



CERTIFICATION TEST REPORT

Report Number. : 13812998-E2V3

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

Model : A2657

Brand : Apple

FCC ID : BCGA2657

EUT Description : Network adapter

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C

Date Of Issue:

April 21, 2022

Prepared by:

UL VERIFICATION SERVICES

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	4/8/2022	Initial Issue	Abrego Gerardo
V2	4/19/2022	Addressed TCB comments and test equipment	Tri Pham
V3	4/21/2022	Updated BE and spur plots	Tri Pham

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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: Network adapter

MODEL: A2657

BRAND: Apple

SERIAL NUMBER: Conducted: C32GWVWD4
Radiated: QPGPH3PVYM

SAMPLE RECEIPT DATE: January 22, 2022

DATE TESTED: February 2, 2022 – April 20, 2022

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	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 Laboratory Engineer
Consumer Technology Division
UL Verification Services Inc.

Abrego Gerardo
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	Requirement	Result	Comment
See Comment	Duty Cycle	Reporting purposes only	ANSI C63.10 Section 11.6.
-	99% OBW	Reporting purposes only	ANSI C63.10 Section 6.9.3.
15.247 (a) (2)	6dB BW	Complies	None.
15.247 (b) (3)	Output Power	Complies	None.
See Comment	Average power	Reporting purposes only	Per ANSI C63.10, Section 11.9.2.3.2.
15.247 (e)	PSD	Complies	None.
15.247 (d)	Conducted Spurious Emissions	Complies	None.
15.209, 15.205	Radiated Emissions	Complies	None.
15.207	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, ANSI C63.10-2013, KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 414788 D01 Radiated Test Site v01r01.

4. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by A2LA, Certificate Number 0751.05, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
☐	Building 1: 47173 Benicia Street Fremont, CA 94538, U.S.A	US0104	2324A	550739
☐	Building 2: 47266 Benicia Street Fremont, CA 94538, U.S.A	US0104	22541	550739
☒	Building 4: 47658 Kato Rd Fremont, CA 94538, U.S.A	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%.

5.4. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.

36.5 dBuV + 0 dB + 10.1 dB + 0 dB = 46.6 dBuV

6. EQUIPMENT UNDER TEST

6.1. EUT DESCRIPTION

The EUT is a Network Adapter. It has an integral battery, two Gigabit Ethernet port, lightning connector and antenna. The device supports IEEE 802.11b/g/n radio, Bluetooth radio, and NFC. Network Adapter comes with 32 GB memory storage and 1GB RAM.

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)
2412 - 2467	802.11b	6.50	4.47
2412 - 2467	802.11n HT20	6.54	4.51

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

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

The radio utilizes an antenna with a maximum gain of 2.9 dBi.

6.4. SOFTWARE AND FIRMWARE

The EUT firmware installed during testing was 19F47.

6.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 1GHz, above 18GHz, and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

For Radiated band edge and harmonic emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the highest power.

EUT was investigated in three orthogonal orientations X (Flatbed), Y (Portrait) and Z (Landscape), it was determined that Z (Landscape) orientation was the worst-case orientation with EUT and charger; therefore, all final radiated testing was performed with the EUT in Z (Landscape) orientation.

For below 1GHz, EUT was connecting to both Laptop and Switch/Router via ethernet cable as the worst case. There were no emissions found below 30MHz within 20dB of the limit. For AC line conducted emission was investigated with AC power adapter and with laptop.

Worst-case data rates as provided by the client were:

802.11b mode: 1 Mbps

802.11n HT20mode: MCS0

6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Apple	Macbook Pro	C02P41RZG086	FCC DoC
Laptop AC/DC adapter	Liteon Technology	PA-1450-BA1	B123	NA
AC/DC Adapter	Apple	A1385	D292365CDYADHLHC3	NA
10dB Fixed Attenuator	Pasternack	PE7087-10	Label ID: 178584	N/A

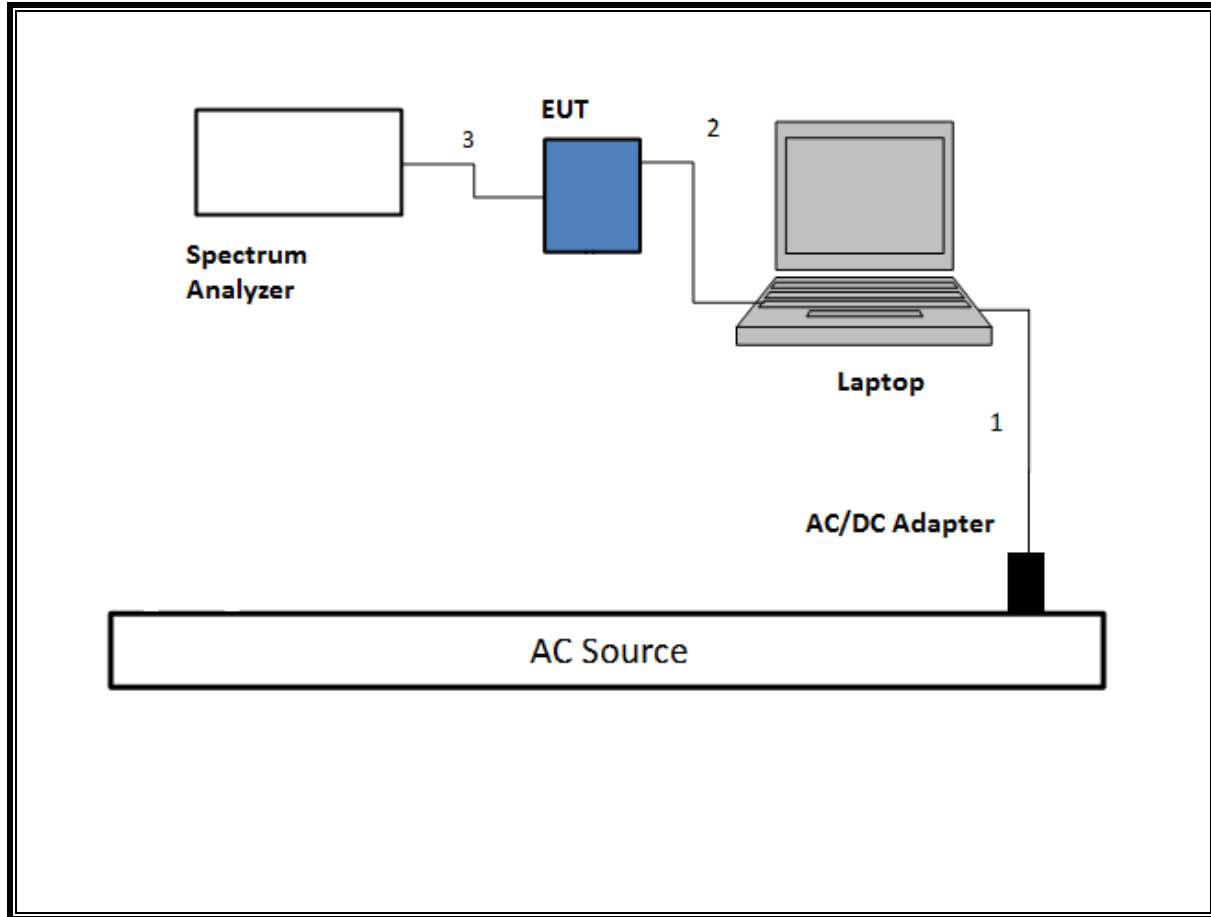
I/O CABLES (Conducted)

I/O Cable List						
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-C	Shielded	1	N/A
3	Antenna	1	SMA	Un-Shielded	0.2	To spectrum Analyzer

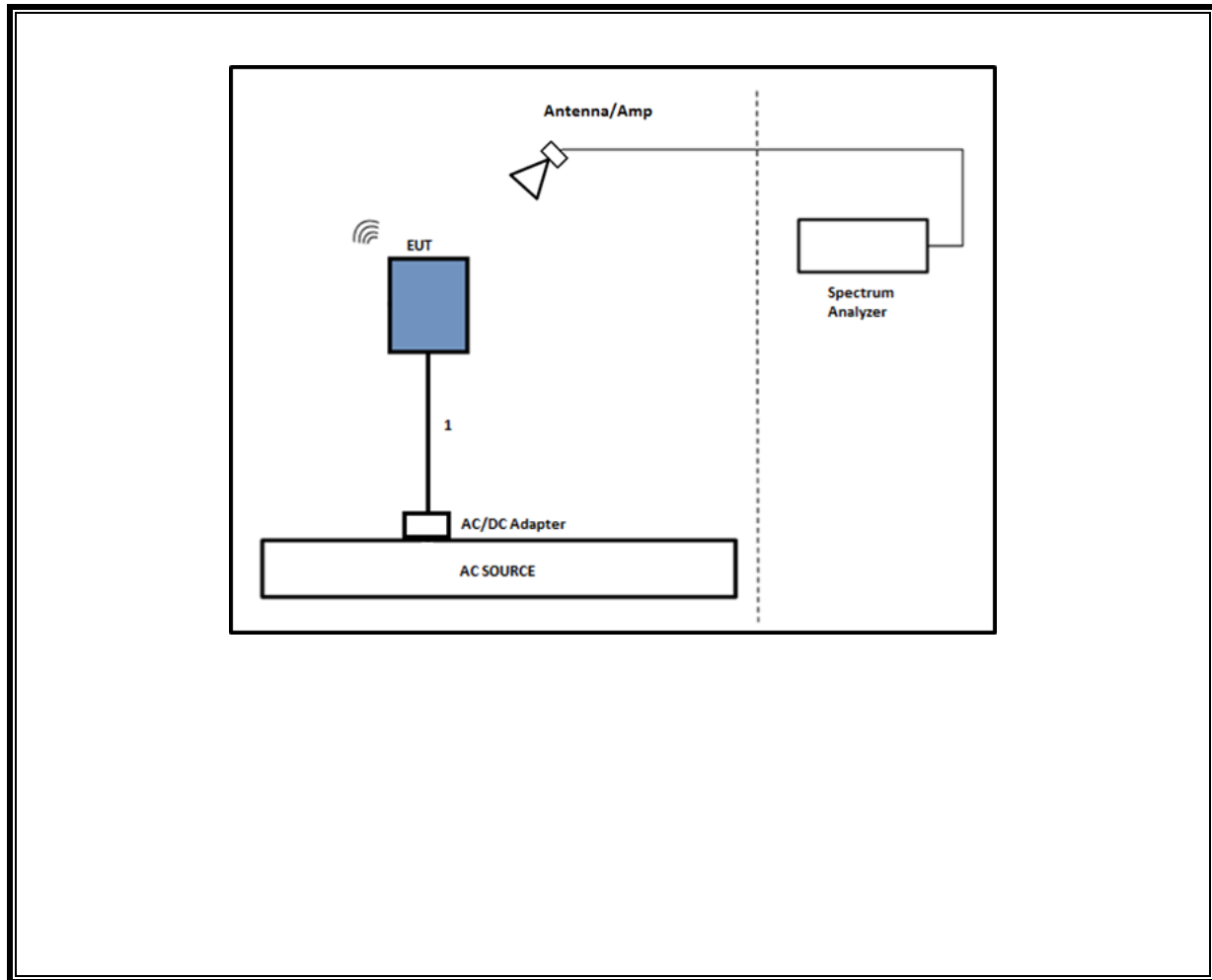
TEST SETUP

The EUT is connected to a test laptop during the tests. Test software exercised the radio card.

SETUP DIAGRAM FOR CONDUCTED TESTS



SETUP DIAGRAM FOR RADIATED TESTS ABOVE 1 GHz



The diagram illustrates an EMC test setup. At the bottom, a box labeled "AC Source/ LISN" provides power. Three cables, each labeled "1", connect the AC source to three different components: a black antenna-like device on the left, a blue box labeled "EUT" in the center, and a laptop on the right. The black device is connected via a cable labeled "3". The EUT is connected to the laptop via a cable labeled "2". Above the EUT, a small antenna icon is shown. To the right of the EUT and laptop, a vertical dashed line separates the "Radiated Test" area from the "Conducted Test" area. In the "Radiated Test" area, an "Antenna/Amp" is shown with a signal path leading to a "Spectrum Analyzer" box. The "Conducted Test" area is indicated by a green dashed line connecting the AC source to the "Spectrum Analyzer".

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
Amplifier, 100MHz-18GHz	AMPLICAL	AMP0.1G18-47-20	PRE0197319	04/08/2022	04/08/2021
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	175953	02/08/2023	02/08/2022
Antenna, Broadband Hybrid, 30MHz to 2000MHz	Sunol Sciences Corp.	JB1	82258	10/01/2022	10/01/2021
EMI TEST RECEIVER	Rohde & Schwarz	ESW44	PRE0179367	02/17/2023	02/17/2022
Power Meter, P-series single channel	Keysight Technologies Inc	N1911A	90757	02/03/2023	02/03/2022
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	T341	02/02/2023	02/02/2022
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	200895	10/13/2022	10/13/2021
RF Amplifier, 1-18GHz	AMPLICAL	AMP0.1G18-47-20	172123	02/12/2023	02/12/2022
Antenna, BroadBand Hybrid, 30MHz to 3GHz	Sunol Sciences Corp.	JB3	174373	12/14/2022	12/14/2021
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310	170648	02/10/2023	02/10/2022
Antenna Horn, 18 to 26GHz	ARA	SWH-28	81139	05/25/2022	05/25/2021
Pre-Amp 18-26GHz	Agilent Technology	8449B	T404	04/19/2022	04/19/2021
Antenna, Passive Loop 9KHz-30MHz	Electro-Metric	EM-6872	170016	06/08/2022	06/08/2021

AC Line Conducted					
Description	Manufacturer	Model	ID Num	Cal Due	Last Cal
EMI Test Receiver 9kHz-7GHz	Rohde & Schwarz	ESR	T1436	02/21/2023	02/21/2022
LISN for Conducted Emissions CISPR-16	FISCHER CUSTOM COMMUNICATIONS	FCC-LISN-50/250-25-2-01-480V	175765	01/26/2023	01/26/2022
UL AUTOMATION SOFTWARE					
Radiated Software	UL	UL EMC	Ver 9.5, Mar 6, 2020		
Conducted Software	UL	UL EMC	2020.2.26		
AC Line Conducted Software	UL	UL EMC	Ver 9.5, February 21, 2020		

9. ANTENNA PORT TEST RESULTS

9.1. ON TIME AND DUTY CYCLE

LIMITS

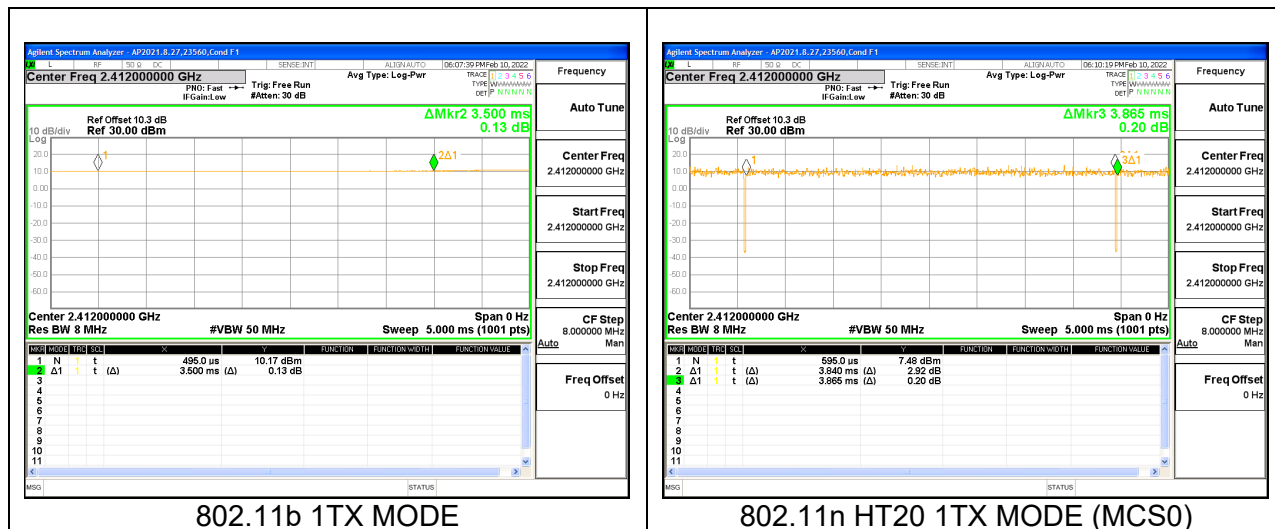
None; for reporting purposes only.

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 1TX	1.000	1.000	1.000	100.00	0.00	0.010
802.11n HT20 1TX (MCS0)	3.840	3.865	0.994	99.35	0.00	0.010



9.2. 99% BANDWIDTH

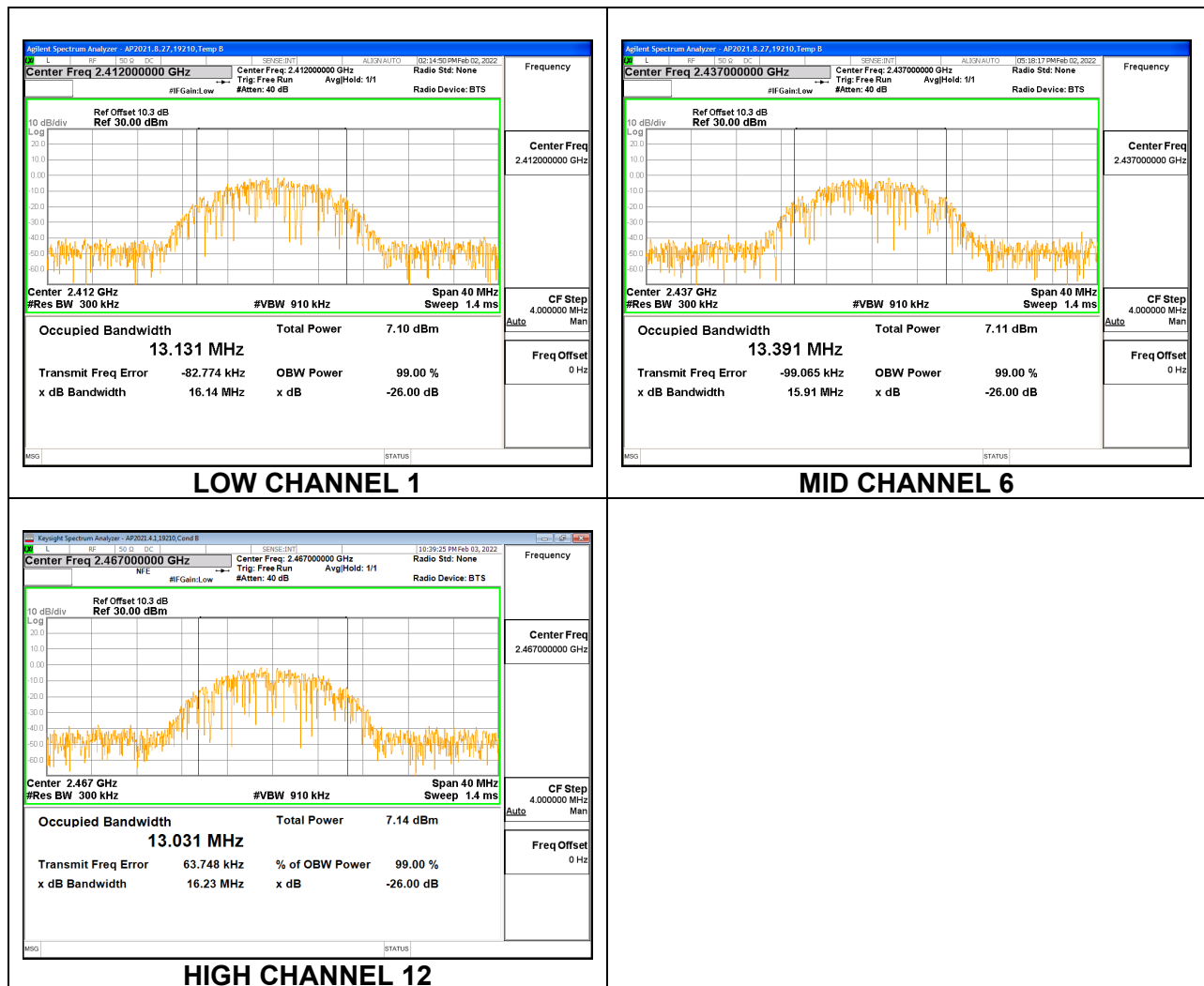
LIMITS

None; for reporting purposes only.

