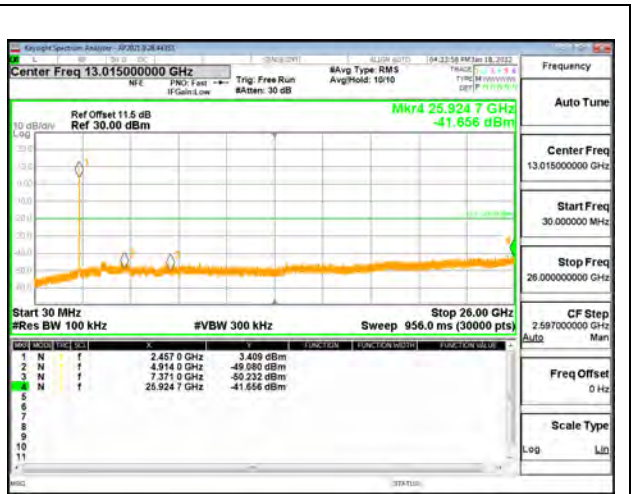
9.6.2. 802.11n HT20 SISO MODE

1TX ANT2 MODE

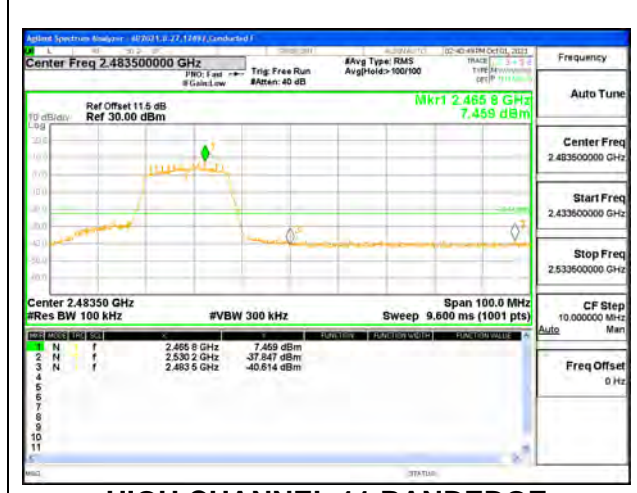




HIGH CHANNEL 10 BANDEDGE



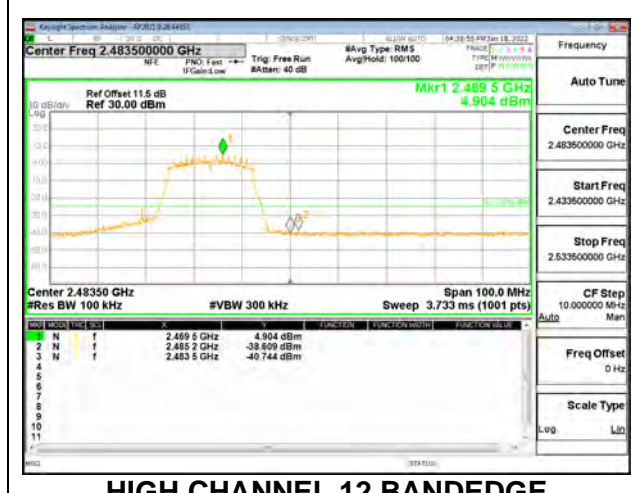
OUT-OF-BAND HIGH CHANNEL 10



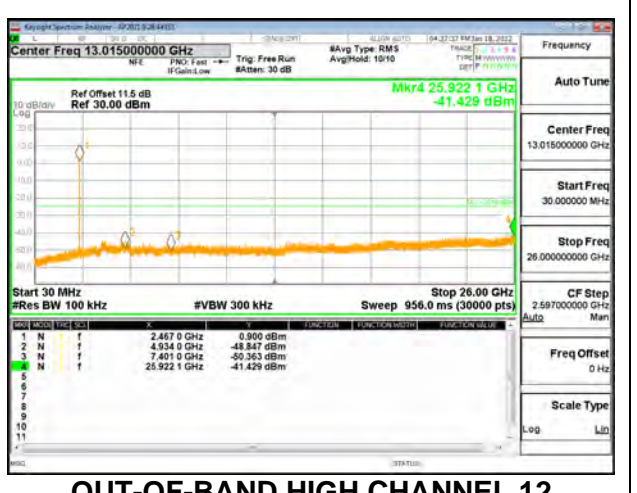
HIGH CHANNEL 11 BANDEDGE



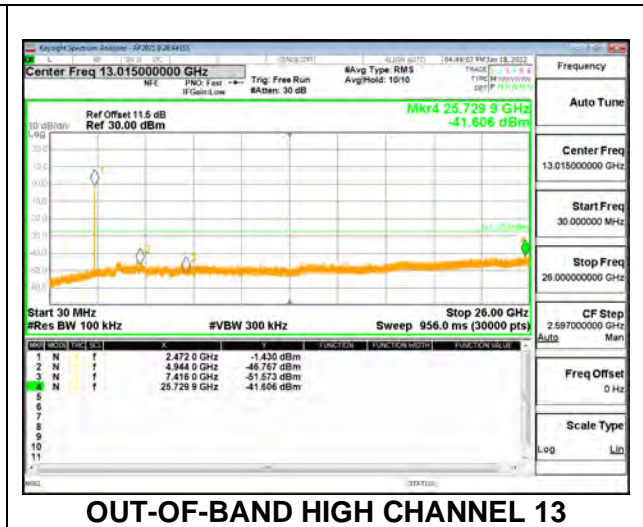
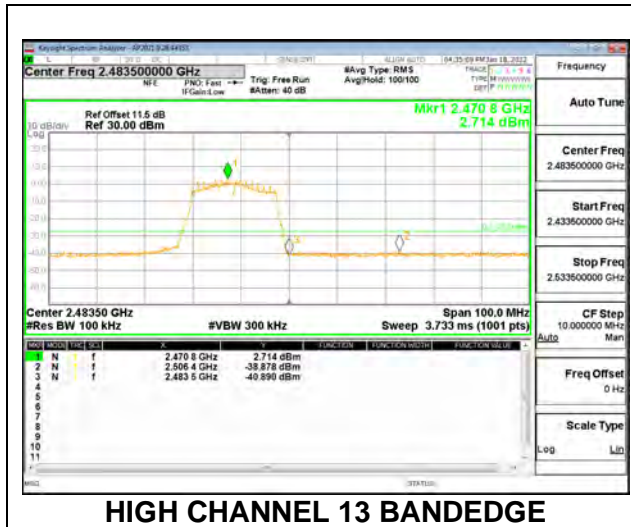
OUT-OF-BAND HIGH CHANNEL 11



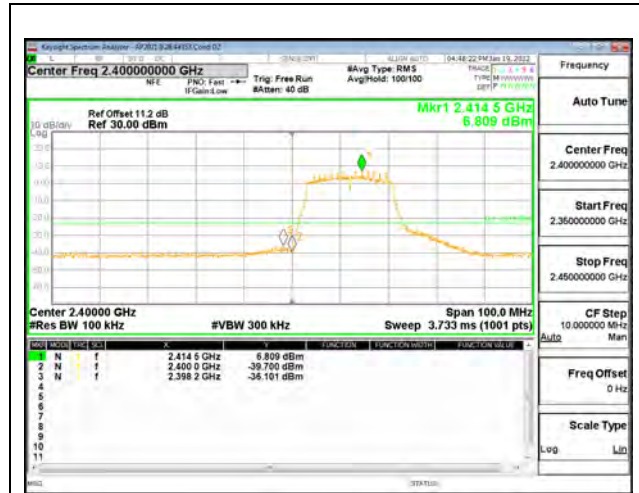
HIGH CHANNEL 12 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 12



1TX ANT3 MODE



LOW CHANNEL 1 BANDEDGE



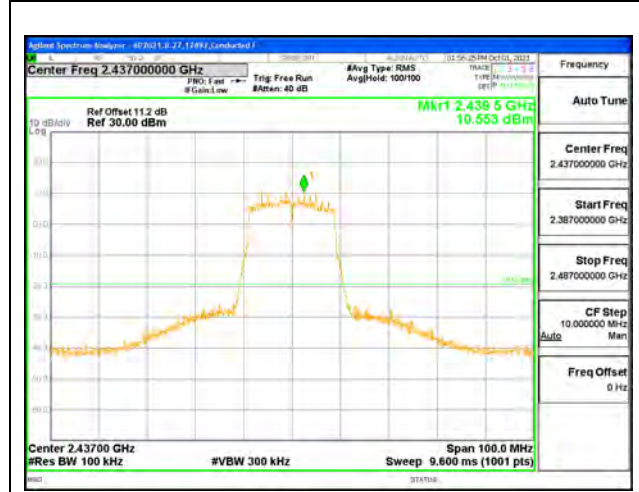
OUT-OF-BAND LOW CHANNEL 1



LOW CHANNEL 2 BANDEDGE



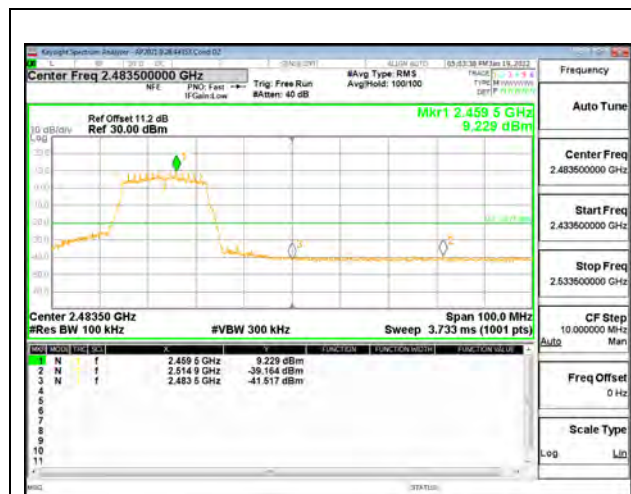
OUT-OF-BAND LOW CHANNEL 2



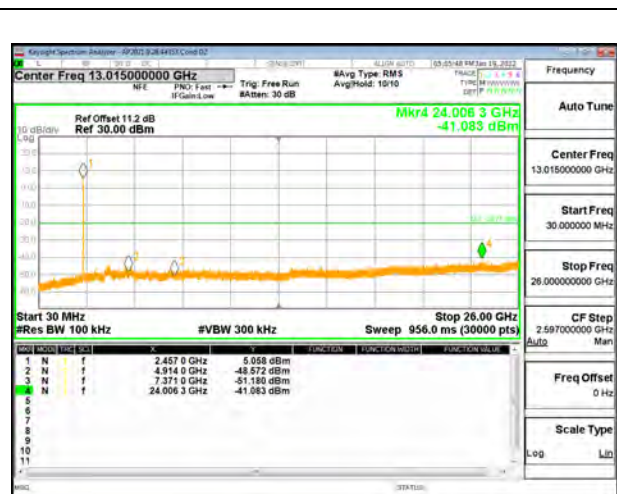
IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL



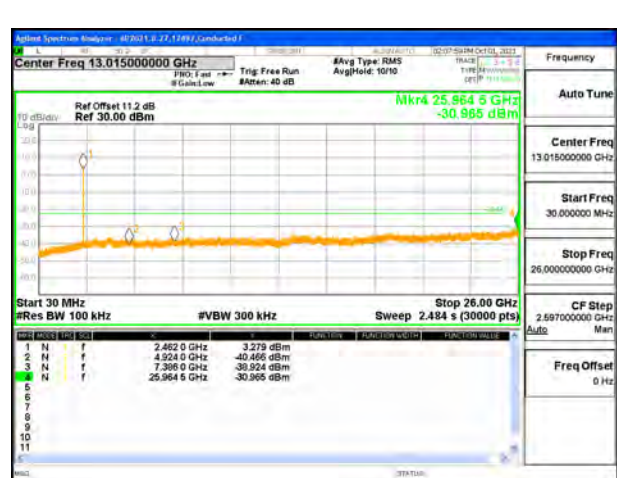
HIGH CHANNEL 10 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 10



HIGH CHANNEL 11 BANDEDGE



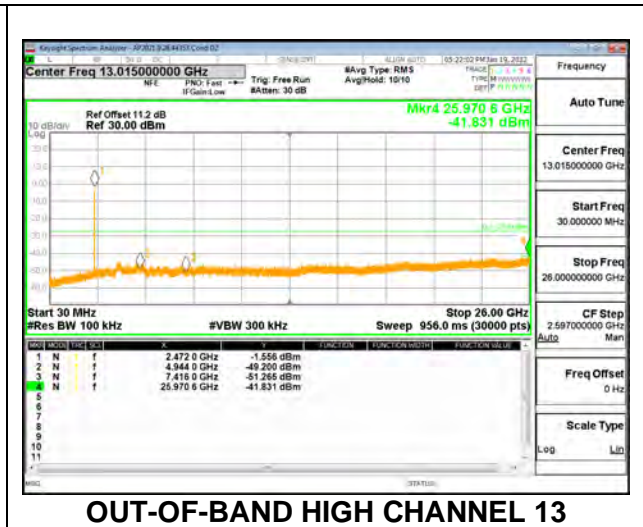
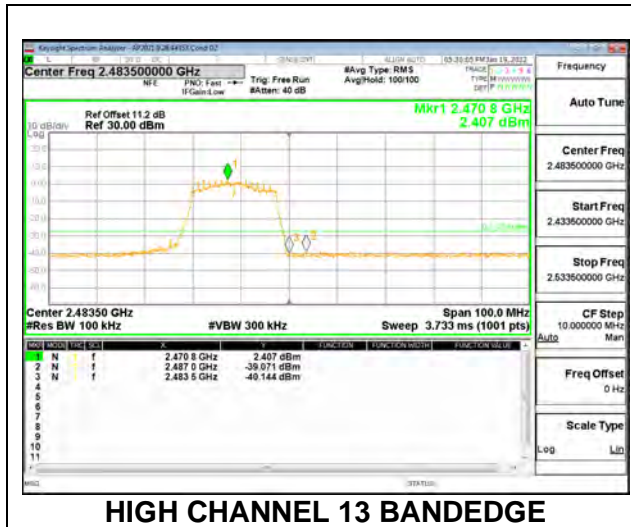
OUT-OF-BAND HIGH CHANNEL 11