RESULTS

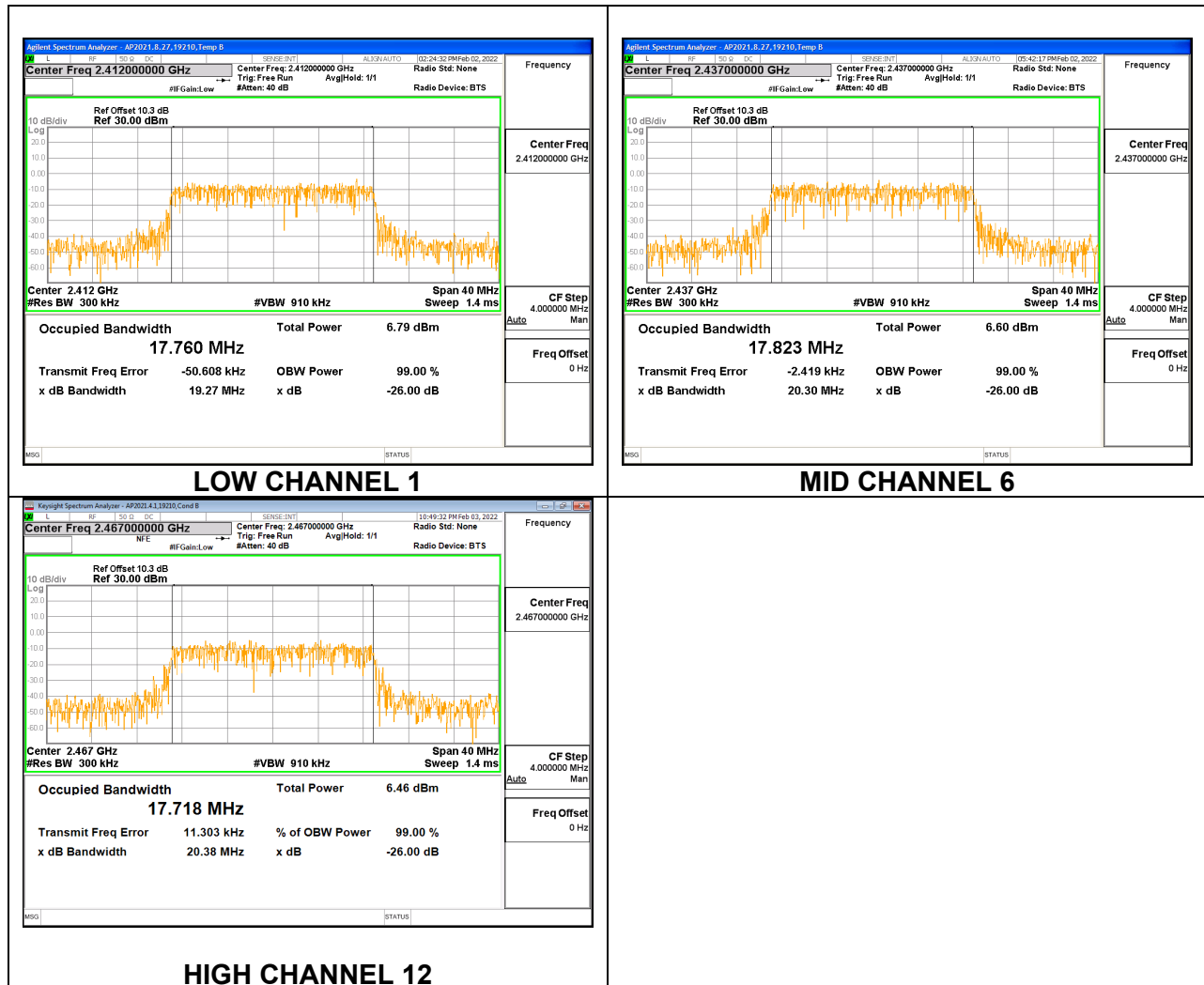
9.2.1. 802.11b MODE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low 1	2412	13.1310
Mid 6	2437	13.3910
High 12	2467	13.0310



9.2.2. 802.11n HT20 MODE

Channel	Frequency	99% Bandwidth
	(MHz)	(MHz)
Low 1	2412	17.7600
Mid 6	2437	17.8230
High 12	2467	17.7180



9.3. 6 dB BANDWIDTH

LIMITS

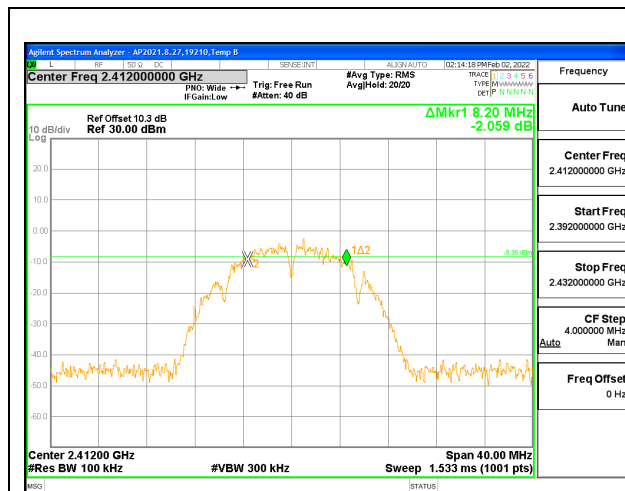
FCC §15.247 (a) (2)

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

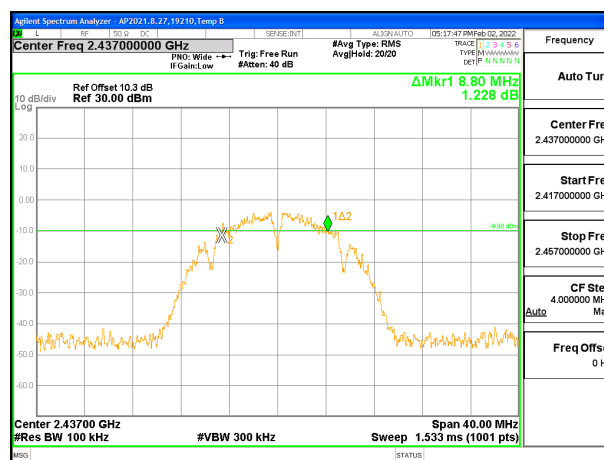
RESULTS

9.3.1. 802.11b MODE

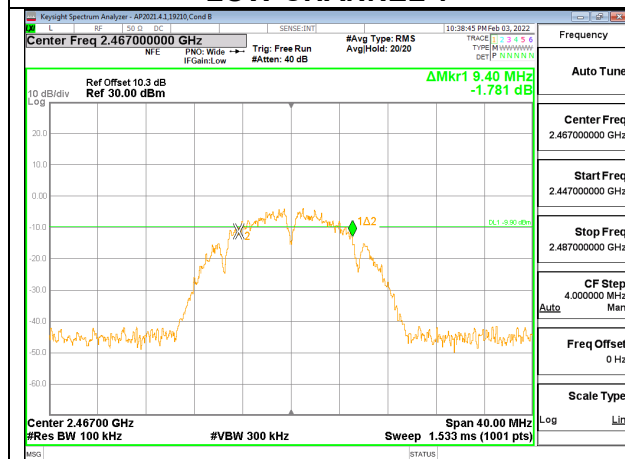
Channel	Frequency	6 dB Bandwidth	Minimum Limit
	(MHz)	(MHz)	(MHz)
Low 1	2412	8.2000	0.5
Mid 6	2437	8.8000	0.5
High 12	2467	9.4000	0.5



LOW CHANNEL 1



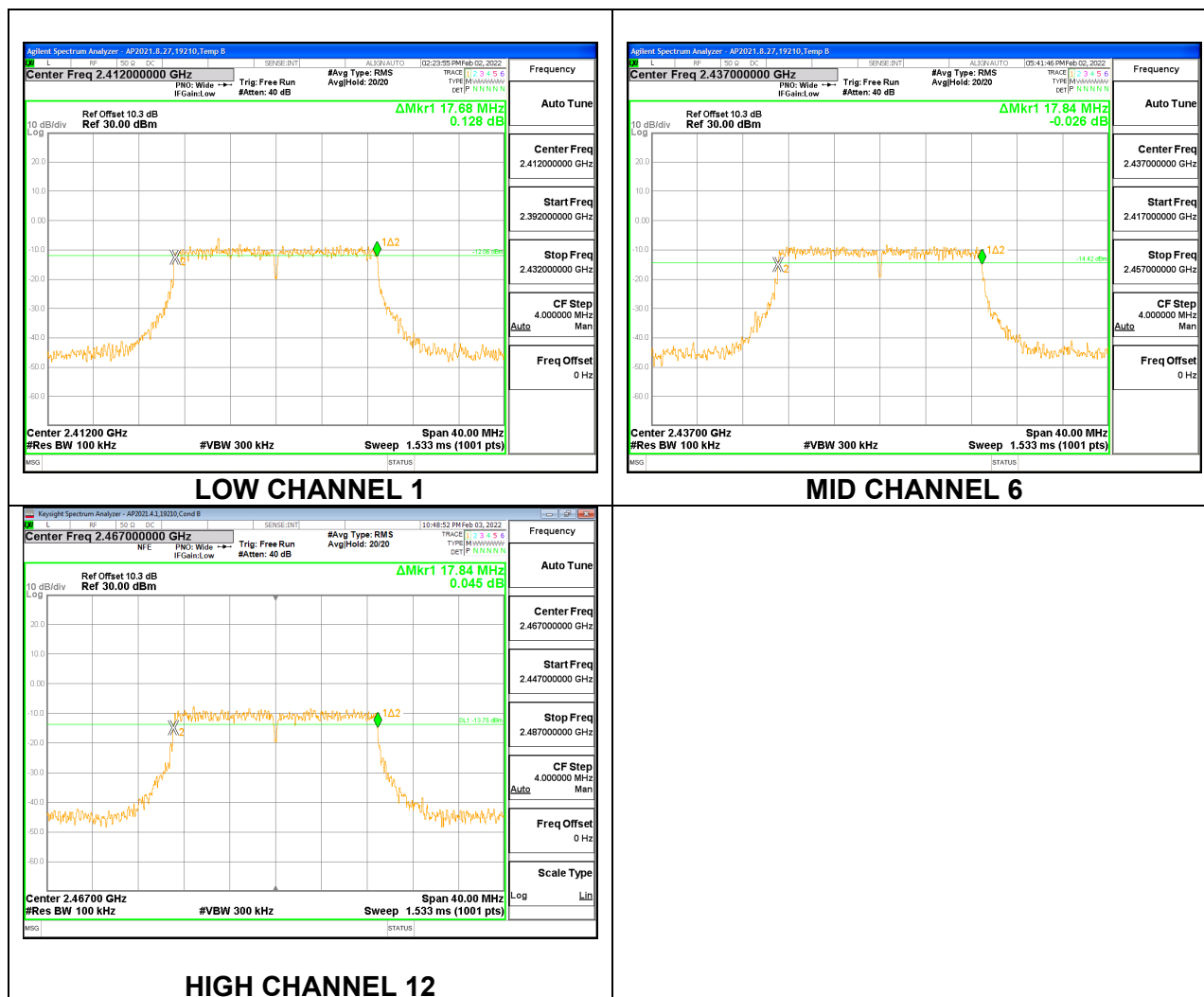
MID CHANNEL 6



HIGH CHANNEL 12

9.3.2. 802.11n HT20 MODE

Channel	Frequency	6 dB Bandwidth	Minimum Limit
	(MHz)	(MHz)	(MHz)
Low 1	2412	17.6800	0.5
Mid 6	2437	17.8400	0.5
High 12	2467	17.8400	0.5



9.4. OUTPUT POWER

LIMITS

FCC §15.247 (b) (3)

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

The transmitter output is connected to a power meter.

The cable assembly insertion loss of 10.3 dB (including 10 dB pad and 0.3 dB cable) was entered as an offset in the power meter to allow for a gated average reading of power.

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

DIRECTIONAL ANTENNA GAIN

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

Frequency Range (GHz)	ANT (dBi)
2.4	2.9

RESULTS

9.4.1. 802.11b MODE

Test Engineer:	50820
Test Date:	3/9/22

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	2.90	30.00	30	36	30.00
Mid 6	2437	2.90	30.00	30	36	30.00
High 12	2467	2.90	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	6.48	6.48	30.00	-23.52
Mid 6	2437	6.50	6.50	30.00	-23.50
High 12	2467	6.48	6.48	30.00	-23.52

9.4.2. 802.11n HT20 MODE

Test Engineer:	50820
Test Date:	3/9/22

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	2.90	30.00	30	36	30.00
Mid 6	2437	2.90	30.00	30	36	30.00
High 12	2467	2.90	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	6.51	6.51	30.00	-23.49
Mid 6	2437	6.54	6.54	30.00	-23.46
High 12	2467	6.52	6.52	30.00	-23.48

9.5. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

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.

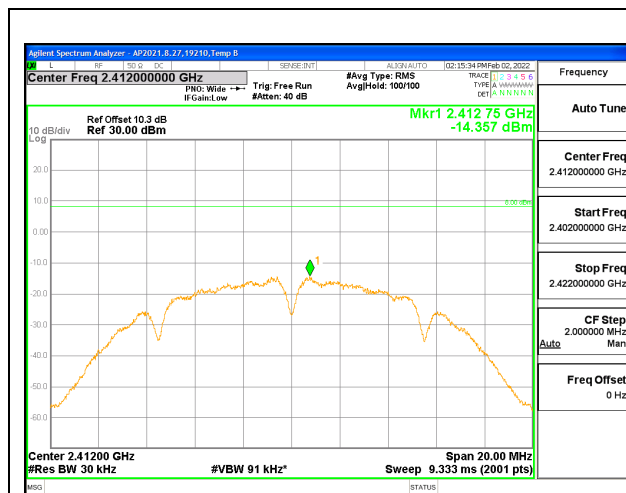
RESULTS

9.5.1. 802.11b MODE

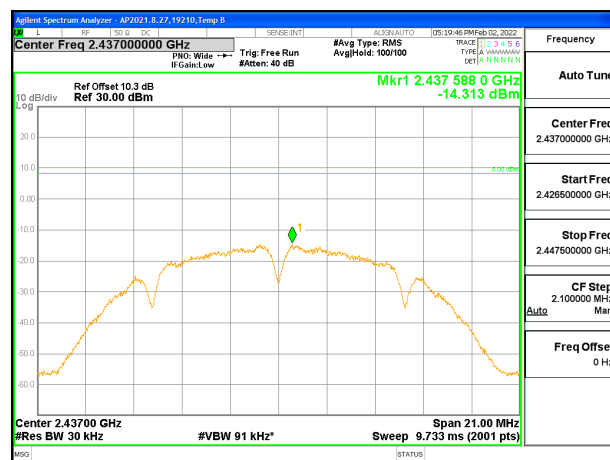
Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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PSD Results

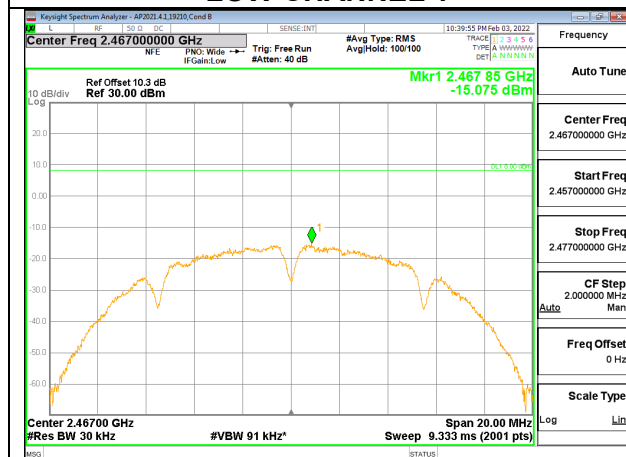
Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-14.36	-14.36	8.0	-22.4
Mid 6	2437	-14.31	-14.31	8.0	-22.3
High 12	2467	-15.08	-15.08	8.0	-23.1