HIGH CHANNEL 12 BANDEDGE

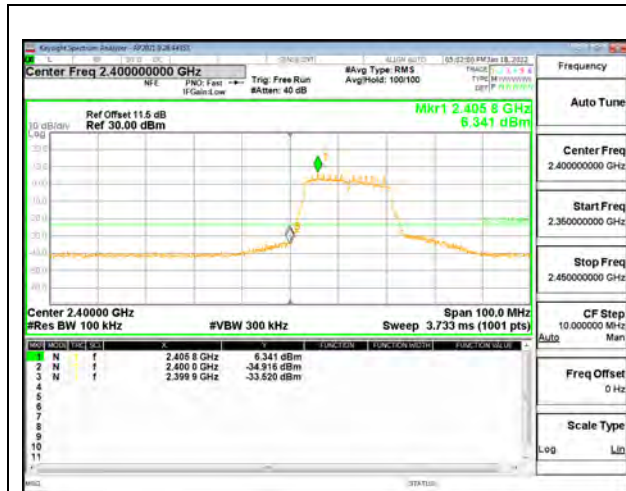


OUT-OF-BAND HIGH CHANNEL 12

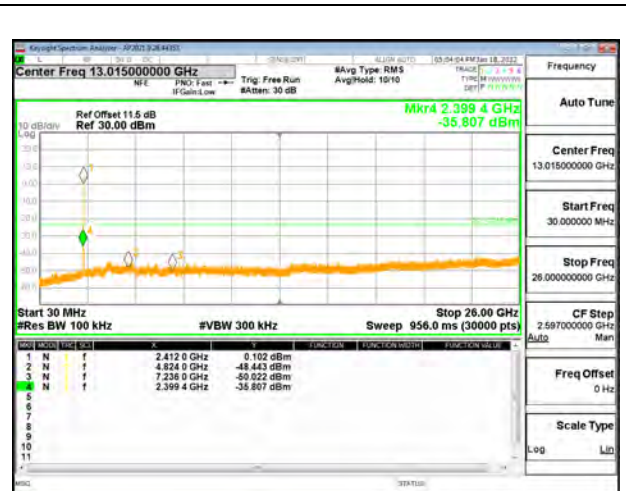


9.6.3. 802.11n HT20 MODE 2TX

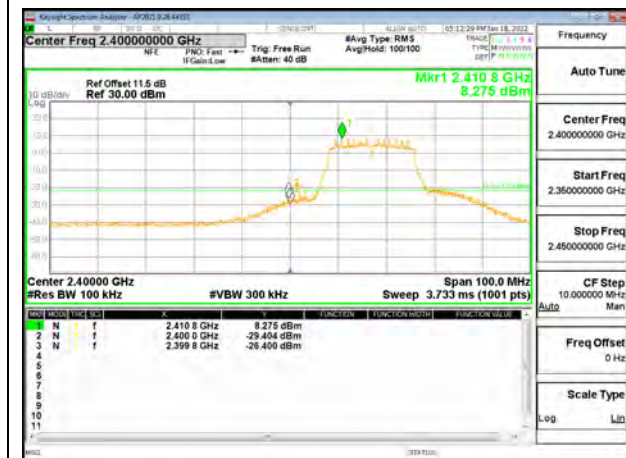
2TX ANT2 + ANT3 CDD MODE



LOW CHANNEL 1 BANDEDGE ANT2



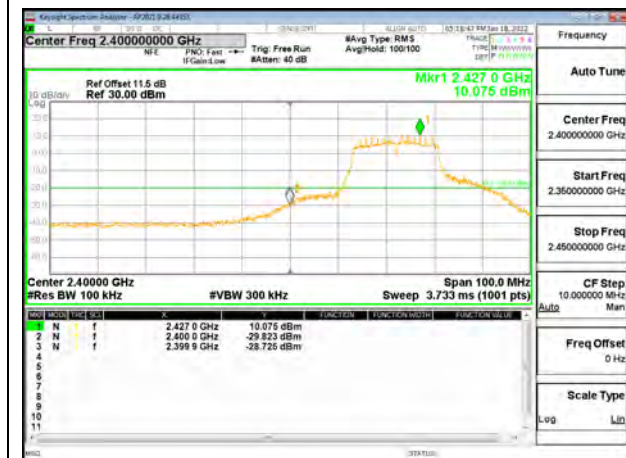
OUT-OF-BAND LOW CHANNEL 1 ANT2



LOW CHANNEL 2 BANDEDGE ANT2



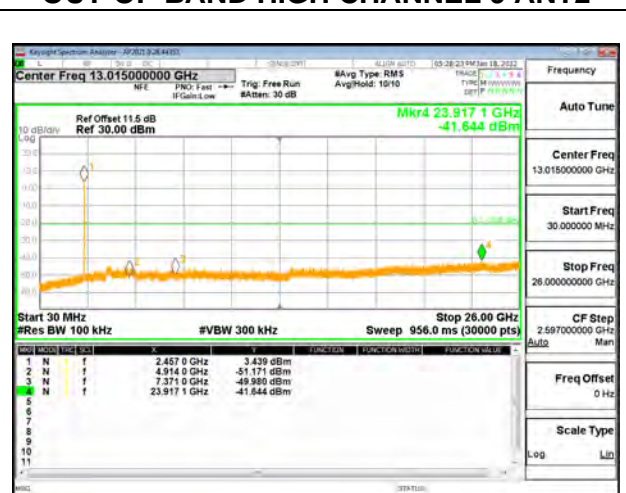
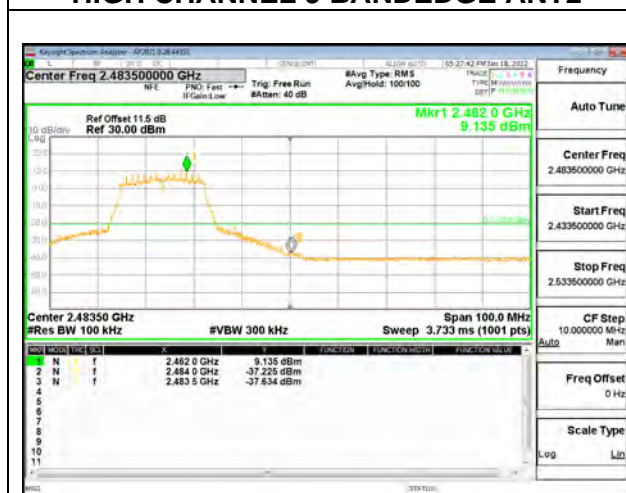
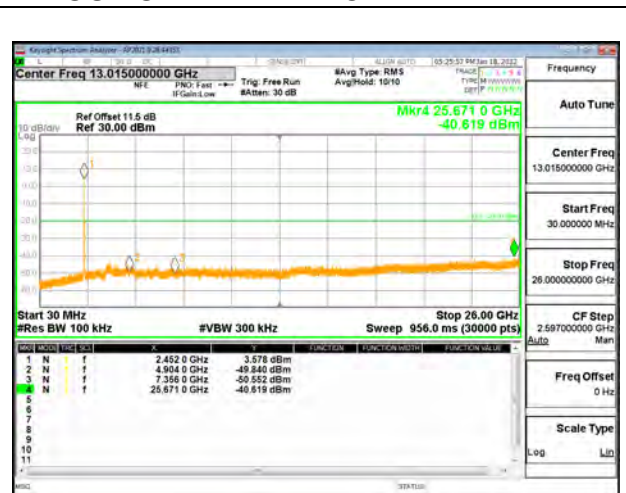
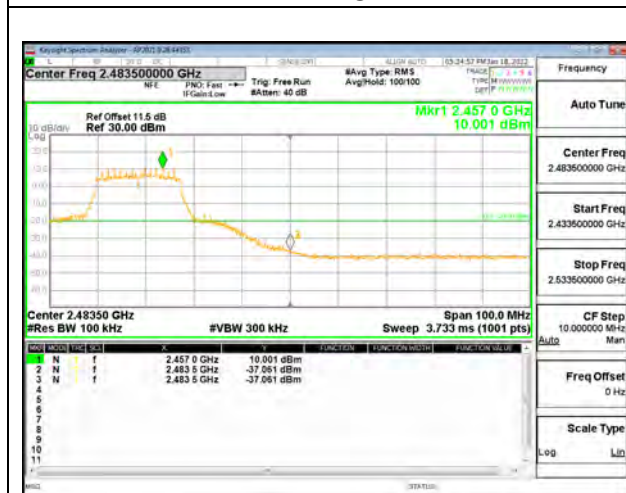
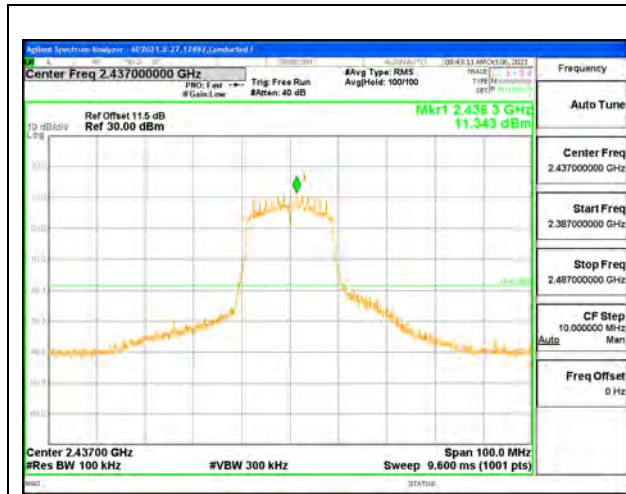
OUT-OF-BAND LOW CHANNEL 2 ANT2

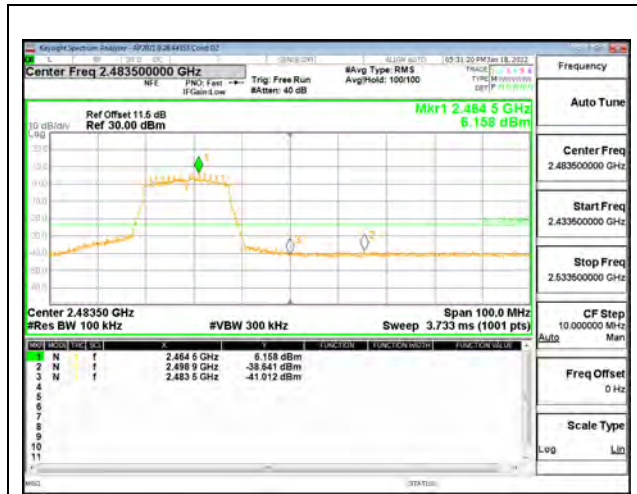


LOW CHANNEL 3 BANDEDGE ANT2

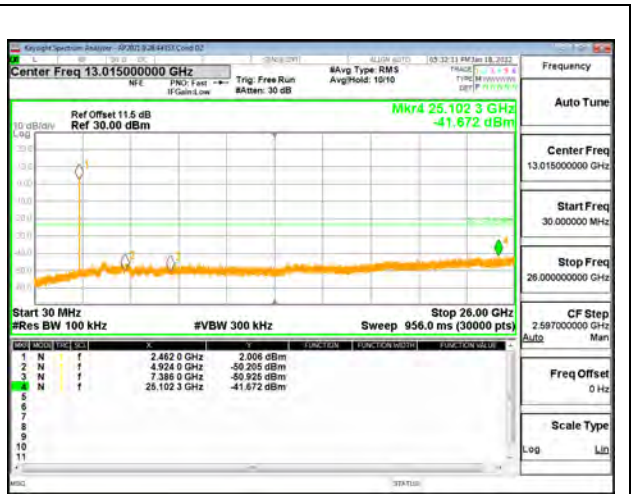


OUT-OF-BAND LOW CHANNEL 3 ANT2





HIGH CHANNEL 11 BANDEDGE ANT2



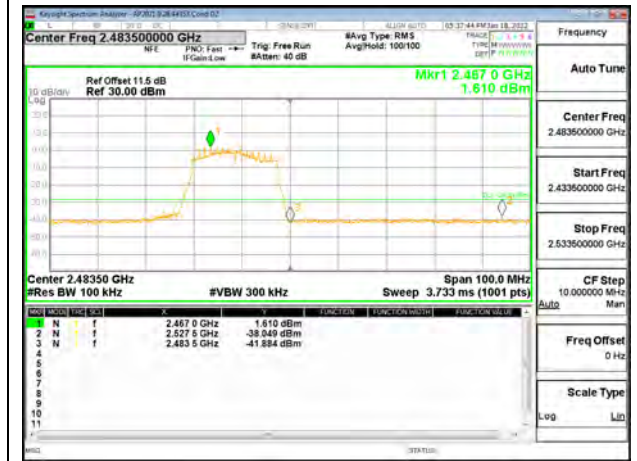
OUT-OF-BAND HIGH CHANNEL 11 ANT2



HIGH CHANNEL 12 BANDEDGE ANT2



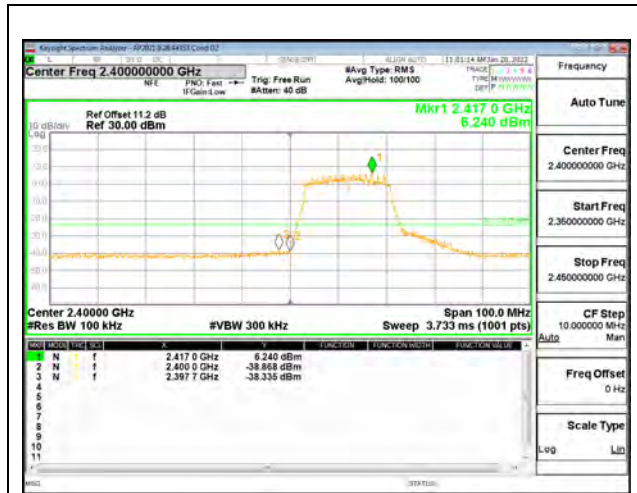
OUT-OF-BAND HIGH CHANNEL 12 ANT2



HIGH CHANNEL 13 BANDEDGE ANT2



OUT-OF-BAND HIGH CHANNEL 13 ANT2



LOW CHANNEL 1 BANDEDGE ANT3



OUT-OF-BAND LOW CHANNEL 1 ANT3



LOW CHANNEL 2 BANDEDGE ANT3



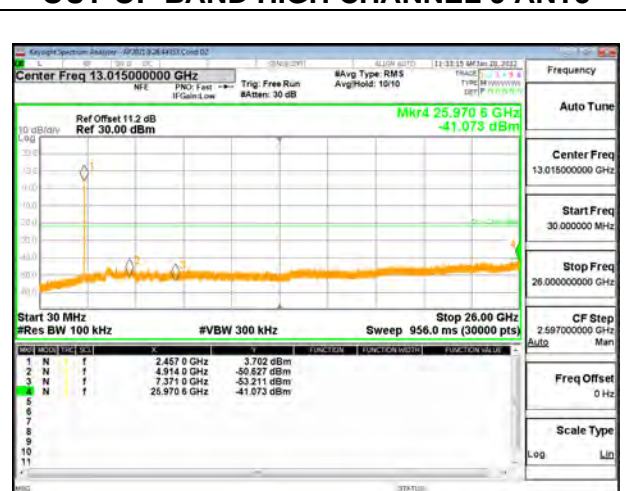
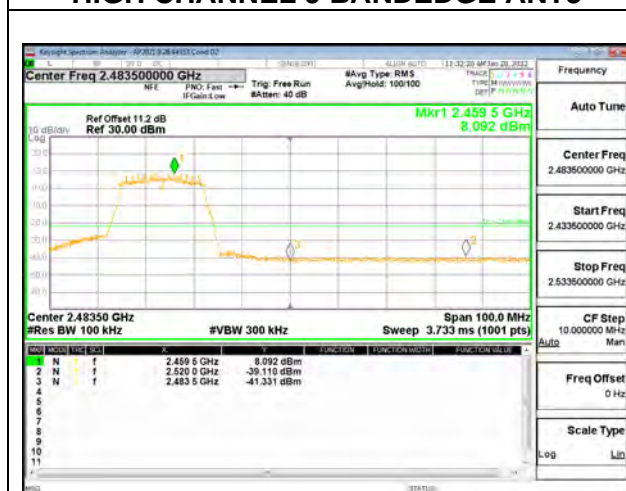
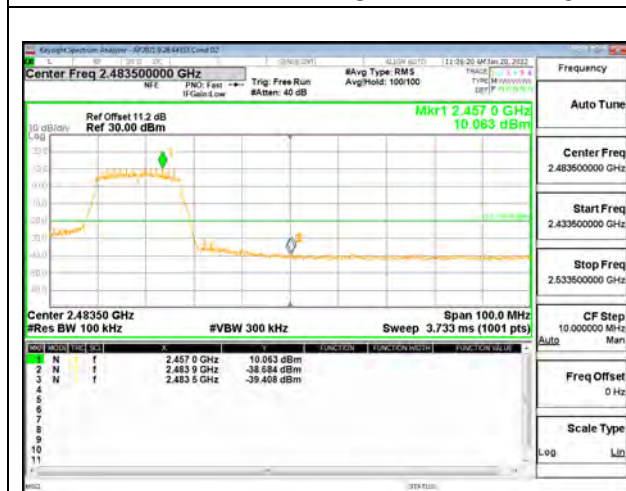
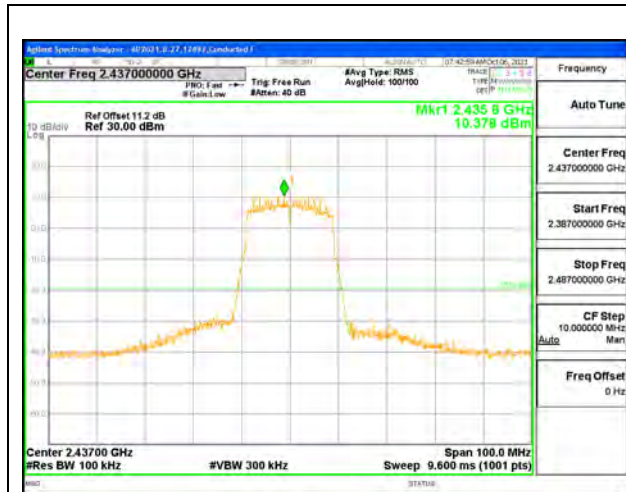
OUT-OF-BAND LOW CHANNEL 2 ANT3

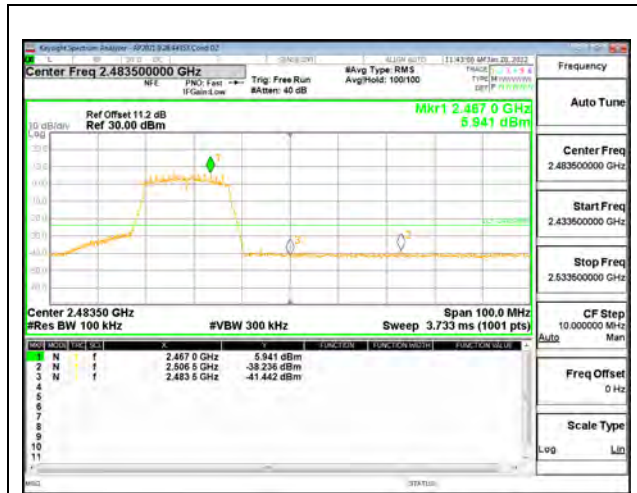


LOW CHANNEL 3 BANDEDGE ANT3



OUT-OF-BAND LOW CHANNEL 3 ANT3





HIGH CHANNEL 11 BANDEDGE ANT3



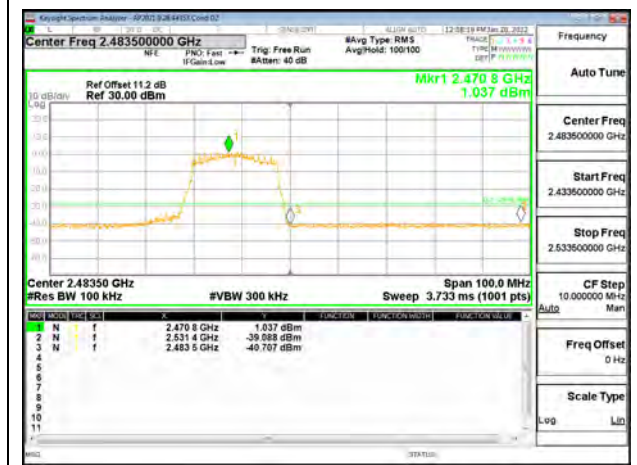
OUT-OF-BAND HIGH CHANNEL 11 ANT3



HIGH CHANNEL 12 BANDEDGE ANT3



OUT-OF-BAND HIGH CHANNEL 12 ANT3



HIGH CHANNEL 13 BANDEDGE ANT3



OUT-OF-BAND HIGH CHANNEL 13 ANT3

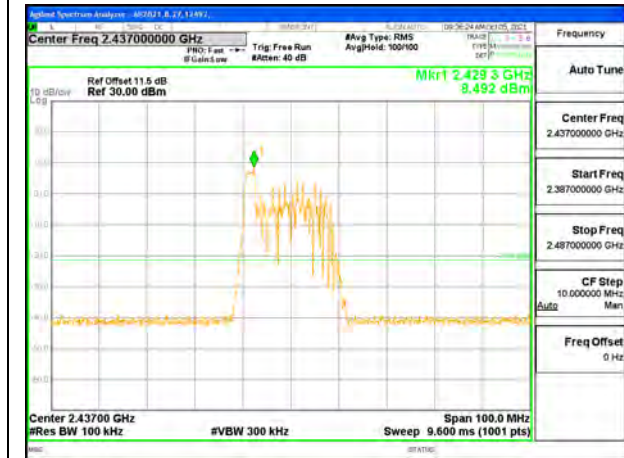
9.6.4. 802.11ax HE20 MODE
1TX ANT2 MODE, 26-Tone RU Index 0