LOW CHANNEL 1



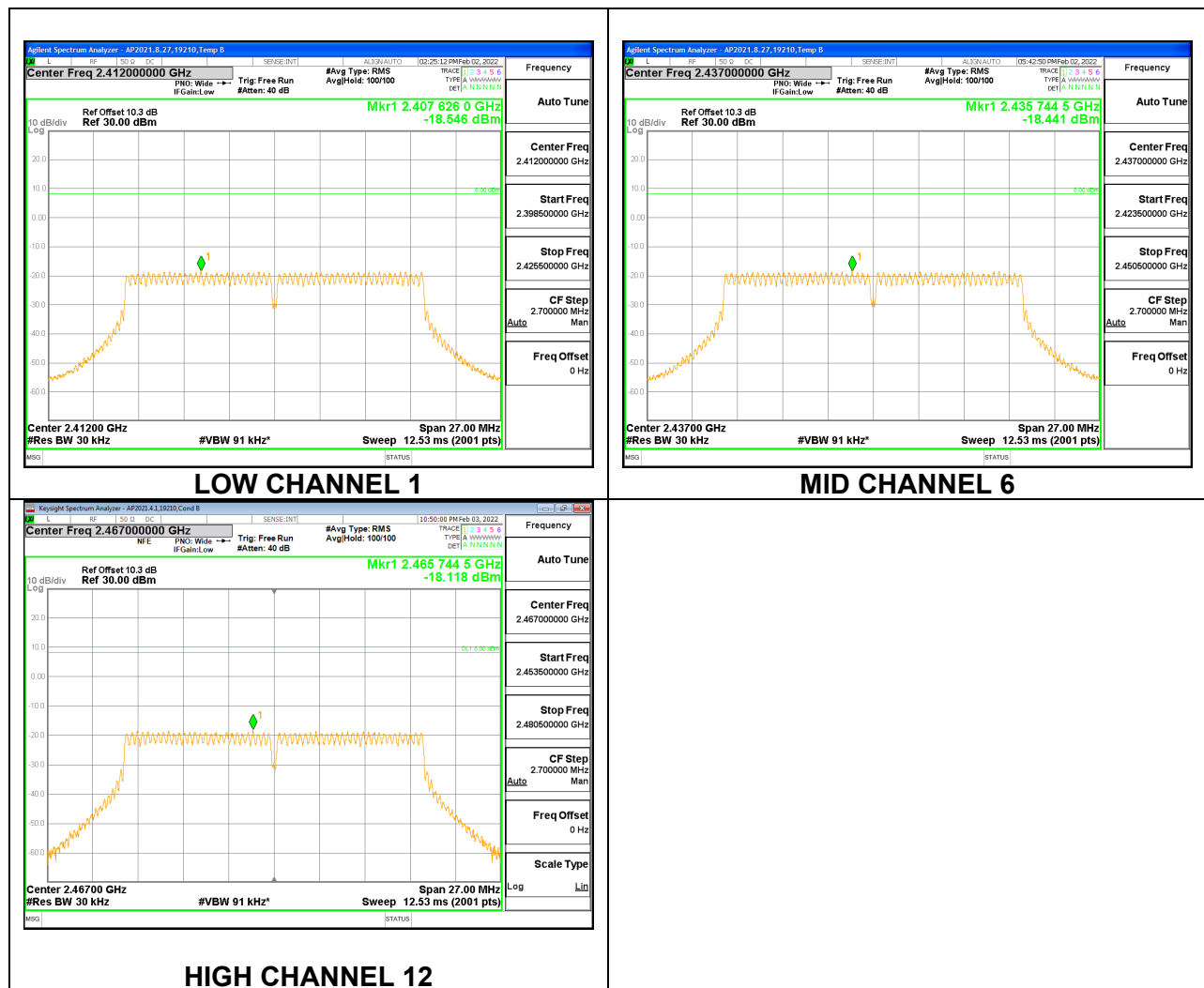
MID CHANNEL 6



HIGH CHANNEL 12

Duty Cycle CF (dB)	0.00	Included in Calculations of Corr'd PSD
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Channel	Frequency (MHz)	Meas (dBm/ 3kHz)	Total Corr'd PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Margin (dB)
Low 1	2412	-18.55	-18.55	8.0	-26.5
Mid 6	2437	-18.44	-18.44	8.0	-26.4
High 12	2467	-18.12	-18.12	8.0	-26.1



9.6. CONDUCTED SPURIOUS EMISSIONS

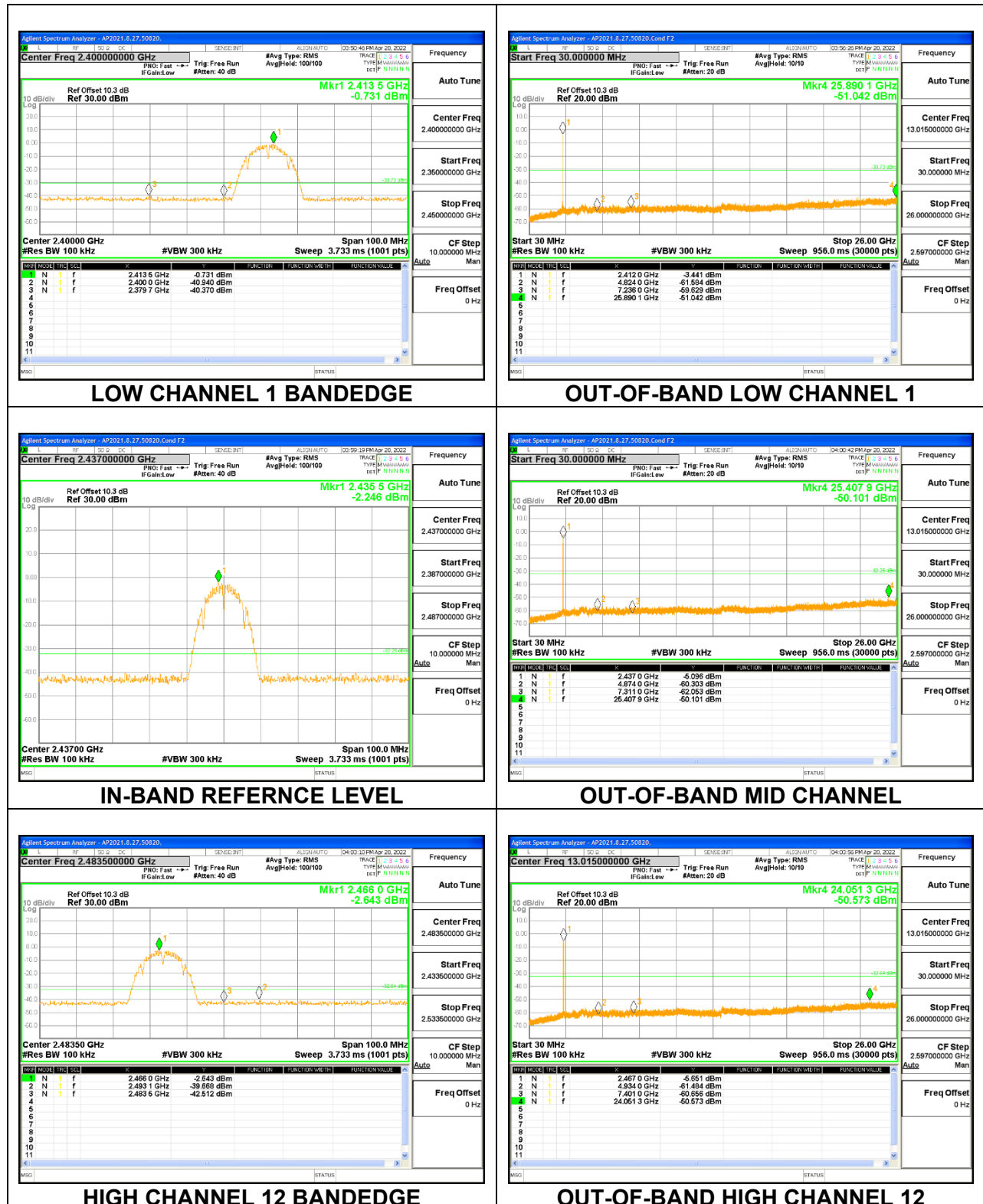
LIMITS

FCC §15.247 (d)

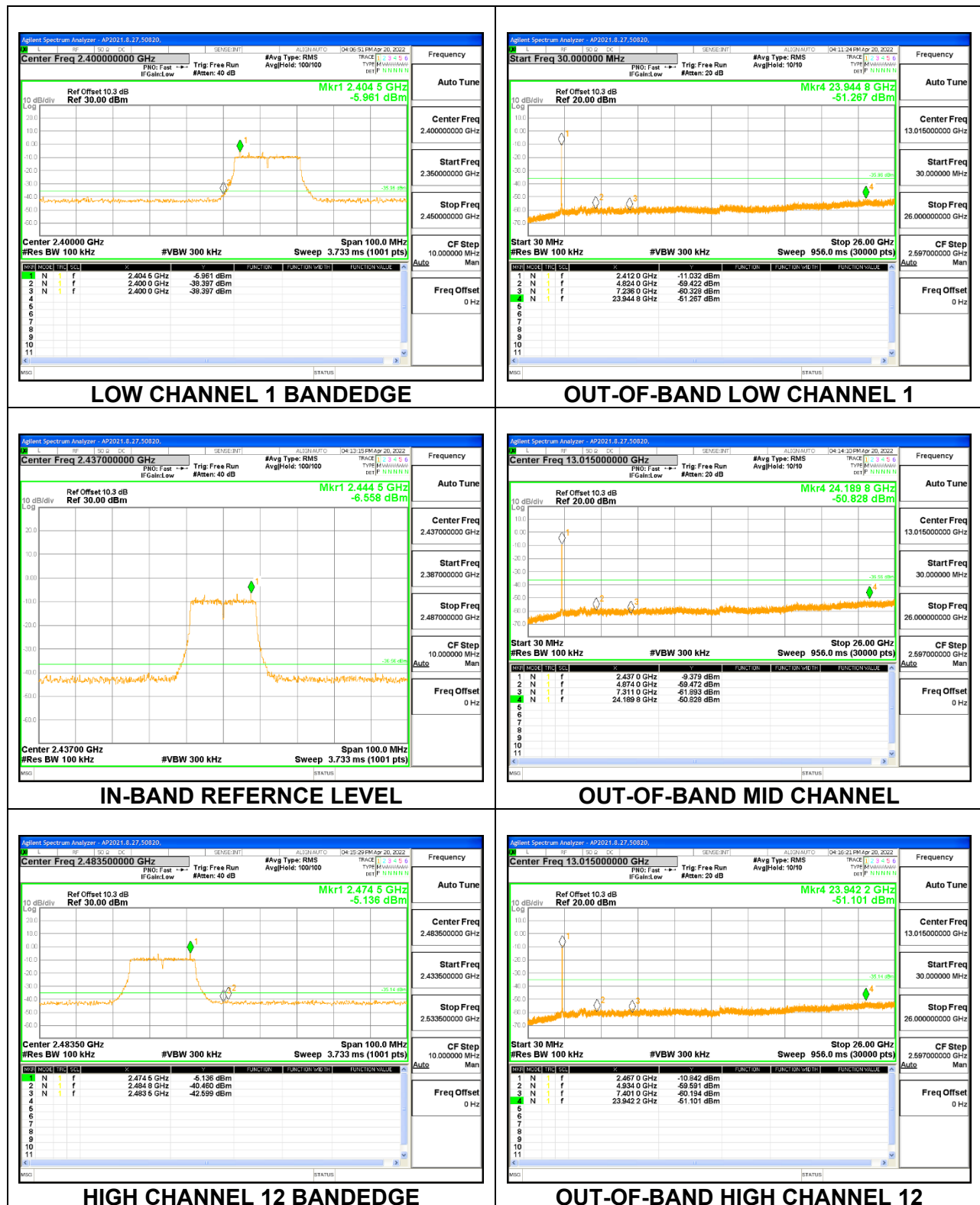
Output power was measured based on the use of peak measurement, therefore the required attenuation is 30 dB.

RESULTS

9.6.1. 802.11b MODE



9.6.2. 802.11n HT20 MODE



10. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements in the 30-1000MHz range, 9kHz for peak and/or quasi-peak detection measurements in the 0.15-30MHz range and 200Hz for peak and/or quasi-peak detection measurements in the 9 to 150kHz range. Peak detection is used unless otherwise noted as quasi-peak or average (9-90kHz and 110-490kHz).

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power was tested.

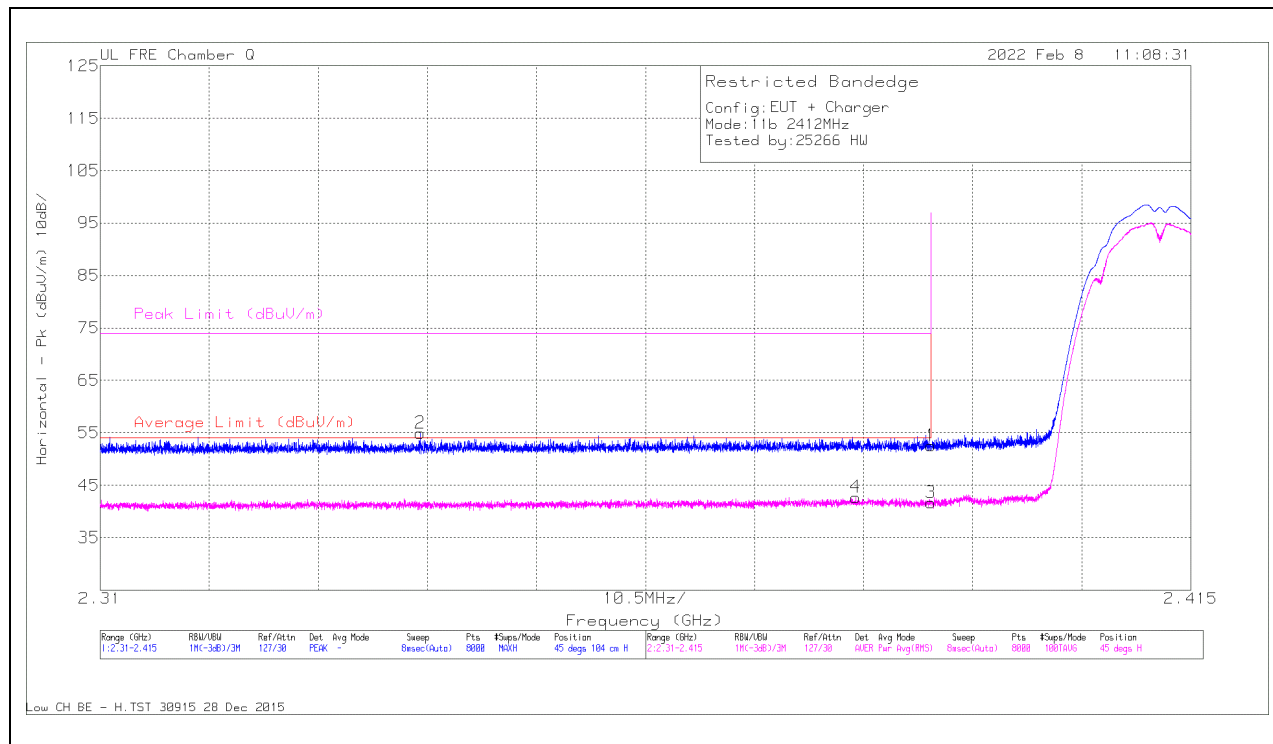
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

10.1. TRANSMITTER ABOVE 1 GHz

10.1.1. TX ABOVE 1 GHz 802.11b MODE IN THE 2.4 GHz BAND

BANDEDGE (LOW CHANNEL, CH 1)

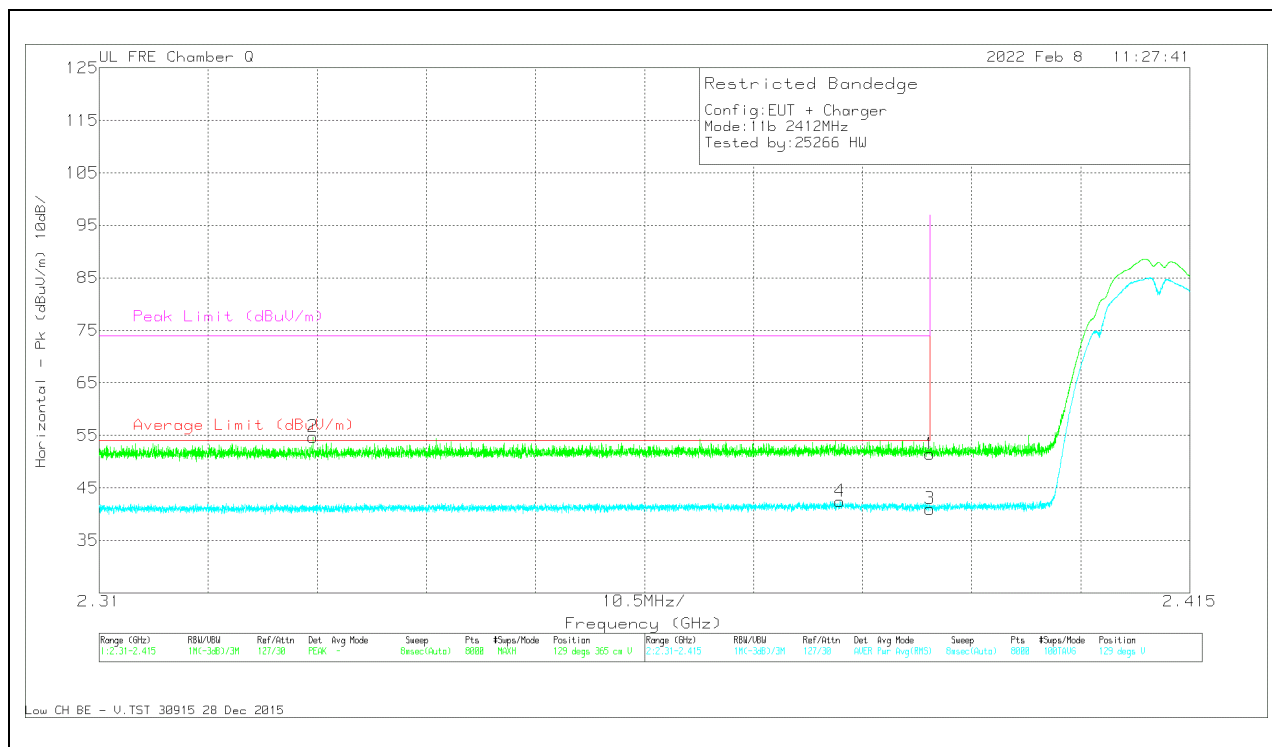
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	2.340822	57.76	Pk	31.8	-34.6	54.96	-	-	74	-19.04	45	104	H
4	2.38275	45.22	RMS	32	-34.5	42.72	54	-11.28	-	-	45	104	H
1	2.39	55.15	Pk	31.9	-34.5	52.55	-	-	74	-21.45	45	104	H
3	2.39	44.29	RMS	31.9	-34.5	41.69	54	-12.31	-	-	45	104	H

Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

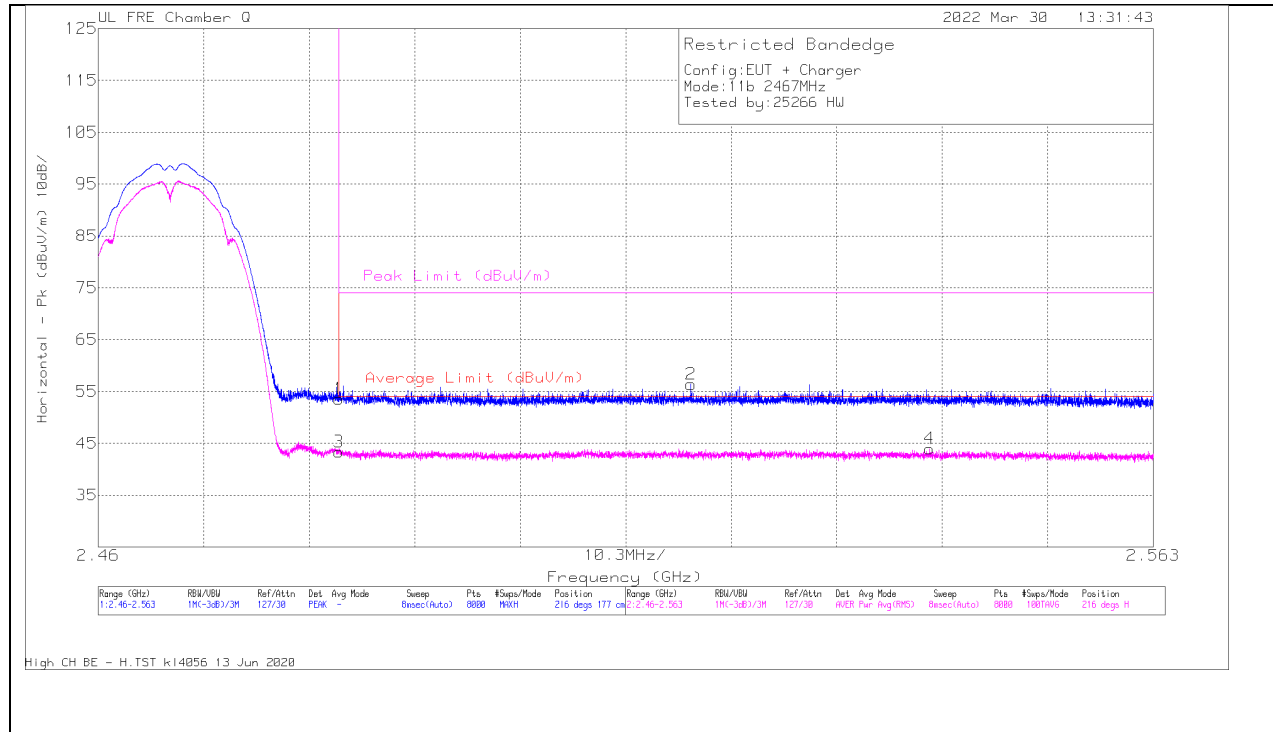


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	2.33057	57.42	Pk	31.9	-34.6	54.72	-	-	74	-19.28	129	365	V
4	2.381293	44.97	RMS	32	-34.5	42.47	54	-11.53	-	-	129	365	V
1	2.39	54.03	Pk	31.9	-34.5	51.43	-	-	74	-22.57	129	365	V
3	2.39	43.59	RMS	31.9	-34.5	40.99	54	-13.01	-	-	129	365	V

Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 12)

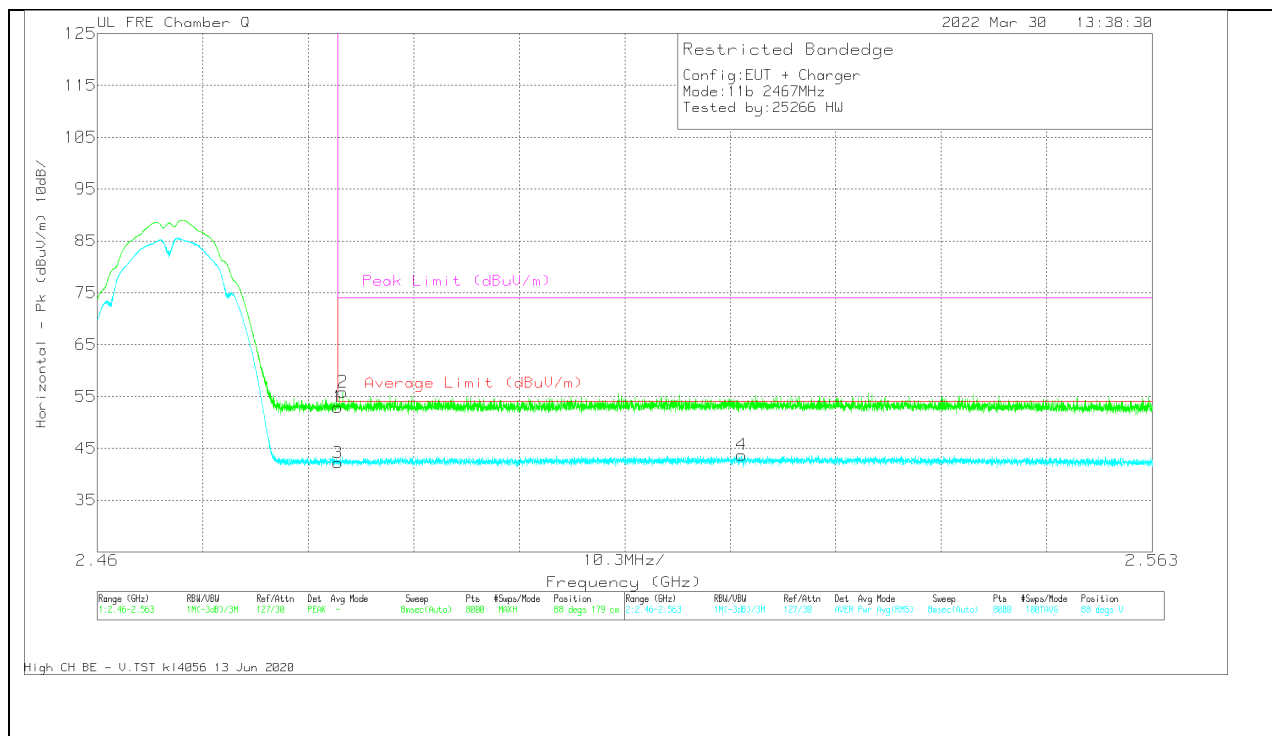
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dBm)	Amp/Cou/Filt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.4835	55.29	Pk	32.6	-34.3	0	53.59	-	-	74	-20.41	216	177	H
3	2.4835	45.03	RMS	32.6	-34.3	0	43.33	54	-10.67	-	-	216	177	H
2	2.517869	57.68	Pk	32.8	-34.1	0	56.38	-	-	74	-17.62	216	177	H
4	2.541151	45.47	RMS	32.7	-34.2	0	43.97	54	-10.03	-	-	216	177	H

Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

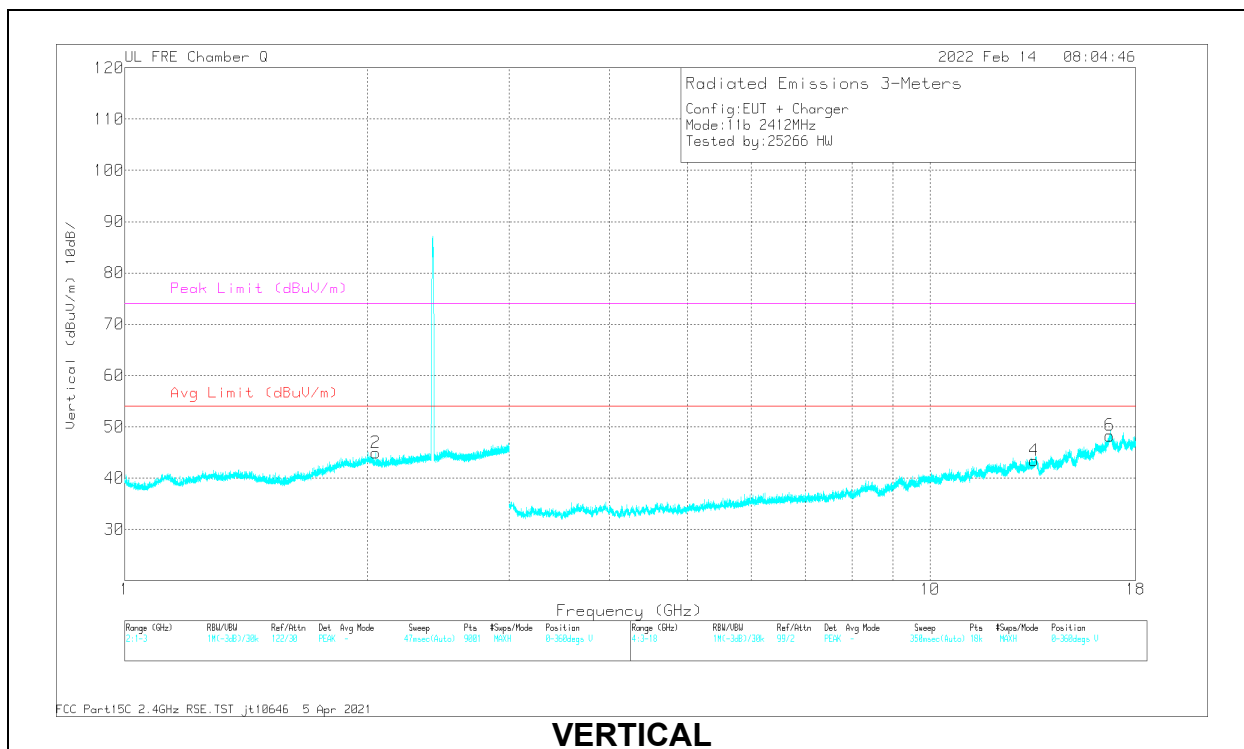
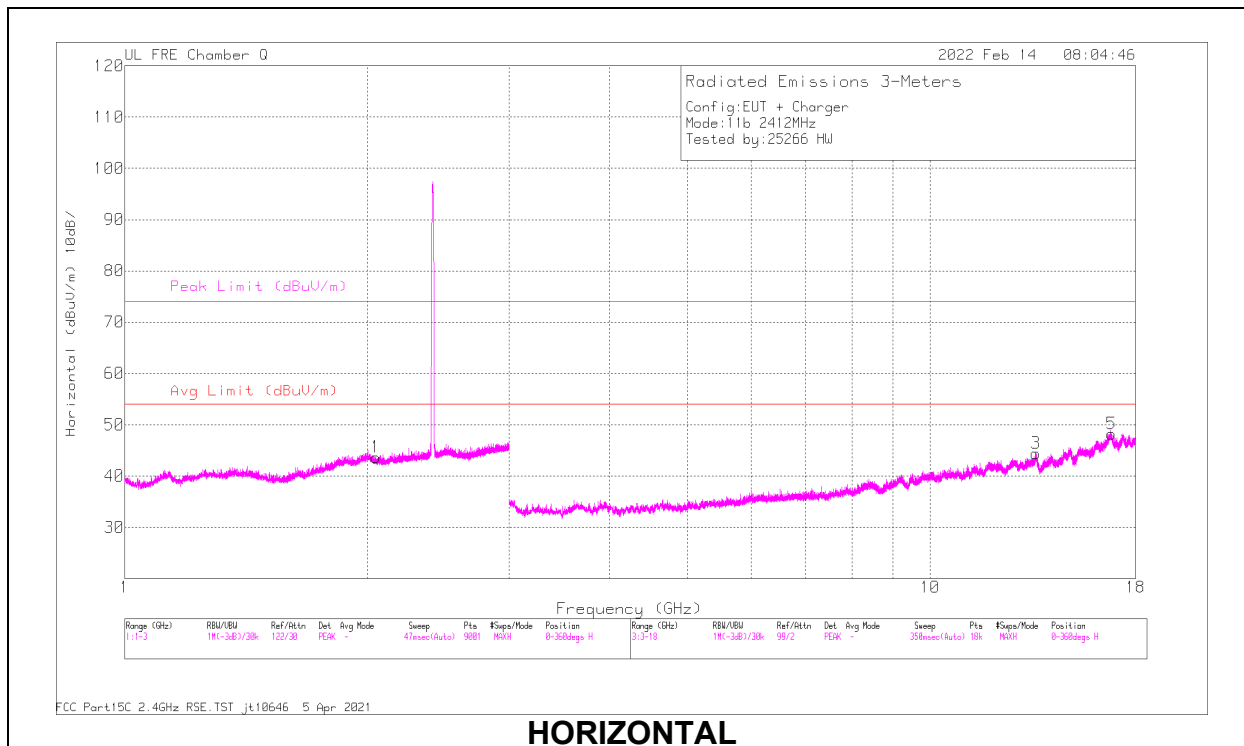


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dB/m)	Amp/Cbl/Filr/ Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.4835	54.66	Pk	32.6	-34.3	52.96	-	-	74	-21.04	88	179	V
3	2.4835	43.91	RMS	32.6	-34.3	42.21	54	-11.79	-	-	88	179	V
2	2.483964	57.53	Pk	32.6	-34.3	55.83	-	-	74	-18.17	88	179	V
4	2.522904	45.04	RMS	32.8	-34.1	43.74	54	-10.26	-	-	88	179	V

Pk - Peak detector
RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL, CH 1 RESULTS

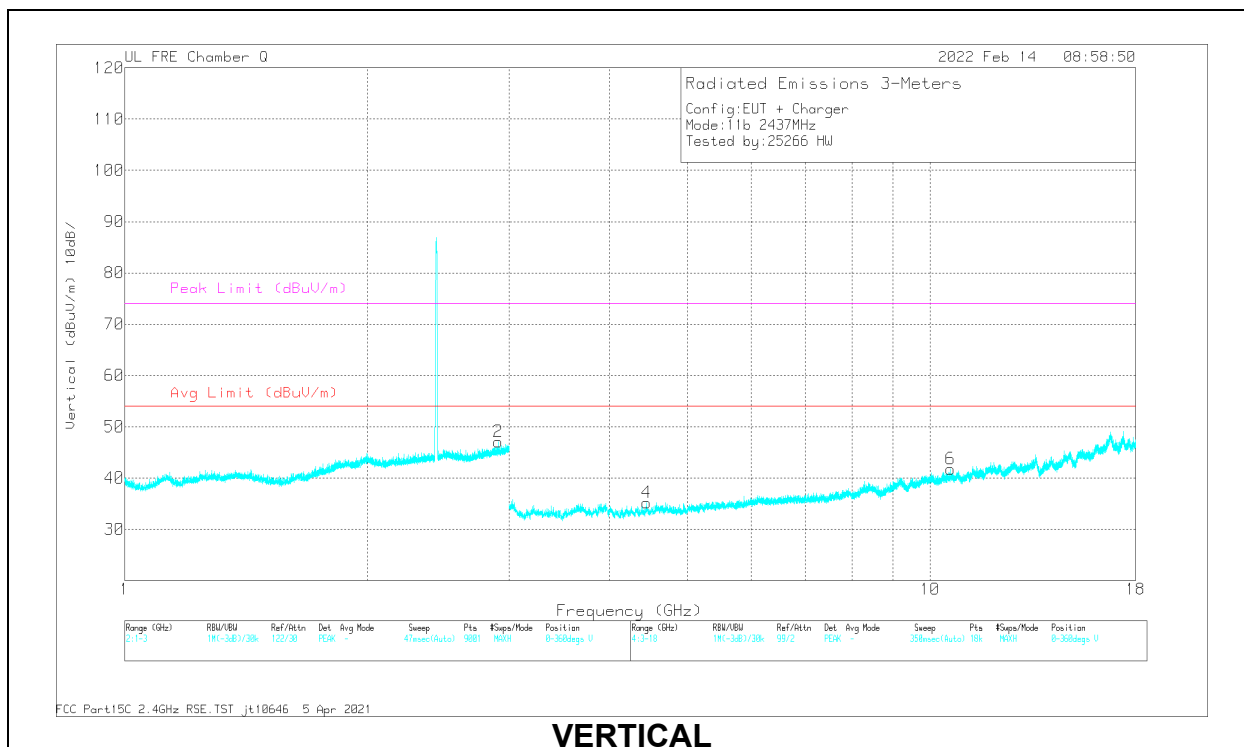
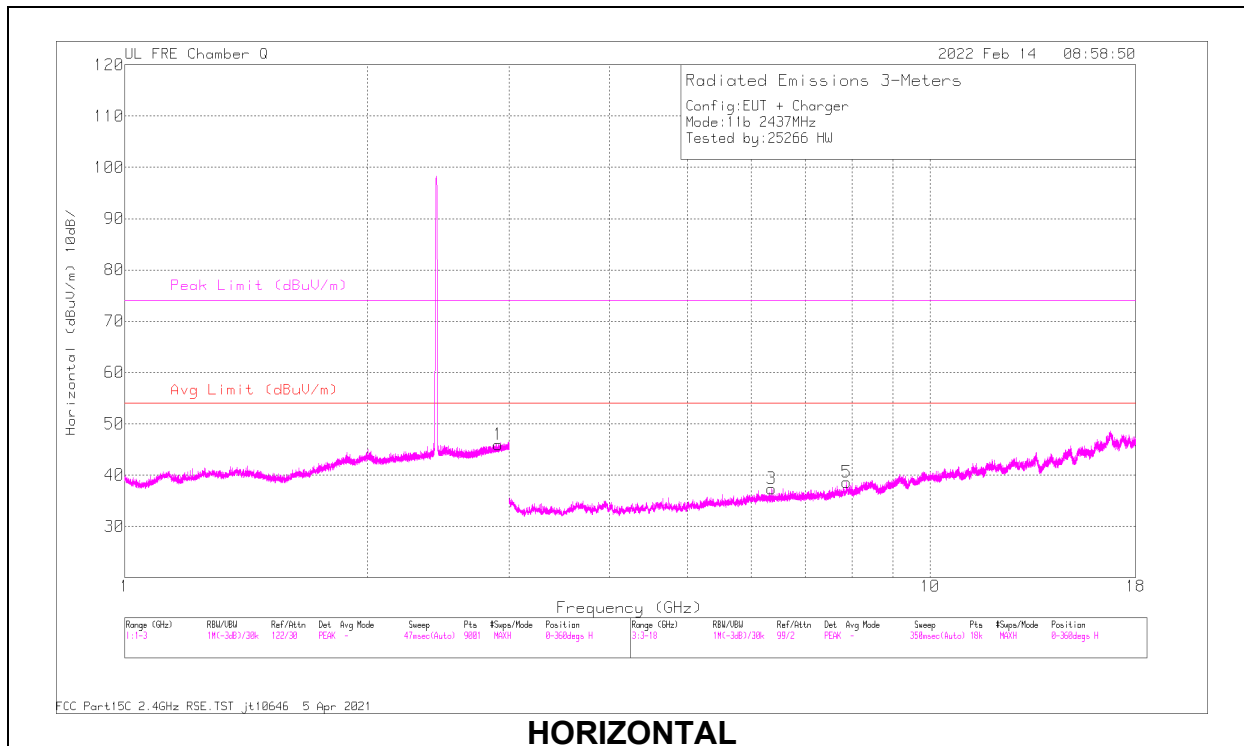


RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	2.05002	56.87	PK2	31.2	-34.6	53.47		-	74	-20.53	125	120	V
1	2.050305	57.15	PK2	31.2	-34.6	53.75		-	74	-20.25	201	318	H
	2.051812	45.01	MAv1	31.2	-34.5	41.71	54	-12.29			201	318	H
4	13.474829	35.02	MAv1	39	-32.8	41.22	54	-12.78			212	151	V
	13.476112	47.21	PK2	39	-32.8	53.41			74	-20.59	212	151	V
3	13.535456	47.19	PK2	38.9	-32.1	53.99			74	-20.01	218	120	H
6	16.71258	49.19	PK2	41.7	-32.1	58.79			74	-15.21	289	350	V
	16.721591	36.67	MAv1	41.7	-32.1	46.27	54	-7.73			289	350	V
5	16.811586	47.92	PK2	41.8	-32.6	57.12			74	-16.88	322	136	H

PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL, CH 6 RESULTS

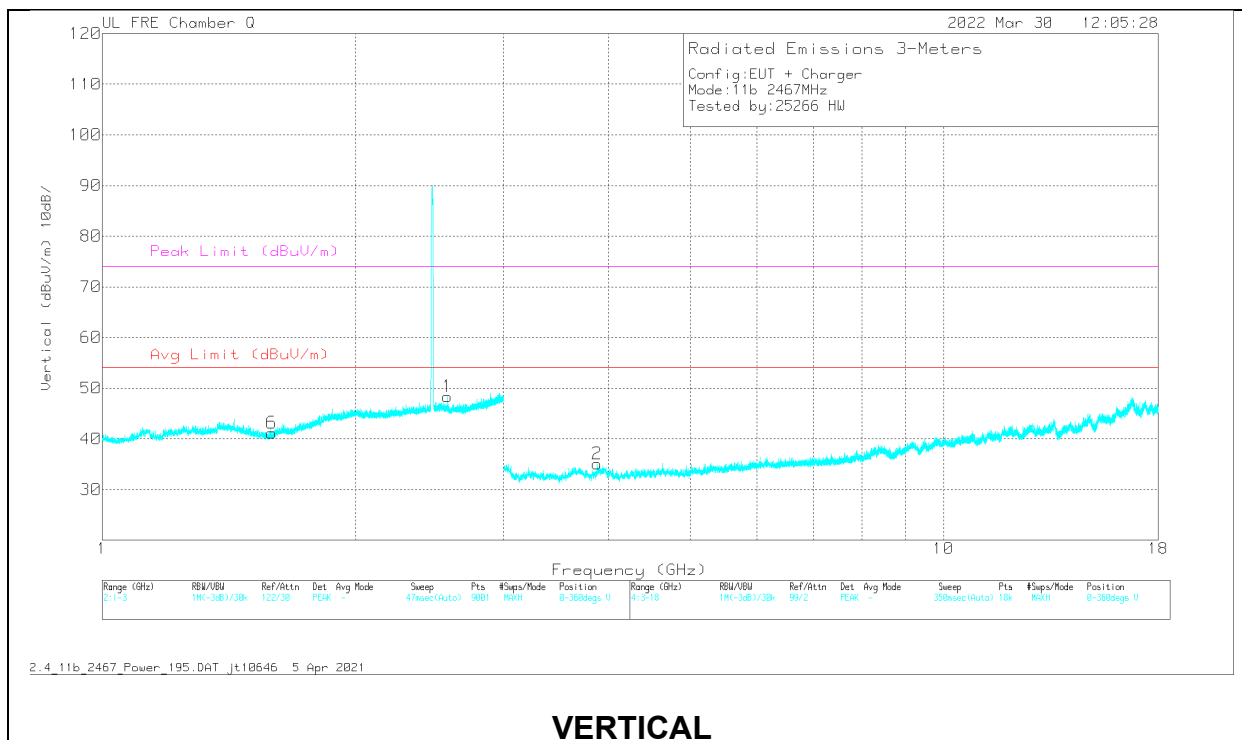
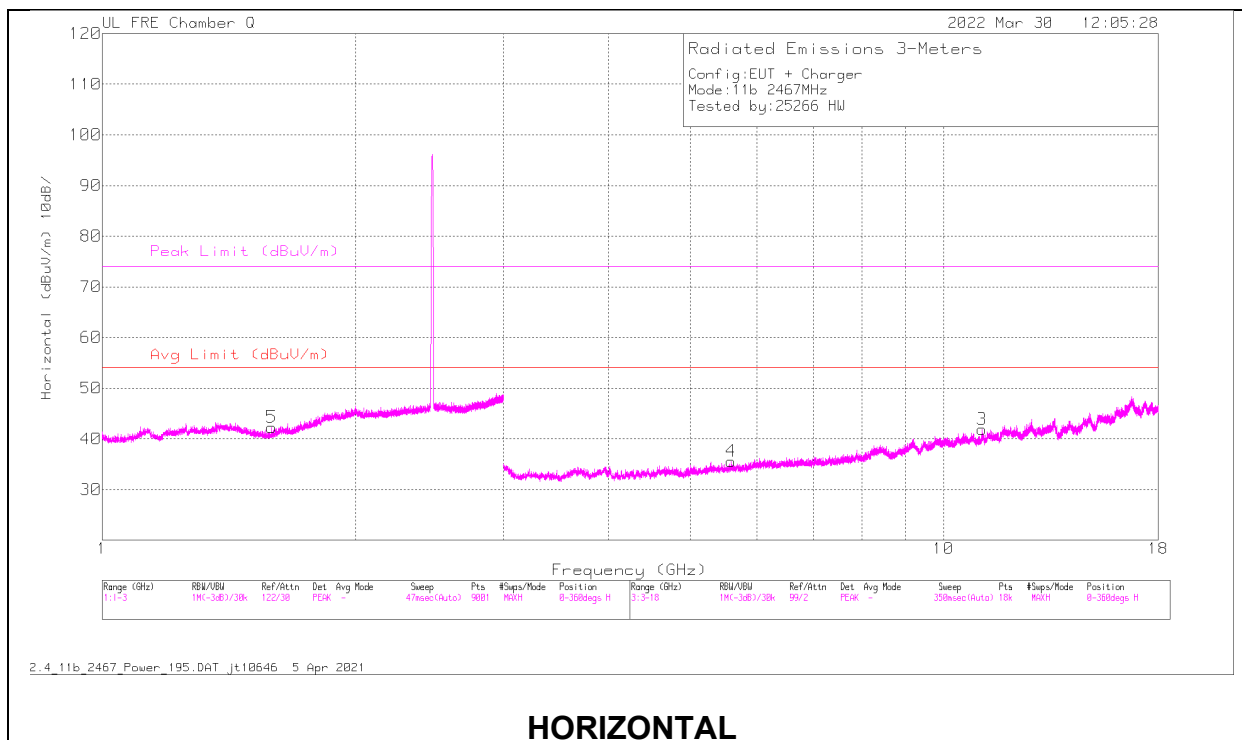


RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	2.908165	45.22	MAv1	32.4	-33.6	44.02	54	-9.98			153	312	V
	2.911038	57.3	PK2	32.4	-33.7	56			74	-18.00	153	312	V
1	2.912783	56.81	PK2	32.4	-33.6	55.61			74	-18.39	357	390	H
4	4.44579	51.65	PK2	33.8	-41.4	44.05			74	-29.95	311	230	V
	4.446738	40.11	MAv1	33.8	-41.4	32.51	54	-21.49			311	230	V
3	6.354507	48.6	PK2	35.5	-38.4	45.7			74	-28.3	224	256	H
	6.355086	37.28	MAv1	35.5	-38.5	34.28	54	-19.72			224	256	H
5	7.873569	48.84	PK2	36	-37	47.84			74	-26.16	11	115	H
	7.875319	36.85	MAv1	35.9	-37	35.75	54	-18.25			11	115	H
6	10.601339	47.76	PK2	37.7	-34.8	50.66	-	-	74	-23.34	186	167	V
	10.602238	35.69	MAv1	37.7	-34.7	38.69	54	-15.31	-	-	186	167	V

PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL, CH 12 RESULTS



RADIATED EMISSIONS

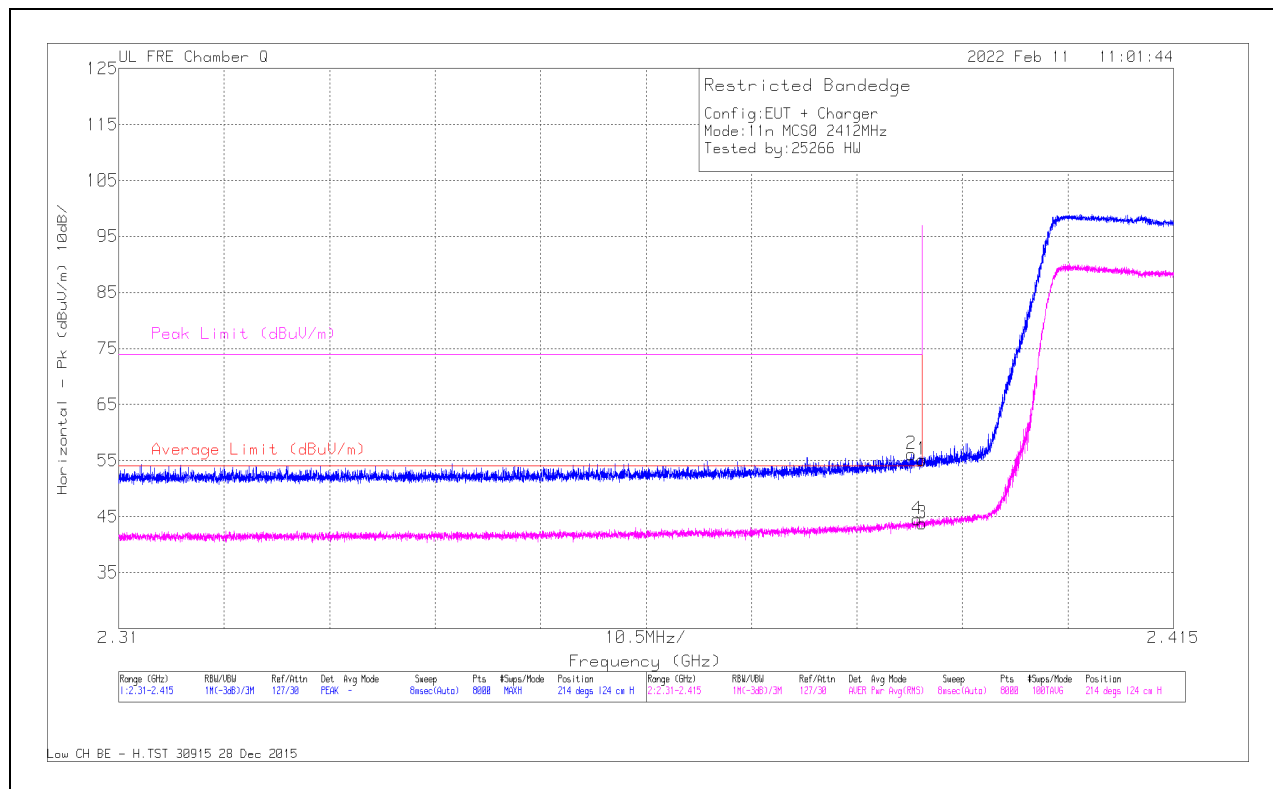
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dB/m)	Amp/Cbl/Filtr/ Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	1.588104	47.04	MAv1	27.7	-35.1	39.64	54	-14.36	-	-	258	147	V
	1.588147	58.91	PK2	27.7	-35.1	51.51	-	-	74	-22.49	23	204	H
6	1.588859	58.58	PK2	27.7	-35.1	51.18	-	-	74	-22.82	258	147	V
	1.591264	47.12	MAv1	27.7	-35.1	39.72	54	-14.28	-	-	23	204	H
1	2.572808	58.9	PK2	32.4	-34	57.3	-	-	-	-	106	178	V
	2.573259	47.11	MAv1	32.4	-34	45.51	-	-	-	-	106	178	V
2	3.874151	39.62	MAv1	33.4	-40.8	32.22	54	-21.78	-	-	10	130	V
	3.875761	51.23	PK2	33.4	-40.9	43.73	-	-	74	-30.27	10	130	V
4	5.590956	49.81	PK2	34.6	-39.5	44.91	-	-	-	-	329	163	H
	5.593137	38.06	MAv1	34.6	-39.6	33.06	-	-	-	-	329	163	H
3	11.111788	34.74	MAv1	37.9	-33.9	38.74	54	-15.26	-	-	116	198	H
	11.113731	46.44	PK2	38	-33.9	50.54	-	-	74	-23.46	116	198	H

PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

10.1.2. TX ABOVE 1 GHz 802.11n HT20 MODE IN THE 2.4 GHz BAND

BANDEDGE (LOW CHANNEL, CH 1)

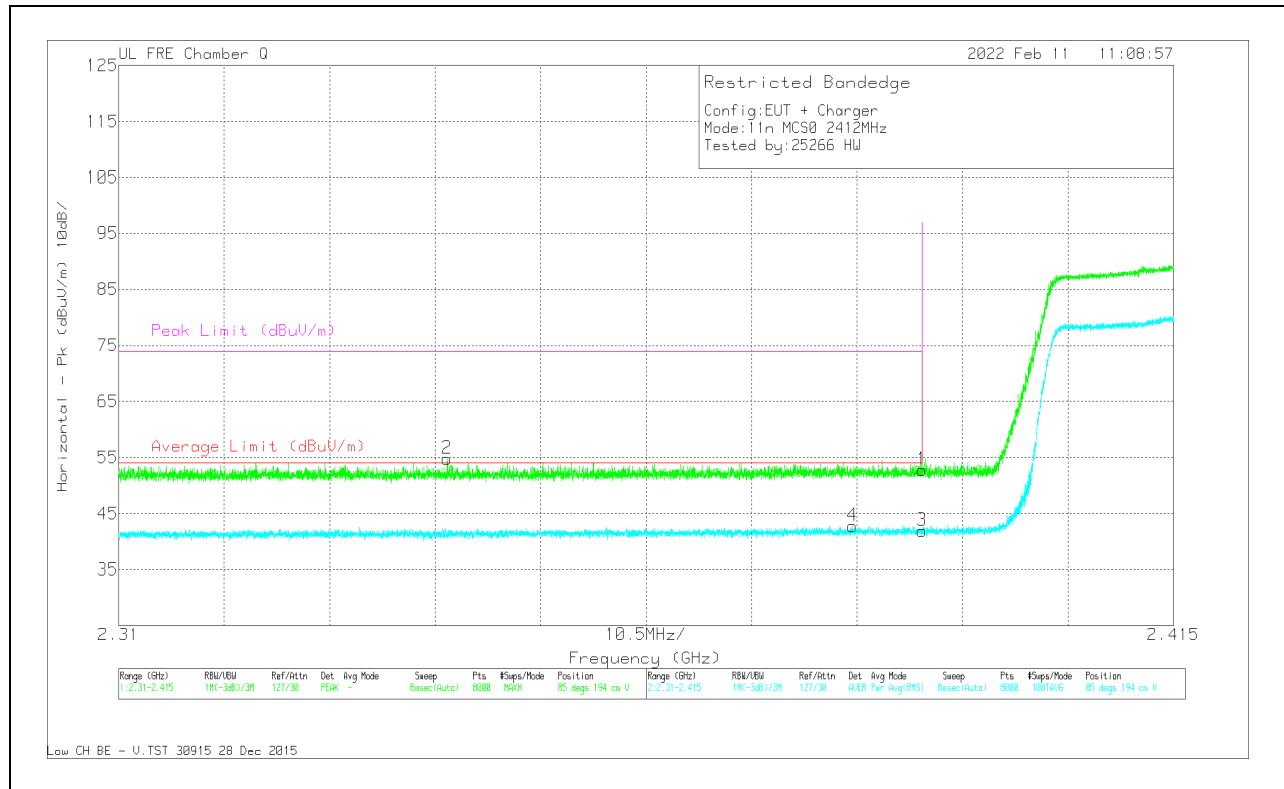
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	2.388893	58.79	Pk	31.9	-34.5	56.19	-	-	74	-17.81	214	124	H
4	2.389458	47.06	RMS	31.9	-34.5	44.46	54	-9.54	-	-	214	124	H
1	2.39	57.69	Pk	31.9	-34.5	55.09	-	-	74	-18.91	214	124	H
3	2.39	46.33	RMS	31.9	-34.5	43.73	54	-10.27	-	-	214	124	H

Pk - Peak detector
RMS - RMS detection

VERTICAL RESULT

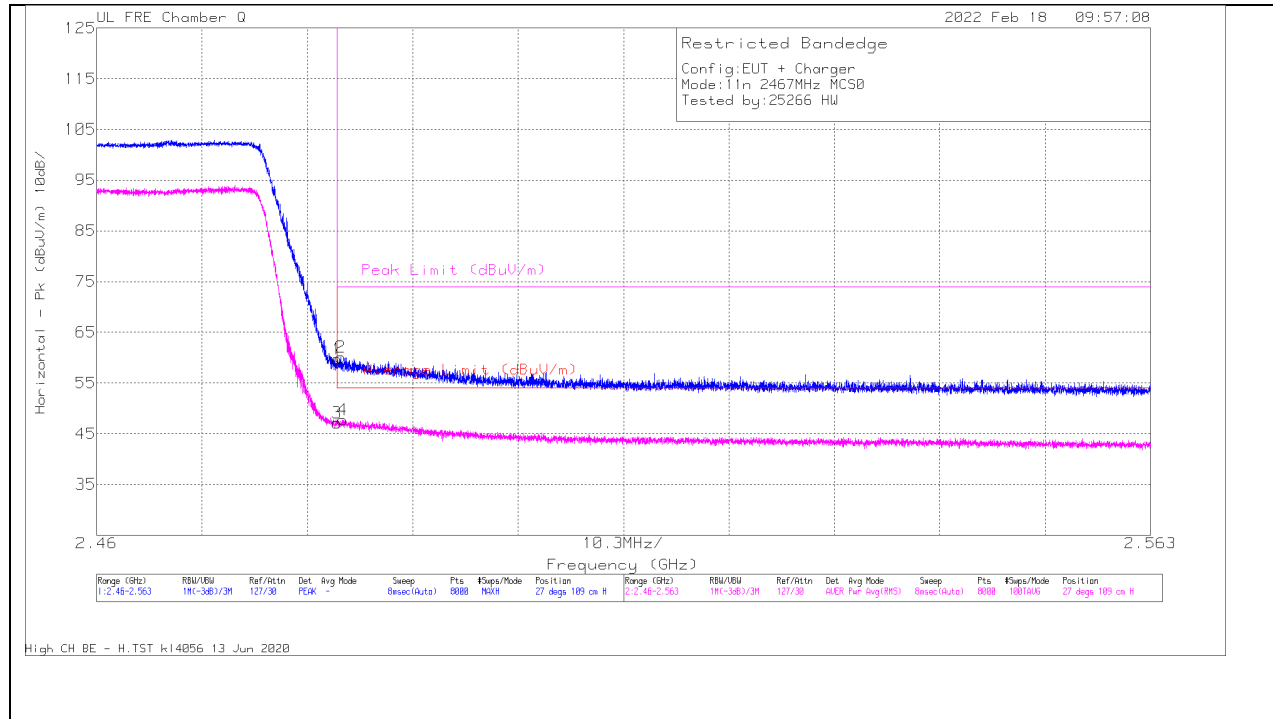


Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	2.342712	57.55	Pk	31.8	-34.6	54.75	-	-	74	-19.25	85	194	V
4	2.383078	45.31	RMS	32	-34.5	42.81	54	-11.19	-	-	85	194	V
1	2.39	55.43	Pk	31.9	-34.5	52.83	-	-	74	-21.17	85	194	V
3	2.39	44.47	RMS	31.9	-34.5	41.87	54	-12.13	-	-	85	194	V

Pk - Peak detector
RMS - RMS detection

BANDEDGE (HIGH CHANNEL, CH 12)