LOW CHANNEL 1 BANDEDGE



OUT-OF-BAND LOW CHANNEL 1



IN-BAND REFERENCE LEVEL



OUT-OF-BAND MID CHANNEL



HIGH CHANNEL 11 BANDEGE



OUT-OF-BAND HIGH CHANNEL 11



HIGH CHANNEL 12 BANDEGE



OUT-OF-BAND HIGH CHANNEL 12

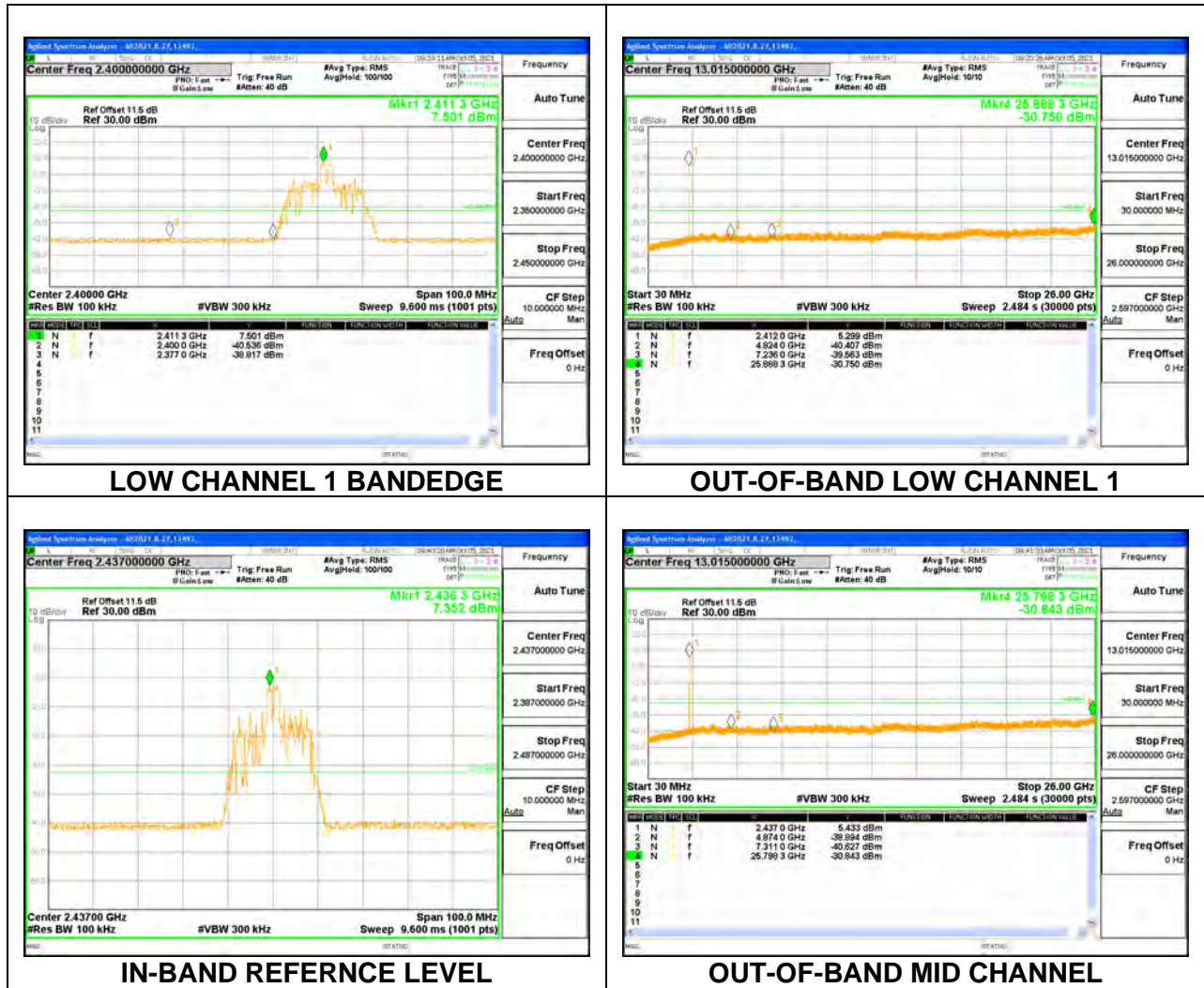


HIGH CHANNEL 13 BANDEGE



OUT-OF-BAND HIGH CHANNEL 13

1TX ANT2 MODE, 26-Tone RU Index 4





HIGH CHANNEL 11 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 11



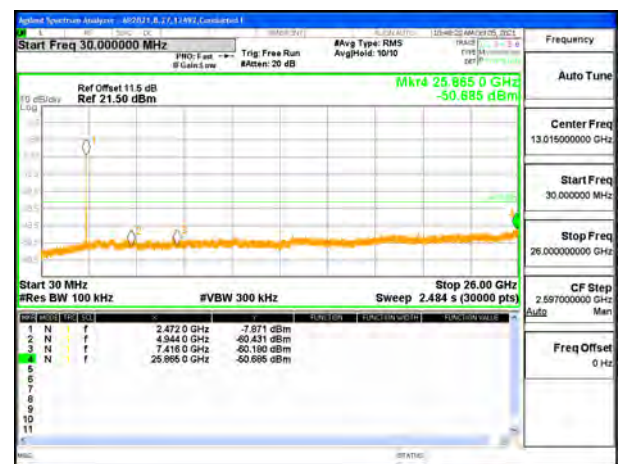
HIGH CHANNEL 12 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 12