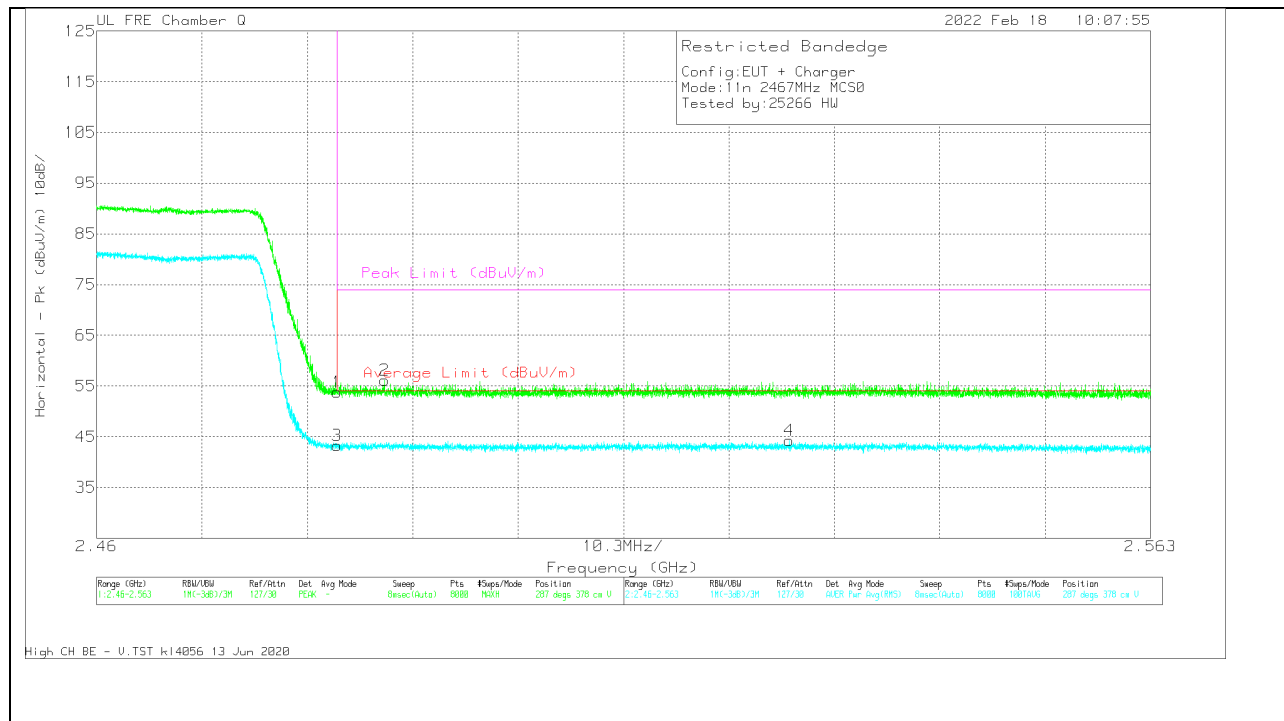
HORIZONTAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dBm)	Amp/Cb/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.4835	61.4	Pk	32.6	-34.3	0	59.7	-	-	74	-14.3	27	109	H
3	2.4835	48.86	RMS	32.6	-34.3	0	47.16	54	-6.84	-	-	27	109	H
2	2.483887	61.82	Pk	32.6	-34.3	0	60.12	-	-	74	-13.88	27	109	H
4	2.484067	49.32	RMS	32.7	-34.3	0	47.72	54	-6.28	-	-	27	109	H

Pk - Peak detector
RMS - RMS detection

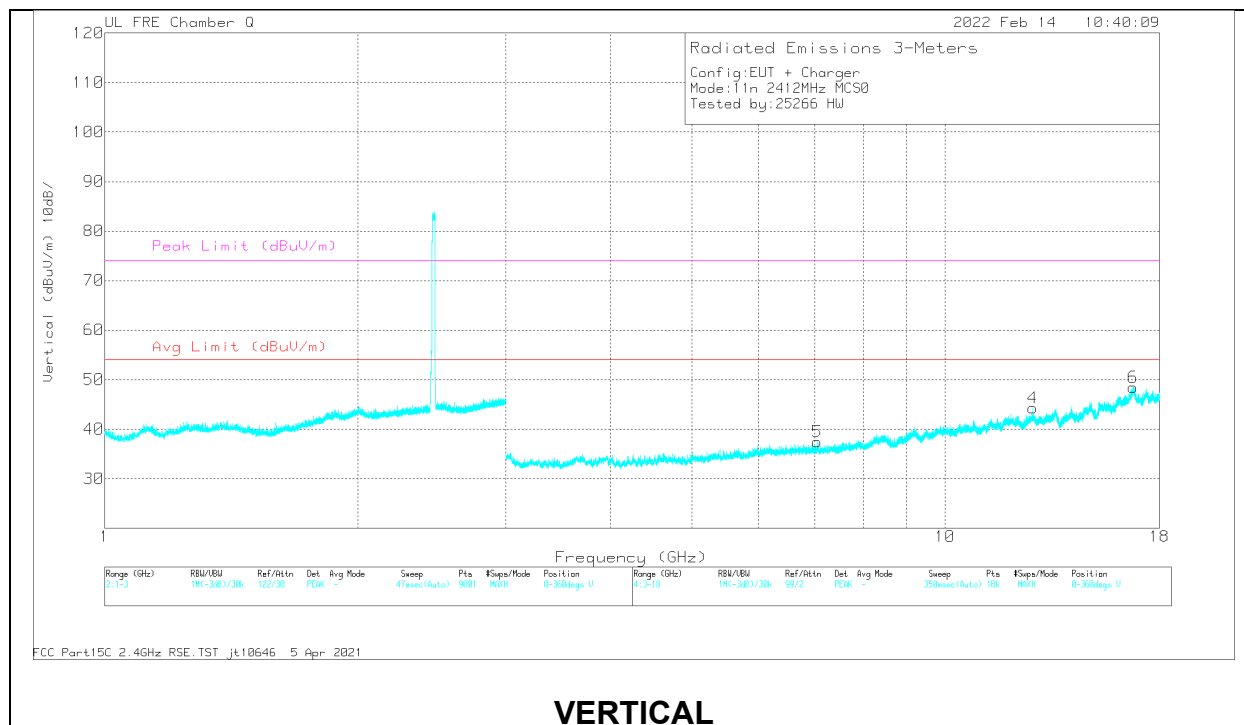
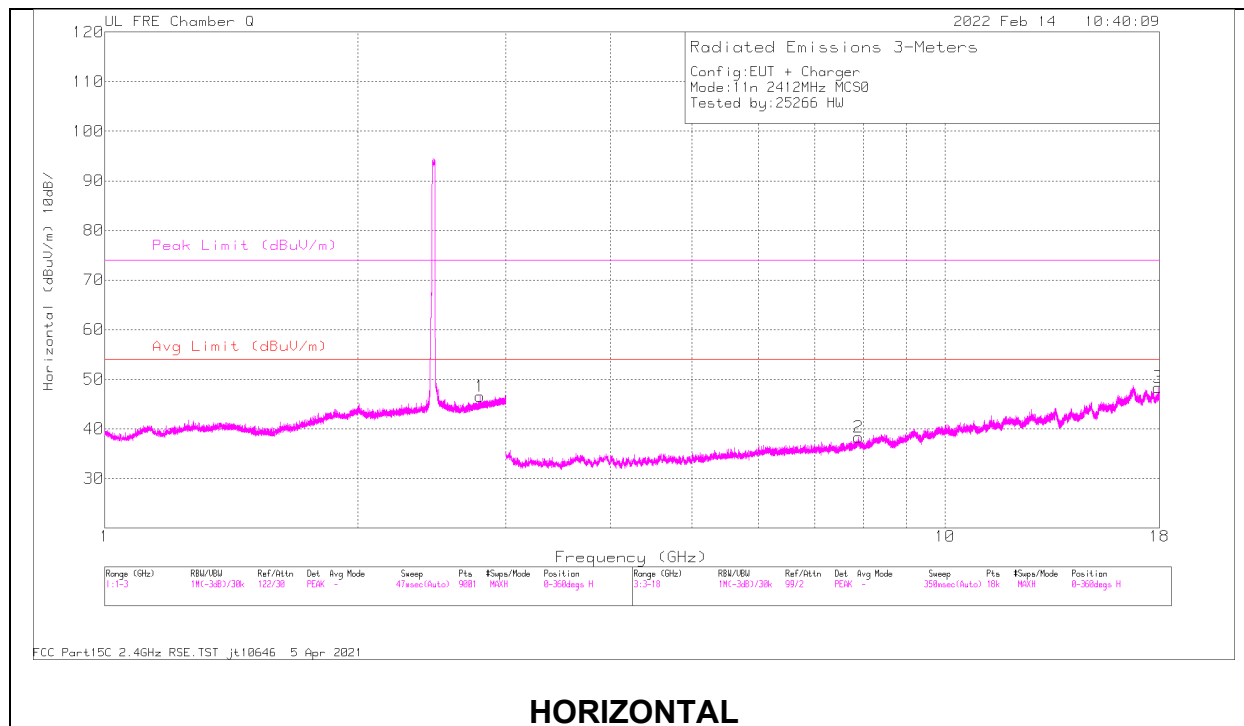
VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dBm)	Amp/Ch/Filt/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.4835	55.45	Pk	32.6	-34.3	0	53.75	-	-	74	-20.25	287	378	V
3	2.4835	44.95	RMS	32.6	-34.3	0	43.25	54	-10.75	-	-	287	378	V
2	2.488136	57.6	Pk	32.7	-34.2	0	56.1	-	-	74	-17.9	287	378	V
4	2.527682	45.79	RMS	32.7	-34.2	0	44.29	54	-9.71	-	-	287	378	V

Pk - Peak detector
RMS - RMS detection

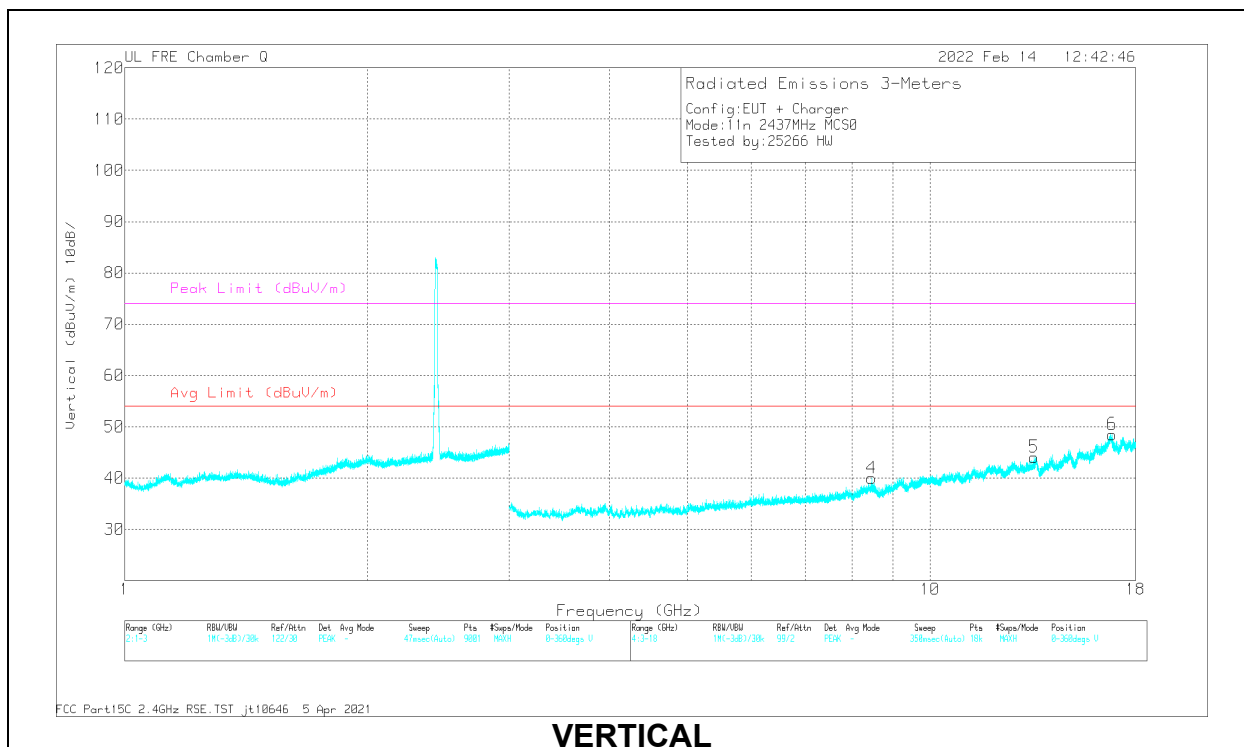
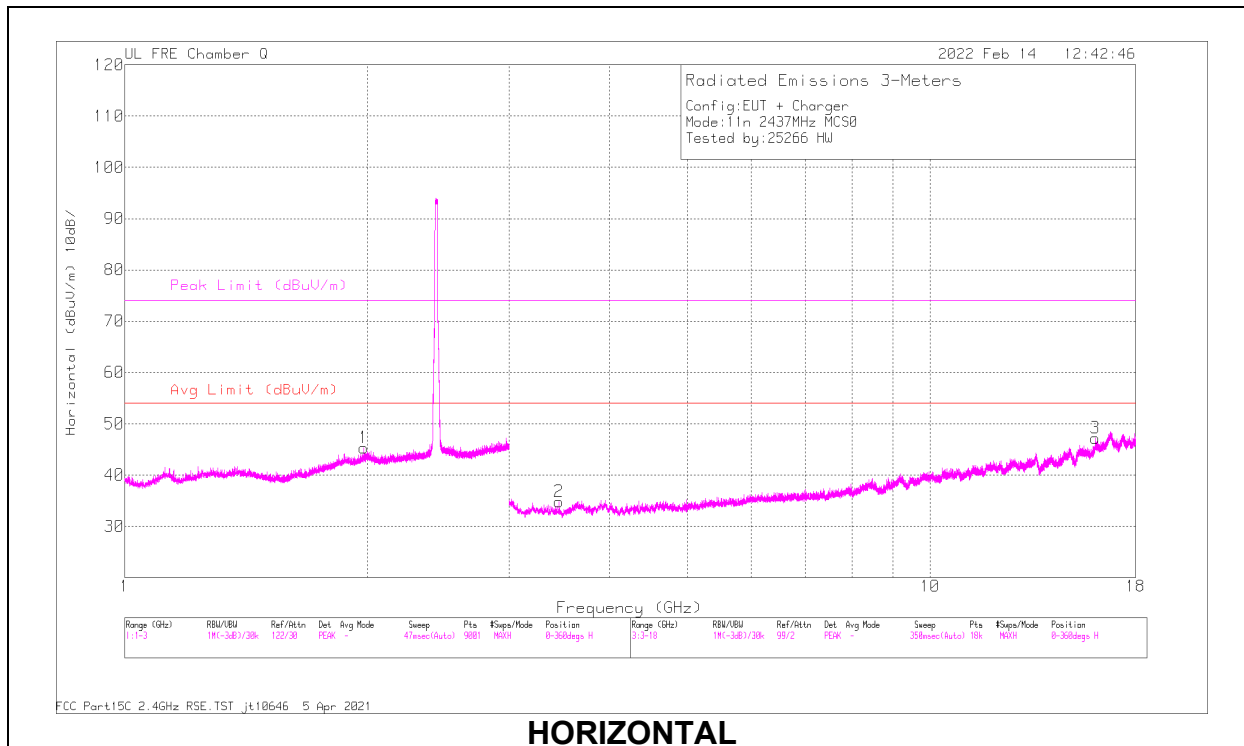
HARMONICS AND SPURIOUS EMISSIONS LOW CHANNEL, CH 1 RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dB/m)	Amp/Cb I/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.797377	57.07	PK2	32.2	-33.9	55.37	-	-	74	-18.63	336	117	H
	2.798292	45.3	MAv1	32.2	-33.9	43.6	54	-10.4			336	117	H
5	7.048405	36.89	MAv1	35.6	-37.8	34.69	54	-19.31			10	102	V
	7.050682	48.7	PK2	35.6	-37.8	46.5			74	-27.5	10	102	V
2	7.894405	48.46	PK2	35.9	-36.8	47.56			74	-26.44	78	124	H
	7.896171	36.83	MAv1	36	-36.8	36.03	54	-17.97			78	124	H
4	12.725599	47.63	PK2	39.3	-34.6	52.33			74	-21.67	5	101	V
	12.725974	36.09	MAv1	39.3	-34.6	40.79	54	-13.21			5	101	V
6	16.746793	36.68	MAv1	41.8	-32.1	46.38	54	-7.62			222	213	V
	16.748539	48.44	PK2	41.8	-32.2	58.04				-15.96	222	213	V
3	17.926188	46.94	PK2	41.2	-31.6	56.54	-	-	74	-17.46	15	136	H
	17.926552	35.69	MAv1	41.2	-31.6	45.29	54	-8.71			15	136	H

MID CHANNEL, CH 6 RESULTS

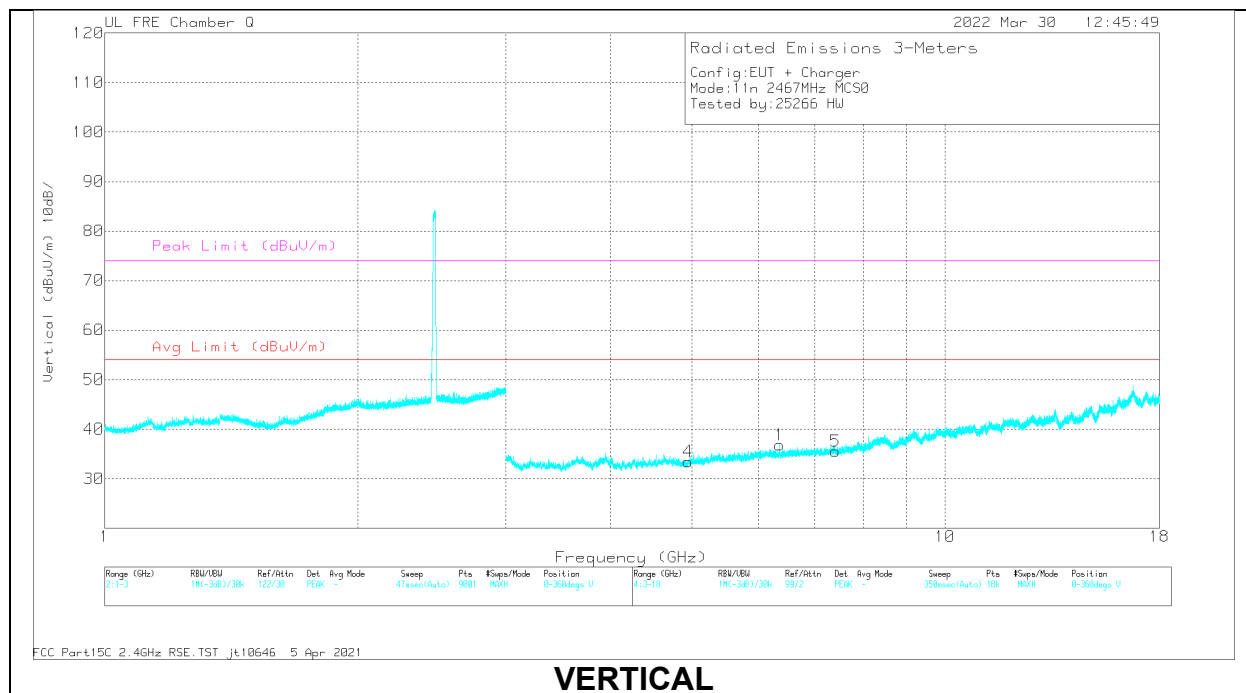
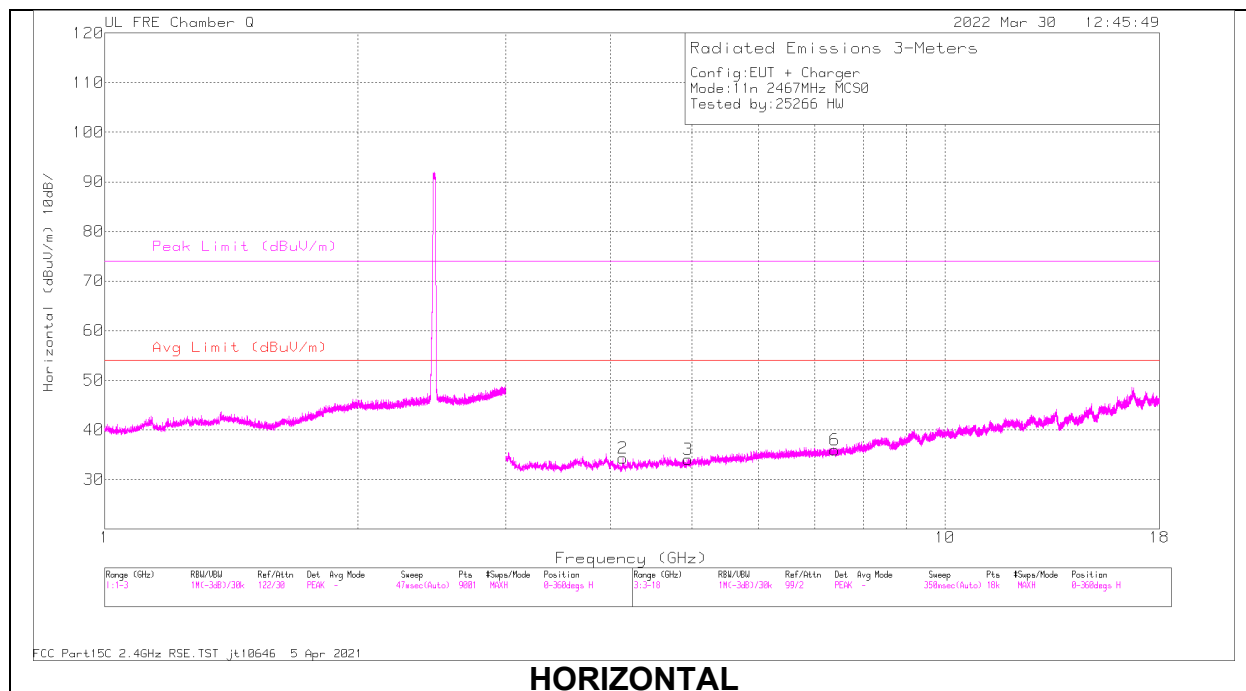


RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dB/m)	Amp/Cb I/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.980626	45.24	MAv1	31.5	-34.6	42.14	54	-11.86			20	229	H
	1.983191	57.15	PK2	31.5	-34.6	54.05			74	-19.95	20	229	H
2	3.461622	39.93	MAv1	32.6	-40.6	31.93	54	-22.07			51	386	H
	3.462849	51.58	PK2	32.6	-40.7	43.48			74	-30.52	51	386	H
4	8.459824	48.38	PK2	35.9	-35.9	48.38			74	-25.62	221	339	V
	8.46247	36.8	MAv1	35.9	-36	36.7	54	-17.3	-	-	221	339	V
5	13.466326	46.12	PK2	39	-32.9	52.22			74	-21.78	56	188	V
	13.467453	34.67	MAv1	39	-32.9	40.77	54	-13.23			56	188	V
3	16.046592	35.89	MAv1	40.7	-32.7	43.89	54	-10.11	-	-	21	322	H
	16.04921	47.35	PK2	40.7	-32.7	55.35			74	-18.65	21	322	H
6	16.821797	36.39	MAv1	41.8	-32.8	45.39	54	-8.61			41	108	V
	16.824007	48.09	PK2	41.9	-32.8	57.19			74	-16.81	41	108	V

PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL, CH 12 RESULTS



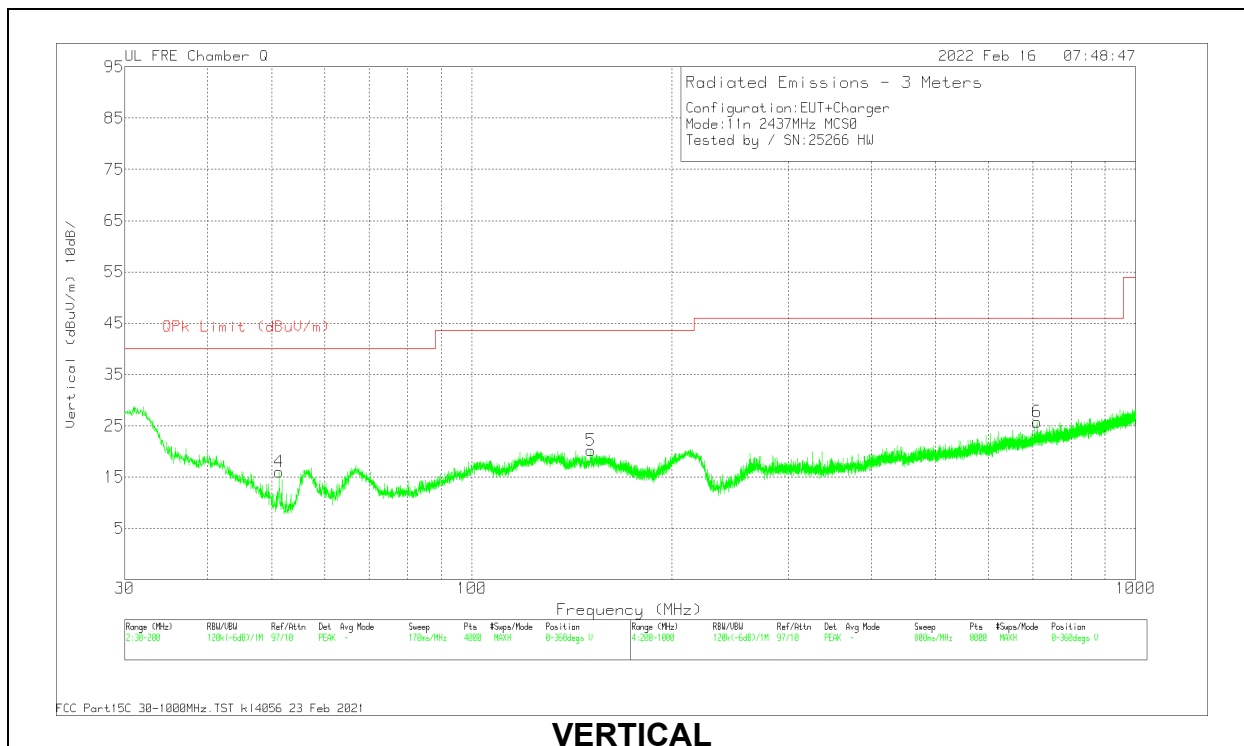
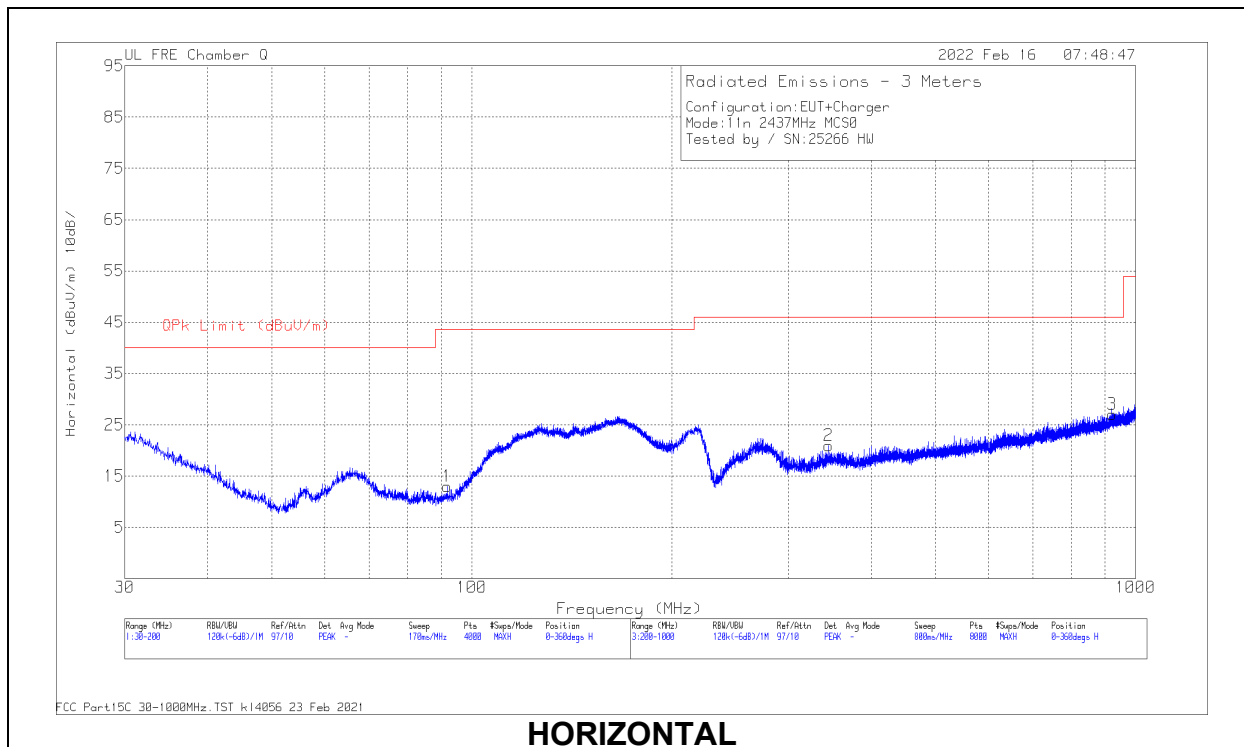
RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 200895 (dB/m)	Amp/Cb/Filtr/ Pad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	4.136648	51.35	PK2	33.4	-40.8	43.95	-	-	74	-30.05	81	203	H
	4.137435	39.54	MAv1	33.4	-40.8	32.14	54	-21.86	-	-	81	203	H
4	4.945171	51.21	PK2	33.9	-41.4	43.71	-	-	74	-30.29	212	122	V
	4.946433	39.93	MAv1	33.9	-41.4	32.43	54	-21.57	-	-	212	122	V
3	4.947027	39.75	MAv1	33.9	-41.4	32.25	54	-21.75	-	-	13	206	H
	4.948839	51.59	PK2	33.9	-41.4	44.09	-	-	74	-29.91	13	206	H
1	6.359914	36.78	MAv1	35.5	-38.4	33.88	-	-	-	-	186	152	V
	6.360261	48.52	PK2	35.5	-38.4	45.62	-	-	-	-	186	152	V
6	7.399073	47.97	PK2	35.7	-37.5	46.17	-	-	74	-27.83	1	220	H
	7.3997	36.28	MAv1	35.7	-37.6	34.38	54	-19.62	-	-	1	220	H
5	7.401983	48.26	PK2	35.7	-37.6	46.36	-	-	74	-27.64	313	201	V
	7.402446	36.06	MAv1	35.7	-37.6	34.16	54	-19.84	-	-	313	201	V

PK2 - KDB558074 Method: Maximum Peak
MAv1 - KDB558074 Option 1 Maximum RMS Average

10.2. WORST CASE BELOW 1 GHZ

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)

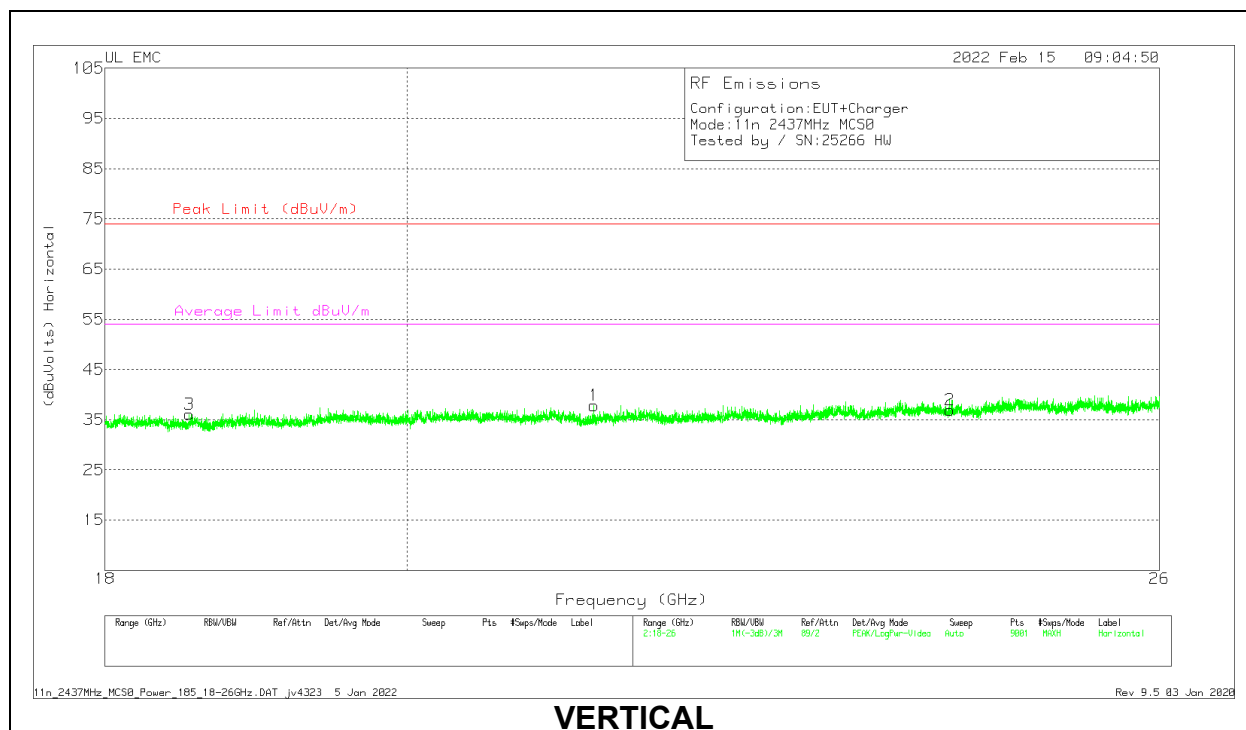
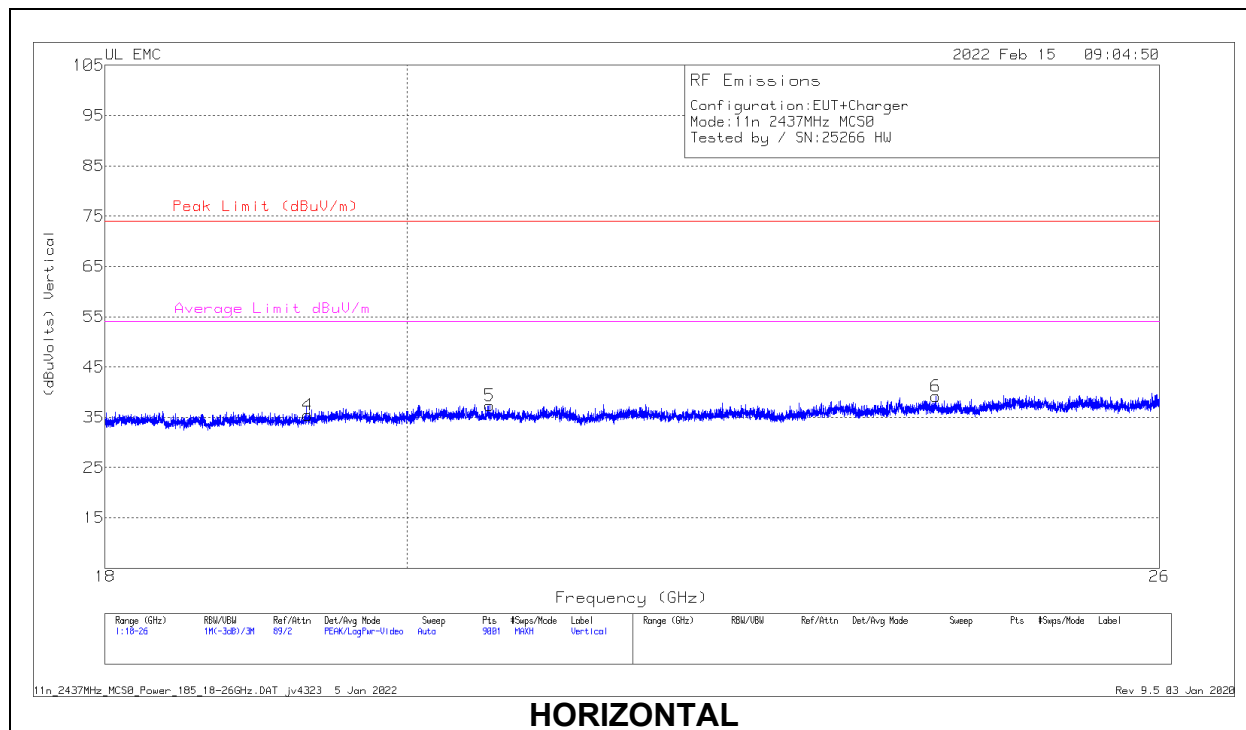


Below 1GHz Data

Marker	Frequenc y (MHz)	Meter Reading (dBuV)	Det	AF PRE0184 971 (dB/m)	Amp Cbl (Db)	Correcte d Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	51.2555	34.96	Pk	13.2	-32.2	15.96	40	-24.04	0-360	100	V
1	91.8535	31.05	Pk	13.8	-31.9	12.95	43.52	-30.57	0-360	201	H
5	150.944	33.79	Pk	18	-31.6	20.19	43.52	-23.33	0-360	100	V
2	344.919	31.94	Pk	19.8	-30.8	20.94	46.02	-25.08	0-360	100	H
6	710.166	29.4	Pk	25.9	-29.6	25.7	46.02	-20.32	0-360	99	V
3	921.794	26.81	Pk	28.1	-27.9	27.01	46.02	-19.01	0-360	301	H

10.3. WORST CASE 18-26 GHZ

SPURIOUS EMISSIONS 18-26 GHz (WORST-CASE CONFIGURATION)



18 – 26GHz Data

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF 81139 (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	PK Margin (dB)	Average Limit dBuV/m	Margin (dB)	Polarity
4	19.31911	68.35	Pk	33.5	-56.9	-9.5	35.45	74	-38.55	54	-18.55	V
5	20.58311	70.23	Pk	33.8	-57.2	-9.5	37.33	74	-36.67	54	-16.67	V
6	24.04978	70.65	Pk	34.5	-56.5	-9.5	39.15	74	-34.85	54	-14.85	V
1	21.34578	70.84	Pk	33.8	-57.3	-9.5	37.84	74	-36.16	54	-16.16	H
2	24.16889	68.91	Pk	34.5	-57	-9.5	36.91	74	-37.09	54	-17.09	H
3	18.53689	71.58	Pk	33	-59	-9.5	36.08	74	-37.92	54	-17.92	H