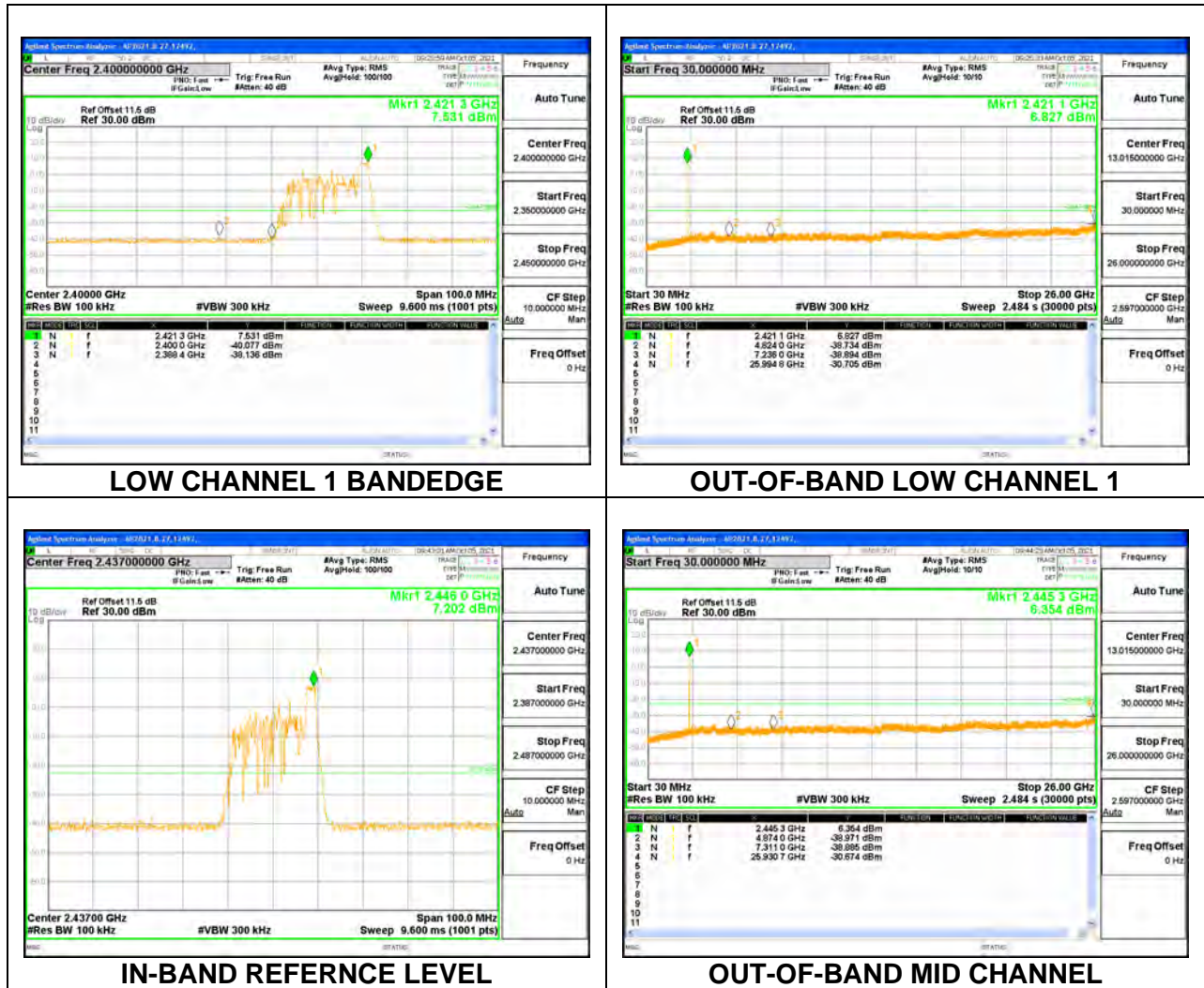


HIGH CHANNEL 13 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 13

1TX ANT2 MODE, 26-Tone RU Index 8





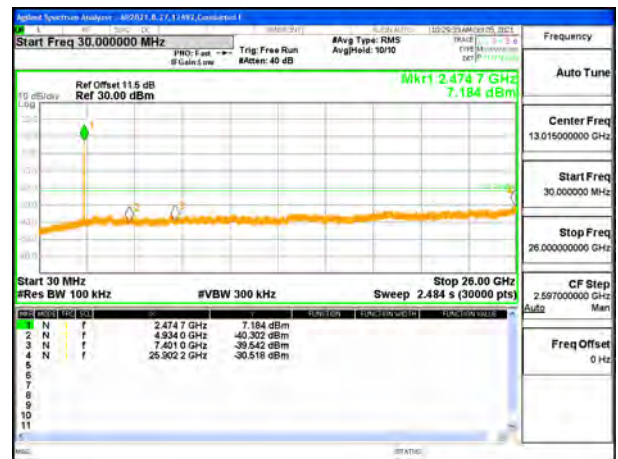
HIGH CHANNEL 11 BANDEGE



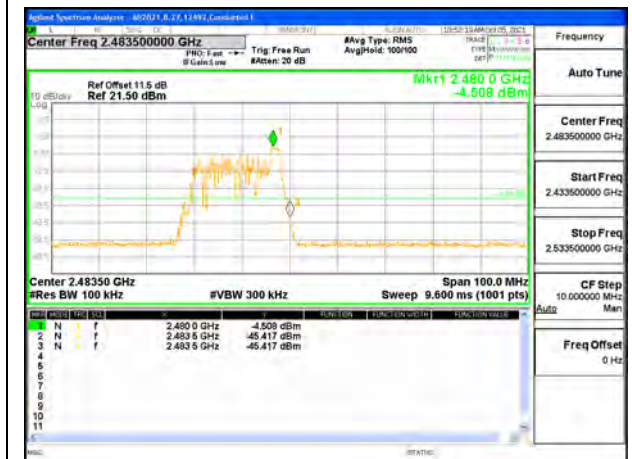
OUT-OF-BAND HIGH CHANNEL 11



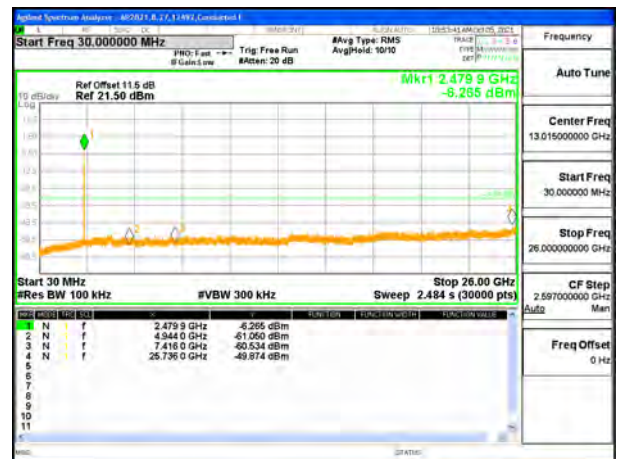
HIGH CHANNEL 12 BANDEGE



OUT-OF-BAND HIGH CHANNEL 12

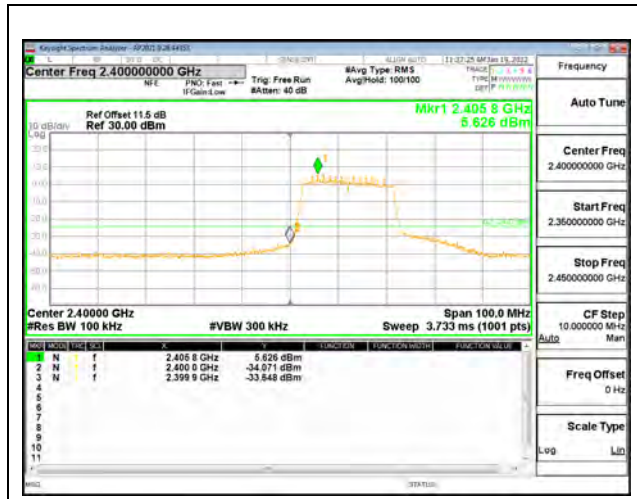


HIGH CHANNEL 13 BANDEGE

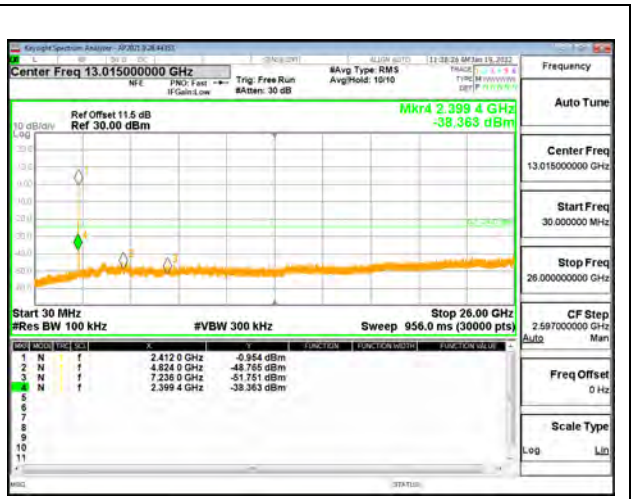


OUT-OF-BAND HIGH CHANNEL 13

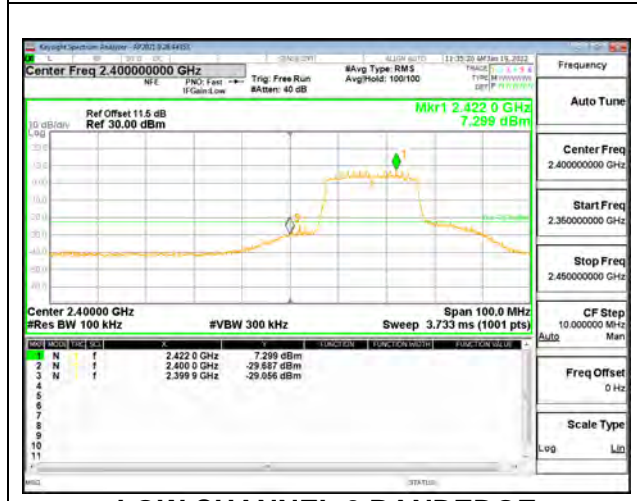
1TX ANT2 MODE, SU Mode



LOW CHANNEL 1 BANDEDGE



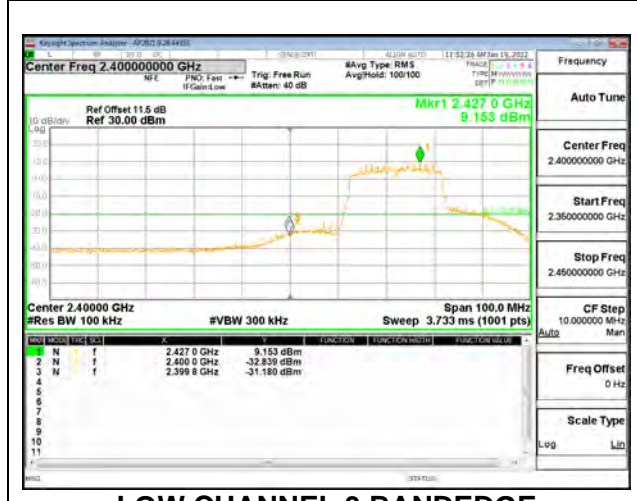
OUT-OF-BAND LOW CHANNEL 1



LOW CHANNEL 2 BANDEDGE



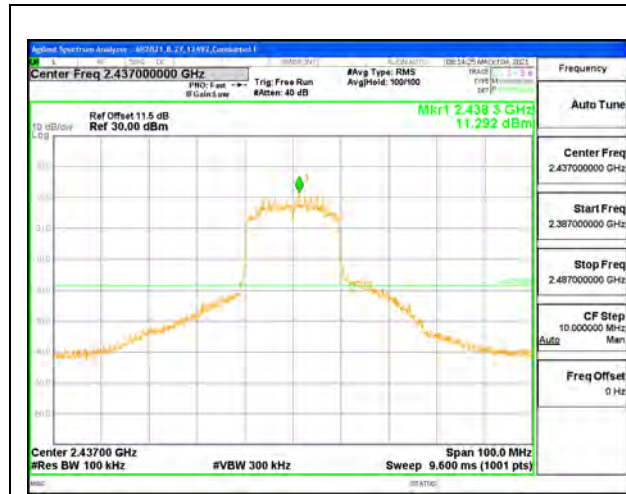
OUT-OF-BAND LOW CHANNEL 2



LOW CHANNEL 3 BANDEDGE



OUT-OF-BAND LOW CHANNEL 3



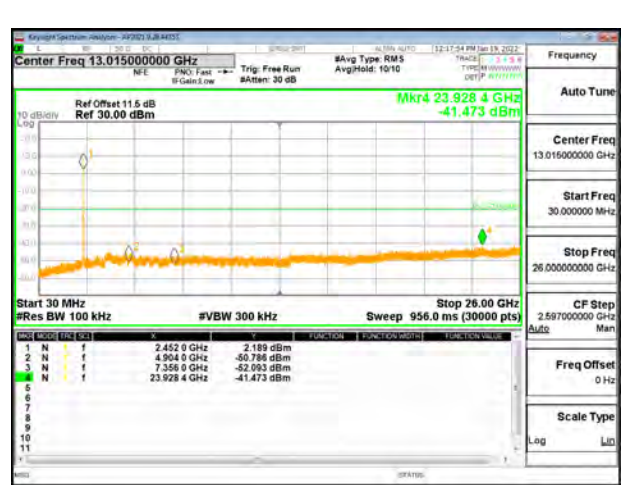
IN-BAND REFERENCE LEVEL



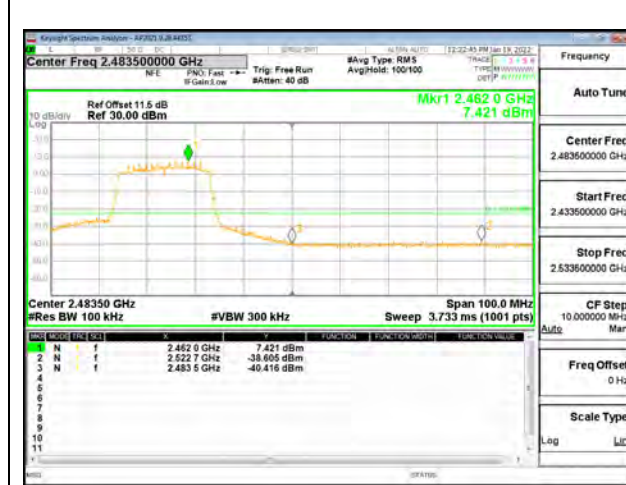
OUT-OF-BAND MID CHANNEL



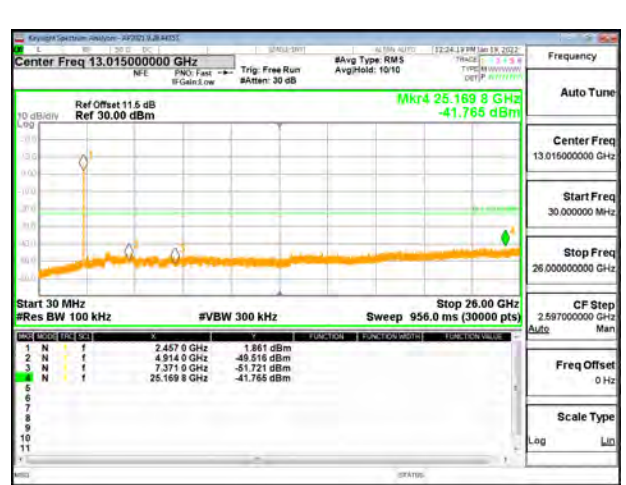
HIGH CHANNEL 9 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 9



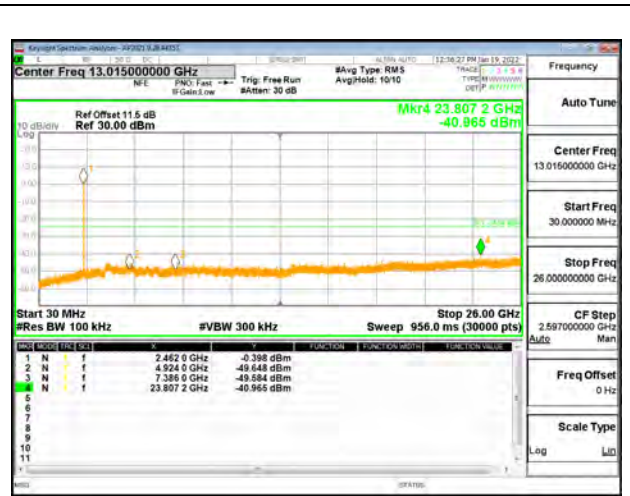
HIGH CHANNEL 10 BANDEDGE



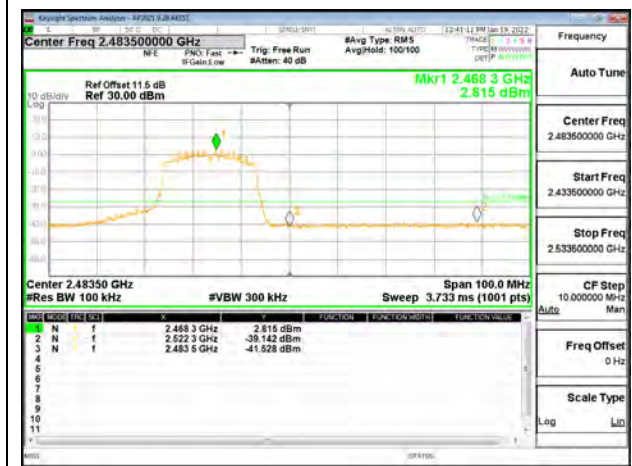
OUT-OF-BAND HIGH CHANNEL 10



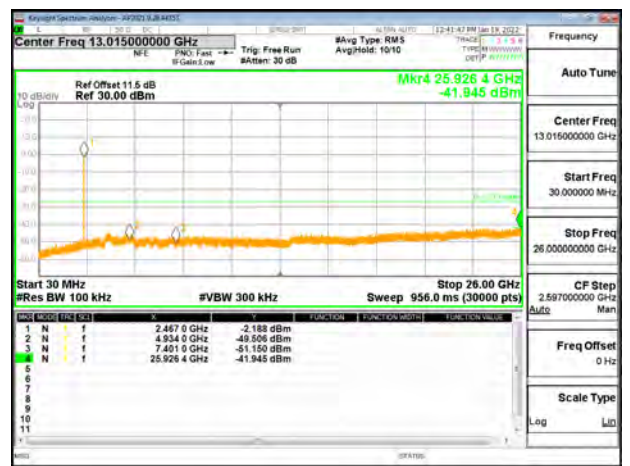
HIGH CHANNEL 11 BANDEDGE



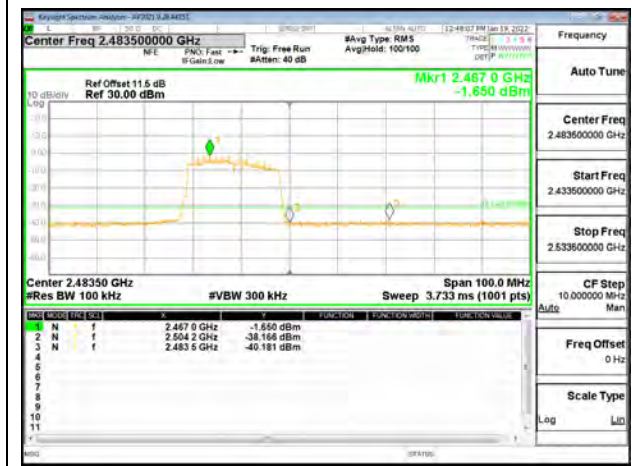
OUT-OF-BAND HIGH CHANNEL 11



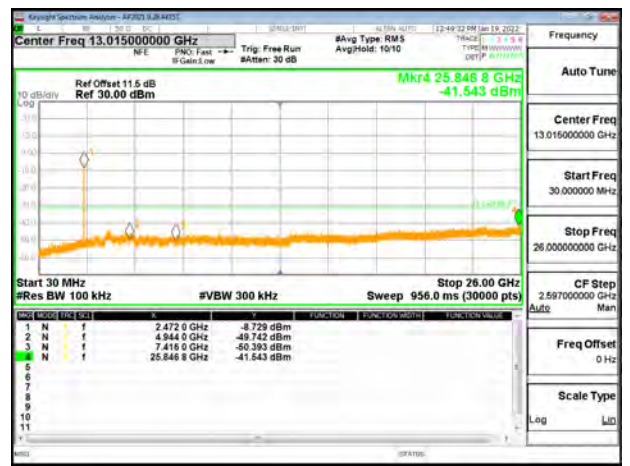
HIGH CHANNEL 12 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 12