Pk - Peak detector

11. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

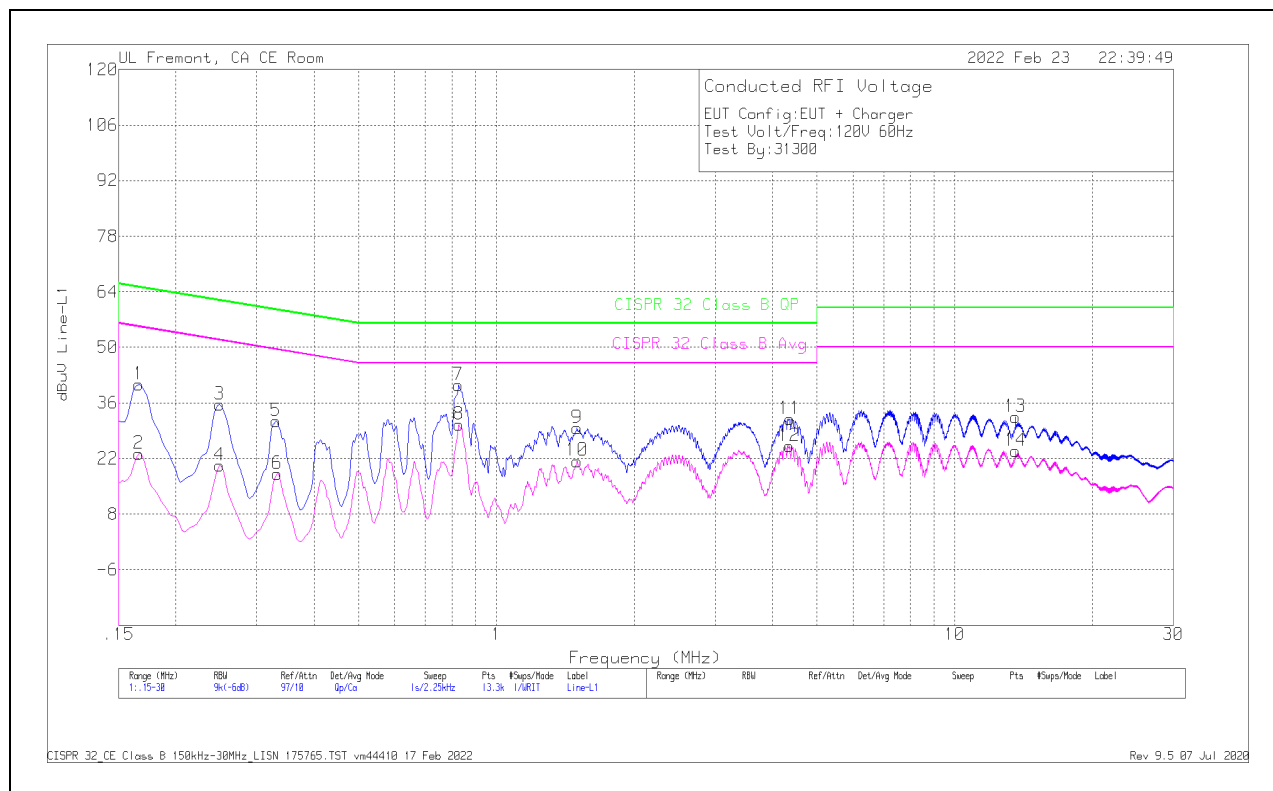
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

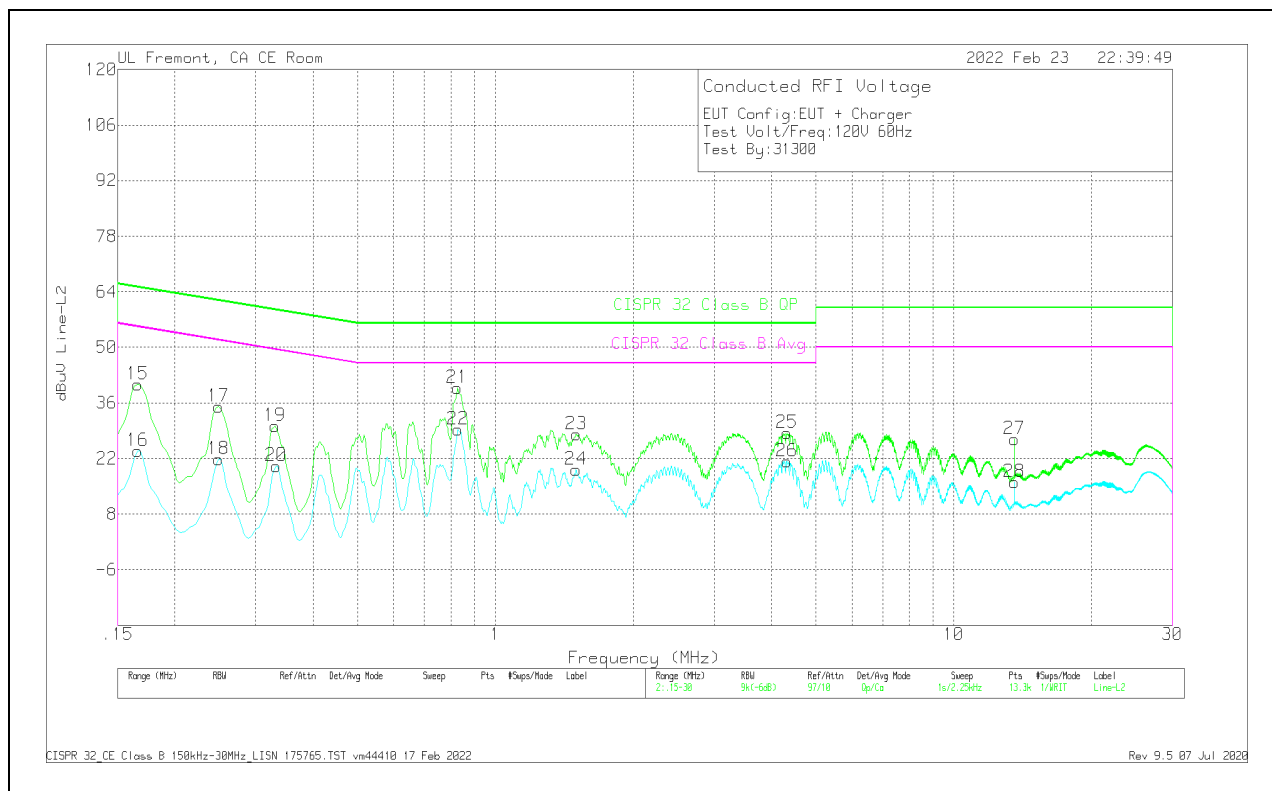
11.1. AC Power Line WITH AC/DC ADAPTER

LINE 1 RESULTS



Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1	C1&C3 cable	TekBox Limiter TBFL1 Model 207	Corrected Reading dBuV	CISPR 32 Class B QP	Margin (dB)	CISPR 32 Class B Avg	Margin (dB)
2	.16575	13.76	Ca	.1	0	9.4	23.26	-	-	55.17	-31.91
4	.249	10.95	Ca	0	0	9.3	20.25	-	-	51.79	-31.54
6	.33225	8.82	Ca	0	0	9.3	18.12	-	-	49.39	-31.27
8	.8295	21.06	Ca	0	.1	9.3	30.46	-	-	46	-15.54
10	1.5	11.98	Ca	0	.1	9.3	21.38	-	-	46	-24.62
12	4.35525	15.73	Ca	0	.1	9.3	25.13	-	-	46	-20.87
14	13.56	14.36	Ca	.1	.2	9.3	23.96	-	-	50	-26.04
1	.16575	31.13	Qp	.1	0	9.4	40.63	65.17	-24.54	-	-
3	.249	26.3	Qp	0	0	9.3	35.6	61.79	-26.19	-	-
5	.33	22.12	Qp	0	0	9.3	31.42	59.45	-28.03	-	-
7	.82725	31.08	Qp	0	.1	9.3	40.48	56	-15.52	-	-
9	1.5	20.22	Qp	0	.1	9.3	29.62	56	-26.38	-	-
11	4.36425	22.47	Qp	0	.1	9.3	31.87	56	-24.13	-	-
13	13.56	22.89	Qp	.1	.2	9.3	32.49	60	-27.51	-	-

LINE 2 RESULTS

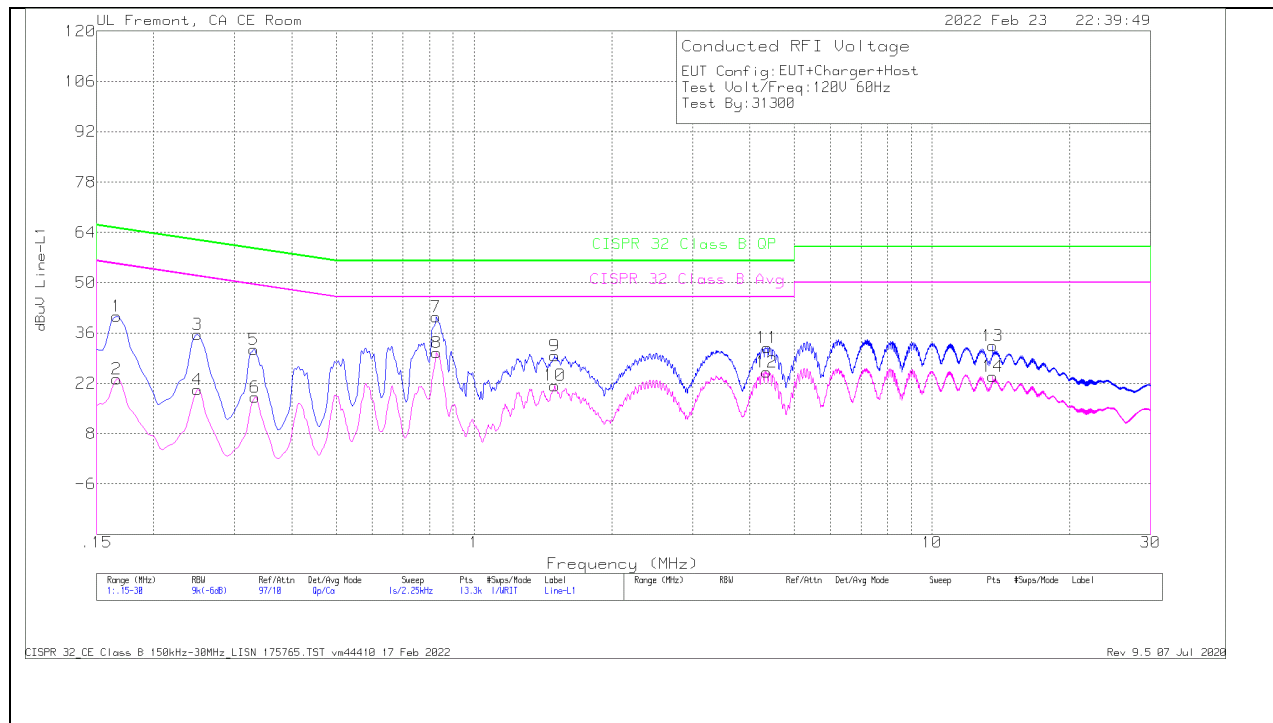


Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2	C2&C3 cable	TekBox Limiter TBFL1 Model 207	Corrected Reading dBuV	CISPR 32 Class B QP	Margin (dB)	CISPR 32 Class B Avg	Margin (dB)
16	.16575	14.45	Ca	.1	0	9.4	23.95	-	-	55.17	-31.22
18	.249	12.57	Ca	0	0	9.3	21.87	-	-	51.79	-29.92
20	.33225	10.85	Ca	0	0	9.3	20.15	-	-	49.39	-29.24
22	.8295	19.96	Ca	0	.1	9.3	29.36	-	-	46	-16.64
24	1.5	9.78	Ca	0	.1	9.3	19.18	-	-	46	-26.82
26	4.326	11.95	Ca	0	.1	9.3	21.35	-	-	46	-24.65
28	13.56	6.41	Ca	.1	.2	9.3	16.01	-	-	50	-33.99
15	.16575	31.2	Qp	.1	0	9.4	40.7	65.17	-24.47	-	-
17	.249	25.72	Qp	0	0	9.3	35.02	61.79	-26.77	-	-
19	.33	20.84	Qp	0	0	9.3	30.14	59.45	-29.31	-	-
21	.82725	30.31	Qp	0	.1	9.3	39.71	56	-16.29	-	-
23	1.5045	18.66	Qp	0	.1	9.3	28.06	56	-27.94	-	-
25	4.32825	19.04	Qp	0	.1	9.3	28.44	56	-27.56	-	-
27	13.56	17.24	Qp	.1	.2	9.3	26.84	60	-33.16	-	-

11.2. AC Power Line WITH LAPTOP

LINE 1 RESULTS



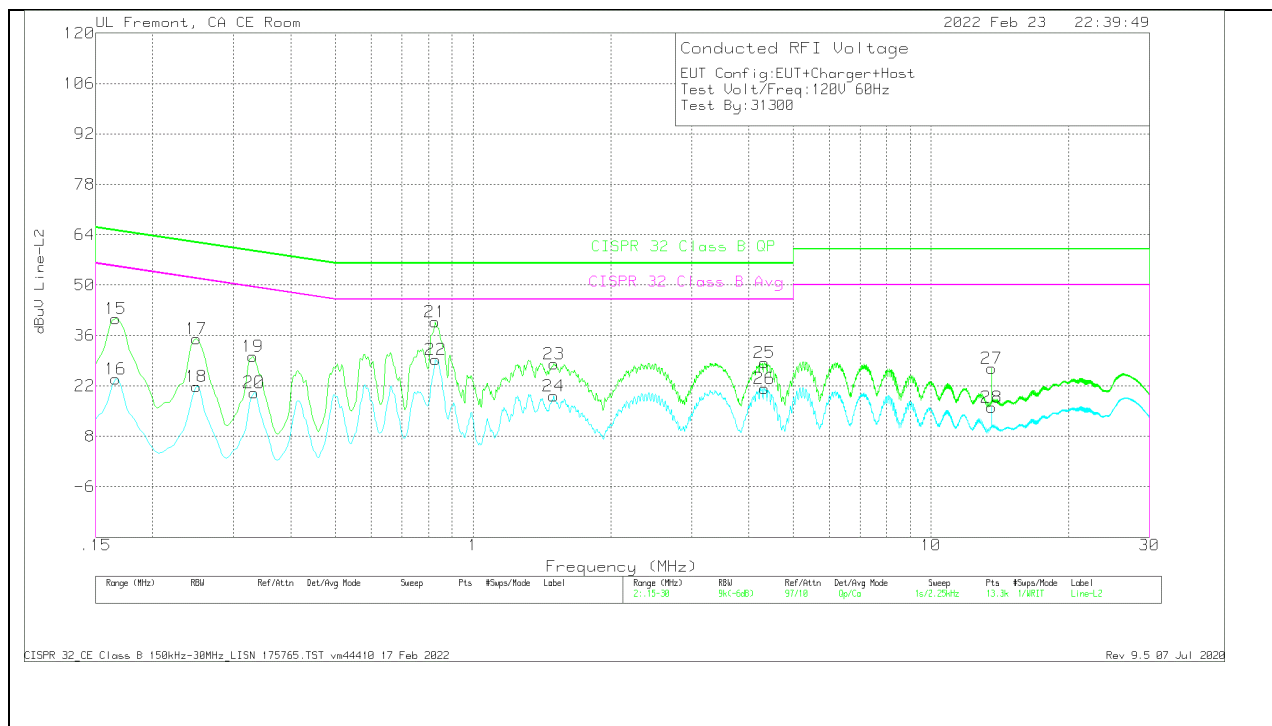
Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L1	C1&C3 cable	TekBox Limiter TBFL1 Model 207	Corrected Reading dBuV	CISPR 32 Class B QP	Margin (dB)	CISPR 32 Class B Avg	Margin (dB)
2	.16575	13.76	Ca	.1	0	9.4	23.26	-	-	55.17	-31.91
4	.249	10.95	Ca	0	0	9.3	20.25	-	-	51.79	-31.54
6	.33225	8.82	Ca	0	0	9.3	18.12	-	-	49.39	-31.27
8	.8295	21.06	Ca	0	.1	9.3	30.46	-	-	46	-15.54
10	1.5	11.98	Ca	0	.1	9.3	21.38	-	-	46	-24.62
12	4.35525	15.73	Ca	0	.1	9.3	25.13	-	-	46	-20.87
14	13.56	14.36	Ca	.1	.2	9.3	23.96	-	-	50	-26.04
1	.16575	31.13	Qp	.1	0	9.4	40.63	65.17	-24.54	-	-
3	.249	26.3	Qp	0	0	9.3	35.6	61.79	-26.19	-	-
5	.33	22.12	Qp	0	0	9.3	31.42	59.45	-28.03	-	-
7	.82725	31.08	Qp	0	.1	9.3	40.48	56	-15.52	-	-
9	1.5	20.22	Qp	0	.1	9.3	29.62	56	-26.38	-	-
11	4.36425	22.47	Qp	0	.1	9.3	31.87	56	-24.13	-	-
13	13.56	22.89	Qp	.1	.2	9.3	32.49	60	-27.51	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	175765 LISN L2	C2&C3 cable	TekBox Limiter TBFL1 Model 207	Corrected Reading dBuV	CISPR 32 Class B QP	Margin (dB)	CISPR 32 Class B Avg	Margin (dB)
16	.16575	14.45	Ca	.1	0	9.4	23.95	-	-	55.17	-31.22
18	.249	12.57	Ca	0	0	9.3	21.87	-	-	51.79	-29.92
20	.33225	10.85	Ca	0	0	9.3	20.15	-	-	49.39	-29.24
22	.8295	19.96	Ca	0	.1	9.3	29.36	-	-	46	-16.64
24	1.5	9.78	Ca	0	.1	9.3	19.18	-	-	46	-26.82
26	4.326	11.95	Ca	0	.1	9.3	21.35	-	-	46	-24.65
28	13.56	6.41	Ca	.1	.2	9.3	16.01	-	-	50	-33.99
15	.16575	31.2	Qp	.1	0	9.4	40.7	65.17	-24.47	-	-
17	.249	25.72	Qp	0	0	9.3	35.02	61.79	-26.77	-	-
19	.33	20.84	Qp	0	0	9.3	30.14	59.45	-29.31	-	-
21	.82725	30.31	Qp	0	.1	9.3	39.71	56	-16.29	-	-
23	1.5045	18.66	Qp	0	.1	9.3	28.06	56	-27.94	-	-
25	4.32825	19.04	Qp	0	.1	9.3	28.44	56	-27.56	-	-
27	13.56	17.24	Qp	.1	.2	9.3	26.84	60	-33.16	-	-

Qp - Quasi-Peak detector

Ca - CISPR average detection

12. SETUP PHOTOS

Please refer to 13812998-EP1 for setup photos

END OF TEST REPORT