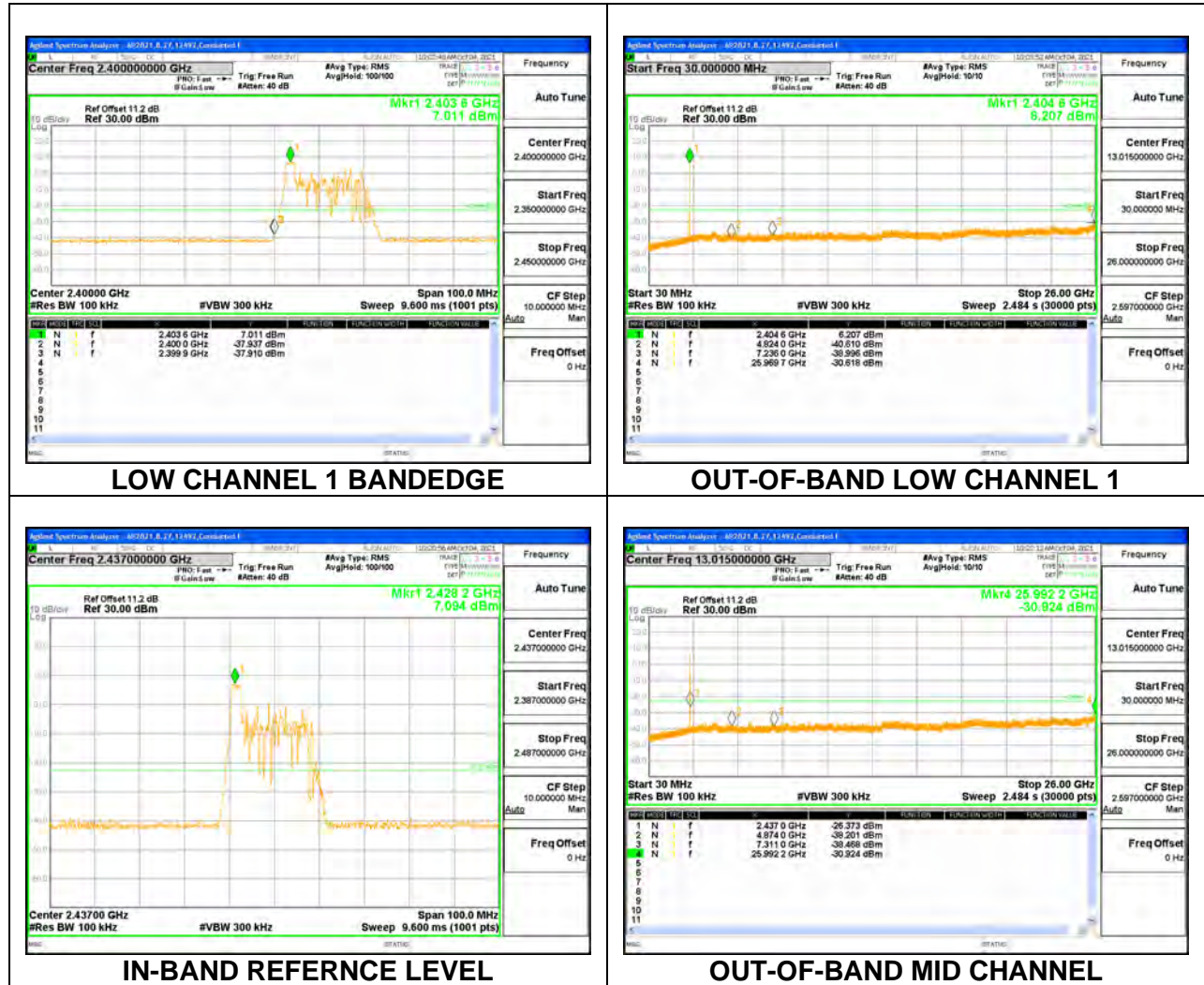


HIGH CHANNEL 13 BANDEDGE



OUT-OF-BAND HIGH CHANNEL 13

1TX ANT3 MODE, 26-Tone RU Index 0





HIGH CHANNEL 11 BANDEGE



OUT-OF-BAND HIGH CHANNEL 11



HIGH CHANNEL 12 BANDEGE



OUT-OF-BAND HIGH CHANNEL 12

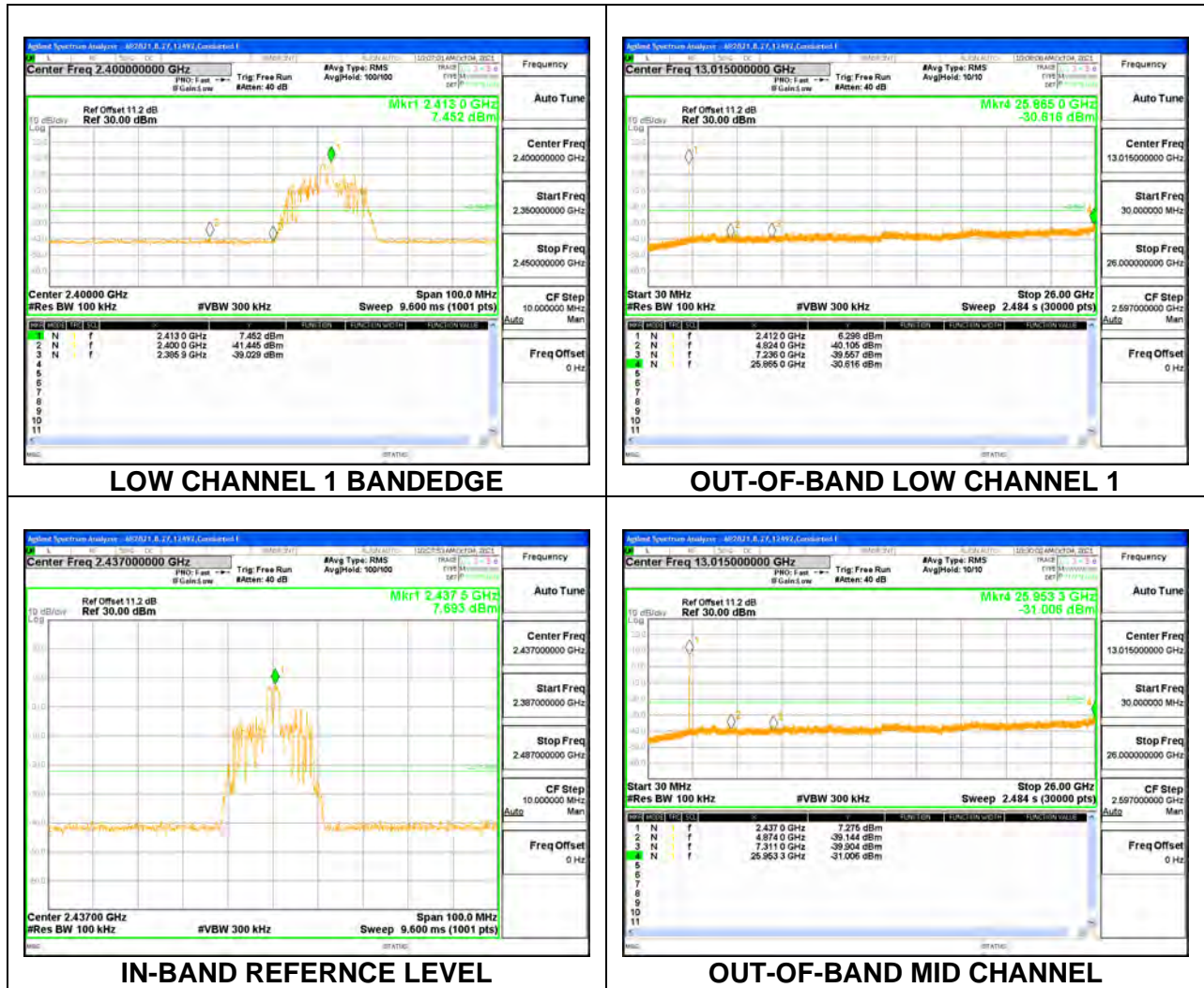


HIGH CHANNEL 13 BANDEGE



OUT-OF-BAND HIGH CHANNEL 13

1TX ANT3 MODE, 26-Tone RU Index 4





HIGH CHANNEL 11 BANDEGE



OUT-OF-BAND HIGH CHANNEL 11



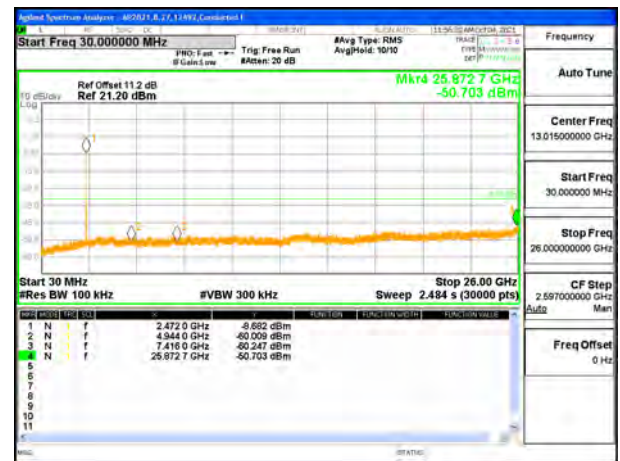
HIGH CHANNEL 12 BANDEGE



OUT-OF-BAND HIGH CHANNEL 12



HIGH CHANNEL 13 BANDEGE



OUT-OF-BAND HIGH CHANNEL 13

1TX ANT3 MODE, 26-Tone RU Index 8

